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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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Democracy and development

Address delivered by H.E. Fernando Henrique Cardoso, President of the Federative Republic of Brazil, on the occasion of his visit to ECLAC Headquarters at Santiago, Chile, on 3 March 1995.

First of all, I should like to say how grateful I am for the kindness with which I have been received everywhere I have been in Chile. Nevertheless, ECLAC has a very special meaning for me. I am perhaps a little conservative in my habits, although not so much in my way of thinking, as Enzo Faletto seems to think ...

Whenever I can, when I am in France, I go to Chartres and its cathedral. One of the world's great monuments: a page of history in its own right. To see it is a pleasure for one's artistic senses, but it is perhaps even more than that: something in the nature of a pilgrimage ... There is something mystical about it which always remains in my mind, but my visit to it is also a symbolic gesture of embracing the culture it represents. Likewise, every time I come to Chile I visit another cathedral of a slightly different kind. So here I am once again in ECLAC, where so many great minds preached their gospel. Among all those prophets, however, there are two whom I always mention and to whom I should like to refer once again today. The first of them is Raúl Prebisch, who gave his name to this conference room and who has been a source of inspiration for all of us.

I remember so well when I first came to Chile. The ECLAC headquarters were not as grand as they are now. ECLA, as it then was, was still in the old building at the corner of Providencia and J. M. Infante, and as always we were short of space. There was nowhere halfway decent for me to install myself, so I began to occupy the office of Prebisch's secretary. As in those days Prebisch was in the United States most of the time, at the IDB, when he was away I took the liberty not only of occupying his secretary's office but also of using his own office to receive my friends from Brazil. They were tremendously impressed, and wondered how someone like me, who had only a lowly post, could occupy such magnificent accommodation ... But the truth is that I was also using those offices to draw inspiration, for Prebisch was the mentor of all of us, and still is.

The second person I want to mention is José Medina Echavarría, with whom I worked so closely. He had the enormous patience to read my manuscripts and those of Enzo Faletto for the book on development and dependence in Latin America, or maybe dependence and development: I don't recall the title for sure –there were so many books, and it was so long ago. Anyway, don José read them patiently and corrected the Spanish they were written in, which was pretty awful in my case.

Everything passed through the hands of Weinberg, who was the reviser, but even so don José still read and improved the text. I think he was never very convinced by our arguments, but he respected them. He followed a Weberian train of thought: even more so than I, who had already adopted some of Weber's ideas. He looked at all that like someone who was asking himself: what is going to happen with Latin America? To tell the truth, possibly because of his own personal background, don José was in some ways the inspiration for the analyses we made. Don José was Spanish, but he had lived in Puerto Rico and later in Mexico.

But don José was now in Chile. He knew about everything under the sun. He had written important books, and he continued to do so while we were there, and afterwards too. I think he always looked at the intellectuals and problems he worked with, here in ECLAC, in Latin America, with the feeling that he was dealing with something that was very close and yet at the same time very different. It was nearly Europe, but yet it wasn't. It was nearly Spain, yet it was not Spain. This was more or less the set of ideas we were working on, which grew much later into the Frankenstein of dependence theory.

Basically, what we wanted to bring out was just that: a search for an identity like that which don José had as a European. He looked at us and asked himself if one day we would have our own identity, or if we would always be using an imitation. The answer was not easy to arrive at, and it still isn't. That was our horizon: agonizing, existential, almost Hamletian. It really is striking how some people live in Latin America as though they were foreigners, in terms of their mentality and surroundings. In the past, they looked to Europe; now, their eyes are fixed on the United States, and maybe tomorrow they will be looking to Japan: who knows? There are others who have a more realistic outlook, however. They accept what they are and what they are not. They take a dialectic view, as I do.

No-one has gone into this matter more fully than ECLAC. Never, in our continent, has there been a school of thought which has produced a sounder or more serious answer to this question of what we will finally become, how we will form a nation and a State, and what kind of relationship we will have with the rest of the world.

ECLAC has been working on this ever since it was set up, and it is still seeking a final answer. The little that I was able to do personally when I was here was, as Gert Rosenthal noted, to make a modest contribution to the political dimension of ECLAC's field of study. Maybe I was also able to contribute something here and there in the social dimension. However, the broad lines were already defined by the centre-periphery theory. Basically, it was all there, and everything else would be a question of nuances, of doing things somewhat less mechanically. Maybe the periphery also has a life of its own. Maybe the bonds that bind it are bonds that permit some degree of growth. Maybe tomorrow we will attain an identity strong enough to allow us to break out of our situation of stagnation, which is so often depicted as a situation from which there is no way out, yet sometimes we do discover new paths and ways out, so we must keep on searching.

Nowadays, I have other matters to deal with: everything that has to do with Brazil, especially in the political field. The great feat that has to be performed, not only by Brazil but by many other Latin American nations and peoples too, is to keep up a process of growth and to maintain the advance of democracy in conditions of such great inequality, of such concentrations of poverty. Keeping democracy alive and dealing with the growing demands that democracy itself brings to the surface is our great challenge, and I believe that we have only a certain length of time at our disposal for doing this.

This morning, before I came to ECLAC, I was in the sector of Santiago known as La Florida. In Lomas de La Florida, the community put forward its demands in the presence of the Presidents of Chile and Brazil. We were there to celebrate the achievement of some social advances, but they very rightly wanted more, for social progress is something that has virtually no end.

While the social situation is difficult in Chile, it is much more complex in Brazil, for there are many, many millions of people who need assistance there, and sometimes, in order to keep our actions soundly-based and credible, we are obliged to say "no" to perfectly justified requests, because if I say "yes" today but cannot keep my word, tomorrow I will be obliged to say "no". And that "no" will be an absolute negative, because there will be nothing more to do. Thus, it is better to say "no" now, with the hope that maybe tomorrow I can say "yes" with the certainty of fulfilling my promises. It is very hard to maintain the people's faith in democracy in these circumstances.

We are making progress in Latin America. Maybe this is the legacy we can bequeath to other countries of the world: perhaps to Asia, whose development is of such recent date. Here, we have indeed attained democracy, not only in the institutional sense, important though it is, but also in the social sense. We have freedom. We do not yet have full democracy as regards institutional channels and mechanisms for meeting demands, but we do have freedom, won after a hard struggle. We have freedom, and we are beginning to have institutions which make possible participation and can thus help to ensure democracy. This is an important point, to my manner of thinking, and will continue to be so. Of course, due to the vagaries of life, I also had to cope with a situation in Brazil which involved a further source of concern: levels of inflation which were squeezing the life out of us.

When I became Minister of Finance, inflation was running at around 20%. When I left that post, it stood at nearly 35%, but even so, people applauded me in the streets. How can this be? What was the reason for this unusual reaction? The explanation is that I told the people the truth. I appeared on television many times, because when one analyses the situation and explains to the people the reasons for a given measure, this means putting into effect the values that we ascribe to democracy. One cannot overcome economic difficulties by taking the measures designed by some technocrat, some equations written on a scrap of paper, and then imposing them on the people. They must be explained to them. Even when inflation was rising, I explained the reasons for this and asked the people to have faith, because inflation was going to go down, and I explained to them how this was going to happen.

It also fell to my lot to carry out a stabilization programme. Fortunately, I am not an economist, because it is very difficult to apply a stabilization programme and, because economists know a great deal, this sometimes prevents them from boldly trying to do what seems to be impossible in order to break through the difficulties facing them at a given time. It is not a task for a single person. The truth is that the people understood the situation, and I am not saying this in a demagogic sense. The people understood that inflation ran against their interests, but the peculiar feature of the Brazilian situation was that inflation did not harm the interests of big firms, because everything was indexed.

Perfectly foreseeable levels of inflation are the same thing as no inflation at all for those who are in a position to handle them, but they are not the same as the absence of inflation for someone who depends on the salary he receives, and who has no money left at the end of the month because it disappeared in the whirlwind of an inflationary spiral that rises and rises and never stops.

It is at times like those that it is necessary to have faith in democracy. This means confidence that it will be possible to explain the situation to the people and that they will understand if the explanation is clear enough. It is necessary to have faith in the possibility of overcoming obstacles and in the justification for stabilization measures when the people see that it is necessary to curb inflation for their own good. According to the latest calculations of the Ministry of Finance, stabilization allowed between US$12 billion and US$15 billion to come into the hands of the people, of consumers. This was money that came into the hands of the lowest-paid people, because the others already had everything indexed and were well protected. It was money that went to those who had no way of defending themselves.

The opposition to a stabilization policy disappears if an effort is made not to apply the process solely on the basis of some abstract theories which have little to do with the everyday life of the people. It is necessary to have the courage to refuse to give into theories and to avoid imposing views which, no matter how attractive they may seem from the intellectual point of view, do not have much to do with common sense. This calls for courage on the part of the economic team and the decision-makers and the capacity to announce what is going to be done and then fulfill that promise.

I think this fits in with what Gert Rosenthal said a little while ago: if taken seriously, political life and intellectual life have a good many points of convergence. No-one can take sound decisions in politics if he does not have the intellectual capacity to know why he is taking them and the deep conviction that he is doing the right thing. Even though he may be mistaken, he must have a deep belief in what he is doing and must do everything possible to make that belief come true. When someone stakes everything in this way, he is no longer in the groves of Academe but in the dusty paths of real life.

Many of us in Latin America are staking everything in this way, in body and soul. Here in Chile, and in many other countries too. We are now once again passing through a complex, very delicate period which is not limited to Latin America but is worldwide. Yesterday in Valparaíso, where I was deeply affected and honoured by the way I was received by senators and deputies alike, I said that the Bretton Woods institutions are no longer sufficient for dealing with the current challenges. Those institutions go back to before the days of the computer: everything is different now. Speculation is now possible on a massive scale, because there is much more money that is not subject to any form of control –by a country or by a Central Bank– than the money that is subject to such controls. We must deal with this problem, which is a political issue and, I believe, a challenge that ECLAC should take up.

I no longer have the time to engage in the intellectual analysis of this type of challenge, but it is a very suitable opportunity for an institution like ECLAC to point the way to follow once again: an opportunity to save us from our present disoriented situation, in which we are copying models from various sources. It would be a good thing if someone were to speak out plainly and say that there is a problem here –a political problem– which calls for decided action not by the developing countries but by the richest nations. They must speak out and say what they want to do with the world they created, like latter-day Frankensteins, but which they do not know how to handle. Neither we nor a country like Mexico know how to control the situation, and this is why it is vital to put a stop to certain processes which are beginning to eat away the international economic system.

I believe the time has come for institutions like the United Nations to take this question very seriously. Now that we are celebrating the 50th anniversary of the world organization, we should no longer confine ourselves to discussing who should be a member of the Security Council to act as a global policeman, necessary though that task is, but should also tackle the vital task of considering the reform of the appropriate institutions in order to ensure the continuity of the world trade system, the finance system, and the availability of liquidity in the international financial systems.

How are we to do this? Allow me to give you an example from my own experience. As Minister of Finance, I tried to obtain a stand-by credit of a "measly" two billion dollars from the International Monetary Fund. I did not manage to obtain it, however, and providentially we did not need the Fund's approval for what we had to do. The reason why I did not obtain it was that some middle-level technicians felt that the political conditions in Brazil were not appropriate. To this I replied: "What on earth do you know about these things? For God's sake, try to be a little less arrogant!", because they viewed the developing economies through distorting glasses, as they still do. What they need is a better sense of politics, of the democratic dimension I mentioned earlier, of the courage and faith that society at large sometimes displays, of the importance of self-esteem and the capacity for recovering it. All this is important, but not for them. The only thing that matters for them is their little account-books, which are not always very accurate. They only take into account the operating deficit, the deficit on this or that account. But on what basis and with what data are these accounts prepared, and how many hypotheses are there that back them up? My goodness, how many errors do they contain!

The time has come to declare, loud and clear, that though we need international institutions with the capacity to say "no", when they refuse something they must do so on the basis of broader criteria, not on the basis of hypotheses and theories which are often mere prejudices and are not even worthy to be called hypotheses or theories.

I believe this is an important moment for ECLAC to set forth its ideas. The challenge has been given, but it is not only wealth that is concentrated, but also the international wisdom to meet this challenge. The experts possess great wisdom, but they are perhaps too deeply entrenched in their positions and are not fully aware that there are new issues to be faced.

So the institutions must take a fresh look at the problems. The cathedrals should keep on being cathedrals and we should still be able to visit Chartres with admiration, for although sometimes no Mass is being celebrated, the priest will come later. It is the same here. Here we have many priests, even, one might say, cardinals. Maybe we do not have a Pope, but there are people who have a clear idea of the present situation. This, then is the great moment.

If I may say so, I do not myself know the answer to all this. Indeed, the humble President of a country with so many problems could hardly make bold to offer such an answer. What I do have, however, are doubts, concern, anxiety, and I address myself to this organization, which has so much intellectual strength, to ask it to renew its ideas once again and help the world to understand that we are living in a new era: an era which holds out many possibilities but will be marked by stagnation and regression unless we adapt our institutions to seize those opportunities. Yet there is no reason why this should happen. We are no longer living under the threat of World War III: indeed, there is no longer even a situation of serious ideological polarization. Why should we not seize these opportunities, then? Why should we not take this step forward, make the first move and clearly recognize that the world must be rebuilt? Our peoples deserve more than this. We owe it to them to show qualities of leadership which will make it possible to progress in terms of greater democracy and growth, greater equality and social justice.

I am here, then, to ask for your help in the name of all the people of Brazil –that may sound a little demagogic, but after all I did receive quite a few votes– and I believe you can indeed help us. Think freely, and do not be afraid to speak out. Do what Prebisch did in his time. Speak out clearly. If necessary, shout so that all may hear. I will be in the Presidential salon to applaud your words, and it will be a great pleasure for me to do so.

(Original: Portuguese)

Can growth *and equity* go hand in hand?

Joseph Ramos

Director, Division of Production, Productivity and Management, ECLAC.

This article presents the issue in the context of the theoretical and empirical debate, started by Kuznets, on the possibility of achieving growth with equity. The conclusion is that there is no inevitable conflict between these two goals, provided that economic policy promotes the areas of complementarity between growth and equity. It therefore rejects the approaches which assume that there is an insoluble conflict between these objectives, such as the "trickle-down" theory (which stoically accepts that such a conflict exists and proposes that those affected should wait as long as is necessary for their situation to improve) and the contrasting "parallel" approach (which suggests that growth should be sacrificed in favour of equity, with social policy being entrusted with the correction of the worst distributive effects of economic policy). Instead, it advocates an "integrated" approach in which economic policy incorporates considerations of income distribution and social policy pays due attention to efficiency, while both attach great importance to the areas of complementarity between growth and equity. In this respect, it mentions four major areas of complementarity between these two goals, three of which are the subject of fairly general agreement (keeping the macroeconomic balances within acceptable margins; investment in human resources, and a policy of full employment in productive activities), while the fourth is less generally agreed but is strongly supported by ECLAC: the need for the rapid, large-scale spread of technology. Finally, the article notes the instrumental differences between the ECLAC and neo-liberal approaches in seven specific areas of economic policy. For example, the neo-liberal approach gives priority to the deregulation and liberalization of markets, the neutrality of the instruments used, and some degree of passivity on the part of the State. The ECLAC approach, in contrast, calls for selective action by the State to make up for the most serious flaws and shortcomings in the factor markets, without which it is considered unlikely that the region can attain the high economic growth rates which past history has shown to be within the reach of late-industrializing countries, while it is even more unlikely that such growth can be attained with equity.

I
Introduction

After nearly a decade of economic stagnation and social backwardness, the countries of Latin America and the Caribbean have made a resolute effort to stabilize and restructure their economies and have been successful in checking runaway inflation, liberalizing markets, reducing excessive levels of protection, and redefining the roles of the public and private sectors, while giving the latter the key role in production.

These reforms have had their cost, however, and the most serious aspect is that in most cases this cost has not been shared out equitably. The success of the reforms is still a long way from being certain (as is shown, for example, by the Mexican crisis in 1994-1995), and democracy itself may be at risk in some cases because many of the advances made have been gained at the expense of the poorest sectors of the population. We can therefore see that growth with equity is not only essential from the ethical point of view, but also for political reasons. This raises a big question, however: is growth with equity technically possible?

Indeed, at least since the time of Kuznets, it is usually considered in the economic literature that these two objectives are contradictory, so that some writers have proposed a sequential approach: first growth and then (perhaps) redistribution. As it has been noted that this effect takes a very long time to make itself felt, however, others have suggested that some growth should be sacrificed in favour of better distribution of the fruits of economic progress, with social policy being made responsible for compensating or correcting the regressive effects of some economic policies. The problem with this second approach, however, is that these regressive effects are so great that no realistic social policy is capable of making up for them.

Fortunately, if we look at the performances registered since the Second World War by many developing countries –especially, but not exclusively, some recently-industrialized Asian countries– [1] we see that the presumed conflict between growth and equity is by no means inevitable. There are substantial areas of complementarity, and not merely of conflict, between the objectives of growth and equity, and whether or not these areas are given priority depends on the policies applied. Thus, it is perfectly possible to achieve growth and improve equity at the same time rather than in sequence, provided that an integrated approach is adopted in which economic policy pursues the objective of equity as well as that of growth, while social policy gives high priority not only to equity but also to efficiency. In such a case, economic and social policies must focus on heightening the complementary aspects of growth and equity while minimizing possible areas of conflict.

It goes without saying, of course, that although growth with equity is perfectly possible, it is neither easy nor automatic. No matter how much consensus there may be on the importance of the market economy and a strong private sector for promoting development –a consensus which is shared by ECLAC– it must nevertheless be acknowledged that although these are necessary conditions for growth they are not of themselves sufficient for attaining this goal, and still less that of growth with equity. If those two factors were indeed sufficient of themselves, then the per capita income of the region would not be one-fifth or one-tenth that of the developed countries and 40% of its population would not be living in a state of poverty, as is the case today, for during at least 120 of the 180 years of independence of the region (and during nearly 450 of the 500 years since its colonization) its economy has been organized on the basis of private ownership of the means of production, the leading role of the market, and a small, passive State. This proves that growth with equity requires not only a market economy but also vigorous public action to make the best possible use of the potential areas of complementation in favour of both objectives.

□ This article is based on the document *Equity and changing production patterns: an integrated approach* (ECLAC, 1992), whose preparation was coordinated by the author of the present article.

[1] See, for example, Fields (1991), who analysed the growth processes of 70 developing countries since the war and found that although in half of them growth was accompanied by a deterioration in income distribution, which is in line with Kuznets's hypothesis, in the other half income distribution improved or at least did not deteriorate. This therefore shows that these two objectives are not mutually exclusive, as traditional theories claim.

II

Areas of complementarity

A general consensus is beginning to emerge that the main areas of complementarity between growth and equity are maintenance of the basic macroeconomic balances, investment in human resources, the generation of productive employment, and technological modernization.

1. Maintenance of the basic macroeconomic balances

Experience shows that the worst slumps in income in absolute terms, as well as the biggest setbacks in this respect, have been due to recessions caused by adjustments in order to cope with unsustainable current account deficits (accompanied by heavy devaluations and slumps in the product and real wages, as in the 1982-1983 debt crisis and the 1994-1995 crisis in Mexico), to recessions caused by runaway inflation in which real wages have dropped by as much as 50% (as in Argentina in 1988-1990, Brazil in 1990-1991, Bolivia in 1982-1984, Nicaragua in 1987-1990, and Peru in 1988-1989), or to subsequent badly designed or implemented stabilization attempts, as in Chile (1974-1975), Peru (1990-1992) and Venezuela (1989). In cases of runaway inflation, wages usually lag far behind prices, because the lower classes have fewer defence mechanisms to cope with spiralling inflation, while if subsequent stabilization programmes lead to a decline in production, either because they are poorly designed or because they do not enjoy credibility, this leads to lower levels of employment which result in declines both in wages and in the share of workers in national income. Consequently, measures aimed at avoiding such imbalances favour not only growth but also equity.

2. Investment in human resources

Investment in human resources is necessary in order to break the vicious circle of poverty. Among other things, it favours a reduction in the fertility rates of poor women, whose children run a greater risk of suffering from malnutrition, have fewer chances of taking advantage of the education they receive and, as their education tends to be of low quality, often end up working at very low-productivity jobs, thus perpetuating the vicious circle of poverty. In order to prevent this from happening, measures must be taken to help bring effective fertility rates down to the levels desired by couples in the light of the number of children they can responsibly bring up; to eliminate malnutrition through mother and child health programmes; to continue to broaden the coverage of the educational system (a goal which has indeed been reached in much of the region), and above all, to raise the quality of education and adapt it more closely to human resource needs.

3. Generation of productive employment

Unemployment or employment in only marginally productive activities (underemployment) is not only a social problem but also a sign of great economic inefficiency, since it means wasting the productive potential of a considerable part of a country's human resources. As well as affecting those who have no jobs, unemployment has an adverse effect on wages, so that it also affects those who do have jobs. The high levels of unemployment and underemployment explain the marked deterioration in real wages in the region during the 1980s, when wages generally went down more markedly than the per capita product and productivity. It is therefore not surprising that the fruits of economic progress do not spread to the broad masses but are concentrated in the hands of a few.

For this reason, ECLAC considers that the achievement of full employment is a good indication of the possibility of growth with equity. It is not a question of just any type of full employment, however, but of truly productive employment. For example: if any kind of job were enough to ensure the achievement of full employment by the year 2000, we could simply prohibit the transportation of freight in wheeled vehicles, but obviously the resulting employment would hardly be very productive. It is therefore not enough to apply emergency policies which generate temporary or low-productivity employment: instead it is necessary to formulate economic policy in general with a view to the generation of productive employment, through specific measures such as those mentioned below (especially in Part III, sections 2 a), b) and c).

4. Technological modernization

ECLAC holds that the improvement of international competitiveness must be based on a constant increase in productivity through technological modernization. It therefore rejects competitiveness based on low wages or abuse of the environment, which gives transitory, non-renewable advantages, because it considers this to be superficial or spurious competitiveness. A classic example of this is the Spanish Empire, which, in spite of its access to the natural riches of the New World, fell far behind the British Empire, whose progress was based on systematic technological progress.

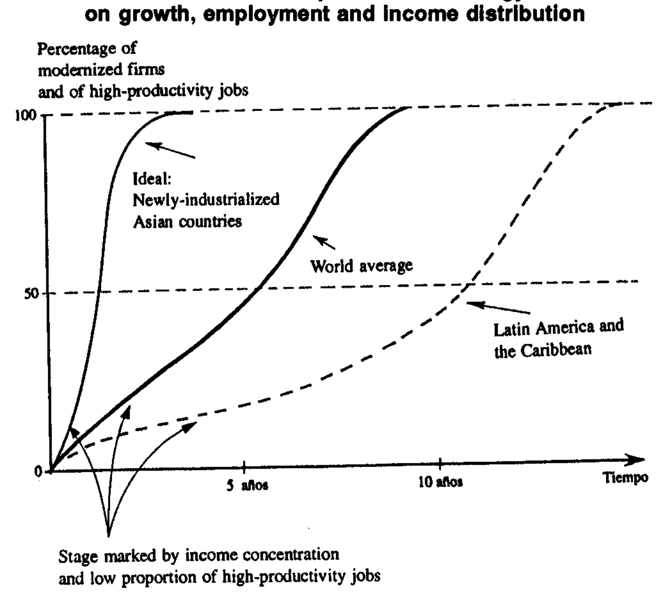
In our opinion, the existence of such a high proportion of poor people in the region (40%) is due largely to the fact that many workers are employed in firms with insufficient, outdated equipment, so that their productivity is very limited and their wages very low. This situation will persist as long as the productivity of an average firm in the region is only one-third or half that of a typical enterprise in a developed country, even taking into account the differences in the relative scarcity of factors. The generation of truly productive jobs therefore involves speeding up the spread of technology.

At first sight, it might be feared that there is a conflict between technological progress and the number of jobs, but this is only apparent. There are many technical advances which allow labour to be saved but which, while reducing the number of low-productivity jobs, increase those of high productivity. Furthermore, the most important technological advances not only reduce the demand for unskilled labour but also make possible savings of capital, which is the scarcest factor. For example, the pocket calculators of today, which cost ten dollars or less, carry out the same operations as the electro-mechanical calculators of twenty years ago, which cost over 200 dollars, and they do so much more quickly. The savings of capital thus made possible allow productive employment to be generated in this and other fields. There are any number of similar examples not only in informatics but also in communications, air and sea transport, electronics, biotechnology, development of new materials, and other activities.

Since technological progress can have a variety of effects, priority must be given to the rapid spread of technology, especially in backward, labour-intensive sectors, for the slower the spread of technology, the slower will be the growth of the product and the generation of high-productivity jobs, since without such advances the majority of firms will continue to operate with obsolete technology. In contrast, when the spread of technology is speeded up, this will increase both the product and the number of high-productivity jobs (see figure 1).

FIGURE 1

Effects of the rate of spread of technology on growth, employment and income distribution



Source: Prepared by the author.

III

Areas of discrepancy

Although there is increasing consensus that growth with equity calls for the maintenance of the basic macroeconomic balances and a strategy designed to raise international competitiveness through technological modernization, the generation of full, productive employment, and investment in human resources, there are still substantial areas of disagreement over the approaches and instruments to be used.

1. Differences with regard to approaches

As we already noted, ECLAC rejects the "trickle-down" theory because past experience shows that economic growth by itself does not automatically lead to equity, or at least not within a reasonable length of time, but only after many decades. Nor does ECLAC agree with the approach that saddles social policy with the practically unattainable objective of making up for the regressive effects of many economic policies. Instead, ECLAC advocates an integrated approach under which considerations of equity are incorporated into economic policy, while social policy takes due account of the need for efficiency. Under this approach, it is considered preferable, for example, to avoid the evils of unemployment through a macroeconomic and growth policy aimed at the stabilization of prices and the achievement of full employment, rather than through arrangements for the payment of unemployment benefits.

2. Differences with regard to instruments

Some authors (mostly of the neo-liberal school) advocate measures to deregulate markets and make them more flexible, with the State playing rather a passive role. In contrast, ECLAC holds that there is also a need for vigorous, albeit selective, public action to overcome the most critical bottlenecks and thus prevent growth from being slow and concentrative (see figure 1).

In almost all orthodox theories, a leading role is given to price liberalization and measures to deregulate markets and make them more flexible. According to these theories, under-development is due essentially to government interference in markets, and their implicit tenet is that the prices obtaining in deregulated markets must necessarily be the "correct" or equilibrium prices. According to the neo-structuralist approach taken by ECLAC, however, various key markets suffer from critical flaws which mean that at any given moment the equilibrium price between supply and demand may not be the same as the long-term equilibrium price: i.e., the price that reflects the real scarcity of goods, and above all of factors. In the following paragraphs we will show the differences between the neo-liberal approach and the ECLAC neo-structuralist approach as regards the instruments that can be used to strengthen the areas of complementarity (see table 1).

a) *Increasing public saving or reducing the deficit*

All the experts agree that increasing public saving, or reducing the deficit, is a necessary condition for keeping the macroeconomic balances within acceptable limits. In order to reduce the deficit it is necessary either to reduce public expenditure or increase revenue. Although from the macroeconomic standpoint it does not matter which of these means is used to eliminate the deficit,[2] this is not so from the standpoint of growth with equity, for cuts in expenditure –which were the typical orthodox solution in the region in the 1980s– make it even more difficult to fulfil the basic functions of the public sector in terms of investment in the infrastructure and human resources, both of which are essential for growth with equity.

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[2] Strictly speaking, even from the macroeconomic point of view it is not true that it does not matter how the deficit is eliminated. On the one hand, it is not only necessary to balance the fiscal accounts (or generate a surplus): it is also necessary that the balance attained should be credible, in order to consolidate the goal of stability. Consequently, the balance must be obtained through a level of expenditure which can be maintained in the long term, and not through an unsustainably compressed level of spending. On the other hand, the level of saving must also be seen to be stable, which means that it must be based on a high level of national, rather than external, saving, in order to avoid excessive domestic vulnerability (take, for example, the 1994-1995 Mexican crisis and the current high level of vulnerability of Argentina).

TABLE 1

Equity and growth: the orthodox proposal versus the ECLAC proposal

Objectives	Orthodox proposal		ECLAC proposal	
	Policies	*Associated problems*	*Policies*	*Instruments*
1. Public saving	Reduce spending. "Focus" spending (make spending more "progressive").	Level of revenue insufficient to cover investment in infra-structure and human capital. Uneven adjustment of expenditure and income.	Use of leeway to raise tax burden (direct income). Make tax collection more progressive.	Expansion of tax base. Reduction of tax evasion. Selected exemptions from VAT. Taxes on automobiles, property and fuels.
2. Private saving	Raise interest rates. Compress wages.	Insufficient impact. Redistribution of income to traditional savers (i.e., the rich).	Increase saving by wage-earners through institutional changes.	Saving for housing. Forced saving, elimination of actuarial and cash deficits of social security system.
3. Private investment in human resources	None.	No loans available for education or training.	Create a capital market for investments in human capital in order to overcome the problem of lack of guarantees.	Use of social security funds to guarantee educational loans and use of the social security system for repayment of these loans by payroll deduction.
4. Better use of investments	Free interest rates.	Segmentation: access to long-term capital limited to large firms.	Create financial instruments suitable for small and medium-sized firms.	Promote the use of leasing, guarantee funds, venture capital funds, secondary securities markets, and "credit cards" for businesses.
5. Better use of labour	Deregulate the labour market.	Conflictive labour relations; low productivity; job instability.	Modernize labour relations, encourage payment of wages by results rather than hours worked (profit sharing).	Authorization to convert part of severance benefits into profit-sharing wages. Lower social security taxes on profit-sharing wages. Profit-sharing wages for young people starting work for the first time. Obligation that $x\%$ of wage increases must be in the form of profit sharing.
6. Expansion of markets	Lower tariffs. Maintain a high, stable exchange rate.	Neutral incentives; insufficient use of industrial base created by import substitution.	Apply a temporary pro-export policy bias.	Credits, drawback arrangements, special tax provisions for non-traditional and pioneering exports. Encouragement of internationa-lization of local firms.
7. Technological development	No action taken: "black box" attitude.	Low competitiveness due to technological lag.	Incorporation and spread of technical progress. Achievement of systemic competitiveness.	Organization of visits to most advanced foreign firms. Strengthening of technological infrastructure (especially in informatics and telecommunications). Strengthening of linkages between the production and technology systems.
8. Role of the State	Passive (deregulation).		Active (promotion of role of State).	

Consequently, ECLAC proposes that priority should no longer be given to cuts in expenditure, but instead efforts should be made to increase tax revenue.

Indeed, in so far as inflation is a kind of tax (implicit, but none the less real), increasing tax revenue in order to reduce the fiscal deficit, and hence inflation, simply means replacing an implicit tax with an explicit one, without however increasing the net effective tax burden. Furthermore, the tax burden of the private sector in the region is not very high: if we exclude the taxes paid by State enterprises, especially those engaged in the extraction of natural resources, this burden amounts to 16% of the regional GDP (the highest national levels being 20% and 22% in Mexico and Chile, respectively), whereas in the OECD countries it amounts to 25% of the product. Consequently, there would appear to be ample room to raise the tax burden in the region, especially as regards direct taxes, which stand at only 3% of GDP, whereas in the OECD countries they amount to 13% and in the recently industrialized Asian countries to 7%.

Opinions differ on the best ways to increase tax revenue. ECLAC's view is that instead of raising the marginal tax rates, which are usually quite high, it would be more useful to apply measures such as the following: diminish the wide range of tax exemptions, which not only reduce revenue but also facilitate tax evasion; broaden the tax base (for example, by establishing taxes on capital gains, dividends, interest on time deposits, income from rents, etc.), and reduce the enormous tax evasion currently practiced.

The last-named measure is by no means an illusory aim, since there are countries in the region which have managed to increase their tax revenue in four years by as much as 4% of GDP through well-designed campaigns against tax evasion. Such campaigns include the following: i) tax simplification measures in order to reduce the number of tax rates, special taxes and exemptions, which in many cases turn tax legislation into an incomprehensible jumble of red tape (before the 1975 tax reform in Chile, for example, the list of exemptions occupied 164 pages); ii) drastic penalties for tax evasion; iii) computerized, cross-referenced processing of tax information; iv) testing of tax inspectors and dismissal of the least-qualified so that the remainder can be given higher salaries; and v) dismissal and exemplary punishment of the highest-level corrupt officials in the internal revenue service, especially if they are members of the governing party, in order to give greater credibility to the campaign against civil service corruption.

b) *Increasing private saving and investments*

All the experts also agree that increasing private saving, and hence investments, is vitally important in order to increase the number of well-paid jobs. There are differences of opinion, however, regarding the most suitable ways of promoting such saving. Orthodox analysts usually advocate an increase in real interest rates in order to promote private saving. ECLAC agrees, of course, that negative real interest rates considerably reduce the saving potential. Both practical experience and theory, however,[3] indicate that in less-developed countries, once real interest rates reach a level slightly higher than that of international rates,[4] further increases in those real domestic rates have little impact on saving.

Likewise, for obvious reasons of equity, ECLAC does not agree either with classic orthodox policies designed to increase saving by reducing wages and thus transferring resources from wage-earners, whose propensity to save is low, to capitalists, who are supposed to have a high propensity to save. Instead, in order to increase private saving ECLAC advocates the adoption of forced saving measures in the form of either higher taxation or greater institutional saving. In both of these cases, State intervention is necessary. By way of example, an increase in social security contributions and postponement of pensionable age to a level more in keeping with current longer life expectancy would both increase private saving and make it possible to cover the deficits equivalent to between 2% and 6% of GDP which currently effect the social security systems of the region.

[3] Raising interest rates has a positive substitution effect because it encourages the postponement of consumption instead of present consumption. It also has a negative income effect, however: when interest rates rise, the income from savings increases too, thus reducing the need to make an effort to save. This negative effect reduces or even cancels out the substitution effect, thereby limiting the increase in saving brought about by interest rate rises.

[4] Real interest rates in less-developed countries tend to be higher than international rates because their economies usually suffer from greater macroeconomic and political instability and saving therefore entails greater risks.

c) *Proper allocation of investments*

For reasons of both growth and equity, it is important not only to increase investment but also to ensure that it goes to the most promising sectors. According to conventional wisdom, in order to take the fullest advantage of the scarce available capital it is necessary to allow interest rates to fluctuate freely. Regardless of the possible vices or virtues of this approach, however, ECLAC considers that interest rates cannot be the only instrument for resource allocation, since the serious gaps, flaws and cases of segmentation in capital markets in the region make it essential that the State should take measures to correct the serious and costly distortions in resource allocation caused by these shortcomings.

The fact is that capital markets in the region are very poorly developed, especially as regards the supply of long-term funds, and access to capital is highly segmented, to the detriment of medium-sized and small enterprises, while access to international capital is even more limited. Consequently, the mobility of capital among the various economic agents, companies, sectors and regions is severely restricted, and this is compounded by the high transaction costs (or the impression that they are very high), the negative practice of demanding guarantees rather than evaluating the projects in question when deciding whether to grant loans or not, and the preference of firms for investments in other companies in which they have a majority share, in similar or related sectors or in the same region. These limitations oblige most firms to finance their own investments to a much larger extent than would be necessary in a market with good capital mobility. This artificial shortage of capital has particularly serious repercussions in the region in terms of underemployment and unemployment, since it keeps labour productivity down to a much lower level than if capital were fully mobile or less concentrated.[5]

In order to overcome the problem of the artificial shortage of capital, ECLAC proposes, among others, the following measures to strengthen and consolidate capital markets: establishment of investment funds to provide venture capital or capital for the launching of new enterprises; establishment of a secondary securities market for family or closed companies, with requirements as regards bookkeeping and auditing which are greater than those currently demanded but less than those demanded from firms quoted on the stock exchange; generalized conversion of financial assets into securities ("securitization"); leasing and leaseback facilities for both new and used equipment; factoring; requirement that 100% of profits (and possibly even of amortization funds) should be distributed to shareholders as dividends; encouragement of reinvestment of profits by shareholders or financial intermediaries in the same or other firms; and taxation of land and property on the basis of its market value.

d) *Increasing private-sector investment in human capital*

There is no doubt that investment in human capital significantly increases the productivity of all factors, but especially of labour, thereby also increasing demand. A substantial effort to increase such investments is called for from both the public and private sectors. Because of the lack of "real" guarantees for loans made for this purpose, however, there is no private market where loans for investment in human capital can be obtained. It is strange that such an obvious and important fact should have been ignored in the specialized literature (with the notable exception of Becker),[6] and in economic policy.

Thus, despite the high rates of private and social return afforded by general education, vocational training and post-secondary studies (rates which are usually over 20% per year), hardly any private loans are made for investments in this field. Unless his family, or he himself, possesses savings to finance

[5] Strictly speaking, the concentration of wealth and the insufficient mobility of capital are not the only factors governing the adoption of capital-intensive technology. It should also be remembered that the capacity in terms of business decisions of those responsible for managing a large amount of capital is not completely elastic, so that they prefer to use capital-intensive technology which allows them to save labour. The use of labour-intensive technologies which absorb the whole of a firm's capital also demands a complex and extensive administrative structure which is usually beyond the firm's management capacity and, moreover, may dilute the owner's power and control.

[6] As far back as the early 1960s, in his classic work *Human Capital*, Becker (1964) referred to the negative consequences of the virtual absence of a loan market for investments in human capital. The vast majority of analysts, however, have devoted no attention to the study of this market, perhaps precisely because it does not exist.

his studies, a worker can only obtain training thanks to his employers, who will naturally tend to invest only in training which raises labour productivity within their own firm, i.e., specialized training. This is why investment in training is so much less than is needed, to such a point that a worker in the region receives, on average, only one or two months' training during his entire working life, which may last 40 or 50 years.

The lack of private institutions which provide loans for investments in human capital results in unsuitable allocation of capital in the economy: there is over-investment in physical capital goods, but there is too little investment in human capital, thereby reducing the national product and total factor productivity and adversely affecting labour productivity and the demand for labour. This is one of the main causes of underemployment and unemployment in the region and is a clear example of a market flaw which militates against both efficiency and equity.

In order to overcome the problems of the lack of guarantees and the difficulty of securing reimbursement, which make it virtually impossible to obtain private loans for investments in training and post-secondary education, ECLAC has suggested that advantage should be taken of the fact that most workers will be net creditors to the government at the end of their working life, because of the forced savings represented by their contributions to social security. Specifically, ECLAC proposes that their pension rights should be used as guarantees for such loans: both those expected to be taken out by the debtor in the future and those effectively accumulated by his guarantor. Once the debtor's studies are over, higher than usual contributions would be levied through automatic payroll deduction from the wages of the debtor –or, in case of default, those of his guarantor– until the loan and interest commitments were paid off. This combination of adequate guarantees and security of reimbursement would stimulate the private sector to grant loans for investments in human capital, [7] while at the same time it would encourage more saving by the beneficiaries and their guarantors.

e) Rigidities in the labour market

Orthodox analysts attribute unemployment basically to rigidities in the labour market. They therefore stress the need for measures to facilitate dismissals, limit unionization and strikes, deregulate the entry of workers into certain activities and eliminate or reduce the minimum wage. There is no doubt that trade union monopolies and entry barriers may be dangerous: in economies like those of the region, which are trying to gain a foothold in the international market, for example, control of port activities by a union which limits the number of workers could involve high costs. Normally, however, this kind of problem only affects a very small segment of the labour force.

For most workers, the great problem is the low productivity of their jobs, and this is due in large part to rigidities deriving from the traditional practice of paying fixed wages which do not link the workers' income to the performance of the firm. This seriously limits the potential for raising productivity and makes it necessary to resort to dismissals as the only practical way of coping with recessions.

ECLAC therefore advocates a system of flexible (participative) wages like that used in Japan, South Korea and Taiwan, where a substantial part of a worker's total income is linked to the performance of the firm he works for, thus helping to raise productivity, promote cooperation, and reduce conflicts within the firm. A point which is just as important, or even more so, is that such participative wages favour increased employment, for whereas firms that pay fixed wages usually respond to a fall in demand for their products by lowering their levels of production and employment, companies which pay profit-sharing wages will tend to reduce their prices in order to keep up their sales and production, since they know that the lower prices and revenue will automatically be reflected in a smaller payroll. This helps to explain the good labour relations, high productivity and low unemployment registered in Japan.

Among the measures which could be taken to facilitate the use of participative or profit-sharing wage systems are the following:

i) since there would be less unemployment, authorization could be given for the voluntary conversion

[7] In these circumstances, it would mean that the worker's forced savings would not only bring him benefits in the future, when he retires, but also at present. This would only be possible if the worker's own contributions or those of his guarantor could be used as a guarantee, and if the law authorized operations of this type, which are currently prohibited.

of part of the severance entitlements provided for in the labour laws of most of the countries of the region into a specific percentage of workers' income, varying in line with the firm's performance;

ii) since young workers are those who suffer most from the current "last in, first out" practice, a fixed minimum wage lower than that currently in force could be established, so that, for example, 20% or 25% of a worker's income in a normal year would depend on the firm's performance;

iii) since the generalized use of participative wages gives rise to positive externalities for the economy, by bringing the product and employment close to their full potential, a smaller percentage of that part of the worker's wages corresponding to such variable income could be deducted for social security purposes, and

iv) even more importantly, and likewise because of the positive externalities involved, it could be stipulated that real wage increases (i.e., greater than the expected inflation) could correspond solely to a certain percentage of that part of the worker's income linked to the firm's performance, until the percentage of variable wages reached the desired level (for example, 20% or 25% of a worker's pay in a normal year).

f) Gaining entry to fast-growing markets of high purchasing power

It is no use producing more goods if they cannot be sold. In order to generate productive employment, the products of the region must gain access to fast-growing markets of high purchasing power, for small markets like those existing in the region (with the exception of Mexico and Brazil) limit both efficiency and equity: the former because they do not allow advantage to be taken of economies of scale or the benefits of specialization, and the latter because they hinder the expansion of employment. It is therefore indispensable to make progress in terms of the international linkages of the region.

Some authors consider that this is the approach that should have been taken from the start. ECLAC, however, feels that import substitution-based industrialization made sense as a first stage in which firms had to learn to produce. Moreover, export-oriented industrialization was not feasible in the 1930s because of the Great Depression, in the 1940s because of the Second World War, and in the 1950s because of the European reconstruction process. However, the time has long been ripe for the transition to the second stage –that of the export of non-traditional products, especially manufactures– in order to make better use of the industrial facilities created through the import substitution-based industrialization strategy.

Be that as it may, no-one questions the importance of improving the international linkages of Latin America and the Caribbean any more, although there may be differences of opinion on how to achieve that objective. According to the orthodox school of thought, for example, in order to stimulate exports it is necessary to lower tariffs and maintain a high exchange rate.

Both these measures are undoubtedly necessary. Nevertheless, ECLAC considers that the use of neutral instruments is not enough to achieve fast-improving and effective linkages with international markets in order to make better use of the production structure established in the import substitution stage. Instead, it holds that the real challenge facing incipient industry in the region is not in the field of production but in that of the penetration of international markets. It therefore proposes that economic policy should be given a temporary bias favouring both the opening of new markets and the promotion of non-traditional exports (figure 2), and in contrast to the orthodox approach it advocates active (though selective and temporary) promotion of non-traditional exports and of the penetration of new markets. The first firms to sell new exports on foreign markets or to open up new markets for traditional exports should be considered as Schumpeterian innovators, and their initiatives and innovations should therefore be given

FIGURE 2
Alternative development strategies

Role of the State	Orientation: Outward	Orientation: Inward
Passive	Orthodox proposal	
Active	Present ECLAC proposal Example: the "Asian tigers"	Past ECLAC proposal

special temporary incentives similar to the patents granted to the inventors of new technologies. This would allow better use to be made of the existing industrial structure and would ensure the broader, growing markets which are essential for generating solid, sustainable growth of the product, employment and real wages. Thus, just as in the past the most suitable instrument for fostering incipient industry was import substitution furthered by protective tariffs, today the most suitable instruments for furthering truly innovative activities are those which promote non-traditional exports and new markets through temporary subsidies, special drawback arrangements, and loans at international interest rates.

g) Technological modernization

There is a big difference in productivity between the typical enterprises of the region and those of the developed countries, and it is up to firms in the region to narrow this gap by selecting, adapting and adopting the "best international practices" which are most suitable for local business. Such an effort has a certain cost, however, and the firm which is first to modernize its practices in this way will reap only part of the benefits. There will therefore be a tendency not to invest as much as is necessary in this effort, since each firm will prefer to let its competitors absorb the cost of identifying, adopting and developing the most suitable technology for the country, with the idea of subsequently imitating those pioneers at much lower cost.

Since it is considered that what happens within a business company is the exclusive responsibility of the businessman and not of the State, this microeconomic problem is normally completely ignored in the neo-liberal approach. This is not so, however, in the case of the neo-structuralist approach, which views the solution of this problem as possibly the greatest challenge to be faced in the modernization of business and the elimination of differences of productivity. It therefore proposes a massive programme to speed up the spread of the best technologies through the shared financing of visits to firms employing the best practices abroad: i.e., a kind of "learning by visiting".

As was done so successfully in the technical assistance programme for European reconstruction after the Second World War, it is proposed that inspection visits to six or eight plants representing the best practices abroad should be organized and co-financed,[8, 9] for some 15 to 20 staff (employers, engineers, technicians, supervisors, operatives and trade union officials) from each one of 50 subsectors (for a typical country of the region).[10] The visits would last around six weeks, and on their return each group would draft a report on the best practices observed, not only in terms of the equipment and technology used, but also as regards production methods, organization of work, industrial relations, quality control, marketing, etc. Subsequently, the members of the subsectoral groups would spread the results of the visits among five or ten other firms in their country.

When this was done in Europe, at very low cost (approximately US$20 million per country for visits by 20 persons from each of 50 subsectors), it was possible to achieve increases in productivity of the order of 25% to 50% in each of the participating firms, without any significant increases in net investment (Silberman and Weiss, 1992). The execution of such a programme in the region could be expected to bring similar or even greater increases, since the disparity between the total factor productivity of the developed countries and that of Latin America (a ratio of approximately 2.5 to 1) is much higher than that which existed between the United States and Europe in the late 1940s. The programme not only has an extremely high cost/benefit ratio but

[8] This co-financing could mean, for example, that firms would continue to pay their workers' wages while they took part in the visits and prepared the relevant reports, and the government contribution would cover the travel, subsistence and administrative costs of the programme (estimated at around US$20 000 per participant, or US$20 million for the whole programme involving 20 persons from each of 50 branches of production).

[9] In the time of the Marshall Plan, all the plants using the "best practices" were in the United States. Now, of course, depending on the branches in question, they might be in Europe, Japan or the United States. It would therefore be necessary to enjoy the collaboration not only of the United States government and producers, but of those of all the OECD countries.

[10] Obviously, the number of the most relevant sectors and plants using the "best practices" would vary according to the size of the country and its current level of technological sophistication. Thus, for example, although they might be using the best practices, the plants visited would not be the same for visitors from Brazilian producers (which are of large scale and have a higher level of sophistication) as for representatives of Central American firms (which are smaller and produce for specialized, integrated market niches), to say nothing of the very different scales of production and marketing involved.

is also of massive scope, since with the same multiplier as in the case of the Marshall Plan it would be possible to spread the experience to between 5 000 and 10 000 firms. This would enable the region to finally take advantage of its belated development and cut corners so as to race towards the world technological frontier. [11]

Naturally, a prior requisite for the rapid and effective adoption of technology and its adaptation to local conditions is that there should be a certain minimum scientific, and especially technological, infrastructure which has some research and development capacity of its own and is closely linked with the production sectors.

IV

Conclusions

In short, growth with equity is not only desirable from the ethical point of view but is also perfectly possible from the technical standpoint. In order to overcome poverty it is necessary to generate good stable jobs of high and growing productivity: in other words, there must be a policy aimed at modernizing firms and increasing their own productivity and that of their environment. ECLAC feels that in order to achieve these objectives it is not enough merely to take the liberalization and deregulation measures that form the essence of the traditional proposals, as though the markets were perfect. Instead, in line with the neo-structuralist tradition, ECLAC advocates more active instruments which will make it possible to overcome the critical obstacles in key markets (for physical and human capital, labour, technology and foreign exchange), the degree of activism being subject to the State's real capacity to take action and to do so efficiently. [12]

(Original: Spanish)

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[11] Furthermore, this proposal means that productivity becomes a central, uniting issue and assumes its proper status as the main source of solid and lasting improvements in the standard of living of the whole population, for which purpose the effort made must be a national one, and not just the responsibility of the business sector or a few groups. It also does away with the need to try to pick "winners", since the programme is open to all the sectors that wish to participate, or at least to the first 50 which organize themselves and present a programme for their sector each year and are willing to take part in the co-financing of the programme.

[12] The measures referred to are not a minimum or maximum set of needed actions. They are merely an example of the measures that could be taken to overcome the obstacles existing in the markets, provided that these obstacles represent a critical problem and that the State has the necessary institutional capacity to tackle them without neglecting its fundamental functions, including the maintenance of the necessary macroeconomic balances, the execution of the necessary social and infrastructural investments, and the provision of a reasonable level of social security.

Stability and structure: *interactions in* economic growth

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The recent economic development of the region confirms that stability has not yet been firmly consolidated in it. There are still some structural factors of macroeconomic instability, various sequels of the debt crisis have not yet been overcome, and fresh macroeconomic tensions of various origins have made their appearance. The challenge currently facing economic policy is to implement reform and growth policies while maintaining the recent achievements in terms of stability. A prior requisite for this is a proper understanding of the way macroeconomic and microeconomic factors interact: the mutual influence of constraints in terms of macroeconomic consistency, on the one hand, and the imbalances generated in the reform process and the consequent changes in the production base, on the other. This article therefore seeks to analyse why "the macroeconomic problem" has an identity of its own and the ways in which it affects the microeconomic structure (both real and financial) and is in turn affected by it. It goes on to try to identify the most important micro-macro transmission channels and finally sets out some reflections on the way in which micro-macro interactions help to determine the growth potential of an economy.

I
Introduction

During the 1980s, the debt crisis gave rise to an unprecedented level of macroeconomic instability. In this context, stabilization became an absolute priority and the question of growth was relegated to the background. In the last few years, however, problems relating to growth and the development of production have been gaining ground in the Latin American economic policy agenda, and this undoubtedly represents a considerable advance.

The fundamental factor which has made possible this change in the relative levels of priority assigned to stability and growth has been the change which has occurred in the international capital market: in these first few years of the 1990s there has been a sharp fall in external interest rates and the rationing of credit from which the countries of the region had been suffering has appreciably eased. Thus, the two basic factors which had served to generate the debt crisis have been deactivated. Under these new circumstances, governments have had greater freedom to carry out successful stabilization policies and there has consequently been a general improvement in the key aggregate variables of the countries of the region, with the very important exception of Brazil (Damill, Fanelli, Frenkel and Rozenwurcel, 1993). Once stabilization ceased to be such a pressing need, there was a chance to start thinking about growth. As a general rule, efforts have been made to reactivate the sources of growth through structural reforms aimed at heightening the role of the market and increasing the efficiency of the structure of production.

It must be borne in mind, however, that stability is far from having been consolidated. Some structural factors of macroeconomic instability are still intact, the debt crisis has left sequels which have not yet been overcome, and fresh macroeconomic tensions have appeared as a by-product of the faster implementation of structural reforms.

We have expressed the view that this new situation represents an advance. If we take into account the potential factors of imbalance that still remain, however, we must add that it also represents a challenge: basically that of making intelligent use of the greater leeway available in order to set in motion policies for reform and growth, while maintaining the recent achievements in terms of stability. One necessary condition for facing this challenge is to understand –if only roughly– the way the macroeconomic and microeconomic factors interact: i.e., to understand how the constraints regarding macroeconomic consistency (both short and long term) condition the imbalances generated during the reform process by the consequent changes in the production base, yet at the same time are themselves conditioned by them.

This article analyses the factors that affect the relation between consistency of the aggregates and development of production. In order to deal with this problem it is essential to use analytical results drawn not only from macroeconomics and microeconomics but also from growth theory, financial theory, public finances, industrial organization, international trade and the dynamics of technological change. In order to be fruitful, an interdisciplinary approach must necessarily be taken, and this is precisely one of the most difficult obstacles to overcome. There is very little systematic interaction at the analytical level between macroeconomists and specialists belonging to each of the branches in question –especially those dealing with the analysis of industrial organization, innovation and technological change. For this reason (and, among other things, the macroeconomic slant in the authors' background) this article can only be of an exploratory nature. Our greatest desire in writing it is that it may prove to be of some use for future interdisciplinary studies on the relation between "micro" aspects (that is to say, factors relating to the structure of production) and "macro" considerations (i.e., consistency of the aggregates). This desire stems from the firm belief that many of the secrets of growth are hidden in the complex web of "micro-macro" relations.

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If the most important forms of "macro-micro" interactions could be identified, then it would be possible to analyse the way in which different macroeconomic scenarios, characterized by different configurations of aggregate variables, have a positive or negative effect on the conduct of the economic agents, the morphology of institutions, and, ultimately, the efficiency and growth path of the economic structure. It would also be possible to assess whether structural reforms designed to change the characteristics of the context in which microeconomic decisions are taken help or hinder the consolidation of stability. Naturally, in view of our objectives, our analysis will be aimed primarily at determining the particular features of these mechanisms in the present Latin American context, which is marked by a state of stability which has not yet been consolidated and the more rapid adoption of structural reforms designed to heighten the role of the market.

II

Some further details of the problem to be analysed

It would be desirable at this point to make some clarifications which will help both to avoid certain possible points of confusion and to delineate the subject of our analysis more clearly. Let us begin with a semantic clarification. We are using the terms "micro" and "macro" for reasons of convenience and brevity, and without much respect for the traditional division of labour in our discipline. In this study, the "macro problem" covers the short-term questions which are traditionally dealt with by macroeconomics, but it also covers other matters connected with the long-term consistency between saving and investment which are usually analysed under growth theory. Our use of the term "micro", on the other hand, covers a range of characteristics of economic structure which is in one sense broader but in another sense narrower than that usually studied in microeconomics. It is broader because we include in the "micro problem" questions normally dealt with in institutional approaches and in the literature on innovation and industrial organization, but it is narrower because, for example, we do not refer to questions connected with consumer theory.

Normally, the micro-macro relation is analysed in literature on the micro-bases of macroeconomics. The purpose of this literature is to study how the individual forms of conduct determined by a given micro structure (resources, technology, consumer preferences and market structure) may serve as the basis for the broader proposals of macroeconomics, so as to arrive at a unified theory. In the final analysis, the aim is to dilute the macroeconomic problem by converting it into an epiphenomenon of microeconomic forms of behaviour, ultimately explainable in terms of a general theory based only on principles of conduct for each individual agent. In spite of all the efforts made, however, it has not been possible to arrive at results which enjoy a minimum of consensus among the specialists. The discussion set forth in the following pages is only tangentially related with this problem, however, and we should like to make it clear right away that we have no intention of trying to reinvent the wheel.

Unlike the micro-bases approach, which seeks to solve a theoretical problem, the approach used here is based on our experience of case studies in Latin America. Because of the lack of an integrated theoretical structure, in the economic analysis of specific cases the problems of microeconomic structure and the macroeconomic problems are studied separately. In line with the foregoing, we take it as a methodological assumption in this study that the macroeconomic problems have an identity of their own and that the same is true of the microeconomic problems relating to the structure of production. Hence –and basing our work on the actual facts identified through the study of specific cases– we seek to identify the interaction between the two types of problems: how do given micro structures affect macroeconomic stability, and how do different macroeconomic imbalances help to shape a particular micro structure? This approach does not assume that the micro structure is of a given type and is invariable in the presence of macroeconomic imbalances.

An example could serve to illustrate this. In the traditional literature it is assumed that inflation occurs as a result of a lack of coordination whereby aggregate demand exceeds supply. Let us assume that this is due to an excess supply of money. In order for the imbalance to disappear, all that would be necessary would be for the monetary authorities to apply a contractionary monetary policy that would lead to a real amount of money exactly equal to the demand resulting from the sum of the demand of each of the individual agents. The assumption is that the microeconomic structure is invariable in the presence of macroeconomic imbalances and that there is one, and one only, demand for money compatible with each level of inflation. However, this is not always in keeping with the observed facts in Latin America.

Let us suppose that there is a given rate of inflation which rises because of an increase in the rate of money issue, leading to a decline in the demand for money. Let us further suppose that, through stabilization policies, the authorities manage to bring the rates of inflation and money issue back to their previous levels. In a context like this, we have often observed in Latin America that the demand for money does not in fact return to its original level and –a very important point– there are financial markets which simply disappear (typically, the longest-term markets). In other words, for a certain given rate of inflation there could be (although this is not necessarily so) two different levels of demand for money and two different structures of financial markets. If this is so, it means that eliminating the macroeconomic imbalance does not necessarily mean returning to the "same" economy as before. The macro imbalance produces a mutation in the micro structure. This type of phenomenon is not confined to the monetary field, since it also takes place on the real side of the economy. This happens, for example, when variations in the rate of inflation lead to permanent changes in the average length of contracts or to the outright disappearance of some types of contracts. In both cases, the structure of production may suffer changes because there are production activities which cease to be viable if certain forms of contracts are no longer available. [1]

The argument we are putting forward is not that every macro imbalance always gives rise to micro changes, but that it is possible to identify certain configurations of macro imbalances which do indeed produce structural changes. Obviously, whatever the type of imbalance, the macroeconomic aspect is important in itself, because it has enough causal properties to condition the decisions of individual agents, regardless of whether the microeconomic framework is considered invariable or not. But when those decisions lead to changes in technology or in the propensity to innovate, to destruction of wealth, to variations in the capital/product ratio or to changes in institutions (changes in the type of contracts, disappearance of markets, etc.) it cannot be assumed that the micro framework within which individual decisions are taken has remained invariable.

The importance of this question is clear when we look at the long-term evolution of the micro structure. There are features in the economic structure which cannot be explained solely in micro terms, without reference to the macro context in which that evolution took place. It then becomes necessary to explain what are the characteristics which, when assumed by some specific types of macro imbalances, mean that the occurrence of the latter leads to permanent changes in the micro structure. In this respect, the aim is not to take the place of the traditional short-term macroeconomic approach which assumes a given micro framework, but to complement it by including in the analysis the long-term effects that cases of inconsistency of the aggregates may have on that framework.

In this article, we argue that in order to bring about such an extension of traditional macro analysis it is necessary to include not only cases of stable imbalance but also those of unstable imbalance. In other words, it is necessary to include macroeconomic scenarios marked not only by explosive situations of instability (such as hyperinflation), but also –and above all– those involving prolonged periods of instability which do not become explosive (e.g., lengthy periods of three-digit inflation) or those which display a systematic propensity to generate pronounced and recurrent imbalances, so that this becomes an inherent feature of the macroeconomic context. In our view, it is precisely the perception by economic agents that they are living in an economy marked by macroeconomic instability which leads them to adopt forms of conduct that end up by causing structural changes in the micro environment.

Indeed, the importance of this question is already implicitly recognized in the language used to discuss macroeconomic phenomena in Latin America. When the literature refers to macroeconomic problems in the developed countries, it talks about macroeconomic imbalances. When it refers to macro-

[1] For more details of the relation between inflation and contracts, see Frenkel, 1990.

economic matters in the case of Latin America, however, it changes without more ado from the word "balance" to the term "stability" and proceeds to talk about the problem of macroeconomic stabilization and stabilization policies. In the first case, it is implicitly assumed that the economy is stable and that the problem faced by macroeconomic policy is how to speed up the return to equilibrium of an inherently stable economy. In the second case, however, it is not assumed –in our opinion, quite rightly– that the economy is stable, and the perceived problem is not how to hasten the return to a predefined state of balance but how to find policies for making an unstable economy stable. It is a question of defining a new equilibrium configuration and new forms of dynamic adjustment in a state of imbalance.

This is precisely why stabilization policies usually include structural reform elements and it is so difficult to separate the two components. This is also an important reason why it is necessary to take a macroeconomic approach which includes matters normally dealt with in growth theory. If the economy has features of instability, then it is necessary to change the parameters that define it in order to make it stable. In other words, it is necessary to reform part of its structure. Moreover, if the stabilization efforts are successful, the stabilized economy will not really be the same economy that gave rise to the macroeconomic imbalances which led to the application of the stabilization policy. Inherently stable economies are not stabilized: they merely return to a state of equilibrium. It is unstable economies that have to be stabilized: i.e., that must be structurally changed so as to put them on stable paths towards balance so that they finally can become balanced economies.

The close relation between stabilization and structural reform that is highlighted by instability phenomena gives rise in turn to other problems. When designing the structural change policies which must accompany stabilization: What are the structural parameters that must be changed? What are the features of the micro structure that give rise to the propensity to instability, and how do the necessary changes affect the growth capacity of the economy? All this makes it essential to analyse the effects of micro elements on macro ones.

In short, in the approach adopted in this study the relation between micro and macro elements is seen as a two-way street, so that we have two tasks before us. The first is to analyse why there is a macroeconomic "problem" which has features and an identity of its own and warrants (analytically) separate treatment from the other questions concerning the evolution of production activities. In particular, it is essential to have a clear idea of why macroeconomic imbalances and, very often, the appearance of cases of instability, have so keenly affected the growth rate and morphology of the production structure of Latin America. The second task is to see how the imbalances which exist in the production structure, as well as the greater development and sophistication of that structure, could help to deactivate the structural factors that lie at the root of the propensity of the economies of the region to generate heavy and recurrent macroeconomic imbalances which often take on the nature of downright instability.

III

From macro to micro: the special features of the macroeconomic problem and structural changes

The reason for the appearance of the literature on micro-bases is that it is not possible, on the basis of purely microeconomic principles, to deduce a theorem from the actual facts observed at the macroeconomic level, such as unemployment or the importance of nominal variables in determining the level of aggregate activity. Because of the impossibility of solving this question, it was decided, as a working hypothesis, to view the macroeconomic problem as an entity of its own, independent of individual forms of conduct. In order to define such an entity, macroeconomic analysis identifies a group of fundamental variables which determine the evolution of the economy at the aggregate level. These variables are those associated with the evolution of the external sector, the fiscal accounts, and the balance between global saving and investment. [2] When pronounced unforeseen changes take place in these fundamental variables, cases of lack of coordination among individual plans occur and imbalances arise in the macroeconomic entity.

The nub of the macroeconomic problem is the existence of these flaws of coordination. When they occur, this means that not all the economic agents are in a position to trade *ex post* on the markets the amounts which they had planned to trade *ex ante*. There is a macroeconomic imbalance because there is a lack of coordination at the aggregate level.

The main distortion generated by a situation of imbalance is that the agents may be obliged to carry out transactions which may be greater or smaller than they wish, and this affects them in terms of budgetary constraints or their wealth position. [3] As a result, they are obliged to make unforeseen adjustments in order to bring their balance-sheet back into balance, and these adjustments may affect both the real side (reallocation of factors) and the financial side (portfolio decisions), and both flows (decisions within a given period) and stocks (reallocations of resources between time-periods). These problems arise in any situation of imbalance, but when they are due to flaws of coordination at the aggregate level the key point is that there will be a macroeconomically substantial number of agents carrying out transactions in a state of imbalance and hence adjusting their balance-sheets.

In turn, the effects of these adjustments on the balance-sheets of other agents –who were perhaps initially not affected– cannot be ignored, because they will be of significant size. In other words, there will be spillover effects on other markets which will tend to heighten the impact of the imbalance on a given market or markets. Moreover, as transactions in a state of imbalance may affect not only flows but also stocks, the spillover effect may have substantial consequences over time. The imbalance can be "read" in each agent's balance-sheet by looking at the decisions on stocks and flows that they have to take in order to correct the imbalance, and this is precisely why flaws of coordination are of fundamental importance for understanding why macro elements affect micro ones.

The channels of transmission through which coordination flaws at the aggregate level end up affecting the decisions of the individual agents are many and varied. In view of the type of analysis with which we are concerned here, however, a general classification of the fundamental channels will be enough. The basic transmission mechanism in a market economy is naturally that which operates through the price system: i.e., through variations in the relative prices on both the real and financial sides. However, the price system does not operate optimally, because prices are not completely flexible, the supply of information is not perfect, there are factors which weaken competition, and there are rigidities and frictions in the reallocation of resources. In reality, it is because of these market flaws that there are flaws in coordination and imbalances which lead to the generation of false relative price signals. In such circumstances, the fact that the price mechanism is not optimal leads to over- or under-corrections of prices which cause variations in amounts (of supply or demand) and wrong financial decisions: that is to say, decisions which prevent the agents from being able to trade the planned amounts on real and financial markets. The phenomena of unemployment on the real side and situations of over-indebtedness or severe liquidity constraints on the financial side are the most visible signs of this type of situation.

When the agents realize that their decisions may be mistaken because the prices do not include all the

[2] In the discussion on stabilization and growth in Latin America, the crucial role of these three factors led to the development of the literature based on "three gaps" models: the fiscal gap, the external gap and the internal (saving/investment) gap. See, for example, Fanelli, Frenkel and Taylor, 1992.

[3] The traditional literature on imbalances (Leijonhufvud, 1968; Benassy, 1982) places emphasis on the transactions which are not carried out because of flaws of coordination. In another study, however, we have argued that this emphasis is not justified (Fanelli, 1988). This is particularly so at the financial level, where, in situations of imbalance, over-indebted agents typically have the possibility of delaying their payments, thus forcing their creditors to lend them more than they were *ex ante* willing to do. This type of situation was very common during the debt crisis, when a number of Latin American countries applied payments moratoria. When emphasis is placed on the transactions which are not carried out, the system of rationing used in the situation of imbalance is that "the short arm of the market calls the tune" (for example, if there is an excess of supply, the amounts determined by demand are traded). When more transactions than desired are allowed to take place, the rationing system may be based on the domination of the "long arm of the market" or on a linear combination of the amounts determined by the short and the long arms. In the first case, all the transactions are voluntary, but in the second case there may be forced or involuntary transactions.

relevant information or include information which may be wrong, they seek information to supplement that provided by relative prices. As the most visible effects of the imbalance affect the real amounts traded and the variations in the agents' financial position, two new sets of signals appear which need to be taken into account in individual decisions: information on the real amounts traded on the markets and information on financial amounts provided by the financial indicators prepared on the basis of the agents' balance-sheets. It is therefore necessary to incorporate two types of transmission mechanisms as well as prices which affect microeconomic decisions and through which macroeconomic elements ultimately affect microeconomic ones. These are, on the one hand, the mechanisms operating through quantitative indicators on the real side (such as unemployment and idle capacity), and on the other, those acting through variations in the financial quantitative indicators. Among the latter are flow/flow indicators (such as that reflecting interest/sales); short-term stock/stock indicators (such as that reflecting liquid asset liquidity/short-term debt receivable) and long-term indicators of the same type (such as indebtedness/net worth), and stock/flow indicators (e.g., sales/debt).

Once the special features of the macroeconomic problem have been defined (its basis on the fundamental variables and flaws of coordination, on the one hand, and the transmission mechanisms between the aggregate imbalance and the microeconomic forms of conduct, on the other), it remains to see how the effects of the economic imbalance lead, under certain circumstances, to changes in the morphology of the micro structure and in its evolution over time. As we already noted, phenomena of instability are of fundamental importance in this. We now wish to show how this links up with the quantitative magnitude of the flaws of coordination, their duration in time, and their recurrence.

Total coordination (that is to say, the complete absence of macro problems) only occurs in a context of general equilibrium, and such a context is an ideal construct. Nevertheless, it is a useful construct because reference to such a situation makes it possible to consider different degrees of macroeconomic imbalance. Although economies are always to some extent in a state of imbalance, a limited degree of imbalance may be considered of little significance in determining how they function, and the assumption of balance may be useful when modelling such functioning. The macroeconomic problem takes on major importance, however, when the size of the imbalances in the fundamental variables is so great that it significantly affects the functioning of the economy.

In traditional macroeconomic analysis, the aggregate imbalance is seen as a temporary phenomenon and the main emphasis is placed on the search for the best means of intervention –especially in terms of the use of fiscal, monetary and exchange rate policies– capable of solving the flaws of coordination and at the same time minimizing the length of time during which the economy will be operating in a state of imbalance. Leaving aside the recent discussions on whether such policies are necessary or not, in traditional analysis it is assumed that the imbalance is temporary, either because the economy regulates itself in a suitable manner without the need for policy intervention, or because, if this is not so, it is nevertheless possible to speed up the adjustment process by "fine tuning". If this were indeed so, the repercussions of macroeconomic imbalances at the micro level would not be too serious.

This approach becomes too narrow, however, when analysing the macroeconomic problem as it occurs in an economy like that of a typical Latin American country. The basic reason for this is that the macroeconomic problems faced by the region usually display different characteristics from those typically encountered in developed economies. The most notable differences are in the magnitude, duration and recurrence of macroeconomic imbalances. These features are displayed in many and varied ways in each particular economy. However, there is one feature which unites in itself the variety of factors that help to determine an economy's propensity to give rise to flaws of coordination: namely, the degree of stochastic volatility and unpredictability as regards the evolution of the fundamental variables. The more volatile and hard to model the stochastic process generating the observed evolution of the fundamental variables is, the harder it will be to anticipate that evolution, the greater the uncertainty will be, and, ultimately, the greater will be the economy's propensity to generate external or fiscal imbalances or imbalances between saving and investment. In such a context, there will be repeated periods in which serious flaws of coordination will occur.

In an economy which displays these features in the evolution of its fundamental variables, there will be forms of conduct at the microeconomic level which are not observed when this situation does not prevail. What we wish to highlight is that it is one thing to pass through a stage of imbalance, but quite another to live in an economy which has a systematic propensity to generate imbalances. In the latter case –unlike what is maintained in traditional macroeconomic analysis– since a state of macroeconomic imbalance is perceived to be a recurrent phenomenon, the agents see as profitable certain forms of microeconomic adaptation which would not be so viewed if imbalances were only sporadic and transitory phenomena. It is reasonable to assume that, in an economy which has a structural propensity to generate macroeconomic imbalances, the influence of macro elements on the micro structure will be much more permanent and visible. We have already seen that the macro-micro transmission mechanisms operate through the price system, the quantitative information available, and the financial position of the agents. It is worth dwelling briefly, then, on the special features displayed by such channels in an economy with a propensity to generate recurrent and unstable imbalances at the macroeconomic level.

Let us begin by looking at the way this works through the price system. As the main responsibility for eliminating imbalances in market economies is assigned to relative prices, an important consequence of volatility of the fundamental variables will be higher and more pronounced fluctuations in relative prices. That is to say, in the relative prices which economic analysis identifies as key elements precisely because they are associated with the fundamental variables (real exchange rate, real wages, interest rates, etc.). If the price signals received by the agents are more volatile, the degree of uncertainty surrounding the decision-making process will tend to be higher, and there will therefore be a greater probability that individuals will take wrong decisions which will later lead them into a situation of imbalance.

The evolution of the amounts traded in a situation of imbalance is not independent of the foregoing. We have already seen that because of various imperfections (rigidities, etc.) not all the adjustment will take place through prices. Consequently, the quantitative amounts too will evolve in a more volatile manner in a context where it is difficult to foresee the behaviour of relative prices. There will be abrupt and unforeseen changes in these quantitative amounts during the adjustment process, thus giving rise to rapid and recurrent recession/expansion cycles which will add still further uncertainty to the microeconomic decision-making context.

Finally, since in a monetary economy every transaction on the real side has a counterpart on the financial side, the indicators in the financial balance-sheet will also tend to show marked and unforeseen changes. In reality, unforeseen variations in prices and quantities can put the agents off balance even when the latter are taking a "wait and see" attitude at the financial level. This happens, for example, when unforeseen devaluations give rise to equally unforeseen transfers of wealth which often sharply change the financial position of the agents (for example, by turning a solid financial position into a highly speculative or Ponzi position) or when deep recessions lead to unsustainable financial positions.

It is precisely this differentiated manner in which the macro-micro transmission mechanisms operate that explain why, in an economy with a tendency to generate instability, macro imbalances produce micro changes. In reality, the changes observed are related in one way or another with the following fact: in an economy with a high degree of macroeconomic uncertainty in which it is easier to make mistakes, flexibility for changing past decisions has an economic price.[4] Empirically speaking, the most direct way of verifying this fact is to observe the enormous differences of perceived risk between short- and long-term levels of yield. Often, there are situations where these differences become infinite for some terms, so that long-term credit markets simply disappear.

This sort of extreme preference for flexibility has fundamental consequences for real resource assignment, the morphology of the financial system, and –through its effects on investment and innovation capacity– on growth. Later on in this article, we will make use of this result, which is one of the central conclusions of our study because it directly affects the development of production. For now, however, we wish to highlight two other points which are connected with the dynamics of adjustment in equilibrium and the restrictions that an unstable economy imposes on macroeconomic policy.

In an unstable economy, the reactions of individuals not only bring about changes in the micro structure: these changes can also generate mechanisms of adjustment in disequilibrium which lead to explosive dynamic paths of action. For example, there may be a fiscal deficit and inflation may speed up. In order to

[4] The way we use the concept of flexibility is inspired by Hicks, 1974.

protect themselves from the effects of this speeding up, individuals react by shortening the duration of their contracts on a generalized basis. This has the result of narrowing the time horizon for microeconomic decisions. There are investment projects which are not carried out, and financial assets which are no longer in demand. As a result, the level of activity declines and it is harder for the government and the private sector to find takers for debt, even at very short terms. The lower level of activity reduces tax revenue, the fiscal deficit increases and, in the context of the lower demand for public bonds, the only way the government can finance its outlays is by increasing the rate of money issue. This speeds up inflation, and the whole vicious circle continues. The path of adjustment in disequilibrium begins to show signs of explosiveness, and this is seen as confirming the correctness of the individuals' decision to shorten their contracts in order to adapt to an unstable economy. The adjustment in disequilibrium leads to the consolidation of the changes at the micro level.

These mechanisms of feedback of disequilibrium and consolidation of microeconomic changes also affects the effectiveness of economic policies. When there are frequent unforeseen changes in the time path of the fundamental variables, the authorities are obliged to make frequent radical changes in their policy instruments in an effort to offset the unbalancing effects. In this context, it is highly unlikely that the authorities will gain sufficient prestige to give credibility to their policies.

This has two negative consequences. First, it is hard for the economic agents to adapt their forms of conduct in a rapid and flexible manner when the government announces radical changes in policy: in a context of uncertainty, conservative and defensive stances may be safest, since they ensure greater flexibility. Second, the government is obliged to exaggerate in choosing the quantitative goals of its policies, for its announcements must be dramatic if they are to change the conduct of conservative economic agents.

These two facts are a permanent source of instability and flaws in macroeconomic coordination in the countries of the region. If the policies seek dramatic goals, yet the economic agents' conduct does not change in the direction desired by the authorities, the consequences in terms of macroeconomic imbalances and disturbances of production may lead to severe distortions. Problems of this type have been a typical feature, for example, of the protection-liberalization-balance-of-payments crises-protection economic policy cycles observed in the past in Argentina, Chile and other countries. In order to seek credibility, the authorities launch a rapid and highly ambitious trade openness programme, in the hope that the private sector will take the openness as a permanent fact and invest in industrial conversion. As the greater openness gives rise to an explosion of imports and an unsustainable current account deficit, however, the private sector foresees that it will not be possible to maintain the system, and therefore does not invest in conversion of its activities. In such a context, exports stagnate while imports soar. When it becomes impossible to finance the resulting current account deficit, the authorities are obliged, in order to ensure a minimum of macroeconomic stability, to re-impose not only high tariffs but even outright prohibitions and import quotas. Thus, *ex post*, the defensive forms of conduct of the economic agents are endorsed as correct by the economic policy.

IV

From micro to macro: structural imbalance and macroeconomic stability

Not all countries display the same degree of macroeconomic instability, because in each country the volatility of the fundamental variables and the specific mechanisms of adjustment to imbalances are different. Such individual features are closely related with the structural characteristics of each economy. It is precisely for this reason that micro factors help to determine the economy's capacity to absorb macroeconomic shocks more or less effectively.

The economic structure is made up of a production base (technology, resources, innovation capacity), individuals, markets and institutions. Consequently, the economy's capacity to absorb shocks that are reflected in flaws of coordination may be assessed as a function of: i) the quantity and quality of the auto-regulation mechanisms (markets and institutions) which can cushion the shocks and spread them over time, and ii) the features of the production system which make it more or less flexible as regards the reallocation of factors of production in order to adapt to new situations (e.g., those arising after shocks).

As a function of the foregoing, economies can organize themselves in line with the degree of development of their markets and institutions and the diversification of their production structure. In the case of economies with a significant degree of industrial development, for example, the two criteria in question could be used to establish an order in which the developed capitalist economies are at one extreme and the former Socialist economies, now in a process of change, at the other, with the larger Latin American economies somewhere between the two.

Under criterion i), the auto-regulation capacity depends on the degree of development of markets and institutions. Both the market structure and the institutions directly or indirectly connected with economic activity are of crucial importance, because they determine the capacity to handle the uncertainty which is inherent in all economic activities and because they can significantly help to soften the unbalancing effects of volatility.

The greater the degree of development of the market structure, the smoother the process of price determination will be and, consequently, the smaller will be the likelihood that lasting imbalances and unstable processes will arise. A "full" system of markets would allow the elimination of spot imbalances to be spread over time through the operations of futures markets, while the uncertainty would be handled through the activities of the insurance markets. In this sense, the ideal reference model is the "perfect" market and information structure which has all the mechanisms needed to guarantee full coordination of plans and decisions adopted by individuals on a decentralized basis, in which the reallocation of resources in response to items of information which change the information context takes place more or less instantaneously and without involving significant costs.

No real economy has such characteristics, but the developed capitalist economies have structures which come closest to this theoretical model. Although the structure of those economies displays numerous market flaws, there are usually substitutes which come close to the characteristics of the missing markets. For example, the absence of generalized futures markets is less serious when the capital markets for various terms are well developed, and although there may not be markets for taking our insurance against all types of risks, the insurance markets for different types of risks are nevertheless much more highly developed than in a typical Latin American economy.

The conclusion to be drawn from the foregoing is that the degree of "completeness" of microeconomic market structure is indeed relevant for macro dynamics, since there is a close correlation between flaws of macroeconomic coordination and the magnitude of market flaws. The greater the number and size of market flaws, the more serious is the weakness –or even absence– of market mechanisms that can cushion imbalances, and there is consequently a greater tendency of the economies to generate imbalances and dynamic adjustment paths which tend to reproduce or amplify the imbalances instead of correcting them.

The degree of development of the institutions connected with economic activity affects the likelihood that flaws of macroeconomic coordination may arise, for various reasons. Two of these are worthy of special mention. The first is that there are institutional arrangements which can make up for market flaws such as the absence of some key futures or insurance markets, and they are therefore important mechanisms for reducing uncertainty. These institutions are important in establishing inter-client relations in order to reduce the uncertainty of relations among firms operating in a world of spot markets; in making up for flaws in the labour market or for the externalities generated in the process of training financed by private firms; in providing substitutes for non-existent credit markets, through State banks or client/supplier/company credit relations, etc.

The second reason is that the strength and soundness of institutions reduces the volatility of the fundamental variables. The more highly developed public sector institutions (such as the tax structure) are, the less likelihood there will be of fiscal shocks which lead to macroeconomic imbalance. The more efficient bank supervision practices and the selection methods used for the assignment of credit by commercial banks are, the less likelihood there will be of a financial crisis, with all its consequent negative externalities for macroeconomic balance. Furthermore, the proper development of institutions is also important because there is a correlation between it and the degree of stability of the legal and regulatory framework, which is in turn of decisive importance for the evolution of investment in particular and the degree of uncertainty in general. In an economy based on private property, legal security is not only a necessary condition for the very existence of markets, but also for the existence of the investments which will ensure the reproduction of the economic system.

Criterion ii) referred to earlier directly concerns the production structure. Generally speaking, the lower the degree of diversification and sophistication of production, the less capacity there will be for quickly reallocating resources to new activities when permanent shocks occur. In economies which are poorly developed at the production level, there is a larger amount of rigidities which prevent rapid conversion of the production structure. This means that the process of transition and adjustment after shocks is longer and, consequently, the length of time during which the economy is functioning in a state of imbalance will be longer too. It is important to note that –at least empirically– it has been proved that factors i) and ii) are not independent and that this fact tends to boost the mechanisms that reproduce and prolong imbalances.

Thus, we see first of all that the lack of development of production has a positive correlation with the lack of development of the financial and capital markets. The propensity to instability is stronger because the rigidity of the production structure makes the transition processes longer, and the lack of capital markets makes it very difficult to finance long processes of conversion of production. The result is that in a typical Latin American economy, for example, there are prolonged periods of shrinking production which do not necessarily lead to successful conversion of the production apparatus but rather to net losses of production capacity which had been built up in the past. Typical examples of this are the processes of shock treatment aimed at securing greater economic openness which are marked by the disappearance of substantial parts of the industrial sector, without the appearance of new forms of specialization and economies of scale in other segments of the industrial system, because of the lack of finance for conversion.

Secondly, we also observe empirically that there is a correlation between the degree of development of production and the level of sophistication of the institutions connected with economic activity. This means that the development of institutions designed to make up for markets which do not exist because of market flaws is also delayed; thus, the capacity to handle uncertainty is directly related to the insufficient sophistication of the production system. In reality, this is hardly surprising in the light of the various studies that exist on industrial organization. These studies show that the development of institutions designed to handle uncertainty outside the market proper, such as relations among clients, suppliers and companies, tends to be greater in the more sophisticated industrial sectors, where prices play a much smaller role in resource allocation than, for example, in the commodities and raw materials markets in general.[5] Thus, the lower the degree of sophistication of production, the smaller will be the economic presence of these institutions and the greater the role of uncertainty and instability.

Two simple examples may serve to illustrate more clearly what we have been trying to show in this section. The first refers to multiplier effects and illustrates the role of changes in the micro structure in determining the macro adjustment dynamics.

The magnitude of the multiplier effect of expenditure is greater in an economy like that of Argentina than in the present-day United States economy. It is a well-known fact that the multiplier effect has been gradually weakening in the latter economy, to such a point that its very existence has been questioned since the early 1960s. In contrast, this effect was clearly discernible in the 1930s. This change in the dynamics of macroeconomic behaviour over the course of time may be attributed to the greater complexity of the economic structure (development of markets and institutions and accumulation of wealth). To put it in a nutshell, wage-earners are now richer, have unemployment insurance, and have greater access to credit, so that a temporary reduction in their current income affects their consumption expenditure less than it did sixty years ago. In contrast, the structure of the Argentine economy in this respect is more like that of the United States in the 1930s. A reduction in the current income of Argentine wage-earners (who are poorer than their United States opposite

[5] Scherer (1980) provides a whole mass of collected data on industrial organization which support this assertion.

numbers and do not enjoy generalized unemployment insurance) imposes a liquidity constraint on them which limits their consumption expenditure. When this happens, we see the repercussions of the "income effects" which determine the magnitude of the multiplier. Depending on the structure of the economy, these same mechanisms also determine various other forms of behaviour in the presence of situations of imbalance: for example, the reaction to a devaluation. The structural diversity –especially as regards the diversification of the production base– determines why a devaluation may be recessionary in Argentina but expansionary in the United States.

The second example concerns the lack of diversification of production, seen as a direct cause of the degree of macroeconomic volatility. One of the main determinants of the variability of the current account balance in Latin America is the variability of the terms of trade. As exports display a low level of diversification, as a result of the lack of competitiveness of the most dynamic sectors of industry (Guerrieri, 1993), the trade account often suffers big changes when there are negative external shocks. The lack of diversification of production means that the volatility of the terms of trade is directly reflected in volatility of the fundamental variables that affect the external sector. The fact of depending on just a few export products makes it impossible to cushion this volatility through the diversification of risks implicit in a diversified export structure. Thus, the lack of development of production becomes a direct source of macroeconomic volatility.

V

The micro-macro interaction, the production structure, and growth

So far, we have seen how macro instability can bring about changes in the micro structure and how micro weaknesses –in the production structure, in markets and in institutions– can lead to flaws of coordination. The division we have made in dealing with these two questions is due solely to reasons of methodology and presentation. In order to avoid misunderstandings, we would like to make it clear that, at the empirical level, the general rule is that there are a host of interactions and feedback mechanisms between macro and micro factors which mean that in reality there is a kind of simultaneous determination of the micro and macro characteristics of a given economy. When analysing specific cases, it is very difficult to decide whether an economy displays, say, serious market flaws due to its macroeconomic instability or whether, in contrast, it is the lack of some key markets –such as a long-term capital market– which is responsible for the situation of aggregate instability.[6]

This obviously does not mean that, in a specific situation, the final result of the process of interaction of micro and macro factors cannot be analysed by separating the incidence of each of these two factors. In reality, the possibility of making this analytical separation of those factors is of fundamental importance for understanding the growth restrictions faced by an economy in a given economic situation. Indeed, in order to round out our methodological approach we would like to dwell precisely on the implications that this has for growth.

In order to present the question of growth restrictions as succinctly as possible, we may note that in another article (Fanelli and Frenkel, 1994) we systematized them as a function of four problems which, one way or another, economies must solve in order to be in a position to grow. First, there is the Smithian problem: in order to grow in a rapid and sustainable

[6] Normally, there will tend to be mutual feedback between these phenomena. This is why, in periods of acute crisis –when both the instability and the lack of markets exceed a certain critical threshold– it is so hard to find a way out. Stabilization policies which are not accompanied by structural reform policies tend to fail because of the existing shortcomings in market structure, while structural reform policies not accompanied by stabilization policies fail because of the uncertainty prevailing in an unbalanced macroeconomic context. This is a further argument in favour of accompanying stabilization strategies with reform policies, and also in favour of not trying to implement reform policies which may lead to worsening of the macroeconomic imbalance (Fanelli and Frenkel, 1994).

manner, an economy must generate a rate of saving which allows it to keep up a high rate of investment financed from its own resources. Second, there is the Keynesian problem, which holds that it is not only necessary to save but also to have efficient mechanisms for intermediating between saving and investment: i.e., it is necessary to have a well-developed structure of markets and institutions capable of ensuring that the saving effort is effectively converted into productive investment. The third problem is the neo-classical one, which stresses that the available resources must be allocated efficiently in order to maximize the growth rate: it is not just the amount of investment that is important, but also the efficiency of the investment. Finally, there is the Schumpeterian problem, which emphasizes the importance of creativeness as the motor for growth and highlights the role of entrepreneurs and firms that make innovations on the technological, organizational and other levels.[7]

The micro-macro interrelations which we have identified are of fundamental importance for the last three growth problems mentioned above,[8] since they help to shape the markets and institutions for financial intermediation between saving and investment; they determine the efficiency with which the relevant economic information is processed –through the price, quantity and financial signals–, thus helping to optimize resource allocation; and they markedly affect the innovation capacity of the economy by influencing the conduct of the individual agents and the institutions which make up the national innovation system.[9]

Many of these effects can be examined on the basis of the micro changes which take place in contexts of high instability, because in these conditions the mechanisms in operation can be "seen" more clearly inasmuch as the effects on the variables are more marked than in situations of only slight imbalance.

When analysing the influence of macro factors on the micro structure, a central conclusion was that the micro changes brought about by macroeconomic instability have the special feature that they affect the degree of preference of the agents for flexibility. In relation to the growth problems mentioned above, changes in the degree of preference for flexibility are of fundamental importance, because they bring about variations not only in the amount but also in the efficiency of investment, as well as in innovation capacity.

In a situation of a high degree of preference for flexibility, the shortening of the time horizon means that investment projects with short lead times have an economic premium over longer-term projects, and, in turn, when the lead times are identical, the profits expected from higher-risk projects are discounted at an excessively high rate. It is also empirically observed that, in highly unstable contexts, corrections in discount rates for long-term or higher-risk projects not only very rapidly incorporate information on increases in system risk but actually tend to over-react. These over-reaction phenomena, in turn, give rise to marked errors in the allocation of resources between periods, because they skew the price and quantity signals. It follows from this that the investments made will tend to be inefficient and this will further aggravate the neo-classical problem.

Generally speaking, in a situation of high preference for liquidity, preference will be given to short-term investment projects which have the least correlation with the economic cycle and the least dispersal of yields. When the preference for liquidity increased in Latin America in the 1980s, for example, only a few investment projects were able to comply with the above conditions: hence, it is hardly surprising that there were sharp falls in the investment/product ratios in most of the countries of the region. Nor is it surprising that foreign direct investment went mainly to the acquisition of privatized public utilities, which comply with the fundamental requisite of being businesses that handle a very large amount of liquid resources, use well-tried technology, and are classified as low-risk investments.

In the lists of "beta" asset ratings[10] which are used on the stock exchanges of developed countries in order to measure the economic risk of investment projects, for example, companies connected with

[7] Nelson (1991 and 1992) analyses the role of the entrepreneur *vis-a-vis* that of the firm in the innovation process and as an agent of "creative destruction".

[8] In this article we will not be dealing with the question of how they affect saving constraints.

[9] For details of national innovation systems, see for example Nelson (1993), Mowery (1993) and Johnson and Lundvall (1988).

[10] The beta rating is the sensitivity of the yield of an asset to variations in the overall yield of the assets traded on the market.

public utilities such as gas, electricity and telephones are those that have the lowest beta ratings (Brealey and Myers, 1986). This shows that these are low-risk businesses with profits that do not tend to move in line with global market trends. Businesses associated with spearhead technology and innovation –electronics, for example–, which are precisely those that could contribute most in terms of technological learning to the countries of the region, are those with the highest beta ratings. As a high beta figure implies higher risks, this means that in a context of high uncertainty characterized by over-reaction in the correction of discount rates, the degree of profitability needed in order to convince investors to carry out such projects is so high that there is very little likelihood that a project involving advanced technology will be implemented. It may also be noted that in view of the fact that foreign direct investment is one of the fundamental vehicles for the transfer of technology to a developing country (Dahlman, 1993; Dahlman and Nelson, 1993) and that privatization processes provide foreign investors with the possibility of acquiring low-risk businesses, the conclusion is that in the present context little can be expected from innovation as a source of growth. Structural reform, in a situation of instability, may be acting to some extent against greater sophistication of the production structure, if it causes the acquisition of public enterprises to push aside projects of higher risk and technological sophistication.

In fact, innovative activities –and hence the possibility of solving the Schumpeterian problem– are among those most seriously affected by the increased preference for flexibility. This takes place largely because in under-developed countries the technological learning process is intimately related to the acquisition of new production equipment, so that when investment declines the process of technological change is adversely affected too (Bradford, 1994). There is also a second reason why the innovation process is tending to stagnate. When there is great uncertainty about the price, quantity and financial information, businessmen responsible for investments usually adopt defensive strategies, and such strategies weaken aggressive competition and the will to make innovations in the production process (Katz, 1993). In a very concrete sense, it could be said that the preference for flexibility, just as it tends to undermine the efficiency with which the markets operate, thereby aggravating the neo-classical problem, also tends to break up national innovation systems by severely affecting the behaviour of the agents and institutions which help to keep them going, and this undoubtedly makes the Schumpeterian constraint on growth even more severe.

Microeconomic changes which increase the preference for flexibility also very significantly affect the financial intermediation structure. In a situation where there is a generalized preference for flexibility in microeconomic decisions, there is a generalized shift of demand for financial assets towards the short term and also often towards foreign currency holdings (as in Argentina, Uruguay, Peru or Bolivia). This means that liquid or very short-term assets increase in comparison with those of a longer term, and the ratio between the market price and value on issue of instruments denominated in local currency will tend to go down. Likewise, liquidity comes to be just as important as yield when determining the preference for a given asset. This in turn has as its correlation, as far as the generation of credit is concerned, the fact that the conditions for gaining access to long-term funds are increasingly onerous and, when the available credit is in foreign currency, companies whose activities are linked to the domestic market will be obliged to run bigger exchange risks.

To put the matter in another way, in addition to the soaring discount rates due to the economic risks involved which we mentioned above, it is also necessary to take into account the increase in such rates caused by the big rise in financial risks. Thus, two investment projects which have identical economic risks but different financial risks –because the financing structures available to their investors are different– may receive different ratings in the selection process, so that one may be carried out but the other not. It is a well-known fact that in all economies the financial risk affects the economic risk of a project. The specific feature of an economy that shows an excessive preference for flexibility is that this difference is exacerbated in that case.

Obviously, this plays a large part in determining the growth capacity, because it affects the process whereby the winners in the competition for resources are selected. The selection comes to be very strongly related to the specific financial characteristics of each branch of production, but much less to their economic characteristics. After a considerable length of time has passed in an economy where the long-term capital markets are either absent or too limited, the firms that still survive in the process are not necessarily those with the best capacity for efficiently allocating the existing resources or innovating in terms of products or production processes, but rather those that are located in branches of production which –because of their type of industrial organization– are least affected by this market flaw.

The firms which tend to survive best in this type of financial environment are those that make intensive use of capital and have predictable income. [11] These types of firms can increase their coefficient of indebtedness to a relatively greater extent without producing major jumps in their financial risk indexes. Once again, the branches of production where these firms are most often to be found are those associated with privatized public services. They are followed in the scale of survival capacity by big companies which, although they also have a high capital density, have less predictable operating incomes. In this case, they have less capacity to increase their coefficient of indebtedness without significantly affecting their financial risk indexes (typical examples are firms operating in such branches as steel, cement and petrochemicals). Finally, the firms which are most vulnerable are medium-sized and small companies whose operating income is heavily dependent on the global economic cycle, such as the firms which are so numerous in broad sectors of Latin American industry (textiles, small capital goods producers, etc.). The skewing of the bases of "natural" selection in the competition for resources gives rise to forces which militate against the solution of both the neo-classical and the Schumpeterian problems.

It should also be noted that the lack of development of the financial system also affects these problems. On the one hand, the segmentation which is typical of poorly developed markets tends to severely prejudice access to credit by small and medium-sized firms, thus further strengthening the tendencies mentioned earlier which favour big firms. On the other hand, the banking system plays a substantial role in improving resource allocation, through the selection mechanisms used by loan officers when allocating loans to the private sector. [12] When credit does not exist, such mechanisms cease to operate and private investors lose an important source of independent appraisal of their projects.

In reality, some of the main features of the production structures generated in Latin America by a decade of instability and financial astringency seem to be related to the "ranking of financial survival potential" which we just referred to. The net result of the interaction of microeconomic and macroeconomic phenomena in the context of the debt crisis was economic stagnation and a fall in the investment rate. The latter fact, together with the marked instability which prevailed, caused a striking setback in the process of diversification of production in Latin America. The possibility of achieving integrated development of the industrial sector on the basis of the experience gained in import substitution definitively disappeared. The industrial sectors which survived the crisis best were basically those processing natural resources and a few mass production industries such as the automobile industry –which at all events is passing through a profound process of change whose outcome is uncertain in some countries. Other rather more sophisticated branches, such as the production of capital goods, have tended to disappear, and the same thing has occurred in some segments of the textile industry. The "new" dynamic sectors are associated with the privatization processes in countries such as Chile, Argentina, and to a lesser extent Mexico (Guerrieri, 1993; Katz, 1993).

To conclude with the question of growth, let us look at a last important consequence of micro changes. As we already noted, situations of preference for flexibility are usually reflected in a big increase in the demand for foreign-currency assets. In Latin America, this phenomenon has been reflected in greater dollarization of the domestic financial system, or else in capital flight. Both these phenomena further aggravate the Keynesian constraint, by making the process of intermediation between saving and investment more difficult. However, the two phenomena do not each have the same consequences. The main adverse effect of dollarization is that it induces firms to take bigger exchange risks, but it also has a positive side in that it increases the capacity of the domestic banking system to make loans (in dollars). It therefore does not mean that domestic saving cannot be channelled to investment, but that the costs of such intermediation may be higher for borrowers because they will be exposed to higher exchange risk.

[11] For a classification of the financial characteristics of business finance as a function of the characteristics of the corresponding branch of production, see World Bank, 1989.

[12] For more details of this role of the financial system, see Stiglitz, 1993.

It is precisely this element which differentiates dollarization from capital flight. In the case of the latter, the increased demand for foreign-currency assets means that part of the domestic saving will go to finance investment projects in other economies. This has very negative effects on the Keynesian constraint, because the process of intermediation between saving and investment is interrupted at the domestic level and –unless there is access to external finance, as in the 1980s– growth begins to be restricted by the availability of savings. A typical manifestation of this is the rationing of bank credit. As a result, investment projects cannot find funds to finance them, not because there is little domestic saving, but because that saving is "exported" through the portfolio decisions of the agents.

The fact is that, historically, the challenge posed by the Keynesian constraint on growth has been one of the most difficult to overcome in Latin America. The establishment of public banks for the purpose of promoting development in the region may be interpreted as an effort to correct this congenital flaw in economic organization. Generally, however, the functioning of such banks has also suffered from serious flaws, which have become critical as macroeconomic instability has widened the distortions and increased the incentive for rent-seeking activities. This seems clear in many Latin American countries –Argentina, Brazil and Chile, for example– where the deterioration of the functions of channelling savings and selecting and efficiently allocating credit was associated with the rise of inflation.

Similarly, the greater relative importance of public saving and the financing of private investments with fiscal transfers in Latin America has also been a reflection of the weakness of the financial systems. The fiscal crisis and the need for stabilization have imposed strict limits on this traditional role of the public sector, however. In reality, the lack of success in developing these institutional mechanisms for making up for the market flaw represented by the absence of a long-term capital market merely goes to prove that macroeconomic instability is just as harmful to the development of markets as it is to that of institutions.

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Pension system *reform in* Latin America

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When reforming pension systems, the arguments used must be carefully studied, since changes may involve substantial economic, social and political costs. The reforms which are being carried out in the region reflect this dilemma and are the result of various compromises affecting the new system as regards: i) the degree to which the benefits provided by the system and the administration of its reserve funds are isolated from the political process; ii) the necessary regulation and supervision of the markets with which the system interacts in order to effect the financial intermediation of its funds; iii) the appropriate combination of fiscal resources and pension fund surpluses to be used to pay the debt owed to pensioners of the former system and the commitments in terms of minimum pensions; iv) the provision of insurance schemes against disability and survival contingencies and possible fluctuations in the financial market, as well as covering the lifetime annuity option; v) the need to supply information so that members can take free and informed individual decisions, and vi) ensuring a capital market with a suitable combination of financial instruments to protect the system against inflation risks.

I

Introduction

Pension systems in the region have been characterized by the simultaneous existence of different options for the different segments of the labour market; by including a public component operating on the system of flat-rate benefits; by fixing benefits at higher rates than those covered by members' contributions and the capitalization of reserves (usually carried out in an inefficient manner and in poorly developed capital markets), and by low levels of coverage because of the nature of the labour market, which includes substantial proportions of poor workers (who have little or no saving capacity) and own-account workers (who do not respond to the incentives of pension schemes).

In order to make the necessary reforms, important decisions will have to be taken on such matters as isolating the determination of the benefits to be provided by the system from the income redistribution process; linking pension systems to the development of suitably regulated and supervised capital markets on which they can capitalize their reserves; bringing the different schemes in line with each other; providing basic pensions for the poor, and generating incentives for the participation of own-account workers.

The possible reforms range from modification of the existing systems to their replacement with other systems based on individual records of contributions. There are at least four factors which can influence the political and economic cost of the reforms: i) the appropriate combination of fiscal resources and pension fund surpluses to be used to pay the debt owed to pensioners of the former system and the commitments in terms of basic pensions for the poor; ii) the establishment of schemes to make provision for disability and survival contingencies; iii) the provision of instruments to enable the system to protect its funds against inflation risks, and iv) the provision of information to members so that they can take the informed individual or collective decisions called for by the reforms.

Each government's appraisal of these options will allow it to determine the degree of need and urgency for making changes and the institutions that need to be developed to shape the reform of the corresponding pension system.

This article gives examples of some of the options that are being explored by the countries of Latin America. It gives an idea of the resources needed to secure minimum universal coverage under the traditional system of flat-rate benefits and the macroeconomic requirements to enable this system to be sustained over time. It then reviews the diagnostic findings and reform options for the existing pension schemes, most of which are of the flat-rate type, and in conclusion it sums up the main features of the changes which have begun to set in motion a transition from flat-rate systems to those based on the maintenance of records of the individual members' contributions.

II

The macroeconomic and microeconomic efficiency of pension systems

There are two types of persons who can be eligible for the benefits of a pension system: i) those who have made systematic contributions to the system and who receive benefits when they retire or suffer

□ This article analyses 15 case studies made under the project on Pension Systems in Latin America: Diagnoses and Options for Reform, carried out as part of the ECLAC/UNDP Joint Regional Project on Financial Policies for Development. The author wishes to express his gratitude for the comments made by Gunther Held and Daniel Titelman on a preliminary version of this study, although the views expressed in the present article are of course the exclusive responsibility of the author.

TABLE 1

Latin America: Static requirements for the macroeconomic efficiency of a system offering a universal pension equal to the per capita gross domestic product, in the late 1980s and early 1990s
(Percentages)

Countries	Objective in terms of benefits [a]		Wages		Share of pensions in social expenditure	
	Per capita GDP (1980 dollars) (1)	Population over 65, as a percentage of total population (2)	Share of wages in GDP (3)	Contribution rate/wages (2)/(3) (4)	Social expenditure as % of GDP (5)	Pensions as % of social expenditure (2)/(5) (6)
Argentina	3 787	9.11	29.6 (87)	30.8	18.0 (93)	50.6
Bolivia	629	3.63	...	...	4.6 (92)	78.9
Brazil	1 839	4.70	36.2 (85)	13.0	9.7 (91)	48.5
Chile	2 774	6.02	33.0 (85)	18.2	15.3 (93)	39.3
Colombia	1 473	4.21	39.5 (91)	10.7	8.2 (92)	51.3
Costa Rica	1 516	4.25	47.5 (91)	9.0	16.1 (91)	26.4
Ecuador	1 393	3.81	12.8 (92)	29.8	6.1 (91)	62.5
El Salvador	693	3.82	...	...	...	...
Guatemala	945	3.18	...	...	...	...
Haiti	176	4.08	...	...	...	...
Honduras	657	3.27	40.2 (92)	8.1	...	...
Mexico	2 507	3.73	25.8 (91)	14.5	7.7 (91)	48.4
Nicaragua	449	3.00	...	...	...	...
Panama	1 764	4.78	46.4 (92)	10.3	...	...
Paraguay	1 279	3.57	29.7 (92)	12.0	8.1 (92)	44.1
Peru	870	3.80	25.5 (87/91)	14.9	1.8 (91)	111.1
Dominican Republic	1 113	3.37	...	...	...	...
Uruguay	2 426	11.60	42.7 (92)	27.2	18.6 (91)	62.4
Venezuela	3 714	3.74	34.3 (92)	10.9	8.5 (90)	44.0

Source: Prepared by the author on the basis of demographic data from CELADE (1993), national accounts statistics from ECLAC (1994) and social expenditure statistics from Cominetti and Di Gropello (1994). Data on social expenditure include expenditure on social security.

[a] It should be noted that in order to provide a pension equal to the per capita GDP, the requirement (as a percentage of GDP) is equal to the share of the potential beneficiaries (those over 65) in the total population. Thus, if $Y_n = Y/N$ is the per capita product, then if N_r is the number of people over 65 the total amount of pensions to be paid will be $Y_n \bullet N_n$ that is to say, the product of the number of beneficiaries (N_r) multiplied by the amount of the benefit per person (Y_n). This amount, divided by the product (Y) shows that the share in the product corresponds exactly to the number of people over 65 as a proportion of the total population, since $(Y_n \bullet N_r)/Y = (Y/N) \bullet (N_r)/Y = N_r/N$.

some form of disability, or, after their death, their surviving widows or orphans; and ii) those who have not made such contributions but have been declared eligible in line with some criterion of solidarity, such as poverty or some other factor. The benefits granted to these latter persons are financed through transfers from the national budget.

1. Macroeconomic efficiency and the system of financing through payroll deductions or budgetary allocations

Even though the Latin American population is relatively young, the goal of providing universal basic pensions (i.e., to the whole of the population of retiring age) can absorb a high percentage of GDP. On the basis of demographic, national accounts and fiscal statistics, a (static) estimate has been made of the resources required to reach a hypothetical goal in terms of benefits, and these requirements have been compared, respectively, with the total wage bill of the economy and the fiscal budget that each country devotes to social expenditure (table 1). The calculations were made on the basis of a hypothetical flat-rate system designed to provide all those over 65 (whether contributors or not) with a pension equal to the per capita gross domestic product. [1]

[1] This is equal to a pension (measured in 1980 US dollars) of US$316 per month in the best case (Argentina) but only US$15 per month in the worst case (Haiti).

In column 4 of the table, an estimate is given of the rate of contributions as a percentage of the wage bill. This ranges from a minimum of 8.1% in Honduras (where the population is still very young and the share of wages in GDP is high) to a maximum of 31% in Argentina (where the population is older and the share of wages in GDP is low).

On the hypothesis that the funds needed to finance pensions are obtained from taxes, an estimate is given in column 6 of the table of the percentage of the social expenditure budget that would have to be used for that purpose. Among the countries with relatively more comparable statistics (Argentina, Bolivia, Chile, Colombia, Costa Rica, Ecuador, Mexico, Paraguay, Uruguay and Venezuela),[2] this percentage varies considerably. Thus, there is a maximum of nearly 80% in Bolivia (a country whose fiscal budget for social expenditure is very small, especially in the light of a programme of benefits with such broad coverage as that postulated here) and a minimum of 26% in the case of Costa Rica (a country with a high level of social expenditure in view of its tradition of devoting resources to social security in order to achieve broad population coverage).

2. Macroeconomic efficiency and increases in productivity

In order to keep the ratio between pensions and rates of contribution constant over time, percentage changes in real wages must be such as to make up for any percentage changes in the ratio of contributors to pensioners (Larraín and Wagner, 1982). Because of the percentage decline that is expected in the ratio of the number of potential workers (persons between 15 and 65) to that of the passive members of the population (people over 65)[3] over the period 1990-2025, an average 1.5% cumulative annual rate of increase in real wages will be needed (requiring increases in the product per worker). This goal will vary from a maximum of 2.3% in the Dominican Republic, where a very marked change is foreseen in the age structure of the population, to a minimum of 0.02% in Haiti, where the still very high fertility levels will ensure the persistence of a young population.

Since the population of working age will increase by an average of 1.7% per year, the product will have to grow by at least 3.3% per year in the region over the next 35 years, merely in order to ensure productive employment for new entrants into the labour force. If it is also desired to reduce underemployment and poverty, it will be necessary to raise this goal still further.

According to estimates of the Regional Employment Programme for Latin America and the Caribbean of the International Labour Organisation (PREALC/ILO), the structure of the labour market is changing (table 2). The share of jobs in the formal segments of the market is going down, in contrast with the growth of employment in the informal sector and in small enterprises. At the same time, the adjustment policies have barely succeeded in checking the deterioration in real terms of minimum wages and of wages in some sectors of the economy.

3. Macroeconomic efficiency and saving

In order to reverse the above trend and generate productive employment, the product would have to increase by 5% per year and the coefficients of fixed capital formation would have to exceed 22% of GDP. This would make it possible to promote technological development, redistribute income through investment in human capital, and replenish renewable capital so that development can be sustainable. In the light of these demands, the reforms to pension systems are reassessing their economic functions as well as their redistributive (solidary) role and are viewing institutional saving as an important factor for improving the macroeconomic context in which pension systems themselves have to operate. This helps to complete a kind of virtuous circle of conditions needed for their development and functioning (Massad and Eyzaguirre, 1990; ECLAC/UNDP, 1991).

In contrast to this desirable state of affairs, in the 1980s pension systems operated in a kind of vicious circle: there were not sufficient savings to invest; the economies neither grew nor generated productive employment; personal disposable income went down; efforts at reactivation came to nothing, in a climate of stagnation and instability, and the few incentives to increase national saving were compounded by the de-

[2] The figures are not strictly comparable among the various countries, since the coverage varies from one country to another. Special mention may be made of the cases of Peru, which does not include social security in this expenditure, and Brazil, which only includes central government expenditure, although a substantial part of social expenditure is effected on a decentralized basis (Cominetti and Di Gropello, 1994, table A.1).

[3] This ratio is in inverse relation to the ratio of dependency on account of age.

TABLE 2

Latin America: Structure of employment and evolution of real wages, 1980-1992

Countries/ years	Structure of non-agricultural employment (Percentages)							Real wages[a] (Index 1980=100)			
	Informal sector				Formal sector						
	Total	Own-account workers	Domestic service	Small enter-prises	Total	Public sector	Large private enterprises	Minimum	Agri-culture	Construc-tion	Industry
Latin America											
1980	40.2	19.2	6.4	14.6	59.8	15.7	44.1	100.0	100.0	100.0	100.0
1985	47.0	22.6	7.8	16.6	53.1	16.6	36.5	86.4	78.2	84.3	91.0
1993	55.2	26.1	6.8	22.3	44.8	13.9	30.9	64.8	69.4	87.3	93.3
Argentina											
1980	39.4	20.4	6.0	13.0	60.7	18.9	41.8	100.0	100.0	100.0	100.0
1985	42.7	22.9	6.5	13.3	57.3	19.1	38.2	113.1	138.4	61.6	75.0
1993	50.8	26.6	8.2	16.1	49.2	16.8	32.4	45.3	...	61.5	104.6
Brazil											
1980	33.7	17.3	6.7	9.7	66.3	11.1	55.2	100.0	100.0	100.0	100.0
1985	44.7	21.1	9.1	14.5	55.4	12.0	43.4	83.9	100.3	84.5	90.6
1993	55.6	23.4	7.7	25.5	44.4	10.0	34.5	49.2	18.8	93.0	109.6
Chile											
1980	50.4	27.9	8.3	14.3	49.6	11.9	37.7	100.0	100.0	100.0	100.0
1985	53.3	24.4	9.8	19.1	46.7	9.9	36.8	63.4	79.2	54.4	90.4
1993	49.9	22.6	6.6	20.6	50.1	7.9	42.3	83.4	104.2	67.5	117.6
Colombia											
1980	52.5	25.3	6.7	20.5	47.5	13.8	33.7	100.0	100.0	100.0	100.0
1985	55.7	28.0	7.0	20.7	44.2	12.4	31.8	108.0	115.7	104.2	113.5
1993	60.3	25.4	5.9	29.0	39.5	9.9	29.6	102.4	115.0	112.3	116.0
Costa Rica											
1980	36.4	16.3	6.1	14.0	63.6	26.7	36.9	100.0	100.0	100.0	100.0
1985	40.5	17.2	6.2	17.1	59.4	26.3	31.7	112.2	99.9	85.5	105.7
1993	52.5	22.2	5.6	24.7	47.5	21.0	26.5	114.8	...	102.7	106.1
Mexico											
1980	49.1	18.0	6.2	24.9	50.9	21.8	29.1	100.0	100.0	100.0	100.0
1985	51.3	23.5	6.4	21.4	48.7	25.5	23.2	67.0	72.2	84.8	72.0
1993	57.0	30.6	5.5	20.9	43.0	23.0	20.0	38.9	...	55.5	69.0
Venezuela											
1980	34.5	21.2	4.5	8.8	65.4	25.6	39.8	100.0	100.0	100.0	100.0
1985	39.9	21.3	4.9	13.7	60.1	24.5	35.6	95.3	94.6	...	...
1993	52.2	25.1	4.8	22.4	47.8	18.6	29.2	60.1	55.4	...	...

Source: PREALC/ILO, on the basis of household surveys and other official sources (various reports).
[a] The latest figures are for 1992.

cline in disposable income, instability of prices, and the cash deficits of the governments. Thus, the national component of saving efforts was limited by the drop in real levels of disposable national income and the similarly low growth rates of the product, together with high rates of inflation. Furthermore, the relative prices of investment goods increased, while capital formation decreased (Held and Uthoff, 1994).

In the early 1990s, some of the foregoing tendencies began to change in the region. On average, however, although the levels of national saving for financing gross fixed capital formation have recovered somewhat, they are still not high enough to allow the necessary growth rates to be regained (table 3).

4. Microeconomic efficiency: resource management

Let us now look at the yields of a worker's contributions in two optional systems –the traditional flat-rate system and a system of individual pension accounts– over two periods (table 4). In the first period, the

TABLE 3

Latin America (nine countries): Indicators of saving/investment and growth, 1970-1992

Countries/years	Per capita disposable national income (1980 dollars)	Saving and gross capital formation: At current prices: National saving	External saving	Gross fixed capital formation	At constant prices: Gross fixed capital formation	Growth of per capita disposable national income (%)
Latin America						
1970-1979	1 590	19.8	2.9	22.7	21.9	3.9
1980-1989	1 800	19.6	1.6	21.1	18.9	-0.6
1990-1992	1 756	19.5	0.9	20.4	16.7	-0.4
Brazil						
1970-1979	1 534	19.2	3.5	22.7	24.4	5.3
1980-1989	1 809	18.9	2.0	20.9	18.4	0.3
1990-1992	1 766	19.8	0.6	20.4	14.7	-3.1
Chile						
1970-1979	1 968	12.0	2.9	14.8	15.4	-0.6
1980-1989	1 888	10.4	7.7	18.1	15.1	0.5
1990-1992	2 270	23.0	2.1	25.1	16.2	3.1
Colombia						
1970-1979	1 019	18.2	0.5	18.7	18.5	3.5
1980-1989	1 233	18.8	1.0	19.8	18.5	0.9
1990-1992	1 350	22.6	-4.9	17.7	15.1	0.9
Costa Rica						
1970-1979	1 345	13.2	10.4	23.6	21.6	2.5
1980-1989	1 193	16.1	9.5	25.6	20.5	-2.2
1990-1992	1 179	20.7	5.4	26.0	21.8	-0.0
Ecuador						
1970-1979	1 033	18.0	5.5	23.4	24.0	5.0
1980-1989	1 197	15.3	6.1	21.3	18.7	-2.2
1990-1992	1 055	17.1	2.6	19.7	15.0	-3.8
Guatemala						
1970-1979	1 011	13.5	3.5	17.0	19.5	3.3
1980-1989	949	9.1	4.1	13.3	14.4	-2.3
1990-1992	941	11.1	2.9	13.9	15.9	2.4
Mexico						
1970-1979	2 015	19.7	2.9	22.6	22.7	2.9
1980-1989	2 323	21.6	0.4	22.0	19.6	-0.7
1990-1992	2 257	18.5	3.6	22.1	20.1	1.4
Peru						
1970-1979	1 091	16.6	3.6	20.2	22.1	0.2
1980-1989	1 023	21.3	3.6	25.0	22.1	-1.9
1990-1992	791	16.7	2.6	19.3	22.7	-4.1
Venezuela						
1970-1979	3 143	33.7	-1.1	32.6	17.6	7.0
1980-1989	3 238	22.6	-2.2	20.5	18.8	-4.1
1990-1992	2 905	23.6	-9.1	14.4	13.7	5.0

Source: Held and Uthoff, 1994.

worker makes contributions or saves (at a contribution or saving rate c_1 on his real wage w_1), and in the second period he is a pensioner or beneficiary and receives a pension p. Under the flat-rate system, the pension equals the contributions made by the total number of active workers in the second period ($c_2 \bullet w_2 \bullet T_2$), divided by the total number of workers who paid contributions in the first period (T_1). Under the financial or individual capitalization system, the pension is equal to the worker's total contributions, duly capitalized at the rate of return of the capital market *r*.

TABLE 4

Estimation of yield of two pension systems

	Amount of contributions or saving in period 1 (1)	Amount of pension per participant in period 2 (2)	Yield for individual member (3)=(2)/(1)-1
Flat-rate system (not financed)	$c_1 \bullet w_1$	$(c_2 \bullet w_2 \bullet T_2)/T_1$	$1-(c_2 \bullet w_2 \bullet T_2)/(T_1 \bullet (c_1 \bullet w_1)) \square$ $r_c+r_w+r_T$
Individual capitalization system (financed)	$c_1 \bullet w_1$	$c_1 \bullet w_1 \bullet (1 + r)$	$1-c_1 \bullet w_1 \bullet (1 + r)/(c_1 \bullet w_1) = r$

Source: Prepared by the author.

The preliminary overviews published each year by ECLAC report the figures for 15 countries of the region corresponding to interest rates on deposits and loans (as indicators of the yield of savings in the banking system), the growth rates of the product (which, in the absence of changes in the functional distribution of income, should correspond to the growth rates of the overall wage bill), and the growth rates of real wages.

If possible, the comparison of the yields of the two systems should be carried out over a long period, and should refer to economies which operate efficiently. The available information is not very conclusive, however, as it refers to very short periods and economies in a state of transition, and the results are also sensitive to the (loan or deposit) rate used for the comparison. Between 1990 and 1992, it was observed that in 11 cases the deposit interest rates were lower than the growth rate of the product, which would tend to strengthen the adoption of flat-rate systems. Only in four cases were the two rates equal or the deposit rate was higher than the product growth rate. In nine cases, however, the rate of interest on loans was higher than the GDP growth rate, which would tend to strengthen the adoption of individual capitalization systems.[4]

III

A diagnosis of the present pension systems

Most of the studies published by ECLAC on this matter (Uthoff and Szalachmann, 1991, 1992 and 1994; Iglesias and Acuña, 1991; Schulthess and Demarco, 1993) indicate that the currently operating systems have developed into flat-rate schemes with supplementary individual capitalization components, and are not working well because they are made up of poorly managed multiple schemes of low coverage. The question of strengthening flat-rate systems or changing them into financial (individual capitalization) systems will arise after weighing two types of criteria. On the one hand, it is necessary to take into account the system's efficiency in guaranteeing to contributors that they will receive what is due to them when they reach retirement age; the freedom of contributors to move from one occupation to another and decide who is to manage their contributions or compulsory savings, and the financial discipline displayed in the management of the pension fund. On the other hand, it is necessary to take account of the redistributive capacity of the system and its value as a means of showing solidarity with the under-privileged (i.e., as a means of redistribution).

Thirteen of the 15 countries considered (Bolivia, Brazil, Costa Rica, Ecuador, El Salvador, Guatemala, Honduras, Jamaica, Mexico, Paraguay, Trinidad and Tobago, Uruguay and Venezuela) place emphasis on

[4] It is important to note that, in the case of an individual capitalization system, the funds may be invested in assets other than securities or assets traded on the financial system.

the need to correct pension systems in the sense of improving management of their reserve funds but retaining their redistributive functions.

The problems for which solutions must be sought may be divided into seven categories: i) the heterogeneity of the criteria under which the various systems operate; ii) the contradiction between the shortage of productive employment and the ageing of the population and the declining ratio of contributors to beneficiaries; iii) evasion and lags in the payment of contributions; iv) the low yields of the investment portfolios of the reserve funds; v) the low population coverage; vi) the disparities between the benefits received by pensioners and the contributions paid during the working life of members, and vii) inefficient and costly administration of the systems (table 5).

The solutions to these problems are not easy, nor do they depend exclusively on the design of the pension systems. In the studies in question there are recommendations that action should also be taken on other sectors and institutions of the economy (the financial market and its institutions, the labour market and training and technological research institutions, the way the fiscal budget is used for social expenditure, etc.).

As well as correcting the weaknesses in the existing systems, it is suggested that progress should be made towards mixed systems with a basic universal component operating on a flat-rate basis, with capitalization of the reserve funds, and a (voluntary or compulsory) supplementary individual saving component operating on the basis of individual capitalization.

Two studies (Argentina and Colombia) report on reform proposals aimed at the establishment of a mixed system which will retain certain redistributive functions but will add a supplementary individual capitalization component.[5] Only one of the studies (Chile) describes the experience of a transition from a flat-rate system to an individual capitalization system totally divorced from redistributive functions.[6] The three studies in question emphasize the weaknesses of the flat-rate system and advocate a system that can be protected from political pressures.[7]

In the study on Chile (Iglesias and Acuña, 1991), it is noted that before the reform (carried out in 1979) there were a number of non-compatible schemes which reduced labour mobility.[8] The financial situation of these schemes had deteriorated because of the demographic and labour characteristics of the country.[9] There were also serious faults in the way benefits were granted.[10] As a result, serious financing problems arose.[11]

[5] The reform projects in Argentina and Colombia analysed in this article are those which were being proposed at the time when the studies were being carried out. Their subsequent amendment in the legislative bodies and the final form in which they were approved have not been considered here.

[6] Another country which has reformed its system in the same direction is Peru (for an analysis of the Peruvian experience, see Canales-Kriljenko, 1991). After the case studies had been made, Bolivia and Mexico started on similar transitions, involving in the latter case the establishment of the Retirement Saving System (SAR).

[7] These arguments are not always shared by all the political actors, and this has given rise to extensive debates on the reforms which have affected the political viability of some of them (Mesa-Lago, 1994).

[8] There were 32 retirement insurance institutions providing pensions, covering approximately 70% of the labour force. Three of them (Servicio de Seguro Social, Caja de Empleados Públicos and Caja de Empleados Particulares) accounted for 94% of the total insured population. This multitude of institutions gave rise to over 100 retirement systems demanding a wide variety of requisites from members in order to qualify for pensions. This latter aspect also gave rise to big differences between the pensions received by persons with similar personal and professional characteristics.

[9] In the case of the Servicio de Seguro Social, the ratio of contributors to beneficiaries fell from 10.8 to 2.2 between 1960 and 1980.

[10] These faults included the fact that there was an incentive to declare less than the actual taxable earnings during most of a worker's economically active life, since the benefits were determined exclusively on the basis of the average taxable earnings during the last three or five years before retirement (depending on the particular scheme). The benefits were determined without any relation to the actual contributions made during the contributor's whole working life, and the conditions for obtaining benefits were neither clearly regulated nor closely supervised.

[11] The fact that benefits were determined on the basis of the average nominal income during the last three or five years of working life meant that, with inflation running at an average of 20% per year, beneficiaries suffered a reduction of 16 - 28% in their real initial pensions. As there were no automatic indexing mechanisms for pensions but inflation was widespread, the benefits changed significantly in real terms through the discretionary decisions of the State authorities, which were based largely on fiscal policy considerations.

TABLE 5

Latin America: Problems of pension systems based on the flat-rate system, and proposals for reforms

Objective	Problems	Proposals	Instruments to be used
Homogenization	Systems are made up of different mutually exclusive schemes and affect labour mobility between occupations	Place the different schemes on the same footing and ensure similar benefits for all workers with similar eligibility features, regardless of where they work	Equalize contributions and eligibility conditions (retirement age and record of contributions) for obtaining pensions under a single homogeneous system
Labour productivity	Low-productivity jobs; low ratio of contributors to beneficiaries	Aim economic policy at the generation of productive jobs	Investment in human resources, saving, factor productivity, xpansion of markets, and technological development
Greater revenue	Evasion and arrears by employers; State indebtedness; collection of contributions from own-account workers	Establish systems of rewards and punishments in order to promote compliance with the system; make arrangements for the renegotiation of debts owed to the system	Identification of contributors and dependents without any possibility of fraud or error; individual accounts; computerization; trict checks on compliance, with indexed fines and positive real punitive interest rates; readjustable bonds for State debt; simplification of formalities
Investment of reserve funds	Low yield of reserve funds; diversion to other government programmes; lack of indexing mechanisms	Regulate and supervise the composition of the investment portfolio; develop the capital market; keep programmes strictly separate	Establishment of a regulatory and supervisory body and of a risk classification commission;financial intermediation; periodic public balance sheets; preparation of public accounts by programmes
Social solidarity: expansion of population coverage	Systems cover only part of the labour force; some segments of the population lack the capacity to save	Develop mixed systems providinga basic pension and supplement them on the basis of individual saving effort; create incentives to encourage saving by own-account workers	Use of funds to provide credit guarantees for participants; confirmation of a basic minimum pension; financing of additional pensions by the contributors themselves; separation of the pension programme from the fiscal budget
Adapt pensions to individualsaving effort and/or to the capacity of the system	Benefits have no relation to actual contributions made; some beneficiaries are not eligible for the benefits they receive; benefits are indexed on a different basis from the revenue base and other sources of income	Link pensions to established minimum levels and supplement them with additional benefits in keeping with the contributions made by participants during their working life	Retirement age and percentage of former income should be fixed according to life expectancy and umber of years of contributions; more flexible approach to retirement age, subject to duly estimated benefit deductions in line with contributions made; basic pension, plus self-financed supplementary pension; development of assured lifetime annuities; development of indexing mechanisms appropriate for the system; regulation and supervision of eligible dependents; elimination of privileges
Improve management	Excessive management costs and inefficiency	Carry out administrative reforms	Rationalization; separation of programmes; suitable legislation; computerization; training; programme budgeting; personnel policy; standardization; privatization.

Source: Prepared by the author.

In the case of Argentina (Schulthess and Demarco, 1993) the study deals with the Sistema Nacional de Previsión Social (National Social Insurance System - SNPS).[12] Two groups of factors are identified as affecting the financial solvency of the system. The first group are those of a long-term, structural nature,[13] which have resulted in low ratios of contributors to beneficiaries (less than 1.7 in 1990 and expected to continue falling).[14] A second group of factors, which are of a shorter-term nature, includes those which could be put right through small corrections in the way the pension system operates[15] and those which are not so closely connected with the functioning of the system but nevertheless affect its results.[16]

The study on Colombia (Ayala, 1992 and Colombia, Ministerio de Trabajo y Previsión Social, 1992) reports that the pension system is made up of a considerable number of independent pension funds which arose as a result of the past evolution of the system in Colombia and, in particular, the decentralization of public social security institutions.[17] The Colombian system has an extremely low level of coverage;[18] its pension benefits have no relation to the contributions made by each individual;[19] it is considered extremely regressive;[20] it is deemed to be inefficient,[21] and it is estimated that it has helped to raise the cost of hiring workers.[22]

[12] This covers approximately 90% of the economically active population, through two subsystems: one for employees and the other for self-employed persons. Because of its high coverage, the expenditure of the SNPS amounted to nearly 5% of GDP and 31% of total central government expenditure in 1991. Even so, the system has been unable to reverse the tendency towards the deterioration of pensions in real terms.

[13] These factors are: i) the increase in life expectancy, so that an ever-increasing number of persons are reaching retirement age, leading to rapid ageing of the population (demographic factors); ii) the tendency towards a decline in the total participation rate (42% of the population was active in 1970, but only 38% in 1988); iii) the failure to create productive employment in the formal sector (the share of low-productivity jobs in total employment is estimated to have risen from 20% in 1960 to 33% in 1990), and iv) the long-standing decline in labour productivity and real wages (average real wages in 1989-1991 were still below the 1977-1978 level).

[14] The ratio of contributors to beneficiaries is 2.2 for employees and 0.7 for self-employed persons; it is expected that the former figure will continue to fall, while the latter will increase slightly.

[15] Among these shortcomings are the provision of pensions which bear little relation to the total contributions made during the pensioner's active life (due to the adoption of very flexible criteria in order to satisfy political pressures to increase benefits or to widen the range of circumstances in which benefits are payable, without reference to the actual capacity of the system) and the incentives to under-declare taxable income.

[16] Among these, the authors mention the volatility of nominal prices and wages, which affect the collection of contributions and the expenditure of the system, as well as the evolution of these variables and of pensions in real terms.

[17] The author estimates that in the public sector alone, which represents a million workers and 300 000 pensioners, there are more than a thousand institutions providing pension services. The system is also concentrated, however, since only 10 social security institutions and six pension funds cover 70% of the public-sector members. The fact that these institutions are not integrated with each other affects mobility in an extremely heterogeneous labour market.

[18] Only 25% of the population is covered and only one out of every two wage-earners is a member of the system. This is due to a segmented labour market, a high proportion of informal-sector workers, failure to monitor compliance with the labour legislation in the case of employees, and the absence of a set of incentives to encourage compliance by own-account workers.

[19] The compulsory tax of 6.5% of taxable income must be paid by the employer (two-thirds) and the employee (one-third) in the case of employees, but it is voluntary and must be paid entirely by the worker himself in the case of self-employed persons. Pension benefits are calculated on the basis of the nominal income received in the last two years of active life (which gives an incentive to under-declare income during almost the whole working life) and the rate of replenishment is calculated on the basis of the number of years during which a worker has made contributions (but not on the amount contributed). In real terms, the benefits provided were not very significant, and they deteriorated rapidly because up to 1987 they were not subject to any automatic indexing mechanism and were granted to persons who had mostly only completed the minimum length of time required to begin to draw a pension.

[20] Its population coverage is low (it leaves out precisely the poorest 40% of the population), and it provides the rest of the beneficiary population (those with higher incomes) with discretionary benefits (which have no relation to the contributions made and involve big subsidies within the system, which are allocated in a regressive manner). Ayala estimates that after 30 years of paying contributions, the subsidy given to each person varies from a minimum of 10% for those who were earning the equivalent of one minimum wage to a maximum of 87% for a worker who was earning more than ten times the minimum wage.

[21] The author mentions the high administration costs, the corruption which exists at the time of determining the benefits to be given, the lack of any significant relation between the contributions made by an individual and the benefits received, and the incentives to avoid complying with the labour legislation.

[22] In order to adjust to the changes occurring in the ratio of contributors to workers, the system is imposing successive increases in the rate of contributions. The report foresees that this will continue unless reforms are made, thus affecting the cost of hiring labour and the generation of productive employment in the future.

IV

Reforms in pension systems with individual capitalization components

A system of compulsory individual capitalization can restrict the individual freedom of the contributor just as severely as a flat-rate system. In the final analysis, the choice between the two must depend on whether the members of society are in a position to value the possibility of being owners of a right or of a certain amount of capital, the way in which these assets are provided when retirement age is reached, and the way in which participation in the different modalities of a system may restrict the contributor's mobility between various employment options.

Unlike the flat-rate system, the individual capitalization system is based on rules which are the same for all (in contrast with multiple systems); the contributions are definite (in contrast with systems where the benefits are definite); the reserves are built up in individual accounts for each member (unlike the collective capitalization of the reserves of the system), and the systems are managed by firms whose own capital is independent of the funds they manage (unlike the form of management used by State bodies, where the reserves are merged with the operating budget).

It is argued that this proposal i) gives members greater security, because it reduces the effect of demographic changes, brings home to each individual the need to maintain or increase his labour productivity throughout his working life, makes an effort to ensure that the financial system gives members a good yield on their savings, and reduces the incentives for under-declaration of taxable income; ii) promotes greater freedom because it facilitates occupational mobility between sectors which were previously linked to different pension systems with different rules, and also permits additional voluntary saving; iii) improves the financial management of the fund because it does away with the need for pension institutions to manage big reserves for their operation and intermediation, separates the results of the administrative management of such institutions (on the basis of their operating budget or their own capital) from the results of the financial intermediation of the fund, and regulates and supervises the financial market, and iv) transfer the social functions to other State instruments, as it supplements pensions at the cost of the fiscal budget when a member's savings are not enough to obtain a minimum pension, and seeks to solve the problem of low population coverage through incentives for people to participate in the system.

With regard to the financial discipline with which systems are managed, flat-rate systems make promises regarding the rights of their members (definite benefits) which they will only have to fulfil in the future. Promises of improved benefits in an individual capitalization system, in contrast, can only be financed with higher current contributions (definite contributions). As there is no direct relation between contributions and benefits, the flat-rate system suffers from faults which affect the government, since it makes promises (definite benefits) which are not made in the second case (definite contributions). This argument, which is found in almost all the studies on current pension systems, does not mean that the flat-rate system is bad in itself, since it can adapt the offer of better future benefits to what it is doing with members' contributions at present.

The Chilean reform process replaced a flat-rate system with one based on individual capitalization and delegated the redistributive functions to other State institutions. It is therefore important to note its differences from the Argentine and Colombian reform projects, as reported to ECLAC (table 6). These differences are due to the fact that the governments of Argentina and Colombia have assumed the commitment to retain or transfer part of the redistributive functions of the pension system, while maintaining the political viability of the project.

Table 6 gives a brief comparative summary of the reform carried out in Chile and the proposed reforms in Argentina and Colombia, highlighting the features connected with the roles of the public and private sectors, the forms of membership (individual or collective), the nature of the changes made in the former system, the treatment as regards preferential

TABLE 6

Latin America (three countries): Overview of reforms to three pension systems

	Argentina	Chile	Colombia
STRUCTURAL FACTORS			
Ratio of potential workers to beneficiaries (1990-1995)	6.4	9.9	14.0
Growth rate of potential workers (1990-1995)	1.5	1.5	2.5
Proportion of informal sector workers among total workers (%)			
1980	26.4	36.1	32.0
1993	34.8	29.2	30.3
Proportion of workers in small enterprises among total workers (%)			
1980	13.0	14.3	20.5
1993	16.1	20.5	29.0
Indexes of real wages (1980=100)			
Minimum wage (1992)	45.3	83.4	102.4
Wages in industry (1992)	104.6	117.6	116.0
Wages in construction (1992)	61.5	67.5	112.3
Wages in agriculture (1992)	...	104.2	...
Rate of contribution on wage bill for a hypothetical pension equal to per capita GDP and financed by taxes on formal sector workers (%)	30.2	18.2	11.1
DIAGNOSIS OF OLD PENSION SYSTEM			
Coverage of labour force (%)			
Members of system	90.0	90.2	25.0
Contributors to system	42.5	53.5	...
Ratio of contributors to beneficiaries		2.2	13.0
Rate of contributions (exclusively for pensions) (%)	27.0	19.0 (1981)	7.9
Multiple institutions and types of benefits?	Yes	Yes	Yes
Concentrated in a few institutions?	Yes	Yes	Yes
Are individual benefits in line with contributions?	No	No	No
Does the system run an operating deficit?	Yes	Yes	No
YEAR OF IMPLEMENTATION OF REFORMS	1994	1981	1994
MAIN FEATURES OF REFORMS			
Role of public and private sectors			
Does the public sector play a regulatory role in the pension fund management business?	Yes	Yes	Yes
Does the public sector play a supervisory role in this business?	Yes	Yes	Yes
Was a new institution set up for this purpose?	Yes	Yes	No
Can the public sector participate in the financial management of the funds?	To a limited extent	No	Yes
Does the public sector collect the contributions to the system?	Yes	No	Sometimes
Can the private sector participate in the management of funds through existing enterprises?	No	No	Yes, but mus keep separate accounts
Are the following roles entrusted to public institutions?			
Custody of financial instruments	Central Bank	Central Bank	Central Bank
Criteria for risk classification	Central Bank National Securities Commission	Risk and Classification Commission	Superintendency of Banks
Regulation of insurance industry	National Superintendency of Insurance Companies	Superintendency of Securities and Insurance Companies	Superintendency of Banks
Management of the old system	National Social Security Administration	Institute of Social Security Normalization	Institute of Social Security (reformed)

TABLE 6 *(cont. 1)*

	Argentina	Chile	Colombia
Administration of minimum pensions	Idem	Idem	Idem
Are the following roles entrusted to private institutions?			
Management of insurance	Yes	Yes	Yes
Classification of financial risks	Yes	Yes	Yes
Individual or collective membership			
Is membership on an individual basis?	Yes	Yes	Yes
Can members change freely from one pension fund to another?	Yes	Yes	Yes (not more than wice a year)
Are there incentives to change to the new system?			
Yield on investments	Yes	Yes	Yes
Publicity	Yes	Yes	Yes
Replacement or supplementation of the old system			
What happened to the old system?	Modified	Replaced	Replaced and modified
Can the present labour force stay in the old system?	No	Yes	Some workers forced to change
Are new entrants into the labour force obliged to join the new system?	Yes	Yes	Yes
Can those who have elected to join the new system change their minds later?	No	No	No
Are the following incentives provided for changing to the new system?			
Bond in respect of past contributions	Compensatory pension for past contributions	Yes	Yes
Lower social security taxes	No	Yes	No
Increase in net wage or salary	No	Yes	No
Publicity	For capitalization	Yes	Yes
Single, non-discriminatory system			
Does the system fix a single rate for the following contingencies?	Yes	Yes	Yes
What is the rate:?			
Old age pension	8.0	10.0	10.0
Disability/ survivors' insurance	3.0	3.0	3.5
Social solidarity with other beneficiaries	16.0	Paid from general taxes	1.0 for high incomes
Total	27.0	13.0	13.5-14.5
Does the system permit voluntary saving?	By capitalization	Yes	Yes, for benefits above the minimum
Does the system guarantee a minimum pension?	Yes	Yes	Yes
How is the minimum pension financed?	Social solidarity scheme	General taxes scheme	Social solidarity
Do the following factors affect the amount of the beneficiary's old age pension?			
Taxable wage/salary/income	Yes	Yes	No (up to a minimum)
Yield of individual reserves	Yes	Yes	No (up to a minimum)
Bond in respect of past contributions	Compensatory pension for	Yes	No (up to a minimum) past contributions
Voluntary saving	Yes	Yes	Yes (over a minimum)
Do the following factors affect the amount of the disability or survivors' benefits?			
Taxable wage/salary/income	Yes	Yes	No (up to a minimum)
Yield of individual reserve funds	Under system of capitalization	Yes	No (up to a minimum)

TABLE 6 *(conclusion)*

	Argentina	Chile	Colombia
Bond in respect of past contributions	Yes, compensatory pension for past contributions	Yes	No (up to a minimum)
Purchase of insurance	Yes	Yes	No (up to a minimum)
Voluntary saving	Yes	Yes	Yes (over a minimum)
Separation of programmes			
Does the new system provide other benefits as well as old age, disability and survivors' pensions?	No	No	No
How are benefits in respect of other social security contingencies provided?	Separately	Separately	Separately
Separation of resources of the pension fund enterprise from the pension fund itself			
Are the resources of the pension fund enterprise separate from the pension fund itself?	Yes	Yes	Yes
Is the pension fund management firm responsible for providing a certain minimum yield in line with the market?	Yes	Yes	Yes
Is the pension fund management firm obliged to maintain a reserve to guarantee members' rights in extreme cases?	Yes	Yes	Yes
Role of the insurance companies			
Are the following benefits covered by insurance policies taken out individually or collectively?			
Disability	Collective	Collective	Collective
Survivors' benefits	Collective	Collective	Collective
Lifetime annuities	Individual	Individual	Individual

Source: Case studies giving diagnoses and reform options in respect of Latin American pension systems, carried out under the ECLAC/UNDP Joint Project on Financial Policies for Development. For Chile: Iglesias and Acuña (1991); for Colombia, Ayala (1992), and for Argentina, Schulthess and Demarco (1993).

and discriminatory pensions and differential rates of contribution, the relationship between the management of the pension system and the rest of the social security programmes, the relationship between the pension fund and the capital (or budget) of the firms and institutions responsible for managing it, and the forms of insurance against financial risks.

This table shows the following similarities and differences among the three reform processes:

i) All three give the State exclusive responsibility for regulating and supervising the pension system, but they differ as regards the responsibility for the financial management of the pension funds: Chile assigns this responsibility exclusively to the private sector, while the proposals of the other two countries share it between both sectors. They also differ in their approach to the role of the system in terms of solidarity: Chile places this role exclusively within the sphere of public policies, but the other two countries keep it within the pension system. These decisions give rise to important differences in the respective forms of institutional development.

ii) All three reform processes call for individual membership, in order to facilitate labour mobility.

iii) The three reform processes differ in the ways they seek to change the previous system, depending on whether or not they decide to maintain redistributive functions: Chile replaced the old system completely, whereas the other two countries propose to change it in order to progress towards a mixed system under which the old system is supplemented with individual capitalization components. All these elements have important fiscal implications (table 7).

iv) All three reform processes eliminate preferential and discriminatory pensions and differential contribution rates. The rates of contribution and the way benefits are calculated differ in the three cases, however. The financing of social solidarity pensions (for non-contributors) and minimum pensions (for those who have made contributions) also differs in each case: in the Chilean system, only general taxes are considered, while the other two take into account transfers among members or their employers for this purpose. In all three cases, the differences in pensions other than minimum benefits are due to differences in the total amount of contributions made, in the yield achieved in the management of the funds, and in the size of the transfer/length of membership bond or pension granted in respect of contributions made to the old system.

v) All three reform processes separate the management of the pension system from that of the other social security programmes.

vi) All three isolate the pension fund from the capital (or budget) of the firms and institutions responsible for its management.

vii) All three reform processes provide for insurance against financial risks, through policies subcontracted with private insurance companies, either collectively (for survivors' or disability pensions) or individually (for the option of lifetime annuities to be taken out when the contributor retires).

TABLE 7

Latin America (three countries): Actual and estimated fiscal deficits associated with the transition to new pension systems

Year	Chile: Deficit associates with reform *(% of GDP)*			Colombia: Fiscal requirements of reform *(% of GDP)*						Argentina: National Social Security System (SNPS) (public component) *(Millions of 1991 pesos and percentages)*	
	Bond in respect of past contributions	Operating deficit	Total	Bond in respect of past contribution		Operating deficit		Total		Cumulative deficit	Total amount of resources
				ISS	SP	ISS	SP	ISS	SP		
1981	0.01	1.19	1.20								
1983	0.17	3.53	3.70								
1985	0.24	3.36	3.60								
1987	0.38	3.42	3.80								
1988	0.36	3.04	3.40								
1989	0.53	4.17	4.70								
1990	0.63	4.13	4.76								
1991	0.71	4.08	4.79								
1995	0.71	3.84	4.55	0.00	0.00	0.20	1.29	0.00	1.29	503 (0.19)	8 019 (2.95)
2000	0.95	3.18	4.13	0.45	0.04	0.75	1.22	1.18	0.76	10 417 (3.00)	14 388 (4.15)
2005	1.11	2.28	3.39	...	...	...	...	...	...	22 610 (5.11)	10 582 (2.39)
2010	0.94	1.47	2.41	0.74	0.83	0.88	0.75	1.62	1.58	36 048 (6.41)	17 617 (3.13)
2015	...	...	...	...	...	...	...	...	...	46 805 (6.50)	25 011 (3.47)
2020	...	...	...	...	...	...	...	...	...	49 142 (3.99)	32 782 (3.57)
2025	...	...	...	0.42	0.78	0.07	0.17	0.49	0.95	46 337 (3.95)	36 000 (3.07)

Source: For Chile: Arrau, 1992. For Colombia, Ayala, 1992. For Argentina, Schulthess and Demarco, 1993. In the case of the latter country, revenue includes personal contributions; employers' contributions; value added tax (VAT); taxes on assets; shared income; assumptions regarding the rate of reduction of the premiums and evasion, and financial income. Expenditure includes total outstanding debt; debt payments; pension payments to current pensioners, and new liabilities in respect of the universal basic and supplementary pensions. Resources include stock in Yacimientos Petrolíferos Fiscales (YPF); capitalization of interest and profits, and Social Security Consolidation Bonds (BOCONs), net of amortization payments. In order to express the figures as percentages of GDP, the 1992 GDP (in 1992 pesos) was projected according to the actual and estimated growth rates for 1993 and 1994, and thereafter at a cumulative annual rate of 5%. The following values (in millions of 1992 pesos) were obtained for the years in question:

1995	271 419	2005	442 113	2015	720 155	2025	1 173 057
2000	346 407	2010	562 261	2020	919 121		

V

Conclusions

Pension systems operate in integration with other important components of the economy: the labour market and its institutions; the public sector and its institutions, and the financial and insurance markets and their institutions. In theory, both the old and the new systems can operate perfectly under ideal conditions. Their functions are to collect funds in line with the probability of certain contingencies among their members, to prevent the leakage of the resources they collect for those purposes, and to provide duly financed benefits. In ideal circumstances, this task would be carried out in conditions of constantly increasing productivity of their active members, since in this way the product would always grow and the system could devote part of that increase to consumption by its beneficiaries. In this respect, the reforms should not only pursue the proper design of the system and the regulation and supervision needed for its proper functioning, but should also supervise the operation of other sectors and markets of the economy with which the system interacts.

The experience of the region shows that, whatever the original design of the pension systems may have been, most of them have ended up operating on a flat-rate basis. This is because of the granting of benefits that exceed the systems' possibilities, the low yield of their reserves because of inflation, the investment of those reserves in non-indexed public sector financial instruments (Jiménez, 1993) and poor management. Furthermore, the flat-rate systems are facing or are about to face actuarial imbalances caused by substantial demographic changes, along with an ongoing decline in labour productivity. The lack of confidence of workers and employers in the existing pension systems has made this situation still worse, because the active members evade making contributions to the system and beneficiaries demand more and better benefits (in line with the promises which they feel were made to them). The impact that pension system deficits can have on the public finances and the corresponding macroeconomic imbalances complete a kind of vicious circle, since they create an adverse environment for promoting saving and the development of capital markets.

The reforms must be designed to break this vicious circle. The key to the problem is to clarify the scope of the redistributive functions that pension systems can have and to make it clear that such functions can only be carried out through the observance of discipline in the financial management of the systems' resources. This means recognizing the importance of developing capital markets, in order to contribute to the achievement of three objectives: facilitating the financial management of the reserve funds obtained from contributions and compulsory savings in order to be able to pay more and better pensions in the future; aiding in the formation of capital for sustained growth of the economies and of productive employment in the region; and eliminating the segmentation of capital markets so that more people can benefit from national saving efforts. Other redistributive purposes should be pursued through fiscal policy, making use of alternative sources of finance (general taxes or other contributions to social security).

The reforms should not necessarily replace the flat-rate systems, but should rather make changes in the existing systems in order to ensure that members receive pensions in line with their actual contributions; to provide greater freedom of choice and occupational mobility; to strengthen the financial management of the reserve funds, and to isolate the system from redistributive pressures.

These assertions are not so self-evident to those responsible for preparing the reform projects. This is clear from comparison of the Chilean reforms with the reform projects in Argentina and Colombia. The decision on how to keep on carrying out some tasks in the areas of redistribution and social solidarity which are based precisely on the political leeway that the old systems enjoyed, is the element that leads to the biggest differences among the schemes currently being tried out in the region. The other differences stem from the way the management of the systems is regulated and supervised (a task which is increasingly left in private hands) and the treatment given to members of the former system, whether active or retired.

When the Chilean experience is compared with the projects for Argentina and Colombia, the important effects of some decisions on the final profile of the reform become clear. Thus, we see that in these three cases:

i) the State is given a role in the regulation and supervision of the system;

ii) there are differences in the responsibilities given to the public and private sectors as regards collecting contributions, exercising financial management, and complying with social solidarity aims;

iii) individual membership is promoted;

iv) there are differences in the extent to which the components of the old system are replaced or supplemented;

v) preferential and discriminatory pensions are eliminated, as are differences in rates of contribution and the existence of multiple systems;

vi) because of the particular features of the respective populations, there are differences in the actual amount of the contributions and the conditions of access to the scheme;

vii) there are differences both in the manner of financing minimum and supplementary pensions and in the way the corresponding resources are obtained (one reform process only uses general fiscal resources for this purpose, whereas the others provide for transfers among members for purposes of solidarity);

viii) the differences in pensions higher than the minimum level are due to similar factors (differences in compulsory or voluntary contributions, in the yield of the reserves accumulated during a member's working life, and in the amount of the transfer bond or pension calculated on the basis of the contributions made under the old system);

ix) the resources of the pension fund management companies are totally separated from those of the pension funds themselves;

x) provision is made for insurance against financial risks through policies taken out collectively with private insurance companies in respect of disability and survivors' pensions, but each member is left free to opt for a lifetime annuity when he retires.

(Original: Spanish).

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Recent economic trends in *China and their implications* for trade with Latin America *and the Caribbean*

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Among the East and Southeast Asian economies often regarded as the most successful showcases, the People's Republic of China (PRC) occupies an outstanding place. This economy has one of the fastest growing GNPs in the world, and its outward orientation in the post-Mao Zedong era has made the country a significant world trade partner, so that the question of whether or not the economy stays on its sustained growth path will affect the welfare of the world economy in its entirety, including Latin America. The deepening of the ongoing economic reforms, coupled with prudent macro policies, should insure that the PRC's economy does indeed stay on course in its sustained, yet gradual, transformation process. Despite the already eminent position that the country occupies on the present world scene and its high growth prospects, present economic ties between the PRC and Latin America are marginal: mutual trade flows and reciprocal investments remain at an extremely low level. Nonetheless, the profound economic transformations taking place in both regions, which are growing and structurally reforming, are conducive to opening up wide trade and investment opportunities. At the same time, the stop-and-go cycles which frequently occur in the Chinese economy are likely to produce important bottlenecks and shortages in industrial and agricultural production and result in large annual fluctuations in import demand. To take full advantage of these opportunities, it is important for Latin America to be aware of the implications that these reforms might have on future trade and investment possibilities.

I

Introduction

During the last two decades, East and Southeast Asia has been the most economically dynamic region in the world. Among the economies often regarded as the most successful showcases, the People's Republic of China (PRC) has occupied a leading place. Its remarkable accomplishments include, among others: i) a sustained, yet gradual, transformation from a Stalinist planned economy to a socialist market-oriented one; ii) one of the world's fastest- growing GNPs; iii) sustained industrial growth, promoted first by the large-scale State industries and later by village and township enterprises; iv) substantial productivity gains in agriculture, in order to feed a population which amounts to a quarter of the world total; and v) its emergence as one of the most important partners in the global trade system. Though the reforms in the post-Mao Zedong era have signified a decisive departure from the Stalinist centrally planned economy towards greater use of market forces, their implementation has been pragmatic, evolutionary and incremental. This contrasts with the simultaneous and all-embracing "big-bang" approach adopted by the ex-socialist countries in Eastern Europe.

Whether or not the PRC stays on its sustained economic growth path has important ramifications for the future dynamics of the world economy. It will modify not only the growth potential of neighbouring nations but also the scope of Asian regional economic integration in its entirety. The PRC's tremendously high economic prospects and the outcome of the ongoing Chinese economic reforms will also strongly influence the linkages of the Latin American economies with the Asia-Pacific nations. For these reasons, it is of the utmost importance for Latin America to keep abreast of the PRC's economic development and to examine critically the future trade possibilities and modes of cooperation. This paper seeks to contribute to this objective.

The economic record of the PRC, especially in the post-Mao Zedong era, has been most impressive. Despite stop-go cycles, annual GNP growth during 1978-1993 has averaged close to 9.5%, with a spectacular annual growth rate of around 13% for 1991-1994, in contrast to the average of approximately 6% for the previous 25- year period (1952-1977). Real per capita GNP has more than doubled, despite a population increment of 200 million persons. Though its economic size, as measured by market exchange rates, is still far below that of the major developed economies, when real purchasing power is taken into account the PRC's share in world output triples to 6%. This makes it the world's third largest economy behind the United States and Japan, and almost as large as the four NICs (Republic of Korea, Taiwan, Hong Kong and Singapore) and the four ASEAN nations (Thailand, Malaysia, Indonesia and the Philippines) put together. Should the difference in growth rates between the United States and the PRC be maintained for 20 years more, the latter will become the world's largest economy.

The PRC has been the fastest-industrializing country in the world. The industrial sector has continued to lead the economy with an annual average growth rate of 12.5% during the 1980s in real terms, and the manufacturing sector proper grew even faster, at a rate of 14.4 %. These rates surpass those registered by the Republic of Korea and are almost three times those of Japan. Already by the end of 1987 its manufacturing value-added ranked seventh in the world (UNIDO, 1991), exceeding that of Brazil and Spain. Throughout the reform years, the investment ratio (investment/GDP) has been maintained within the 35%-40% range: a remarkably high level by international standards. Equally striking is the fact that agriculture in the post-Mao era expanded by roughly 6% per year, in comparison with 2.1% in the 1952-1975 period, with the result that agricultural production of all commodities and per capita food production at the end of the 1980s were 100% and 40% higher respectively than at the beginning of the decade.

The growing income disparity between urban and rural areas notwithstanding (Perkins, 1992-1993; Nolan and Sender, 1992), sustained economic growth has brought general improvements in the standard of living. Post-Mao China has achieved a widespread decline in death rates, an increase in life expectancy and health care, a reduction in the level of absolute poverty, improved housing in both urban and rural areas, a jump in per capita consumption of basic foodstuffs in all parts of the country except the poorest mountainous regions, and improved access to a variety of consumer durables. The Human Development Index, compiled by UNDP, which takes into consideration social welfare indicators such as life expectancy, literacy, education, purchasing power, etc., puts the PRC in 94th position among the 173 countries examined.

All these accomplishments have been brought about in an environment of comparatively low inflation (except in recent years) [1] and relatively healthy public finances. Up until recently, the government deficit consistently amounted to only a small proportion of GNP, in the neighborhood of 1% or less. Furthermore, unlike its ex-socialist counterparts in Eastern Europe, the PRC had no foreign debt of any consequence as of 1978 and resorted relatively little to foreign credit after that date. The accumulated external debt in 1993 (US$84 billion) was of relatively manageable scale, and the debt-service ratio of 11% was well below internationally accepted warning levels. The country therefore started its domestic economic reforms from a relatively strong balance-of- payments position.

Fast economic growth has been accompanied by a similarly impressive performance in the external sector. Chinese exports increased from US$9.8 billion in 1978 to US$92 billion in 1993, and China is now ranked as the world's eleventh largest exporter, with its export sales greater than those of Taiwan or the Republic of Korea. Chinese exports in that year accounted for roughly 2.3% of world exports. The PRC's US$104 billion of merchandise imports in 1993 (2.7% of world imports) –a huge jump from the preceding year's figure of US$80,1 billion– was more than for any developing country except Hong Kong, which re-exports most of its imports. In commercial services as well, the PRC exported and imported close to US$9 billion dollars respectively in 1993 (GATT, 1994b). Combined net reciprocal trade between the PRC, Hong Kong and Taiwan (the so-called "Greater China") already represented a volume of imports almost double that of a medium-sized industrial economy like the Netherlands or Canada. The "three Chinas" therefore now offer one of the most substantial and fastest-growing export markets in the world.

II

Recent economic trends and their implications for trade between China and Latin America and the Caribbean

The scope and complexity of the PRC's economic reforms since 1978 have been well documented elsewhere (Lardy, 1992; World Bank, 1992 and 1993; Lall, 1994; Bell, Khor and Kochhar, 1993). The following paragraphs provide an overview of these reforms, with the purpose of illustrating how the wide range of liberalization and decentralization efforts already implemented and/or in course have affected and will influence the overall path of the country in general and the trade possibilities with Latin America and the Caribbean.

1. Macroeconomic management

Each macroeconomic cycle experienced in the past has its own peculiarities, but all have had a number of common characteristics: the early phase of each reform was accompanied by an increase in aggregate demand, ratified by the increase in credit expansion; shortages and bottlenecks arose in critical sectors that led to faster inflation and to a deterioration in the balance of payments; and attempts were made to stabilize the economy through the reimposition of administrative controls and the slowing-down or even partial reversal of the reform process itself. The recent cycle since late 1991 is no exception to this. With the introduction of a 16-point stabilization programme, the government has tried to contain the overheating of the economy, with great difficulty.

[1] The official retail price index rose by 18.6% in 1988 and another 17.8% in 1989, while prices on the free markets rose by more than 30% in 1988, which led to considerable discontent in urban areas. In 1993, the rate of increase in the cost of living was 14.7%, while annual inflation up to September 1994 came to 27.4%: two percentage points more than in August.

Concern about the intensification of demand pressures led the authorities to implement measures consisting of: i) adjustments in interest rates on deposits and loans; ii) an austerity programme involving a reduction in government expenditure; iii) the postponement of price reforms planned for the second half of 1993; iv) a limit on the number of permitted development zones; v) the realignment of the credit expansion plan; vi) the elimination of the insurance on IOUs to farmers; and vii) the strengthening of the enforcement of capital gains taxes on real estate transactions (Bell, Khor and Kochhar, 1993, p. 69). However, the task of controlling aggregate demand has been difficult, partly because of the extensive decentralization among geographical areas: the major part of the State's revenue is now retained in the provinces, and consequently the central government's ability to undertake macroeconomic management through fiscal policy has been reduced. This has been exacerbated by the difficulty faced by the People's Bank of China in containing credit expansion, because of local political pressure on provincial branches of banks. At the same time, there is a potential conflict between central and local investment priorities, and in many cases investments in priority sectors such as energy and transportation infrastructure are less attractive to provincial and local authorities.

In the PRC, like any other economy, effective and coherent macroeconomic management is a prerequisite for the dynamic expansion of trade with the rest of the world. The stop-and-go economic reforms common up to now militate against the creation of stable trade flows, especially with such a region as Latin America and the Caribbean, which still plays a "residual" role in overall PRC trade. At the same time, in order to take full advantage of trade opportunities in the short term the trading partners must carefully assess macroeconomic performance so as to anticipate bottlenecks and supply shortages which arise due to the cyclical overheating and cooling of the economy. Given the increasing freedom of the provincial, municipal and local governments with regard to investment decisions, there should be wider recognition by trading partners of the importance of the PRC's local authorities, with a view to anticipating trade opportunities and negotiating effectively.

2. Agriculture

It was in agriculture that the PRC's economic reforms in the late 1970s and early 1980s first began to fundamentally change the Soviet-type system of production and move towards a market economy. While the formal ownership of land has changed little, and land remains almost exclusively under some form of public ownership, the overhaul of the sector involved the freeing of rural markets for most agricultural products, except grain and a few other key commodities, and the abolition of the agricultural communes as the unit of production and their replacement with what were basically family farms. [2] At the same time, attractive opportunities became available for farmers to invest in non-agricultural activities, especially in the rapidly growing rural industries. These reforms, based on individual economic incentives, laid the foundation for sustained growth of agricultural output and generated the surplus of rural savings needed to finance the continuing industrialization process.

The PRC is relatively poor in agricultural resources. The limited amount of arable land and the large number of farms (225 million), which support 67% of the total population, mean that average farm size is extremely small. [3] In addition, although still higher than that prior to 1978, the growth rate of agricultural output during 1985-88 declined in relation to the 1979-1984 period. The amount of agricultural land has been diminishing by 400 000 hectares annually –arable land and land under permanent crops has declined from 100.9 million hectares in 1982 to 96.6 million in 1991– and although grain output reached a record level of 456 million tons in 1993, the production trend has been stagnant. [4] Yields per hectare in the PRC for numerous crops are already high by world standards, so that further grain output growth is unlikely to be rapid. Consequently, the share of agriculture in GNP has declined by more than ten percentage points over the years, reaching 27% in 1990.

[2] Under the "household responsibility system", the right to use collectively-owned land was contracted to farm households, initially for a period of five years which was subsequently, in 1984, extended to 15 years for annual crops and 50 years for tree crops. Land use rights were made legally transferable in 1988.

[3] The average of 0.4 hectares per farm is modest in comparison with other Asian countries (Japan: 1.4, Taiwan: 1.1 and India: 1.7), not to mention the United States (193 hectares), Australia (3 700) and New Zealand (216).

[4] One study (Lin, 1992) shows that the productivity gain in agricultural production in recent years has not been enough to offset the absolute decline in the area sown: of the productivity growth experienced during 1978-1984, 97% was attributable to the changes in farming institutions from the production team system to the household responsibility system. Only the remaining 3% was contributed by changes in cropping patterns and intensity.

The reasons for this deterioration include: i) the rapid once-and-for-all productivity gains achieved in the earlier period as a result of the dismantling of the commune system; ii) increasing fragmentation of land holdings; iii) the outflow of the labour force from the crop-farming sector; iv) a smaller improvement in the relative prices of agricultural products than in the preceding period; v) increasing income opportunities in non-agricultural activities for farmers, who may have preferred to invest in township and village enterprises; vi) farmers' heavier investments in such areas as housing, rather than in land and irrigation, resulting in a shortage of water resources and degradation of land; and vii) bottlenecks in transport, processing, storage facilities and marketing systems (Lin, 1992; Bell, Khor and Kachhar, 1993, p. 58). The solutions to these constraints can only be found in the long term. In turn, the diminishing acreage of farm land, the saturation of productivity, the underdeveloped transport systems [5] and other production bottlenecks –the solutions of which are also of a medium- and long-term nature– will offer interesting trade opportunities.

One of the PRC's most urgent tasks involves the distribution of the fruits of economic growth to its impoverished rural areas, especially in the country's interior regions. The disparity in incomes between urban and rural residents has been widening steadily since 1984, when the comparable ratio was 1.6 times, instead of the present 2.5 times (*The Nikkei Weekly*, 1994b). The farmers' dissatisfaction, which has resulted in periodic riots in some areas, relates not only to the low absolute level of incomes, eroded by the rising inflation, but also to rising tax burdens and a decline in government purchase prices of agricultural products.

Despite the government's recognition of the plight of the rural population and some fiscal measures to lessen their burdens, it is unlikely that the gap in wealth will narrow in the near future. From the viewpoint of Latin America, trade possibilities will certainly be widened when a large segment of the underprivileged population begins to participate more actively in the economic development process.

3. Industrialization

The industrialization drive, based earlier on the efforts of State-owned enterprises (SOEs), has gradually extended to cover collective and town and village enterprises (TVEs), which are now the most dynamic sector of the PRC's economy. Massive industrial undertakings have been fostered through more than 8 million registered enterprises, among which 99 000 are large- and medium-sized State-owned enterprises, either controlled by central ministries or run by provincial governments. [6] State-owned units were estimated to have employed 18% of the labour force in 1992 (*Journal of Commerce*, 1994, p. 18c). In general, large-scale investments in key SOEs are approved and financed by the central government, while smaller ones involving medium-sized and small SOEs are made by provincial and local authorities.

Collective enterprises and TVEs operate relatively freely on the basis of market forces and enjoy greater managerial and financial autonomy than their State counterparts. Their main sources of finance are bank loans and retained earnings. Since 1979 the activities of TVEs have expanded continuously, and in 1989 these enterprises numbered 18.7 million, giving employment to 93.6 million workers (half of the current total manufacturing labour force and roughly 23% of the total rural labour force). Their output surpassed the value of total agricultural output by 22% (UNIDO, 1992, p. 108). The collective sector as a whole and the TVEs accounted for 40% and 26% respectively of the gross value of industrial output (GVIO) in 1992. They provide an important source of non-agricultural income and taxation (during 1984-1989 they accounted for 50% of the increase in State revenue). Despite their general inward orientation, the TVEs account for more than 20% of the country's total exports, thus constituting one of the most important export sectors. In this sense, a challenge to the authorities is to extend this type of development to other areas of the country. Other enterprises outside the plan are private firms, including foreign-funded entities, which were responsible for 14% of GVIO in 1992.

[5] The inadequate transport infrastructure is most acute in the railroad system. At present, almost half of the railroad capacity is occupied for the transport of coal, and the problem will be intensified if the planned increase in coal production becomes a reality. Reportedly about 6% of grain production is lost each year in shipping between production areas and consumers, due to the inadequate distribution and marketing system and the limited transport capacity (World Bank, 1993).

[6] From the viewpoint of ownership, collectives are regarded as "publicly owned", because in principle their ownership is shared by the community. Moreover, "their operations are closely monitored and often controlled by local government entrepreneurs who exhibit characteristics of both de facto owners and senior managers of township corporations" (cited in Jefferson and Rawski, 1994, p. 5).

It should be borne in mind that there is no straightforward, simple dichotomy between a State-owned heavy industrial sector and small-scale collective light industries. The share of the State is still high in many industrial segments, especially in power and energy, timber, tobacco, machinery, textiles, food processing, chemicals and metallurgy. In fact, in many of the industries producing exportable goods, such as textiles, electronics and metal products and machinery, the State share is still significant. In parallel, the most important sector for the collective enterprises has been machinery, followed by textiles and chemicals. This "dual" structure for many industrial segments, and the diversified machinery sector in particular, has been the driving force for the PRC's rapid and sustained industrialization.

Chinese industry, especially of the State sector, still suffers from a series of problems. In general, the SOEs continue to be characterized by inefficiency, substandard quality, low profitability (half of the SOEs operate in the red), inappropriate investment decisions and the lack of competition. These problems have led to a structural imbalance between downstream and upstream production capacity, high-cost and low-quality intermediate and capital goods, and shortages of certain essential raw materials. In spite of the recent implementation of measures to make these companies responsible for their own management, it is unlikely that the ongoing reforms will provide immediate solutions to these problems, and as long as they persist, the Latin American countries can expect large import demands from the PRC, though widely fluctuating from year to year, depending on the stop-and-go cycles. Meanwhile, the SOE restructuring process is also conducive to the establishment of various types of joint ventures with foreign interests. Since the majority of the 50 000 foreign affiliates in the PRC are joint ventures between foreign investors and SOEs, the potential impact of foreign investment on public enterprise reform can be significant.

4. The external sector

The break from the "self-reliant" approach of the pre-reform period to the philosophy of welcoming all possible sources of advantage, irrespective of their political coloration, has given rise to a wide range of reforms, including: i) the decentralization of the decision-making process and the end of the monopolization of trade by a few trade corporations; ii) the rapid reduction of exports and imports subject to mandatory planning; iii) increasing use of international prices for the determination of the domestic prices of imports; iv) the elimination of all direct budgetary export subsidies; v) a step-by-step reduction of tariff and non-tariff barriers (examined separately later in this article); and vi) the elimination of rigid exchange controls and the depreciation of the local currency. These have been accompanied by ambitious plans to attract foreign investment.

a) *External trade*

Up to the Deng reforms in the late 1970s, Chinese trade policy had placed primary stress on the role of imports rather than exports. Imports were seen as a residual contributor to domestic development, a means to secure deficit materials, capital goods, foodstuffs and technological information. Exports were viewed as a means of financing such imports, and the volume of purchases abroad was tied to the supply of goods suitable for export (Prybyla, 1978). In general, the authorities' attempts to strike a balance in the trade account, the continued emphasis on self-reliance and tapping internal resources for development, the avoidance of excessive foreign economic involvement, and the hesitant attitude to medium- and long-term foreign credits put a brake on the expansion of the PRC's foreign trade.

The "open-door" policy in the post-Mao era has been implemented gradually but with a clear trend towards the decentralization of authority on trade matters. The initial steps involved the partial break-up of the monopoly control of foreign trade by the State trading corporations. Prior to 1978, the PRC's foreign trade was handled by 12 State-owned foreign trade corporations (FTCs) organized by product lines, each having a monopoly in its area. Annual volumes of exports and imports were established and controlled in the context of a central planning system for trade, administered by the predecessors of today's Ministry of Foreign Trade and Economic Cooperation (MOFTEC). As a result of the deregulation, branch offices of FTCs became more independent, and provinces were allowed to create their own FTCs to serve specific trade needs, while sectoral ministries also established their own FTCs to engage in trade in their products. By the end of 1993 the number of trading companies which had obtained trade rights stood at 5 000 and that of production enterprises surpassed 2 000. In addition, there are 50 000 enterprises which have received foreign investments and which can engage in foreign trade with relative independence.

As a consequence of decentralization, the trade plan came to consist of two parts: the command plan, which established mandatory levels for exports and imports of key commodities, and the guidance plan which assigned targets in respect of certain products to local governments and FTCs, which enjoy considerable flexibility in fulfilling those targets. Over the years, the number of products subject to either command or guidance planning has been going down markedly.[7] Similarly, the pricing of tradeables has changed significantly: in comparison with the era of mandatory planning, when the tradeable goods sector was effectively isolated from the rest of the world, imports and exports have come to reflect international prices to a greater extent.

Another key feature of the pre-reform era was the maintenance of a highly overvalued exchange rate, combined with a rigid system of exchange control. Exports which were unprofitable in local-currency terms were offset by the financial profits accruing to the FTCs on their import side on the domestic market. This led to a situation where, in practice, the effective exchange rate varied on a product-by-product basis. The continued devaluation during the 1980s –from around 1.6 renminbi per US dollar in the late 1970s to 4.8 in 1990 and 8.5 in 1994– substantially reduced the bias against exports. As from 1 January 1994, China has unified its dual-track exchange regime and allowed the yuan to trade in a managed float system (GATT, 1994a, p. 9), in a long-expected step towards a convertible currency. The new foreign exchange system abolished the surrender and retention requirements.[8] This reform led to an immediate devaluation and reduced the differentials between the "swap" rates and the official rate.

b) *Foreign investment*

Attracting foreign direct investment (FDI) has been one of the main pillars of the open-door policy. The first step to attract FDI and expand exports was the establishment of four (three in Guangdong and the other in Fujian) Special Economic Zones (SEZs) in 1980-1981. The thrust of the policy was to integrate the country into the international division of labour through the promotion of industrial production in geographically defined areas, with restricted access to foreign capital and technology. With preferential treatment as regards taxation, import licensing, and tariffs, these zones were to serve as experimental "laboratories" for the economic reforms which were just beginning. This was followed by the opening of 14 coastal cities in 1984 and later the establishment of Hainan Island as an SEZ in 1988 and the opening of Pudong New Area (in Shanghai) in 1990. In early 1992 this preferential treatment was extended to 23 major cities in inland provinces, including 18 provincial capitals and 5 cities along the Yangtze River valley. In addition, 6 "development zones" were set up in the same region. These special areas have emerged as the most dynamic growth centres in the economy.

FDI in China has been rising at a phenomenal rate: in cumulative terms, up to the end of 1993, contracts worth US$217 billion (174 000 projects) had been authorized, out of which US$57 billion had actually been invested. By nationality of investors, Hong Kong and Macao have been by far the most important, followed by Taiwan, the United States and Japan. The main FDI flows have been concentrated in the processing and assembling of industrial products in the Southeastern coastal regions. Recently, however, there have been significant flows into high-technology and capital-intensive industries, as well as services and infrastructure, in other geographical locations. FDI in agriculture still remains relatively small.

[7] In the pre-reform period, for example, the export plan specified the quantities of 3 000 individual commodities that were to be procured by the State for export. Similarly, at the beginning of the 1980s import planning covered more than 90% of total imports (Lardy, 1992), but by 1991 the number of exports and imports subject to mandatory planning had fallen to 30% and 20% of their respective totals.

[8] Under the earlier system, in the case of general commodities, exporters (with the exception of foreign-funded enterprises, which were permitted to retain 100% of export earnings, if located in SEZs) had to surrender all foreign exchange earnings to the State and received retention quotas for 80% of such earnings. These quotas were, in turn, shared between the FTC, the supplying enterprise and the local government (for details, see Panagariya, 1991).

Among the significant contributions that FDI makes to the overall economy,[9] the most remarkable is in the trade sector: the share of foreign affiliates' exports in total PRC exports is close to 30%. It should be noted, however, that given the predominance of processing and assembly operations which require a high proportion of imported materials, the national value-added in export-related activities is very low. Consequently, the government now encourages those types of FDI which are conducive to higher value-added, local competition, and enhancement of technology and management skills.

III

Sino-Latin American trade in a world context

1. Global trade of the PRC

Chinese official data show that at the beginning of the 1990s, the PRC's imports were roughly divided between the developed and developing countries (see table 1). Until 1992 imports coming from the developed economies increased in absolute values but went down in relative terms, while those from the developing countries, especially the NICs (i.e., Taiwan, South Korea, Singapore and Hong Kong) increased tremendously. Among the developed countries, the relative importance of Japan as a source of imports steadily declined in the late 1980s but registered a marked recovery at the beginning of the following decade. In nominal value terms, up to 1992 the PRC's imports from the developed countries expanded much more slowly than its exports to them. In 1993, imports from the developed world picked up markedly, slightly reversing the previous downward trend.

TABLE 1

People's Republic of China: Imports, by Major Regions
(Millions of $US)

	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993
World	*26 185*	*39 795*	*43 164*	*43 216*	*55 268*	*59 140*	*53 345*	*63 791*	*80 585*	*103 959*
Developed economies	18 138	27 934	28 915	26 343	30 394	31 715	26 420	31 338	38 013	54 839
Developing economies	5 961	9 045	11 531	14 141	20 739	23 268	23 151	29 132	37 170	40 651
United States	3 871	4 739	4 674	4 810	6 649	7 839	6 571	8 002	8 901	10 687
European Union	3 335	5 793	7 769	7 237	8 064	9 120	8 019	8 359	9 805	14 410
Japan	8 194	14 236	12 494	10 074	11 035	10 532	7 587	10 031	13 682	23 289
Newly industrialized countries [a]	3 007	4 746	6 890	9 573	14 360	16 230	17 931	23 142	30 259	31 384
ASEAN countries [b]	678	832	924	1 438	2 024	2 122	2 105	2 762	2 969	3 367
Latin America and the Caribbean	1 012	1 821	1 629	1 241	2 187	2 416	1 509	1 558	1 899	1 930
Africa	250	220	181	101	171	300	305	303	312	606
Middle East	237	184	267	379	733	750	515	811	1 029	1 958
Economies in transition	1 894	2 649	3 769	3 264	4 137	4 322	3 511	2 739	831	1 288

Source: United Nations, International Commodity Trade Data Base (COMTRADE).
[a] Include Hong Kong, Taiwan, South Korea and Singapore.
[b] Include Malaysia, Indonesia, Thailand, Philippines and Brunei.

[9] FDI accounted for 8% of total gross domestic investment and 6% of total industrial output in 1992. Foreign affiliates generated 6 million jobs (Zhan, 1993).

The high share of the developing countries is heavily influenced by trading partners' re-exports through Hong Kong to the PRC, the rapidly expanding imports from Taiwan through Hong Kong, and intermediate goods and components imported by Hong Kong firms involved in processing and assembly operations in neighbouring Guangdong Province. Other developing country groups, including Latin America and the Caribbean, do not occupy a major place in the import basket of the PRC. Thus, although the value of imports from Latin America and the Caribbean in 1993 was far greater than the figure for Africa, it was not substantially different from that of the Middle East. Nor have imports from the ex-socialist countries regained the peak reached towards the end of the 1980s.

PRC statistics indicate that its imports from Latin America and the Caribbean recovered somewhat in 1993 to US$1.93 billion, but they were nevertheless far below those registered in 1989 (US$2.42 billion) (table 2), accounting for 1.9% of total PRC imports, in comparison with 4.1% four years before. Imports from the region are characterized by large annual

TABLE 2

Chinese People's Republic: Imports from Latin America and the Caribbean
(Thousands of US$)

	1989	1990	1991	1992	1993	Growth rate 1989-1993
World	*59 140 128*	*53 345 133*	*63 790 634*	*80 585 333*	*103 958 979*	*15.1*
Argentina	567 097	318 336	303 858	200 121	219 910	-21.1
Bolivia	0	N.A.	0	N.A.	3	
Brazil	939 975	525 983	345 736	519 322	863 085	-2.1
Chile	179 242	34 292	106 990	409 642	281 660	12.0
Colombia	3 565	3 542	2 446	23 046	776	-31.7
Ecuador	2 667	2 478	1 097	3 515	3 260	5.1
Mexico	148 839	100 399	148 697	113 985	124 823	-4.3
Paraguay	25 329	22 084	19 819	25 397	2 205	-45.7
Peru	181 755	85 423	294 405	310 075	249 107	8.2
Uruguay	110 602	65 774	118 132	93 290	66 639	-11.9
Venezuela	20 205	28 395	6 172	8 945	30 233	10.6
ALADI	*2 179 276*	*1 186 706*	*1 347 352*	*1 707 338*	*1 841 701*	*-4.1*
Costa Rica	291	15	3 630	1 301	1 432	48.9
El Salvador	141	8	235	301	308	21.6
Guatemala	300	N.A.	232	55	237	-5.7
Honduras	34	N.A.	285	29	200	55.7
Nicaragua	4 860	12 531	N.A.	215	230	-53.4
CACM	*5 626*	*12 554*	*4 382*	*1 901*	*2 407*	*-19.1*
Barbados	N.A.	N.A.	15	0	0	
Cuba	229 043	306 214	201 654	182 842	73 642	-24.7
Dominican Republic	N.A.	N.A.	N.A.	6	N.A.	
Grenada	39	N.A.	1	7	4	-43.4
Haiti	0	N.A.	N.A.	N.A.	5	
Jamaica	21	0	33	0	536	124.8
Guyana	N.A.	1	N.A.	N.A.	5	
Panama	223	N.A.	463	3 082	10 465	161.7
Suriname	0	N.A.	N.A.	485	233	
Trinidad and Tobago	N.A.	3 423	4 282	2 772	522	
Antigua and Barbuda	2 211	139	258	235	126	-51.1
Bahamas	N.A.	16	N.A.	N.A.	17	
Dominica	N.A.	N.A.	0	35	30	
St. Kitts and Nevis	N.A.	N.A.	N.A.	N.A.	N.A.	
St. Lucia	N.A.	N.A.	0	3	N.A.	
St. Vincent and the Grenadines	N.A.	N.A.	N.A.	N.A.	N.A.	
Belize	14	9	N.A.	N.A.	N.A.	
Caribbean etc.	*231 551*	*309 802*	*206 706*	*189 467*	*85 585*	*-22.0*
Latin America and the Caribbean total	*2 416 453*	*1 509 062*	*1 558 440*	*1 898 706*	*1 929 693*	*-5.5*

Source: United Nations, International Commodity Trade Data Base (COMTRADE)..

TABLE 3

People's Republic of China: Exports, by major regions
(Millions of US$)

	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993
World	*24 871*	*25 632*	*31 061*	*39 437*	*47 516*	*52 538*	*62 091*	*71 843*	*84 940*	*91 744*
Developed economies	10 388	10 710	12 267	14 571	17 285	19 017	21 266	24 880	30 002	48 053
Developing countries	12 975	12 931	16 331	19 556	24 750	29 191	35 463	42 688	50 031	38 399
USA	2 304	2 192	2 627	3 020	3 358	4 405	5 175	6 148	8 599	16 973
European Union	2 238	2 139	4 012	3 900	4 741	4 878	5 674	6 759	7 627	11 712
Japan	5 118	5 695	4 747	6 394	7 902	8 395	9 011	10 218	11 679	15 777
NICS [a]	7 836	8 647	11 032	15 114	19 860	24 159	30 184	36 907	42 643	28 624
ASEAN countries [b]	758	691	662	994	1 260	1 305	1 732	2 014	2 232	2 438
Latin America and the Caribbean	546	585	451	482	383	529	772	787	1 064	1 763
Africa	375	271	444	315	404	390	395	478	843	1 066
Middle East	2 244	1 596	2 028	907	1 132	1 122	1 183	1 400	1 799	2 417
Economies in transition	1 512	2 164	2 864	3 071	3 455	3 805	3 540	2 620	1 084	1 538

Source: United Nations, International Commodity Trade Data Base (COMTRADE).
[a] Include Hong Kong, Taiwan, South Korea and Singapore.
[b] Include Malaysia, Indonesia, Thailand, Philippines and Brunei.

fluctuations at the regional and national levels. In terms of country of origin, Brazil has been the largest supplier, albeit with wide year-to-year fluctuations. This country's share in the PRC's total imports in 1993 was less than 1%. Besides Brazil, Argentina, Chile, Peru and Mexico have been customary sources of the PRC's imports. Imports from Central America and the Caribbean have been extremely low or non-existent, while imports from Cuba have been declining drastically. The relatively insignificant and declining share of the region in the PRC's imports means that these countries have failed to take advantage of the rapidly growing market. The unstable levels of the PRC's imports from the region also suggest that there is a lack of close, established trade and investment links which would be conducive to a more stable trade flow from one year to another.

On the export side, official PRC data show that the developing countries taken together increased their relative importance over the years, while the developed countries lost part of their share, at least up to 1992 (see table 3). In contrast to the impressive surge of exports to the NICs, other developing regions, including Latin America and the Caribbean, have been marginal, and in most cases, declining markets for the PRC's exports, in relative terms. The ex-socialist countries have suffered a drastic decline in their share to a position similar to that of Latin America and the Caribbean, which has accounted for 1% to 2% of total PRC exports. Brazil has ceased to be a leading importer, even at the regional level. At this level, none of the countries has a dominant trade relation, but exports to Chile, Argentina, Mexico and Panama have increased substantially in recent years (see table 4). In comparison with the PRC's imports from the region, the year-to-year fluctuations are smaller, and there is a clear upward trend. Based on these official figures, the PRC has had a favourable or at least balanced trade position with each developing country grouping, except Latin America and the Caribbean.

2. The influence of re-exports through Hong Kong on the revised compilation of trade data

The trade figures reported by the PRC differ enormously from those given by its trade partners, owing basically to re-exports through Hong Kong. For instance, according to the Chinese trade data, the PRC's exports FOB to the United States in 1993 came to over US$17.0 billion, whereas the CIF import value reported by the United States was US$33.7 billion. This marked discrepancy between the two series cannot be explained by freight and insurance costs. Therefore, the type of data source used greatly changes not only the absolute amounts of trade for each partner but also their relative shares as origins/destinations and the resulting trade balances. [10]

[10] This is why the United States maintains that its trade deficit with the PRC reached US$18 billion in 1992 (equivalent to 18% of its total deficit in that year) and $25 billion in 1993 (roughly 15%).

TABLE 4

People's Republic of China: Exports to Latin America and the Caribbean
(Thousands of US$)

	1989	1990	1991	1992	1993	Growth rate 1989-1993
World	*52 538 091*	*62 091 411*	*71 842 535*	*84 940 062*	*91 744 005*	*15.0*
Argentina	8 902	11 955	51 631	124 146	247 687	129.7
Bolivia	4 829	6 013	4 462	5 343	4 069	-4.2
Brazil	84 462	106 684	68 034	64 756	192 171	22.8
Chile	61 165	67 135	94 202	128 152	204 132	35.2
Colombia	3 475	2 678	5 034	13 312	24 373	62.7
Ecuador	8 208	8 192	14 047	17 481	41 809	50.2
Mexico	42 617	110 570	86 245	157 742	155 693	38.3
Paraguay	4 455	9 549	16 724	11 320	28 899	59.6
Peru	21 657	23 519	31 313	35 467	61 558	29.8
Uruguay	2 908	5 395	10 510	17 902	31 876	82.0
Venezuela	4 531	12 579	32 745	59 544	65 300	94.8
ALADI [a]	247 209	364 269	414 947	635 165	1 057 567	43.8
Costa Rica	2 236	4 443	2 731	4 866	9 100	42.0
El Salvador	2 178	3 193	5 060	9 097	22 280	78.8
Guatemala	3 629	4 906	10 879	17 298	24 997	62.0
Honduras	3 725	6 020	4 533	10 249	21 143	54.4
Nicaragua	420	790	779	1 018	1 700	41.8
CACM [b]	12 188	19 352	23 982	42 528	79 220	59.7
Barbados	503	1 054	1 599	1 120	1 113	22.0
Cuba	212 252	271 939	224 402	200 232	177 044	-4.4
Dominican Republic	6 241	5 295	9 506	20 175	36 745	55.8
Grenada	29	377	82	82	88	32.0
Haiti	324	1 691	1 454	128	588	16.1
Jamaica	4 691	3 857	5 062	8 472	12 713	28.3
Guyana	222	664	2 666	4 915	4 869	116.4
Panama	38 836	95 447	87 332	132 004	350 140	73.3
Suriname	2 061	1 678	2 155	2 856	4 216	19.6
Trinidad and Tobago	1 883	2 565	4 031	3 899	8 676	46.5
Antigua and Barbuda	85	391	50	585	2 069	122.1
Bahamas	346	477	4 775	1 605	1 574	46.0
Dominica	1 579	1 785	3 927	7 134	20 856	90.6
St. Kitts and Nevis	15	30	65	42	37	25.3
St. Lucia	132	66	60	129	145	2.4
St.Vincent and the Grenadines	67	90	44	59	55	-4.8
Belize	659	1 372	1 211	2 458	4 979	65.8
Caribbean etc.	*269 925*	*388 778*	*348 421*	*385 895*	*625 907*	*23.4*
Latin America and the Caribbean, Total	*529 322*	*772 399*	*787 350*	*1 063 588*	*1 762 694*	*35.1*

Source: United Nations, International Commodity Trade Data Base (COMTRADE).
[a] Latin American Integration Association.
[b] Central American Common Market.

Hong Kong's re-exports from all origins, including the PRC, have increased tremendously over the years, reaching US$89 billion and US$106 billion in 1992 and 1993: much more than the respective figures of US$30 billion and US$29 billion for domestic exports. Thus, the size of re-exports is increasing in absolute and relative terms. It is also known that the relative importance of the PRC as the origin of Hong Kong's re-exports has been increasing rapidly (Ho and Kueh, 1993, table 4, p. 340). The great importance of re-exports means that the PRC's trade flows by destination and origin must be substantially modified, not only for the country's three main trading partners (the United States, the European Com-

TABLE 5

Hong Kong: Matrix of re-exports, by major trading partners, 1992
(Millions of US$) [a]

Destination / Origin	China	Japan	Taiwan	USA	Germany	Korea	Other	Total
China	2 590	3 654	1 115	17 949	3 936	846	21 679	51 769
	9.5%	76.0%	33.2%	94.3%	92.7%	48.5%	76.9%	58.5%
	5.0%	7.1%	2.2%	34.7%	7.6%	1.6%	41.9%	100.0%
Japan	7 128	192	449	333	115	244	2 436	10 897
	26.2%	4.0%	13.4%	1.8%	2.7%	14.0%	8.6%	12.3%
	65.4%	1.8%	4.1%	3.1%	1.1%	2.2%	22.4%	100.0%
Taiwan	6 282	13	154	64	26	13	410	6 974
	23.1%	0.3%	4.6%	0.3%	0.6%	0.7%	1.5%	7.9%
	90.1%	0.2%	2.2%	0.9%	0.4%	0.2%	5.9%	100.0%
USA	2 333	179	526	244	13	128	718	4 115
	8.6%	3.7%	15.6%	1.3%	0.3%	7.4%	2.5%	4.6%
	56.7%	4.4%	12.8%	5.9%	0.3%	3.1%	17.4%	100.0%
Germany	782	26	103	13	13	77	167	1 167
	2.9%	0.5%	3.1%	0.1%	0.3%	4.4%	0.6%	1.3%
	67.0%	2.2%	8.8%	1.1%	1.1%	6.6%	14.3%	100.0%
Korea	1 833	64	64	64	26	38	397	2 487
	6.7%	1.3%	1.9%	0.3%	0.6%	2.2%	1.4%	2.8%
	73.7%	2.6%	2.6%	2.6%	1.0%	1.5%	16.0%	100.0%
Other	6 231	679	949	372	115	410	2 385	11 154
	22.9%	14.1%	28.2%	2.0%	2.7%	23.5%	8.5%	12.6%
	55.9%	6.1%	8.5%	3.3%	1.0%	3.7%	21.4%	100.0%
Total	*27 192*	*4 808*	*3 359*	*19 038*	*4 244*	*1 744*	*28 192*	*88 564*
	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
	30.7%	5.4%	3.8%	21.5%	4.8%	2.0%	31.8%	100.0%

Source: Calculations based on data from Tokyo Ginko Geppo (Monthly Bulletin of Bank of Tokyo), December 1993.
[a] Trade values in Hong Kong dollars were converted with the exchange rate of 7.8 HK dollars to the US dollar.

munity and Japan) but for other partners too. Although their origin is not known, there were more than US$2.6 billion of re-exports to Latin America and the Caribbean in 1993.

Table 5 shows a matrix of Hong Kong's re-exports in 1992 by major origins and destinations. As becomes clear, the PRC is much more important as the origin of Hong Kong's re-exports than as their destination, which means that the shares of its main partners in the PRC's exports are much more seriously underestimated than in the case of imports. However, inasmuch as more than 30% of Hong Kong's re-exports are directed to the PRC, the import values are still prone to misinterpretation.

Based on the figures in table 5, an attempt has been made to estimate the PRC's exports and their geographical composition, readjusted for re-exports through Hong Kong. Table 6 summarizes the results obtained. These estimates approximate quite well to the CIF im port values reported by the major trade partners in 1992. Such an adjustment leads to an increase in the joint share of the three developed countries (the United States, Japan and Germany), which rises enormously from 27% when unadjusted to roughly 57% of the PRC's exports when adjusted. The United States, in particular, which resorts extensively to re-exports, absorbs close to 30% of the PRC's exports after the adjustment. This has important implications for Latin America and the Caribbean because the region's dependence on the United States market is as high as that of the PRC, and its product specialization in that market is somewhat similar (i.e., labour-intensive goods).

TABLE 6

People's Republic of China: Geographical distribution of trade in 1992, with and without re-exports through Hong Kong

	Re-exports though H.K. from the PRC (billions of US$)	Direct exports from the PRC (billions of US$)	Combined direct exports and re-exports (billions of US$)	Percentage share without re-exports	Percentage share with re-exports
Destination					
USA	17.95	8.60	25.55	10.1	30.1
Japan	3.65	11.68	15.33	13.8	18.0
Germany	3.94	2.44	6.38	2.9	7.5
Taiwan	1.12	-	1.12	-	1.3
South Korea	1.10	2.44	3.54	2.9	4.2
Others	21.68	59.78	33.02	70.4	38.9
Total	*51.77*	*84.94*	*84.94*	*100.0*	*100.0*
	Imports through Hong Kong	**Direct imports by the PRC**	**Combined imports**	**Percentage share without imports through Hong Kong**	**Percentage share with imports through Hong Kong**
Origin					
USA	2.33	8.90	11.23	11.0	13.9
Japan	7.13	13.68	20.81	17.0	25.8
Germany	0.78	4.01	4.79	5.0	5.9
Taiwan	6.28	-	6.28	-	7.8
South Korea	1.83	2.62	4.45	3.3	5.5
Others	6.23	51.38	33.03	63.4	41.0
Total	*27.19*	*80.59*	*80.59*	*100.0*	*100.0*

Source: Calculated on the basis of the data presented in table 5 and data from COMTRADE.

The PRC's trade with the region is also underestimated, since a substantial portion of Hong Kong's re-exports have the PRC as their origin/destination. Unfortunately, the data on re-exports through Hong Kong do not provide a separate entry for Latin America and the Caribbean. In the case of exports, in 1992 Hong Kong's re-exports to the region came to US$2.61 billion, and in that same year, roughly 77% of total re-exports destined to "other" countries (i.e., other than the United States, Japan, Germany, Taiwan and Korea) originated from the PRC (see table 5). Assuming that the same proportion of the US$2.61 billion came from the PRC, China's combined exports to the region in 1992 could have amounted to US$3.07 billion (direct PRC exports of US$1.06 billion, plus US$2.01 billion of re-exports through Hong Kong). Similarly, by discounting Hong Kong's true imports from the region, by employing the coefficient of "other" countries as a proxy (in 1992, 55.9% of Hong Kong's re-exports originating from "other" countries had the PRC as their final destination), and by applying the same percentage to Hong Kong's total imports from the region of US$833 million, Latin American exports to the PRC could rise by an additional US$337 million. This "guesstimate" increases the PRC's combined imports in 1992 from the region (i.e., those coming directly and the re-exports through Hong Kong) by roughly 17%, from US$1 930 to US$2 267 million.

The foregoing observations on re-exports through Hong Kong are only for the year 1992, but the sizeable underestimation, especially of the PRC's exports to the region, sheds doubt on the claim by Chinese officials that the country has had a persistent trade deficit with Latin America and the Caribbean. Should the situation of 1992 hold true for other years, the opposite will be the case: the PRC has in fact enjoyed a substantial trade surplus with the region. At all events, it would be desirable to analyse the bilateral trade flows on the basis of better-quality trade data on a time-series basis.

3. Trade by products

The PRC's export basket has been further diversified. According to official PRC sources, the already high proportion of manufactured products in total exports in 1984 (48%) continued to grow and in 1993 their share reached 81%. This high coefficient reflects the relatively high level of industrialization in general on the one hand, and the export product-mix in which the PRC has specialized, on the other. The traditional export item, petroleum, has seen its weight reduced drastically over the years. Though the PRC still exports a variety of food and agricultural raw materials, their overall share has declined appreciably. The major export items now fall in the categories of clothing, footwear, toys, travel goods, furniture, some subsegments of the electrical and electronics industry, and machinery.

The product composition of exports does not differ markedly among the PRC's trade partners. This suggests that the country has been exporting more and more along the lines of its natural comparative advantage: low-wage labour. This applies also to the PRC's exports to Latin America and the Caribbean, even after taking into consideration Hong Kong's re-exports.[11] The marked increase in the country's share of world exports of these product groups (Lall, 1994, pp. 158-166) means that the PRC has been displacing some of its Asian neighbours. As the costs of labour have grown in these countries, and as their export basket consists increasingly of more capital-intensive goods, the PRC has been successful in conquering important niches in world manufactured exports. At the same time, the PRC's comparative advantage in capital- and technology-intensive products, though increasing, remains relatively limited. Thus, there is still a long way to go before the country establishes a clear advantage in the large spectrum of machinery and electronics sectors, because the export-push of these exports is still based on the expansion of assembly operations.

On the import side, too, the share of manufactures has been extremely high, accounting for 84% of total imports in 1993. This high coefficient is attributable to the sustained industrialization process which is under way and in particular the increasing requirements for industrial materials and inputs for assembly operations. Among the principal imported manufactures, the most important are iron and steel products, telecommunications equipment, machine tools, textile materials for further processing, chemical fertilizers, passenger cars and parts, and aircraft. In contrast, the share of food and agricultural products has been declining. This is surprising for a densely populated country like the PRC, which might be expected to need voluminous food imports. Except petroleum, of which the PRC is now a net importer, the only primary commodity import is copper. Despite an increase in absolute values, the relative importance of ores and metals has declined. Thus, primary commodities, in which Latin America's comparative advantage lies, have seen their share reduced over the years, in contrast with the impressive growth in manufactures. Despite the overall upward trend for other product groups, there are wide year-to-year fluctuations, reflecting annual domestic production deficiencies and shortfalls, rather than a response to sustained increases in income and/or changes in consumer habits.

The product-mix of the PRC's imports from Latin America and the Caribbean is quite limited. In the import basket of the PRC in 1993, for instance, a mere 10 products, at the three digit SITC level, accounted for 77% of the total, while the top 20 products accounted for over 91% (table 7). Iron and steel in primary forms, copper and iron ore represented more than 40% of the total. Other categories of relative importance included other ferrous and non-ferrous metals, farm and fishery products, agricultural raw materials and petroleum derivatives. To be sure, for these top 20 priority products, Latin America is not necessarily the principal supplier region for the PRC, except for certain countries in specific products (e.g., Brazil in certain segments of iron and steel products and Chile in copper). That is to say, in those product groups which account for most of Latin America's exports there is strong competition from suppliers outside the region. Consequently, the countries in the region can conquer bigger market shares –even in

[11] The majority of products re-exported through Hong Kong to Latin America and the Caribbean consist basically of three groups of manufactures: textiles and clothing, office and telecommunications equipment (including television sets, radios, etc.), and other consumer goods which include other labour-intensive export items produced in assembly-type operations. Given the strong position of the PRC in these product groups, it can be safely inferred that a substantial portion, if not the majority, of these re-exports had the PRC as their origin.

TABLE 7

People's Republic of China: Composition of imports from Latin America and the Caribbean (top 20 products), 1993
(Thousands of US$ and percentage shares)

	Product		Value	Percentage of total imports from Latin America and the Caribbean	Cumulative percentages	Total Chinese world imports
1	672	Iron and steel, primary forms	366 627	19.0	19.0	3 481 362
2	682	Copper, exc. cementation copper	242 916	12.6	31.6	1 211 555
3	281	Iron ore and concentrates	213 903	11.1	42.7	926 981
4	081	Feeding stuff for animals	175 544	9.1	51.8	308 164
5	673	Iron and steel shapes, etc.	151 115	7.8	59.6	4 543 983
6	674	Iron and steel univ. plate, sheet	87 860	4.6	64.2	3 315 300
7	679	Iron and steel tubes, pipes, etc.	70 118	3.6	67.8	998 455
8	061	Sugar and honey	64 565	3.3	71.1	114 528
9	651	Textile yarn	58 547	3.0	74.2	1 719 224
10	611	Leather	43 468	2.3	76.4	1 465 010
11	334	Petroleum products, refined	40 577	2.1	78.5	3 023 361
12	421	Fixed vegetable oils, soft	31 879	1.7	80.2	117 439
13	684	Aluminium	31 220	1.6	81.8	492 531
14	333	Crude petroleum	29 649	1.5	83.3	2 323 412
15	251	Pulp and waste paper	29 479	1.5	84.9	294 053
16	583	Polymerization products, etc.	26 064	1.4	86.2	3 607 249
17	287	Base metal ores and concentrates, n.e.s.	23 182	1.2	87.4	453 216
18	671	Pig iron etc.	23 125	1.2	88.6	165 059
19	036	Shellfish, fresh or frozen	22 820	1.2	89.8	115 353
20	034	Fish, fresh, chilled or frozen	18 156	0.9	90.7	212 419
		All other products	178 704	9.3	100.0	
		Total, all products	1 929 518	100.0		103 958 979

Source: United Nations, International Commodity Trade Data Base (COMTRADE).

products where they have a comparative advantage– only if they are ready to improve their productivity and marketing.

4. Trade protection

a) Tariff and non-tariff measures

In the past, tariffs were regarded as one of the major sources of government revenue, having little effect on trade decisions. Later, during the reform process, tariff rates began to play a more important role in influencing the volume and product composition of imports. Over the years, import duties fluctuated, and after registering a substantial increase in recent years, China's weighted average tariff in 1992 was back to its pre-1987 level (Lall, 1994, pp. 48-57). With the aim of facilitating the country's re-entry into GATT, the most substantial reductions have been made since 1993, and the simple average and weighted average tariffs (measured against actual import volume for 1992) are now 36.4% and 21.9%, respectively[12] (GATT, 1994a, p. 7). The role of tariffs as a source of government revenue has further diminished as a result of the large number of duty exemptions and concessions granted (e.g., to foreign affiliates) (Lall, 1994, pp. 58-60).

Detailed analysis on the nature and degree of the PRC's tariff and non-tariff measures is provided elsewhere (ECLAC, 1995). The ECLAC study examines the protection levels effective in 1992 on more than 5 700 tariff headings grouped under 96 two-digit Harmonized Schedule (HS) codes. The 1992 data are particularly worthy of examination because,

[12] As from 1 January 1993, the PRC readjusted the tariff rates on 3 371 tariff lines, representing 53% of dutiable items, with an average reduction of 7.3% Later, on 1 January 1994, import tariffs on 2 898 products were further reduced by 8.8%.

once its re-entry into GATT is achieved, the PRC will assume the corresponding obligation to reduce its tariff rates by roughly 50% of the values effective in 1992.

The study suggests that the PRC has applied generally quite high import tariffs and that there has been marked dispersion among and within the tariff lines. The simple average of all the tariff rates considered here was 44.5%. These rates ranked the PRC as one of the most highly protected countries in the world, with rates even higher than those of the developing Contracting Parties of GATT, which range between 12% and 15%. In addition, the PRC's tariff structure was one of the most dispersed among large developing countries (Lall, 1994, p. 56). The high and dispersed structure reflected, broadly speaking, the desire on the one hand to protect important domestic sectors such as capital and intermediate goods, and, on the other, to penalize the consumption of non-essential and luxury items.

At more disaggregated levels, foodstuffs and agricultural raw materials tended to have relatively low rates, with some important exceptions where the interests of national producers predominated or products were considered to be luxury items. The application of non-tariff measures (NTMs) to these products was less frequent. There was a clear case of tariff escalation, in accordance with the level of processing. Rates for minerals were low in general and not dispersed, but, as in agricultural products, tended to escalate (ECLAC, 1995).

Tariffs on industrial imports were structured in such a way that intermediate and capital goods were subject mostly to rates of 20%-30%, while rates on most finished consumer goods were over 60%. For iron and steel, an import item of increasing importance, the rates were generally low, with the simple average being close to 14%, but a majority of these products were affected by NTMs. Most products derived from iron and steel had much higher tariff rates, but faced less frequent application of NTMs. With regard to machinery, items for industrial use, such as engines, generators, furnaces, pumps, cranes, lifts, etc., had rates of less than 30%, whereas the rate for household goods such as air conditioners, refrigerators, audio equipment, videos, etc., was 100%. These luxury items also faced NTMs. Other types of machinery were in an intermediate position. The widest dispersion of tariff rates within the sector was found in the case of vehicles.

The NTMs used consisted of a variety of instruments ranging from the mandatory import plan, imports through designated national foreign trade corporations (the so-called canalization), import quotas and licensing. The extent to which each of these is applied is difficult to assess with precision, because they frequently overlap. Also, their implementation is exercised by both central and local governments, thereby creating multiple stages of import approval from different authorities (for details, see Lall, 1994, pp. 63 -67). In 1994, the PRC Government abolished mandatory plans for imports (GATT, 1994a, p. 7) and reduced the use of canalization. This is significant because its use covered not only commodities subject to plans but also products such as iron and steel, textile yarns, sugar and cigarettes. In addition, controls were relaxed on other goods whose importation had been restricted to certain FTCs.

Despite the abolition of the mandatory import plans, import quotas are still applied to a wide range of products in accordance with the State industrial policy and the sectoral development programmes. As of May 1994, 114 categories of products, at the four-digit HS level, were subject to import quotas. The principal sectors affected are agriculture, certain segments of industrial inputs, automobiles, textiles, machinery, electrical and electronic products, and consumer durables. In addition, although they are not subject to import quotas, some subsectors of machinery and electronic products which are still at the "infant" stage of production are subject to open tendering. The goods affected amount to 71 product categories, also at the four-digit HS. The number of broad categories subject to licensing in 1994 remained at 53 (Luo, 1994). Reportedly, the award of licenses can be discretional: their distribution may be linked to FTC performance. Likewise, import licensing seems to have been used by provincial and municipal authorities in accordance with the priorities established by local plans. Although the real effects of these quantitative measures cannot be precisely ascertained, their impact on imports can be grave, not only because of their restrictive effects but also because of the complexity involved in administering them, given the wide range of products covered.

As in the case of imports, the PRC has deployed a wide range of export controls. Although in principle all mandatory export planning was abolished in 1991, there still remain other forms of control. "Except for 16 categories of products that have a close bearing on the national economy and people's livelihood and for which export is managed by a few corporations, State control over the export of all other commodities has been lifted" (GATT, 1994a, p. 6). This is a big improvement in comparison with 1992, when about 15% of total exports were still marketed through designated FTCs. Before 1992, export licensing –the most important remaining control– covered 15% of the country's exports, affecting principally agricultural goods such as grain, tea, pork, beef, mutton, poultry and others (GATT, 1994a, p. 6). Export licensing is still applied in the case of such commodities as tungsten, of which the PRC is the main world producer. In 1993, a total of 138 categories of products were subject to export licenses (GATT, 1994a, p. 6). With the deepening of trade reforms, the number of products subject to export licenses should drop even further.

b) *Effects of the Uruguay Round*

In 1986, 36 years after its withdrawal in 1950, the PRC (which had been one of the founding members of GATT) began to seek re-entry to that organization (replaced by the World Trade Organization in January 1995). [13] Its re-entry would facilitate its international recognition and formal integration in the world economy as well as the consolidation of the market reforms under way. From China's standpoint, there are also several immediate tangible benefits. First, joining GATT would secure for it almost automatically the benefits of Most Favoured Nation (MFN) treatment from more than 120 Contracting Parties. Under the multilateral system, joining GATT eliminates the possibility for the United States to deprive China of its MFN privileges: a perennial source of trade conflict between the two countries up to now. [14] Re-accession to GATT would also make it easier for the PRC to receive further preferential treatment under the Generalized System of Preferences (GSP). Furthermore, GATT membership would mean that the PRC could resort to the dispute settlement mechanisms and procedures when necessary and avoid, as much as possible, discriminatory anti-dumping charges imposed by third parties. The PRC should be one of the biggest gainers from the Uruguay Round, because its export basket will enjoy a marked reduction in tariffs and NTMs (in the case of textiles, for example).

On the other hand, some of the other contracting parties are concerned about China's re-entry into GATT because of, *inter alia*: i) the absence of regulatory transparency; ii) its non-universal trade regime (a dual system consisting first of a liberal, export-oriented production regime with foreign investment in the Special Economic Zones and coastal cities, but also of a considerably more restrictive trade system applicable to the rest of the country); iii) rules and obligations imposed by local and regional authorities, and differential treatment of minority autonomous regions of China and other areas of poverty; iv) uncertainty over the import barriers used, including quotas, licenses, and other restrictions and controls (standards and certification requirements); v) the role of the State trading entities; and vi) China's status as a developing country. Regarding the latter point, some members oppose this status, arguing that as China is the world's sixth largest market (counting the European Union as a group), it should not enjoy such a privilege. If its developing country status were admitted, the PRC would enjoy a longer time-span to comply with the requirements of the WTO, and in some areas it would have fewer commitments in terms of cutting domestic subsidies or providing market access, and greater leeway to provide domestic support for rural development and some classes of export subsidies, with similar concessions in regard of services.

Taking into consideration China's level of economic development and the possible adverse impacts it might suffer, some maintain that the world community should adopt a practical and realistic approach to the PRC's entry into the global trade body. Others, in contrast, argue that the PRC's rising importance in world trade makes it difficult for its negotiators to plead for a wide range of special exceptions. These observations taken together may mean that the rest of GATT members should be prepared to negotiate a transitional period, for instance up to about the year 2000, in order for the PRC to fully comply with the

[13] China was a founding member of GATT but has been treated as a non-contracting party since 1950, when the Chiang Kai-shek regime in Taiwan gave notice of the withdrawal of China from GATT. For details of the issues related to the PRC's re-entry into GATT, see Cai, 1992.

[14] The United States, invoking its 1974 Trade Act, gives MFN treatment to China on an ad hoc basis, and this is reviewed annually. It is estimated that complete deprivation of MFN privileges by the United States would result in annual export losses for the PRC in the range of US$7.0 and US$15.2 billion, while United States consumers would also lose annually close to US$14 billion in higher prices (Lall, 1994, pp. 155-158). Also, given its close ties with the PRC, the withdrawal of China's MFN status would cost Hong Kong up to 70 000 jobs and up to three percentage points of annual GDP growth (Ho and Kueh, 1993, p. 347).

trade body's rules. During this period, the country could reduce the level of tariff protection, remove most NTMs, align its technical standards with international norms, and make its currency fully convertible. In turn, the fulfillment of the adjustments needed in order to comply with the new WTO requirements would open up enticing trade and investment opportunities for the rest of the world, including the countries of Latin America and the Caribbean.

5. Trade possibilities by product groups [15]

a) *Manufactures*

Given the heavy weight of labour-intensive manufactures in the PRC's total exports and the notable inroads made by some Latin American countries in these product groups, competition in some areas will be intensifying in domestic markets and OECD countries. The fact that close to 30% of their total exports are destined to the United States means that Latin America and the Caribbean will face strong competition from the PRC in this market. Most susceptible are textiles and clothing, footwear, electrical and non-electrical machinery, travel goods, metal manufactures, etc. Although the North American Free Trade Agreement (NAFTA) and its possible extension to other countries might reduce somewhat the comparative advantage of the PRC in the United States, [16] China will continue to be a formidable competitor in the highly labour-intensive imports of that country. Competition from the PRC will be particularly strong for the countries of Central America and the Caribbean, whose basic trade orientation is the maquila-type export of textiles and clothing or electrical equipment to the United States. It is also possible that there may be "investment diversion" from the region towards the PRC, induced by the attractively low wage levels and the enormous potential that the local market holds.

In other industrial segments, however, this may not necessarily be the case. Latin American exports have increasingly incorporated industrial products: today, such goods account for more than two-thirds of total regional exports, and roughly half of them consist of manufactured goods. An important share of industrial products is accounted for by semi-manufactures, based on agricultural or mineral resources. Among manufactures, the most important are those of new capital-intensive industries (e.g., automobiles) as well as those of traditional or basic-input industries (chemicals, iron and steel) (ECLAC, 1994). While Latin America will be competing directly with other Asian countries in these product groups, the PRC offers one of the most dynamic markets in industrial products for Latin American producers and exporters.

b) *Minerals and metals*

The PRC is a very significant, but not necessarily the leading, producer of a number of items. In the case of such metals as aluminium, copper, lead and zinc, the country's share in world production does not exceed 10%. A relatively high share is reported for tin and mercury and a particularly high level of participation for antimony. In the case of iron ore and crude steel –a product group which looms high in the import basket of the PRC from Latin America– although China's production has been increasing in recent years, its share is not overwhelmingly high.

The country has not necessarily been the main importer of metals that are interest to Latin America and the Caribbean, and in some of them (e.g., tin and zinc) it has been a substantial world exporter. However, the PRC's share in world metal consumption shows a clear upward trend, and its self-sufficiency has declined over the years. Furthermore, compared with the developed market economy countries (DMECs), China's per capita consumption of major metals is extremely low and much lower than that of Brazil, Argentina, Mexico, Korea and Taiwan, though higher than that of India. These observations point to the conclusion that the country is at a development stage, where the input of metals per unit of GDP is likely to expand for some years to come. Any reductions in per capita requirements thanks to miniaturization, saving and substitution should be offset by increasing requirements for materials owing to rapid economic growth (especially of the industrial sector), population increase, the need for infrastructural works and growing consumerism.

[15] For a more detailed discussion, see ECLAC (1995).

[16] Estimates of trade diversion affecting the PRC in the United States due to NAFTA amount to as much as US$40 million. Although quite small in relation to the PRC's overall trade, this figure exceeds the combined overall loss of US$28 million in terms of displaced exports estimated for the major South American exporters as a result of NAFTA (Lall, 1994, p. 53). The principal explanation is that the PRC directly competes with Mexico in many highly labour-intensive sectors like textiles, clothing, footwear, sporting goods, etc, that are subject to strict non-tariff measures in the United States.

Such trade expansion possibilities can be illustrated by taking the case of steel: a product of which the PRC is the second largest producer after Japan, surpassing the former Soviet Union and the United States. However, even the industrial slow-down in 1990 did not bring a balance between supply and demand, and there continued to be an acute shortage of steel even for basic industries such as energy and transportation. Although it is the largest iron ore mining country and the fourth iron ore importer, the PRC will be facing a significant supply gap in the future in this product group (UNIDO, 1991, p. 99). With regard to copper, projections point to an annual consumption increase of 5%, which means that within ten years the consumption of refined copper could increase by some 550 000 tons annually (*Estrategia*, 4 January 1994), and because of the limited possibilities for the expansion of its own output, its imports are expected to increase. The same can be said about energy resources. If the PRC's per capita consumption of energy resources reaches that of Korea within 20 years, this would mean a five-fold increase in its energy demand. This increase is bigger than the total energy consumption of the United States today, but even so the per capita energy consumption of the PRC would still be less than one-third that of the United States today. Likewise, as it becomes more dependent of imported oil, the PRC will become one of the major buyers on the international crude market (*The Nikkei Weekly*, 27 September 1993). In order to assure future supplies, the Chinese are interested in establishing joint ventures in Latin America with such countries as Peru, Ecuador and Venezuela.

c) *Agricultural and forestry products*

The PRC is one of the main producers, consumers and traders of a number of agricultural products. Its share in world production is markedly high for rice, cotton, wheat, pork and poultry, and coarse grains, and has been increasing over the years for all these products except rice. As might be expected, its share in world consumption is even higher and has also been increasing, especially in the post-Mao period. Its position as a net exporter of such products as rice, beef, mutton, pork and poultry and dairy products has gone down substantially in recent years, and the PRC is a primary net importer of products which are of major importance to Latin America and the Caribbean.

The PRC's per capita consumption of such products as rice and wheat is already higher than that of its Asian neighbours of similar diet and living habits, but it is substantially less in the case of other products such as meat, sugar, dairy items, eggs, cotton and, to a lesser extent, coarse grains and wool. It is estimated that by the year 2000 the national consumption of meat, poultry, eggs and fish will have doubled, and that the projected grain output will be far below demand (UNIDO, 1991, p. 90). Similarly, its self-sufficiency in cotton and wool is likely to decline if textile and clothing exports continue to grow. Several studies (e.g., Carter and Zhong, 1991) project a grain supply shortage for the latter half of the 1990s, equivalent to 20% of its future needs, unless there is major technological development or there are significant price reforms which would finally alter the traditional policy of taxing farmers and subsidizing consumers. Some authors (e.g., Lin, 1992) argue that crop patterns and resource allocation in each region and in the nation as a whole would be greatly improved if 5% of the grain requirements were to be imported. Likewise, as the world's third-largest paper consumer (*The Nikkei Weekly,* 1994a), with pulp imports already equivalent to 90% of total demand, import demand for this group of products is likely to increase rapidly.

6. Investment and other financial flows

As a reflection of both the causes and the effects of the low levels of current trade, mutual investment flows have been quite limited. It is estimated that the accumulated Chinese investment in Latin America and the Caribbean comes to US$300 million (Luo, 1994), with 80 mixed or wholly-owned companies said to be operating in the region (CONECPLAN, 1993). The best known of these is the purchase of Hierroperú of Peru by a Chinese company for US$120 million. Another Chinese company, Sapet Department (a division of the huge China National Petroleum Corporation), has embarked on its first oil extraction venture in northern Peru, regarded by experts as the first step in an ambitious plan to supply equipment for the petroleum industry in Latin America. Other major projects include the iron ore mining and fishery sectors in Peru, iron ore production, wood processing, bicycle assembly in Brazil, tractor assembly in Venezuela, fish meal and apparel production in Chile, deep-sea fishing in Argentina, zinc mining in Bolivia, and fresh-water shrimp culture and apparel production in Ecuador. Currently, studies are being undertaken to explore the investment possibilities for iron ore mining projects in Brazil and copper mining in Chile.

The PRC investors involved in Latin America and the Caribbean are from the public sector (Luo, 1994). In the future, the Chinese might be interested in direct investment projects, apart from the privatization and debt-equity conversion arrangements which have been a major incentive for attracting investment flows to Latin America and the Caribbean in recent years. Although large investment projects in sectors other than natural resources will be unlikely, there will be continued interest on the part of the PRC in such areas as iron ore or copper mining, wood processing, assembly of machinery and electrical and electronic products, and textiles and apparel.

Latin American investments in the PRC are even smaller in number and size. The most notable are the Chilean investment in the fabrication of copper tubes, Cuba's interests in medical equipment and, as a joint-venture, the recent opening of a Brazilian barbecue restaurant, all of them in Beijing. Another interesting joint-venture is a leather factory for which an Argentine firm supplies the raw material, with the final products being exported to the United States (Luo, 1994).

Despite its very small present scale, Latin American foreign investment in the PRC should increase. Some of the sectors earmarked for joint-ventures in the PRC are those in which Latin American entrepreneurs can participate with a relatively small initial capital. As a matter of fact, the Chinese have expressed interest in receiving Latin American investments in food processing industries (CONECPLAN, 1993). Given the present level of technological capability of the PRC and the countries of the region, substantial technology transfers can be envisaged. This type of cooperation could involve the participation of private and State-owned enterprises of various sizes.

In order to facilitate investment, the PRC has signed reciprocal agreements for the promotion and protection of investments with Bolivia, Chile, Argentina, Uruguay, Peru, Ecuador and Jamaica. The eventual signing of agreements with other countries at the earliest possible date, including such major regional players as Brazil and Mexico, will undoubtedly enhance the investment environment for both regions. Despite the recent steps to expand trade credit by signing reciprocal credit agreements with several Latin American banks and establishing local branches (Luo, 1994), there will be greater needs for trade finance, involving more institutions and countries in both regions.

7. Areas for Sino-Latin American economic cooperation

The key to economic cooperation is mutual understanding and deepening of diplomatic relations. In this respect, the PRC has already established diplomatic relations with 17 countries in Latin America and the Caribbean and created a Ministry of Foreign Trade and Economic Cooperation (MOFTEC) office in almost all of those embassies. Besides these official channels, the PRC sends a significant number of trade missions to the region and participates in international trade fairs. These initiatives have served to create direct contacts among the trade agents of both parties. In contrast, similar trade promotion undertakings on the part of Latin America and the Caribbean have been relatively scarce, and general knowledge of the PRC by entrepreneurs of the region has been limited. More active participation by Latin American agents in those fairs will surely enhance trade and marketing possibilities. Another form of trade promotion, on a more permanent basis, is by establishing representative offices in the PRC. A permanent presence in the consumer market provides potential exporters with up-to-date information on its special features and idiosyncracies.

With regard to diplomatic relations, there are 29 nations in the world which recognize Taiwan as a nation rather than a province. Among them, all seven Central American countries, along with Haiti, the Dominican Republic and several other smaller island countries, recognize Taiwan as the true representative of China. In recent years, these countries have officially supported the entry of Taiwan into the United Nations. At the same time, Taiwanese commercial and investment interests in Central America, as well as technical assistance directed to the sub-region, have intensified substantially. Reflecting the importance that it attaches to the sub-region, Taiwan is also a contributing member of the Central American Bank for Economic Integration. The rising profile of Taiwan makes it an increasingly complex matter for Latin America and the Caribbean to establish consistent diplomatic relations with each China. Meanwhile, however, the non-existence of diplomatic relations does not prevent those countries from seeking stronger economic ties with the PRC.

The possibilities for broadening trade and other links between Latin America and the PRC can be pursued not only by bilateral means but also through multilateral mechanisms. The latter include the Pacific Basin Economic Council (PBEC), the Pacific Economic Cooperation Conference (PECC), and the Asia-Pacific Economic Cooperation forum (APEC). The PRC is a member of all of these. The PBEC groups the business communities of 18 countries, including Chile, Colombia, Mexico, Peru and Russia. The PECC is made up of private sector interests, academics, and representatives of governments, including those of Chile, Colombia, Mexico and Peru. The APEC is a formal ministerial-level forum for consultation and cooperation in economic matters, of which Mexico and Chile are full members. It is crucial that Mexico and Chile in the APEC, and some other Latin American countries who are members of the above-mentioned organizations, should act as interlocutors for Latin American interests.

It is unlikely that closer and stronger economic relations can be built up unless there are clear commitments by governments. In order to facilitate trade flows in a more consistent manner, it would be desirable to expand trade finance and to strengthen the institutional framework for this objective. Similarly, both regions should seek to provide a more stable investment climate, by signing reciprocal agreements on investment promotion and protection. Also, when possible, the countries of Latin America and the Caribbean should promote technical cooperation projects or other sectoral agreements with the PRC (e.g., on quality control and health and phytosanitary inspection), which would lead to trade and investment possibilities. From a similar angle, it is strategically important for the countries of the region to support the PRC's aspirations to play a more prominent role in trade and economic cooperation between the two areas. This could be achieved, for example, by actively supporting the official requests made by the PRC in September 1993 for full membership of the Inter-American Development Bank and the Caribbean Development Bank.

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Economic relations *between Latin America* and the high-performing *Asian developing economies*

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This study examines "South-South" economic relations in the context of regionalism. It covers three Latin American countries and eight high-performing Asian developing economies. Although the level of trade and investment between these two groups is currently very low, trade is growing fast and there are indications that the potential for continued growth exists. Although regionalism is advancing in both these parts of the world, it has so far not affected the ties between the two groups of countries, and in fact inter-regional trade growth has recently been exceeding intra-regional growth in the case of most of the countries covered by this study. In the short term, it would appear that economic relations between these Latin American and Asian countries will depend largely on whether a "second generation" of reforms in Latin America will sustain the gains from prior reforms. These changes will require a rehabilitated State at a time when much of the latter's political capital has already been expended, yet the need to maintain fiscal integrity remains. Part of the solution for the Latin American economies seems likely to lie in the widening and deepening of formal integration arrangements, especially in the case of the North American Free Trade Agreement (NAFTA), which could contribute to greater economic integration with the high-performing Asian countries. Finally, while the Asia-Pacific Economic Cooperation Council (APEC) is an obvious institutional bridge between the two regions, it may be premature to speculate too much on its potential significance. There would appear to be some formidable obstacles in the path towards a trans-Pacific Free Trade Area.

I
Introduction

The patterns of world trade and investment are being shaped in part no doubt by the proliferation of regional integration agreements. In Latin America and the Caribbean, for example, where such agreements have multiplied recently to close to 30, intra-regional exports as a share of exports to the world as a whole have increased dramatically from 13% in 1990 to an estimated 22% in 1994 (ECLAC, 1994). Moreover, the momentous decisions to move towards regional free trade areas adopted at the December 1994 Summit of the Americas and the November 1994 APEC summit could significantly influence future trade and investment patterns.

How will "South-South" economic relations be affected by the unfolding of such trends? This study is intended as a modest effort towards assessing part of the picture by examining the economic relations between the Latin American economies (LAEs) and the so-called high performing Asian developing economies (HPAEs). Much of the focus will be on the interaction between eleven countries: three Latin American economies –Brazil, Mexico and Venezuela (which together constitute roughly 65% of the Latin American and Caribbean gross domestic product)– and eight Asian economies (China, Hong Kong, Indonesia, Malaysia, Singapore, South Korea, Taiwan and Thailand).

In the following sections, a brief overview is given of the recent foreign trade and direct investment trends between these two sets of countries (section II). Section III then analyses the short- and long-term prospects for LAE-HPAE relations and the extrapolations that can be made on the basis of the data at hand. It notes that an important component in such an analysis is the juxtaposition of the prospects for greater inter-hemispheric integration with the context of growing hemispheric integration, and considers the extent to which the two may be compatible. Finally, section IV offers some conclusions.

II
Foreign trade and direct investment trends

According to data from the IMF (1987 and 1993), although the level of trade between the two sets of countries is still very low, trade growth in recent years has been very high. In 1992, trade by Brazil, Mexico and Venezuela with the eight HPAEs amounted to 6%, 3% and 2% of their total trade, respectively, while trade by the eight Asian countries with the three LAEs was between 0.5% and 1% of the Asian economies' world trade. Indeed, the figure for these Asian economies' trade with the whole of Latin America is not much greater, ranging from 1% to 3% for each of the HPAEs.

Yet, trade growth has been high. Trade between the HPAEs and Brazil and Venezuela grew at an average annual rate of 12% from 1980 to 1992, while the annual growth rate for the Asian countries' trade with Mexico was even more impressive over that period, exceeding 18%. Indeed, in the 1989-1992 period, the HPAEs' trade growth with Mexico and Venezuela was even more striking: around 32% per year.

For Mexico and Venezuela, the expansion of trade with the HPAEs was the result of both high export and import growth. Most of Brazil's expansion of trade with the HPAEs during 1980-1992 was due to growing Brazilian exports to the Asian markets, though recently the growth of Brazil's imports from that region has exceeded its export growth to the HPAEs. With the exception of Brazilian imports, most of the LAE-HPAE trade is in manufactured goods (United Nations, 1992a, 1992b and 1993).

These rates of growth are impressive by virtually any standard: when compared, for example, with the growth of world trade during the 1980s and early 1990s, which was closer to an average annual rate of 6%; with the growth rate of the eleven countries' trade with the world as a whole; and with intra-regional trade growth.

According to data drawn primarily from UNCTC (1992), OECD (1993), and ECLAC (1993), while recognizing the numerous data gaps and limitations it may be seen that the inter-regional foreign direct investment (FDI) flows are probably a good deal smaller than the corresponding trade flows. Both regions have been registering substantial FDI inflows recently, yet the great majority of this investment has originated in the industrial market economies (IMEs). In fact, LAE-HPAE FDI flows, as a proportion of inward FDI, have tended to be insignificant (i.e., less than 1%). The exceptions may be Taiwan, where 3.1% of its inward FDI flows from 1986 to 1990 came from Latin America, and Mexico, where 8.5% of the inward FDI in 1992 came from developing countries, which means most probably that it came from the HPAEs.

FDI figures are higher in some instances, though still small, if measured as a proportion of outward FDI. In the late 1980s to early 1990s, roughly 10% of FDI from Korea and Taiwan went to Latin America and the Caribbean, while for China (in 1987) the figure was closer to 4%. Most FDI from the HPAEs to the LAEs seems to be in sectors producing labour-intensive manufactured goods (such as textiles and apparel) for the North American market. In the case of Brazil, outward investments in the HPAEs in 1992 were less than one-half of one per cent of the total.

Is inter-regional FDI growing? The evidence is mixed. In general terms there has been a large increase in inflows of FDI to the HPAEs and the LAEs, especially Venezuela, Indonesia, Malaysia, China and Mexico (a notable exception is Brazil, which witnessed a 13% decline in FDI inflows between 1989 and 1992). As previously mentioned, however, most of these inflows come from the IMEs. For its part, outward FDI from the HPAEs is growing rapidly, though most is directed either to the IMEs or to other HPAEs.

A reasonable interpretation of the available data regarding trends in FDI flows between the HPAEs and the LAEs would seem to be that FDI outflows from Taiwan, Korea and China to the LAEs have been increasing in absolute terms and –at least in the case of Taiwan– in relative terms as well (that is to say, the proportion of Taiwan's outward FDI going to Latin America has been increasing). Outward FDI from the HPAEs as a group to Brazil and Venezuela appears to be declining, but HPAE flows to Mexico are probably increasing. Finally, FDI from Latin America to Taiwan, Malaysia and Korea has increased, but flows from the region to China, Indonesia, Hong Kong and Thailand have decreased.

III

Inter-regional integration potential

Extrapolating from existing economic trends is always a tenuous exercise, and probably more so than usual in this instance, for a number of reasons. First, Latin America and the Caribbean is in transition from the "lost decade" of the 1980s, and with the current major setback in Mexico and its spillover elsewhere, the transition has entered a new and uncertain phase. Second, the shift towards regional integration as a major form of economic integration worldwide is probably just beginning. Last, but not least, the high inter-regional trade growth figures are connected in one sense with the low levels of trade: the lower the initial level, the bigger the percentage change stemming from a given increment from one level of trade to another. In other words, the rate of trade growth between the two regions could be highly volatile and/or unsustainable.

What follows is a closer look at some of the important variables that are likely to affect trade and investment relations between the LAEs and the HPAEs. First, a partial assessment is made of the trade potential between the two regions in the light of the compatibility of their trade structures. Second, the evidence on regionalism is examined on the basis of the data emerging from this study, in order to determine the extent to which regional and inter-regional integration has been proceeding in these two areas of the world. Third, and no doubt most importantly, an assessment is made of the role of policy and institutions in shaping events, including the role of both national policies and institutions and inter-governmental policy and supranational institutions.

1. Potential for trade between the LAEs and the HPAEs

This section attempts to measure in one sense the potential for trade, by comparing the trade structures of trading partners. To what extent, for example, does Mexico export (to the world) what the HPAEs import (from the world)? Obviously, if one country does not sell what another country wants to buy, then there would appear to be little potential, at least in the short to medium term, for expansion of trade between the two. On the other hand, if the structure of exports of country A closely corresponds with the structure of imports of country B, then one might expect that, if the two countries are not already major trading partners, there is potential for them to become so.

Nevertheless, it is worth stressing some limitations of this exercise. First, there are clearly other important variables which also determine present and future trade patterns: market size and growth, geography, culture, history, policy, and FDI patterns seem to be among the most salient considerations in this respect.

Second, trade structures are not immutable. On the contrary, one of the most striking characteristics often observed among the HPAEs, and perhaps more recently some LAEs (such as Mexico), has been the dynamic nature of these economies' comparative advantages; some economies have displayed an impressive ability to "upgrade" their comparative advantages. A "good match", then, may be at best a necessary but not sufficient condition for trade expansion and, more generally, for greater integration between two areas in the near to medium term.

Third, the trade structures are examined in this article at a fairly high level of aggregation. Thus, the composition of trade for the relevant economies was disaggregated into five main commodity categories: i) all food items; ii) agricultural raw materials; iii) fuels; iv) ores and metals; and v) manufactured goods. Manufactured goods, in turn, were further disaggregated into three categories: i) chemical products; ii) machinery and equipment; and iii) a residual classification covering all other manufactured goods. [1]

This level of aggregation gives a good idea of the match between export and import structures, although further disaggregation (by 3-digit SITC commodities or commodity groups) would provide a more meaningful analysis of the extent to which one country is selling what another is buying.

On the basis of data taken from UNCTAD (1993) the structure of exports to the world by each of the three LAEs was matched with the structure of imports from the world by the HPAEs, as well as with the import structures of the LAEs' main and regional trading partners, for purposes of comparison. A similar match was also made between the LAEs' imports and the exports of the relevant economies.

The export-import structures were matched in the following way. The proportion of country A's exports in each commodity category was compared with the proportion of country B's imports in the same category. For each category, the smaller proportion of the two countries was determined and then added to the smaller proportions derived from the remaining categories. If the export-import structures are identical, the components will add up to 100 (i.e., a perfect match). The more dissimilar or incompatible are the structures, the lower is the total. The lowest possible measure is zero. [2]

On the basis of the trade structures (and assuming the elimination of all other influences), the evidence suggests the following conclusions. First, there would seem to be far greater opportunities for Mexico and Brazil than for Venezuela to export to the HPAEs (tables 1, 2 and 3). The most striking feature of the trade compatibility measures in respect of Venezuela's exports to the HPAEs and other trading partners is the extent to which the trade structures appear to be incompatible: compared with Brazil and Mexico, the matches are very poor "across the board." [3]

[1] This classification scheme follows that used in UNCTAD (1993).

[2] This trade structure compatibility measure is derived from Finger and Kreinin (1979), although these authors focus on the extent to which the export structures between two trading partners match. Erzan and Yeats (1991, p. 14) similarly apply the "Kreinin-Finger Index" to the case of export structures within Latin American economies in order to gauge the extent to which potential gains from a free trade area might be shared among countries with similar export structures.

[3] In 1991, 86% of Venezuela's exports were fuels. The extent to which trading partners' import structures are compatible with Venezuela's concentrated export structure hinges largely on how much these countries need oil. For example, the figures indicate relatively higher compatibility between Venezuelan exports and the import structure of Brazil and Japan, both of which are importers of fuel. In contrast, the compatibility is lower in the case of fuel producers such as China, Malaysia and Mexico.

TABLE 1

Brazil: Trade Compatibility (TC) Index, 1990-1992

	Extent to which Brazil exports what its trade partners import TC Index [a]		TC Index
HPAEs [b]	62	United States	64
Asian Tigers [c]	63	Canada	60
ASEAN [d]	60	Mexico	73
China	64	Argentina	56
Singapore	59	Italy	69
Korea	61	Netherlands	74
Hong Kong	68	Japan	73
Taiwan	62	Germany	73
Malaysia	59	France	72
Thailand	64	Spain	68
Indonesia	57	United Kingdom	73
	Extent to which Brazil imports what its trade partners export TC Index		TC Index
HPAEs	59	United States	71
Asian Tigers	56	Canada	74
ASEAN	62	Mexico	89
China	61	Argentina	48
Singapore	74	Italy	59
Korea	53	Netherlands	76
Hong Kong	44	Japan	49
Taiwan	53	Germany	64
Malaysia	73	France	73
Thailand	54	Spain	69
Indonesia	60	United Kingdom	72

Source: UNCTAD (1993).
[a] The Trade Compatibility Index ranges from 1 to 100: the higher the index, the better the "fit" and hence the greater the trade potential. For a definition of the TC index, see the text.
[b] High-performing developing Asian economies.
[c] Include Hong Kong, South Korea, Singapore and Taiwan.
[d] The Association of South-East Asian Nations (ASEAN) includes Indonesia, Malaysia and Thailand.

Second, while both Mexico and Brazil have significant potential for expanding exports to HPAE markets, Mexico would appear to be better placed in this respect. This is partly because, overall, the compatibility indexes are higher for Mexican exports than they are for those of Brazil, even though Brazil currently exports a greater proportion of its commodities to HPAEs than does Mexico. Moreover, although in both countries the matches with their main trading partners are generally better than with the HPAEs, this difference is smaller in the case of Mexico. This would seem to imply that there is more room for the expansion of Mexico's exports to the HPAEs than those of Brazil.

Third, there would seem to be greater potential for Mexico and Brazil to expand their exports to the HPAEs than there is for the HPAEs to export more to Mexico and Brazil. The fit between the export structures of Mexico and Brazil and the import structures of the HPAEs tends to be better (i.e., the trade compatibility index is higher) than in the case of the fit between the imports of Brazil and Mexico and the HPAEs' exports.

In addition, with a couple of notable exceptions,[4] the import structures of Brazil and Mexico are generally much more compatible with the export structures of their main trading partners than with the HPAEs' export structures. In other words, there seem to be good reasons why those partners –the United States and some European countries in particular– are the leading sources of imports for Brazil and Mexico,

[4] The exceptions are the relatively incompatible export structures of Japan and Argentina with respect to Brazil's import structure. Yet these two countries are among the top five exporters to Brazil. These exceptions no doubt highlight the importance of other explanatory variables previously alluded to.

TABLE 2

Mexico: Trade Compatibility (TC) Index, 1990-1992

	Extent to which Mexico exports what its trade partners import TC Index [a]		TC Index
HPAEs [b]	71	United States	72
Asian Tigers [c]	72	Canada	67
ASEAN [d]	71	Brazil	89
China	67	Venezuela	73
Singapore	75	Colombia	71
Korea	80	Argentina	70
Hong Kong	60	Japan	78
Taiwan	74	Germany	76
Malaysia	68	France	78
Thailand	72	Spain	80
Indonesia	73	United Kingdom	75
	Extent to which Mexico imports what its trade partners export TC Index		TC Index
HPAEs	68	United States	94
Asian Tigers	71	Canada	78
ASEAN	64	Brazil	66
China	67	Venezuela	14
Singapore	85	Colombia	49
Korea	73	Argentina	49
Hong Kong	53	Japan	78
Taiwan	73	Germany	90
Malaysia	80	France	88
Thailand	64	Spain	91
Indonesia	48	United Kingdom	87

Source: UNCTAD (1993).

[a] The Trade Compatibility Index ranges from 1 to 100: the higher the index, the better the "fit" and hence the greater the trade potential. For a definition of the TC index, see the text.

[b] High-performing developing Asian economies.

[c] Include Hong Kong, South Korea, Singapore and Taiwan.

[d] The Association of South-East Asian Nations (ASEAN) includes Indonesia, Malaysia and Thailand.

and why such trends could continue. The compatibility of Mexico's import structure with its main trading partners is particularly striking: especially with the United States, though also with its European partners (Germany, France, Spain, and the UK).

Fourth, the export expansion potential for all three LAEs would seem to be slightly greater on the markets of the "Asian Tigers" (Singapore, Korea, Hong Kong and Taiwan) than on those of the ASEAN countries (Malaysia, Thailand and Indonesia). Among the HPAEs, the greatest export expansion potential for both Mexico and Venezuela lies in the Korean market, while the least potential exists with Hong Kong. In contrast, Brazil's greatest export expansion potential is with Hong Kong, and the least with Indonesia.

Fifth, the export expansion potential for the HPAEs with the three LAE markets is greatest for Singapore and Malaysia. Indonesia would appear to have the least potential to expand exports to Mexico and Venezuela, and Hong Kong's exports have relatively little room for expansion in all three LAEs.

Finally, some observations regarding the potential for intra-regional trade within Latin America may be instructive (as the potential for inter-regional trade is conditioned in part by the potential for intra-regional trade). First, the evidence suggests that there is substantial potential for trade expansion between Brazil and Mexico (in both exports and imports): greater than that which exists with their main trading partners and with the HPAEs. This may suggest that both countries could make substantial gains if they were to link up more formally through a trade agreement. Mexican export expansion shows considerable potential in the case of the markets of other Latin American countries as well, including Venezuela, Colombia and Argentina. This potential is roughly comparable to that with the HPAE markets.

TABLE 3

Venezuela: Trade Compatibility (TC) Index, 1990-1992

	TC Index [a]		TC Index
	Extent to which Venezuela exports what its trade partners import		
HPAEs [b]	21	United States	23
Asian Tigers [c]	23	Canada	16
ASEAN [d]	20	Mexico	16
China	15	Colombia	19
Singapore	25	Brazil	37
Korea	30	Italy	23
Hong Kong	13	Netherlands	21
Taiwan	24	Japan	38
Malaysia	17	Germany	21
Thailand	21	France	22
Indonesia	22	United Kingdom	19
	Extent to which Venezuela imports what its trade partners export		
	TC Index		TC Index
HPAEs	65	United States	88
Asian Tigers	67	Canada	80
ASEAN	63	Mexico	65
China	65	Colombia	47
Singapore	76	Brazil	67
Korea	71	Italy	76
Hong Kong	51	Netherlands	78
Taiwan	71	Japan	68
Malaysia	80	Germany	83
Thailand	62	France	91
Indonesia	48	United Kingdom	87

Source: UNCTAD (1993).

[a] The Trade Compatibility Index ranges from 1 to 100: the higher the index, the better the "fit" and hence the greater the trade potential. For a definition of the TC index, see the text.

[b] High-performing developing Asian economies.

[c] Include Hong Kong, South Korea, Singapore and Taiwan.

[d] The Association of South-East Asian Nations (ASEAN) includes Indonesia, Malaysia and Thailand.

In contrast, the fit between Brazil's exports and Argentina's import structure is quite poor: poorer than any of the other trade compatibility measurements for Brazilian exports. This may have interesting implications for the evolution of MERCOSUR, of which Brazil and Argentina are the two dominant members. At the very least, this result would seem to imply that it is in Brazil's interest to remain diversified as regards its trade partners.

Finally, Venezuela's exports match up poorly with all its Latin American partners, in comparison with the figures for Mexico and Brazil. Furthermore, among Venezuela's trading partners in the hemisphere and elsewhere (including the HPAEs), its export expansion potential to Mexico and Colombia is among the smallest, though its export expansion potential to Brazil is among the largest.

2. Evidence on regionalism (and inter-regional integration)

Clearly, greater regional and inter-regional economic activity are not necessarily mutually exclusive. In fact, "open regionalism" can serve to promote greater economic links between regions. This theme will be dealt with more fully below. The purpose of this section is first to look at the existing record. To what extent has regionalism been occurring in Latin America and Asia? Is there evidence of the co-existence of regionalism alongside growing inter-regional integration? Or, to put it a little differently, has regionalism –to the extent that it is occurring– taken place at the expense of LAE-HPAE relations?

Evidence from both trade and investment flows is available, though the trade data provide a much more complete and current picture (tables 4 and 5). The focus in this exercise is on the comparison, for each of the ten developing countries in this study,[5] of the average annual percentage change in trade during the most recent time series (1989 to 1992) with: i) the world; ii) the country's own region, including both the neighboring industrial market economy countries and developing economies; and iii) the developing economies of the "other" region.[6] Evidence of regionalism is considered to exist if a country's trade growth with the economies of its region exceeds that country's trade growth with the world.

The results are quite striking. First, evidence of regionalism does exist for all ten countries: that is to say, each country's growth of trade with the economies of its own region during 1989 to 1992 was greater than the growth of world trade for that country.

Second, with the exception of the trends in the trade of China and Singapore, regionalism does not appear to be taking place at the expense of LAE-HPAE inter-regional integration: i.e., with the exception of China and Singapore, each LAE's (HPAE's) trade growth with the HPAEs (LAEs) has been greater than that country's growth in terms of world trade. This obviously means that trade with some other countries and regions in the world is growing less than the world trade growth of these LAEs and HPAEs. Trade between these two Third World regions, however, is not suffering.

Indeed, in most of the countries (Mexico, Venezuela, Thailand, Hong Kong, Indonesia and Korea), inter-regional trade growth exceeded regional trade growth during the period from 1989 to 1992. The results given in tables 4 and 5 for a longer time series, 1980 to 1992, show similar trends, although less pronounced.

The results on regionalism and its association with LAE-HPAE relations are not as clear-cut in the case of FDI trends (table 6). In part, the analysis is hampered by insufficient data; either there are not enough data to provide a trend assessment, and/or the figures are not as up-to-date as one would wish.

TABLE 4

Brazil, Mexico and Venezuela: Direction of trade, 1980-1992
(Average annual percentage change)

	Brazil		Mexico		Venezuela	
	1980-1992	1989-1992	1980-1992	1989-1992	1980-1992	1989-1992
World	*2.3*	*4.3*	*9.3*	*23.2*	-0.7	6.4
Industrial market economies	3.5	3.0	9.9	23.8	-0.3	4.6
Developing economies	1.0	8.5	8.0	18.8	-2.1	13.9
Asia	9.6	6.2	18.1	33.1	10.4	31.9
HPAEs [a]	12.2	5.9	18.4	32.8	11.9	31.6
China	4.0	-10.1	4.4	-2.5	NA	NA
Hong Kong	17.9	2.6	22.7	32.7	6.6	30.4
Indonesia	2.1	10.6	18.3	36.7	NA	-8.0
Korea	22.9	15.4	25.8	40.3	17.4	49.0
Malaysia	22.7	14.9	20.7	41.8	NA	NA
Singapore	6.9	5.1	12.7	25.7	NA	64.6
Thailand	20.4	15.9	28.5	44.3	NA	NA
Taiwan	20.9	11.0	25.3	111.4	NA	-0.2
Western Hemisphere	4.0	7.2	10.3	25.0	-0.6	8.9
United States	3.9	1.9	10.4	25.4	1.8	7.9
Canada	-2.0	-8.4	15.5	37.4	-10.3	0.4
LAEs [b]	4.9	17.0	6.8	14.4	-2.9	12.5

Source: IMF, 1987 and 1993.
[a] High-performing developing Asian economies.
[b] Latin American economies.

[5] Data for Taiwan were not available.

[6] Thus, the region for Brazil, Mexico and Venezuela is taken to include all the countries of the Western Hemisphere, while the HPAEs' region includes not only all the Asian developing economies, but also Australia, Japan and New Zealand, which were expressly excluded from the present study.

TABLE 5

High-performing developing Asian economies (HPAEs): Direction of trade, 1980-1992
(Average annual percentage change)

	Thailand		Singapore		China	
	1980-1992	1989-1992	1980-1992	1989-1992	1980-1992	1989-1992
World	*12.8*	*17.6*	*8.9*	*10.3*	*12.5*	*12.2*
Industrial market economies	13.7	17.8	9.6	8.3	9.3	8.9
Developing economies	11.7	17.4	8.6	12.4	16.0	15.4
Latin American economies	17.2	19.7	6.0	7.4	7.1	4.7
Brazil	16.1	16.4	6.8	0.3	5.3	-9.9
Mexico	21.1	20.8	8.2	15.5	8.1	10.6
Venezuela	-2.3	33.8	16.1	55.1	8.7	15.2
Asia-Pacific	14.4	19.0	10.2	11.3	14.6	15.3
Australia	14.8	20.1	9.2	18.2	4.9	11.4
Japan	14.9	19.6	8.9	6.8	8.5	7.1
New Zealand	11.4	16.1	-1.8	5.3	5.6	-4.9
Asian developing economies	14.0	18.4	10.9	12.6	19.0	18.8

	Hong Kong		Indonesia		Korea		Malaysia	
	1980-1992	1989-1992	1980-1992	1989-1992	1980-1992	1989-1992	1980-1992	1989-1992
World	*14.6*	*16.2*	*5.2*	*15.6*	*11.5*	*8.2*	*10.2*	*19.0*
Industrial market economies	12.3	14.2	4.2	13.7	11.3	3.5	9.4	18.5
Developing economies	18.1	18.0	8.5	20.1	12.3	21.8	12.0	19.8
Latin American economies	13.8	24.3	-3.6	23.0	15.3	13.9	17.4	19.0
Brazil	17.9	2.1	-1.2	12.3	25.0	17.9	14.4	11.5
Mexico	21.4	35.2	14.8	35.6	19.1	19.2	23.1	47.0
Venezuela	6.8	25.2	12.3	46.2	17.8	46.1	NA	NA
Asia-Pacific	17.5	17.2	5.1	15.7	13.6	11.4	11.3	19.2
Australia	10.2	10.6	9.4	23.1	12.7	11.3	6.7	9.3
Japan	12.7	14.4	1.9	10.8	10.4	2.7	8.9	19.0
New Zealand	9.3	12.3	0.4	9.5	14.6	13.3	9.3	0.7
Asian developing economies	19.4	18.1	10.0	20.8	18.0	22.7	13.1	20.5

Source: IMF, 1987 and 1993.

As in the analysis on trade, evidence of regionalism is considered to exist if a country's inward (outward) FDI from the economies of its region increases over time as a proportion of total inward (outward) FDI.

With regard to FDI trends, there is evidence that regionalism exists among the HPAEs, but there is no evidence of it in the three LAEs. Even among the HPAEs, however, the trend is not universal: for Singapore, Hong Kong and Korea, the proportion of outward FDI to total FDI which remains in the region is declining.

Where available, the evidence of the co-existence of regionalism with (proportionately) growing LAE-HPAE FDI is mixed, with little discernible pattern to explain why. Some countries are experiencing both phenomena, others are witnessing one but not the other, and some are not experiencing either. It is difficult to make much of an interpretation of these trends, as the data are limited. To a large extent, this reflects the reality that FDI from many of these developing countries remains relatively insignificant.

3. Policies and institutions

The primary policy and institutional considerations boil down to two: domestic reforms in Latin America

TABLE 6

Latin America (three countries) and Asia (eight countries): Regional and inter-regional FDI trends, 1980-1992

	Evidence of:	
	Regionalism [a]	Inter-regionalism [b]
Outward FDI		
Singapore	No	
Hong Kong	No	
Korea	No	No
Taiwan	Yes	Yes
Thailand	Yes	
Indonesia		
Malaysia		
China	Yes	No
Brazil	No	No
Mexico		
Venezuela		
Inward FDI		
Singapore		
Hong Kong	Yes	No
Korea	Yes	Yes
Taiwan	Yes	Yes
Thailand	Yes	No
Indonesia	Yes	No
Malaysia	Yes	Yes
China	Yes	No
Brazil	No	No
Mexico		
Venezuela	No	No

Source: OECD (1993), ECLAC (1993) and CTC (1992).

[a] Evidence of regionalism is said to exist if the inflow (outflow) of FDI in an economy from (to) the economies of its region increases over time as a proportion of the total inflow (outflow) of FDI.

[b] Evidence of inter-regionalism is said to exist if there is proportional growth of FDI between the economies of Latin America and those of Asia.

and the Caribbean, and the repercussions of regional cooperation arrangements (especially the North American Free Trade Agreement (NAFTA) and the Asia-Pacific Economic Cooperation Council (APEC)).

a) *Domestic reforms in the Latin American economies*

The sweeping reforms in Latin America and the Caribbean have contributed to substantial economic gains. Excluding Brazil, where reforms have tended to lag, the growth of output in the region increased from an annual rate of 1.5% in 1985-1989 to roughly 3.5% in 1990-1994 (Linde, 1995). Average inflation (excluding Brazil) fell to 14% by 1994: a record low in recent decades, and far below the 130% registered in 1989. These trends, if they continue, will obviously benefit LAE-HPAE economic relations.

Nevertheless, the crisis in Mexico has further underscored the need for "second generation" reforms. These structural reforms must address at least two broad concerns. First, the region as a whole continues to face substantial destabilizing pressures in the form of current account deficits which cannot be eradicated by stabilization policies alone. Reduction of the dependence on volatile foreign portfolio capital is vital. This means sustaining and even accelerating exports. Domestic savings must also increase. The LAEs save less than 20% of GDP: a very low figure compared with the 35% of GDP saved by the HPAEs.

Furthermore, in addition to being morally intolerable, the region's widespread and growing poverty and high income inequality is not sustainable. In fact, Latin America and the Caribbean has the most severely skewed income distribution in the world, with the richest 20% receiving almost twenty times more income than do the poorest 20% (Sprout and Weaver 1992).[7]

Paradoxically, in light of the region's largely fruitful efforts over the past ten years to decrease the role of the State, these concerns and others point to a need to rehabilitate it.[8] If Latin America is to sustain and broaden the gains it has already made, effective governance is particularly needed to upgrade public services in health and education, promote savings, investment and exports, better regulate newly privatized sectors, and push forward tax reforms.

b) *Intergovernmental institutions*

Policies affecting relations between governments –trade and investment agreements in particular– will also play a major role in inter-regional integration trends between the LAEs and the HPAEs. Most of this activity has so far been intra-regional. Within Latin America, integration agreements have been flourishing: a web of some thirty overlapping, sometimes contradictory, integration arrangements has evolved in recent years. Asian integration has tended so far to

[7] In contrast, the wealthiest 20% in the industrial market economies receive seven times more than the poorest 20%. In East Asia, the ratio (six to one) is lower still (Sprout and Weaver, 1992).

[8] This sentiment is ably expressed and supported by Naim, 1993.

be more market-driven than policy-driven, more informal than formal. There too, however, governments are cooperating to reap the gains from pooling resources and comparative advantages.[9]

The regional arrangement that is likely to have the greatest repercussions on LAE-HPAE relations in the near to medium term is the North American Free Trade Agreement (NAFTA). This is largely because the United States is the leading member, and its economy is vitally important to all the countries of this study. This may be most apparent in the case of the LAEs, but the HPAEs are very much dependent on the U.S. economy too, as is shown in the remarkable figures given in table 7. The Philippines and Japan are included in this table to further underscore the importance of the U.S. market for all of East Asia. In 1993, the United States ranked first among export markets in six of the ten Asian countries, and second in the other four.

NAFTA is also important because it significantly tilts the global balance between regionalism and multilateralism. Combined with Europe's long-standing integration scheme, which continues to deepen and widen, it ensures a prominent position for regional integration across the globe, and could put pressure on the Asian countries to regionally integrate in a defensive manner.

A fundamental concern then is that, with the emergence of NAFTA, the world could move towards closed regional blocs, or at least that the attention to regional integration could erode the levels of commitment and progress in the multilateral forum of GATT (now the World Trade Organization (WTO)). Neither scenario would serve the promotion of South-South relations, nor the more general consideration of Third World development (in most instances).

Nevertheless, although the closed-bloc scenario could unfold in the above manner, it does not seem likely at this juncture for two fundamental reasons. First, the multilateral process has been boosted by a Uruguay Round victory, thus increasing the probability that regionalism and multilateralism will be processes that complement rather than substitute each other. Second, NAFTA is not taking the shape of a closed system, and this would seem to apply in general to the other Western Hemisphere integration agreements as well.

There are two important criteria for judging the openness of NAFTA. One refers to trade and investment barriers to non-members. The other refers to membership barriers.

With regard to the first criterion, NAFTA would seem to score quite well overall. As has been argued elsewhere, NAFTA essentially conforms to the "letter" of the GATT's Article XXIV (which sanctions regional arrangements given certain conditions), and, more importantly, it builds on the GATT in some important areas. NAFTA, in other words, has some GATT-plus characteristics.[10]

Naturally, a primary objective of NAFTA is to give the producers in its member countries a competitive advantage over others. In general, however, the strategy seems to be to do so not through raising barriers to the outside, but by lowering barriers within. If this is accomplished, then trade creation will outweigh trade diversion, and non-members can reap these trade creation gains as well. Growing open markets translate into growing opportunities for all, not just NAFTA members. This is another way of stressing the importance of weighing the dynamic effects (of greater economic growth) against the static trade and investment diversion effects.

Still, not all is wonderful with NAFTA. A major negative aspect is clearly its restrictive rules of origin, particularly in textiles and apparel and automobiles. Unfortunately, these measures seem aimed at the East Asian competitors. It is also unfortunate because these rules may well actually impair the competitiveness of many of the producers within the free trade area over the longer term. It also sets a dangerous precedent for future regional schemes. However, the agreements at the Uruguay Round on these sectors will likely serve to minimize the trade diversion that may stem from NAFTA's restrictive rules of origin.

[9] The emergence of so-called "growth triangles" comes to mind. There are at least three of these: i) the Chinese economic area consisting of China, Hong Kong and Taiwan; ii) a growth triangle between Indonesia, Malaysia and Singapore established in 1989, and iii) more recently, in 1993, an arrangement between Malaysia, Thailand and Indonesia (see, for example, Vatikiotis (1993). In addition, the ASEAN countries have been working towards a free trade area (AFTA), though progress appears to be slow.

[10] See, for example, Hufbauer and Schott (1993) for an assessment in this vein.

TABLE 7

East Asia: Importance of the United States market, 1993

	Total exports (US$ millions)	Exports to United States (US$ millions)	United States share of total (%)	United States rank among export markets
Japan	362 583	106 898	29.5	1
Asian Tigers				
Korea	83 535	18 138	21.7	1
Taiwan [a]	76 161	22 317	29.3	1
Hong Kong	135 005	31 159	23.1	2
Singapore	74 071	15 074	20.4	1
ASEAN				
Indonesia	36 843	5 230	14.2	2
Thailand	37 111	8 004	21.6	1
Philippines	11 279	4 324	38.3	1
Malaysia	47 080	9 580	20.3	2
China	91 611	16 976	18.5	2

Source: IMF (1994).

[a] These figures are for 1991 and are taken from Ow-Taylor (1993).

There also continues to be legitimate concern regarding the United States' use of "aggressive unilateralism" in its trade policy arsenal. In fact, if the United States tries to apply an enlightened regional trade policy in NAFTA, this could give rise to greater pressures for anti-dumping and countervailing duty actions, as U.S. producers hurt by growing competition as a result of NAFTA seek redress wherever they can get it. Once again, the East Asians may be likely targets.

Finally, there is the issue of accession to NAFTA. While membership is technically open to any country that is able to meet the economic conditions set forth by the NAFTA members, it is clear that the intention is to make the Agreement the core of a wider hemispheric free trade area. At the Miami Summit, the NAFTA members formally invited Chile to begin negotiations, scheduled to begin in May 1995, with a view to NAFTA membership.

Access to NAFTA through formal membership may not be all that important, however, to countries outside the hemisphere. This is partly because there are indirect means of gaining access to it. One is to secure a trade and/or investment agreement with a member country of NAFTA. This is what many countries have been doing with Mexico. Most of these agreements have been between Mexico and Western Hemisphere countries, though not exclusively so.

Mexico and Thailand, for example, recently signed a trade and investment expansion agreement. This will promote Thai investments in Mexico and, through these investments, enable Thailand to capture some of the preferential access to the markets in Canada and the United States. These investment endeavours will initially be joint ventures (see Stier, 1992).

APEC, too, could become a formal vehicle for gaining access to the North American market for the HPAEs and, more generally, a mechanism to promote LAE-HPAE economic links. Established in 1989 with the modest objectives of providing a formal forum at the intergovernmental level for consultation and cooperation in economic affairs by the Pacific Rim countries, it continues to widen (it now has a membership of 17) and deepen (moving towards more ambitious objectives and increasing commitments).

Working groups have been formed in APEC on trade, investment and other areas, and a permanent secretariat has been established in Singapore. Until recently, Third World APEC members came only from the Asian region (specifically, the eight HPAEs of this study, plus Brunei and the Philippines). However, Mexico became a member at the Seattle meeting in December 1993, and most recently, Chile joined in November 1994 at Jakarta.

The major development at the Jakarta Summit was the agreement in principle to form a free trade area among APEC members by the year 2020. Whether and how that unfolds in practice are very much open questions. There are certainly reasons to expect a much more difficult negotiation process than that preceding the formation of NAFTA. The concern shown by some U.S. groups of being out-competed by future members of the free trade area will be greater, as will the voices of objection. In addition, there would appear to be much less consensus among potential members on the fundamentals. How free should free trade be? How fast should it be attained, and what should the sequence of policies be? At all events, a better indication of the feasibility of the proposed free trade area should be revealed by the next summit meeting to be held in the fall of 1995 in Osaka, Japan, at which a more specific blueprint is to be unfolded. [11]

IV

Concluding observations

Economic relations between the LAEs and the HPAEs in the near term would seem to hinge greatly on the reform process in Latin America and the Caribbean, and on the evolution of NAFTA. To some extent, the most difficult part still lies ahead for the LAEs in their dramatic bid to compete in the world economy. Far-reaching though the stabilization and liberalization reforms have been, some even more intractable structural changes must be made in order to sustain the gains. These changes will require a rehabilitated State, at a time when much political capital has already been expended, yet the need to maintain fiscal integrity remains. Nevertheless, in view of the extraordinary achievements to date, grounds for cautious optimism would seem to exist.

Part of the solution for the LAEs seems likely to lie in the widening and deepening of formal integration arrangements, and NAFTA in particular. Furthermore, the growth of regionalism in the Western Hemisphere so far appears to be compatible with growing inter-regional relations. In fact, the importance of the Asian-American economic ties almost ensures this outcome.

NAFTA may, however, affect the composition of the LAE-HPAE economic flows. In particular, to the extent that it will have some adverse consequences for the East Asian economies in the shape of restrictive rules of origin and possible U.S. unilateral trade actions, the HPAEs may focus more on direct investments in Latin America in the near term and less on trade as a means of maintaining access to the North American market.

Finally, while APEC is an obvious institutional bridge between regions, it may be premature to speculate too much on its potential significance. As previously mentioned, there are some notable obstacles standing in the way of its evolution into a free trade area. There is one trend, however, which could take place in Europe and could contribute as much as anything to greater integration between Asia and the Americas. Some observers have contended that Western Europe shows signs of playing a closed-bloc game. Be that as it may, at the very least it will continue to be preoccupied for some time to come with both deepening the European Community within and incorporating its neighbours to the East.

(Original: English)

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[11] Two non-governmental arrangements that play a role in encouraging LAE-HPAE relations are also worth mentioning: the Pacific Economic Cooperation Conference (PECC), established in 1980, whose individual members are drawn from all the APEC countries plus Peru; and the Pacific Basin Economic Council (PBEC), established in 1969, with nine members (Japan, Korea, Hong Kong, Australia, New Zealand, the United States, Canada, Mexico and Chile). See Mattos (1993) for more details.

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Economic relations *between Latin America* and the European Union

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Two opposing trends are currently shaping relations between the European Union and Latin America. On the one hand, political signals in both regions are positive and point the way to closer ties in the future; on the other hand, the situation with regard to the Union's trade with Latin America has worsened appreciably, with the region's trade surplus giving way to a deficit for the first time in four decades. This trend may jeopardize the progress made thus far. If we do not act now, trade-related tensions, the reduction of development assistance and the appearance of social or environmental trade restrictions may cast a shadow over the bilateral situation, causing the two regions to become what we might describe as *distant friends*. If, however, existing political signs that the regions are drawing closer together lead them to take decisions that actually do improve their economic relations, then the two regions may form a mutually beneficial relationship and become *genuine partners*. If this is to happen, the two regions must place a higher priority on one other, agree upon a strategic, long-term agenda and resolve some specific trade problems.

In this article the author examines these issues, presents an analysis of the reversal of the trading position and of the perils of inaction, and offers some thoughts regarding this strategic vision of a new kind of economic relationship between the two regions.

I
Introduction

Relations between the European Union and Latin America have prospered since 1994. The Fourth Institutionalized Ministerial Meeting between the European Union and the Rio Group, held in São Paulo in April 1994, asked that a medium- and long-term strategy for intensifying relations be prepared and agreed to work for a genuine partnership in the areas of economic affairs, trade, industry, science and technology; furthermore, the Heads of State and Government of the European Union attending the meeting of the European Council held at Corfu, Greece, in June 1994 reaffirmed, for the first time in several years, the importance they attribute to relations with Latin America and its regional groupings.

Less than six months later, when the European Council met at Essen, Germany, in December 1994, it confirmed its desire to embark upon a new, broad-based relationship with Latin America and instructed the Commission and the Council to proceed with the prompt initiation of negotiations concerning an inter-regional framework agreement with the MERCOSUR countries and to undertake the conclusion of new agreements with Mexico and Chile with all due speed. These announcements were welcomed by the governments of the countries concerned, and from the first quarter of 1995 on, negotiations regarding the nature and content of these three agreements have been the subject of intense debate in Brussels. The Fifth Institutionalized Ministerial Meeting of the European Union and the Rio Group, held in Paris in March 1995, then reiterated both regions' interest in forming closer relations with the help of new instruments of cooperation.

Bolstered by broadly shared principles and values, such as those of democracy and respect for human rights, a common historical and cultural heritage and a long tradition of economic exchanges, and based on the progress already made within the framework of their institutionalized political dialogue, governments on both sides of the Atlantic appear to be looking forward with great enthusiasm to a new stage in their relations.

This bright political picture is at odds, however, with the disturbing state of the trade flows between the regions. For several decades, Europe had a substantial trade deficit with Latin America, which provided it with a useful political argument to counter demands that it open up its market more fully to Latin American exports. This state of affairs has changed radically, however, and since 1989 the trend has been towards a serious deterioration in Latin America's trade balance with the European Union. In 1994, the balance of trade between the two regions switched directions for the first time in several decades. Worse yet, the trade matrix, which is sharply skewed towards commodity exports and imports of manufactures on the part of Latin America, strongly indicates that these negative trends will persist in the future. This situation should serve as the practical framework for an analysis of the evolution of the two regions' economic relations.

Trade statistics would not be so significant if it were not for the fact that they serve as indicators of more thorough-going changes in the nature of the two regions' economic relations. It is normal for countries to have surpluses or deficits with other countries or regions within the dynamic realm of international trade. Nevertheless, the strength of the trends seen in recent years gives reason to believe that this new era of trade will have crucial implications for political relations and the economic dialogue between the two regions.

One of these implications is particularly disquieting. The fact that a deficit with Europe has followed upon the heels of Latin America's trade liberalization drive may jeopardize the progress engendered by the friendly relations formed in recent years. The era that now appears to be drawing to a

□ The author wishes to thank Francisco Bataller, Jorio Dauster, Patricio Leiva, Carlos Arturo Marulanda and Claudio Riedel for their suggestions, as well as the editors of this *Review*. It goes without saying, however, that he himself is solely responsible for any errors or omissions which may have crept in, and he also wishes to make it clear that the opinions expressed herein are of a purely personal nature and in no way should be construed as reflecting the views of the Government of Venezuela.

close may be followed by a deterioration in the dialogue between the regions on economic issues, and this could alter the course of future relations. This would be a serious matter, and we therefore need to act now.

The economic situation in both regions during the past few years has been marked by the need to adapt to changing conditions in the world economy. For its part, Latin America is faced with an entirely new set of conditions in the 1990s. Since the end of the 1980s, almost all the countries of the region have opened up and liberalized their economies, and this has paved the way for the restoration of macroeconomic stability in most of them, as well as a gradual reversal of the recession that hit the region in the 1980s. Having surmounted the external debt crisis and the stagnation and inflation that prevailed in the region during the "lost decade" of the 1980s, the Latin America of today –with an average annual growth rate of 4% since 1989– is one of the fastest-growing economic regions in the world. The concepts of a closed economy, State interventionism, direct price controls and the maintenance of dangerous fiscal and monetary imbalances have given way, in most of the countries, to the idea of open and increasingly integrated economies, free trade in goods and services, privatization and improved controls on public finances.

Latin America's newly-mounted effort to make a place for itself in the economic globalization process and to establish a growth path based on the opening and liberalization of its economies has not been easy. As demonstrated by the cases of Mexico in early 1995 or Venezuela in 1992, reforms have been accompanied by new macroeconomic disequilibria or, in some countries, by social and political discontent owing to the difficulties inherent in the liberalization model or to political opposition to the new paradigms of economic liberalization.

Europe, for its part, also finds itself face to face with a new situation in the 1990s. The consolidation of the Single European Market has not generated as much growth as expected, but the process of building an integrated economic community has continued to move forward despite the political difficulties involved. The European Union is aware that the maintenance of its strategic importance *vis-à-vis* the United States and Japan hinges upon its economic and political integration. For the 1990s Europe has also, however, set itself the challenge of regaining its global economic competitiveness while at the same time upholding its long-standing achievements in the areas of the protection of labour and social security. The situation is complicated by the difficulties involved in the return to capitalism and democracy in the countries of Central and Eastern Europe, as well as in their incorporation into the institutional framework of the European Union.

In the midst of all these changes, a genuine rapprochement between Latin America and the European Union has yet to occur. Thus far, the amply justified political cordiality marking the dialogue between these two regions has lacked the underpinning that would be afforded by an element of vision and depth in their relations. A routine, unimaginative relationship between the two regions that fails to adapt to the sweeping changes taking place in them and in their economic dealings could well be damaged by potential trade disputes, the discontinuation of the cooperation traditionally provided by Europe, and the emergence of protectionist tendencies on both sides of the Atlantic.

If a change in attitude does not occur now, the advances made to date may be placed in jeopardy and it may prove impossible to take advantage of the immense potential for improving economic interchanges of benefit to both regions; the two regions may then become what we might call *distant friends*. If, on the other hand, the existing political signs that the regions are drawing closer together lead them to take decisions that actually do improve their economic relations, then the two regions may form a highly beneficial relationship and become *genuine partners*. This article examines these issues, presents an analysis of the reversal of the trading positions and of the perils of inaction, and offers some thoughts regarding the strategic aspects of a new type of economic relationship between the two regions.

II

Reversing the imbalance: a new era in trade

Accustomed as they are to Europe's long-standing trade deficit with Latin America, the experts have yet to appreciate the importance of the swift, thorough-going changes that have taken place in economic relations between the two regions in recent years.

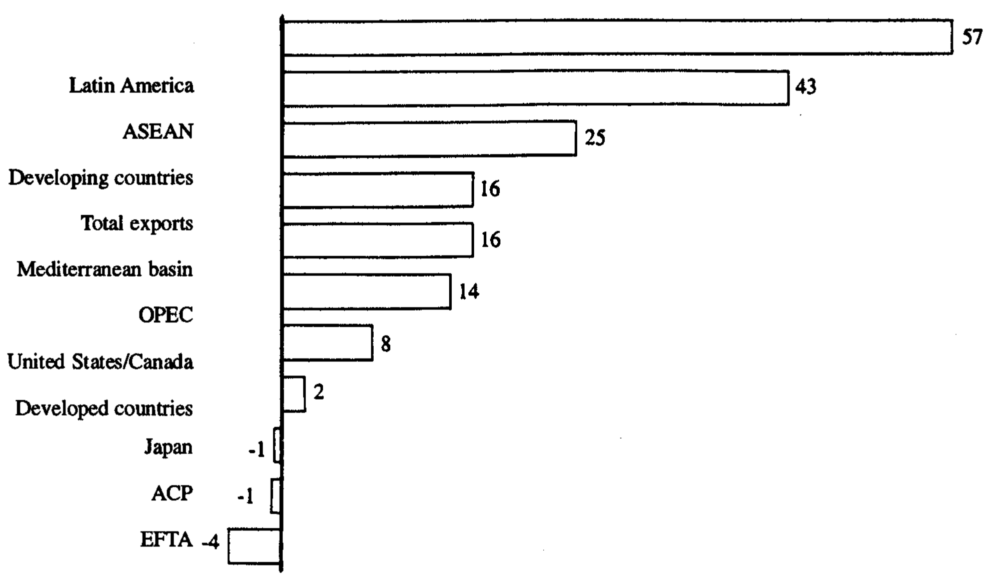
The figures are enlightening. Between 1990 and 1993:

- The European Union's exports to Latin America climbed from 15 billion ECUs to 23.6 billion ECUs. [1]
- At the same time, the European Union's imports from Latin America fell by 13%, from 25.3 billion ECUs to 21.9 billion ECUs.
- As a result, the European Union's long-standing deficit with Latin America rapidly disappeared, with the trade balance changing over from a deficit of 10.3 billion ECUs (with an all-time high of 15.3 billion ECUs in 1985) to a surplus of 1.6 billion ECUs.
- European exports of manufactures and other products incorporating a high level of value added tend to be the fastest-growing items, whereas Latin America's exports are concentrated in depressed sectors, products that are protected in Europe and raw materials that bring low prices on the market.

With Europe mired in a recession, Latin America became the fastest-growing market in the world for the European Union's exports. Between 1990 and 1993, these exports jumped by 57%, whereas the Union's exports to the countries of ASEAN (Association of South-East Asian Nations) rose by 43% and its exports to all developing countries as a group were up by 25%. These figures provide a stark contrast to the increase of just 2% in European exports to developed countries, the relatively unpromising trend in its exports to the United States and Canada (which rose by only 8%), the 1% decrease in exports to Japan, and the 4% decline in its exports to the countries of the European Free Trade Association (EFTA) (see figure 1).

FIGURE 1

European Union: Growth of exports to various regions, 1990-1993
(Percentages)



Source: Statistical Office of the European Union (EUROSTAT).

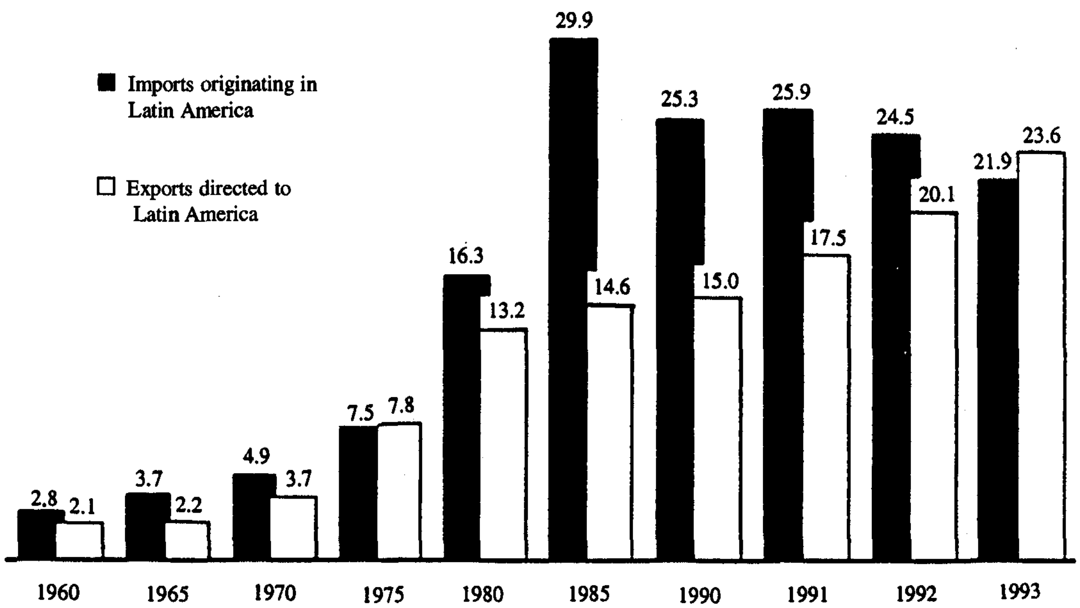
[1] All the trade figures cited here come from the Statistical Office of the European Union (EUROSTAT).

This is all part of an established trend, rather than the result of a special, temporary situation. In the past decade, European exports to Latin America doubled, from 12 billion ECUs in 1983 to over 23.6 billion in 1993 (see figure 2).

Meanwhile, Latin America's exports to Europe fell from a high of almost 30 billion ECUs in 1985 to 21.9 billion in 1993, thus wiping out Europe's deficit with Latin America and setting up a trend that gained further momentum during the last three years of the period (see figure 3).

FIGURE 2

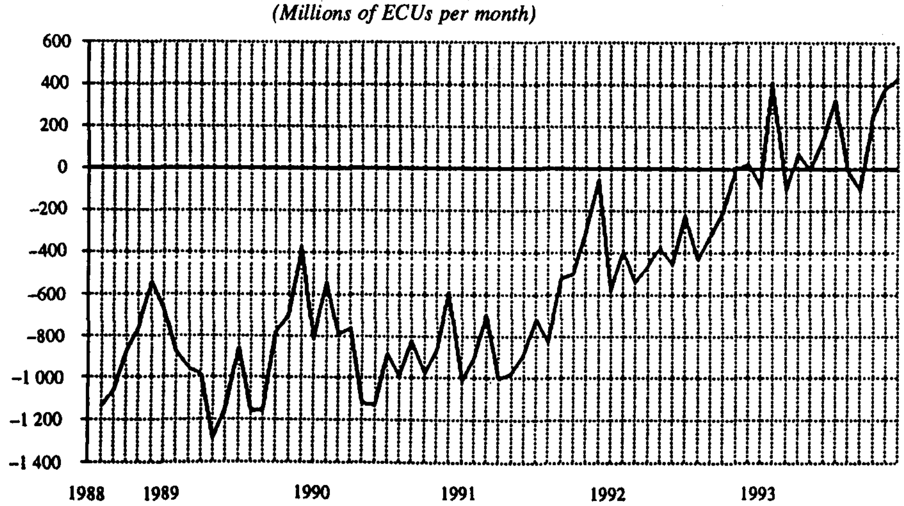
European Union: Trade with Latin America, 1960-1993
(Billions of ECUs)



Source: Statistical Office of the European Union (EUROSTAT).

FIGURE 3

Monthly trends in the European Union's trade balance with Latin America, 1989-1993
(Millions of ECUs per month)



Source: Statistical Office of the European Union (EUROSTAT).

The impact of the evaporation of the European Union's deficit with Latin America on the latter's balance of payments has been mitigated, of course, by the increase in capital flows to the region. Since 1990, net capital flows to Latin America have amounted to US$44 billion per year (ECLAC, 1994). Thanks to their policy of opening up their economies to international capital and promoting the privatization process, the Latin American countries doubled their share of total foreign direct investment in developing regions from 6% in 1986-1990 to 13% in 1992.

The trends in the product mix of trade flows between the two regions show just how solid the overall downturn in Latin America's trade balance is. The bulk of the growth in European exports has been in products containing a large amount of value added, such as transport equipment and manufactures (see figure 4). Part of the increase in exports of manufactures is accounted for by the sale of equipment and machinery associated with industrial investments which will lay the foundations for future increases in Latin American exports. Nevertheless, even European exports of final consumer goods, such as food and textiles, have risen steeply.

In sharp contrast, Latin American exports to Europe have slackened in all product categories. Traditional exports (e.g., food, energy and raw materials), which make up three-quarters of the total, were down by 11% over the last three-year period. These products have either been subject to price reductions (as in the cases of coffee and petroleum) or have trouble gaining access to the European market, as will be discussed later on. The most disturbing aspect of this situation, however, is the decline in the region's exports of manufactures (27% between 1991 and 1993), transport equipment (20%) and chemicals (33%), since this is a reflection of the structural constraints which hinder Latin American producers from gaining entry into the European market for products incorporating a high level of value added.

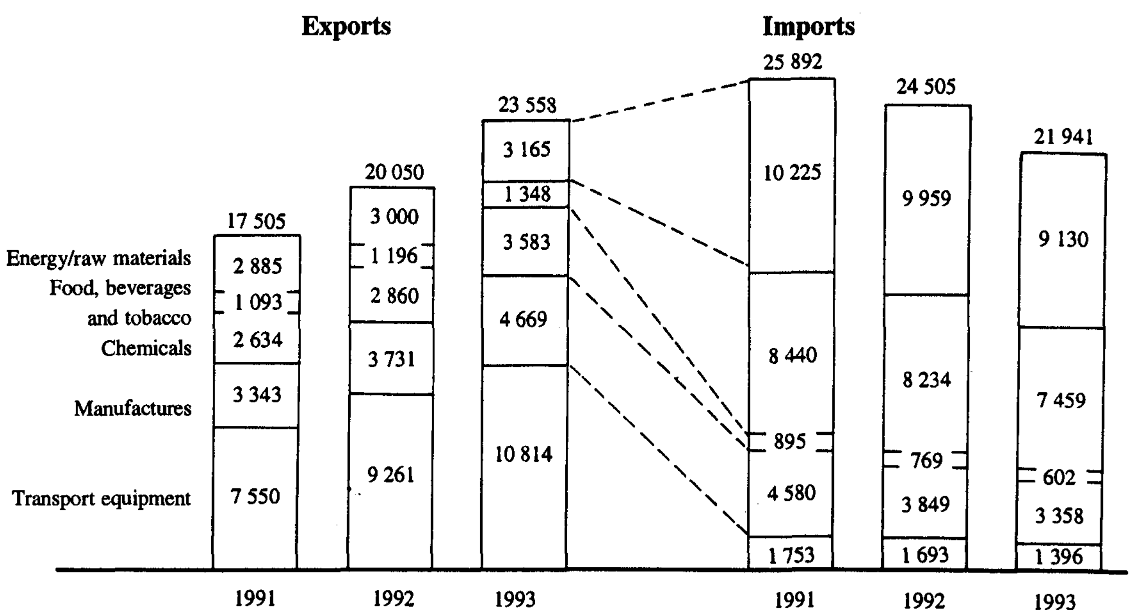
The disappearance of Latin America's trade surplus is the result of a radical change in the trade matrix of the majority of Latin American countries, including the largest among them (see figures 5 and 6).

Thus, between 1985 and 1993:

- Brazil's exports dropped by 20% while its imports doubled, and its trade surplus consequently shrank from 7 648 million ECUs to just 2 891 million.

FIGURE 4

European Union: Trade with Latin America, by products, 1991-1993
(Millions of ECUs)

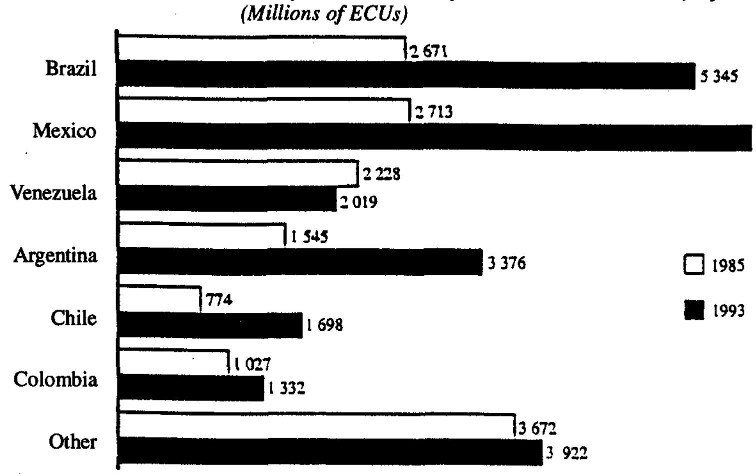


Source: Statistical Office of the European Union (EUROSTAT).

- Mexico's exports fell by nearly 60% and its imports jumped by 116%, so that its trade surplus of 2 757 million ECUs gave way to a deficit of 3 520 million.
- Venezuela was one of the few countries whose imports from the European Union decreased (by nearly 10%), but at the same time its exports to the Union slipped to just 30% of their 1985 level. Thus, its surplus of 1.6 billion ECUs was replaced by a deficit of 870 million ECUs.
- Argentina raised its imports by 120% and cut its exports by 7%, as a result of which its trade surplus of 1.8 billion ECUs turned into a deficit of 330 million.
- Chile was one of the few countries whose exports increased, but only by 19%, whereas its imports climbed by 120%.
- Colombia's exports were down by 5% and its imports were up by 30%.
- The rest of the Latin American countries' exports held steady but their imports expanded by 7%.

FIGURE 5

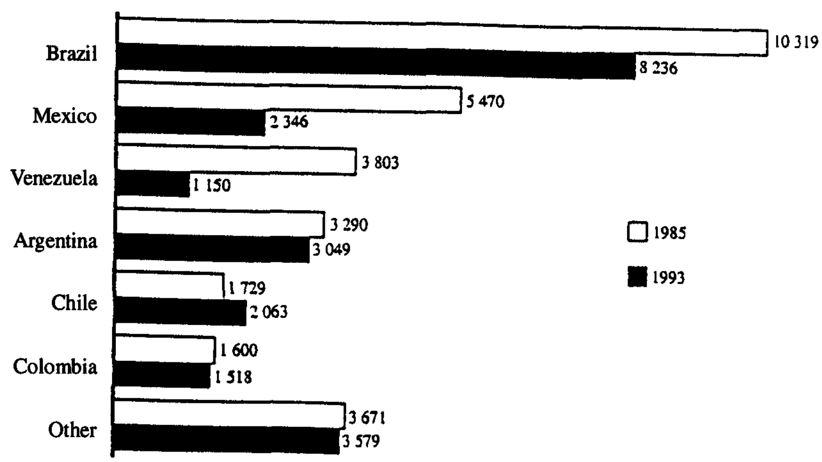
European Union: Exports to Latin America, by countries, 1985-1993
(Millions of ECUs)



Source: Statistical Office of the European Union (EUROSTAT).

FIGURE 6

European Union: Imports from Latin America, by countries, 1985-1993
(Millions of ECUs)



Source: Statistical Office of the European Union (EUROSTAT).

III

Just another part of the "rest of the world"?

Judging from recent trends, it seems clear that European entrepreneurs and merchants have displayed a greater capability than their governments have to seize the opportunities offered by Latin America following its recent economic overhaul. Despite the fact that Europe's private sector has exhibited renewed enthusiasm and Latin America has become one of the fastest-growing destinations for European exports and investment, for years European political institutions have assigned a lower priority to this region: far lower than that given to other regions which have received much better treatment by the Community in terms of its policies on trade, cooperation and investment. For example, countries aspiring to membership in the Union, as well as many countries in Central and Eastern Europe, the Mediterranean, Africa and Asia, have developed preferential economic relations with the European Union and enjoy the benefits of cooperation, free-trade or association agreements that give them greater access to the European market (IRELA, 1993).

In contrast, the Generalized System of Preferences (GSP) and recent "third-generation" agreements have thus far been the only vehicles for economic cooperation with Latin America, together, more recently, with regional programmes for cooperation in the field of education (ALFA) and for the promotion of business and investments (AL-INVEST). In addition to these helpful, but limited, instruments, there are the special trade preferences granted to Central American and Andean countries as a reward for their efforts to combat the illegal drug trade.

The European Union's priorities in terms of its economic relations are very clear, and are reflected in the existing agreements and the negotiations now under way on trade, investment and cooperation (see table 1). Among the countries grouped under the heading of the "rest of the world", South Africa, the ASEAN countries and China have been high on the European Union's list of priorities. Latin America, however, has patiently waiting for some definite sign that it is to be afforded a higher profile within the European Union. In this respect, the offers to negotiate cooperation agreements which were extended to the MERCOSUR countries, Mexico and Chile in late 1994 may prove to be an important and concrete opportunity for strengthening relations between the European Union and Latin America in the future.

Against this backdrop, the move to form closer ties between Latin America and the United States, as exemplified primarily by the signing of the North American Free Trade Agreement (NAFTA) and the Summit of the Americas in Miami, is viewed with skepticism in Europe. In the eyes of many Euro-

TABLE 1

European Union: Revealed economic preferences

Type of agreement	Instrument
1. Expansion	• Extension to Austria, Finland, Sweden
2. European economic sphere	• Extension of internal market to 18 countries
3. Central and Eastern Europe	• Offer of membership, and free trade agreements with Poland, Romania, the Ukraine and others
4. Mediterranean and North Africa	• Broad unilateral trade preferences; free trade agreements with Morocco, Tunisia and Israel
5. Least developed countries of Africa, the Caribbean and the Pacific	• Unilateral free trade and economic aid
6. Rest of developing world (including Latin America)	• Generalized System of Preferences; special preferences for Andean and Central American countries

peans, these renewed contacts are nothing more than the consolidation of North America's influence over the South. In Latin America, a number of countries hope to form part of a free trade zone stretching "from Alaska to Tierra del Fuego" that would offer them untrammeled access to the world's largest market in exchange for trade concessions which, for the most part, they have already granted unilaterally as part of their economic liberalization programmes.

Export promotion has been a mainstay of United States policy regarding Latin America. This concept of an economically-focused foreign policy, which is clearly oriented towards boosting the growth of the domestic economy by increasing exports, differs from the policy stance of the European Union, which has thus far not delineated its objectives *vis-à-vis* the region so clearly and must contend with what are often conflicting objectives (free trade versus protectionism, closer political ties versus Eurocentrism). Thus, the results of the Summit of the Americas hosted by President Clinton, which included an agreement to create a free trade area in the Americas by the year 2005, once again puts to the test the European Union's ability to offer an ambitious vision of its own regarding its relations with Latin America.

In Europe, the steps being taken to create closer ties among the countries of the Western Hemisphere are viewed with either apprehension or skepticism. European politicians and entrepreneurs fear that the conclusion of economic agreements in the Americas could lead to the formation of a closed trade bloc and thus limit business opportunities for Europeans –just as others once (mistakenly) thought would happen to them when the Single European Market was created.

IV

The status quo: a sure-fire recipe for confrontation

Merely preserving the status quo will generate increasing risks. In the amicable environment created by a return to normal political relations, routine dealings mask the advent of potential economic confrontations between the two regions and militate against the formulation of new options for the establishment of closer ties. Therefore, what is lacking the most in European-Latin American relations as they now stand is an integrative, ambitious long-term agenda, along with practical measures for fulfilling it. Without a strategic vision of this nature to guide the process of forming more intensive, more comprehensive relations, the most probable future course of events may be dominated by short-term problems and bureaucratic red tape. If this happens, the problems will overshadow the solutions. Thus, maintaining the status quo should not be regarded as a sign that relations have reached a stage of maturity, but rather as a potential hazard.

Escalating trade disputes, the unavoidable reduction of European cooperation for development, and the appearance of special kinds of social or environmental restrictions on trade may further distance the two regions from one another as, slowly but surely, their relations deteriorate even though the situation remains one of "business as usual". All this may come to pass despite the fact that they clearly share many interests and principles. Rather than simply constituting a missed opportunity, an attempt to maintain the status quo may seriously jeopardize the progress made to date in improving the two regions' relations.

1. Trade: problems awaiting a solution

Despite the successful conclusion of the Uruguay Round of GATT, some of the pending issues on the two regions' trade agenda may prove to be sources of future tensions. The appearance of a surplus in the European Union's trade balance with Latin America for the first time in more than three decades will create a less than favourable climate for a qualitative improvement in their trade dialogue. If this surplus swells as a result of the solid position of European exports and the persistent stagnation of Latin America's, trade negotiations will become even more difficult. The belief will gain ground in Latin America that European exporters (along with their North

American and Asian counterparts) have been the main beneficiaries of economic liberalization while Latin American exporters are confronted with increasing difficulties in their attempts to gain access to the European market on a competitive basis.

The European Union's revision of the GSP has entailed the incorporation of stricter "graduation" criteria which have an appreciable effect on the larger and more prosperous Latin American countries. The trade preferences enjoyed by Brazil, Argentina, Mexico and Chile have all been substantially reduced as a consequence of the graduation of their most competitive sectors. What Brussels regards as simply a necessary rationalization of the system of trade preferences for developing countries may be seen by economic agents in Latin America as an attack on some countries' established rights. Furthermore, given the tariff reductions provided for in the Uruguay Round, the revision of the GSP will in any event bring about an effective reduction in the tariff differentials enjoyed by Latin America.

The debate about the GSP therefore represents a missed opportunity to improve the economic dialogue between the two regions. During the closing months of 1994, the larger countries of Latin America were torn between their profound dissatisfaction with the new GSP, which has a direct and immediate effect on their exports, and their positive expectations regarding the conclusion of *future* trade agreements with the European Union.

Meanwhile, some specific trade issues have taken on a definitely confrontational tenor, as in the case of a number of anti-dumping decisions which affect products of importance to some countries in the region. Examples include Brazilian steel, Argentine grain and Chilean apples, among others. If these problems are not resolved satisfactorily, then tensions between the two regions will persist and, in all likelihood, escalate (Rio Group, 1993, and Izam, 1994, pp. 111-134).

Overall, a number of the economic policy tools being used by the European Union are having a serious impact on Latin American exports. The Rio Group consulted each of its member countries and compiled a list of the specific problems associated with 12 different policy instruments, including explicit or implicit trade protection mechanisms, consumer protection measures and trade diversion mechanisms. Most of these trade problems have not yet been dealt with satisfactorily (see table 2).

2. The imminent reduction of development assistance

The European Union has traditionally been Latin America's largest source of development assistance, providing close to US$500 million per year. The types of trade problems which Latin America will face in the future cannot, however, be offset by more cooperation for development.

The European Union will inevitably have to reduce the amount that it budgets for such cooperation, and the cuts made in this item are probably going to be particularly large in the case of Latin America. This is because Europe's commitments to the poorer countries of Africa, the Caribbean and the Pacific (ACP) and its newly-made commitments to aid Central and Eastern Europe will demand more funds than the Union has available. Consequently, the reduction in what have become traditional levels of assistance will also draw a reaction from Latin American countries, which may feel they have been pushed to the sidelines. The fact of the matter is that it will be politically more difficult in the future to grant concessional credits, aid and subsidies to a region that is growing at the rate of 5% per year as long as Europe continues to be plagued by fiscal problems and as long as much poorer countries that pose more serious geopolitical risks within the European arena are seeking financial assistance or humanitarian aid as a last resort.

3. The new mythology of protectionism

A number of new, special items on Europe's political agenda will add their weight to the existing array of negative trends in relations between the two regions. One example is the idea of demanding that human rights be respected by exporting countries as a condition for granting them market access or trade preferences. Recently, a report issued by the European Parliament called for the discontinuation of imports of a number of agricultural products from Central America, Colombia and Peru as an *a priori* punishment for alleged human rights violations in those countries, even though no evidence had been brought forward to back up these accusations (Musso, 1993). The curious alliance between politicians demanding improvements in human rights and lobbyists for companies seeking to avoid competition in certain products from developing countries may give rise to unprecedented sorts of problems in the two regions' relations.

TABLE 2

Trade problems between the European Union and Latin America, 1994

Type of instrument	Products (examples)	Comments
1. Import certificates	Apples, garlic, bananas, mutton, shellfish, fish	Do not conform to the GATT licensing agreement; the indicative level of issue of certificates may be regarded as constituting a quota.
2. Import quotas	Hides, bananas, tunny fish, mutton, textiles, copper products, aluminium in rolls	Limit GSP benefits, since they are applied through the assignment of entitlements to importers and are subject to annual adjustments. In some cases the usual tariff is applied to exports in excess of the quota.
3. Reference prices and countervailing duties	Apples, lemons, poultry meat, hake	Create an unfair system, since transactions conducted by a few importers affect all the rest and, even though the objective is simply to equalize the prices of imports and the end result is the prohibition of imports.
4. Antidumping duties	Cotton thread, sisal fibres, acrylic fibres, ferrosilicon	Additional duties are very high (15%-30%) in order to block product access to the Community market; the corresponding investigations use data that are from two to three years old.
5. Unilateral tariff increases	Sisal threads	Are not preceded by consultations, nor compensation, as provided for by article 28 of GATT, and contravene rights set forth in GATT.
6. Tariff classification	Sodium nitrate, potassium nitrate	An inappropriate classification leads to the application of higher tariffs, to the prohibition of imports or to the use of unsuitable trade regimes.
7. Rules of origin	Tunny fish, shark meat	Are extremely strict in the Community GSP and do not promote regional integration.
8. Commercial designation	Scallops	Affects products which are of equal quality but are not recognized as such.
9. Harmonization of technical standards	Chocolates	Affects products to be marketed in the European Union.
10. Public health measures applying to plants and animals	Pork, fish products, fishmeal	Are applied to products which do not pose a health hazard but are prevented from entering the Community market.
11. Environmental measures	Potentially all	Constitute attempts to make trade contingent upon unrealistic environmental objectives.
12. Preferential third-party agreements	All	European association, partnership, and trade and economic cooperation agreements with Eastern European countries adversely affect trade with Latin America.

Source: Rio Group.

Much the same can be said about the indiscriminate use of environmental slogans to block free trade, while on another front, some European politicians claim that it is unacceptable to engage in free trade with any country that does not provide its workers with social security coverage of a type deemed to be "adequate" on the basis of European standards. Seeking to justify protectionism in Europe on the basis of such concepts as "social dumping" is tantamount to attempting to oblige countries with lower labour costs to furnish the same sort of coverage as is provided by countries whose per capita income levels are 10 or 20 times higher. At the same time, it would also mean in practice that these countries would be forgoing the development opportunities opened up by free trade for both sellers and buyers to create an environment of economic progress with a larger number of well-paid jobs. This new trade mythology creeps into the debate as an argument which is just as attractive to intellectual circles of the European Left as it is to entrepreneurs in industries facing competition from developing countries, including those of Latin America.

In the discussion on these issues, Latin America and Europe have more areas of agreement than of differences. After all, the Latin American countries' laws in the fields of labour, the environment and human rights are much closer to the European models than are those of China or other Eastern countries. Indeed, much of their legislation on these subjects has been patterned after European laws. Nevertheless, for some sectors in Europe this necessary differentiation among Third World countries is less clear, and they attack any isolated incidents of human rights violations or unfair labour practices in Latin America as if such acts were accepted or promoted by the State, as indeed they are in some other regions of the world.

A constructive dialogue between Latin America and Europe concerning these important items on the world agenda is both necessary and possible. European protectionism, as fomented by the political, business and labour sectors that have been most severely affected by the recession and rising unemployment, is increasingly becoming the best excuse available to proponents of protectionism in Latin America, and this could certainly contribute to the deterioration of the region's own economic liberalization processes. What can we say to those who hold that Latin American countries should apply the same protectionist instruments as are used by Europe to shield their production of apples, steel or grain? (Rio Group, 1994) What better argument can there be for a return to protectionism in Latin America than the peculiar use now being made of such new concepts as "social correctness" or "social dumping", which are steadily gaining in popularity in some European bureaucracies as a tool for protecting their least competitive industries, whose performance is being hurt by exports from countries which have lower unit labour costs? (Steil, 1994, pp. 14-20)

By the same token, protectionist sectors in Europe often use the recession and unemployment as an argument for seeking to implement trade protection measures. So long as the recession in Europe persists, they contend, Latin Americans should accept Europe's closure of some markets, but no mention is made of the possibility that these protectionist measures might remain in place after the recession has ended.

How can we stop Latin America's problems of unemployment, underemployment and inequality from being used as a renewed justification for protectionism, in a stance which mirrors the position adopted by some circles in Europe and viewed with sympathy in Brussels? Trade disputes will inevitably occur if protectionist groups gain ground, and they will create more problems than opportunities for relations between the two regions. Both Europe and Latin America must therefore strive to take advantage of their many substantive areas of agreement on environmental, labour and human rights issues, so that the "green agenda" and the "human rights agenda" may serve as a foundation for closer ties rather than as an excuse for confrontation.

V

A question to ponder: closer relations or "the mixture as before"?

The present conditions make it necessary to get away from the routine in the dealings between Europe and Latin America and to give their relations a shot in the arm. This means that the two regions must assign a higher priority to one other, agree upon a long-range, strategic vision of their relations, seek to reach pragmatic agreements, and solve a number of specific trade problems.

1. Higher reciprocal priority and shared ambitions

First of all, the two regions need to place the main issues regarding their trade relations –particularly within the context of the dialogue between the Rio Group and the European Union– at the top of their political agenda. This must be a two-sided effort. For Europe, this means that, as it erects the pillars that will serve as the underpinnings for the European Union, it must give consideration both to the benefits of forming closer ties with Latin America and to the risks involved in preserving the status quo.

For its part, Latin America should place a higher political and economic priority on its relations with Europe and assign them a level of importance comparable to that currently attributed to relations with the United States and, potentially, with Asia. The region needs to understand how much it will benefit if it can strike a better balance in future among its relations with the world's major economic powers.

2. A long-term vision of a genuine partnership betweenthe two regions

Second, the two regions need to agree upon a new, strategic agenda for their future economic relations that will focus on the establishment of a genuine economic partnership. In order to marshall the necessary political support, Europe needs to realize that Latin America is a *natural partner* for it and that such a partnership will bring benefits, not just costs.

This new type of economic relationship should be founded upon the solid political ties that now join the two regions and should have characteristics similar to those of Europe's relations with its main developed economic partners: economic interdependence and greater reciprocal access for goods, services, capital and technology; close inter-company and inter- industry links; low transaction costs; a large pool of relevant economic information; and a wide-ranging network of support agencies to promote economic exchanges (Fisher, von Gleich and Grabendorff (eds.), 1994, pp. 383-392).

The preparation of this new agenda should be a joint undertaking. The building of a new bi-regional consensus requires the participation of the appropriate community institutions in both regions. In the case of Latin America, the Rio Group has become its representative and needs to make changes in its structure and organization in order to meet the challenges entailed in the formation of a more intensive and dynamic political relationship with the European Union.

3. Pragmatic agreements

In establishing the framework for this new bi-regional relationship, consideration must be given to the diversity of interests and concerns existing on both sides of the Atlantic. In particular, the momentum generated by the integration processes undertaken at the regional level and among specific countries of Latin America (MERCOSUR, Andean Group, Central America, the Caribbean, Chile and Mexico) should be put to use in building closer relations at "differing speeds and variable geometries", through pragmatic agreements that take into account the specific political and economic characteristics of the various groupings and the different natures of their relations with Europe.

For example, in view of the importance of its trade relations with Europe, MERCOSUR should give top priority to negotiating a free trade agreement with the European Union; such an agreement could then serve as a basis for the incorporation of other countries later on. In a parallel effort, Mexico and Chile could also proceed to negotiate free trade agreements of the same sort. Given the solid nature of its integration institutions, the Andean Group could concentrate on strengthening institutional and trade agreements in such areas as the protection of investments and transport and in specific sectors, such as fisheries and telecommunications, as well as carrying forward the liberalization of its trade with Europe. Steps taken in these new areas would complement the special trade preferences granted as a form of cooperation in the effort to combat the drug traffic. Other Latin American countries, such as those of Central America, could seek to enhance their ties with the European Union through an increase in the quality and quantity of cooperation for development and a realignment of the San José dialogue. Using regional groups as a foundation for this process would allow the intensification of relations between Latin America and the European Union to proceed at a faster pace than if it were confined to action at the national level or if a single accord had to be framed for all of Latin America.

Along these same lines, it would be helpful for the European Union to define general parameters for the extension to other countries and groups in Latin America of the offer it has made to MERCOSUR to enter into a free trade agreement. Once these parameters are known, the other countries could then lay their own plans for future negotiations with the European Union.

4. Solving specific problems

Finally, in the short run efforts need to be focused on solving a number of important problems that have already been identified, particularly those relating to market access, the Generalized System of Preferences, and trade regulations.

To this end, flexible channels of communication with both the trade and sectoral authorities of the European Union need to be set up. For example, a direct link should be established between the Rio Group and the divisions of the European Union in charge of agriculture, the internal market, and competition so that specific trade-related issues may be discussed in greater depth. A joint effort should be undertaken at this level to work through an agenda that would include such issues as import certificates, the quota system, voluntary export restraints, reference prices and countervailing duties, the GSP and tariff classifications.

In view of the threat which a weakening of the status quo could pose, relations between Latin America and the European Union need be revitalized. A mutual process of re-discovery is called for, and this will involve forming closer political ties, stepping up reciprocal action to open up the regions' economies, establishing more suitable institutions for promoting exchanges, and redefining cooperation for development.

The regions should therefore work together within the framework of a new relationship that takes into account the need to improve Latin America's economic environment, the benefits of economic liberalization for European exporters and investors, and the dangers associated with an increase in protectionism in Europe.

Thus, European-Latin American relations are now at a crossroads. If the status quo is maintained, economic realities will overtake the two regions and cause their trade relations to become increasingly strained, thereby jeopardizing the progress made in recent years. If efforts to sign new economic agreements with the various countries and groups should fail, increasing difficulties between the two regions are sure to follow. If, on the other hand, the regions jointly define a new strategic vision of their economic relationship, they will then be able to solve many of their existing problems and thus strengthen this link in the chain of trans-Atlantic relations.

The elements that will serve as the foundation for this new vision are fairly evident: a solid political consensus aimed at strengthening and intensifying relations; and an effort to achieve the greatest possible degree of openness to free trade and investment within the context of a genuine bi-regional partnership.

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Rules of origin:
new implications

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As a subject of international negotiations, rules of origin have been of interest since the early 1970s, but in recent years they have come to be regarded as a new form of protectionism and have figured prominently in the spate of trade negotiations which have been initiated or carried forward in the Americas since the late 1980s. The trade schemes negotiated under the terms of the new treaties thus adopted make it possible to extend the protection of intermediate inputs from one signatory country to another. Therefore, the advantages associated with a free trade area are no longer determined solely by each country's system of protection but have instead come to depend upon their trading partners having low trade barriers as well. Moreover, any country gaining access to a trading partner's market must "share the preference" with the party benefiting from the rules of origin in the other country. The smaller the country engaged in negotiations is, the more severely constrained it will be if it accepts restrictive rules of origin. Furthermore, the "one-on-one" system of negotiations has the disadvantage of preventing accumulation for the purpose of qualifying under rules of origin, which discourages private investment. In view of this situation, it has been suggested that joint Latin American negotiations should be undertaken on rules of origin. In the author's opinion, defining such regulations at the individual country level is not feasible under existing conditions. As for the general rules, it would be difficult to move beyond what was agreed in the Uruguay Round, which was not a great deal. Accordingly, it would be more meaningful to work on a concept of asymmetry that allows for the recognition that, above and beyond the problem of differing levels of development, the relative size of the countries involved is also a factor and that this element gives rise to striking differences in the web of production linkages.

I

Introduction

The subject of non-tariff barriers began to receive widespread attention as successive rounds of multilateral negotiations led to a progressive reduction in developed countries' tariffs during the 1960s and 1970s, even though such barriers had existed long before that time. The campaign against dumping on the part of the Latin American countries did not begin until the late 1980s (and in some countries has not really begun even yet), even though the practice of dumping is as old as international trade itself. The reason for this is that trade liberalization has increased the countries' exposure. The same can be said of rules of origin, which, as reciprocal liberalization processes become more complex, come to be regarded as new instruments of protection. This article seeks to provide some further thoughts about just what is being negotiated and in what direction these emerging schemes are leading us.

Rules of origin are a set of regulations that determine where a given good has been produced. Under completely normal trading conditions, this information would be of little importance or would be useful only for statistical purposes. However, in many cases transborder merchandise trade flows are subject to differing regulatory provisions depending on the type of product involved and where it comes from.

The fact that good *AA* is transported across the territory of country *XX* to reach country *YY*, after a company located in country *XX* has sold it to a firm in country *YY*, does not make country *XX* the point of origin of that good. Although the customs records indicate that the product comes from country *XX* and it is recorded as such in foreign trade statistics, there may be many circumstances under which the customs authorities' treatment of that product will depend on what its true point of origin is determined to have been. Let us look at some examples:

i) Under the terms of the Multifibre Agreement, industrialized countries place quotas on imports of textile products and garments from developing countries. Some countries might try to sidestep the quota by routing their products to the market via a third country which does not export many goods of this type. In order to make it even more difficult to detect this practice, it might also subject the final product to some negligible form of processing, such as changing its label or packaging. Therefore, it becomes necessary to determine what combination of processing operations will be considered to have changed the merchandise's "nationality", thus making it eligible for a given quota.

ii) Two countries establish a free trade zone with one another but maintain their original tariffs (which, we will assume, are different) for trade with the rest of the world. What would obviously occur under such circumstances –in the absence of rules of origin– is that products would enter the zone through the country having the lower tariff and would then be transferred from there to the country with the higher tariff. As in the first example, in order to prevent this manoeuvre from being discovered, the entrepreneur from outside the zone would make some trivial change in the product as a way of evading customs controls. Determining whether these changes are significant enough to have converted imported inputs into a nationally-produced item that may then be sold within the zone without being subject to further tariffs is one of the purposes of rules of origin.

iii) The General Agreement on Tariffs and Trade (GATT) grants most-favoured-nation (MFN) status to participating countries. Some nations, such as the United States, have higher tariffs for non-member countries or for those to which they do not wish to award this status for political reasons (e.g., Vietnam). In such cases, criteria for the application of the corresponding tariff are needed.

In each of the above situations we might be talking about different rules of origin, even for the same applicant country. Moreover, rules of origin often differ from one country or situation to the next. We will come back to this subject later on.

II

A typology of rules of origin

Although it is not a commonly-known fact, the current typology of rules of origin was established with the signing of the Kyoto international convention for the simplification and standardization of customs formalities on 18 May 1973. This Convention, which was drafted under the auspices of the Customs Co-operation Council, calls for a series of measures whose main purpose was the organization of future activities in these fields. The most interesting portion of that Convention in terms of the subject under consideration here is found in annex D.1, which deals with rules of origin, because little or nothing of substance has changed since those "old" definitions were formulated.[1]

This annex lays down two criteria. First, if the article in question has been produced entirely in a given country (whether by means of relatively primitive systems of mining, harvesting, fishing, etc. or by using inputs that were themselves produced in the country), then there is no doubt as to the national origin of the product concerned.

Second, if more than one country has taken part in the production of a given article (whether by providing materials or labour) then, in order for a product to acquire a specific nationality, it must have undergone a "substantial transformation"; this can be defined in various ways: i) based on the fact that the article has undergone a change in the applicable tariff classification; ii) based on the list of processing operations that do or do not allow a product to qualify as originating from the country in which those operations were performed; and iii) based on the *ad valorem* rule, in cases where the value content of the products used or the percentage by which an item's value has increased while in a given country reaches a specified level.

[1] Annex D.1 of the Kyoto International Convention gives general definitions for the various rules of origin and weighs their advantages and disadvantages, but it does not identify any optimum package of rules and procedures.

One pre-existing method that was not specified in Kyoto involves the use of content percentages determined on a non-*ad valorem* basis, primarily in the case of mixtures (e.g., the content of wool by weight or of mixed juices by volume). The North American Free Trade Agreement (NAFTA) abounds with examples of this type of system.

Annex D.1 to the Convention does not define what constitutes a "substantial transformation" (the quotation marks appear in the original text), even in abstract terms. The United States Customs Service considers "substantial" processing to have taken place when an item has undergone a production process that causes its name, characteristics and use to differ from those of the materials used in its production. The three possible types of qualifying transformations will be examined below.

1. Change in tariff classification

At the simplest level, the concept of a change in tariff classification establishes that an article will be considered to be an originating good if the tariff classification of the final product differs from the classifications of the intermediate imported materials used to produce it. The appealing simplicity of this definition fades away, however, when one realizes that the existing basis for the classification of merchandise is the Harmonized Commodity Description and Coding System, which was formulated with a view to customs identification and statistical considerations and is based on broad processing criteria. The realm of production is much more varied than the categories used in the Harmonized System, and a change in tariff classification may involve a change between chapters (two digits), headings (four digits), subheadings (six digits) or tariff items (eight to ten digits).

The problem does not lie in the application of the Harmonized System, which is much more recent than the Kyoto International Convention, but rather in the original conceptualization of this approach as formulated in 1973, when it was thought (adequate practical experience in this regard was lacking at the time) that the requirement relating to changes in tariff classifications could take the form of a general rule whereby, for example, the change in classification would be defined as a change from one tariff heading to another (four digits) plus a list of exceptions. The actual situation has proved to be more complicated than that.

Obviously, characterizing a change in tariff classification as a change from one chapter to another (there are 97 chapters in the Harmonized System) is too narrow a definition. Two different products may fall under a single tariff heading even though one of those products is used to make the other, and the two would therefore differ substantially in terms of the amount of processing they involve. For example, in chapter 95, "Toys", there may be a toy that is a combination of several different pieces; for example, toys that represent animals (9503.30), when put together with domestically-produced and packaged models of mangers and human figures, may become Christmas articles (9505.10). In such a case it is easy to see that the final good has undergone a substantial transformation. Nevertheless, if the final product were classified under the same heading as one of its major inputs (9503) –for instance, because it did not fit in the category of "Christmas articles"– it would remain under the same heading and would therefore not qualify as an originating good. For reasons such as this, changes in tariff classifications are defined on a case-by-case basis by the treaty negotiators of each country; it is at this point that the various business interests come into play. [2]

2. List of processing operations

Under this method, comprehensive lists are normally used which describe, product by product, the technical procedures deemed to be of sufficient importance. The advantage of this approach is that the relevant criteria can be standardized in cases where the operations involved are sufficiently general in nature. However, the diversity of cases and the complexity of production processes make its application very difficult. Although this approach is generally used in a positive sense, all sets of rules of origin include a list of operations that do not qualify the product as an originating good (e.g., assembly, dilution, etc.).

3. Ad valorem rule

This appears to be the simplest procedure for determining the origin of merchandise and, although it has been very controversial, it is one of the most widely used. It seems logical, as well as being the most reasonable approach, to equate the concept of a "substantial transformation" with an equivalent change in market value. No matter how complex production processes or changes in tariffs may be, there has to be some value-based criterion for determining when an article has been sufficiently "transformed". The value added by such processing can be computed as a minimum percentage of the total value of the good that has been generated within the country. For example, the United States Generalized System of Preferences, the Caribbean Basin Initiative and the United States free trade agreement with Israel all use the criterion of a minimum of 35% national content for total direct operating costs and materials. Other agreements, such as the Latin American Integration Association (ALADI) and the former Free Trade Agreement between the United States and Canada, set the level at 50%. We will return to these questions later on in this article.

Many criticisms have been made of this method which should be noted here:

i) Difficulties arise in borderline cases where a small difference may determine a product's country of origin.

ii) In many cases these differences arise from changes in a final product's relative prices with respect to its various inputs, which may be due to changes in international prices or to currency fluctuations.

iii) One important objection becomes apparent only in the case of non-unilateral commitments. Differences between the cost of labour in countries at different stages of development generate different percentages of national value added and may thus lead to incongruous situations in which the same good, even when it has been produced using similar technological processes, qualifies as an originating good when it is made in the United States but not

[2] In fact, one of the first complaints to be submitted regarding the interpretation of rules of origin in respect of the North American Free Trade Agreement had to do with toys. Under the rules of origin of the Generalized System of Preferences (GSP), there was no barrier to the movement of toys from Mexico into the United States, but the requirement of a change in tariff classification raised difficulties (*Journal of Commerce*, 1 March 1994).

when it is produced in Mexico (Morici, 1991). This kind of problem arises when the *ad valorem* criterion is applied reciprocally between countries with large wage differentials.

iv) Difficulties have been raised by the fact that the early definitions of "national content", although conceptually clear, were not precise enough for purposes of business calculations. Specifically, when it comes to adding the cost of materials to direct processing costs, a problem arises in arriving at an accounting definition of the latter, which should include labour costs plus assignable capital costs (depreciation, imputed land rent). Overhead costs that are difficult to impute are left out of the calculations altogether. Finally, there is also a difference between computing national content residually (total value less imported content) and calculating it "directly" (domestically-produced materials plus direct operating costs); in the latter case, the definition of the factors involved raises serious problems.

In short, there is more than one way to define the concept of "substantial transformation"; there are various interests involved, and these interests are expressed in different combinations of criteria. If the determination of product nationality is left to government negotiators, then the pressure brought to bear by private sectoral interests will be a very influential factor in the negotiations. And this is where everything really gets complicated. From a technical standpoint, it is easier to talk about allowable time periods for tariff reductions (0, 5 and 10 years, and even 15 years in exceptional cases) because even though entrepreneurs may try to exert their influence, sooner or later they are bound to fall into one of these categories and end up –by means of a process that may take differing amounts of time– with a zero-level tariff. In contrast, the possible combinations of criteria for defining rules of origin are numerous and remain in place indefinitely, or at least until they are renegotiated.

It should be noted that in these cases the concept of a "substantial transformation" is not based on any clearly measurable principle whatsoever.[3] Instead, it is defined by the relevant countries' negotiators, who trade off the pressures exerted by their respective industries among themselves.

III

The rules-of-origin spectrum

As noted earlier, all agreements concerning special treatment in connection with tariffs or non-tariff barriers are accompanied by definitions of the criteria to be used in determining the origin of the merchandise in question.

1. General Agreement on Tariffs and Trade (GATT)

Although few people today would regard GATT and its successor, the World Trade Organization (WTO), as preferential trading clubs, that is actually what they are, inasmuch as the corresponding commitments are to be fulfilled only by member countries.

In the Uruguay Round, an agreement on rules of origin was negotiated which deals only with what GATT refers to –ironically enough– as "non-preferential trade policy instruments" (article 1), based on the concept of most-favoured-nation status. In other words, they apply only to general rights as set forth in GATT, not to preferential agreements such as the GSP. The commitment is to standardize the various countries' rules of origin within a time period of three years. To that end, a Rules of Origin Committee and a Technical Committee are being created under the auspices of the Customs Cooperation Council.

The main criteria to be used in determining a good's origin are the following: i) that the good has been produced entirely in a given country; ii) that it has undergone a substantial transformation resulting in a change in its tariff classification; and iii) that in cases where the above two criteria are insufficient, standards referring to the value content or processing operations may be applied.

[3] We need look no further for an example than the NAFTA rules of origin for wearing apparel, under which the determination of a garment's nationality starts with the spinning of the yarn and moves on from there.

2. Generalized System of Preferences (GSP)

No international standard exists under this system. The United States GSP requires that the cost or value of the materials produced in a beneficiary developing country or in two or more countries belonging to the same association, plus the direct cost of processing operations conducted in such countries, may not total less than 35% of the estimated value of the article at the time it enters United States territory. There are a number of unknowns here, such as the definitions of "estimated value" and of "direct cost of operations", as mentioned earlier.

3. Caribbean Basin Initiative (CBI)

The system used in this scheme is quite similar to that of the GSP, with one important difference: the 35% of national content may include 15 percentage points corresponding to United States content. Direct operating costs may not include profits or overheads but may include the depreciation of machinery and equipment assignable to the product in question.

Annex II of the agreement on rules of origin set forth in the Act of Marrakesh [4] contains a joint declaration concerning preferential rules of origin; however, this statement makes no contributions of any great significance in its two pages, but instead limits itself to noting the need for such rules to be clearly delineated, for methods of calculation to be transparent, etc. It lays down no guiding principles.

4. Central American Common Market (CACM)

In the case of the signatories of the General Treaty on Central American Economic Integration, the Regulations on Central American Origin of Merchandise are quite permissive. Unlike other free trade areas in the Americas, the CACM is actually a customs union. According to its regulations, the following types of articles are classified as originating goods: i) products "natural" to any member State; ii) goods made from them; iii) merchandise containing imported inputs that has undergone a production process which endows it with an identity of its own, such as to lead to a change in its tariff classification (the type of change is not defined); iv) in cases where the above guidelines are not sufficient, the standard to be used is a regional content of not less than 25% in direct costs. Products that have merely been assembled, packaged, diluted, etc. are expressly excluded from the above definition. In 1995 a new set of regulations have been under discussion which would make changes in tariff classification the pivotal criterion for determining if a substantial transformation has taken place. Nevertheless, the minimum regional-content requirement remains a controversial issue.

5. Latin American Integration Association (ALADI)

The signatories of the Montevideo Treaty of 1980 have a somewhat more detailed set of rules of origin. Products qualify as originating goods if: i) they have been produced entirely within the country; ii) their tariff classification has changed; iii) the CIF value of materials originating in third-party countries does not exceed 50% of the FOB export value of the merchandise; iv) the goods meet other specific requirements, such as using inputs from signatory countries. The economic complementarity agreement signed by Chile and Mexico in September 1991 expressly recognizes the ALADI rules of origin, although it does permit the Administrative Commission to lay down specific requirements and, indeed, entrusts it with that task. The standards applied by MERCOSUR are similar to those of ALADI.

6. United States

Before it signed a free trade agreement with Canada in 1989, the United States had not published any rules of origin whatsoever, except the more general ones applying to the GSP, the Caribbean Basin Initiative, and the free trade agreement with Israel. Whenever a problem arose, customs officials would refer to general principles which had been developed over a period of many years, in order to take the necessary decisions on a case-by-case basis. It was not until it began to sign major trade agreements with other countries that, for the first time ever, the United States had to address the issue raised by the need for bilaterality in such rules (both as an exporter and as an importer). In the United States agreement with Canada, the criterion was a change in tariff classifi-

[4] This Act incorporates the results of the Uruguay Round of Multilateral Trade Negotiations (April 1994).

cation or, alternatively, a 50% national value-added requirement, although this standard's definition was somewhat unclear and quite abstract in nature. In its agreement with Israel, it applied a criterion similar to that used in the GSP, with the difference that it applied to both sides.

IV

Rules of origin in the North American Free Trade Agreement (NAFTA)

1. General definitions

The NAFTA rules of origin are defined and explained in the 26 pages of Chapter Four, volume 1 of the treaty. The detailed descriptions of specific changes in tariff classifications, however, are to be found in 168 pages of volume 2. The general definition is that a good is deemed to have originated in the territory of a contracting party when:

i) The good is wholly obtained or produced in the territory of one or more of the Parties (minerals, plants, stock breeding and husbandry, hunting and fishing, etc.).

ii) All the non-originating materials used in the production of the good undergo a change in the applicable tariff classification as described in volume 2 or, in the event that no change in tariff classification is necessary, meet all of the other established requirements.

iii) The good is produced entirely in the territory of one or more of the Parties exclusively from originating materials. [5]

iv) The good is produced entirely in the territory of one or more of the Parties but some of the non-originating parts used in the production of the good do not undergo a change in tariff classification because they have been classified as an assembled good pursuant to the rules of the Harmonized System, or the tariff heading for the good covers both the good itself and its unattached parts. In this case, the following rule is used: the regional value content of the good must not be less than 60% of the transaction value (FOB) or not less than 50% of the net cost (this choice is made by the exporter, unless this is not applicable for any of a number of reasons, such as the existence of certain types of relationships among the parties). [6] Products falling under the heading of "apparel" in chapters 61-63 are excluded from this rule.

2. Motor vehicles: requirement for an increasing content of regional value

The negotiations concerning the automotive industry were rather difficult because the United States and Mexico are both quite sensitive to this industry's influence on employment levels and exports. A very large proportion (between 30% and 40%) of the growth in Mexico's exports over the past 10 years has been accounted for by the automotive industry (engines and motor vehicles). The United States insisted that motor vehicles should include the greatest possible percentage of national content in order to qualify as originating goods. Consequently, in addition to any applicable requirement regarding a change in tariff classification, it was decided that, for vehicles subject to the provisions described in paragraph (iv) of section 1 above, and starting with a 50% regional value content as calculated under the net cost method, that value would rise to 56% in 1998 and to 62.5% by 2002 (or 50%, 55% and 60% for other types of vehicles).

[5] It is important to note that –unlike the CBI, for example– the territories of the three NAFTA signatories are considered as one. Thus, a Mexican factory which uses only Canadian materials is just as eligible as if all its materials originated in Mexico. For the purposes of NAFTA, the concepts of "region" and "country" are interchangeable insofar as they relate to rules of origin.

[6] There are various circumstances under which the net cost method must be used; motor vehicles are one example. The transaction value method is extremely easy to use when the percentage of national content is determined by subtracting the value of imported materials from the transaction value of the good. The calculations involved when the net cost method is applied are based on the same formula: the net cost is used instead of the transaction value and in this case any sales promotion, marketing, royalties, packing costs, etc. are excluded.

3. The de minimis rule

In the real world, there are many cases in which imported inputs are used that do not undergo a change in tariff classification as required by the specific list, but whose impact on the final product is not very significant. A rule is laid down for such cases (article 405) according to which a good may qualify as an originating good if the value of all non-originating materials used in the production of the good that do not undergo a change in the applicable tariff classification is not more than 7% of the transaction value, FOB.[7,8] As in the case of the value of regional content, the *de minimis* content can be expressed as a percentage of content by volume or weight.

4. Verification of origin

Chapter 5 of NAFTA deals with customs procedures, most of which refer to the Certificate of Origin. One interesting innovation is that the agent who signs the Certificate of Origin and who bears responsibility for it is the exporter, and not the producer, the Government, a chamber of commerce, etc. This simplifies the paperwork involved, thereby reflecting the most recent trends in international trade rules: i) the trader bears full responsibility; ii) statements are accepted as correct unless proved to be otherwise; and iii) infractions of these rules are discouraged because of the violator's high risk of discovery and the harsh penalties imposed upon offenders. Moreover, it has been found that, in practice, the issue of Certificates of Origin by government agencies does not add a sufficient degree of reliability and that if an exporter is caught violating the regulations, he usually claims that the responsibility for those infringements is shared with the authorities of the country of origin, thus creating unnecessary friction between signatory nations.

5. Specific rules and changes in tariff classifications

The specific rules concerning changes in tariff classification are laid down in volume II of the North American Free Trade Agreement. These rules are set forth in two columns: the left-hand column shows the tariff heading, subheading or item, while the right-hand column specifies what constitutes an applicable change in tariff classification in each particular case. For some goods, the specification is so simple that it is given only at the four-digit level; in other cases, six digits are used. In the column that identifies applicable changes in tariff classifications, specifications are often given at the eight-digit level.

For example, in chapter 2, "Meat and edible meat offal", the criterion used to determine whether a good qualifies as an originating good is, for all headings, that the material must come from a different chapter. Strictly speaking, this means that although a live animal may be imported from another country, the slaughtering of that animal constitutes a production operation which qualifies it as an originating good.

The rules of origin applying to textiles and clothing provide a good illustration of how arbitrary, in terms of any logical concept of what constitutes "substantial transformation", the negotiation of these rules can be. In the Harmonized System, these goods are covered by chapters 50 through 63, with wearing apparel being included in chapters 61 and 62 and part of 63. NAFTA's general criterion for conferring nationality upon a product is applied "from the yarn on up", although this is defined more or less strictly depending on the protection guideline being used. For example, woollen yarns (HS 51.06) may be made out of imported wool (HS 51.01) but cotton yarns or threads may not be made out of imported cotton (it must come from one of NAFTA's three signatory countries).

From the fabric level on up, yarns and threads must come from the region, with a few exceptions. For example, silk fabrics (heading 50.07) may come from any other heading. Silk thread is under heading 50.04, which means that a change of heading within the same chapter qualifies a product as an originating good. Silk fabrics produced in the countries of the region using imported silk thread are therefore classified as originating goods. The rationale underlying this determination is that, given the fact that the region's output of such fibres is insufficient, nobody has anything to protect.

Garments must be made of fabric produced in the region, thereby bringing the category full circle (see annex 1).

[7] There is a specific list of goods to which this rule does not apply, including some dairy products, juices, instant coffee and others.

[8] "Indirect materials" (gasoline, lubricants, etc.) are automatically classified as originating goods.

V

Rules of origin as instruments of a new type of protection

Almost by definition, free trade areas entail a bias that is not present in customs unions. In the Latin American tradition (which is swiftly changing), customs unions have been nothing more than free trade areas which use a common tariff for outside countries. It may be helpful to make a distinction among three types of cases.

1. Perfect customs unions

A perfect customs union is one in which the countries belonging to it have a customs system (it does not matter whether it is a common system or not) and have entered into a prior agreement regarding the distribution of the proceeds among the countries concerned.[9] In such cases, the country and customs administration through which an imported product –whether an input or a final good– enters the union is irrelevant, since once it has entered, it can circulate freely within that union. Rules of origin are therefore entirely unnecessary.

2. Simple customs unions

In a simple customs union, such as any of those existing in Latin America, a product cleared through customs in country *XX* cannot then be transferred to country *YY* because the "common" (but not socialized) external tariff has been collected by the Treasury of country *XX*. The same is true of imported inputs. This is why customs unions in Latin America have regulations concerning product origin or cases in which a good's origin is in doubt. The basic reason for retaining such provisions has to do entirely with revenue.

3. Free trade areas

In a free trade area, each nation applies its own tariff to the rest of the world. In such cases, two problems arise:

i) Merchants may try to bring finished goods into the area through the country having the lowest tariffs and then re-export those products within the duty-free zone; and

ii) Producers in countries where inputs are subject to lower tariffs will have a competitive edge over their counterparts in other member countries. Exporters from outside the area may bring their goods into the country at an earlier stage of processing, finish their processing once they have arrived in member country *XX*, whose tariffs are lower, and then re-ship the products to country *YY*, which applies higher tariffs to both the finished good and the corresponding intermediate product.

Problems such as the two cited above are avoided through the use of rules of origin. Another instrument for combatting the second type of practice is the elimination of the system of tariff drawbacks on reciprocal trade.

Let us take a moment to consider this last point. If good *AA* is produced in country *XX* using input *BB*, on which the tariff is 10%, and is also produced in country *YY*, where *BB* is subject to a 5% tariff, it is a customary international practice and is allowed under GATT (and now by the WTO) for the exporter who sends product *AA* from country *XX* to country *YY* to request a refund of the tariff paid on the input. This is because –generally speaking– a tariff is paid on the exported product in its country of destination.

However, if the two countries are members of a free trade area, then good *AA* will enter country *YY* from country *XX* without paying a tariff, and this puts producers of that same good who are located in country *YY* at a disadvantage, since they do have to pay tariffs. In a customs union, there can obviously be no system of reciprocal drawbacks; both types of producers pay the same tariff on their inputs and may

[9] The European Union (EU) has a common customs administration, and all tariff revenues are paid into the Union's common coffers. The subsequent use of these funds for joint EU programmes is in no way related to their origin. Hence, the origin of merchandise becomes unimportant.

thus compete on an equal footing. In a free trade area, however, the situation is not so clear-cut. In our example, one producer pays a 10% tariff on inputs while the other pays a 5% tariff, but both producers can market their final goods in either country without paying tariffs.

Both the North American Free Trade Agreement and the agreement recently concluded between Mexico and Costa Rica, as well as other such agreements for the establishment of free trade areas which are now being negotiated, set deadlines for the elimination of drawbacks in reciprocal trade. The NAFTA deadline for the elimination of this system is 1 January 2001. [10]

Thus far, little thought has been given to the fact that, once drawbacks have been eliminated for reciprocal trade between two countries in which a significant volume of the same input is employed, users in the country with the higher tariff will bring strong pressure to bear on their Government to lower that tariff to the level maintained by the other country so that competitors will have a "level playing field". This is a compelling reason for believing that, if the wave of free trade agreements sweeping over Latin America continues, then the region will be moving towards the establishment of a common external tariff, at least on inputs. It is more than likely that this common tariff would tend to move lower due to the individual, unplanned nature of each dispute between private sectors and their governments.

Conventional economic theory on integration refers –for the sake of convenience– solely to tariffs and occasionally to the suppression of quantitative barriers. It is almost taken for granted that all free trade agreements are good, so long as they do not raise tariffs or non-tariff barriers applying to the rest of the world.

Krueger (1993) argues that free trade areas exhibit a significant protectionist bias which is not present in customs unions. The fact that, in these areas, different tariffs are applied to countries outside the region makes it necessary to have rules of origin; by means of these rules, the trade protection of one member country is extended to the other, thereby raising the possibility of trade diversion. One SELA document goes further, contending that "rules of origin are to a free trade agreement what a common external tariff is to a customs union" (SELA, 1993).

In the study cited above, Krueger also emphasizes that, according to the conventional view of the positive and negative effects of free trade areas, the lower a country's trade barriers are before it signs a free trade agreement, the less trade diversion will be generated in that country. However, once rules of origin enter the picture, the barriers of a country's trading partner will also need to be low in order for it to avoid paying a high cost for integration.

As a corollary to what has been said in the preceding paragraphs, it should be borne in mind that the formation of a free trade area can lead to both trade creation and trade diversion.

When a tariff reduction enables a country to import goods from its trading partner which it used to produce less efficiently (at a higher cost), we say that a trade flow has been created which did not exist before. If prior to integration a country imported a given product from outside the region but, once trade preferences are in place, it obtains that product from a neighbouring country (which produces the good at a higher cost), then a pre-existing trade flow has been diverted. This gives rise to inefficiency, since, overall, the country is paying more for the product it is importing. It is true that the importer will pay less, but this is only because the tariff has been reduced. The important point here is that the country is beginning to obtain its supply of the product from a more expensive, less efficient source.

One way of lessening this inefficiency is to maintain a low tariff level for the rest of the world on products imported from countries belonging to the free trade area. If this is done, then the trading partner's margin of preference will be smaller and the extent of trade diversion will also probably be less, depending on the relevant products' price elasticity. When trade creation outweighs trade diversion, it may be assumed that the country will be better off. If, on the other hand, trade diversion predominates, the country will probably end up worse off. [11] This is the traditional assumption in regard to integration strategies.

[10] These provisions, as well as others, are going to affect the *maquiladoras* in Mexico for two reasons: i) because they are going to be able to place more and more –and eventually all– of their output on the internal market if they so desire; and ii) because exemptions on inputs will disappear, since inputs will be imported duty free in any case as from the year 2001 (International Trade Commission, 1994).

[11] Meade-type gains in consumption may occur if the effect of lower prices for consumers outweighs the trade diversion effects.

An extreme example may help us to understand all these different situations more fully. A country with a tariff level of zero on all its products prior to the formation of a free trade area would not lose anything at all, since it would continue to obtain its products from the least expensive suppliers while at the same time enjoying greater access to the market of the other country participating in the free trade area. If rules of origin are factored into the equation, however, then a country that had zero tariffs on all its products prior to the creation of a free trade area might have to switch to a different source for its inputs in order to take advantage of its access to the new market.

The important point here is that rules of origin may extend protection to the country producing inputs for its trading partner's market through the application of preferences to the finished good.

During the negotiations leading up to the North American Free Trade Agreement, the United States took the position that rules of origin should be as strict as possible. In Krueger's view (1993), the United States was clearly trying to protect United States producers in the Mexican market by "exporting" its protection even though Mexico's tariff rates are quite low.

Another angle from which we may analyse the economic effects of rules of origin is as follows: an entrepreneur who seeks to avail himself of a trade preference in order to export goods within the region is actually sharing this preference with the supplier of the inputs he uses within his targeted regional market. This angle went largely unnoticed in the negotiations, but it is highly significant in practical terms. A numerical example may be useful here.

Let us assume that the tariff rate on product *AA* in country *XX* is 15% and that the only input used, input *BB*, is subject to a 7% tariff. Let us also assume that in country *YY*, this input is neither produced nor is subject to any tariff and that it represents 50% of the total cost. If the tariff on product *AA* is eliminated, then the margin of preference enjoyed by country *YY* in country *XX* will amount to 15 percentage points. If forced to obtain the input in country *XX*, entrepreneurs will have to pay 7% more (assuming that the tariff accurately measures the nominal level of protection implicit in country *XX*). Manufacturers located in country *YY* will have to subtract an additional cost of 3.5 points (50% x 7%) from their 15-point preference (or possible markup). Therefore, their margin of preference will amount to 11.5 percentage points.

Obviously, no government expert is capable of drawing such a fine line, using these types of simplified calculations, for all products. It is therefore vital for the private sector to take part, contributing its calculations and its experts, in order to explore all the possible effects of rules of origin.

VI

A final digression regarding the concept of asymmetry

Of all the terms used by trade negotiators, asymmetry has been the hardest one to pin down. During the NAFTA negotiations, use of the word was prohibited. It was not reintroduced again until Mexico's Secretary of Commerce, Jaime Serra Puche, used it in announcing the outcome of those negotiations when he indicated that they had managed to secure asymmetrical treatment favouring Mexico (Serra Puche, 1992).

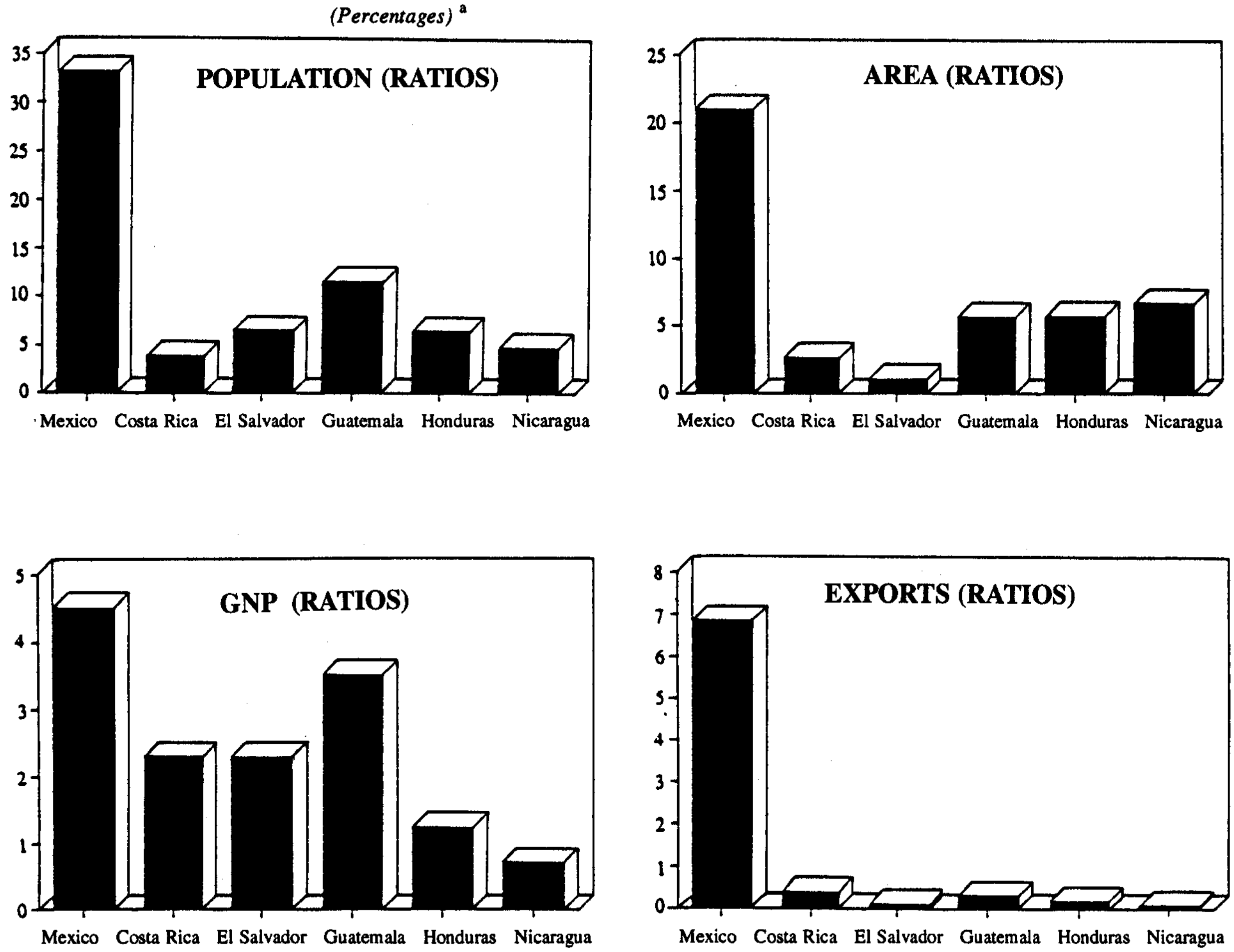
The Act of Tuxtla Gutiérrez, of 11 January 1991, which served as a frame of reference for trade negotiations between Mexico and the Central American countries, states that "negotiations on trade liberalization shall take into account the relative differences existing among the participating countries' levels of economic development" (annex to the Act). On 31 March 1992, the Multilateral Framework Agreement for the Trade Liberalization Programme was signed by the Governments of Costa Rica, El Salvador, Guatemala, Honduras, Mexico and Nicaragua. References are also made to "their relative levels of development" in the Act's preambular paragraphs.

However, no clear definition of the concept of asymmetry has been formulated. If we compare the differences between Mexico and the United States in terms of population, gross national product, area and exports with the differences existing between each of the Central American countries and Mexico, and if we regard these differences as indicators of asymmetry, it becomes clear that the distance separating each Central American country from Mexico is greater than the distance separating Mexico from the United States (see figure 1).

The four above-mentioned indicators of relative size should carry their due weight when the countries come to the negotiating table. Generally speaking, negotiators tend to seek asymmetry in the deadlines set for tariff reductions. These deadlines do eventually arrive, however, and they will finally level off the playing field by bringing trade barriers down to zero. The different amounts of time allowed for countries to adapt to these changes may be important, but rules of origin remain in place and may lead to less efficient future investment patterns. For example, the accumulation of production by small countries for the purpose of satisfying rules of origin may promote regional investment in cases where more than one change in tariff classification is required in order for the final product to qualify. The most typical example is that of wearing apparel, where three changes in tariff classification, starting with the yarn used to make a garment, is usually

FIGURE 1

Central American countries and Mexico: relative sizes
(Percentages) [a]



Source: World Bank data.
[a] The figures shown for Mexico are expressed as a percentage of those of the United States, and the figures for each Central American country are expressed as a percentage of Mexico's.

required under NAFTA rules. It is unlikely that a small country will have developed capabilities in all three areas (spinning mills, weaving mills and the making up of garments). Therefore, if such a country were to negotiate with Mexico on its own, for example (based on NAFTA rules), it would only be able to export wearing apparel to that country if its production activities were completely integrated or if it acquired its inputs from Mexico. However, if regional accumulation were allowed for these purposes, then Central American investments in textile and spinning mills would be promoted.

Countries that are able to negotiate integration agreements as a bloc will invariably have more opportunities of this type. The possibility of accumulation affords long-term gains, and failure to provide for this approach within short-term organizational schemes may do substantial damage to the smaller economies involved.

In this article we have seen that not only are countries negotiating rules of origin based on different methodologies for measuring what constitutes a substantial transformation (methods which assign differing priorities to changes in tariff classification, the type of change, national added value content, etc.) but even when a methodology is agreed upon, the rules established for each product differ depending on the outcome of the give and take occurring among the negotiators involved. It is as if, after having –with great difficulty– arrived at an agreement as to whether to use yards or metres in setting the length of the pace to be used by participants in a parade, the organizers had forgotten to decide on the amount of space to be maintained between rows. The result would be disastrous. Yet this may be the direction in which we are heading now.

Cocteau is credited with a well-known saying that, when events overtake us, we should pretend that they were our idea in the first place. If negotiations are undertaken on an individual basis, each country should take into consideration what has previously been negotiated in regard to rules of origin and, just as it will need to measure those rules' impact on the level of protection afforded to its own industrial sector, it should also assess their possible effect on the future location of investments. Given the infinite array of situations that may arise, the system will need to operate on a trial-and-error basis. Emphasis should also be placed, however, on maintaining flexibility in terms of the negotiations' outcome and on the possibility of periodically renegotiating the commitments made.

VII

Conclusions

Just as the issue of non-tariff barriers was in the spotlight during the 1960s and 1970s because these instruments offered a neo-protectionist option for countering the tariff reductions made under the aegis of GATT, and just as possible means of defending a country against dumping come to the fore when an economy is being opened up to external trade, rules of origin have become one of the current issues under discussion in the wave of trade negotiations that has been sweeping over the Americas since the late 1980s. And these rules could prove to have a serious disruptive effect on investment processes as well as markets.

Rules of origin have helped many Latin American countries to make good use of the unilateral advantages granted by industrialized countries, such as those provided under the Generalized System of Preferences and the Caribbean Basin Initiative, and, to a lesser extent, to comply with the terms of regional free trade agreements or similar types of accords. The plethora of negotiations being undertaken in the light of the new ways in which rules of origin are being used –negotiations in which even the United States will participate– oblige us to take a fresh look at every aspect of the established system.

The application of rules of origin must not be considered in isolation from other measures aimed at rationalizing existing schemes of protection (such as the discontinuation of drawbacks as of the year 2001, which is provided for in a number of treaties to which the United States or Mexico is a party) and evening out barriers to the entry of intermediate inputs.

The rules of origin negotiated in these new treaties make it possible to extend protection regarding intermediate inputs from one country to another. Therefore, the advantages afforded by participation in a free trade area no longer depend so heavily on each country's own system of protection (i.e., on its own tariffs being low), since it has become necessary for its trading partners' barriers to be low as well. Furthermore, the agent gaining access to a trading partner's market must "share the preference" with those benefiting from the relevant rule of origin in the other country.

The smaller the country engaged in negotiations is, the more severely constrained it will be if it accepts restrictive rules of origin. In addition, the "one-on-one" system of negotiations has the serious disadvantage of preventing accumulation for purposes of qualifying under rules of origin. This discourages private investment, whose promotion is precisely one of the objectives of each such treaty. In view of this situation, there has been a call for joint Latin American negotiations regarding rules of origin. Indeed, determining such rules at the individual country level does not appear to be feasible under existing conditions. As for the general rules, it would be difficult to move beyond what was agreed in the Uruguay Round, which was not a great deal. It would therefore be more meaningful to work on a concept of asymmetry that allows for the recognition that, above and beyond the problem of differing levels of development (which have always served as the context for this concept's use), the relative size of the countries involved is also a factor and that this element gives rise to striking differences in the web of production linkages. It is crucial that progress should be made in this area if private investment is to be promoted.

(Original: Spanish)

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ANNEX 1

Results of free trade negotiations between Mexico and the United States regarding access for Mexican products. Example: denim jeans

Tariff item classification	6203.42.20 6203.42.40B 6204.62.20 6204.62.40B
Rule of origin	"A change to subheading 6203.41 through 6203.49 [men] or to subheading 6204.61 through 6204.69 [women] from any other chapter, except from headings: 51.06 to 51.13: yarns and fabrics of animal hair and wool 52.04 to 52.12: yarns and fabrics of cotton 53.07 to 53.08: yarns of jute and vegetable textile fibres 53.10 to 53.11: fabrics of the above Chapter 54: Man-made yarns and fabrics 55.08 to 55.16: yarns and fabrics of staple fibres 58.01 to 58.02: velvet, felt and terry toweling and fabric 60.01 to 60.02: other fabrics Providing a good has been both cut and sewn or otherwise assembled in the territory of one or more of the Parties" *Meaning*: In order for a pair of trousers to qualify as an originating good, all of its components, starting from the yarn on up, must also be originating goods. These guidelines are complemented, for example, by the rules of origin for cotton fabrics (52.08 to 52.12), which specify that yarns classified under headings 52.05 to 52.06 must be originating goods. In addition, the rules applying to cotton yarn stipulate that the cotton used must itself be an originating good. *Note*: Silk (chapter 50) and linen (53.09) fabrics may be imported.

Elimination of tariffs on originating goods:	Product	Base tariff rate (%)	Type of reduction
6203.42.20	Overalls (men)	11	A (immediate)
6203.42.40.10	Other denim clothes (men)	17.7	B6 (5 years)
6204.62.20	Overalls (women)	9.5	A (immediate)
6204.62.40.10	Other *denim* clothes (women)	17.7	B6 (5 years)

Quotas and restrictions	Originating goods are not subject to quotas. Existing restrictions on non-originating goods (at a consultation level of 650,000 dozen) will be discontinued as of 1 January 2001. Products falling under the Special Regime will not be subject to a quota. The definition of *maquila* processing is broadened to include bleaching, dyeing and washing. Such products are exempt from quotas.
Special tariffs on non-originating products (cut and sewn in the region)	In appendix 6, all products containing blue denim are listed as exceptions. Consequently, no preferences exist in this case.

Source: Gitli, 1994.

Globalization *and restructuring the* energy sector *in Latin America*

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This article analyses the main manifestations of the globalization process and its implications in terms of the restructuring of energy markets. The reforms now being undertaken by the countries of the region are being pursued within the context of an economic paradigm with ramifications at the international level which assigns high priority to the liberalization and/or privatization of public utilities, and this, in turn, can be expected to engender new savings/investment strategies based on the relatively more stable nature of income flows from energy activities. The introduction of competition (when the characteristics and size of the market in question so permit), the regulation of natural monopolies, the presence of private firms and of institutional investors, and the ascendancy of the aim of running a profitable business venture over the conventional view of utilities as public services can all be expected to boost the formation, reproduction and diversification of capital, thereby galvanizing financial markets and opening up new opportunities for attracting external resources. The restructuring of energy markets may promote growth by opening up new financing options and increasing the mobility of income streams and, in so doing, will reshape the macroeconomic impact of the energy sector.

I
Introduction

The technological changes that have taken place in recent decades (in transport, informatics, telecommunications, etc.) have brought about sweeping changes in the world economy whose manifestations have included the increasing articulation of national markets and, hence, a close connection between commercial and financial events. As a result, the effects of positive and negative factors are spreading to the rest of the economy more and more swiftly.

This is leading to an increasing degree of interdependence in the realm of economic policy-making and to the growing involvement of private interests, as the share of world trade accounted for by intra-conglomerate transactions steadily rises.

Internationalization is not, of course, a new phenomenon; nor is the steadily mounting influence exerted by transnational considerations on business decisions.

What is new, however, is that in recent decades conflicts between State interests and business decisions at the transnational level have tended to lessen as a new economic paradigm with worldwide ramifications has taken shape. This paradigm, which is based upon the primacy of market forces and a strong leading role for the private sector, has called into question the conventional scheme of international relations in which State interests have been paramount.

This process has, of course, included various types of actions and reactions which may well shed light on the nature of the process itself. This growing interaction of markets, which is marked by both conflict and cooperation between States and business, is what we refer to as *globalization.* This concept is still in the process of being developed, and the globalization phenomenon has not yet been fully analysed from the standpoint of developing countries' interests. It is quite likely that many of the demands that figured on the agenda of North-South relations will have no place in this new era of globalization.

II
The new era

The "demonstration effect" is one of the most powerful engines of globalization, since consumers invariably tend to seek out the best way of meeting their needs. People's lifestyles will therefore conform more and more closely to international patterns or standards, and this will be even more true of the higher-income strata of society.

Globalization also fosters a degree of ideological uniformity in the exercise of citizenship and in public policy-making, despite the fact that the realities of the world's nations and the ways in which they are linked together are increasingly heterogeneous.

We might say that some form of economic synergy is being cultivated, based on an apparent correlation of interests, which will reduce the range of opportunities for legitimizing demands based on the inequality of nations.

In the developed countries, the State will no doubt continue to influence the course of international negotiations, in contrast to the situation in developing countries, where the State may ultimately play a very passive role if the current tendency towards maintaining the State in a subsidiary position is carried to extremes.

Within this framework, State action will tend to undergo a qualitative change. In developed countries, the activities of the public sector will surely take on a more transnational dimension which will pave the way for a better meeting of minds between the public and private sectors. In developing countries, however, the State may be more inclined to represent private interests. In turn, the private sector may be

□ This study has been prepared as part of the OLADE/ECLAC/GTZ Project on Energy and Development in Latin America and the Caribbean.

strongly influenced by external forces owing to the rapid growth of foreign investment at a time when technical progress will be making it increasingly difficult to monitor or control private operations.

Business strategies will be formulated from the vantage point of a world market entailing a complex interconnection of competitive advantages. "Know-how" and the means of disseminating it will become increasingly "tradeable", but these advantages will also be under constant scrutiny by firms on the cutting edge of technological change, which will continually be reappraising the economic life-span and environmental sustainability of production processes.

Environmental issues will become increasingly internationalized, as will the imposition of sanctions of various sorts when the planet's natural heritage is harmed.[1] Technical progress and the challenges of competitiveness are generating a self-contradictory process, however. On the one hand, technological changes are promoting energy efficiency, but on the other, many industries are moving to countries that have more readily available resources and fewer environmental restrictions, which leads them to become more energy intensive.

The more limited advantages of some national territories will cease to be important when barriers to the exploitation of more generously endowed territories' assets and natural resources are dismantled. As a consequence of the extraordinary mobility of resource allocation engendered by technical progress, however, natural advantages will be more relative than absolute.

The amazing growth of international financial transactions bears witness to this phenomenon. For example, between the early 1970s and late 1980s, the banking market's share in the world product climbed from 6% to 28%. What is more, this market, which was equivalent to slightly less than one half of total world trade at the start of that period, was 37% greater than total trade by the end of it (Agosín and Tussie, 1993).

This greater mobility is facilitated by the harmonization of regulations concerning foreign investment. Most countries now offer a more attractive investment environment for the broader range of options open to companies when taking investment decisions.

There is a tendency, for example, to establish neutral systems of taxation, standardize income tax rates, fix taxes on the basis of performance during the fiscal year, guarantee the right to remit profits, do away with exchange and credit restrictions and, in general, refrain from the discriminatory application of economic policy instruments.

In the exploitation of natural resources such as hydrocarbons, the types of relationships formed between business enterprises and national States are tending to become more and more uniform, and the use of arbitration mechanisms or supra-national forums for the settlement of disputes is becoming increasingly widespread.

However, an increasing volume of commercial transactions are based on models which do not take national considerations into account. A large proportion of these transactions have also become "de-materialized", inasmuch as they involve speculative operations in which profits are determined by the spreads between purchase and sale prices. In these cases, the results depend more heavily on cyclical factors and market interconnections than on the physical assets underlying such transactions.

Rapid technological change stimulates the integration of national economies. The "revolution" taking place in communications and in expectations has shortened the distance separating national markets, while information technologies make it possible to organize and manage the production of goods and services on a worldwide scale and to do so more efficiently.

These changes are expanding business firms' sphere of influence in the location and diversification of production. We can now expect to see an unprecedented level of competition in the world economy in which, for example, energy efficiency will be an extremely important factor.

Thus, the globalization process is founded upon the greater mobility of business agents and is being furthered by the looser regulation and/or deregulation of international trade, inter-bank movements and foreign investment in line with the new economic paradigm.

This paradigm is fostering a new "outward-looking" growth model which, in some countries of Latin America, will be coupled with a marked degree of internal structural heterogeneity.

[1] A new environmental order is being constructed. A total of 127 multilateral agreements are currently in force, 17 of which contain provisions dealing with trade. In addition, there are 211 notifications attached to the agreement on trade barriers reached during the Tokyo Round which establish regulations concerning environmental protection and affect the way energy resources are managed.

III

Energy and globalization

The globalization process is calling into question some aspects of the negotiations on energy-related issues that have taken place in international forums and between the State and business interests.

In the new economic paradigm, natural resources and assets are freely available, with their use being governed by the rules of the market. This circumstance ought not to affect the exercise of national sovereignty, but it will tend to reduce the State's participation in the exploitation of energy sources.

The idea that energy is a strategic resource and should therefore be in the hands of the State is increasingly falling out of favour. The privatization of the electricity sector is a priority item on the agendas of most of the countries in the region, and pressure to privatize the oil industry is mounting.

Most countries in the region have dismantled the barriers with which they used to block access to the use of energy sources, because State control of this sector is now believed to have been in many cases the cause of its financial weakness.

These problems became more acute when the external debt crisis hit the region; the crisis led to a shortage of credit from both the private banking system and from private suppliers which was later exacerbated by the tightening of credit from multilateral sources and official lenders.

There is now a consensus as to the need to boost foreign investment in order to tap new resources, to expand and modernize existing operations, to generate foreign exchange so that debt obligations may be met and, in general, to permit the absorption of the fruits of technical progress.

The 1990s have ushered in a new stage in the promotion of private investment which will pave the way for the sale of firms in the energy sector, either wholly or in part, and/or the formation of strategic alliances within the framework of a new kind of cooperative relationship with transnational corporations.

Little by little, conditions will be created which will allow private capital to reclaim the central role it played during the first half of this century. However, this will also rekindle the controversy –one which had subsided when energy activities were nationalized– about the ever-conflictive issues of the control of profits and, in general, the distribution of benefits.

In the new paradigm, the energy sector should not be subject to discriminatory treatment. The neutral application of economic instruments and of policies for liberalizing trade and finance will bring about a substantive change in the capture of energy revenues. [2] These policies will also facilitate the use of transfer prices, given the large proportion of international trade which is made up of intra-firm transactions. [3]

The systems used for the distribution of profits in the oil industry are also tending to become more uniform, and this is leading to the internationalization of the types of contracts between States and business enterprises.

Thus, for example, the system of oil leases, which had seemed to have fallen into disuse, is being revived. The widespread use of this system will bring major changes in public policies compared to those applied in past decades, which were based on the idea that the oil which was extracted was the property of the State, thereby giving rise to the conclusion of contracts under which private enterprises assumed the risks associated with exploration and exploitation in exchange for compensation for services rendered (payment in kind or on a fee basis).

Under a leasing system, in contrast, the product becomes the property of the oil company. This reduces the State's role in foreign trade operations and limits the amount of manoeuvering room available for setting up a united front in the international market.

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[2] The main mechanisms used to obtain revenue from the energy sector have been: rents and/or royalties, increases in the level of taxable income, taxes on sales transactions and windfall profits, protectionist tariffs, controls on remittances of profits, discriminatory exchange rates, controls on foreign trade, etc.

[3] Figures for the mid-1980s indicate that 23% and 24% of oil exports and imports, respectively, in the United States were intra-firm transactions (CTC, 1988).

From the perspective of the globalization process, the institutional structure of world markets –an issue that became the focus of attention for oil-exporting countries in the 1970s– is not in question.

Zero-sum situations will have no place in an increasingly interdependent world economy because of their implicitly confrontational nature: what is good for some is bad for others or, in other words, some people win and some people lose. If, under exceptional circumstances, it were to become necessary to intervene in the market, decision-makers would be inclined to try to strike a balance between the interests of producers and consumers (the minimax principle).

These factors are related to price formation. Thus, concerted or unilateral actions aimed at influencing the market are regarded as running counter to the principles of free trade upon which the globalization process is founded. [4]

In short, in this new paradigm we can look for less State intervention and a higher profile for the private sector. To this end, a series of economic reforms will have to be undertaken which will influence the way in which energy markets are organized within the context of a relocation of production activities that will give the energy sector a crucial role to play in the formation of competitive advantages.

At the same time, the debate about the institutional structure of world markets will gradually give way to negotiations that place more emphasis on environmental protection, energy efficiency, the promotion of new and renewable energy sources, and the integrated management of our natural heritage.

The negotiations now under way are proceeding along these lines, in accordance with the increasingly broad array of international treaties in this area (the Vienna Convention, the Montreal Protocol, the Convention on Climate Change and Agenda 21 in Rio de Janeiro), as well as the Pact for Development and Prosperity and the Plan of Action approved at the recent Summit of the Americas. [5] Lines of cooperative action were agreed upon at these meetings which emphasize the importance of the globalization of energy issues in keeping with this new era's economic paradigm.

IV

Economic reforms and energy

Although the economic reforms undertaken by the Latin American countries were an internal reaction to the spiralling inflation, fiscal imbalances and slow growth seen in the 1980s, their orientation has been strongly influenced by external factors. These reforms assign a predominant role to the market in the task of linking up a complex array of public and private interests.

Through these reforms, the countries are seeking to set up very different ground rules from those devised for the developmentalist State of past decades. That State sought to establish a certain style of growth and redistribution which attached particular importance to obtaining economic rents from the utilization of natural resources, and to that end it intervened in the area of resource allocation and influenced the behaviour of entrepreneurial agents. Private interests had to be subordinated to public interests, which supposedly were in keeping with the well-being of the nation as a whole.

It is not the purpose of this article to explain what factors ultimately led up to the crisis of the developmentalist State. Although the developmentalist State did stimulate the expansion of the domestic market, promote industrialization and broaden the coverage of public services, it was unable to set up a sustained savings and investment model. The internal mechanics of income transfer, the impact of external borrowing, fluctuations in international markets and,

[4] The level and stability of oil prices continue to be a cause of concern. At the close of the 1980s, for example, the real price index for petroleum and petroleum products was 51% lower than it had been at the start of the decade.

[5] The Summit of the Americas was held in Miami on 9-11 December 1994.

in general, the changes that took place in the world economy were surely among the factors that contributed to this outcome.

The more recent reforms have been designed to reduce the scope of public-sector action. They are clearly directed towards universalizing the principle of the subordinate role of the State through the liberalization of markets for goods and services, the injection of a strong dose of neutrality into economic policy management, and the questioning of practices that discriminate among production sectors or on the basis of the origin of capital.

Under these reforms, business firms should concentrate on developing their competitive advantages, while the State should intervene only when it must do so to ensure free competition or to preserve a stable economic, social and political environment that will instil confidence, stimulate investment and promote greater dissemination and absorption of technical progress.

These reforms will have a decisive impact on the performance of the energy sector, even though their implementation and specific effects will depend upon the particular conditions existing in each country.

Along these same lines, an effort is being made to gradually lessen the sector's incidence in public finances; even so, in many countries of the region, the taxes levied on energy sources still account for a very sizeable share of tax revenues.

On another front, steps are being taken to introduce competition into energy markets by promoting the liberalization of commerce in tradeables and regulating natural monopolies, as well as to carry forward the privatization of public enterprises and to expand the role of energy-related activities in the capital market.

V

Estructuring energy markets

The principles associated with the new economic paradigm are a more influential factor in the restructuring of energy markets than are the principles of energy-resource management itself, because they play a very important role in the reorientation of fiscal policy and the reorganization of savings and investment strategies. Consequently, we cannot rule out the possibility that some departures from sustainable uses of energy sources may arise on account of this.

The power of the market could help to steer events in this direction, but it is by no means the only way of protecting the environment or promoting energy efficiency.

The most recent debates on the subject have made it clear just how complex the process of restructuring energy markets is. The nature of this process will depend upon the availability of resources, the tradeable or non-tradeable status of the goods in question, the types of channels linking sellers and buyers, market size, the relevant economies' degree of openness and, in general, the macroeconomic significance taken on by the management of revenues from energy activities (OLADE, 1992).

1. Electricity

The electricity sector's infrastructure (for power generation, transmission and distribution) is highly capital intensive. The return on an investment takes a long time, and users are supplied through single channels. The expenses incurred in the transmission and distribution stages are sunk costs; these activities demand economies of scale, and such economies may also be necessary in the power generation stage if optimum scales do not fit the size of the relevant market.

The generation of electricity should take place within a competitive market, but if optimum output exceeds demand, then a monopoly could provide the necessary supply at a lower cost. In such cases we are dealing with a "natural monopoly", which is typical of transmission and distribution activities.

In most of the countries of the region, the supply of electricity has always been thought of as a public service, and in some cases this has been seen as justifying the erection of barriers to the entry of private capital and the establishment of State monopolies having a marked degree of vertical integration.

Accordingly, the debate taking place in the region has a strong ideological bias which emphasizes the "inevitable" inefficiency of the State-as-entrepreneur and champions the idea of privatization: a position that is sometimes heavily influenced by fiscal considerations. The ideologization of this debate thus stems from the need to forge a link between the necessity of restructuring the relevant markets and the need to change existing forms of ownership.

A consensus exists as to the desirability of doing away with monopolies in the generation of electricity in cases where the market is large enough to permit competition; this is not possible, however, in the transmission and distribution stages.

In such cases, generating companies' sales should be based on market prices, there should be open access and suitably regulated tolls for transmission services, and rates should be set at the distribution level, although large consumers should be allowed to negotiate their rates freely with the electricity companies.

Chile's pioneering reforms in the electricity sector and those undertaken more recently by Argentina and Peru represent attempts to break down the sector's vertical integration. It is felt that the presence of the same actors in a number of different phases of the industry could distort free competition in power generation activities as well as hindering the regulation of transmission and distribution services.

Chile's reforms have not laid to rest the problem of intra-firm relations, however; a number of conflicts have occurred among the firms in this sector and questions have been raised as to whether genuinely competitive conditions actually exist.[6] This is why Peru's reform programme specified that power generation, transmission and distribution cannot be conducted simultaneously by the same principal.[7]

In order for Mexico to be able to join NAFTA, barriers to entry into generation activities were eliminated, but electrical power must still be sold to the Federal Electricity Company, a vertically-integrated State-run enterprise.[8]

One objective that is beginning to become a part of many of the new regulatory schemes is to avoid the various forms of concentration which may arise when the private sector plays a central role in restructuring the market. Hence the importance of establishing agencies to monitor the conditions under which competition is taking place (e.g., anti-trust commissions).

Accordingly, there is general agreement as to the need for the State to step in to correct market imperfections and to regulate fees and rates when their level and nature are such as to be inconsistent with a competitive supply.

Emphasis is placed on the elimination of entry barriers, on the presence of as many independent companies in power generation activities as possible, and on ensuring that the transmission-system operators are independent of those companies, in order to prevent discriminatory practices that would hamper free competition.[9]

The view that regulatory systems should be as non-discretionary as possible and should be designed without reference to whether or not they will uphold the ascendancy of State-run enterprises is increasingly gaining acceptance. An attempt is thus being made to eliminate the conflict of interest created by provisions which gave the latter enterprises regulatory powers.

The controversy surrounding the seeming dichotomy between a business orientation and a public-service orientation has yet to be resolved. It is recognized that a business orientation is necessary to ensure efficiency, while not forgetting the contradictions that could arise from the standpoint of social equity and environmental sustainability. However, it is also recognized that the publicly-owned utilities' formerly exclusive orientation as a public service contributed to their weak financial position, thus creating fiscal problems and adding to the external debt.

[6] These conflicts have arisen primarily within the Interconnected Central System (SIC), which is dominated by two private firms: the Empresa Nacional de Electricidad (ENDESA) controls 61% of installed generation capacity, Chilgener controls 16%, and the Empresa Eléctrica Colbún Machicura, in which the State is the majority stockholder, controls 11%, with the balance being accounted for by other private generators. ENDESA also controls transmission through its subsidiary, Transelec, while ENERSIS owns the largest distributor (Chilectra Metropolitana) and is one of ENDESA's largest shareholders (Tohá, 1995 and Blanlot, 1993).

[7] Electricity Concessions Act, Decree-Law 25844, article 122.

[8] The Government of Mexico has interpreted the constitutional provision which bars private access to the electricity sector on the grounds that it is a public service as meaning that there is no objection to the generation of electricity for subsequent sale to the Federal Electricity Company, user generation, co-generation, small-scale generation, or exportation in border areas.

[9] In Chile, for example, a large percentage of water rights are held by ENDESA; in the opinion of some experts, this constitutes a significant entry barrier that impairs competition in the area of power generation (Tohá, 1995 and Lorenzini, 1995).

There can be no doubt that the shrinking of sources of external finance, the saturation of borrowing capacity and the presence of fiscal constraints make it necessary to favour a management approach that focuses on the profitability of investment capital. At the same time, however, it is important to recognize that this approach should be followed regardless of whether the companies concerned are public or private.

Opting for a business orientation does not mean ignoring social objectives. Subsidies, if necessary, should be as direct as the circumstances demand, since experience has shown that the manipulation of prices and rates is a very limited mechanism for the redistribution of income.

2. Natural gas

Natural gas markets developed in the producing countries (Argentina, Bolivia, Brazil, Colombia, Mexico and Venezuela) in response to domestic demand, with the State playing a leading role in the process. There is nevertheless strong potential for integration in the natural gas sector, which poses an interesting challenge for the relevant regulatory systems. [10]

This market is similar to the electricity market. Competition in the area of gas extraction is feasible, but transmission and distribution activities are conducted by natural monopolies. Producers may operate their own pipelines but it is important that there should be open access to gas transport facilities in order to ensure the development of this resource.

Argentina has been a pioneer in the restructuring of this market, as well as taking the decision to privatize the Gas del Estado (GDE) company. The Natural Gas Regulatory Agency sets distribution rates and transport fees, and transport and distribution networks are freely accessible. Natural gas production is free of barriers, as is import activity in this field, but authorization is needed for exports.

3. Petroleum

This market is supplied via a number of different channels. Petroleum is a tradeable good which is bought and sold on the basis of certain internationally accepted forms of contracts and price quotations; this facilitates the liberalization of these markets, since there is competition among similar sorts of goods. Nevertheless, there is a possibility that natural monopolies may exist, depending on the size and characteristics of the domestic markets concerned.

Monopolies having a high degree of vertical integration –in keeping with the prevailing structure of the industry at the world level– predominate in Latin America. Furthermore, nearly 80% of the region's petroleum production is in the hands of State-run companies, either directly or indirectly.

The debate concerning the liberalization of oil markets is fairly polarized, and it is thus difficult to arrive at a consensus. In oil-importing countries, there is a better chance that agreement to liberalize these markets can be reached, although there are some circles which have adopted the position that oil supplies are a strategic matter.

Defenders of this position point out that it is a widely-used energy source which affects a large number of users and influences the overall performance of the economy. The same argument is also used in oil-producing and oil-exporting countries, where advocates of this view contend that control over oil revenues is an inherent component of national sovereignty.

It is also argued, however, that excessive nationalism militates against the full utilization of existing potential by limiting private investment in an activity where the risks associated with exploration are extremely high. Other adverse factors that are cited include the effects of political interference, the inefficiencies inherent when the State tries to act as an entrepreneur, and the effect which the manipulation of domestic prices has on oil companies' financial standing.

Those who want the State to maintain a dominant position are aware of these problems, but in response they propose the adoption of macroeconomic policies that involve less intervention (in such fields as the use of price controls as a means of dampening inflationary pressures, for example), the formation of strategic alliances for exploration and drilling operations, the acquisition of new technologies, and the streamlining of international operations; it has also been proposed that State-run enterprises should be given greater autonomy in determining how oil revenues will be used.

In Bolivia, Colombia, Ecuador and Peru, contracts may be entered into with private operators. In Brazil

[10] The main transactions conducted within the region so far have been between Argentina and Bolivia. Projects are now being developed, however, for interconnections between Argentina and Chile, between Brazil and Uruguay, and among Bolivia, Brazil and Chile. Integration between Colombia and Venezuela and between Peru and Brazil is also a possibility.

and Mexico, PETROBRAS and PEMEX, respectively, are allowed to team up with private companies, while the Venezuelan Congress recently approved strategic association agreements, in which the State does not hold a majority interest, with three private consortiums. [11]

To date, Argentina is the only oil-producing country to have privatized most of its State-run company, Yacimientos Petrolíferos Fiscales (YPF). Bolivia, Ecuador and Peru have decided to privatize their oil companies, but have not yet actually carried out such operations.

In Brazil, Mexico and Venezuela, the State will surely maintain its leading position. In the other countries of the region it is possible that a system of oil contracts will emerge that will encourage private capital to participate more intensively in oil exploration and drilling activities as well as promoting open access to transport networks and competition in the oil refining industry. All of this would presumably take place within a context of unrestricted domestic and foreign trade in which regulation is based on international prices.

VI

The State and regulation

It is generally agreed that the State should play an active role in regulating the energy sector. It is acknowledged that neither absolute liberalism nor absolute Statism is a guarantee of efficiency and that the best option is to be found somewhere in between those two extremes. What is at issue, however, is the type of intervention to be effected, although it is generally agreed that it should be carried out by autonomous agencies with high-level technical capabilities.

Regulation is essential, regardless of what decisions are taken regarding corporate ownership. It is very difficult indeed to attract private capital and ensure a high level of efficiency if transparent ground rules have not been established. Moreover, the highly captive nature of energy markets makes regulation necessary in order to protect users, since energy costs can affect the competitiveness of other activities. Relegating the State to an extremely subsidiary position would also jeopardize the objectives of environmental sustainability and social equity.

A number of lessons may be drawn from the region's experiences which should be taken into consideration. Regulation based on a cost-plus approach may protect inefficient operations, since there will always be some leeway for manipulating costs. A better method would be to compare corporate performance against that of model enterprises. In addition, adjustment factors should be specified beforehand so that continual negotiations –which can erode confidence– will not be necessary.

At all events, regulation makes sense only if it encourages efficiency, and this means that discretionary or arbitrary mechanisms should be ruled out.

The stability of the countries' energy policies must be ensured and the assignment of responsibilities to the public and private sectors should be spelled out very clearly; these elements must be coupled with sound macroeconomic management together with long-term sectoral policies. In addition, the countries' fiscal positions need to be made less dependent on the energy sector.

Schemes for consensus-building need to be promoted that will encourage energy efficiency on both the supply and demand sides. Such schemes can contribute to the attainment of an energy balance in keeping with the potential and sustainability of a country's natural heritage.

Energy policies should also foster improved linkages in domestic markets, which will have a positive effect in terms of social equity.

Energy policy options for improving the level of social equity do not begin and end with the management of fees and rates. Energy policies should not only expand the coverage of services but should also adapt supply to demand, while not forgetting the need for social programmes to be energy-efficient as well (Maldonado and Márquez, 1994).

These options go beyond the reach of market mechanisms, of course, and call for State intervention.

[11] The Petroleum Act of August 1975 set aside the oil industry and trade as prerogatives of the State, but did permit partnerships to be set up with private firms, under State control (article 5). Congress found that the presence of such control did not require a majority interest, and this paved the way for the conclusion of three contracts in 1993 by subsidiaries of Petróleos de Venezuela (PDVSA): Maraven with Conoco; Maraven with Total, Itochu and Marubeni; and Lagoven with Exxon, Shell and Mitsubishi.

VII

Energy and capital formation

The most novel aspect of the move to restructure energy markets lies in the impact of this process on savings and investment schemes. Capital markets will be able to expand if privatizations and new investments lead to the formation of open-end companies and ensure the participation of more institutional investors, such as pension fund management firms (AFPs). Thus, the restructuring process is likely to bring about significant changes in the energy sector's financing patterns.

The elimination of the distortions affecting profit margins ought to increase the availability of resources, since cash generation has been limited due, among other factors, to ill-advised decisions in setting prices and rates. [12]

During the 1980s, for example, the cash-generation index for electricity companies rose only in Chile. This index ranged between 10% and 40% in Ecuador and Venezuela, between 60% and 80% in Brazil, Colombia, Honduras and Mexico, and was negative in Argentina (OLADE, 1989).

Cash generation should increase regardless of a corporation's ownership if State-run enterprises receive the same treatment as private firms. Even so, for a number of reasons, privatization will open up new opportunities for obtaining financing. These reasons include the possibility of attracting resources through capital markets and the greater leeway afforded for financial management.

In contrast, State-run enterprises are faced with certain constraints when attempting to operate in capital markets due to their status as closed corporations. Furthermore, they are subject to provisions which require them to transfer their profits and/or which set certain limits on the use of their funds. These constraints can be overcome, however, if they are given greater operational autonomy and if performance-based control systems are used.

The establishment of stable, transparent rules for the operation of energy markets and privatizations ought to lead to the diversification of financing options, particularly through an increase in stock market operations.

This assertion is backed up by Chile's experience, as has been noted in a number of recent studies (Paredes, 1995). In 1993, for example, Chile's main private electricity companies obtained 54% of their resources from the capital market.

In 1980-1984, prior to the privatization of the electricity companies, their stocks accounted for no more than 2%-5% of the total value of transactions conducted on the Santiago Stock Exchange, whereas in 1985-1989 they ranged from 17% to 31% of the total. In 1990-1994, after the privatization of these firms had been completed, electricity-company shares climbed sharply to between 37% and 47% of the total value of stock transactions.

In addition, as of 31 July 1994 securities issued by electricity companies accounted for 36% of all the securities registered with the Superintendency of Securities and Insurance.

Chilean electricity companies have also made a very strong entrance into international capital markets through the use of American Depositary Receipts (ADRs). As of the end of December 1994, the total value of Chilean companies' ADRs on the New York Stock Exchange was US$2 934 million, or 24% of all electricity-company transactions. [13]

It has also been noted that the main investment brokers are steering funds towards activities that include partially or wholly privatized natural monopolies.

[12] The case of Peru provides a good example. In 1989, real prices for petroleum products were 75% lower than they had been in 1985, causing Petróleos de Perú (PETROPERU) to lose US$600 million. Furthermore, whereas the long-term marginal cost of electrical power in 1989 was between US$ 0.07 and US$0.08 per kW/hour, rates averaged only US$0.02.

[13] As of the end of 1994, generating companies (ENDESA and Chilgener) had placed US$352 million in ADRs; Chilectra (the largest distributor) and Chilquinta had placed about US$179 million, and ENERSIS, a holding company, had placed US$163 million (figures cited in a study prepared by the Munita, Cruzat and Claro brokerage house and published in the daily newspaper *El Mercurio* (1995b)).

At the close of 1994, foreign investment funds had placed about US$507 million in Chile, with 18% of that amount going to electricity companies (ENDESA, ENERSIS, Chilgener and Chilectra) and 32% to firms in the services sector. [14]

These investors include, for example, Merrill Lynch Global Utility Fund, Equity Fund of Latin America, and Emerging Markets, whose portfolios include a large proportion of investments in activities subject to regulation. [15]

We can therefore expect the restructuring of the region's energy sector to help deepen its capital markets, which will also receive a boost from the creation of private pension fund management firms (AFPs).

Chile's AFPs –a model whose use is spreading to other countries in the region– were managing a total of US$22 332 million at the close of 1994, and it is estimated that they will be handling around US$50 billion by the year 2000. [16]

These AFPs have placed a considerable portion of their investments in electricity companies. In 1994, for example, 20% of their total investments had been placed in these firms, representing 67% of their total equity investments, which amounted to US$6 526 million. [17]

Another important consideration is the role which energy companies can play in the design of systems for what has become known as "people's capitalism" (ECLAC, 1994).

In Chile's case, however, the ownership of electricity companies is quite concentrated, with the five largest shareholders of the main electricity firms controlling very large blocks of stock (ENDESA: 30%, Chilgener: 29%, ENERSIS: 36% and Chilquinta: 46%) (Paredes, 1995).

As we have seen, the greater international mobility of investment resources and the interdependence of financial markets –features which are an inherent part of the globalization process– open up new financing opportunities for the sector, although the recent crisis in Mexico also demonstrates just how volatile these markets are.

Increased exposure to capital markets ought to motivate electricity companies to boost their operational efficiency as well, given the hypersensitivity of these markets.

The greater attractiveness of these companies' shares on the stock exchanges, their move into international financial markets and the participation of institutional investors (AFPs, mutual funds, insurance companies, etc.) are directly related to the lower level of risk associated with such investments and the large profits that such firms can yield.[18]

Regulatory systems can play an important role by ensuring levels of return which are safer and more stable than those afforded by other investment options.

Another significant factor is the electricity companies' greater ability to generate profits on an ongoing basis because they operate in what are, to a large degree, captive markets where future demand can be controlled, all of which permits better medium- and long-term planning.

More empirical evidence is required to back up these statements, of course, but there are enough indications to allow us to hazard a few hypotheses for further research.

In the case of Chile, the technological contributions made by private activities do not appear to have been of great importance. Perhaps their most significant contributions have been their expertise in the area of financial management and their ability to

[14] Figures compiled by the Superintendency of Securities and Insurance of Chile in 1994 indicate that the foreign investment funds having interests in the country sent US$246 million in profit remittances out of the country; this was equivalent to more than half their total investments. These investment funds are primarily interested in realizing short-term gains, and their portfolios change very frequently (information published in *El Mercurio* (1995e)).

[15] Some major financial consulting firms, such as Salomon Brothers, advise their clients to invest in electricity companies when they are seeking high returns with a minimum of risk (according to a report prepared by CELFIN, S.A., distributed by Salomon Brothers and published in *El Mercurio* (1995d)).

[16] Figures published in *El Mercurio* (1995c), based on a study of the private pension system prepared by the Santiago Chamber of Commerce.

[17] Of this amount, 84% was invested in services, in the following descending order of magnitude: ENDESA, ENERSIS, Chilectra (generation), Compañía de Teléfonos de Chile (CTC), ENTEL, COPEC, Chilectra (distribution), Empresa Eléctrica Colbún Machicura, Telex-Chile and Telefónica del Sur.

[18] In 1994, ENDESA, the largest generator of electricity in the country, reported US$368 million in profits, which was 52% more than the year before. This represented a profit ratio of 16% on equity and 12% on assets (statements made by José Yuraszeck, Chairman of ENDESA, as published in *El Mercurio* (1995a)).

generate non-operational income, given their high level of short-run liquidity (since collection of their revenue is faster and more certain than in other businesses).

The financial management of private firms is more dynamic and more efficient. Public enterprises' efforts to generate non-operational profits are subject to restrictions whenever such efforts call for them to overstep the bounds of their original line of business. Furthermore, as a result of price and rate distortions, potential profits are often transferred in the form of subsidies. In addition, these corporations must go through a time-consuming authorization process before they can expand or diversify their operations, and their use of any profits which they may make is subject to restrictions.

In view of the above, private management may be expected to make a greater contribution to savings and investment, which would in turn drive forward the growth of the economy.

In Chile's experience, for example, one interesting development has been the diversification of electricity companies' investments, both in energy-related activities and in other sectors. [19] This process coincides with the internationalization of these firms, which has been stimulated by restructuring and privatization initiatives in other countries of the region. Chilectra, for example, has become one of the largest distributors in Latin America thanks to its operations in Lima, Buenos Aires and Santiago. This process will also play a role in the integration of natural gas supplies between Argentina and Bolivia. [20]

The situation is likely to be different for oil companies, because in most cases they are closed corporations and they are exposed to international price fluctuations. In the case of public enterprises, financing options would consist of use of their own funds, increased foreign borrowing, or strategic alliances with transnational corporations.

Depending on their size and the level of the existing reserves, companies that are sold to the private sector may be able to position themselves in intra-firm circuits within corporate chains run by firms located outside the region. Be that as it may, Chilean, Argentine and Mexican firms have all expressed interest in the slated privatization of Petróleos de Perú (PETROPERU). [21]

Clearly, then, some regional firms are willing to internationalize their operations. This is true, for example, of Yacimientos Petrolíferos Fiscales (YPF) of Argentina. YPF projects an output of between 450 000 and 500 000 barrels of oil per day, which would put it on a par with such corporations as Conoco in the United States and Elf Aquitaine of France.

A company of this size needs to diversify its risk by seeking out new oil production opportunities. In this respect, YPF has formed a consortium with PETROBRAS to explore for oil in the Gulf of Mexico; it is also moving into Chile with a natural gas link and is working to expand its exploration operations in Algeria, Bolivia, Ecuador, Peru and Paraguay. [22] The scope of its activities may extend beyond the oil industry if current negotiations with CODELCO of Chile regarding YPF's entrance into the mining sector prove successful.

Oil production will continue to be an important means of obtaining external savings, given the region's potential reserves and the scale of investment involved in this activity. For the time being, there is no indication that privatizations will have any major impact on capital markets, although this will, of course, depend upon how they are conducted.

(Original: Spanish)

[19] Chilgener has interests in shipping and port activities. ENERSIS has investments in services and the supply of computer equipment, construction and real estate, and foreign trade. ENDESA has interests in port activities and infrastructure projects, while Chilquinta has investments in telecommunications, the real estate business, and drinking water and sewerage services.

[20] The available integration options for the supply of natural gas from Argentina to Chile involve two consortiums: Gasoducto Trasandino, S.A., which includes ENERSIS and Chilectra, and Gas Andes, in which Chilgener is a participant. As part of the effort to achieve integration with Bolivia, Chile's Empresa Nacional de Petróleo (ENAP) has signed an agreement with BHP Power, Inc. of Australia and Yacimientos Petrolíferos Fiscales (YPF) of Bolivia.

[21] The privatization of PETROPERU is the subject of a heated controversy regarding two alternative courses of action: the privatization of the company as a whole, or its privatization by branches of activity (exploration and production, transport, refining and distribution plants).

[22] Expenditures on prospecting for new deposits outside Argentina are estimated at 25% of the company's total investments in exploration.

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The kaleidoscope *of competitiveness*

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Competitiveness has become one of the main "standards" governing the ever-changing interplay of interests at the international level. Trade liberalization, structural adjustments, the retooling of production, intelligent coexistence with our natural resources, the struggle to eliminate poverty –all are viewed, in one way or another, through the prism of competitiveness. This has transformed competitiveness into some sort of compulsory principle by which international status is measured and which influences the formulation and implementation of business strategies and national policies. The literature on competitiveness offers a wide array of definitions, ranging from ones that focus on economic aspects to others that attempt to link up the techno-economic, sociopolitical and cultural aspects of the competitive process. The differences among them lie in the way in which they look at the relationship between development and competitiveness. The author contends that it is possible to fashion a "map" of competitiveness: a network of key, inter-linked concepts whose objective remains the same regardless of how competitiveness is defined, i.e., to gain, hold onto, and expand one's market share. This map depicts an ordered yet flexible set of concepts –a territory and its roads– which can be adapted to the interests and objectives of the user and which, like a kaleidoscope, serves innumerable purposes and permits suitable concepts to be devised to cope with specific problems.

I

A concept and a map

There are words that have the gift of seeming to be extremely precise and specific while at the same time being extremely generic and loose; these concepts are highly operative and measurable but are at the same time exceedingly abstract and extensive. Be that as it may, they all have the knack of shaping behaviour and attitudes and, as tools of evaluation, of influencing our daily lives. One of these magic words is "competitiveness". Perhaps one way of comprehending the magical qualities of this word is to distinguish it from another: "competition".

Competition may be viewed as part of the economic struggle, and the ability to compete may be seen as a process which leads to rivalries between groups of merchants. We could, therefore, draw a distinction between "competition" and "competitiveness", with the latter being regarded as the set of skills and qualities required in order to engage in competition. Competition would thus be the result of competitiveness and would be subsumed into it.

This might be a valid explanation if it were not for the existence of a comprehensive perspective that encompasses both the result and the process. Competition may be understood as a process of confrontation among various sources of capital, i.e., among the powers of enhancement of value and economic expansion which the ownership of capital confers. Competition should be viewed "as an integral, inseparable part of the global process of capital accumulation"; it is, therefore, "the basic engine of the capitalist dynamic" (Possas, 1985). Furthermore, this confrontation among blocs of capital occurs in the marketplace, which is by definition the arena for capitalist competition.

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Viewed in this way, competition and competitiveness would be interchangeable; their use would simply be a matter of preference. And the word "competitiveness" would be nothing more than a term that is currently in fashion, or, as it is defined in a Spanish-language dictionary of economic terms: "competitiveness –cacophonous term introduced in the 1980s meaning *ability to compete*, especially in external markets. In English: *competitiveness*"; this definition suggests that it is an exclusively economic term equivalent in meaning to "competition" (Tamanes, 1988).

Although we could take the view that the global process of capital accumulation encompasses all spheres of capitalist society –and on that basis deem the issue being considered here to have been resolved– we would be lacking an integrated concept of competition to aid us in understanding the new types of issues being addressed by a number of contemporary authors who are looking at competitiveness from a different angle.

We could draw a clear distinction between competition and competitiveness, or we could use the concept of global capital accumulation to join the two terms together –which might be of great help in understanding the multiple meanings currently attributed to the word "competitiveness"– if such a frame of reference were available. In any event, after having examined a portion of the voluminous literature on the subject, it appears worthwhile to present some of the different ways in which the term has been conceptualized, examine their connotations, and compare them with the facts. What does appear to be possible is to devise a "map" of competitiveness, rather than to develop any single concept of the term that would be valid in all cases.

Competitiveness can be better understood with the help of a map or a network of interlinked concepts whose objective remains the same regardless of how competitiveness is defined: gaining, holding onto and expanding one's market share. This map is similar to a kaleidoscope in that it represents an ordered yet flexible set of concepts that can be adapted to the interests and objectives of the person wishing to use it. And, like a kaleidoscope, the map serves innumerable purposes: it depicts a territory and its roads, as well as the unknown areas found along those imperfectly known roads, but it does not provide us with the specific elements needed to explore particular problems. To do that, we need to develop the appropriate concept.

II

Conceptualizations of competitiveness

An examination of the literature yields a wide array of definitions. At one extreme, there are definitions that reflect a greater concern with the economic aspects of competitiveness and that emphasize its most immediate and measurable manifestations; at the other extreme, there are definitions that seek to link up the techno-economic, sociopolitical and cultural aspects of the competitive process.

It makes no sense to try to decide which are the "true" or "correct" conceptualizations, inasmuch as all of them view competitiveness as an empirical phenomenon in the light of a given body of theory. What we can say is that the two extremes in this continuum of definitions reflect different interests, different concerns and different theoretical foundations; perhaps one complements the other. We can also say that their differences lie in the way in which they look at the relationship between development and competitiveness from their distinct vantage points, which are not only theoretical in nature but include strategies, policies and social values as well.

1. Conceptualizations with an economic emphasis

In the specialized literature, the predominant approach is an economic one which includes precise working definitions and focuses on the quantitative measurement of the components of the competitive process with a view to the use of comparative methods. The figure of Ricardo and international trade theory have shaped this approach to the analysis of competitiveness.

Let us consider a few examples: "competitiveness is the ability of a country, a sector or a particular firm to participate in external markets" (Feenstra, 1989, introduction); "competitiveness is the ability to derive profit from export activity" (Helleiner, 1989, p. 3); "since for a number of reasons (macroeconomic country analyses, a technological capacity for innovation, product quality, etc.) these factors are extremely difficult to measure in quantitative terms, we can look at the concept in terms of relative competitive positions that are clearly associated with international cost and price differentials or, more precisely, the relative changes in these indicators" (Durand and Giorno, 1987, p. 149); "competitiveness is the sustainable ability to realize gains and maintain market share and is thus defined in a way that has three major measurable dimensions: gains, market share and, through the use of the world "sustainability", the dimension of time" (Duren, Martin and Westgren, 1992, p. 2).

From an economic standpoint, understanding the concept of competitiveness requires not only an examination of domestic and external market shares but also a comparative analysis of production costs and prices, exchange and interest rates, market power and "non-price" dimensions, such as market data, product design, packaging, quality control, customer service, marketing and distribution. In short, it includes the efficiency of the exporting economy (sector, firm, country).

In the area of policy, research points to the importance of relating marginal national income to the marginal social cost of a given exportable product and its negative or positive externalities (Helleiner, 1989, pp. 7 and 16), i.e., the welfare implications or those costs that are not fully registered by the market and pricing system (Bannock, Baxter and Davis, 1987).

The use of this concept of competitiveness in the preparation of baseline studies and projections is its most common and practical application. There is no reason to object to this usage so long as we introduce the proviso of *ceteris paribus* and clearly set forth the relevant externalities. Seen from this perspective, the economic system remains linked to the other systems making up society via the concept of externalities; social costs are no doubt taken into account in the economic system, but because they are difficult to quantify they do not generate feedback for the economy in the form of information of fundamental importance for the viability, continuity and modification of the sociocultural system of which it is a part.

Industrial pollution, the use of forest streams as water sources, the socio-economic exclusion of large groups of poor people, and issues such as those of political representation, democracy and human rights cannot, according to another group of social scientists, be regarded as exogenous to the economy (when dealing with the notion of competitiveness) but must instead be viewed as elements of the sociocultural system.

Actually, there is nothing new about this critical observation. The consideration of economic contingencies in relation to cognition, culture, the social structure and public institutions has a long tradition in a number of the social sciences, including economics. It would seem that these disciplines have now "awakened" from their conceptual slumber. Or perhaps it would be closer to the mark to say that they have been called upon to deal with new types of empirical situations (see, for example, Zukin and DiMaggio, 1990). In regard to the various social sciences –such as anthropology, economics, political science, sociology and history– we may well ask if there are criteria that will allow us to draw fairly clear and sustainable boundaries between them. "On the basis of an analysis of world systems, the answer to this question is a resounding no. All the supposed criteria –level of analysis, object of study, methods, theoretical assumptions– lack practical validity or, if not lacking in validity, represent obstacles to the expansion of knowledge rather than stimulating its development" (Wallerstein, 1990, pp. 398-417).

The ascendancy of the economic perspective presupposes the existence of forces that are manipulated by "invisible hands" which are sufficiently powerful to maintain, reform and expand the existing sociocultural system. This hypothesis might be acceptable if, in fact, the world system functioned "properly", as it did during the first three decades after the Second World War. The fact of the matter, however, is that what sets the current world system apart is precisely the need to re-establish the basic assumptions underlying its operation, as is indicated by the high degree of randomness that obliges economic agents and Governments to engage in continual improvisations. What had been external to a given sub-system "became" internal, thus making it necessary to re-think the rationale of economic activity.

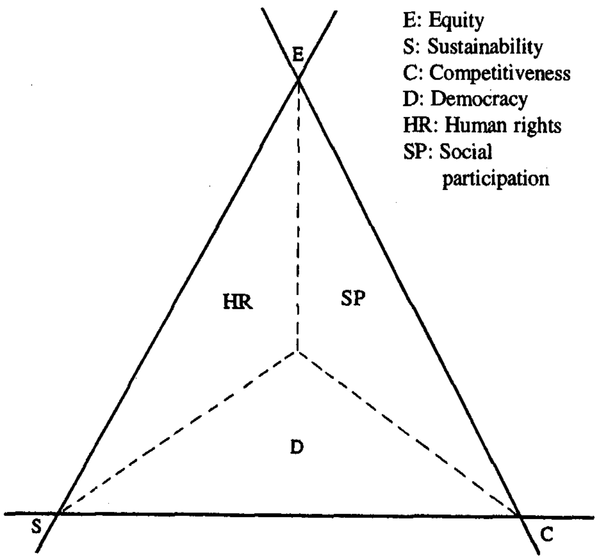
2. Conceptualizations with a sociocultural emphasis

The main thrust of this approach may be grasped by referring to the most basic criticism made of the preceding one: an economic conceptualization of the situation does not allow itself to be sullied by any other dimension of the social system, which means, in practice, that it does not permit the formulation of the "integrated strategy of economic and social reforms" required by an "innovative society" (Bradford, 1992, p. 18). The point of departure for the sociocultural approach (Buckley, 1971, p. 15) may be described as follows: For Latin America, the 1990s are a time during which the region's poor and its Governments are reaching towards broader objectives than would have been feasible in the 1980s. There are now new imperatives of social equity, international competitiveness and environmental sustainability which must be satisfied within a democratic framework marked by increasing social participation and a respect for human rights. In order to fulfil these new imperatives, an effort will have to be made to stimulate economic growth while at the same time consolidating recent achievements in the areas of economic stabilization and adjustment (Bradford, 1992, p. 3).

This approach, which was developed during the 1980s by ECLAC and is broadly summarized in ECLAC (1990), is based on the work of Fernando Fajnzylber and has been taken up by Colin Bradford at the Development Centre of the Organization for Economic Cooperation and Development (OECD). It may be summed up in two main points: i) new technological, organizational, institutional, legal, political and cultural imperatives are shaping contemporary thought and action and make it possible to design a particular future configuration for the sociocultural system; and ii) competitiveness is being given greater weight in terms of how it relates to other concepts (equity and sustainability) and social values (democracy, human rights and social participation) (see figure 1).

We might say that the authors of this proposal are performing the same function as ideologists and scholars did in other eras. They profit from past ex-

FIGURE I
The relationship between competitiveness and other concepts and social values



Source: Prepared by the author.

periences by making a critical analysis of them, they question the existing state of affairs, they take advantage of material and cultural opportunities, and they advocate the material expression of values inherited from Western culture. The implementation of this development model entails a change in societal attitudes and behaviour in all social segments as they head towards an innovative society (Bradford, 1992, p. 7).

Although we cannot rule out the possibility of a civilizing regression of sociocultural systems, the ideology of the proposed development model, which is buttressed by the principle of participatory democracy, is entirely compatible with competitiveness based on continuing innovations or, as F. Fajnzylber called it, authentic competitiveness. This raises a crucial question (which we will return to later on), primarily for those who would define competitiveness as the absence of power or coercion. Moreover, it is a more complex view of how the competitive process is configured, inasmuch as it does not focus solely on the structural determination of production but also includes, in addition to the issue of power, aspects relating to the control of national and international security, of credit and of knowledge, beliefs and ideas (Strange, 1988, pp. 24-29).

In this sense, competitiveness is not interchangeable with competition, nor can it boast a conceptual status of its own. In fact, it must struggle to defend its very identity and strive to form part of a body of theory in which: i) it is relevant to a problem area or issue for which it can provide a valid solution; ii) it is capable of providing an explanatory frame of reference; and iii) it is capable of furnishing hypotheses that lend themselves to simulation. This struggle also extends to the realms of ideology and praxis.

In the field of economics, the complexity of the meanings and viewpoints associated with the use of the term is evident. "Obligatory references in the recent literature to industrial policy, performance analysis and the outlook for industry notwithstanding, these authors do not hold the same view of competitiveness. The differences among them are born of their differing theoretical foundations, views of industrial dynamics and even ideologies, and they have implications for the evaluation of industry and of any policy proposals that may be formulated" (Haguenauer, 1990, pp. 327-328).

Following an analysis of the definitions of competitiveness, its conceptual uses and the issues it raises, other authors have concluded that "the evaluation of competitiveness calls for an approach that goes beyond traditional trade theory to determine the nature of the trade matrix and how it is influenced by corporate strategies and government intervention. Innumerable factors have been identified in addition to competitive pricing, and various levels of analysis have been presented. Some authors feel it is futile to research a new paradigm to take the place of traditional trade theory, but the political importance of devising a new 'strategic' trade theory has already been acknowledged. An important lesson to be drawn from this literature is that specific industrial sectors are of special importance. We need detailed case studies, prepared by business strategists, to complement the theoretically rigorous studies we already have, which are based on general equilibrium theory and are highly aggregated in terms of both macroeconomics and trade" (Abbot and Bredahl, 1992, pp. 19-20). These authors are uneasy about explaining the reasons for the patterns of production and trade observed between nations, although the discussion that has followed upon the debate concerning the Leontief paradox continues to be of key importance.

An exploration of the concept of competitiveness from what we may call a sociocultural standpoint goes far beyond the issue of international trade, although such trade is certainly a part of competitiveness.

For over a decade now, a number of authors have defended the idea of an explicit relationship between efficiency, productivity, competitiveness and rising living standards. Porter, for example, says: "My theory begins from individual industries and competitors and builds up to the economy as a whole ... The theory presented in this book attempts to capture the full complexity and richness of actual competition, rather than abstract from it ... I have sought here to integrate the many elements which influence how companies behave and economies progress. The result is a holistic approach whose level of complexity may be uncomfortable to some" (Porter, 1990, foreword).

It is worth taking a moment to examine two ideas that have been championed by this and other authors, both of which underscore the sociocultural perspective: one associates competitiveness with productivity, and the other regards competitiveness as a national ability rather than as an ability possessed by any one individual firm.

Productivity is the master key to competitiveness and is founded upon technological, organizational and institutional innovations. Although technological innovations may not be the "cause" of economic development, they are a core element of such development (Labini, 1989, pp. 22 and 33). These innovations do not come from empirical, random sources but are instead brought about by organizations commonly known as national innovation systems.

These systems entail what Dosi (according to Villaschi, 1992, pp. 51-76) identifies as three interlinked domains: the technological domain (the educational system, laboratories and research), the economic domain (the forms taken by production units) and the domain of socio-political institutions (which facilitate or hinder technological development). Innovation systems therefore need to be regarded as one component of the sociocultural system's feedback circuits.

For some authors, such as Helleiner, it makes no sense to talk about a country's competitiveness because companies and economic sectors are what really do the competing; the actors of international competitiveness are actually production units and sectors, and the entire environment surrounding a national system of innovation is disregarded. Fajnzylber sees the situation differently: "Companies are not the only ones competing in the international marketplace. Confrontations also occur between production systems, institutional schemes and social organizations, in which business enterprises are an important element but one that is integrated into a network of linkages with the educational system, technological infrastructure, relations between management and labour, the public and private institutional apparatus, the financial system, etc." (Fajnzylber, 1988, pp. 22-23). And to emphasize this point: "In sum, in today's world products not only compete with one another but are the manifestation of competition between different production, technological and educational systems" (Rosales, 1990, pp. 711-712).

In the final report of a seminar on international competitiveness coordinated by the Economic Development Institute (EDI) of the World Bank and held in the Republic of Korea in April 1990, one of the rapporteurs, Irfan ul Haque, states that it is not enough to understand the competitiveness of manufactured products in terms of their basic elements, such as price and quality, because, in actual fact, these products cannot easily be compared with one another; there is no direct relationship between price and quality, since it is quite difficult to specify the quality of differentiated products. Nor can competitiveness be defined simply as the ability to export or to generate trade surpluses, since this can also be accomplished by artificial means (e.g., lowering the exchange rate or reducing domestic expenses, such as wages) (Haque, 1991, p. 5).

Haque critically appraises the positions taken by Porter (1990) and Pérez (1989). Porter's interpretation is founded upon the absence of any universally suitable system of technological development, which means that each nation must devise its own system based on its own history, culture and values; however, technological advances bring about changes in modes of production and organization –sometimes radical ones– and a lack of adaptability in one of these elements may make it very difficult to realize the potential of the other.

Pérez (1989) argues that periods of rapid growth (such as the 1950s and 1960s) have been marked by a dynamic alignment between the socio-institutional system and the demands of technological change, and the misalignment of these two spheres has slowed growth during the past two decades. According to this view, countries' international competitiveness began to decline because they clung to a technological paradigm which had ceased to be valid under the prevailing conditions. Their difficulties thus stemmed from their previous successes, since they remained wholly committed to an outdated paradigm because of past investments and existing institutions that were difficult to change or dismantle. The birth of a new paradigm –as has occurred as a result of recent advances in technology– redefines the conditions for competitiveness, and success will depend upon how adaptable each country's institutions are. Thus, it is not merely a question of creating new industries and products to take the place of the old ones.

According to Haque, however, the problem with this interpretation is that although it does emphasize the harmonization of technology and institutions, it does not account for the success attained by newly industrializing countries which have outpaced the traditional sources in manufacturing production (Haque, 1991, pp. 6 and 7).

Another rapporteur at the above-mentioned seminar highlighted the sociocultural perspective and firmly asserted that national competitiveness is not simply an economic or market-driven phenomenon. In his view, passive efficiency (i.e., in which prices are accepted as correct, with the expectation that competitiveness will automatically adapt to them) has not been the experience of countries such as the Republic of Korea, which has performed well in the world economy. Laws, customs, language, business habits and other national peculiarities play an important role in determining competitiveness and trade, and a broad, comprehensive view of society is therefore required (Bradford, 1991, pp. 18).

This approach is based on the idea of national competitiveness and points up the contradictory relationship existing among national institutions that have been created to disseminate a worldwide techno-economic paradigm within a given country; it looks at the history of the recently industrializing Asian countries and concludes that national strategies and policies are necessary in order to create sources of competitiveness.

3. A preliminary evaluation

Defining competitiveness as participation in the market is a good start; expanding that definition by incorporating the structure and behaviour of business firms and economic sectors is a step in the right direction and is no doubt very useful for purposes of techno-economic analysis. The possibility of delving further into the concept of (positive and negative) externalities in the light of the new paradigm of flexible production systems, together with many other theoretical contributions of industrial economics and strategic business activities, gives reason to believe that significant progress might be made in developing a more specifically economic interpretation of competitiveness. This would make it difficult to incorporate other dimensions of the social system, which today are just as important as the economic dimension, into an economic definition of competitiveness.

On the other hand, the concept of competitiveness as seen from a sociocultural viewpoint is too broad, and it is linked up with a conceptual construct (which is also seeking to win the status of a body of theory) that entails the loss of its operative character; its boundaries are vague and its internal structure is extremely fluid. Here, competitiveness appears to be a mixture of: i) a view of the contemporary world, steeped in social values, which accepts various combinations of organizational systems and markets; ii) concepts drawn from different schools of thought which, when joined together (although this is not yet clear), reach beyond the scope of concepts used in such areas as international trade theory; iii) life in the real world, where fierce battles are waged over market shares and where international regulations are not so "civilized" as to permit agents to try to incorporate the social values proposed by the model. In fact, this conceptualization of competitiveness, along with the concepts of social equity and sustainability, looks towards the future as a model, while seeking to acquire a prescriptive capacity with regard to present actions.

This is why we suggest thinking of competitiveness as a map, complete with territories and roads, which can be used to develop suitable concepts for dealing with particular questions. This is because, especially since the 1979-1982 crisis, competitiveness has become one of the main "standards" governing the ever-changing interplay of interests at the international level. Trade liberalization, structural adjustments, the retooling of the production sector, intelligent coexistence with our natural resources, the struggle to eliminate poverty –all are, in one way or another, viewed through the prism of competitiveness. This has transformed competitiveness –within the context of a broad, ambiguous conceptual environment– into some sort of compulsory principle which serves as a yardstick for the international evaluation of public and private bodies (including lending agencies) and which has influenced the formulation and implementation of business strategies and national policies.

The controversy that arose between the World Bank and Japan in the early 1990s underlined the fact that it was not a question of being for or against the idea of opening up countries' economies, but rather of how that should be done. Whereas in February 1990 the President of the World Bank said that market forces and economic efficiency were (in the past decade) the best ways of achieving the type of growth that serves as an antidote for poverty (Broad and others, 1990-1991, p. 144), Japan held that "in the 1980s both economic policy and theory were strongly oriented towards achieving efficiency. In this sense, it was a unique period. However, that period has come to an end. What we need now is a policy that strikes a good balance between efficiency and social equity in order to promote the well-being of the whole of society. The World Bank's structural adjustment approach should be altered to reflect this change in direction" (Japan, 1991).

Presumably we have now gained enough experience to enable us to adopt a more mature position, as opposed to the simplistic strategies championed by some international agencies during the 1980s. Strategies which were supposed to achieve growth simply by opening up markets and launching countries into export activities are no longer defended even by their creators (the World Bank, including the International Finance Corporation (IFC) and the International Development Association (IDA)). Moreover, rigid dichotomies that led to the formulation of strange oppositional constructs –a strong State versus a minimal State, a market economy versus an intervention-based economy, import substitution versus export promotion– have now been discredited.

A study of actual events shows that, even though competitiveness is implicit in the liberalization of national economies, countries have in fact maintained protectionist and incentive schemes through which they all seek to achieve their national objectives. What is more, deregulation and privatization have not done away with the State's role in economic development because institutions have not been created that are capable of providing the necessary support for innovation, international trade, transnational investment or bilateral and multilateral negotiations, especially in developing countries.

III

A map of competitiveness

The map of competitiveness has two poles: structural world power, and the development of countries or regions seeking to achieve growth and development through their integration into the world at large (see figure 2).

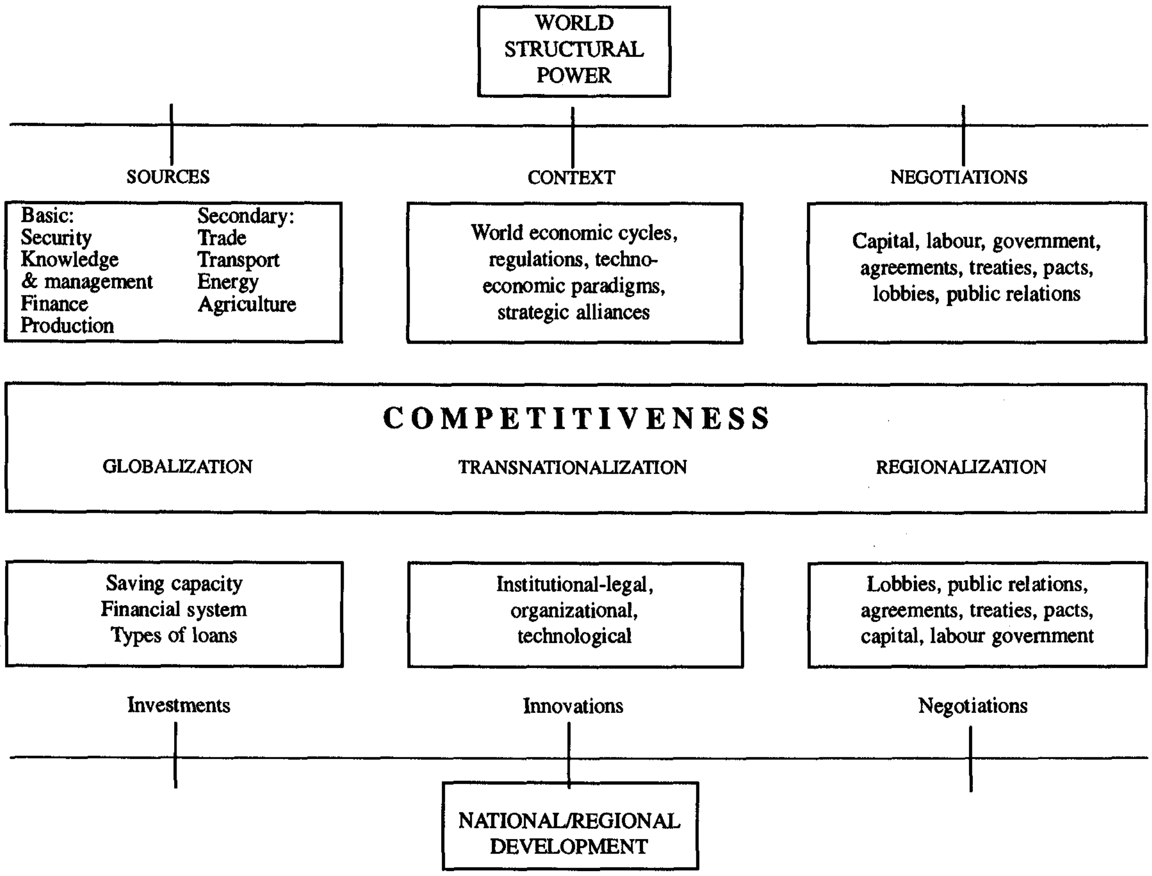
The concept of power is a vital component of the competitiveness map. The context in which competitiveness arises and is structured, along with its sources, is one in which it mixes and overlaps with the components of power; this is why a broadly-defined concept of negotiation is included, it being assumed that there can be no power without some sort of negotiation.

"It is impossible to study political economy, especially international political economy, without devoting particular attention to the role of power in economic life. Each (national economic-political) system reflects a different mixture in terms of the weight assigned to the basic values of wealth, order, justice and liberty. What determines the nature of this mixture is, basically, a question of power" (Strange, 1988, p. 23). Power and competitiveness are closely related, largely because they stem from the same basic sources: security, knowledge, finance and production (see Müller, 1992, pp. 12-25).

Paying attention to the sources of power in a specific context is only part of the competitive process. To go beyond this point we need to examine the types of negotiations that play a key role in each particular situation, once there is a basis upon which to decide what can and what cannot be changed. For example, negotiations between Brazilian producers and associations of United States orange-juice consumers regarding certain characteristics of the product, with a view to competing in the United States market, may at a given point in time turn out to be the

FIGURE 2

A map of competitiveness



Source: Prepared by the author.

most decisive element in determining the success of one of Brazil's competitive strategies.

"World structural power" refers to that power which shapes the globe's techno-economic and socio-political structures and which decides how other States, institutions, firms and economic processes should operate (Strange, 1988, pp. 24-29). Those wielding this type of power can be identified by the leading roles they play in the world of today: Canada, France, Germany, Italy, Japan, the United Kingdom and the United States (the G-7 nations); North America, Western Europe and Japan (the "Triad", as Ohmae (1985) calls them); China and Russia; transnational corporations; the IMF and the World Bank; NATO and the Pentagon –to give just a few examples (see Plano and Olton, 1982).

It is just as important to know what actors hold structural power as it is to know how they wield it or, in other words, what the sources of power are. With regard to competitiveness, the question is: What are the sources of competitive capacity? Here we might say that competitiveness is a manifestation of structural power or a combined effect of control over sources of power and the ability to manage key negotiations in a given context. Furthermore, we need to consider the feedback effect which competitiveness has on structural power –without, however, identifying one concept with the other.

The map indicates that competitiveness permeates all the relevant processes and is one of the ways in which developed countries connect, at the national or regional level, with those seeking to attain development. In their efforts to achieve, maintain and increase their competitiveness, developed and developing countries should take into account three basic trends at the international level which serve as a frame of reference for their strategies: globalization, transnationalization and regionalization (SELA, 1991, pp. 20-24). The core of structural power –i.e., the central group of actors that hold sway (the Triad, for example)– appears as an interconnection among the national States that possess the most advanced sources of power and competitiveness. The three abovementioned trends provide an indication of the kinds of conditions that must be met by firms, sectors, economies and regions if they are to attain a dynamic form of integration into the contemporary world.

It is in this context that the current move to modify the role of the national State in the world market –and, hence the role of the State in the nation– arises as a result of the globalization and transnationalization processes. This tendency is, however, counteracted by the emergence of regional groupings of countries (regionalization). In other words, there are factors that erode the autonomy of national States in their efforts to control their global demand and to implement strategies and policies for achieving national objectives. At the same time, the opposing trend is no longer manifested solely as a strategy for reestablishing the strength of national States, but is also reflected in an effort to organize a supranational entity (i.e., a regional entity).

One of the factors that erodes the autonomy of national States is the transnationalization process. This process is generated by the activities of enterprises which have organized their strategies, controls, investments and procedures into complementary networks which span the entire planet and which are seeking to optimize their productivity and profits. It should be noted that the multinational corporations of the 1950s, 1960s and 1970s are no longer at the centre of this process; truly transnational organizations have taken their place (Wendt, 1993).

The other factor is globalization. This phenomenon is an outgrowth of the more open nature of national economies: of the increasing mixture of external flows and stocks with domestic ones, whether in the areas of production, marketing, finance or services. In this sense, globalization subsumes transnationalization and is associated with the concept of interdependent interests, as opposed to the notions of subordination or imperialism. [1]

[1] For a critical analysis of interdependence, especially in North-South relations, of competitiveness as the new ideology, of the rationale of war, and of the contradictions associated with globalization, see *Manière de voir*, 1993.

Regionalization or the formation of blocs entails a redistribution of power among the countries both within a bloc and between blocs. The European Union represents the most advanced regionalization process; most of the other blocs are actually instances of the commercial coordination of long-standing spheres of influence, which may or may not eventually become economic blocs.

Key negotiations at the national or regional level are a fundamental part of a regulatory system that will afford better control over the circuit of socioeconomic indeterminateness. The alliances formed among the major actors of the sociocultural system –business, labour and government– are one example of this.

International negotiations are a crucial component of competitive integration. Agreements, treaties, pacts and lobbies are essential mechanisms of international competitiveness. According to Kramer, one of the least-studied aspects of the "Asian tigers'" success story is how deftly they have handled their trade relations with the United States with the help of a versatile and sophisticated lobby in Washington, D. C. Not long ago, Taiwan managed to perform the feat of maintaining its position as the principal beneficiary of the Generalized System of Preferences (GSP), despite the opposition of United States trade officials, who sought to alter its status in each new round of GSP revisions. Figures for 1983 compiled by the United States Department of Justice show that the Republic of Korea spent US$4.5 million on 47 high-powered attorneys or public relations experts, while Taiwan spent US$2.5 million on 39 public relations experts. They have also entered into coalitions with complementary interest groups within United States society. In view of the fact that protectionist measures raise prices and hurt product quality, the Koreans and Taiwanese have followed the lead of Japanese automobile manufacturers in forming alliances with consumer protection groups and representatives of retail store chains (Kramer, 1991, pp. 41-42).

It is worth taking a moment to look at what may be a "world model" in the making and to analyse what such a model has in store for us. Geopolitical and ideological changes, coupled with the modifications being made in strategies for boosting competitiveness and productivity, are posing new regulatory challenges at the world and national levels. These challenges are being faced within an uncertain environment in which agents are continually improvising in order to cope with the problems that arise. It is difficult to bring into general use a development model which is still in the process of being formed, an unfinished model such as this, since although the courses of action to be pursued at the microeconomic and sectoral levels have been delineated, they have not been defined at the macroeconomic level, which includes such aspects as social security and unemployment. The principal difficulties lie in the generalization of the promises held out by this model: social participation, social equity and environmental controls. These are areas of difficulty for developed countries, and even more so for developing countries, since they call for sweeping changes in the internal environment.

The relationship between world structural power and the development processes being pursued by, for example, the countries of Latin America and the Caribbean is enveloped within a competitive "force field" in which three major interlinking currents of force are channeled: globalization, transnationalization and regionalization (see figure 2). The countries that hold power are the leaders of these currents. Thus, as viewed from the vantage point of the region, competitiveness would be a country's capacity to adapt to the world power structure by taking part in global, national and regional decision-making processes. This capacity can become a reality, not as in the "inward-looking" model of industrialization but rather through integration into the new division of labour based on subsectoral specialization, since this division of labour is conducive to intra-sectoral investment and trade, which are the "core of modern trade theory" (Cohen, 1992, p. 35).

In order to position themselves within this competitive "force field", developing countries have three sub-systems at their command: investment, innovation and negotiation. This does not mean that each country in the region should establish all three sub-systems, but rather that each should develop the national capacity to link up the sub-system (or part thereof) that it does have with those available in other countries of the region. The development of instantaneous communications services and of data processing networks make international intra-sectoral "trade" of this sort perfectly possible.

The objective of forming an innovative society in the region which is competitively integrated with the rest of the world is linked to a capacity for not only technological but also organizational, institutional and legal innovation. An understanding of this sub-system, together with an understanding of the predominant techno-economic paradigm in the relevant national economies, will facilitate the selection of the innovations needed in order to permit the application of one or more competitive strategies. The important point is for these innovations to become the main driving force behind the effort to achieve the objectives of competitiveness; these innovations will serve as the parameters for attempts to adjust the key negotiation and investment sub-systems.

It must be remembered that even though protective mechanisms and temporary incentives for products, firms and sectors which are designed to create and expand a nation's or region's ability to compete may, in principle, run counter to the spirit of economic liberalization (globalization and transnationalization), they are not at odds with the forces governing international competitiveness so long as (and it appears that this will be the case) these mechanisms are negotiated at both the domestic and external levels.

A final consideration is that each country of the region is finding it increasingly difficult to continue with a mode of production that destroys the environment and to carry on with a model of social organization that, by leading to a concentration of wealth and an increase in poverty, heightens the asymmetries existing between one social group and another. Today, this perverse polarization is regarded as an obstacle to economic growth; this is especially true of poverty, defined as the absence of a market and the lack of social power. The application of technological and organizational innovations that will boost productivity and consolidate a pattern of authentic competition requires a redistribution of power within the countries' societies, together with the incorporation of poor and indigent sectors into the holders of power. In the world of today, the reorganization of the socio-political structure and its linkage with systems of innovation are imperative in order to achieve national/regional development in today's competitive world.

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The privatization *of public* water utilities

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Latin America has kept in step with the worldwide trend towards the privatization of public utilities. Its motivation for doing so stems from a number of factors: an economic philosophy, its quest for greater efficiency, macroeconomic situations, debt-equity swaps, decisions to bring private capital into the management of public utilities during times of economic crisis, and others. This article analyses the characteristics and components of public utilities, the differences existing between one utility and another (particularly in terms of their capital/revenue ratio), the rigidity of supply and investment, the possibilities of giving consumers a choice, the concept of economies of scale and how it ties in with the notion of monopolies, and the legal implications of monopolistic systems. It also examines some aspects of the legal regulation of utilities, such as administrative controls, the idea of reasonable profit levels, control by holding companies, regulation and monitoring mechanisms, and terms and conditions of service, including some components of the relationship between water use and the management of water resources. Among the specific cases of utility privatizations which are reviewed, particular attention is devoted to the case of the United Kingdom, which is currently the subject of public debate; selected aspects of Spain's Public Administration Contracts bill are outlined as well. In conclusion, the author suggests that the countries of the region should take comparable legislation and the experience of other nations into account and should set up suitable regulatory and monitoring systems prior to privatization.

I

Introduction

This article has been prompted by the privatization process in South America, which in some countries has been undertaken not only with a view to increasing the efficiency of public services but also as a means of bringing about structural changes in the economy (Stelzer, 1995; Gerchunoff and Cánovas, 1993, p. 2).

In some countries, therefore, privatization operations have been, at least initially, a "macroeconomic tool" for stabilizing the economy, which has meant that the increased efficiency of production resulting from privatization has not necessarily been passed on to society in the form of lower rates and charges (as has occurred in the privatization of monopolies in various regions and countries of the world). In the United Kingdom, for example, the Exchequer's purpose in carrying out privatizations has been to maximize profits, while the corresponding policy has been aimed at broadening the shareholder base. Gains in efficiency have not resulted in lower rates for users. The privatization of these systems has been accompanied by very loose regulation, and the resulting lack of competition has triggered demands for stronger regulation (Stelzer, 1995; Gerchunoff and Cánovas, 1993, p. 2).

In this article we will look at various privatization techniques and their legal content, as well as the concept of public utilities and methods for their regulation, with a view to helping to identify suitable practices and regulations for the sector on the basis of comparable legislation. The article will focus on water utilities because so many public utilities involve the use of water resources, while the current trend is clearly towards the internationalization of these utilities by investors and service providers (Merrill Lynch, 1991). This trend is also evident in the drafting of legislation, particularly in the European Union. [1]

Public utilities are a structural part of modern society. Without them, today's cities and forms of production would simply be inconceivable. In most cases, they entail some monopolistic elements and have a bearing on the public interest, since they are connected with such aspects as basic public health and economic development (Tieman and others, 1995).

These activities involve significant economies of scale and of scope, call for fixed non-liquid investments and a production capacity designed to meet peak demand, and are subject to government regulation. The regulatory system primarily focuses on service quality and rates, with the latter being pegged, in some systems, to reasonable profit levels for the service provider.

The legal instruments governing the provision of such services entail elements of public interest which set them apart from common-law contracts, and the State takes an active part in their implementation or regulation. The institutional structure for the regulation of these utilities is composed of commissions and agencies in respect of which a special effort is usually made to ensure their technical and financial capabilities and independence.

In terms of water use, service providers are large institutional users which are normally required to obtain water use permits, to comply with regulations concerning water discharge and pollution, and to respect general obligations regarding the efficient and beneficial use of the resource.

Utility companies are often both vertically and horizontally integrated and tend to become internationalized. Consequently, many systems devote par-

□ This article is based on a study presented at the Ibero-American Seminar on Water Laws and Technology, organized by the Water and Environmental Sciences Institute and the University of Alicante at Alicante, Spain, on 15-17 December 1994.

[1] See, for example, the Public Administration Contracts bill of 26 October 1992, which was submitted to the Spanish Parliament, among other reasons, as a means of bringing the country's legislation into line with that of the European Community.

ticular attention to monitoring the composition of their blocks of shares and to the methods of signing contracts.

Countries that are now returning to a system of privately-operated public utilities are beginning to develop the relevant regulatory mechanisms and institutions. This institution-building process is essential for a proper understanding and monitoring of utility-related activities. The institutions created for this purpose, which perform a role of fundamental importance, require constant updating.

Familiarity with comparable legislation and management systems is highly valuable in this area, and the creation of systems, programmes and projects for transferring this type of knowledge would be a useful step.

II

The importance of public utilities in modern society

The role of public utilities in modern society can rightly be described as structural, because it is an outstanding element in social and economic organization, similar in importance to a society's monetary, credit and educational systems. The existing systems for organizing production and establishing population centres would be inconceivable without efficiently-run public utilities on a mass scale.

Public utilities have a number of characteristics which have made them a highly important area of the law:

i) They are activities in which competition is not fully effective, and are usually subject to government regulation designed to protect the public interest (Phillips Jr., 1993, p. 3).

ii) They seem to operate more efficiently when they are monopolies; however, in such cases public utilities often must be compelled (by means of regulations) to contribute to the general welfare rather than doing so voluntarily (Kaysen and Turner, 1959, pp. 48-49, as cited in Phillips Jr., 1993, p. 4).

iii) The regulation of public utilities is a result of the public interest associated with the activity; this is the primary legal basis for such regulation, which is chiefly expressed in the control of rates and services (Phillips Jr., 1993, p.4).

iv) Some authors feel that conflicts often arise between public and private interests as they relate to public utilities; they see this conflict as stemming from the difference between private firms' main objective (profit maximization) and the public interest (adequate service at the lowest possible price). Some countries have created institutions specifically for the purpose of conducting research on public utilities, since the regulatory process is not only controversial but also analytically demanding.[2]

v) At present, there are clear differences in the openness to technological change of the various types of public utilities; this gives rise to differing regulatory needs and, in some cases, even to a reformulation of the concept of natural monopolies in certain sorts of activities.

vi) Although regulation is certainly a characteristic of public-service providers, the content and scope of that regulation is not fixed, but instead tends to undergo adjustments as time passes and as circumstances and needs change (Phillips Jr., 1993, p. 7).

vii) At the same time, some authors contend that regulation has not served its purpose and that, in practice, it has become "the haven of refuge for all aspiring monopolists who found it too difficult, too costly or too precarious to secure and maintain a monopoly" under a deregulated system (Gray, 1940, pp. 8-20, as cited in Phillips Jr., 1993, pp. 8 and 31).

[2] See, in particular, the reference made to the creation of the National Regulatory Research Institute in the United States (Phillips Jr., 1993, pp. 5 and 17-21).

III

The economic characteristics of public utilities

Among the main economic characteristics of public utilities are the following:

1. Economies of scale and of scope

As we said earlier, part of the justification for having public utilities lies in the notion of natural monopolies, i.e., activities involving economies of scale (the greater the scale of production, the lower the unit cost) and of scope (certain types of services are less expensive when they are provided by one firm than when they are provided by two firms).

Drinking water and sanitation services provide ready examples of such a situation. It has been determined that the investment required to supply drinking water and sanitation services via a small-scale system for an average three-person household is US$1 600, whereas with a larger system, the figure is only US$200 (economies of scale). The concept of economies of scope, for its part, has been advanced as an explanation for the tendency to integrate drinking water services with sanitation services. Thus, small-scale systems experience financial problems which give rise to difficulties in technical areas, in management and in the general adaptation or improvement of services (Lawton and Davis, 1983, as cited in Phillips Jr., 1993, pp. 851 and 836-839). Economies of scale are thus a factor in the establishment of monopolies (Phillips Jr., 1993, p. 56), whose existence, in turn, justifies the regulation of prices (rates) and products (services).

2. Fixed non-liquid investment

The attainment of economies of scale frequently requires heavy non-liquid investments in large-scale infrastructure. This type of fixed investment usually represents a sizeable portion of total costs, and this means that the organizations providing such public services are capital-intensive. This trait, too, is particularly marked in the case of drinking water and sanitation utilities, in which the revenue/capital ratio is very low (Phillips Jr., 1993, p. 15).

Demand for these essential services, for which there is no substitute, is continually growing. There have been no major technological advances in recent years in the field, and this, coupled with inflation, environmental requirements, the cost of compliance with established standards and the need to secure and protect new sources of finance, has led to a constant increase in costs, with the resulting capital/revenue ratio ranging from 6:1 to 10:1 or, according to some authors, even as much as 12:1 (Wade Miller Associates, Inc., as cited in Haarmeyer, 1994, p. 43).

In fact, drinking water and sanitation services have been described as the most capital-intensive of all the public utilities (Environmental Protection Agency, 1977). As we will see later on, this influences the legal conditions under which the private sector invests in drinking water supply and sanitation services, as well as these utilities' financing systems and the regulation of private activity in this sector.

It should be noted that not all public utilities have the same capital/revenue ratio. For telephone services, the ratio is 3:1, for electricity it is from 3:1 to 4:1. and for airlines it is 1:1. This clearly influences the private sector's propensity to invest, the existence of real competition, the likelihood of monopolies and, in consequence, the various activities' differing needs in terms of regulation.

3. Idle capacity

Fixed investment in public utilities is carried out in order to meet peak projected demand and to cover the increases expected in that demand over time. Some factors of production cannot be divided up, and for technical reasons must therefore be structured in a single bloc. Idle capacity can be regarded as a result of the diversity of demand levels, which prompts service providers to try to attract that demand through the use of consumer incentives. Since this may lead to undue discrimination, it becomes a factor in the adoption of controls for preventing such an eventuality.

4. Operational limitations

In many cases, the possibility of competition among service providers is limited by the nature of the service itself and by the carrying capacity of the facilities in question (e.g., pipes and available areas for installing and laying them), which normally do not have enough physical space available to support a large number of suppliers and thus set the stage for competition.

5. Market structure

In most cases, the demand for public utilities is diversified and fairly inelastic (although differences do exist from one utility to the next and between what we might call essential consumption and needs of other types). In addition, users are limited by the rigidity of the supply system (since they usually are not able to choose among various possible suppliers of drinking water and sanitation services).

6. Legal implications

Owing to the above characteristics, entry into the public-utility market is usually subject to government control and to regulatory measures aimed at forestalling transfers of income from consumers to investors. This is accomplished through consumer-complaint mechanisms and controls that have been expressly designed to keep the social, economic and political power of public utilities in check. [3]

IV

Legal concepts relating to the regulation of public utilities

Some activities have the ability, potential or characteristic tendency to affect the community as a whole through their influence on the general welfare, public health, collective security and other elements. These activities are subject to government control in order to safeguard the general welfare (Spota, 1941, p. 917, note 189; Phillips Jr., 1993, p. 87). This type of control is justified by the monopolistic nature of many such utilities, by their importance as essential consumer services, and by the absence of other alternatives. [4]

Accordingly, the administrative contracts under which a private person is granted the right to operate a public utility usually contain special clauses regarding the provision of guarantees, the administrative authority to interpret the contract, modifications for the purpose of serving the public interest, dispute settlement, determination of effects and the clarification of any doubts that may arise. [5]

Government control takes the form of regulations governing the quality of the service provided, its scope and coverage, frequency or consistency, price and, in the case of drinking water services, environmental impact.

Regulation, as well as the philosophical grounds for its existence, is nothing new. Some precedents in this area were laid down in the doctrine of the early Church Fathers –"just price" (*justum pretium*) and "natural price" (*verum pretium*)– and in the regulation of the guilds of medieval times and of activities regarded as being of common interest (Glaesser, 1957, pp. 196-201, as cited in Phillips Jr., 1993, p. 122). These measures regulated prices, the quality and type of service provided, etc. The topic has direct implications for a number of different aspects of water-related public utilities, as we will see below.

[3] See Breyer, as cited in Phillips Jr., 1993, p. 60.

[4] In some countries these controls are termed "police powers". This concept has some very interesting facets, since under some circumstances it permits the Government to act upon private goods on the grounds that certain types of controls, although they may reduce the economic rent derived from a good as a consequence of given regulations or linkages, are acceptable so long as the return on the corresponding investment, even though it has been limited, is "reasonable" (Penn Central Transportation Co. vs. New York, 438 US 104, 1978). It has been suggested that a very strong connection may exist between this case and the theory of public utilities. See Findley and Faber, 1992, p. 287.

[5] See the Spanish Public Administration Contracts bill, article 7.

1. Licensees' earnings

This section will make no attempt to delve into the technical complexities of different rate systems but will simply describe some of the criteria used to set the parameters which determine the total profits realized by public utility licensees and their connection with the rates charged. Existing legislation offers examples that set precedents in this area. The laws of the State of New York, for example, require that water use rates shall be fair and reasonable and may not exceed the limits authorized by law or by order of the relevant regulatory commission. This question is clearly linked to the issue of reasonable profits for the licensee. [6]

The most important point here is to determine what constitutes a reasonable profit. Providers of public services cannot be forced to operate at a loss, but this does not mean that they are guaranteed an actual return on their investment. The rate should be such as to cover operating costs and provide a reasonable return on the investment. It should also be of a level that will enable the organizations providing these types of services to attract resources in the capital market. Legal experts in the United States have discussed the idea that the returns on such an investment should be comparable to those realized from activities involving similar levels of risk and uncertainty, in similar areas, at the time the activity is being conducted. They have also said that such returns cannot be set at a specific level or according to a pre-determined formula, since they are subject to changes in economic conditions stemming from the state of the general economy and the positions of the specific companies concerned. Indeed, in some cases rates have been lowered as a means of punishing companies deemed to be inefficient (Phillips Jr., 1993, p. 427).

Not all systems regulate the return on investments. Haarmeyer claims that since French water companies have not been subject to profit controls that hinder the innovation process, they have led the field in technological and managerial innovations (Haarmeyer, 1994, p. 48).

In the United Kingdom, drinking water and sanitation utilities were privatized in 1989. Rates have been regulated through the establishment of price caps. The system functions on the basis of the wholesale price index plus an adjustment factor ("K"). In the water industry, this factor is positive owing to the characteristics of the subsector, which include capital-intensiveness, high investment needs and low productivity (Haarmeyer, 1994, p. 49).

The United Kingdom's experience merits analysis because it has sparked a widespread public debate on the subject which is in some ways unique in its conceptual richness, ideological seriousness and transparency. The English system is based on the idea that earnings should not be limited but that caps should be placed on the rates charged. In so doing, the Government "slanted the playing field in the investors' favour at the expense of consumers" (Stelzer, 1995). By 1992-1993, water company earnings had climbed by an average of 23%. Operating profits were up by 34.3%, on average. These returns were felt to be excessive (Tieman and others, 1995). As of March 1994, water rates were absorbing a sizeable portion of the income of the poorest sectors of the population, and these sectors' ability to pay became the primary consideration in the determination of prices for 1994 (Booker, 1994, p. 61).

The British system was overhauled in July 1994. The Office of Water Services lowered the adjustment factor in the midst of a climate of consumer discontent, with users charging that the directors of water companies were doubling their salaries by doubling the cost of water to consumers (*The Times*, 1994), that the water companies' costs were not rising as fast as inflation, that capital expenditures were not as big as planned, that money had been lost on sideline businesses that had nothing to do with the main activity, and other problems. All this has prompted some commentators to forecast that regulatory provisions which are more closely tied to profit levels may be implemented in the future (Helm, 1994). Others do not so much predict but rather recommend that some means of controlling earnings and profits should be introduced into the regulatory system (Stelzer, 1995). In addition, in view of how much the stock in these companies is worth, the possibility of taxing windfall profits has been mentioned (Tieman and others, 1995).

If we examine the experiences of other privatized utilities, we find, for example, that the relevant regulatory decree in Buenos Aires includes references to the rationality and efficiency of the sys-

[6] *Consolidated Law Service,* vol. 26, New York, 1993, p. 158 *et seq.* (article 89-b-1).

tem, to a balance between supply and demand, to health and social objectives, to the need to reflect economic costs as well as the licensee's profits, and to transfers between different sectors of users. Rates are subject to review in the event of any significant change in operating costs, in the quality or level of service, in the taxes to be paid by the utility company, in the exchange rate for the dollar or in environmental or other laws.[7]

It is interesting to compare the above Act with Spain's Public Administration Contracts bill, which calls for a set price in local currency and stipulates that the price should be geared to the market (article 13). Readjustments must reflect actual market fluctuations (the markets in question may be regional ones), including changes in the cost of labour and of basic factors affecting the contract (articles 100 and 101 of the Public Administration Contracts bill).

2. The provision of public services

One of the typical features of public utilities is that they involve economies of scale, which are a basic element in the concept of natural monopolies. The legal consequence of this is that the entry of service providers into the public utility system has been subject to State authorization. The fact that some of these utilities are monopolies has another legal implication as well: the conditions under which such services are provided are (or should be) monitored in order to ensure that utility licensees are not obtaining monopoly rents at the expense of users.

Spain's Public Administration Contracts bill permits the private management of public utilities when they have an economic content and the services provided are of a sort that can be delegated. Concession contracts cannot be implemented until a legal framework for the utility has been formed, areas of administrative responsibility have been defined, the benefits to be provided to the persons subject to that administrative jurisdiction have been specified, and it has been established that the activity corresponds to the administrative authority in question and is subject to the police powers necessary to ensure the satisfactory operation of the utility in question (article 151).

Consequently, the legal instruments by which authorization is given for the operation of public utilities have certain features which differentiate them from other contracts. One very important feature of this sort, which has already been mentioned in our discussion of the privatization process in the United Kingdom, is that rate guidelines are subject to periodic review to ensure that the rate is reasonable and that it is performing its assigned functions of attracting investment and covering costs while not representing a monopolistic levy on users.

Under Argentine law, whose legal doctrines and jurisprudence have been strongly influenced by European experiences, "the licensing agreement is not a common-law contract ... between equal parties ... but rather the delegation to a company of the responsibility for duly providing a public service ..."; following along the lines laid down by Mayer, it is stated that "the licensing arrangement is an administrative act that cannot be covered satisfactorily by private-law contracts"; therefore, "in the event of disputes, the application of common law is suppletory" and is applicable only in so far as it does not contravene the general interest; "the rights which arise are public civil rights". United States law applies similar concepts, since the possibility of providing a public service is contingent upon the issuance of licenses, franchises or administrative permits, all of which imply the existence of special terms and conditions. This circumstance has important implications, since the legal act is subject to police power, and the licensee is obligated to comply with regulations and provisions even if they are subsequent to the issuance of the license.[8]

Under English law, providers of drinking water and sanitation services are appointed, and the appointee is required to discharge all duties imposed by any legal provision. In addition, the terms and conditions of the appointment are subject to agreed modifications, through their referral to the Antitrust Commission, by reason of functions performed by the companies in question that involve the public interest, or in accordance with orders given under other legal provisions (HMSO, 1991, articles 6-17).

[7] Article 44 of the regulatory act ("Marco Regulatorio") governing the granting of concessions to provide drinking water and sewerage utilities in Greater Buenos Aires (Buenos Aires, Argentina).

[8] See Spota, 1941, v. 2, pp. 908-925 together with the doctrine and jurisprudence cited therein; Phillips Jr., 1993, pp. 94-96 and 136; and 94 US, Munn vs. Illinois, 1877.

A recent decision handed down in the United Kingdom holds that drinking water and sanitation utilities operate under the control of the State. In the case of South West Water, the court found that, despite its private character, South West Water derives from the State, since it operates a public utility which is controlled by a State-designated regulator. The legal character of the organization providing the service is irrelevant because the public utility is under the control of the State (*Financial Times*, 1994).

The activities of the State may not cause the licensee to operate at a loss or to suffer confiscation. Nevertheless, the methodology and concept of "reasonable" profits, both in regard to public utilities and as they relate to their conceptualization (in line with the Penn Station case mentioned earlier), are a legal tool with financial, economic and technical underpinnings which should be properly understood, analysed and applied in countries that have privatization processes under way.

3. Licensees as institutional water users

The management of water-related utilities has an impact on both the quantity and quality of the resource. For this reason, licensees are regarded as large-scale users and are subject to a series of water-use controls and requirements. The proliferation of water uses, their reciprocal effects and their aggregate impact on the environment have made it necessary to establish organizational and legal structures to monitor, plan and reconcile those uses.

These institutional measures tend to be structured at the watershed or area level for planning and management purposes (Dourojeanni, 1994; ECLAC, 1994; Barraqué, 1993, p. 43 *et seq.*). This is what has been done in France, Spain and other European countries. Latin America is currently engaged in the analysis and discussion of this issue, and this process is quite far advanced in Brazil, Colombia, Peru and Venezuela.

There is also an increasing tendency to separate water management for specific uses from national water policy and management. As a result of this trend, responsibility for water policy and planning in general is being handed over to ministries responsible for the environment, natural resources or water resources. The idea here is that this is a suitable way to ensure impartiality and objectivity in the management of a resource subject to both environmental degradation and multiple demands. A report by the Secretary-General of the United Nations to the Committee on Natural Resources (United Nations, 1994) cites examples of this tendency in a number of countries, including Canada, France, Guatemala, Israel (with some differing characteristics), Oman, the United States and other nations.

In addition, some countries have modified their integrated water monitoring and management systems along with the system under which their drinking water and sanitation utilities operate.

Thus, in 1992 Mexico reformed its water-resource legislation with the introduction of a package that includes the adoption of a system of tradeable water rights, the creation of watershed authorities as a means of reducing the fragmentation of the water sector, the imposition of fines for polluting, and the possibility of privatizing the country's drinking water and sanitation utilities (Casasús, 1994).

One of the merits of the United Kingdom's reform of its drinking water supply and management system is that it separates water companies from the water-resource monitoring and management system; in other words, the regulator has been separated from the object of regulation. Today, the English system applies a series of controls on water companies. These include controls on the system as such, which are administered by the Office of Water Services, while environmental and water-use controls are administered by the National Rivers Authority and the Drinking Water Inspectorate (Jeffrey, 1994, p. 64).

England's water companies have certain environmental obligations they must fulfil (see the Water Industry Act, 1991, articles 3-5). The prospectus describing the terms of sale of water-company stock sets out certain conditions regarding corporate water use. It notes that, pursuant to the 1963 Water Act, water utility licensees must obtain permits in order to divert watercourses or to create certain types of reservoirs. The regulation of discharges or dumping and the conditions under which dumping may be performed, as well as the issuance of watercourse diversion permits, are the responsibility of the National Rivers Authority (see the prospectus *The Water Share Offers,* 1989, pp. 29 and 30).

Under the system of privatization used in Greater Buenos Aires, the decree establishing the regulatory regime stipulates that the management of pollution control functions shall conform to the regulatory provisions of the Secretariat for Natural

Resources and the Human Environment and to the annexes setting forth the regulatory framework for use in this area; that water pollution shall be monitored by the Regulatory Agency for the utility concerned (which sets it apart from the English system, in which the regulation and control of pollution is the responsibility of a different body from that which oversees the management of the utility as such); and, finally, that the utility licensee has the right to make use of groundwater and effect diversions of surface water.[9]

The system for granting water rights may have something to do with the tendency of some sectors to form monopolies. To remedy this type of situation, water laws usually contain requirements regarding the effective use of water resources, within given time periods, for purposes which the legal system deems beneficial. The purpose of these principles is to prevent individuals from establishing absolute monopolies on the resource (Beck, 1991, p. 106 *et seq.*).

In connection with this point it has been noted that, in the case of hydropower generation, the issuance of use permits that are not subject to any time limit for effective use may actually result in the establishment of monopolies in this activity and prompt the utilization of energy sources other than water. This has also been seen to have a distortionary effect on power generation –a segment of the generation-transmission-distribution chain which may, by virtue of its particular characteristics, be regarded as non-regulable (according to some modern bodies of law) and open to competition. The issuance of unlimited water rights opens up opportunities for forming legal monopolies (De Andrade, 1995, p. 10; Sánchez Albavera, 1994, p. 22).

4. Determination of the service area

The delimitation of drinking water and sanitation service areas should be based on two objectives: ensuring that no areas are left without service or that the different zones within a political district are gradually incorporated into the service area; and ensuring that the areas created are such as to permit economies of scale.

This was one of the aims of the reform of the drinking water supply and sanitation system in Mexico City, where the fragmentation of the service among various municipalities has been held to have weakened the sector (Casasús, 1994).

Figures have already been presented which attest to the differences between the relative costs of supplying a typical family in small and large service areas. The concept of economies of scale should be a fundamental consideration in the regulation of public utilities (whether they have been privatized or not). This means that the content of recommendations regarding such steps as the decentralization of services at the lowest suitable level need to be made more specific. This principle could be complemented by the concept of economies of scale. In some countries it has been suggested that regional enterprises should be created which would group together a number of smaller systems or that the larger companies should absorb the smaller ones.[10]

Although these considerations may seem somewhat obvious, some countries are still working to decentralize their utilities at the political level despite the fact that the basic political units may not always be the best choice from a technical and/or economic standpoint.

5. Generic obligations and rights of licensees

According to a very useful summary prepared by Phillips, utility licensees have four basic obligations: i) They must serve any customer within their service area who is willing to pay for the service. This general duty may include the obligation to serve areas that are unprofitable and are therefore being subsidized by other services offered by the licensee. It may also entail the construction of infrastructure to meet future demand; ii) They must provide safe and adequate service which instantaneously meets demand; iii) They must serve all their clients without engaging in arbitrary, unfair or undue discrimination; and iv) Licensees must charge no more than a just and reasonable price for the services they render.

[9] Articles 17, 29 and 76 of the regulations ("Marco Regulatorio") governing the licensing of drinking water and sewerage utilities in Greater Buenos Aires.

[10] Phillips Jr., 1993, p. 839. In some districts the smaller companies contract management services from specialized or larger firms, which saves them the trouble of recruiting staff directly.

The generic rights of licensees include: i) Legal protection of their property; ii) The right to charge a reasonable price for their services, since they cannot be forced to operate at a loss, although the State does not guarantee that they will actually realize a reasonable profit; iii) The rates and regulations to which their service is subject must be reasonable in nature and include the right to disconnect a customer under certain circumstances; iv) The right, in most cases, to protection from competition within their service area; v) In general, the right of eminent domain, which includes the right to expropriate private property, impose mandatory easements, gain entry, require information and other measures having to do with their ability to do their job (Phillips, Jr., 1993, p. 121).

Spain's Public Administration Contracts bill requires that licensees be in good technical, financial, economic and professional standing.

6. Some elements specific to water utilities

Water utilities have certain duties involving specific aspects of the generic rights and obligations listed in the preceding section.

They are obligated to provide water service within their area and to maintain, upgrade and expand the corresponding infrastructure, as well as to meet certain operating standards. In accordance with the financial terms and conditions of the licensing arrangement, they must provide services and infrastructure to users on demand (this is complemented by the right to require compulsory hook-ups). The financial terms of such arrangements may include payments, deposits, the installation of meters and other conditions.

In some systems, the licensee can be held liable under civil law if he fails to fulfil his obligations to users. This liability can be discharged by proof of due diligence.

A licensee's obligations include the provision of a sufficient amount of water of suitable quality, the maintenance of the continuity of such service at an adequate level of water pressure, and the upkeep of hook-ups to ensure that they remain in working condition. Under certain circumstances, this obligation may extend to non-domestic uses. Water quality requirements are particularly important, and licensees are obligated to abide by any guidelines established as to the purposes for which water may be used, the substances which the water may or may not contain, the concentrations of specific substances, sampling systems, monitoring of and information on the quality of the water sources used, etc.

The licensee's obligations may also extend to technical aspects of the methods used to provide service, the construction and design of infrastructure, and the quality and features of equipment and facilities. These obligations are complemented by a number of rights or authorities, such as the power to require the installation of meters in some cases, to monitor users, to prevent activities that pollute the resource, and to control dumping or discharges in the drainage system. For their part, the licensees themselves are also subject to increasingly strict standards concerning the level of pollution occasioned by their activities.

One particularly important obligation is that the licensee must supply adequate and timely information to the public and to government authorities. To this end, he must keep certain records and have available surveys, blueprints and maps of service networks, publications, reports and information on the status of the sector, etc.[11]

Hydropower companies are subject to standards or regulations concerning, inter alia, public safety, environmental monitoring, environmental impacts, water resource use, and the operation of power plants affecting water resources (coordination with other uses).[12]

[11] The examples given in this section have been taken from the laws of the United Kingdom (the Water Industry Act of 1991), the prospectus entitled *The Water Share Offers* (1989), and the regulations ("Marco Regulatorio") governing the licensing of drinking water and sewerage utilities in Greater Buenos Aires.

[12] See Argentine Republic, *Proyecto de Pliego Hidroeléctrica Mendoza, Provincia de Mendoza, Argentina*, 16 July 1992.

V

Techniques used in the privatization of public utilities

The traditional dividing lines between governments, utility operators and the user public are undergoing major changes as a result of the transfer of utility operations to the private sector, the integration of users and their interests into water management structures, the monitoring of services (as a basis for legitimation) and, as mentioned earlier, the establishment of management and planning structures at the watershed or area level (Barraqué, 1993, p. 46).

The term "privatization" is understood to refer to the introduction of market forces into the economy and, in a narrower sense, the transfer of public enterprises, activities or assets to private hands, whether wholly or as a majority or minority interest therein. The objectives of privatization may include the rationalization of public enterprises, increased efficiency, a broader distribution of ownership, the reduction of public-sector expenses, the conversion of external debt into equity and the generation of a public demonstration effect regarding a government's economic policy (Vuylsteke, 1988, vol. 1, p. 1; Gerchunoff and Cánovas, 1993).

In addition to the above reasons, and with specific reference to the water and sanitation sector, some authors also cite the professional interests of some groups connected with water resources which regard privatization as a means of avoiding financial constraints and carrying forward the professionalization of the water industry (Barraqué, 1993, p. 51). Another trend which has been observed is the concentration of services in a smaller number of companies and the diversification of these firms, many of which offer utility service proper, consulting services and construction capabilities, thereby availing themselves of the economies of scale and of scope associated with certain activities. Barraqué, for example, notes that the firms Générale des Eaux and Lyonnaise des Eaux have diversified both vertically and horizontally, offering drinking water service, sanitation services, solid waste disposal, transport services, heating, etc. Lyonnaise des Eaux recently merged with Dumez, which carries out construction activities and provides consulting services (Barraqué, 1993, pp. 47, 51 and 67).

The possibility of forming integrated holding companies, which would not benefit consumers, given the triangular practices and transfer pricing facilitated by such corporate structures, has prompted the passage of laws and the creation of special mechanisms to control such activities. The study of this subject and empirical research in connection with privatized public utilities in Latin America are still in their early stages. [13]

The most common methods of privatization are private or public stock offerings, the incorporation of private investments in existing firms, sell-offs of the assets of public enterprises or of the government, the reorganization of firms into component parts, the purchase of a block of stock by a firm's management or staff, leases or management contracts, construction/ownership/operating contracts, payments based on usage rates, etc. (Vuylsteke, 1988, pp. 7-9).

Both exogenous and endogenous factors influence the corporate privatization process. Exogenous factors include public opinion, the situation in the capital market, the overall state of the economy, employment regulations in the public and private sectors, the area of activity in which the firm is engaged, etc. Endogenous factors include the original legal character of the activity in question (is it a public utility or not?), its organizational structure (is it an arm of the central government, a decentralized unit, a public stock corporation?), its financial standing, its market, its economic viability, its regulatory framework, possible price levels, type of ownership (public or national), etc.

In the United Kingdom, the privatization of firms in the water industry has taken the form of stock offerings. The terms of such sales have been studied so as to ensure some degree of dissemination

[13] See, for example, the United States Public Utility Act of 1935 and the reports of the Monopolies Commission in the United Kingdom.

among the public of stock ownership. Limitations were also imposed to prevent excessive concentration of the stock being offered. Furthermore, the Government has reserved for itself a special type of share which confers no stockholder equity but will give it a say in certain sorts of decisions that it feels to be of fundamental importance (see *The Water Share Offers* prospectus, 1989).

Some authors have indicated that the blocks of capital involved in the purchase of various State enterprises in Argentina give an excessive amount of control over key activities to a small group of shareholders whose horizontal involvement in a sizeable number of public enterprises could have an impact from the standpoint of the power of the holding companies involved. [14] The provision of the service in question takes the form of an operating license under which the licensee promises to make the investments needed to upgrade, expand and maintain the utilities, while the State awards it the service and certain guarantees. The granting of monopoly rights has been regarded as an important element in the privatization of public utilities (Vuylsteke, 1988, p. 63).

It is interesting to compare this arrangement with Spain's Public Administration Contracts bill, which provides that, for all public utilities, contracts will be awarded on the basis of open or restricted invitations to tender and which limits negotiated procedures to well-founded grounds of exception (article 155).

The privatization process usually requires a number of preparatory steps, including the preparation of public opinion, the creation of privatizable companies, the prior development of frameworks that will ensure the transparency and credibility of the process, financial reorganization aimed at putting the relevant firms on a sound financial footing, the taking of decisions regarding contracts being performed at the time and concerning the future of existing employees, the establishment of the regulatory structure for the relevant utilities, the creation of appropriate regulatory agencies, the establishment of a system of civil liability coverage (this is particularly important when the State continues to be the owner of record), the institution of safeguards and guarantees, and the definition of insurance and civil liability systems.

When water-related infrastructure is being privatized, plant safety systems (particularly in the case of dams) and methods for checking on the condition of the systems that are to be privatized take on great importance. These verification procedures play a crucial role in assessing the physical condition of corporate assets and illustrate the importance of undertaking baseline studies prior to privatization (Vuylsteke, 1988, p. 98). If a suitable baseline analysis of the relevant infrastructure is not undertaken before privatization in order to determine its condition, the State will not know what is being privatized and the licensee will be able to bring claims alleging the existence of undisclosed defects after the license has been granted. This type of situation can call the transparency of the process into question and eventually lead to rate increases that were not explicitly provided for in the original negotiations.

The various modalities of privatization that have been used in connection with water utilities in particular include the leasing of infrastructure, management contracts, franchises and licenses and, as a complementary measure, the division of systems into their component parts.

In some of these arrangements, the equity investment remains in public hands, and what is actually being transferred is the operation of the systems. This type of arrangement has been used for drinking water and sanitation utilities, a sector which, owing to its high costs and low rates of return, has traditionally received some sort of preferential treatment, including special tax provisions. [15] Thus, in the past local water companies in England used long-term reimbursable, rate-based loans to cover these costs. This system has fallen into disfavour because it does not promote efficiency, since it is presumed to be more efficient for capital costs to be covered by users' payments. This means, it has been said, that today's water users are paying a tax for the benefit of future generations (Tieman and others, 1995). A related question, but one which we will not explore here, is how applicable these systems may be in societies with regressive economic structures in cases where investment needs exceed users' capacity to pay. This raises more general issues regarding economic structure and systems of taxation which should be analysed when the financial structures of the utilities are being designed.

[14] For this reason, European laws generally require the submission of an exhaustive list of associated firms by applicants for such licenses. See the Spanish Public Administration Contracts bill, article 129, and Gerchunoff and Cánovas, 1993, p. 10 *et seq.*.

[15] According to Barraqué (1993, p. 67), in France private water companies could secure a refund of their value added taxes. Similar refunds were given under the Internal Revenue Code of the United States, up to 1986 (see Haarmeyer, 1994, p. 51 *et seq.*).

The method of dividing up systems into their component parts (generation, distribution and transmission) has been used in the hydropower industry. This represents a departure from the more traditional form of organization in which such enterprises (especially public power companies) were vertically integrated (Vuylsteke, 1988, p. 23).

As noted earlier, among these three activities, power generation is regarded as the one that lends itself the most to deregulation, since there would presumably be no limitations on corporate entry into the system. This idea of unlimited access is subject to certain conditions, however: for example, the relevant markets must be large enough, there must not be agreements among generating companies, the institutional system must not have monopolistic leanings (Sánchez Albavera, 1994; De Andrade, 1995), there must not be environmental or input-related constraints, and the State must not set aside certain markets for a particular generating company. Under such circumstances, an interesting quandary may arise if, following the State's award of licenses under which markets are set aside for certain generators, new sources emerge that can supply power more cheaply than those generators. Could users argue that such agreements are *res inter alios acta* and lodge legal demands that these new sources be given market access? The question is a complicated one, but failure to make allowance for this element of free enterprise in respect of market entry undermines the argument that generating activities should not be regulated and paves the way for the repetition, on a socially inequitable basis, of the inefficiencies in the public systems which prompted their privatization in the first place.

Under leasing arrangements, the contractor leases facilities from the State for the execution of the activities which have been transferred to him. The lessee assumes the full risk associated with the activity in question. The State needs to ensure that, upon termination of the contract, these facilities will be returned to it in good condition. The lessee, rather than the State, bears legal liability for the utility, but the government retains certain supervisory rights. This model has frequently been applied in France, where the municipalities employing it take responsibility for the financing and construction of the facilities, while the lessee runs, manages and charges for the service. Rates reflect the costs involved plus earnings and include a surcharge to cover capital costs, which is transferred to the public authority (Haarmeyer, 1994, p. 47). This system has also been used in Africa.

When management contracts are used, the State pays a third party to operate the systems in question. Under this arrangement the State does not save on investment costs, and in addition it has to pay a fee for management services. If the arrangement works as it should, the utility's efficiency and profitability will increase. Under this system, as applied in France, the municipality charges users for the service and then covers the contractor's expenses. The budget for drinking water and sanitation utilities is separate from the rest of the municipal budget (Haarmeyer, 1994, p. 47).

In both cases –leases and management contracts– the payment of debts and other commitments continues to be the obligation of the State. And under both these systems, clear-cut and precise definitions are required regarding each party's obligations in respect of maintenance, operations, renewal of elements of the system, and the payment of other costs. The technical capabilities and financial standing of the contractors are of fundamental importance in such situations.

The granting of concessions has been widely used for drinking water and sanitation utilities and for power utilities. Typically, some sort of investment on the part of the licensee is required; the term of the concession is fairly long (20-30 years), and upon its expiration the utility reverts to the State. One important element in this kind of arrangement is the inclusion of precautionary provisions to ensure that, as the expiration date of the concession approaches, the concessionaire will still maintain a suitable rate of investment and will continue to operate and maintain the facilities properly.

Systems of concessions, leases and management contracts are all widely used in France and Spain.

Australia's experiences in this regard are interesting as well, especially because the contracts used in that country have been quite rigorous and detailed as to the obligations of the parties. The concessionaires finance the venture; the Government makes a commitment to buy the water; construction work and loans are covered by tied contracts in order to ensure that such projects are completed on time and within their budgets; and the works are covered in great detail in the concession contracts (Haarmeyer, 1994, p. 50).

VI

Conclusions and recommendations

The privatization of public utilities is a worldwide phenomenon. The process has somewhat of a globalizing effect, inasmuch as global investment funds exist in the sector and the corporations providing the services operate on a worldwide scale. Within this context, a comparative study of the relevant legislation, especially in economies that have a great deal of experience in this field, may be useful for countries that have only recently begun to return to a system of privately-run public utilities. Such an examination brings out a number of important points that warrant special consideration.

i) The drafting techniques required to draw up contracts that specify precisely what is expected of each party, the costs, time periods (including deadlines for the completion of projects for the development of water resources), the features of the services to be rendered, the areas in which they are to be rendered, and the environmental controls to which they will be subject.

ii) The concept of a reasonable profit or return for the utility provider, bearing in mind that these services are monopolies with guaranteed financial flows.

iii) The need to set up independent commissions or regulatory bodies and ensure that they have adequate funding, capacity and technical expertise.[16] Countries that are now embarking upon the privatization process would be well advised to develop institutional and technical capabilities in this sector, since otherwise it will be almost impossible for them to know what to regulate or whether the costs and expenditures of utility companies are reasonable or not.

iv) Given the concentration of many services in a limited number of companies and the presence of the same economic groups or conglomerates in various types of public and private utilities, it is necessary to establish very precise, transparent rules governing public utilities' assets and their valuation, investment and operating costs and expenditures, accounting practices, loans, ownership and transfers of blocks of stock, and contracts for the provision of services, consultancy and materials.

v) There must be suitable participation by users, along with ready access to administrative and judicial forums. The provision of ready access should not be confined to cases in which an individual problem can be identified simply and quickly (e.g., inappropriate rates) but should also apply in instances where users as a group are affected by practices that unreasonably restrict competition in the provision of the service in question.

vi) Powers in respect of national water management policy should be given to non-sectoral bodies. It appears necessary for the management of the water supply, the monitoring of water uses and the protection of water resources to be carried out by agencies at the watershed level. In cases of privatization, the need for this type of management and harmonization of uses is especially crucial.

vii) A suitable regulatory structure should be established before privatization is undertaken. This structure should cover, among other things, the necessary regulatory mechanisms and bodies, the area of activity to be regulated, the principle of reasonable returns, the desired quality and regularity of the services to be provided, and the authority to carry out ongoing supervisory and monitoring activities.

(Original: Spanish).

[16] The importance of this point and of having regulatory systems equipped with appropriate personnel and adequate funding should not be underestimated. This is illustrated by the problems encountered by Mr. Littlechild –the regulator for electrical power utilities in the United Kingdom– in setting rates, analysing the financial status and capital structure of the companies he regulates, and maintaining relations and negotiating with them. The fact that each company has an entire team devoted to fighting for its interests with respect to the regulations prompted the observation that Mr. Littlechild is outgunned by his opponents (*The Times*, 1995, pp. 2, 19 and 20).

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How much *can we spend* on education?

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The technology employed by Latin America's educational systems was developed by the countries which are now industrialized. This technology is labour-intensive, with expenditures being concentrated in the salaries of teaching staff and administrative personnel, and its effective utilization –as it is applied in the industrialized countries– entails a high level of expenditure per student. In line with recommendations made by international agencies, many Governments in the region have voiced their intention to raise the amount they spend on education to between 6% and 8% of the gross domestic product. The Latin American countries would have to spend much more than this, however, in order to create an efficient system affording universal coverage. Public education does not have the means of obtaining sufficient funding; only private schools receiving financial support from their students' families are in a position to use these technologies properly. In order to solve the region's educational problems, a policy is needed that will encourage the development of more efficient –and, in general, more capital-intensive– educational technologies based on the successful experiments that have been undertaken in the region.

I
Introduction

Rarely in the history of education in Latin America has there been such a meeting of minds on the part of the various social actors as to what formal education currently is and what it ideally ought to be. Governments, educators, scholars, businesspeople, workers, churches, cultural groups and others have similar objectives for education and talk about these objectives in very similar terms. Most studies on the subject indicate that educational coverage is being expanded at all levels, but the quality of education is declining. It has also been found that formal education does not fully meet the present and future demands of the production apparatus and makes no significant contribution in terms of greater social equity. The studies also agree on what the most important challenges for education are.

Some of these challenges are mentioned over and over again: upgrading the quality of education while making the necessary modifications to adapt curricula and teaching methods to the advances that have taken place in science, technology and pedagogy; establishing a more free-flowing relationship with the labour market and with higher education, to include the incorporation of the major technical changes occurring now and likely to occur in the near future; creating educational conditions that will help to change the region's production patterns and increase the level of social equity; emphasizing a type of education that focuses on development of each individual's skills rather than forms of instruction aimed primarily at the acquisition of book knowledge; inculcating ethical principles and values that will help the individual to operate successfully in the various spheres of society; and providing all students with access to the codes of modern-day society, which entails, among other things, improving the quality of instruction in the sciences and technology (ECLAC, 1990).

There is also some agreement as to what the best strategies are for meeting these challenges, or at least what the countries need in order to progress towards these objectives. Those that appear to be attracting the most attention are: decentralization of the educational system and greater autonomy for the schools in regard to their curricula and administration; a form of regulation that will allow the various units of the educational system to coordinate with one another and with their economic, social and political environments; policies based on a consensus among all the sectors involved; and universal access to mid-level or secondary education (on the assumption that universal coverage has already been achieved at the elementary level) (ECLAC, 1990).

Obviously, however, mere agreement on principles and on the steps to be taken is not sufficient to ensure that policies will be effective. The formulation and implementation of strategies are affected by rigidities which generally stem from conflicts with macroeconomic policies and efforts to balance the budget, education systems' infrastructural shortcomings, a shortage of skilled human resources (especially in vocational and technical education), demands –whether well- or ill-founded– made by teachers unions, an ignorance of the most appropriate educational technologies, the lukewarm support forthcoming from social institutions (including business firms) when their assistance is required for the implementation of certain types of plans, and the absence of an appropriate cultural environment.

But the greatest obstacle of all –and this constitutes the central argument to be made in this article– is the impossibility of applying the educational models implicitly or explicitly called for by the proposals being made for improving the quality of education in Latin America, because of the financial and cultural constraints imposed by the regional environment.

In order to back up this assertion, we will first outline the various educational models and their associated technologies. Next, we will look at the distribution of expenditure on education in industrialized countries and in Latin America and the way in which the current educational model is applied in the region. A number of technological options for education will then be proposed, followed by an examination of their effects in terms of educational policy.

□ The observations and comments made by Joseph Ramos and Jorge Katz regarding a preliminary version of this article enabled the author to define many concepts more precisely, refine the arguments presented, and organize the information more coherently. Any instances of inaccuracy or confusion that may remain are the sole responsibility of the author.

II

The models serving as a frame of reference

The region's educational models are based on the French lycée, the German "Gymnasium" and the "comprehensive" schools of the United States, Sweden or England, which have set, to a greater or lesser degree, the pattern for the region's educational systems at least since the start of this century. Elementary schools have also felt this influence, and in many instances are a watered-down version of the secondary school. These models have played a considerable part in determining the schools' objectives, the content of instruction and the pedagogic technologies used in general education. The differentiation between general education in the sciences and humanities and technical education also stems from the application of these organizational and pedagogical models in Latin America. It is true that these models have been adapted to local circumstances, but the adaptations have not been so radical as to change the essential aspects of the models (Programme for Better-Quality Education with Greater Social Equity (MECE 1.2), 1993).

The educational reforms being proposed and, in part, now being implemented in Latin America are measures aimed at adapting these models to the economic and social needs of today. This process has already been carried out or is currently under way in many industrialized countries and, in almost every case, conforms to the organizational principles and pedagogic technologies of the original model. Chile, Colombia, Jamaica, Mexico and other countries have undertaken educational reforms of this type.

From the standpoint of educational technology, which is the main focus of this article, the educational systems that are serving as a model for the region use books as the principal instructional vehicle and draw upon positive science for their curricular content and method. The technological foundations for these systems were laid early on in the nineteenth century in Europe and attributed specific functions to the teachers and teaching materials. The North American educational model –the comprehensive school, which was later adopted, with some major or minor modifications, by the United Kingdom, Japan and the Scandinavian countries– has altered some aspects of the European educational systems' structure at the secondary-school level, but has made no substantive modifications in their educational technology (Johnson and Packer, 1987).

Books assume the existence of a certain cultural context and of a series of institutions which, directly or indirectly, support the efforts of the school. These include school, community or neighbourhood libraries which give students broad access to books; the art, technology or science museums found in all cities in the developed world, which supplement and illustrate concepts and information learned in the classroom; newspapers and magazines or television programmes whose references and analyses raise issues and furnish information which can then be integrated into schoolwork; and in some cases, especially in Germany and more hesitantly in other countries, a relationship with the production sector which facilitates the task of vocational and technical schools (Johnson and Lundvall, 1988).

In these various educational modalities, books are the repository of knowledge and each teacher is an initiator and commentator on particular scientific subjects. Teachers are therefore the other essential component in these school systems' "educational technology";[1] they are distinguished more by their specialization in a given field of knowledge than by their pedagogical merits. Some of the roles they play in disseminating knowledge include assisting students to define the boundaries of their field of study and organize the relevant information, helping students get started on information searches and guiding them during that process, and informing them about scientific advances. With this educational technology, knowledge is basically to be found in books, but it is the teacher –i.e., a highly specialized and qualified human resource– who activates it. Teachers need to have a strong grasp of their fields and must be equipped to answer students' questions and clear up their doubts; they also must organize their work in such a way as to generate incentives that will structure their students' activities, as well as monitoring and evaluating their progress.

[1] The term "technology" is used here to denote a combination of material and human resources. In education, the paramount human resource, for any type of economic calculation, is the teacher.

The overall work of a teacher includes actual teaching in the classroom, reading-up for and preparation of the classes, providing individual attention to students, supervising and correcting examinations and tests, and performing duties connected with the administration and running of the school. The amount of time devoted to each of these tasks varies from one country's educational system to another, but on average teachers spend between 35% and 50% of their time in the classroom; between 20% and 33% on lesson preparation, reading to keep abreast of advances in pedagogy and scientific disciplines, correcting tests and attending to students' needs; and the rest of their time on administrative duties, in-service training and other tasks.

Originally (in the nineteenth century in Europe and the twentieth century in the United States and Japan), this way of organizing education was intended to provide society with leaders and senior public officials. After the Second World War, the educational system's coverage was broadened in these countries as they became more democratic and reorganized their production structures. This raised the amount of money spent on education considerably. On average, between 1950 and 1960, the percentage of gross domestic product (GDP) which the countries of the Organization for Economic Cooperation and Development (OECD) spent on education climbed from 3% to 5% and has hovered around these levels since that time. Almost all of these funds came and continue to come from the public coffers (OECD, 1992).

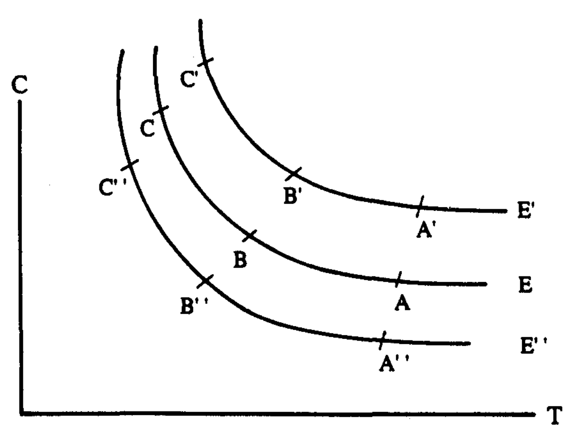
In the past few decades, the role of education in these societies has changed, thus raising new issues and generating virtually ceaseless educational reform movements. Some of these changes, especially those aimed at forging a closer bond between the working world and education, have become known in the region, and an attempt is being made to apply them. The German dual system has probably attracted the most attention of all, and one of the reasons for this is that it alters not only the role and functions of teachers but also their relationship to knowledge and the nature of their own education and advanced training. This innovation is as yet confined to vocational/technical schools.

For the other educational modalities, the classical sort of educational technology still prevails, either in fact or as a frame of reference, despite the instructional and administrative changes that have been made in the schools. The "educational production function", i.e., the combination of human and material resources used to provide education services to the population, does not differ in any essential way from that which was instituted in the nineteenth and early twentieth centuries in the industrialized countries. Although there have indeed been changes in the educational and instructional methods used in the schools, from an economic standpoint there has been no technical progress. Furthermore, today's educational systems are becoming less and less efficient, since the changes in the inputs used to teach each individual has actually raised rather than reduced the cost of obtaining a comparable output.

Figure 1 shows the production function for the most common types of educational systems. The existing combinations, all of which are labour-intensive (T), are located on the AB segment of curve E. The combinations to the left of C (which are more capital-intensive) are purely theoretical; they are not actually found in any existing system. Some of the innovations introduced during the 1970s and 1980s shift the curve towards E' and are therefore less efficient; at all events, they are still situated in the A'B' segment. The problem, from an economic standpoint, is to find a curve that shifts towards E''.

FIGURE 1

Production functions for the most common educational modalities



Source: Prepared by the author.

III

Expenditure on the school system

The application of these technologies entails certain costs. In the industrialized countries, these costs are as shown in table 1.

The real level of expenditure per student provides a better idea of the actual cost of educational services than do other commonly-used indicators, such as the percentage of GDP spent on education. Real expenditure takes national conditions into account as they relate to the buying power of education. The cross-country differences shown in table 1 are partly due to differences in the salaries paid to teachers (highest in Sweden and the Netherlands) and to administrative staff (highest in the United States), and in cost-efficiency (highest in Japan). In all these cases, however, teaching methods, the ways in which knowledge is preserved and transmitted, and the relationship between teachers and teaching materials are very similar. This situation is a reflection of different ways of applying the technology, whose costs are influenced by local conditions.

Some of the international agencies which have concerned themselves with this subject, including the World Bank, the Economic Commission for Latin America and the Caribbean (ECLAC) and the United Nations Educational, Scientific and Cultural Organization (UNESCO), have suggested that the amount being spent on education by developing countries should be brought closer to the industrialized countries' levels of expenditure. In aggregate terms, this would be about 6% of GDP.

Table 2, which gives figures for some countries of the region, shows that the levels of expenditure on education, except in the cases of Panama and Jamaica, fall far short of the recommendations of international bodies. The amount of funding allocated for education is reflected, first and foremost, in the level of expenditure per student, which is about ten times lower in the region than in industrialized countries. This gap is not accounted for entirely by these countries' differing levels of development; it is also due to the fact that the countries of the region spend a smaller percentage of their GDP on education and, above all, because they have reduced their costs by various means.

The distribution of expenditure is also interesting, since in most of the countries covered by this analysis it is concentrated in current spending; only Jamaica and Mexico allocate a significant amount of funding for capital expenditures. This type of resource distribution plays a role in determining the way in which this educational technology is applied in the region.

Regardless of the country in which it is applied, this type of educational technology is very intensive in skilled labour. Almost all the countries whose educational systems exhibit these characteristics spend over 60% of the public funds they allocate for education on wages. Some, such as Canada, Germany, France, the Republic of Korea and the United Kingdom, spend over 70% on wages; others, including Argentina, Belgium, Chile and Costa Rica, spend over 80%, while such countries as Bolivia and Colombia spend more than 90% on this item of expenditure.

Capital expenditure represents 5% or less of total spending in the countries of the region, with the exceptions of Jamaica and Mexico, which allocate 13.3% and 38.8%, respectively, of expenditure for investment (UNESCO, 1993). The capital component of expenditure is usually higher in the OECD countries (around 10% of total spending on education in the 1990s).

Aggregate data for spending on education (current and capital expenditure) do not clearly reflect the differences between the industrialized and Latin American countries. Although in the OECD countries the growth rate for current spending has been higher than for capital spending since 1970, this growth has been based on investments made during preceding years. The share of capital investment has fallen from 19.3% to 7.2% in Australia, from 20.0% to 8.5% in Austria, from 20.8% to 7.5% in Germany, from 18.0% to 5.9% in the Netherlands, from 16.1% to 6.5% in Norway, from 22.1% to 10.5% in Switzerland, etc. (OECD, 1992). The elasticity of the increase in current expenditure relative to total spending on education was greater than unity in the 1970s and 1980s, but the share of capital investment then rose in the 1990s, climbing to 10% of public spending on education.

TABLE 1

OECD: Annual public expenditure on education in selected countries
(Average for 1970-1988)

	As percentage of GDP (nominal)	Per student (nominal, in dollars)	Per student (real, in dollars)	Per student nominal, (percentage of per capita GDP)
Australia	5.4	2 693	3 431	25.4
Canada	6.9	4 013	4 106	30.5
United States	4.6	3 520	3 418	21.2
France	5.6[a]	2 254	2 651	...
Germany	4.1	2 039	2 230	20.0
Italy	5.0	1 783	3 284	23.9
Japan	4.7	2 344	2 324	21.4
Netherlands	6.6	2 567	3 158	29.5
Sweden	7.0	4 197	4 358	34.8
Norway	5.6	3 657	3 751	26.1
United Kingdom	4.9	1 758	2 463	21.9

Source: OECD data, 1992.
[a] Percentage of real GDP.

TABLE 2

Latin America and the Caribbean (12 countries): Expenditure on education, 1990

	Total, as percentage of GDP	Current expenditure as percentage of total expenditure	Percentage of current expenditure on secondary education	Expenditure per secondary-school student (nominal, in dollars per year)
Argentina	1.5	96.0	44.9	349.20
Bolivia	2.4	99.5	13.5	61.70
Brazil (1988)	3.9	...	7.2	248.40
Chile	3.4	97.5	17.3	177.30
Colombia (1989)	2.9	95.2	27.6	126.80
Costa Rica	4.6	96.6	17.1	317.30
Ecuador	2.7	94.7	32.0	100.30
Haiti	1.8	99.9	19.1	57.50
Jamaica	5.9	86.7	33.2	251.20
Mexico	4.1	61.2	29.2	257.30
Panama	5.7	97.3	23.3	295.90
Peru (1987)	3.5	94.6	20.4	187.00

Source: UNESCO, 1994.

These variations reflect political and social circumstances in the OECD countries, with the growth of current expenditure being associated with an increase in enrolment rather than with any major changes in the educational technologies being employed. The bulk of the expenditure needed to pay for buildings and teaching materials (libraries, laboratories, etc.) was made in the 1960s and early 1970s. At this point, it is mainly a question –with the exception, probably, of the United Kingdom (except Scotland), Australia and the Scandinavian countries– of refining or upgrading what is already in place. Furthermore, the most important pedagogic innovations (i.e., the various types of comprehensive schools) do not call for radically different educational technologies. This is because they are curricular and structural innovations which do not alter the essential nature of the relationship between teachers and teaching aids or facilities, although, by doing away with the differentiation of various types of schools, they do make it possible to increase the number of students per teacher.

In Latin America, in contrast, there has been a chronic shortage of investment in physical infrastructure and teaching materials. This state of affairs, whose effects have continued to be felt over the past few decades, has made it possible to run the schools at a lower cost, but the quality of public education has suffered as a result.

IV

Adapting the model to Latin American realities

The major differences between the industrialized nations and the Latin American countries lie in the technological adaptation which has been made in some countries of the region. This adaptation involves the use of almost all of the teacher's workday for teaching classes, while eliminating or minimizing the time spent on reading, lesson preparation, meeting with students, etc. As a result, educational systems end up employing technologies that are more similar to those applied before printed books came into widespread use: in other words, much like those used in the schools that were organized in medieval convents. In this type of school, the instructor is the repository of knowledge, and dictation is the most commonly used technique for transmitting concepts and information. The teacher reproduces –and, at times, comments upon– sentences whose memorization is the objective of the schoolwork performed by students. Students' level of knowledge is monitored by examining how well they remember what was dictated by the teacher, and books, although they do not disappear, cease to play a primary role.

The chief reasons for this type of adaptation today are economic in nature. During a 40-hour week of classes, an instructor can present around 2.5 times more lessons in this type of system than in schools based on the original model. In addition, class size can be larger without creating difficulties since –as this form of teaching does not encourage student participation– it matters less how many students are in the classroom. This lowers the teacher-to-student ratio and therefore improves a school's cost efficiency (as measured by class hours per student), although this does not necessarily mean that it is providing a higher-quality education.

An examination of student/teacher ratios in the late 1980s (see table 3) shows that industrialized countries whose educational systems have a classical organizational structure (i.e., differentiated modalities) generally had fewer students per teacher than those in which comprehensive schools predominated and fewer than in the Latin American and Caribbean countries as well. [2]

Only the former Federal Republic of Germany and France had student/teacher ratios that approached those of countries such as Brazil and Ecuador. In the case of vocational education in Germany, this is accounted for by the special characteristics of its dual school system, which divides up the curriculum between instruction in the classroom and training given by worker-instructors in the relevant industrial establishments, thereby boosting the number of students taught by each teacher in the schools. Moreover, the scale of vocational education is considerable in both of these countries, and this also affects the overall student/teacher ratio shown in the first column of table 3. For these two European countries the student/teacher ratio in non-vocational secondary schools was 11.3. It was 10.1 in the former German Democratic Republic, 9.20 in Italy and 8.27 in Austria. In addition, it must be borne in mind that, in all the European countries with highly differentiated general secondary educational systems, qualitative disparities are to be found between the different tracks, with schools that prepare students for university entrance having a better student/teacher ratio than the upper forms of run-of-the-mill secondary schools.

The student/teacher ratio is precisely one of the aspects of the system that has been changed in Latin America in order to adapt these educational technologies and cut costs. Another major adaptation has been a reduction in the length of the school day. Stu-

[2] These figures provide no more than a rough idea of the situation because they include all teachers, regardless of how many hours they work per week, thereby equating teachers who work 40 hours per week with those who work only a few hours. The figures for countries in which part-time contracts are more common therefore make it appear as though there were more teachers, in relation to the number of students, than there actually are.

TABLE 3
Various regions: Number of students per teacher in secondary schools as of the late 1980s

	Total secondary education	Vocational education
Multi-modal school systems (classical school)		
Belgium (1987)	7.03	...
Austria (1989)	8.45	9.00
German Democratic Republic (1988)	8.96	6.75
Italy (1989)	9.18	9.13
Czechoslovakia (1989)	9.86	7.93
France (1989)	12.42	17.24
Federal Republic of Germany (1988)	14.02	22.26
Comprehensive school systems		
Australia (1990)	12.60	...
United States (1986)	13.35	...
Japan (1989)	17.10	...
Singapore (1980)	19.45	9.18
Republic of Korea (1990)	25.23	21.95
Latin America and the Caribbean		
Ecuador (1987)	14.41	15.49
Brazil (1989)	14.42	...
Mexico (1990)	16.66	13.62
Venezuela (1988)	17.27	...
Panama (1988)	19.41	18.06
Colombia (1989)	19.88	18.00
Peru (1990)	20.92	...
Bolivia (1989)	21.68	...
Jamaica (1988)	26.20	16.49

Source: Based on figures from ECLAC, 1993.

dents in the region's public schools attend between 700 and 900 hours of class per year, whereas in Europe this figure is around 1 200 hours annually and in the Republic of Korea and Japan it is nearly 1 400. Numerous publications in the OECD countries, especially the United States, have advocated the idea that the industrialized countries need to achieve the class-hour levels of Japan in order to rectify the shortcomings of their educational systems.

All the adaptations made in Latin America are associated with low salaries for teachers. If we grant that there is a correlation between wage levels and the technical qualifications of the wage-earner (and that, therefore, higher salaries attract more competent professionals), then the conclusion is that the Latin American educational system is using poorly qualified teachers who are not given any real opportunity to upgrade their qualifications through in-service training or incentives for further study. Even if such incentives were provided, teachers could not make effective use of them because their workloads do not leave them with enough time to participate in such programmes.

The issue of quality is a crucial one in education. The industrialized countries seek to attain it through basic teacher training and subsequent advanced training and refresher courses. Both basic teacher education and advanced training are important components of this pedagogic model.

Although similar measurements for secondary education are not available, there is reason to believe that the gap between the most efficient and the least efficient countries widens considerably at this level, and this is especially true of the United States and the Latin American countries.

V

The educational model under local conditions

The educational policies of a number of countries in the region are aimed at redefining the educational model while at the same time remedying the present situation's adverse effects on the learning process. More often than not, the advocacy of such measures has been based on considerations outside the realm of education, such as the schools' inability to meet the demand for human resources satisfactorily either in the present or the foreseeable future, and a call for changes in the educational system arising out of increasing demands for social equity and democratization (Programme for Better-Quality Education with Greater Social Equity (MECE 1.2), 1993).

The question we need to ask at this point is whether or not it is possible to fashion new educational systems or improve existing ones so that they can do what we expect them to do by applying pedagogic technologies based on the classical school of thought in education and a level of expenditure equivalent to 6% or 7% of GDP. The question is an important one because the demand for education is very elastic and tends to outpace supply, which has an immediate effect on the quality of this service. Moreover, given the characteristics of education viewed as a "good" which is both a consumer product and an investment, the demand for this good is not regulated by market forces. In other words, variations in the prices paid by users of education are not going to have any direct effect on total demand so long as those users have the option of acquiring this good free of charge or at a very low cost (public education).

In addition, spending more on education does not always improve the quality of educational services. Early studies by Coleman (1966) and Jencks (1972) on the effectiveness of higher spending levels showed that, at the margin, expenditure on school materials and infrastructure has very little bearing on academic achievement. Later studies in the OECD countries on the production functions of education found no consistent relationship between expenditure on education and student performance (OECD, 1992). In the industrialized countries, some authors have raised serious doubts as to whether additional increases in spending –and, if so, to what extent– are the best way to improve the schools' effectiveness. [3]

In order to decide which educational modalities are the most appropriate for the region, we first need to determine the minimum cost structure of the educational technology that serves as our frame of reference and then to compare it with the amounts which the various countries are in a position to, and are willing to, spend. This is not meant to imply that budgetary considerations are the only ones that should play a part in the formulation of policies for this sector, but simply that they must be taken into account.

The industrialized countries apply different versions of the same model. Each has made its own adaptations. Japan and the United Kingdom spend much less, in real terms, than Canada or Sweden do. The Republic of Korea has a student/teacher ratio closer to that of Jamaica or Bolivia, while Japan's ratio is closer to that of Mexico or Venezuela. Nevertheless, the quality of education is far higher in the Asian countries than in Latin America and, according to achievement indicators, than in Europe and the United States too. What we need to determine is where the limits of technological adaptation lie, or in other words, how far we can go in modifying this model without causing the quality of the product (education) to deteriorate (Duran-Drouhin, 1993; Ferreyra, 1993).

The different variations of the educational model can be divided into three main categories: i) the classical sort of differentiated education, which has a number of modalities; ii) comprehensive schools; and iii) the types of schools developed in some East-Asian countries. Schools in the first of the above categories are found in Germany, France, Italy, the Netherlands, etc. The second type of schools corresponds to the United States, Australia, the United Kingdom, the Scandinavian countries and others, while the third variety of schools is to be observed in Japan, the Republic of Korea and Singapore.

The comprehensive systems have more students per teacher than the differentiated systems do, but their level of expenditure is not necessarily lower. Sweden and Norway, in which all secondary education has been organized into comprehensive schools, are among the countries that spend the most on education, no matter which indicator is used as a yardstick.

The East-Asian countries, particularly Japan, the Republic of Korea and Singapore, have also organized their educational systems on the basis of the comprehensive model (Japan) or some degree of differentiation (Malaysia, the Republic of Korea, Singapore). These systems exhibit high levels of academic achievement, and their degree of efficiency is also high, as demonstrated by the fact that their levels of expenditure –measured as a percentage of GDP and as total expenditure per student– are lower than in the industrialized countries. The academic efficiency of these systems is accounted for by the part which the school plays in assigning occupational roles, the importance of having a diploma and, above all, the disciplinary system used by educational institutions. Finally, the school's relationship with the family is very close in regard to both academic and disciplinary matters. These dimensions of the educational system fit in with and are defined by the cultures of these countries.

It would appear that this educational model, as developed in the East-Asian countries, is not an option for the region despite its undeniable comparative advantages in terms of costs. The effectiveness of discipline and ethics-based incentives has been wan-

[3] If the information and means were available to allow us to arrive at proper estimates of the benefits of education (economic, social, educational, etc.), we could then accurately determine the rate of return on investments in this sector. The available information does provide grounds for the hypothesis that the marginal benefits of annual expenditure levels in excess of US$2 000 per student tend to decline to zero.

TABLE 4

Latin America and the Caribbean (10 countries): Requirements for the application of classical educational technology in selected countries

	Additional teaching staff at secondary level[a] (1)	Additional teaching staff at secondary level[b] (2)	1 + 2 as % of number of teachers at the secondary level (3)
Bolivia	11 500	13 100	259
Brazil	95 400	178 400	115
Chile	12 000	9 200	72
Colombia	114 800	15 300	113
Ecuador	21 400	54 000	141
Jamaica	14 500	7 110	240
Mexico	241 500	280 000	130
Panama	8 800	5 300	144
Peru	83 400	38 400	146
Venezuela	42 000	16 300	97

Source: Compiled by the author on the basis of data from UNESCO (1992) and the World Bank (1993).

[a] Estimates based on a teacher/student ratio of 1:10, 1 200 class hours per year and the continuation of existing coverage.

[b] Estimates based on the incorporation into 10 years of formal education of the appropriately-aged members of the population who are not now enrolled, a teacher/student ratio of 1:10 and 1,200 class hours per year.

ing in Latin America's educational system. The absence of a supportive and complementary relationship between the home and the school in the region is another factor that militates against the possibility of using Asian-based strategies for organizing the region's schools.

The information to be derived from the European, Australian or United States systems is more relevant to the region. Using these systems as our frame of reference, we can define the following standards which must be met in order to apply this educational technology effectively:

i) The number of students per teacher should be around 10.

ii) Students should attend 1 200 class hours per year.

iii) Educational coverage, at least up to the tenth grade, should be 100%.

iv) The quality of teachers, as measured by their annual salaries, should be comparable with that of other professionals. Either of the following two types of measurements may be used for this purpose: one involves estimating teachers' salaries on the basis of the average salary of civil servants in professional categories as of 1990; the other uses the starting salary for civil servants in professional categories as a yardstick. [4]

v) Infrastructure (especially buildings) must be expanded in order to accommodate the increases in class time, number of classes and enrolment entailed by the above measures.

vi) Educational institutions need to have suitable libraries.

Meeting these standards would involve different levels of effort on the part of the various countries of the region (see table 4).

In order to improve secondary education in Latin America so as to enable it to meet the demands placed upon it (and assuming that the classical form of school organization is being used), the number of teachers would need to be doubled in the majority of the countries; in some of them, such as Jamaica and Bolivia, two and one-half times more teachers than are currently employed would be needed, with all the costs this implies (see table 5).

The additional amount of current expenditure required on the part of the educational system in order to conform to these parameters would be equivalent to approximately 6.3% of GDP in Ecuador, 2.4% in Brazil, 3.3% in Mexico, 5.8% in Venezuela, 6.2% in Colombia, 4.3% in Peru, 5.0% in Bolivia, 6.9% in Jamaica and 2.2% in Chile. The impact of such a level of expenditure on the economy may be gauged by comparing it with State revenues for 1991 as a percentage of GDP, which amounted to 18.1% in

[4] Information from five countries was used for these calculations; figures for the other countries were obtained by extrapolation.

TABLE 5

Latin America and the Caribbean (10 countries): Expenditure on teachers' salaries in secondary schools and the wage bill for the application of classical educational technology

	Expenditure on secondary-school teachers' salaries (in millions of dollars for the years shown)	Wage bill for secondary-school teachers if classical technology is applied (in millions of 1990 dollars) a	b
Bolivia	...	96.20	72.15
Brazil	632.82 (1986)	5 728.36	4 296.30
Chile	118.76 (1990)	701.42	526.07
Colombia	114.71 (1990)	1 408.87	1 056.65
Ecuador	62.73 (1989)	525.60	394.20
Jamaica	41.14 (1990)	170.07	127.55
Mexico	1 399.10 (1990)	12 015.92	9 011.94
Panama	44.93 (1990)	232.32	174.24
Peru	147.87 (1987)	878.26	658.69
Venezuela	80.57 (1988)	1 033.63	775.22

Source: Compiled by the author on the basis of data from UNESCO (1992) and the World Bank (1993).
[a] Based on an annual teacher's salary equivalent to the average salary of civil servants in professional categories.
[b] Based on an annual teacher's salary equivalent to the starting salary for civil servants.

Ecuador, 14.7% in Mexico, 24.3% in Venezuela, 13.4% in Colombia, 8.3% in Peru, 16.6% in Bolivia and nearly 30% in Jamaica and Chile (World Bank, 1993). Even though investment in education may be considered profitable, it would appear to be impossible for the countries to allocate such large percentages of GDP and of government expenditure to this item alone.

In addition to the considerable increase in current expenditure which the full application of this technology would require, especially with regard to teachers' salaries, it would also call for larger outlays on buildings, libraries and teaching materials. The information needed for estimating these infrastructural expenses is not available, but a look at the experiences of industrialized countries indicates that it would amount to over 20% of total spending on education during the implementation of educational reforms and around 10% thereafter. In view of the condition of the region's infrastructure and its limited coverage, expenditure on these items –especially buildings and libraries– would surely exceed the above-mentioned percentages.

The obvious conclusion is that the classical sort of educational technology cannot be applied in the region on a mass scale: public resources are simply too limited, even if there were a s trong political commitment to assign top priority to education. The successful application of this educational technology by some schools, whose performance levels are similar to those of schools in industrialized countries, does not mean that its use can be generalized. These are private schools or public institutions that enjoy special subsidies which bring their revenues up to the levels seen in industrialized countries, which can offer competitive salaries to teachers and which have adequate infrastructure. Most of the expenditure on private education in the region goes to this type of school, and the resultant benefits are received on an immediate basis by those who are willing to undertake such expenditures. In all likelihood, private expenditure on formal education will continue to be channeled to private schools and the benefits will remain confined to the households in question; this is therefore not a plausible investment option for the school system as a whole.[5]

[5] There is a tendency in the region today to assign all sorts of responsibilities to production firms, including the development of basic skills, which was traditionally the job of the public school system. Peres (1994) suggests that although this may be inevitable under current circumstances, it would seem that, rather than being the outcome of an admirable show of restraint on the part of a non-interventionist State, it is the result of the State's failure to perform some of its basic functions. Similar tendencies are to be observed in the area of health care and in the development of national science and technology systems.

There is another factor to be considered as well: once the industrialized countries' current level of efficiency has been attained, it will be very difficult to improve upon it further. [6] Owing to its intensive use of human resources, it is difficult to raise the productivity of education under this system. There are also other factors that hinder the modification of educational technologies; educational systems tend to protect their teachers' monopoly of the transmission of knowledge, despite the fact that information technology has developed so swiftly in the last 20 years and could be used to much greater advantage. This state of affairs has been perpetuated by high unemployment, since this makes it possible to continue to pay teachers very low salaries.

VI

One possible option: a change in technology

In view of these circumstances, if we are to achieve a form of education that is in keeping with the economic and social demands of today's world and with the region's available or potential resources, we need to explore other options. The strategy employed by the industrialized countries and, to some extent, by the Republic of Korea (during their respective post-war periods) does not appear to be feasible in the region, since it involved an extremely sharp increase in public spending on education within a fairly short period of time, with the sums allocated to education being raised by a factor of 5 or 10 within the space of less than 10 years.

The option(s) for organizing the school system in Latin America must be based on the assumption that expenditure on education, especially by the public sector, needs to be raised above customary levels. Most of the countries in the region could afford to spend between 6% and 7% of GDP, [7] which would have some impacts in certain areas. However, if the existing educational model is maintained, this kind of increase in expenditure will do no more than permit gradual corrections of a general nature to be made, resulting in no more than a slight improvement in performance. Given current conditions and the region's past experience with ongoing marginal modifications, what is needed is what Peres (1994) has called a "structural revolution", inasmuch as the limitations of the educational policy and management strategies applied to date have become evident.

One of the courses of action which should be included in such policies is the development of appropriate educational technologies. The most suitable technology of all has probably not been developed yet, but we do have the materials and the experience needed to set about creating it. It does not seem unreasonable to propose a radical technological change in educational praxis that would enable the countries of the region to move beyond book-based technologies and the classical-school role of the teacher. The idea here would be to make use of the advances in technology and management now being implemented in various spheres of economic and social life, particularly in the areas of the organization of labour and of information-gathering and information distribution (Delker, 1990).

The objective is to bring about technical progress in education by maximizing its capital and labour efficiency while also remaining mindful of existing budgetary constraints. This is curve E" of figure 1. There are probably going to be more actual combinations of resources for these new technologies in curve E" past segment B"C" than those found past segment BC or segment B'C' in curves E and E', which represent the more traditional technologies.

The position of actual technologies on one or another segment of these curves is the result of technical constraints. All the advances made in production technologies, at least since the Industrial Revolution, have involved a transfer of knowledge to machinery, working tools and organization. At this point in time, the educational system has the means to make analogous technical substitutions.

[6] Educational productivity and efficiency are difficult to measure and sometimes hard to define; consequently, policy-makers in this field ofter attribute more importance and allocate more budgetary resources to one component, to the detriment of others, rater than seeking to optimize all the "products" of education.

[7] Nevertheless, some countries whose fiscal revenues are very limited, such as Peru, will need to devise their own technological and financial strategies for developing their educational systems.

Technological innovations designed to boost educational systems' efficiency require industrially-produced teaching materials and methodologies for their use. Hence, teaching aids become the repositories of the knowledge imparted to students, and students come to play a more active role in the process.

Technological innovations involving a more intensive use of capital (and, consequently, an increase in the rate of return on highly skilled labour) do not always require the installation of expensive devices, instruments or infrastructure in each school. Sometimes it is enough simply to reorganize the physical elements of the classroom and to use appropriate materials. There are "light" technologies based primarily on the reorganization of teaching facilities, with a big contribution from outside. There are also –or could also be in the future– "heavy" technologies that require the introduction of instruments and other devices (especially electronic and computer equipment) into the learning process.

The Colombian "escuela nueva" ("new school") system, for example, structures the elementary school on the basis of organizational principles similar to those of the "flexible specialization" approach, which involve such steps as setting up the classroom in units that are analogous to production cells (Kaplinsky, 1984).

The "escuela nueva" has transformed the role of the teacher. In this type of school, teachers no longer need to devote all their time to passing on instructions or information that could simply be written down in a book; instead, their job is to ensure that each student is taking an active part in the learning experience. Students are given independent-study texts containing detailed instructions for each stage of the activity they need to carry out in order to have a truly valuable learning experience. These instructions are drawn up by centres that specialize in curricular development and content and are designed to be given directly to each student; the pupil then studies these materials with a group of three or four classmates and goes to the teacher for help when he or she has difficulty in understanding something. This allows teaching materials to be prepared for a large number of schools which incorporate scientific and pedagogic advances and achieve economies of scale. At the same time, it also frees up teachers for other tasks by cutting down on the amount of time they must spend on simply passing along instructions and information.

The "escuela nueva" has proved to be a very efficient form of teaching and is achieving good results at an expenditure level only 15% higher than that of traditional elementary schools (Schiefelbein, 1992). Chile's Programme for Better-Quality Education with Greater Social Equity (Project MECE 1.2) is another experiment aimed at introducing greater diversity into the basic school system. The merits of experiments such as these are that they entail little additional expense, represent a promising departure from the classical tradition, and are not bound to the European cultural context to which the classical school belongs.

Another area of innovation has to do with the use of personal computers. These pieces of equipment, in conjunction with fibre optics, communications satellites, etc., provide access to information that was previously unavailable to the typical student and enable students to establish long-distance interactive relationships. The cost of these technologies is already low and continues to decrease. Today, a powerful computer costs less than US$1 000, has a useful life of five years and, if used by five students, has an annual per-student cost of just US$40. These costs can be even lower if the schools negotiate effectively with manufacturers. The same is true of software and information. Today a computer equipped with a CD-ROM drive and a compact-disc encyclopaedia is less expensive than the same encyclopaedia would be in book form.

Experiments such as the "escuela nueva" or school activities organized around electronic information media lead to the formation of relationships among students and between them and their teachers which are completely different from those found in the classical type of school. For example, students must get used to working in groups, defining problems, solving them and searching out the relevant information. Teachers cease to serve as the central repositories of knowledge and instead become methodological consultants and organizers of working groups.

This strategy obliges us to re-think the objectives of education. The development of key skills or abilities (problem identification, information search techniques, the ability to measure and classify, logical thinking, learning ability, etc.) takes the place of the earlier objective of providing a solid grounding in certain specific subjects. The use of new educational technologies blurs the dividing line between one discipline and another while also redefining the function, basic preparation and advanced training of teachers.

At the same time, the workings of the educational system need to be structured in such a way as to incorporate other actors that are affected by its performance and that have a valuable contribution to make. This broadening of the system's scope is closely linked to more participatory educational technologies, as exemplified by Germany's dual-module system and Colombia's "escuela nueva". It also makes it possible to establish a relationship between the subjects taught in the schools and the features of development in the region; it thus becomes a matter of "installing" disciplines or subject areas with contributions from the environment in which the school operates. For example, the assistance of the local chemical industry should be sought in delineating how this subject is to be taught in nearby schools, museums could participate in the teaching of art, English-speaking members of the community could help with the teaching of English, etc. The mass media can also play a central role in the incorporation of certain fields of knowledge in school.

Whatever the educational technology or technologies used, and regardless of what kinds of changes are made, the schools will need to try to leap-frog some stages in their efforts to move towards the international technological frontier.

The countries of the region have certain advantages over the European nations in this respect. Paradoxically, because their level of cultural development is lower and because the products and institutions associated with their cultural frame of reference are less accessible than in the industrialized world, the countries of the region are better prepared for a radical change in their educational institutions. A highly developed cultural context has certain advantages in terms of classical schooling and other approaches based on it, but it can also act as an obstacle to innovation.

As mentioned earlier, the largest cost component in the classical model of education, and one of its centrepieces, is the teaching staff. In this discussion we have not factored in the cost of training those teachers, but even if we consider nothing more than teachers' salaries, under adequate conditions for the application of the classical-school model or derivations thereof, such as the comprehensive school, we still reach the conclusion that the countries of the region cannot afford these modalities. Moreover, it is invariably more difficult to increase the productivity of technologies which involve intensive use of human resources, as in these educational systems. The problem becomes even more complicated if the goal is to improve the quality of the "product" or output; the results of the efforts made by the OECD countries over the last 25 years to improve the quality of education by reducing the number of students per teacher and improving the schools' infrastructure and materials have been very unsatisfactory (OECD, 1992). Yet there are some new ways of organizing the schools which, together with the use of electronic media, may enable us to lower costs and set up a form of education that meets current needs.

VII

Technological innovation in education: some policy issues

In the late 1980s and the 1990s, the region has introduced reforms designed to bring about substantive changes in its educational systems. Argentina, Chile, Colombia, Jamaica, Mexico and other nations have launched ambitious reform programmes or have publicly acknowledged the need to do so.

These recent reforms tend to go further than the strategies for change formulated in the 1960s and 1970s, which were based on improvements in one or another modality or level and whose main purpose was to improve the system's coverage within the context of the relevant modality or level and to update content and programmes to meet internal or external demands. Today's proposals are more general in nature and are intended to bring about radical changes, and this is reflected in the formulation of policies which reassign roles and functions to the different social sectors involved.

The educational policies that were structured on the basis of particular modalities or sectors of education did have some conceptual advantages and facilitated decision-making. The comprehensive types of proposals being put forward more recently lack this degree of precision and are often watered down into general pronouncements which are confusing or difficult to implement. In such cases, educational policy goes no further than the presentation of general lines of action, while "practical" questions relating to their implementation, including budgetary considerations and technological issues, go unanswered.

A realistic strategy for introducing the necessary changes while also integrating certain general principles should include the above dimensions in the design of the educational system. This translates into the following policies and their corresponding courses of action:

1. Policy A

This policy means taking a firm decision to move in the direction of the technological frontier by taking advantage of the advances made in pedagogy, electronics, computer sciences and communications. The corresponding courses of action would be:

i) To opt for highly cost-effective educational technologies which also substitute capital for labour inputs, whether in the production of teaching aids or in the organization and management of teaching activities themselves.

ii) To narrow the technological gap between the educational systems of the region and those of the industrialized countries by using educational technologies that are appropriate for the countries of the region.

iii) To promote diversity within the educational system by developing subjects or courses of study in the geographic zones where they will be most appropriate, together with the most suitable teaching methods.

2. Policy B

Here, the aim is to promote the transfer, adaptation and development of educational technologies that take existing budgetary constraints into account. The corresponding courses of action would be:

i) To support the formation of strategic alliances among the relevant sectors (teachers, officials of the Ministry of Education, student and parent associations); incorporate new sectors, such as business firms (electronics and communications) and the media (radio, television, the Press); and permit academic sectors to play a more active role.

ii) To seek to achieve the transfer of state-of-the-art educational technology developed outside the region. This involves locating the relevant information and setting up the necessary agencies or prompting existing bodies to translate and adapt methodologies, procedures, textbooks, etc.

iii) To organize programmes for broadening the dissemination of the best educational technologies in the region.

iv) To set up interactive information networks to permit a free flow of communication among all those interested in upgrading the quality of education.

v) To follow up the most promising innovative experiments closely, with regular assessments based on objectives and quality standards, and disseminate the results of those assessments.

3. Policy C

In this policy, the aim is to improve the Government's budgetary appropriations for education in both qualitative and quantitative terms. The corresponding courses of action would be:

i) To increase the government budget for education (without trying to substitute private contributions for government funds).

ii) To apportion the State's budgetary allocation on the basis of realistic, feasible objectives; to this end, cost/benefit studies based on very precise objectives should be conducted and the most efficient strategy defined.

iii) To offer fiscal incentives for research and innovation rather than maintaining the current practice of only providing incentives for greater enrolment.

iv) To define which aspects of education correspond to the private sector and which correspond to the public sector. The identification of the basic skills which it is the responsibility of the State to develop should be one of the starting points for this determination.

4. Policy D

The aim of this policy is to establish State, regional, national or local structures that are capable of carrying out the policies enumerated here. Its purpose is thus to overcome the immobility of most of the region's Ministries of Education. The corresponding courses of action would be:

i) To create coordinating bodies at the local level and delegate to them the necessary authority to bring together all the interested and/or involved sectors. These bodies should also be able to take the initiative in researching and implementing pedagogic innovations.

ii) To establish permanent or *ad-hoc* agencies to respond to requests for advisory assistance on pedagogic and management innovations.

iii) To make a special effort to forestall major disturbances or misalignments caused by changes in the systems. The analysis of similar cases could be highly instructive in this respect.

5. Policy E

This policy seeks to help to train new and established teachers how to apply new technologies: a primary strategic aspect of any innovation policy. The corresponding courses of action would be:

i) To seek to integrate teachers' colleges and teacher-training institutions in the development of educational technologies and policy-making for the sector.

ii) To organize tours and internships to allow teachers to learn about cutting-edge educational experiments both within and outside the region.

(Original: Spanish).

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Women and migrants: *inequalities* in the labour market *of Santiago, Chile*

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Social policies aimed at reducing inequalities in the labour market need to be founded upon a solid understanding of the factors that generate disadvantageous conditions for specific segments of that market. This article describes inequalities in the occupational and income structure affecting economically active women and, in particular, economically active women migrants in Santiago, Chile, and provides some insights into the reasons why these disadvantages exist. Chile's economic growth process is seen by some as setting an example for other Latin American countries which are opening up their economies to international markets. Steps have to be taken, however, to prevent still greater concentration of wealth, the persistence of high levels of poverty, an increase in the heterogeneity of the labour market and inequalities in wage levels. This article seeks to help determine the causes of the disadvantageous conditions under which some segments of Chile's urban labour market operate. The good educational level of economically active women and women migrants in Santiago is at variance with their occupational distribution and their income levels. Upgrading the qualifications of the labour force will thus not be enough to reduce the inequities existing in Latin America's labour markets. The author argues that it is also necessary to identify and confront the gender-based constructs which influence the structure of these labour markets and lead to instances of occupational and wage discrimination that are apparently unrelated to workers' qualifications.

I

Introduction

The economic retooling measures which other Latin American countries did not begin to implement until the late 1980s were already being applied in Chile in 1975, and the effects of that initiative were therefore observable in its urban labour market during the following decade.

Because of the macroeconomic achievements associated with Chile's economic growth process, it is often regarded as a good example for the other countries of the region to follow. Concern is often voiced, however, about the increased inequality of income distribution and the lack of job security in some segments of the labour market, which may account for the country's high levels of urban poverty. Optimistic predictions have been made as to the ability of sustained growth to improve income levels and living conditions for high-productivity sectors and about the possibility of diverting resources to less fortunate sectors by means of social policies which also seek to provide these sectors with more training and improve their position within the production structure (Altimir, 1994; ECLAC, 1992). To implement these pro-equity policies successfully, however, we must identify the reasons why some groups occupy such disadvantageous positions within the labour market.

This article explores the positions of two segments of the labour market in Santiago, Chile, which are at a relative disadvantage –economically active women and women migrants– and notes a number of ways in which a gender-based perspective could help in the analysis of economic participation and female migration in order to contribute to the design of public policies aimed at making the Latin American population's working and living conditions more equitable.

The research effort that led up to the preparation of this article focused on the labour market for women in one of Latin America's large urban centres –the city of Santiago, Chile– and on the characteristics of a specific segment of that market: economically active women migrants. This research project was sponsored by the Rockefeller Foundation and was conducted at the Latin American Demographic Centre (CELADE) in 1991-1992, using documentary, bibliographic and statistical sources. Its objective was to analyse the changes taking place in the structure of the labour market for women in Santiago and in migration to that city by women between 1950 and 1990, along with the occupational status of migrant women between 1960 and 1982. The sources used for the labour-market analysis were population censuses and the National Employment Surveys carried out under the Integrated Household Survey Programme. Data on migrant women were obtained from a survey on migration to Greater Santiago conducted by CELADE in 1962 and from population census samples for 1970 and 1982 which were compiled by CELADE for what was previously the Province of Santiago and is now the Metropolitan Region. The information presented in this article comes from those sources.

II

Economic changes and the labour market in Chile in the 1980s

The sweeping social and economic changes that have taken place in Latin America as a whole and in Chile, in particular, as a consequence of the economic crisis of the early 1980s and its aftermath of adjustment policies, retrofitting and economic liberalization have had differing effects on different segments of the labour market. A number of studies indicate that the heterogeneity of the labour market has increased, the income differentials between various sectors of workers have widened, and some portions of the labour market have seen a progressive decline in job security (PREALC, 1991; ECLAC, 1994; García, 1993).

The labour market for women has undergone particularly striking changes. Women's participation in economic activity had been rising steadily ever since the mid-1950s as a result of such factors as urbanization, the expansion of personal, social and community services, and the gradual rise in women's educational levels. The crisis of the 1980s marked the beginning of an even faster increase in women's participation in economic activity. This has been described as counter-cyclical behaviour in view of the increased entry of women during recessions and the poorly-paid and unstable nature of many of their economic activities (ECLAC, 1994; Pollack, 1990).

During the 1980s the marital status and age distribution of the economically active female population also changed, with increases being observed in the proportion of married women with children and in the percentage of non-wage occupations.

Chile has attracted the attention of experts on this subject because of its early start on the implementation of policies aimed at opening up the economy to external markets and deregulating the labour market, the severity of its recession and the harshness of the adjustment policies which the authoritarian political regime of the time imposed in its urban labour markets, and the macroeconomic successes of the subsequent process by which it has consolidated the changes made in its production patterns; it has also drawn attention, however, because of the further increase in the inequality of its income distribution, the large percentage of poor people in its population, and the decreasing job security of certain segments of its labour market (García, 1991 and 1993; Altimir, 1994).

In the following sections we will supplement this broad overview of the Chilean labour market with an examination of trends in the female labour force and the particular traits of women migrants, with the aim of helping to identify vulnerable segments of the metropolitan labour market as well as some of the factors that contribute to their vulnerability.

III

Migration by women to major Latin American cities

Ever since the start of the import-substitution phase of the industrialization process, women have made up a clear majority of internal migratory flows in Latin America. This majority has been particularly marked in rural-urban flows and in migration to the main cities.

The factors which triggered the exodus from the region's rural areas have had a selective impact on the female population; as a result, it has primarily been young rural women who have joined the pool of surplus labour. In turn, segregation by gender and by the fact of being migrants within the labour market has configured a specific demand for migrant female workers in the large cities. Thus, in the major urban centres of Latin America, migrant women have become concentrated in a small number of occupations reserved for women and have congregated, to a greater extent than non-migrant women, in the tertiary sector and in manual activities, especially domestic service (Pardo, 1987; De Oliveira, 1984; Elton, 1978, Raczynski and Vergara, 1979; Elizaga, 1970; Recchini de Lattes, 1990).

Current research on internal migration in Latin America is examining the implications which the internationalization of the region's economies may have in terms of migratory movements, as well as the ways in which the positions of different members of the family group within the labour market are changing. Some studies have also contributed to our understanding of migration by focusing on new dimensions of that process, such as the influence of cultural, ideological and political forces that operate on the basis of a complex, non-economic dynamic (Lim, 1989; De Oliveira, 1984; Lattes, 1989). One of these sociocultural dimensions is the role of women in society. Segregation by gender and by the fact of being migrants within the labour market is a manifestation of values and practices that restrict women to their reproductive role in their private lives or to socially-downgraded occupations which constitute an extension of that role in the economic sphere. The lower status assigned to jobs performed by women delineates the particular features of female migration and the occupational situation of women (García de Fanelli, 1989; Muñoz, 1988; Arriagada, 1990; Hugo, 1991).

Other cultural dimensions, such as society's control over women's sexuality, also define some of the specific traits of female migration. Women must move, work and live under conditions that cast no doubt upon the modesty of young single women or married women's faithfulness. Moves made by women for occupational reasons are linked to the development of specific segments of the labour market that are socially acceptable for women. The position occupied within the family, the distribution of chores within the household, intra-family patterns of authority and marriage customs are much more important factors in the analysis of female migratory flows than they are in the study of male migration (Hugo, 1991; De Oliveira, 1984).

In recent years, internal migration within the region has increased in variety and complexity. In addition to the factors that have traditionally been of significance in the analysis of migration by women to major cities, we must add the increase in urban poverty and in non-migrant women's participation in economic activity, the presence of urbanization processes in rural areas and the increasing proportion of wage-based employment among the rural population, the deregulation of working conditions, and the rising employment of poor women in agribusiness and the *maquila* industry. These changes, together with the increase in school enrolment among women and declining fertility rates, have altered the traditional patterns of female migration and have given rise to new types of migratory movements. The predominance of women and the proportion of adolescents in migratory flows to large cities have decreased, while temporary movements, inter-urban migration, commuting, the combination of urban residence with rural employment, and rural-rural migration have all increased.

Despite the clearly distinct features of female migration, very few studies provide a separate description of these characteristics (Elizaga, 1970; Elton, 1978; Raczynski and Vergara, 1979; De Oliveira, 1984). The dearth of such analyses is even greater in relation to the particular features of female migration and women's occupational status which stem from the social inequality of the sexes. With the exception of a few case studies conducted in recent years, the gender dimension has not yet been incorporated as a conceptual element into the study of migration, and its absence has impaired the development of policies and programmes aimed at improving the status of Latin American women in society.

Our research project included the analysis of some aspects of gender inequality. The examination of one of these aspects –the factors causing Chilean women to emigrate from rural areas during the import-substitution phase of the industrialization process– point to the existence of different structural causes and personal motivations for migration by women and by men (Aranda, 1982; Pardo, 1987; Raczynski and Vergara, 1979; PREALC, 1979).

Based on statistical sources, we also examined other aspects of gender inequality which will be discussed in this article. One of them is the differences existing between men's and women's occupational concentration and labour incomes in the Santiago metropolitan area as of 1990. Another refers to the inequalities in occupational and income structures observed in 1982 in the Province of Santiago between economically active migrant women, on the one hand, and migrant men and non-migrant women, on the other. This comparison enabled us to hazard a number of gender-based interpretations of the disadvantages suffered by migrant women which may permit the targeting of social policies for these population groups.

IV

The labour market for women in the city of Santiago

The development of specifically female segments of the labour market at both the point of origin and the destination of migratory flows appears to be a determinant of the volume and characteristics of women's migratory movements, as well as of the employment opportunities open to migrant women. In Chile, this type of female-specific selectivity has been the strongest in migration from rural and semi-rural areas to the city of Santiago (Martínez, 1990; Raczynski and Vergara, 1979; Herold, 1979). Although the growth rate of female migration to that city has declined (probably as a result of the rising level of female employment in agribusiness), the volume of this migratory flow continues to expand and women continue to make up a majority of the migrants from areas where a large percentage of the population is rural (Martínez, 1990).

The profound changes that have occurred in Chilean labour markets over the past 20 years may be having an effect on both migratory patterns and the occupational status of migrants. Given its significance as the preferred destination for women migrating from rural areas, we will now take a look at the trends in the labour market for women in Santiago between 1952 and 1990 and will then go on to analyse the attraction which that market holds for migrant women, the typical features of such migrants, and the conditions under which they join in that city's economic activity.

In 1950, the economic participation rate for women –one third of all females aged 12 or over– was considerably higher in the Chilean capital than in other Latin American cities. Economic participation was concentrated among single women, and the participation rate was higher for women under 25 years of age. Most of these economically active women had completed fewer than seven years of schooling. More than two-thirds of them were employed in the tertiary sector, especially in personal and household services (mainly manual workers employed as domestic servants and as providers of other personal services), while a quarter of them were skilled machine operators and craftswomen (dressmakers, seamstresses and weavers).

By 1970, the participation rate had fallen from a third to a quarter of all women, with a particularly steep decrease being observed in the participation rate for women under 20 years of age. The proportion of economically active women who had completed fewer than seven years of school was no more than 35%. The percentage of women employed in personal and household services had declined and was smaller than the percentage of women engaged in social and community services and production support services. The number of female manual workers decreased proportionately, especially in the case of those classified as unskilled workers, while the increase in non-manual female workers was particularly marked in the category of office workers (Szasz, 1994).

This trend, which appears to be due to the increase in the female population's level of education and to a decrease in the economic participation rate for working-class women, was altered somewhat by the macroeconomic changes that took place in the country between 1970 and 1990. In 1990, a majority of economically active women were married and of child-bearing age. Prior to 1970, 60% of economically active women were single, but by 1990 the percentage of single women had slipped to 40% of the total. Until 1970, the age groups with the highest economic participation rates were below 25 years of age, whereas in 1990 the highest rates were found among women between 25 and 45 years of age (Szasz, 1994).

In 1990, half of all working women had completed more than 12 years of school and only a quarter of them had fewer than seven years of schooling. The proportion of women employed in personal and household services was smaller than it had been in 1970. Nearly 40% were engaged in non-manual activities, with increases being registered in the categories of office workers, professionals, technicians and executives. The main departures from earlier trends had to do with the age and marital status of economically active women, the increase in unemployment among women (especially in lower-income sectors), and the types of occupations exhibiting the greatest growth in the city. In addition to the rise in the number of non-manual female workers seen in 1982-1990, there was an increase in unskilled female manual workers (general labourers, day labourers, servants) and in both shop assistants and peddlers during that period. And although the number of women wage-earners rose during this period, there was a much bigger increase in female own-account workers and unpaid female family workers (Szasz, 1994).

Domestic service was the occupation in which the greatest changes took place during this most recent period. This occupational category was the source of employment for one third of all economically active women in the 1950s, and 40 years later it accounted for somewhat more than a quarter of all women workers. Although the relative size of this category of female workers was smaller compared with the total, in 1990 half of all women manual workers were still working as servants. The number of such women climbed substantially, and the average annual growth rate for this group reached its highest levels, in 1982-1990.

The most striking change in this occupational group was the increase in the proportion of domestic workers who did not live at their place of work. Live-out domestic servants represented only 11% of the total in 1952, but in 1990 they were in the majority (see table 1).

This change in domestic-service occupations is related to the macroeconomic and socio-political changes that took place in the country between 1973 and 1990. In 1974, along with the political and economic changes set in motion by the military government that had seized power in 1973, there was a marked increase in the proportion of these workers; the same thing happened in 1981, when male unemployment levels climbed sharply. Part of the rise in female participation rates in the metropolitan area and of the proportionate decrease in young, single female workers was associated with an increase in the number of married working-class women who obtained employment as live-out servants because the heads of their households were unemployed and their household's income levels were dropping. Once the idea of working outside the home (chiefly as domestic servants) had gained cultural acceptance among married working-class women in urban areas, they continued to do so even after male unemployment rates began to move back down, possibly because of the job instability and uncertainty associated with the income levels of large segments of the working population.

TABLE 1

Santiago, Chile: Percentage of women working as live-in and as live-out domestic servants, 1957-1990

	Live-in	Live-out	Total
1957	88.9	11.1	100.0
1967	85.4	14.6	100.0
1972	85.7	14.3	100.0
1974	64.7	35.3	100.0
1975	64.9	35.1	100.0
1976	58.3	41.7	100.0
1977	57.3	42.7	100.0
1978	59.1	40.9	100.0
1979	61.5	38.5	100.0
1980	60.3	39.7	100.0
1981	49.0	51.0	100.0
1990	46.5	53.5	100.0

Source: University of Chile (1957-1977) and National Institute of Statistics (INE) (1978-1990), fourth quarter of each year.

Participation rates for women were lower in the case of the lowest-income and least-educated groups throughout the period in question. Up to 1973, domestic service was an occupation that was performed almost exclusively by migrant women who lived in the homes of their employers; this type of job was not usually taken by urban women, especially if they were married. However, at those points during the period 1970-1990 when wage levels and employment conditions took a critical turn, an unprecedented rise was seen in domestic servants working on a live-out basis (see table 1). In 1990, a majority of the women working as domestic servants did not live in their employer's houses, most had completed more than six years of schooling, and a large percentage of them were married.

Before the 1974 and 1981 recessions, working-class women in the metropolitan area did not work after they married but instead devoted their time to raising their children. When these recessions hit the country, however, some of these women responded to the then rampant unemployment among male heads of household by finding employment as live-out domestic servants in order to support or help support

TABLE 2

Santiago, Chile: Average monthly income of economically active persons in each occupational group, by gender, 1990
(Chilean pesos at December 1990 prices and percentages)

Occupational group	Mem	Women	Women's income as a percentage of men's income
Executives and managers	358 469	315 675	88.1
High-income professionals and technicians [a]	281 331	221 522	78.5
Lower-income professionals and technicians [b]	110 680	81 638	73.8
Farm owners	115 529	81 491	70.5
Office workers	92 150	64 440	69.9
Salespeople	71 855	45 450	63.3
Skilled operatives and craftsmen	52 602	32 178	61.2
Unskilled workers	33 910	32 015	94.4
Workers employed in personal and household service activities	44 274	23 595	53.3
Total	*88 862*	*54 974*	61.9

Source: Compiled by the author on the basis of special tabulations prepared by the National Institute of Statistics (INE). Based on the National Employment Survey results for the fourth quarter of 1990 (INE, 1978-1990).
[a] Includes professions in which average monthly wage levels for 1990 were 190 000 pesos or over.
[b] Includes professions in which average monthly wage levels for 1990 were less than 190 000 pesos.

their children. Gender-based mores –in which motherhood carries the highest priority– have thus been a factor in lower-income women's decision to work or not to work. Increases or decreases in their participation rates appear to have depended on the presence or absence of other breadwinners in the household and, hence, on male workers' unemployment levels, wages and job security.

As of 1990, Santiago's labour market was marked by gender-based forms of occupational segregation. Even though nearly 40% of economically active women were employed in non-manual activities, they were concentrated in professional and technical occupations with mid-range and low wage levels (more than 70% were teachers or nurses) and in clerical jobs. Female manual workers were chiefly employed in personal and household services and in a few manufacturing activities, especially the production of clothing. Men employed in non-manual activities were distributed more evenly among a variety of categories, including executives, managers and highly-paid professionals and technicians. Male manual workers were employed primarily in the categories of skilled craftsmen and operatives, in which few women were to be found (Muñoz, 1988; Szasz, 1994). This segregation occurred despite the fact that the educational levels of men and women in Chile are similar and that, as a group, economically active women are more educated than economically active men.

This occupational segregation is reflected in a sizeable gap between men's and women's incomes. Although a really accurate measurement of the differences in men's and women's remunerations would require a comparison of average incomes for each occupation that took into account the number of hours worked by the employees and their levels of education, we were able to arrive at an approximate measurement of this differential by estimating the average remunerations for economically active men and women in each occupational group in the Santiago metropolitan area as of 1990. According to our estimates,[1] in 1990 women's levels of earned income were equivalent to 62% of what men earned (see table 2). The wage gap appears to be particularly wide in the personal and household services sector, where women earn about half of what men in those occupations earn, but the differentials are also large in the categories of skilled manual workers, salespersons and office workers (Szasz, 1994). Within Latin

[1] Based on special tabulations of the National Employment Survey carried out as part of the Integrated Household Survey Programme.

America as a whole, as of 1990 Chile appeared to have one of the highest degrees of gender-based wage discrimination (ECLAC, 1994), even though Chilean women's level of education is above the regional average and despite the fact that economically active women in Santiago have completed more years of schooling than their male counterparts.

The proportional difference between the average wage levels of economically active men and women makes women a disadvantaged segment in Santiago's labour market. In 1990, half of all working women were earning low incomes whereas only 14% of the economically active men had incomes in that category (see table 3).

TABLE 3

Santiago, Chile: Percentage distribution of economically active population, by monthly income level and by gender, 1990
(Chilean pesos at 1990 prices and percentages)

Average monthly income (pesos)	(Percentage distribution)		Total
	Men	Women	
Less than 35 000	14.3	51.3	28.3
35 000-76 059	53.4	35.5	46.7
76 060-229 999	21.4	9.6	16.9
230 000 or more	10.9	3.6	8.1
Total	*100.0*	*100.0*	100.0

Source: Estimates calculated by the author on the basis of special tabulations of the National Employment Survey results for the fourth quarter of 1990 prepared by the National Institute of Statistics (INE, 1978-1990).

V
Recent female migrants in Santiago's labour market

Because of the shortage of job opportunities for women in their original areas of residence and women migrants' strong desire to work, their participation rate was higher than the rate for women from the metropolitan area during the period 1960-1982. This differential was accounted for almost entirely by the 15-24 age group, since the participation rates for migrant and non-migrant women over 24 years of age were similar.

Prior to the 1970s, the proportion of women under 20 years of age in the migrant population was quite high, although it was declining. By 1977-1982, the proportion of adolescents among female migrants had shrunk considerably. If this trend continues, the economic participation rate for women migrants will become more similar to the rate for women from the metropolitan area.

The differences observed in 1982 between migrant and non-migrant women's unemployment rates, by occupation, suggest that, except in the case of young women entering domestic service, it is more difficult for women migrants to find work (especially if they are professionals or technicians), and they are unemployed more often than non-migrant women are. In the domestic service category, the situation is just the opposite: unemployment levels are lower among migrant women.

An analysis of the data by occupational group indicates that between 1960 and 1982 a disproportionate number of female migrants were employed in manual activities and domestic service. However, between 1970 and 1982 their participation in domestic service fell slightly while the proportion of non-migrant women in this occupation rose as a consequence of the above-mentioned increase in live-out domestic servants.

The greater concentration of migrant women in manual activities is found only among women under 30 years of age. Above that age, the distribution between manual and non-manual activities is similar for the two groups of women. The disadvantageous position of younger migrant women cannot, however, be attributed to a lower educational level, since female migrants and non-migrants had similar educational levels in 1970 and, by 1982, female migrants were better educated than their metropolitan counterparts. In 1982, 60% of economically active women migrants were employed in domestic service whereas only 25% of non-migrant women were in this occupational group; 60% of migrant women and 40% of non-migrant women who worked as servants had completed more than six years of school, and more than 20% of the female migrants in this type of employment had received more than 10 years of formal education (Szasz, 1994).

The differences by age group and by educational level between economically active migrants and non-migrants in 1982 were smaller. Nevertheless, the two groups of women differed noticeably in terms of their position within the household where they lived, with 80% of the women from the metropolitan area who had entered the labour market being either heads of household or wives or daughters of heads of household, whereas only 29% of female migrants were in this position. Instead, most of them were not related to anybody else in the household where they lived. Moreover, 70% of the female migrants employed as domestic servants had no children, but 61% of the non-migrant women in that occupation did have children.

These differences between the two groups' positions within the household where they lived were the only characteristic that might account for the migrants' disadvantageous situation in terms of occupation and income levels. Whereas women from the metropolitan area worked to support or to help support their households, most of the migrant women did not have a home of their own in the city, and they were working to support themselves and in order to have a place to live.

Owing to the cultural differences between males and females, male migrants do not suffer the same occupational disadvantages as female migrants do. Between 1962 and 1982, the occupational and income distribution of male migrants in Santiago was quite similar to that of non-migrant males, whereas the greater occupational segregation of migrant women, which resulted in their concentration in personal services, caused them to have lower incomes than non-migrant women (see table 4). In 1982, female

TABLE 4

Santiago, Chile: Percentage distribution of economically active population, by income level, gender and whether or not migrants, 1962 and 1982

Income level [a]	Men		Women	
	Migrants	Non-migrants	Migrants	Non-migrants
In 1962				
Less than the minimum wage	8.9	6.2	45.3	23.4
Between the minimum and average wage	40.8	36.0	39.4	40.6
Between the average wage and 3.5 times the average wage	40.5	45.1	14.6	32.7
More than 3.5 times the average wage	9.8	12.7	0.7	3.3
Total	*100.0*	*100.0*	*100.0*	*100.0*
In 1982				
Less than the minimum wage	19.1	18.1	61.6	36.6
Between the minimum and average wage	53.5	55.1	26.9	46.5
Between the average wage and 3 times the average wage	19.4	18.8	7.3	11.1
More than 3 times the average wage	8.0	8.0	4.3	5.8
Total	*100.0*	*100.0*	*100.0*	*100.0*

Source: For 1962: Survey on immigration to Greater Santiago, CELADE, 1962 (Elizaga, 1970). For 1982: Estimates prepared by the author on the basis of the percentage distribution of the migrant and non-migrant populations by occupation, obtained from the sample for the 1982 population census and figures for the average monthly incomes for men and women in each occupation taken from the results of the National Employment Survey, fourth quarter of 1990 (INE, 1978-1990).

[a] The figures for 1962 refer to migrants arriving in Greater Santiago between 1952 and 1962. The figures for 1982 refer to migrants arriving in the Metropolitan Region between 1977 and 1982.

migrants earned, on average, about 78% of the average income of non-migrant women (Szasz, 1994).

The only factor that may help to account for these differences between male and female migrants is the importance of the household environment in exerting societal control over women's sexuality. The absence of their families does not appear to limit the occupational options for men, but it may have a great deal to do with the large extent to which the younger female migrants take jobs as live-in domestic servants.

VI

Final considerations

The relatively high educational level of working women in Santiago, Chile, as of 1990 casts doubt upon the hypothesis that some segments of the labour market are poorly paid because of their lack of skills and that this lack is the reason for their low level of productivity. Instead, it suggests that there is a strong demand, within a context of income concentration, for unskilled labour to work in personal service activities, but there is a scarcity of opportunities for the majority of educated women entering the labour market to obtain productive, skilled jobs.

Job opportunities for women who have completed 13 years or more of school –more than half of all the economically active women in Santiago– are confined to such occupations as teachers, nurses, saleswomen and secretaries. The number of women who obtain highly-paid management or professional positions is so small as to be insignificant. For female manual workers –even though they, too, have an educational level above the regional average– the options are basically limited to domestic service (a considerably larger occupational category than in the rest of Latin America), the garment industry and street peddling. Over half of all economically active women earn very low incomes, while only a minority of male workers earn such low wages. This corroborates the hypothesis that women constitute a disadvantaged segment of the labour market in Santiago.

The employment opportunities open to women who have recently migrated to the city are more limited –even though these women's levels of education are as high as or higher than those of non-migrant women– because most of them are segregated and channeled towards manual labour and domestic service. The greater lack of correspondence between the educational levels, occupational achievements and income levels of women in general is even more striking in the case of migrant women.

Conditions such as these should be carefully considered when designing social policies aimed at reducing inequities in the labour market. In a country such as Chile, which has shown solid progress in terms of the macroeconomic variables, the greater concentration of wealth and the heterogeneity of labour income that have been generated by the new development model are a cause of concern.

High hopes have been placed in the possibility of boosting the productivity and incomes of vulnerable segments of the labour market by improving their members' education and job training (Altimir, 1994; Rosenbluth, 1994; ECLAC, 1992). However, our research findings regarding one of those segments of the labour market suggest that problems relating to productivity and income do not primarily stem from a lack of education but are instead a result of the type of labour demand generated by the existing model, one of whose characteristics is the feeble demand for educated female labour.

Social policies intended to make labour markets more equitable and reduce poverty should carefully weigh gender-based variables. Our findings suggest that the occupational and wage segregation to which women workers are subject in Santiago is a form of cultural and economic discrimination that only exacerbates the country's already deficient utilization of the formal training possessed by the Chilean labour force. Migrant women's greater disadvantages in terms of occupations and wages also stem from gender inequalities, since the lack of a home and of a network of contacts affects them much more than it does in the case of male migrants.

The goal of reducing the gender-based inequalities affecting access to the labour market cannot be pursued solely through research within the home or in small groups of women. The task encompasses structural dimensions of our societies and pivotal public policy decisions which, in the case of Chile, do not have to do with any question of women's exclusion from formal education but instead involve gender-based components of the supply and demand for labour in the nation's job markets.

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