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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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Inauguration of the "Fernando Fajnzylber" Conference Room and presentation of CEPAL Review No. 50

Ceremony effected at ECLAC Headquarters on 2 September 1993, with the participation of ***Gert Rosenthal,*** *Executive Secretary of ECLAC, and* ***Alejandro Foxley,*** *Minister of Finance of Chile*

Address by Gert Rosenthal, Executive Secretary of ECLAC

Today, we are celebrating three important events at the same time.

The first of these is that issue No. 50 of CEPAL Review has just come out, thus marking 19 years of uninterrupted publication. We are justly proud of the high level attained by this Review, which first appeared under the direction of Raúl Prebisch and later continued under the leadership of Aníbal Pinto, ably seconded first of all by Adolfo Gurrieri and now by Eugenio Lahera. I should like to express my thanks to all of them and to say how pleased I am that the Review is now considered one of the most serious technical publications in the field of Latin American and Caribbean development.

The second event is that we have expanded the physical infrastructure of ECLAC precisely at a time when the demand for conference halls and meeting rooms is growing day by day. The new facilities harmonize with the rest of the building and are also extremely functional and comfortable. We thus have at our disposal as from today this modern conference hall and its attached meeting room.

Thirdly, in naming this hall the "Fernando Fajnzylber Conference Room" we are taking advantage of a fresh opportunity to pay tribute to one of our dearest friends and colleagues. We are honoured today by the presence of Ms Alicia Barrios, Fernando's widow, and her children, to whom we wish to express our appreciation once again. By placing Fernando's name on the plate at the entrance

to this hall, we are placing on permanent record the respect and appreciation we feel in ECLAC for a person whose legacy to the institution will long endure.

In fact, however, the various important events we are celebrating today are accompanied by a fourth noteworthy event: the participation of Alejandro Foxley, Minister of Finance of Chile, who will inaugurate this hall for the purposes for which it was designed with an important address on the present and future of the Chilean economy. Alejandro is no stranger to this institution, of course. He already did us the honour of being with us, as the main speaker, at the United Nations Day ceremony in 1991, and also during our twenty-fourth session in April 1992. He has been one of the most outstanding members of the Chilean Cabinet, as well as among the Ministers of Finance of Latin America as a whole. We are delighted to have him here with us as an outstanding professional and public servant, as a colleague, and as a friend, and we wish to thank him most sincerely for having agreed to accompany us once again today.

Address by Alejandro Foxley, Minister of Finance of Chile

I should like to thank Gert Rosenthal for giving me the privilege of taking part in a ceremony which has a significance for all of us, and especially for me, which goes far beyond the importance of the physical facilities we are inaugurating, although of course they are imbued with the characteristic spirit of the person to whom we are paying tribute today, that is to say, with a high level of quality, albeit accompanied by great modesty, and a sense of the future.

I have been wanting for some time to have the chance to say a few words about our dear friend Fernando Fajnzylber. I am very happy to see Alicia and her family here today, and I should like them to know that I am proud to be here at this ceremony, because just as Gert said that many references have been made in ECLAC to the contribution that Fernando made to that institution, I too would like to say now that what we have managed to achieve in these four years of government by the Concertation –the union of parties for democracy– has been very closely connected with the work of a few persons like him, who, although not in the government, helped us enormously for many years to get a clearer picture of what we ought to do; people with whom we learnt to exchange and compare ideas at a very demanding level, in order later to put them to the test; people we met with, at moments of desperation and loneliness in Mexico and other places in Latin America, to give us mutual encouragement in the long struggle to restore democracy, but above all to endow that renewed democracy with the qualities and significance of excellence, modernity, and the capacity to solve the people's problems and build up a strong, stable system of harmonious relations.

For those of us who have formed part of this government, it was Fernando Fajnzylber who had the clearest ideas, and he exerted a very important and significant influence on all of us. Indeed, I must confess to Gert that we tried to convince Fernando that he ought to come into the government with us, in some position that would undoubtedly have been a very important one. But there we are:

we have been working away for nearly four years, and we feel that Fernando and ourselves had always been working, and would continue to work, towards the same objectives.

When one tries to give a brief account of what this experience of government may have been, I think that we are really talking about a project that we carried through in conjunction with those who work in this institution, mutually exchanging ideas all the time, and also with those who were scattered over many parts of the world during 17 years, seeking the roots of the problems to be tackled in order to further our development, our harmonious coexistence and our political system.

After nearly four years, here we are.

If one had to summarize the results of our economic policy on the basis of two or three indicators that illustrate the relative success of that policy, then we should look at what has happened during those years, and especially more recently, as regards the processes of investment in this country. A few days ago, the President of the Central Bank presented the Press with the latest National Accounts of Chile. Those figures show that during the four years of democratic government the rate of investment in Chile rose on average to almost 25% of GDP, compared with 19.8% in the previous five years. Also a few days ago, the investment figures for the first half of 1993 were announced: they register growth of 24%, and that at a moment only four or five months before a Presidential election!

In this democratic government, we are going to register an overall average economic growth rate of between 6.3% and 6.4% per year. I think the employment figures speak for themselves: those for July 1993 show a 6% increase in employment in the space of a year: that is to say, over 270 000 new jobs. I believe, therefore, that we have good reason to be satisfied with democracy and what democracy has been able to achieve in the very area where we were supposed to be weakest: the capacity to secure economic growth with efficiency at a higher rate than in the past. Naturally, we are engaged in a daily struggle to make things work, and we are much more keenly aware of the imperfections in our work, the goals we failed to reach, and even sometimes absolute setbacks. All the same, those viewing our country from abroad have a clear picture in their minds and maintain without exception that Chile is today in the same class as a group of countries which, to tell the truth, were never specifically our models: I refer to the South-East Asian countries (although who knows if they were in fact a model for one of the most far-sighted among us, Fernando Fajnzylber, when he began, with that eagerness and energy that were so characteristic of him, to study the experience of those newly-industrialized nations). I think it is interesting to note that both studies of international competitiveness and other indicators –such as the rate of investment– are beginning to place not only Chile but also some other Latin American countries in a class of parameters similar to those of the successful Asian experiences.

Naturally, in these respects we are being judged in terms of efficiency and growth, but it goes without saying that the main content of our statements over the last 20 years has been connected above all with questions of equity and social justice and with the idea that an economic growth process cannot be sustainable over time unless it is accompanied by very marked and significant expansion of the opportunities open to the poorest sectors.

I think it would be both useful and interesting to recall something that we already know: that between 1987 and 1992 the percentage of poor people in the

population went down from almost 45% to 32.7%, while the monetary income of the poorest 20% of the population rose by 26% between 1990 and 1992, whereas between 1987 and 1990 it had increased by only 4.6%. In order not to tire you with a long list of statistics, it could be concluded, then, that in this phase too there has been very marked progress in the reduction of poverty and the provision of more equal opportunities.

Instead of going into more detail on the shortcomings still evident in this task, I think it might be more interesting to exchange a few ideas on something which many people are asking themselves: can the good results obtained in this period be maintained in the future? I would say that, from the point of view of growth, the main question which is in the air –and often also in the Press– is whether we now have greater capacity to cope with the external circumstances which previously tended to condition very directly –and sometimes dramatically– our national growth potential and the living conditions of the population. Is the economy more or less vulnerable today from the point of view of the external sector? Instead of boring you by reciting a whole set of indicators which Roberto Zahler, President of the Central Bank, could explain to you much better than I –indicators on the basic, structural situation of the external sector, which I may say I consider to be extremely sound– I would merely like to note that whereas in 1980 34% of the total saving which this country needed to finance its investments came from abroad, that proportion has now gone down to 5%. Looking at it from another angle, whereas in 1985 Chile had a national saving rate of 7.8%, during our government this rate has averaged 21%. I believe this is an element which can be seen as allowing us to view the future with confidence and tranquillity.

Can the growth rate and the increased investment be maintained in the future? The answer will depend on many factors, but I would like to say that we are concerned to create suitable conditions for ensuring the continuation of the current extraordinary buoyancy of investment (the fixed capital investment rate will be between 27% and 27.5% of the product this year). Yesterday, for example, I spent the day in Congress, where we have been simultaneously formulating, discussing and voting on three Bills on matters which, in my opinion, directly affect the possibilities of increasing investment in the future: modernization of the capital market, the proposed tax reforms (fundamentally involving stabilization of the tax structure for the next four years), and the proposals for modernizing the banking system and reducing the outstanding debts of certain banks.

I am optimistic in this area too: the country will continue to have a stable economic policy, basically along the same lines we are following now. I believe these reforms will provide a sounder base for channeling savings towards investment, and I therefore think the fundamental problem will reside in the capacity to manage the fiscal budget and, above all, in the capacity to ensure that the largest possible proportion of fiscal resources go to investment rather than current expenditure. Of course we are aware that there will be certain problems here, because control of the State's current expenditure will undoubtedly become increasingly difficult, partly because of the seriously deprived situation of public employees such as teachers, health workers, etc., and the fact that those sectors have quite powerful trade union organizations which negotiate on a centralized basis and are rapidly becoming areas of political conflict. I think some queries are arising over the best way to deal with these conflicts and situations in the context of modernization of the State.

Can this effort be kept up in the future?

I think it is important that we should understand what phase of development we are in, because in Latin America we have often become accustomed to considering ourselves as part of a world far removed from the development possibilities the industrialized countries have enjoyed.

A few days ago, I saw some figures which have not been given much attention in the public debate. They were published by the International Monetary Fund as part of a very lengthy study, lasting many years, to try to measure the relative purchasing power of different countries and thus correct the measurement of per capita income in line with the real purchasing power of that income in each country. The results, projected to 1992 and expressed in U.S. dollars of that year, take as their benchmark the projected purchasing power in the United States economy. According to these figures, the equivalent per capita income for a group of Latin American countries comprising Venezuela, Chile, Uruguay and Mexico would be US$6 000 - 7 000, US$5 000 for Argentina, and around US$4 800 for Brazil. Using the same element of comparison, we see that in East Asia the purchasing power for a country like Korea amounts to US$7 200, while for Thailand the figure is US$4 600. In Southern Europe, Spain's purchasing power amounts to US$8 000, that of Greece to US$7 300, and that of Portugal to US$6 700.

I know that all these figures can have differing degrees of reliability or acceptability, but I believe they do mean that it is very important, for diagnosing the situation we are really facing in Latin America in general and Chile in particular (and also for determining the nature of the problems we are going to have to face in the future), to understand that in reality we are in the category of middle-income countries, and not as low as we thought. This means that our countries are beginning to raise problems that go beyond, and are much more complex than, the fundamental task of meeting the basic needs of the poorest citizens and setting in motion economies which are not growing at all.

Therefore, in this list of outstanding problems, I have avoided stressing once again the most obvious issues, such as the struggle against poverty, but would like to refer briefly instead to the new problems, typical of middle-income countries, which severely affect the middle-income sectors and are going to have a lot of influence on the political sustainability of the processes of consolidation of democracy, opening-up of the economy, modernization and rapid growth which are to be observed in the region.

After a period of rapid but very disorderly growth, our countries are beginning to develop problems such as the quality of public services or the difficult access to them by certain sectors of the population. In the most orthodox neoliberal approaches which have been in vogue, the problem is diagnosed as inadequate quantity and quality of these services, and the recipe recommended has been their privatization.

I believe this approach represents an over-simplification of the problem, however. Only yesterday the Press published the results of a survey of the population of Santiago regarding the way they viewed and rated nearly 25 public services provided by the public and private sectors, and the services which came last in this survey in terms of the rating given to them by the public were FONASA, the public medicare agency, and the ISAPREs, its privately-run equivalent. This comes as a surprise in the case of the ISAPREs, a private health system which, on the face of

it, has all the virtues of the neoliberal solution: multiple choices for the consumer, free access, and a seemingly competitive position in the market.

What this survey reveals is a reality which is beginning to become more and more evident, is occurring in other countries with similar levels of income, and is reaching a state of crisis in the high-income countries (the big debate in the last electoral campaign in the United States was over the crisis in a private health system which is no longer working: a system that does not offer a standardized product giving the consumer a real free choice, that does not allow the consumer to know the cost in advance, that is giving rise to growing dissatisfaction among the population, and from which whole population groups, such as older people, are almost automatically excluded).

Something similar is also taking place with the privatized sector of social security. There has recently been a heated debate in Chile over the system of life annuities, which are private insurance policies taken out by those about to retire, after having built up savings in a private pension fund management scheme. The debate is centered on the lack of transparency and the shortcomings of this insurance market, on the excessive costs involved for those about to retire, and the lack of information available to users. Thus, improving the quality and quantity of these services calls not only for the long-recognized task of modernizing and decentralizing the State-run service, which it is generally agreed suffers from enormous shortcomings, but also, and increasingly, to ensure that the privately-run sector of the system is suitably regulated, really does respect the rights of the consumer, and does not provide opportunities for oligopolistic rents.

I think that in some middle-income countries which have registered very rapid but rather chaotic economic growth, an over-optimistic view has been taken that the market, if allowed to operate freely, could solve these problems of disorderly growth. We repeatedly see in our everyday life the tremendous shortcomings for which the market is responsible. The growing urban chaos in the main cities of Latin America, especially in a country like Chile, shows the shortcomings of the approach we have taken so far to these matters. The prevailing chaos in urban construction programmes and in the management of public open spaces and recreational areas, together with urban road congestion, is causing a deterioration in the quality of life of all sectors and is particularly irritating to the middle sectors, who see how their income is rising but their collective living conditions are very sharply deteriorating. I will make no mention here of the even more widely known aspects of pollution or the destruction of the rural environment observed in many cases.

I am mentioning these kinds of problems –and only a few of them, although the range of problems could be greatly extended– because I think that we are beginning to be faced with an old issue in a new form. The old issue is that of determining the right mix between the public and private sectors, between the State and the market. I think that the trends and problems we are facing point unmistakably to the need to strike a better balance, with a State endowed with increased capacity to regulate the market in such areas as urban land use, public transport, standardization of public services and their prices, infrastructure, privatized monopoly services, etc. I believe that this better balance between the market and regulation should also be accompanied by a new balance in society –through the educational system– in order to offset the excessively individualistic approach of the private sector by giving greater weight to collective action in solving the problems of social life.

I believe, therefore, that this set of new problems (I refer only to problems of a sociological nature, rather than to structural problems of the economy, which are the concern of ECLAC) means that we must get away from these extreme, narrow-minded, simplistic approaches and replace them with a new attitude, free of complexes and, I would venture to say, ideologically more clearly defined in the direction of a State which does what it has to do in order to ensure that in the development process increased income is accompanied by a better real quality of life of the population.

Among all these new and old problems –and I would even go so far as to suggest that this is perhaps the crux of the matter– is the political dimension. It may seem strange that we economists, after having been in charge of the economic and financial management of the State for nearly four years, should now come to such an apparently surprising conclusion about the preponderance, as a key element, of the level of performance reached in political life: that is to say, the importance of politics as the fundamental factor determining the feasibility of everything else.

After the almost euphoric sensation we experienced a few months ago because of the smooth and efficient running of the economy, the exemplary functioning of the government coalition, the very good relations between the government and a substantial part of the Opposition, and the outstanding relations it has been possible to establish with the labour sector and even, although with a little more difficulty, with the business world, a feeling is beginning to grow up in the corridors of power that the truth is that we have enjoyed an exceptional political situation because we have been going through an exceptional period in the country's history: seventeen years of dictatorship did not take place in vain, the way the country and its people suffered for so long was not a useless sacrifice, and the people of Chile finally learnt their lessons, drew their own conclusions, and were thus able to give this government the breathing space, time and goodwill needed in order to permit such "exceptional" policies. Now, however, the idea is beginning to take root that this stage is now over and that there are scattered symptoms of acceptance of the fact –which would in no way be unusual– that the time has come to return to politics in the sense that politics was always understood in Chile.

I believe that may well be the heart of the matter. I think that the distinctive factor and the main comparative advantage that this country has had, which has permitted it to achieve this performance that we did not think was possible (these rates of growth and investment, this increase in employment, the fact that the struggle against poverty was carried out at the same time as heavy investments in education, health and housing), has been the preponderance of politics, but good politics, during this period. I think, then, that one of the great topics for future reflection is how to maintain this approach and keep up our efforts, how to create the institutional and structural conditions to make this kind of politics possible, how to ensure that a development process which must be sustained for several generations is given a suitable framework of democratic and political institutions.

This is a matter on which Latin American political experts have long reflected, but unfortunately this message has not yet got through to the political class itself. Here in Chile, we are reaching definitions at this very moment on some very fundamental aspects –such as the nature of the Presidential system, the length

of the President's term of office, and the role of Congress– which will have a decisive influence on this country's capacity to continue basing its politics on cooperation rather than conflict.

I was keen to make these brief comments, which are perhaps not very much in keeping with ECLAC's traditional line, in the presence of Aníbal Pinto, Director of CEPAL Review, whose fiftieth issue we are celebrating today. Aníbal Pinto is one of the people who have had the biggest influence on the intellectual, professional and personal development of all of us: we have been reading his works with the greatest interest for many years, and his ideas perhaps come closest to what we might be hearing if Fernando Fajnzylber were here with us today, for when we listened to Fernando, when we saw how he got to the root of problems in a couple of well-chosen phrases, when we marvelled at the fluidity of his style, the warmth of his human contact, the feeling he gave us that we were part of an ambitious group of Latin Americans who did not give up because things were going badly or very badly and did not accept mediocrity as the norm in public activities or settle for the absence of originality in intellectual work or the formulation of ideas, we got the impression that there was a kind of intellectual brotherhood between that great Latin American economic thinker Aníbal Pinto and that great human being Fernando Fajnzylber.

Flying geese or *sitting ducks?* Transnationals and industry *in developing countries*

Michael Mortimore

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The constitution of a new international industrial order dominated by a core of large transnational corporations generally makes life more difficult for the great majority of developing countries because, since most are not in a position to compete effectively, they face still greater marginalization. TNCs more than ever before can significantly influence the international competitiveness and therefore the nature of incorporation of developing countries into the new increasingly integrated international production system. The national origin and form of foreign direct investment and technology are very important factors in accounting for the kind of impact TNCs have on local industry. The experience of some of the newly industrializing countries of developing Asia suggests that the more dynamic Japanese FDI and technology which comes in the form of minority capital or non-equity participation in local firms has been a very important element in improving the international competitiveness of those countries and ensuring the continuous technological upgrading of their industry. The Latin American experience with the less dynamic United States FDI and technology, which normally came in the form of the establishment of subsidiaries or majority-owned affiliates, has been that this has tended to reinforce the bias towards inward-looking industrialization by import-substitution and has therefore done little to improve the international competitiveness of Latin American industry, which is thus being progressively marginalized, both from an international and a corporate perspective.

I

Introduction

A new international industrial order is taking shape which will have dramatic consequences for developing countries (Mortimore, 1992). One of its principal characteristics is that it primarily concerns a transnational corporate core of a few thousand global companies operating in a half dozen technologically-advanced industries and in another half dozen which are undergoing an active process of industrial restructuring. Around this core, a new and integrated international production system is emerging. This system is centered on the Triad, that is, the huge markets formed by the European Economic Community, North America and Japan, but it also extends to regional clusters of developing countries associated with each of these three major markets (UNCTAD, 1993; CTC, 1991a).

Technology is now the most crucial element in defining competitive advantage.[1] Clear indications of the new international order are evident in the processes of globalization and specialization characterizing foreign trade flows and the processes of globalization and regionalization linked to flows of foreign direct investment. Within the Triad, Japanese transnational corporations have made enormous advances, primarily at the expense of their American and European counterparts. Their gains have been registered mainly in the technologically-advanced industries where international competition has become most intense, such as computers and office equipment, automobiles, consumer electronics, machine tools, etc., in which Japanese manufacturers have made big inroads into international markets and are establishing new international or regional manufacturing operations.

The increased international competition in global economic relations has meant that developing countries now receive fewer preferences from the OECD countries, and at the same time have to compete on harsher terms with them. Only a relatively small group of developing countries are in a position to do so. At the same time, it is evident that significant segments of the new international industrial order are being transferred or assigned to manufacturing operations in developing countries which possess the competitive advantages needed by the transnational corporate core. These developing countries *could* possibly be incorporated into the new international industrial order, but the extent of their incorporation will depend on the nature of the competitive advantages offered by the local industrialization process.

Whereas national policy decisions used to be the defining element of the local industrialization process, in the new international industrial order the more consequential aspects of decision-making shift to the transnational corporate core of the new and integrating international production system. In this sense, the competitive situation on international markets for TNC products and the corporate strategies designed to deal with this factor take preference in the transnational corporate core's decisions to make investments, generate trade and transfer technology. The way developing country governments adapt to this new order will determine whether they are integrated into the international production system as "flying geese" or "sitting ducks".

[1] See Cantwell and Dunning, 1991; Chandler Jr., 1990; Encarnation, 1992; OECD, 1992; Teece (ed.), 1987; and Thurow, 1992. With regard to developing countries, see Ernst and O'Connor, 1989.

II

International competitiveness: developing Asia's flying geese and Latin America's sitting ducks

In the course of the delineation of the new and integrating international production system, a limited number of developing countries will become associated with particular regional sourcing clusters or networks, which for all practical purposes will define their incorporation into the new industrial order. Historically, developing country industry has been incorporated in quite different ways by transnational corporations. The experiences of several developing Asian countries and most Latin American countries provide some insights here.

1. The developing Asia scheme

Table 1 shows the essence of a conceptual scheme, based on the works of Porter and Ozawa, by which the Asian experience can be interpreted (Porter, 1990; Ozawa, 1992). Simply put, it is argued that in Asia it is possible to identify a defined trajectory to growth and development directly related to the competitive advantages possessed by developing countries in Asia. There are four stages in this trajectory: factor-driven, investment-driven, innovation-driven and wealth-driven. Certain changes in patterns of foreign trade and foreign direct investment are associated with each stage.

In the first stage, the only advantages possessed by the usually extremely poor, overpopulated and underdeveloped countries are their natural resources and cheap unskilled labour. Industries in the fields of food processing, textiles and simple manufactures of leather and wood are usually initiated in this stage, as are assembly operations based on imported inputs. Foreign trade develops on the basis of exports produced by these factor-intensive activities, and foreign direct investment arrives seeking natural resources and cheap labour.

Over a period of time the developing country generates and accumulates capital and the weight of the industrialization process shifts toward the second stage: that based on more capital-intensive activities. As a result, in addition to the exports generated by the first stage of factor-driven growth there is the new foreign trade created by the investment-driven activities in consumer durables (consumer electronics and automobiles) and intermediate goods (steel, etc.)

TABLE 1

Competitive advantages and industrial development

Stage of industrial growth	Exports of goods	Foreign direct investment flows
1. Factor-driven	Natural resource-based and labour-intensive exports	Inflows of FDI seeking natural resources and cheap labour (food, textiles, etc.)
2. Investment-driven	The above, plus capital-intensive exports	Inflows of FDI to durable consumer and intermediate goods (consumer electronics. automobiles, etc.) Outflows to factor intensive industries
3. Innovation-driven	The above, plus capital goods and R & D-intensive exports	Inflows to capital equipment and R & D-intensive activities (machine tools). Outflows to investment-intensive industries
4. Wealth-driven	Loss of international competitiveness	

which initiate production in an import-substituting environment and then gradually become more internationally competitive. Outward foreign direct investment by local groups in the factor-intensive activities they have come to dominate is directed to other developing countries which offer more competitive advantages in these factors, while inward foreign direct investment is registered in the above-mentioned capital-intensive activities. Compared with the first stage, the second stage is characterized by much greater national value-added, rising real wage rates, and increasing technological sophistication of local manufacturing operations.

The third stage, based on innovation, is reached by very few developing countries. Japan might be considered the Asian leader in this respect. Here, technology becomes the primary element in determining competitiveness in the fields of capital equipment (machine tools) and research and development-intensive activities (computers, semiconductors), and over time such technology is increasingly locally-generated rather than transferred from the exterior. As foreign technology is accessed, assimilated, adapted, and eventually improved upon, new more technologically-sophisticated exports are added to the existing (but less and less dynamic) ones based on factors and investment. Outward foreign direct investment is directed to countries offering relatively more competitive advantages in the investment-driven industries in which local groups have become efficient, while inward foreign direct investment arrives to take advantage of technology-driven or innovation-intensive activities. As was the case in the transition from the first stage to the second one, local value-added grows, real wages rise and technological sophistication increases. The fourth stage, based on wealth, need not be referred to here as it does not yet fit the situation of the Asian countries; however, the loss of international competitiveness in this stage may be equated with the situation of Europe and the United States.

In the context of the foregoing conceptual framework, the "flying wild geese" scheme sees growth and technological progress in Asia in terms of the image of the arrow-shaped formation of migrating waterfowl, in which there is a lead goose which flies ahead of the flock and leads the way. In Asia, that role is played by Japanese industry, which is more technologically sophisticated and which, during the innovation-driven stage of competitive development, spins off investment-driven industries (intermediate and capital-intensive goods) to the more advanced of the developing countries of the region just as it did previously with labour-intensive manufacturing when it left the factor-driven stage of competitive development. In this sense, the newly industrializing Asian countries (Korea, Taiwan, Hong Kong and Singapore) occupy positions in the flying geese pattern immediately behind Japan. Certain members of the Association of South-East Asian Nations –the ASEAN Four (Indonesia, Malaysia, Philippines and Thailand)– follow by picking up the labour-intensive activities spun off by the Asian NICs. China might be considered to be further back in the flock, having picked up the most labour-intensive and least technologically-demanding assembly operations in which the ASEAN Four are currently losing relative competitiveness.

As can be appreciated, the operational element of this scheme is *the process of learning associated with technological development*, which begins with the transfer of the original foreign technology and passes through several successive stages –assimilation, absorption, diffusion, adaptation, institutionalization, generation and innovation– until the original technology (or an improved version of it) is again transferred, this time by the developing country which received it, to a relatively less technologically-advanced economy. Several countries of developing Asia have been particularly astute in employing export processing zones to begin the process of technology transfer which culminates in them challenging the original supplier of such technology on the international market.

The "flying wild geese" scheme, as applied to Asia by Fukusaku, among others (Fukusaku, 1992), demonstrates that some developing countries are capable of *consciously altering the structural nature of their integration into the international production system* in respect of their exports of manufactures by increasing the human capital- and technology-intensive nature of the latter and reducing their natural resource- and unskilled labour-intensive aspects. In this way, their industrialization process becomes centered on *technological upgrading*, which in turn provides a more sustained basis for that process and ensures a measure of local control over industrialization in the context of the new international industrial order.

The "flying geese" scheme suggests that if it is necessary to imitate others in order to gain a place in

the new international industrial order, then it is of the utmost importance to emulate a *successful* example. In the space of fifty years Japan graduated from being a textile producer to a textile machinery producer. In this regard, the Asian NICs and the ASEAN Four have demonstrated not only that they are astute imitators but that they are even becoming tough competitors for their Japanese mentor. One need look no further than the examples of Korean automobiles or Taiwanese computers.

2. A comparison with Latin America

The magnitude of the success of developing Asian industry in terms of international competitiveness is further highlighted by a comparison with the situation in Latin America. Data from the United Nations COMTRADE data base on exports of manufactures during the 1966-1989 period show that the share corresponding to developing countries rose from less than 13% to over 19% and that of the Asian NICs and the ASEAN Four together rose from less than 4% to over 12%, whereas that of Latin America declined from 5% to 4% over the same period. A look at the relatively more technologically-advanced industries, such as electrical machinery and electronic equipment (ISIC 383), non-electric machinery (ISIC 382) and transportation equipment (ISIC 384), is even more telling.

Over the same period, the share of developing Asian countries in total exports of manufactures in ISIC category 382 rocketed from under 2% to almost 21%, whereas that of Latin America did not surpass 2%. Obviously, the success of the developing Asian countries in the electronics industry has been phenomenal (Ernst and O'Connor, 1992; Mody, 1989). In the non-electrical machinery industry (ISIC 382), developing Asia's share of exports of manufactures rose from less than 1% to 9% between 1966 and 1989, whereas that of Latin America only advanced from slightly less than 1% to slightly more than 1%. In the transport equipment industry (ISIC 384), developing Asia increased its share of total exports from less than 1% to over 4% during that period, whereas Latin America's penetration of the market did not exceed 2% in 1989. Thus, not only did developing Asia's export performance greatly exceed that of Latin America but it was particularly marked in the more technologically-sophisticated industries that TNCs tend to dominate in the context of the new international industrial order.

Blomström (1990, pp. 2 and 5) has suggested that FDI flows to the manufacturing sector of developing countries have traditionally coincided with the industrial and trade policies being implemented by those countries. In that sense, it may be noted that Latin America originally opted for an inward-looking strategy and attracted foreign manufacturing investment (mainly US and European) into protected import-substituting activities, and in spite of efforts at export promotion it never really succeeded in convincing TNCs to export in significant volumes from their local operations. The Asian NICs, which were relative latecomers in terms of their industrialization process, made a clear transition from import-substituting industrialization toward more outwardly-focussed policies which, combined with the judicious use of free export processing zones, have resulted in more export-oriented (mainly Japanese) TNC operations. Kojima (1975) even went so far as to suggest that FDI came in pro-trade and anti-trade variants. The similarities and differences in the Japanese and US TNC operations in these two regions will be dealt with in section III below.

Relative FDI flows to Latin America boomed during the 1970s and it appeared that the region was being progressively incorporated into the global productive structure, although with hindsight it is clear that Latin American trade flows, especially exports, did not keep pace with FDI inflows. The import-substituting nature of the industrialization process, which depended for its dynamism on the local market, was sent reeling by the 1980s debt crisis. The Asian NICs, in contrast, saw their export-oriented industrialization process dovetail well, first, during the 1960s and 1970s with the expanding multilateral trade framework and the establishment of a regional supply network by Japanese TNCs, and later in the 1980s with surging US imports and an explosion of intraregional FDI primarily associated with the offshore Chinese network.[2] Thus, FDI flows to Asia boomed in the 1980s (IMF, 1992, p. 172) and the Asian NICs were progressively incorporated into the global structure of production.

As table 2 shows, a feature shared by foreign trade and FDI has been that the principal gains were registered by the Asian region in general and the Asian NICs in particular; however, in the case of FDI

[2] The Economist, 1991, p. 11, and 1992, pp. 21-24; CTC, 1991b; Whitmore and Hyun, 1989.

TABLE 2

FDI inflows, by area and period, 1970-1989
(Average annual inflows in millions of dollars and percentages)

	1970-1974	1975-1979	1980-1984	1985-1989	1970-1974	1975-1979	1980-1984	1985-1989
All market economies	**14 691**	**27 534**	**52 841**	**117 047**	**100.0**	**100.0**	**100.0**	**100.0**
a) Industrial economies	12 682	21 022	37 326	100 081	86.3	76.3	74.8	81.4
b) Developing country economies	2 009	6 512	15 515	16 966	13.7	23.7	25.2	18.6
i) Asia	673	1 422	4 907	12 449	4.6	5.2	9.3	10.6
Taiwan (included in China) [a]	...	...	530	2 487	...	...	1.0	2.1
Korea	77	71	71	580	0.5	0.3	0.1	0.5
Hong Kong	...	...	680	1 650	...	...	1.4	1.4
Singapore	213	390	1 387	2 690	1.4	1.4	2.6	2.3
Malaysia	210	442	1 131	799	1.4	1.6	2.1	0.7
Thailand	83	64	285	732	0.6	0.2	0.5	0.6
Philippines	4	110	39	389	0.0	0.4	0.1	0.3
ii) Latin America	1 588	3 574	5 434	5 655	10.8	13.0	10.3	4.8
Brazil	852	1 823	2 100	1 426	5.8	6.6	4.0	1.2
Mexico	413	790	1 499	2 178	2.8	2.9	2.8	1.9
Argentina	10	120	439	730	0.1	0.4	0.8	0.6
Colombia	34	72	398	559	0.2	0.3	0.8	0.5
Chile	-142	99	242	125	-1.0	0.4	0.5	0.1
Venezuela	-140	-64	120	81	-1.0	-0.2	0.2	0.1
iii) Africa	537	918	1 096	2 602	3.7	3.3	2.1	2.2
iv) Middle East	-19	275	323	547	-0.1	1.0	0.6	0.5
Turkey	58	52	65	271	0.4	0.2	0.1	0.2

Source: International Monetary Fund, Balance of Payments Tape. UNCTC estimates for Taiwan/China and Hong Kong.
[a] As this figure combines Taiwan and China it is not comparable to the trade statistics.

the Asian gains were not only superior to those of Latin America but also the increasing relative incorporation of the Asian region coincided with an increasingly marginal position for Latin America, especially as of 1985. From the point of view of FDI inflows as a percentage of world totals, Latin America and developing Asia traded places over the 1970-1989 period. The developing countries in general became more marginal in terms of global foreign direct investment flows, with their share dropping from 25% to 19% during the course of the 1980s, but the Asian region actually increased its share from 5% to 11% over the 1970-1989 period, and those gains were concentrated mainly in the Asian NICs. The Latin American region saw its share contract from 11% to less than 5% during the same decade, after reaching a peak of 13% in 1975-1979, and it represented the most rapidly marginalized of all the developing areas.

Clearly, developing Asia and Latin America have had radically different experiences as regards their processes of industrialization, the international competitiveness of their manufactures and the nature of their incorporation into the new international industrial order. The image of flying geese and sitting ducks is a particularly appropriate one in the sense that the flying geese formation suggests order and direction. Moreover, viewed from the point of view of vulnerability to predators or hunters, the flying geese are well beyond the range of most hunters, whereas a duck quietly resting on the water usually represents a defenceless target with little hope of escape.

Having associated developing Asian industry with the image of flying geese and Latin American industry with that of sitting ducks, it is necessary to identify the factors which account for those different characterizations. Below, we suggest that the *national origin* of foreign direct investment (also considered as the source of foreign technology) and the *form* of FDI or technology transfer are critical explanatory factors.

III

The source and form of FDI and technology: their importance for international competitiveness

A first factor which needs to be explicitly taken into account in each case is the nationality (or country source) of the principal foreign investors and providers of foreign technology. Detailed and comparable information on the operations of European TNCs does not exist, therefore the present analysis will be limited to the operations of US and Japanese TNCs.

1. Characteristics of the activities of United States TNCs in Latin American industry

Historically, United States (and European) TNCs have dominated the foreign direct investment flows and technology transfers to Latin America, while more recently Japanese TNCs have come to dominate those going to the Asian NICs (CTC, 1992, and CTC, in the press). Given that the subsidiaries of United States TNCs were designed primarily to service the import-substitution needs of the local economy or, to a lesser extent, the processed raw material needs of the US TNCs, exports of manufactures were not a principal feature of such operations. While it is true that United States TNCs were responsible for a growing share of the exports of manufactures from Latin America, in general export propensities were low due to the preference for local sales, which were usually more profitable, and the relative inefficiency of those operations. United States TNCs dominated wide areas of the Latin American manufacturing sector (Newfarmer and Mueller, 1975), especially chemicals and machinery, and the limited efficiency of their operations generally prevented them from serving as significant competitive stimuli for national enterprises, especially from an export perspective (Jenkins, 1990, p. 218; Blomström, 1990).

While Latin American governments tended to cede the more technologically sophisticated industries to TNCs (machinery, chemicals, for example), believing that the latter would provide the necessary technology, they often obliged TNCs to take on local partners in certain specific activities (e.g., petrochemicals, auto parts, computer equipment, etc.). The conversion of import-substituting industries to export activities has become an urgent need for United States TNCs operating in Latin America since the debt crisis exploded in the 1980s. The degree of success attained in this is not as yet well-known, apart from the fact that trade liberalization policies have been found to be much slower than expected in provoking structural adjustment at the company level (Papageorgiou, Choksi and Michaely, 1990; Ten Kate, 1992).

2. Characteristics of Japanese TNCs in the industry of developing Asia

The impact of Japanese TNCs on the Asian NIC manufacturing sector appears to have been quite different. The Japanese TNCs seem to have selected their foreign investment and technology targets primarily in terms of factors related to international competitiveness rather than simply the size of the national market. To a significant extent, Japanese TNCs were transferring Japanese operations which had lost competitiveness to lower-wage areas abroad, as well as establishing low-cost sourcing centres to provide components for vertically integrated international industries. Given the small size of most developing Asian local markets, an export orientation was central to the decision-making process regarding investment and technology transfer. Incentives in the form of free export processing zones stimulated this transition.

Majority-owned Japanese operations in the zones usually generated a significant amount of subcontracting activities for local enterprises (Sato, 1986; Minato, 1986). To the extent that the national market came to interest these Japanese investors, joint ventures with local partners often proliferated. Japanese foreign direct investment was clearly an important element in relocating production within the

region in response to shifts in competitive advantage (United Nations, 1991, p. 86), but the most important feature was that *national* companies were driving those economies (CTC, 1992; *The Economist*, 1991, p. 11): especially local companies contracted as suppliers to Japanese TNCs. When Japanese TNCs lost competitive advantage, the Asian NICs were able to meet the cost and quality requirements demanded by the Japanese firms, and that served as a strong stimulus to consolidate a solid export-oriented process of industrialization. Behind the Asian NICs, the ASEAN Four stood waiting for opportunities, not only in labour-intensive industries but also in others in which their advances in technological upgrading became a factor in improving their international competitiveness (see, for example, Dahlman and Brimble, 1990).

Rather than making a simple comparison of the Latin American operations of United States TNCs with the Asian operations of Japanese TNCs, it has been considered more appropriate to concentrate on the more technologically-advanced operations (machinery and transport equipment) of *both* United States and Japanese TNCs, especially those with subsidiaries in both Latin America and Asia. It was felt that this would provide a clearer picture of the nature of the international competition at the technological frontier in so far as it involved developing countries. Table 3 provides a first approximation in this respect.

3. The situation in more technologically sophisticated industries

The information contained in table 3 provides a snapshot of the changes which took place during the 1980s in the more technologically complex activities of the manufacturing sector. It will be seen that while the 1982 stock of United States FDI in the manufacturing sector in general and in the machinery and transport equipment industries in particular was larger in volume (US$77 billion compared to US$20 billion) than that of Japan, the more technologically complex industries were of similar relative importance (around 38% of the total for the manufacturing sector) in terms of the structure of FDI stocks. The United States FDI was more centered on general machinery (13.4%), while that of Japan was more focussed on electrical equipment (14.4%). A similar concentration (around 14%) was encountered in the transport equipment industry. By 1989, however, great changes had taken place. The stock of United States FDI (US$156 billion) was still very superior to that of Japan (US$66 billion), but the Japanese FDI was expanding faster.

The composition of United States FDI did not change significantly during this period (flows were small compared to the large stock), but Japanese FDI showed rapid specialization in the machinery and transport equipment sectors, considerably outpacing the United States FDI in relative terms. In other words, the Japanese FDI over this period was considerably more dynamic in terms of its expansion (assisted after 1985 by a strongly appreciating yen) and its specialization in technologically sophisticated sectors (which increased from 36.5% to 48% of the total stock of FDI in the manufacturing sector).

Of special interest is the regional orientation of United States and Japanese FDI during the 1980s in these same industries. The table shows that the stock of United States FDI, historically centered on the European Community (43.4% in 1982), Canada (24%) and Latin America (18%), had changed somewhat by 1989. Relative increases occurred in the cases of the European Community (to 48%), Japan (from 2.4% to 6.4%) and developing Asia (from 2.7% to 4.3%), whereas a minor relative decline took place in the case of Canada and a dramatic decline occurred in that of Latin America (from 18% to 13.7%). The bulk of United States FDI remained focussed on the European Community and Canada, but the Asian region (Japan plus developing Asia) was apparently close to displacing the Latin American region as a target of FDI from United States TNCs operating in the manufacturing industry. In terms of industrial specialization in the machinery and transport equipment sectors, the biggest changes concerned new FDI in the transport equipment sector in Europe and Japan and the electrical equipment industry in developing Asia. Thus, even though the new inflows were relatively small compared with the large stock of FDI in the case of the United States TNCs, some alterations in its geographical distribution could be perceived during the 1980s.

The Japanese TNCs, however, were much more dynamic with their manufacturing sector FDI during the 1983-1989 period, and their regional focus was almost exclusively on the North American market, which rose from 27% to account for 51% of the total Japanese stock of FDI in the manufacturing sector. Developing Asia, which was previously the centre of the nascent FDI network with one-third of the total

TABLE 3

Comparison of growth and regional distribution of United States and Japanese foreign direct investment (FDI) in the manufacturing sector, 1982-1989

	European Community		North America [a]		Japan [b]		Latin America		Developing Asia		All countries	
	1982	1989	1982	1989	1982	1989	1982	1989	1982	1989	1982	1989
1) US FDI (US$ billions)	**33.3**	**74.9**	**18.3**	**32.3**	**1.8**	**10.0**	**13.8**	**21.3**	**2.1**	**6.7**	**76.7**	**155.7**
General machinery (non-electric)	7.4	16.4	1.9	3.3	[c]	2.6	1.7	2.8	0.2	0.8	13.4	27.1
Electric equipment	2.5	4.1	1.3	2.2	0.1	1.2	1.0	1.1	0.9	2.7	6.7	11.9
Transport equipment	3.4	9.2	3.8	7.7	...	2.3	1.7	3.2	[c]	0.3	10.1	23.5
2) US FDI (percentage)	**43.4**	**48.1**	**23.9**	**20.7**	**2.3**	**6.4**	**18.0**	**13.7**	**2.7**	**4.3**	**100**	**100**
General machinery (non-electric)	9.6	10.5	2.5	2.1	[c]	1.7	2.2	1.8	0.3	0.1	17.4	17.4
Electric equipment	3.3	2.6	1.2	1.4	0.1	0.8	1.3	0.7	1.1	1.8	8.8	7.6
Transport equipment	4.4	5.9	5.0	4.9	...	1.5	2.2	1.4	[c]	0.2	13.2	15.1
3) Japanese FDI (US$ billions) [b]	**1.4**	**7.9**	**5.2**	**33.5**	**-**	**-**	**3.9**	**5.6**	**6.5**	**15.6**	**19.5**	**66.1**
General machinery (non-electric)	0.2	1.8	0.5	4.0	-	-	0.3	0.4	0.4	1.6	1.4	7.9
Electric equipment	0.3	2.0	1.5	8.7	-	-	0.3	0.5	0.7	3.3	2.8	14.7
Transport equipment	0.2	1.3	0.8	4.5	-	-	0.6	1.1	0.5	1.3	2.9	9.0
4) Japanese FDI (percentage)	**7.2**	**12.0**	**26.7**	**50.7**	**-**	**-**	**20.0**	**8.5**	**33.3**	**23.6**	**100**	**100**
General machinery (non-electric)	1.0	2.7	2.6	6.1	-	-	1.5	0.6	2.1	2.4	7.2	12.0
Electric equipment	1.5	3.0	7.7	13.2	-	-	1.5	0.8	3.6	5.0	14.4	22.2
Transport equipment	1.0	2.0	4.1	6.8	-	-	3.0	1.7	2.6	2.0	14.9	13.6

Sources: United States data: US Department of Commerce, *US Direct Investment Abroad: 1982 Benchmark Survey Data*, Washington, D.C., December 1985 and *Survey of Current Business*, vol. 70, No. 8, August, 1990. Japanese data: Kerai Koho Center, *Japan 1992: An International Comparison*, Tokyo 1992 and *Japan 1984: An International Comparison*, Tokyo, 1984.

[a] In the case of US FDI North America signifies Canada.

[b] The dates of the Japanese figures are March 1984 and March 1990.

[c] Information not disclosed.

for manufacturing suffered a relative decline, with its share falling to 24%, while the Latin American region saw its share of the stock of FDI nosedive from 20% to 8.5%. Aside from the tremendous expansion in the North American market, only the European Community enjoyed an important relative increase (from 7% to 12%). With respect to industrial specialization in the machinery and transport equipment areas, the biggest increases were registered in the electrical equipment industry in North America (from 7.7% to 13.2%), developing Asia (3.6% to 5%) and the European Community (1.5% to 3%); the general machinery sector in North America (2.6% to 6.1%) and Europe (1% to 2.7%); and the transport equipment industry in North America (4.1% to 6.8%) and the European Community (1% to 2%). Thus, Japanese FDI in the manufacturing sector was considerably more dynamic than that of the United States, and as well as specializing increasingly in technologically more complex activities, it focussed progressively on the principal developed country markets of the Triad during the 1980s.

A common feature of the regional specialization of both United States and Japanese FDI during the 1982-1989 period was that Latin America's position became more marginal and it was progressively displaced by developing Asia. This was particularly so in the electrical machinery sector. More detailed information on the international aspects of United States and Japanese TNC affiliates operating in these

regions and their significance within the framework of the overall TNC networks is contained in table 4.

Before analyzing the data contained in that table, however, it should be noted that while relatively good and consistent information has become available on the nature and structure of United States and Japanese TNC activities that information is still far from perfect. [3] The information is collected by national authorities for different purposes, and while the most detailed United States data deal only with majority-owned foreign affiliates, the Japanese information includes all associates with more than 10% shareholding by the headquarters company or subsidiaries. [4] Fortunately, the Japanese TNC network is more prone than the United States one to employ joint ventures and minority holdings (Whitmore and Hyun, 1989). A consequence of this, however, is that the United States minority shareholdings in important areas, such as the Japanese automotive industry, are not included in the tables on sales. Also, the coverage of the Japanese survey is not nearly as complete as that for the United States. The 1989 version incorporated less than 65% of overall sales of manufactures, and reporting by the TNCs producing transport equipment was particularly low (42% of sales). Furthermore, the United States data provide information only for imports from the United States itself, while the Japanese figures provide information on imports both from Japan and from other sources. Nevertheless, despite the statistical problems involved the "benchmark surveys" of the United States Department of Commerce and the Japanese Ministry of International Trade and Industry represent the most comprehensive sources of comparative information on this subject.

With regard to the manufacturing sector as a whole, the information contained in table 4 indicates, first and foremost, that Latin America *never* represented a particularly important element of Japanese TNC operations (only 8% of local sales and exports in 1983) whereas the developing Asia region did (35 % of local sales, over half of all exports, and almost 40% of all imports). Second, during the 1980s Latin America became even less important to Japanese TNCs (3% of overall sales) while the developing Asia region retained a very significant role (29% of overall sales, over one-half of exports and one-quarter of all imports in 1989) in spite of the fact that flows were increasingly concentrated on the North American market during that decade. Third, it can be appreciated from these figures that the Japanese TNCs established regional supply networks and export platforms in developing Asia. Foreign trade played a fundamental role in these operations, not only as regards trade with Japan but also as regards exports to and imports from third parties. Developing Asia represented a core element of the international expansion of Japanese TNCs. Latin America played a marginal and declining role.

With regard to the operations of United States majority-owned foreign affiliates in the manufacturing sector as a whole, it can be stated that both Latin America and developing Asia have played relatively minor roles in their overall operations, although historically the place of Latin America has been considerably more important than that of developing Asia. Sales from their Latin American network were five times the value of those in developing Asia in 1977, and represented 16% of all local sales (but only 4% of all exports of manufactures). During the 1977-1982 period the relative importance of the Latin American region and the local-sales-centered nature of the operations of United States TNCs in that region was accentuated, reaching 19% of all local manufacturing sales (but only 5% of all exports). Between 1982 and 1989 the Latin American operations of United States TNCs became more marginal, dropping to only 12% of all local sales, although they did change in nature by becoming somewhat more export-oriented than previously (providing 6% of all exports of manufactures) and by beginning to serve more as sourcing centres for United States TNCs (supplying 9% of all exports of manufactures of these United States TNCs to the United States market), although exports to third parties declined. In spite of these changes, however, the Latin American operations of majority-owned United States TNCs did not come to represent a significant supply network nor an export platform of note.

[3] Among other analyses of the problems associated with FDI data, see OECD, 1987; Stekler and Stevens, 1991; US Department of Commerce, 1988; and Patterson, 1990.

[4] Three categories of association of local firms with transnational corporations can usefully be distinguished, according to the share of foreign capital in their equity: i) 100% foreign capital (wholly-owned subsidiaries); ii) 51% to 99% foreign capital (majority foreign-owned affiliates); and iii) 10% (or 25%) to 50% foreign capital (associates or majority local-owned affiliates). The differing levels of participation of foreign capital have important implications with regard to the control of local firms. The first two categories are sometimes combined to form a single category of foreign-controlled firms.

TABLE 4

Japanese and United States TNC affiliates: Comparative analysis of international aspects in the manufacturing sector by region, 1977, 1982 and 1989

	Japanese affiliates				United States majority-owned foreign affiliates					
	1982		1989		1977		1982		1989	
	US$ millions	% Ind. total	US$ millions	% Ind. total	US$ millions	% Ind. total	US$ millions	% Ind. total	US$ millions	% Ind. total
A. All manufacturing										
Latin America (total)	**2 011**	**8**	**3 081**	**3**	**24 217**	**12**	**39 506**	**15**	**47 539**	**9**
1. Local Sales	1 480	8	2 154	3	21 876	16	34 814	19	37 363	12
2. Exports	531	8	927	4	2 341	4	4 692	5	10 176	6
To home country	(229)	(8)	(335)	(4)	(874)	(5)	(1 855)	(7)	(6 412)	(9)
To others	(302)	(8)	(592)	(5)	(1 467)	(3)	(2 837)	(4)	(3 764)	(3)
3. Imports	203	3	295	1						
From home country	(187)	(3)	(119)	(...)	(2 644)	(11)	(4 379)	(13)	(8 577)	(13)
From others	(16)	(1)	(176)	(3)						
Developing Asia (total)	**9 920**	**40**	**29 533**	**29**	**5 125**	**3**	**9 933**	**4**	**24 647**	**5**
1. Local Sales	6 585	35	18 877	23	2 204	2	2 550	1	10 787	3
2. Exports	3 335	51	10 654	51	2 921	5	[a]	[a]	13 861	8
To home country	(1 107)	(39)	(4 669)	(57)	[a]	[a]	(4 060)	(15)	(8 535)	(13)
To others	(2 227)	(61)	(5 978)	(47)	[a]	[a]	(1 894)	(3)	(5 326)	(5)
3. Imports	2 655	38	8 246	25						
From home country	(1 845)	(31)	(6 381)	(23)	(935)	(4)	(2 771)	(8)	(4 524)	7
From others	(1 810)	(70)	(1 865)	(36)						
B. Non-electrical machinery										
Latin America (total)	**84**	**17**	**241**	**4**	**1 899**	**7**	**3 315**	**8**	**5 768**	**6**
1. Local Sales	70	18	230	5	1 649	9	1 705	11	4 102	7
2. Exports	14	13	10	1	250	2	611	4	1 666	4
To home country	(9)	(16)	(1)	(...)	(28)	(2)	(104)	(3)	(819)	(4)
To others	(4)	(8)	(10)	(1)	(222)	(2)	(507)	(4)	(847)	(4)
3. Imports	14	11	14	1						
From home country	(14)	(11)	(6)	(...)	(195)	(6)	(354)	(7)	(784)	(7)
From others	(...)	(...)	(8)	(6)						
Developing Asia (total)	**311**	**63**	**1 396**	**25**	**243**	**1**	**796**	**2**	[a]	[a]
1. Local Sales	224	59	794	19	71	...	[a]	[a]	[a]	[a]
2. Exports	87	81	602	42	172	2	[a]	[a]	[a]	[a]
To home country	(47)	(82)	(254)	(88)	(99)	(8)	(312)	(10)	[a]	[a]
To others	(40)	(78)	(348)	(30)	(73)	(1)	(24)	(2)	[a]	[a]
3. Imports	82	31	396	20						
From home country	(81)	(65)	(363)	(20)	(51)	(2)	(187)	(4)	(907)	(8)
From others	(1)	(...)	(33)	(26)						
C. Electrical equipment										
Latin America (total)	**203**	**3**	**812**	**2**	**1 991**	**11**	**2 674**	**11**	**3 598**	**10**
1. Local Sales	200	4	771	3	1 649	13	2 065	14	2 219	10
2. Exports	3	...	406	4	341	5	608	6	1 379	9
To home country	(...)	(...)	(...)	(...)	(260)	(12)	(507)	(11)	(1 272)	(18)
To others	(3)	(...)	(400)	(7)	(81)	(2)	(101)	(2)	(107)	(1)
3. Imports	34	1	10	1						
From home country	(34)	(1)	(68)	(1)	(348)	(15)	(927)	(20)	(2 054)	(27)
From others	(...)	(...)	(33)	(1)						

TABLE 4 *(Concluded)*

	Japanese affiliates				United States majority-owned foreign affiliates					
	1982		1989		1977		1982		1989	
	US$ millions	% Ind. total	US$ millions	% Ind. total	US$ millions	% Ind. total	US$ millions	% Ind. total	US$ millions	% Ind. total
Developing Asia (total)	**2 308**	**32**	**10 390**	**27**	**2 306**	**12**	**5 099**	**20**	**9 217**	**25**
1. Local Sales	846	15	3 888	14	[a]	[a]	621	4	2 958	13
2. Exports	1 462	86	6 502	72	[a]	[a]	4 478	44	6 259	41
To home country	(519)	(86)	(2 798)	(89)	[a]	[a]	(3 325)	(72)	(3 847)	(55)
To others	(943)	(86)	(3 704)	(63)	[a]	[a]	(1 153)	(20)	(2 412)	(29)
3. Imports	642	21	3 120	20						
From home country	(537)	(18)	(2 412)	(19)	(699)	(29)	(2 026)	(43)	(2 767)	(36)
From others	(104)	(74)	(707)	(26)						
D. Transport equipment										
Latin America (total)	**574**	**11**	**201**	**1**	**5 249**	**11**	**7 558**	**13**	**9 929**	**9**
1. Local Sales	546	12	191	1	4 867	16	6 887	21	6 677	11
2. Exports	531	8	9	...	382	2	671	3	2 839	6
To home country	(229)	(4)	(-)	(-)	[a]	[a]	(432)	(4)	(413)	(10)
To others	(302)	(11)	(9)	(...)	[a]	[a]	(239)	(2)	(3 565)	(2)
3. Imports	111	8	20	2						
From home country	(110)	(9)	(20)	(...)	(2 644)	(11)	(4 379)	(13)	(8 577)	(13)
From others	(1)	(2)	(...)	(3)						
Developing Asia (total)	**1 479**	**30**	**6 008**	**28**	[a]	[a]	[a]	[a]	**1 727**	**2**
1. Local Sales	1 282	28	5 534	28	[a]	[a]	[a]	[a]	1 608	3
2. Exports	198	56	474	27	[a]	[a]	234	1	119	...
To home country	(82)	(57)	(97)	(17)	[a]	[a]	(155)	(1)	(69)	...
To others	(116)	(55)	(377)	(32)	[a]	[a]	(79)	(1)	(50)	...
3. Imports	362	28	1 554	18						
From home country	(328)	(26)	(1 537)	(18)	(11)	(1)	(57)	(...)	(95)	(...)
From others	(34)	(68)	(17)	(25)						

Sources: United States Department of Commerce, *Benchmark Surveys on United States Direct Investment Abroad, 1977, 1982 and 1989*, Washington, D.C., April 1981, December 1985 and October 1991. Japan, Ministry of International Trade and Industry, *Benchmark Surveys on Japanese Companies' Foreign Activities: Compendium on Foreign Activity Data*, Tokyo, 1986 and 1991.
[a] Information not disclosed.

The operations of United States TNCs in developing Asia in 1977 were of marginal importance as they represented only 2% of all local sales and 5% of all exports of manufactures by United States TNCs. Even so, export sales by these United States TNCs in developing Asia in that year already surpassed those generated by their Latin American operations. By 1989, their overall sales had about quintupled in value (now equivalent to about one-half of those from the Latin American operations) and export sales had jumped to 8% of all exports by these firms and 13% of all of their exports to the United States. Thus, although the Latin American operations of the majority-owned United States TNCs remained more important in terms of total sales they were losing ground within the global corporate framework. The operations in developing Asia were increasing in importance, especially in respect of exports and particularly exports to the North American market, and developing Asia was becoming a sourcing centre for United States TNCs. As we shall see below, the central activity of the United States TNC network in developing Asia was in the very dynamic electrical equipment industry.

In other words, Latin American operations were of growing importance to United States TNCs as long as those corporations valued local sales as their principal activity, but their operations in the region declined in relative importance as the TNCs began to give increasing importance to export activities,

although it should be emphasized that some adjustments were visible by 1989 in terms of the increase in their export activities in Latin America.

In developing Asia, in contrast, United States TNCs clearly focussed their operations on the sourcing and trading of electrical equipment.

We thus see that the Japanese TNCs have very much focussed on developing Asia and that their operations involve high levels of foreign trade, which is consistent with the view that their primary purpose is one of component assembly and sourcing. The United States TNCs, which generally rely less on production facilities in developing countries than those in developed nations, had tended to concentrate these activities in the Latin American region, essentially for serving the local market. This difference between the manufacturing operations of Japanese and United States TNCs in developing regions began to lose some of its relevance in the 1980s as the Latin American activities of United States TNCs lost importance within the corporate network and began to change in nature, and as United States TNC activities in developing Asia gathered steam. This becomes clearer if we look at the situation of the more technologically sophisticated industries (see table 4).

It should be emphasized from the outset that the Latin American operations of Japanese TNCs in the machinery and transport equipment sector are of virtually no global significance, even taking into account obvious under-reporting in the transport equipment sector. This is reflected by the fact that Japanese TNCs, the most dynamic foreign direct investors in globalizing industries during the 1980s, paid almost no attention to Latin America. With regard to the manufacturing activities of Japanese TNCs in developing Asia, these were heavily concentrated in two areas of relative technological sophistication: electrical equipment (sales of US$10.4 billion, representing 27% of total sales by Japanese TNCs in that industry in 1989) and transport equipment (US$6 billion in sales, representing 28% of all sales by Japanese TNCs in the industry in that year). Japanese TNC operations in the non-electrical equipment sector in developing Asia might also be mentioned (although sales in 1989 only came to US$1.4 billion), because of the significant FDI which has taken place there during the 1980s (see table 3).

The operations of majority-owned United States TNCs in these two regions were concentrated in only three activities of relative technological sophistication: transport equipment in Latin America (sales of US$9.9 billion, representing 9% of all sales by United States TNCs in that industry in 1989), electrical equipment in developing Asia (sales of US$9.2 billion, corresponding to 25% of all sales of United States TNCs in that field in 1989) and non-electrical equipment in Latin America (sales of US$5.8 billion, equivalent to 6% of the total sales of United States TNCs in that industry in the year in question).

Compared to the Japanese TNC operations in the same sectors in these two regions, two features of United States TNCs stand out:

First, the most important Latin American fields of activity of majority-owned United States TNCs –transport equipment and non-electrical equipment– are activities of relatively minor importance which are tending to become more marginal within the global corporate structure (6%-9% of total sales by United States TNCs operating in those sectors in 1989, compared with 8%-13% in 1982). In contrast, the electrical equipment activities of United States TNCs in developing Asia are already very significant (25% of all sales by United States TNCs in that sector in 1989) and are expanding fast (up from 12% of total sales in 1977). In general, United States TNCs have been losing interest in Latin America.

Second, the high foreign trade component of the electrical equipment activities of United States TNCs in developing Asia, which accounted for over 40% of the exports of United States TNCs in that industry in 1989, indicates that United States TNCs are not necessarily bound to serve only the local market, as has been their traditional role in Latin America. Although the levels of foreign trade are considerably lower than the regional supply network in electrical equipment established by Japanese TNCs in developing Asia, United States TNCs have also created a kind of supply network to feed the North American market and, to a lesser extent, third countries.

At the same time, a glance at the changes taking place in the Latin American operations of United States TNCs in this sector indicates that while local sales have declined due to the recession in Latin America during the 1980s, the level of exports has increased substantially (from 6% to 9% of total exports of United States TNCs operating in this industry between 1982 and 1989), especially in the case of exports to the United States market (from 11% to 18% of such exports by United States TNCs in this industry over the same period). United States TNCs are trying to adapt their Latin American operations to

the new international industrial order in which regional supply networks represent a important element in international competitiveness. This is an important advance for United States TNCs; nevertheless, it should be pointed out that the exports of electrical equipment by their Latin American operations to the United States market consist primarily of consumer electronics, while the exports of electrical equipment by their developing Asian operations to the United States market are mostly computers and associated products. Thus, there are certain differences in terms of technological sophistication within the same industry between the United States TNC operations in developing Asia and those in Latin America, on top of the already mentioned differences relating to dynamism and potential for better integration into the global corporate networks of these TNCs.

Clearly, then, the source of FDI and technology is a very important element in determining the nature of the integration of developing country industry into the new international industrial order. Japanese FDI and technology in developing Asia has produced more positive effects than the United States variety in Latin America, as the above-mentioned differences clearly show.

4. The importance of the form of FDI and technology transfer

In terms of the form of FDI and technology transfer, two examples are particularly relevant.

i) *The electrical machinery and electronic equipment industry*

The manufacturing side of the microelectronics revolution has indisputably been centered on developing Asia, and that region has come to serve as a sourcing centre and export platform for the TNCs operating in that industry, both Japanese and United States. This suggests that in equal conditions the more recent behaviour of Japanese and United States TNCs has been convergent in terms of regional manufacturing operations in certain developing countries. Moreover, the Latin American operations of United States TNCs active in this sector are apparently trying to adapt by converting from local-market-centered operations to component manufacture and final product assembly for export to the United States market.

It must be emphasized, however, that there are several critical differences in the behaviour of United States and Japanese TNCs in their respective regional networks, and those differences heavily influence the availability of opportunities and the benefits going to the developing countries incorporated into or associated with those different TNC regional networks. For example, the United States TNC network is based more directly on *majority* ownership of local operations, whereas the Japanese TNCs use a good deal of *minority* and non-equity ownership options, especially *licensing or subcontracting relationships*. The licensing or subcontracting relationships used by Japanese TNC regional networks have been found to be of significance for national firms in the developing countries used for sourcing, as they facilitate their technological upgrading within a national industrial strategy which pursues incorporation into the new international industrial order, particularly from the point of view of trade and investment flows.

With regard to this topic it may be noted that while the four Asian NICs can all be considered successes in furthering the incorporation of their economies into that new order by way of trade and investment flows, especially in the electronics industry, there are certain distinctions which should be made. Hong Kong and Singapore have followed what could be termed a TNC-*centered* strategy, while Korea and, to a lesser extent, Taiwan have followed a TNC-*associated* one. Both variants began as low-cost assembly bases for export-oriented TNCs, often via export processing zones, but the Korean/Taiwanese variant went further than the Hong Kong/Singapore one by using domestic demand to assist national suppliers in graduating to the status of competitors with their own brand name products (Mody, 1989; *Business Week*, 1993).

In terms of the importance of TNCs for these two strategies, the Hong Kong/Singapore variant utilized foreign direct investment as a major element in domestic capital formation, reaching levels of 15.2% and 25.5% of such investment, respectively, during 1985-1987, while the levels for Taiwan and Korea were considerably lower, at 3.3% and 1.4%, respectively (CTC, 1992). While the proportion of the stock of FDI in the manufacturing sector which was channeled to the electronics sector was roughly similar for these NICs, at about one-third of the total (except for Hong Kong with 46%), the nature and national origin of this FDI differed considerably, and these differences held important consequences in terms of the national benefits from this foreign participation.

In general, FDI in this sector in Hong Kong and Singapore came primarily from the United States and usually took the form of majority-owned foreign affiliates. In Korea and, to a lesser extent, Taiwan, FDI in this sector came principally from Japan and was often in the form of minority capital participation and new forms of investment (Oman, 1984 and 1989; Germidis, 1980). For that reason, the principal electronics firms, by sales, with operations in Hong Kong (Digital, General Electric, Hewlett-Packard, Honeywell and IBM) and Singapore (Seagate, Philips and National Semiconductors) are usually subsidiaries of United States TNCs, whereas the most important electronics companies in Korea (Samsung and Goldstar) and Taiwan (Tatung, Sampo and Teco) are now national firms. The Korean/Taiwanese variant has been more successful in stimulating nascent industrial clusters which provide a firmer technological basis upon which national firms can sustain the catching up process (Ernst and O'Connor, 1992, chap. V; OECD, 1988). This would appear to be a useful, if difficult, strategy for developing countries which possess sufficient domestic demand to help nurture national champions through associations with TNCs which provide them with the requisite technologies.

The Asian NICs' success in the electrical equipment industry would appear to be one of the most pertinent examples for developing countries in respect of their incorporation into the new international industrial order in formation, because it is based on increased international competitiveness which has produced significant trade and investment flows. Notably, the Asian regional network centered on Japanese TNCs has provided some developing countries with significant opportunities to become more integrated into the international industrial system by taking advantage of the phase of Japanese foreign direct investment called "subcontracting-dependent, assembly-based industrialization" (Lawrence, 1992) and the assembly-transplanting stage of multinationalism (Ozawa, 1992, pp. 52-53).

The regional core network strategies of Japanese transnational corporations in the electrical and electronics industry now appear to follow a pattern of strong upstream (supply) linkages between Japan and Asian affiliates, which then serve the dual function of, firstly, selling finished goods to local and regional markets (import-substituting investments) and secondly exporting to affiliates in the Triad to support their own operations with low-cost inputs (rationalized investments) (CTC, 1991a; *The Economist*, 1993). This provides a relatively small group of developing countries with the opportunity to integrate their productive structure for the electronics industry more fully into the structure of the more dynamic elements of the international industry. High sales volumes and larger export markets have made possible the development of regional supply networks, with integrated operations in several Asian countries, supplying inputs to one another. Foreign direct investment by Asian NICs in this sector in the ASEAN Four and other developing countries is gaining strength (Whitmore, Lall and Hyun, 1989). Thus, some NICs have graduated from being merely suppliers of local TNCs to becoming authentic competitors in certain lines of electrical machinery and electronic equipment production, as suggested by the flying wild geese scheme.

ii) *The automobile industry*

Another relevant example of the importance of the form of FDI or technology transfer is that of the automobile industry. Information available for this industry highlights in particular the importance of this aspect and is another example of the clear differences between a TNC-centered Latin American industry and a TNC-associated Asian one. Here, the analysis will be limited principally to capital shareholding, as the more sinuous topics of subcontracting and other non-equity relations with suppliers escape the limits of the present article.

The data in tables 5 and 6 provide the relevant available information, although these data are from 1986 and do not include substantial Japanese automotive TNC investments in Asia which occurred after that date. Thus, table 5 shows that in 1986, only 12 major automotive TNCs possessed about 90% of the total TNC automobile production capacity in developing countries. About half of that production capacity was in the form of subsidiaries or majority-owned affiliates. The other half consisted of minority-owned affiliates or non-equity forms of association. Roughly speaking, that capacity was distributed more or less equally among Japanese, European and United States TNCs. The distinguishing feature was that the production capacity of United States and European TNCs operating in developing countries was primarily in the form of subsidiaries or majority-owned affiliates, whereas the Japanese capacity was almost exclusively in the form of minority-owned associations or non-equity relationships.

TABLE 5

Operations of automobile TNCs in developing countries, by form of investment, 1986
(Thousands of units)

	Majority-owned	Minority-owned	Non-equity	Total
Transnational corporation				
Mitsubishi	6.7	483.9	27.9	518.5
Volkswagen	482.6	14.3	6.5	503.4
General Motors	374.8	63.0	13.7	451.5
Ford	355.6	4.1	2.9	342.5
Fiat	168.5	74.9	44.3	287.7
Nissan	78.2	66.7	47.7	192.5
Mazda	9.5	115.9	43.5	168.9
Suzuki	-	98.9	36.3	135.2
Daimler Benz	48.4	60.1	12.0	120.5
Renault	56.6	26.6	25.3	108.5
Toyota	29.3	13.2	52.7	95.2
Chrysler	87.3	4.8	0.3	92.6
All others	11.3	179.5	158.9	349.7
Distribution by home region				
Japan	125.5	841.2	304.8	1 271.5
Europe	763.3	234.8	137.1	1 135.2
United States	800.2	129.8	30.0	959.9
Total	**1 689.0**	**1 205.8**	**471.8**	**3 366.6**

Source: Calculated from Charles Oman, "New Forms of Investment in Developing Country Industries", Paris, OECD, 1989, table 4.22, p. 201. See original table for definitions and explanatory notes.

TABLE 6

Operations of automobile TNCs in developing countries, by region of host country and form of investment, 1986
(Thousands of units)

	Latin America			Asian NICs		
	Majority-owned	Minority or non-equity	Total	Majority-owned	Minority or non-equity	Total
Transnational Corporation						
Mitsubishi	-	1.3	1.3	6.7	508.6	515.3
Volkswagen	482.6	5.3	487.9	-	8.5	8.5
General Motors	368.5	9.2	377.7	0.3	61.3	61.6
Ford	305.6	0.2	305.8	30.0	5.9	35.8
Fiat	168.0	71.4	239.4	-	29.4	29.4
Nissan	78.2	4.0	82.2	-	107.2	107.2
Mazda	-	13.7	13.7	9.5	144.9	154.4
Suzuki	-	1.0	1.0	-	133.4	133.4
Daimler Benz	48.4	1.5	49.9	-	69.6	69.6
Renault	54.1	26.2	80.3	-	8.9	8.9
Toyota	8.3	19.4	27.7	21.0	44.9	65.9
Chrysler	87.5	5.1	92.6	-	-	-
All others	8.2	52.9	61.1	2.5	226.5	229.0
Distribution by home region						
Japan	86.5	54.5	141.0	39.0	1 072.5	1 111.5
Europe	759.0	131.5	890.6	0.7	149.3	150.1
United States	763.9	25.0	788.9	30.3	127.4	157.6
Total	**1 609.4**	**211.2**	**1 820.5**	**70.0**	**1 349.2**	**1 419.2**

Source: Calculated from Charles Oman, "New Forms of Investment in Developing Country Industries", Paris, OECD, 1989, table 4-23, pp. 202-203. See original table for definitions and explanatory notes.

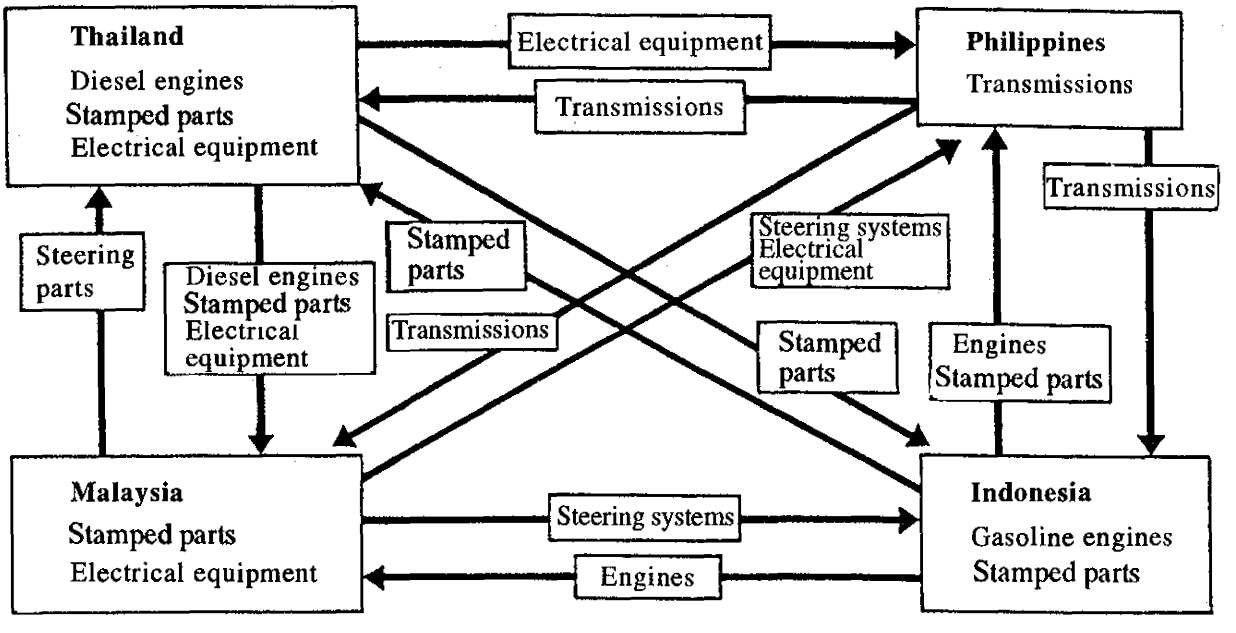
Table 6, which compares the Latin American situation to that of Asia, shows that the United States and European auto TNC production capacity in developing countries was very much concentrated (85%) in Latin America, while that of the Japanese auto TNCs was even more concentrated (89%) in Asia. More pointedly, most (88%) of the United States and European auto TNC capacity was in the form of subsidiaries or majority-owned affiliates, while that of the Japanese auto TNCs in Asia was almost exclusively via minority-owned associates or non-equity associations. These data reconfirm that the Latin American automobile industry can be categorized as TNC-centered, while that of developing Asia can be considered TNC-associated, and that this difference apparently holds important consequences for the predominant automotive industries in developing countries of these respective regions.

It must be reiterated that the source and form of TNC participation in the automobile industry in developing countries are not the only factors explaining the relative success of the developing Asia experience or the relative decline of the Latin American one. Moreover, significant differences exist within the Latin American region itself. The successful restructuring of the Mexican automobile industry represents a clear exception to this generalization linking relative economic performance to the form, origin and level of foreign participation. Subsidiaries of TNCs operating in Mexico exported over 340 000 vehicles to the United States in 1992 (AMIA, 1993, p. 33), and the Mexican autoparts industry (primarily motors) supplied 12% of all imports of automotive components to the United States market in 1989 (Bowring, 1990, p. 61). Nevertheless, one certain implication of this analysis is that the rest of the Latin American auto industry is in bad shape, apparently because it is a poor copy of the relatively less efficient United States and European auto TNCs and is in even more dire need of restructuring than its own progenitors. Troubled manufacturer-supplier relations also seem to hamper its ability to compete internationally (Bowring, 1990, chap. III).

In Asia, the Japanese auto TNCs' strategies have given rise to accelerated local processes of technological upgrading which have culminated, on the one hand, in productive efficiency and trade gains derived from specialization, as the case of Toyota suggests (figure 1), and on the other hand in the production of "developing Asian cars" such as Hyundai, Kia, etc.

FIGURE 1

Automobile operations of Toyota in four ASEAN countries



Source: "Part exchange", in *Far Eastern Economic Review*, 21 September 1989, p. 73.

Motor Trend magazine recently named a Hyundai model as one of the ten best autos imported into the United States. Some developing Asian auto TNCs have even invested in production facilities in the North American and European markets in order to obtain "insider status" in the global automotive industry.

These Asian "flying geese" show enviable competitive strength in their automotive activities. The Latin American automobile industry, however –excepting to a certain extent the Mexican component, which is being integrated into the North American auto industry– does not appear to enjoy any such advantages and is in serious danger of being severely damaged by the auto TNC shake-up (in terms of overcapacity) which is taking place at a global level. It has a "sitting duck" look about it.

IV

Final comments

It would be a gross exaggeration to claim that the very evident and significant differences in the industrial experiences of Latin America and developing Asia and the nature of their incorporation into the new international industrial order were produced exclusively by the transnational corporations in general and the origin and form of foreign direct investment and technology in particular. It would also be a gross over-simplification, however, to suggest that these factors were not central ones in the explanation of this position.

In a world in which decision-making power is shifting towards the major transnational corporations and away from governments, international market dynamics for specific products and the TNCs' corporate strategies for organizing global production will play an ever greater role in determining the spatial location of industry, transfers of technology and trade patterns. The developing countries are in a difficult position because the new situation allows transnational corporations to pick and choose among them. In a context of reduced bargaining power for developing country governments, factors affecting or associated with the relative international competitiveness of a national industry become determinants of a country's incorporation into the new international industrial order.

Within this new order, the source and form of foreign direct investment and technology, both past and present, heavily influence a developing country's chance of success. The experience of developing Asia, based in large part on Japanese FDI and technology, often in the form of minority participation, licensing, or supplier relationships as original equipment manufacturers, has produced a much higher relative level of international competitiveness for Asian industry than has the Latin American experience with primarily United States FDI and technology, usually in the form of subsidiaries or majority-owned affiliates. This is particularly so in the more technologically sophisticated industries, as the examples of the electrical machinery, electronic equipment and automotive sectors clearly show.

The national origin and form of foreign direct investment and technology have played an important role and had a very significant impact in the successes of developing Asian industry in mastering complex technologies, reaching impressive levels of efficiency of production through specialization, and penetrating discriminating international markets. The competitive advantages of developing Asia have attracted the most dynamic foreign investment and technology in the best form for providing opportunities for local industry to become better incorporated into the new international industrial order. In this manner, the Asian "flying geese" have adapted well to the new international industrial order.

Those same factors have likewise played an important role and had a significant impact in the difficulties encountered by Latin American industry. Less dynamic FDI and technology, within the context of a closed import substituting model of industrialization, produced inward-looking, inefficient and uncompetitive industry in the region. Technology transfer via subsidiaries or majority-owned affiliates did not produce significant learning experiences for

local industry in terms of the assimilation, adaptation and improvement of dynamic technologies. On the contrary, best-practice manufacturing in Latin America (including the subsidiaries of TNCs) is not only far behind the technological frontier but is often close to downright obsolescence. Higher levels of exports of manufactures today often come at the expense of national value added in the production process, because the crisis of the 1980s caused investment to stagnate or collapse in the region precisely at the time that technological upgrading was becoming the crucible for the incorporation of developing countries into the new international industrial order. In order to compete with flying geese, sitting ducks must first get airborne.

(Original: English)

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Industrial policy: *where do we stand?*

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It is paradoxical that during the 1980s, when industrial policy tended to fade as a subject for academic scrutiny and was relegated to the sidelines by decision-makers in most of the Latin American countries, it continued to form the basis for the implementation of important measures and instruments in developed and newly industrializing countries and regions. However, as a consequence of various shortcomings and distortions characterizing industrial growth during this period, the prospects for paying serious attention to this area of economic policy began to brighten as the region moved into the 1990s. The industrial policy of the present decade will probably be a good deal different from what it was during periods marked by largely closed economies, non-globalized industries and government policies based mainly on subsidies, direct investment in State enterprises and protective trade mechanisms. Section I of this article focuses on a number of events and facts which illustrate the main features of traditional industrial policy and the limitations that it proved to have. Section II analyses various initiatives that have been mounted since the mid-1980s and underscores the fact that the emergence of new approaches in Latin America, in combination with a variety of factors at work outside the region, means that industrial policy cannot be bypassed as the countries of the region strive to resume their growth and integrate themselves into the world economy. The third and final section presents conclusions which highlight a number of ongoing industrial policy issues and outline various proposals for approaches to these issues conducive to the formulation of a more effective and, above all, more efficient policy than in the past.

I

Traditional industrial policy

Any attempt to systematize the wide-ranging experiences of the Latin American countries in the area of industrial policy would require an exhaustive case-by-case analysis of policy-making and policy implementation that would go beyond the scope of this article. These experiences can, however, be outlined –albeit at the risk of losing some of their richness– with the help of a number of examples that bring out the fundamental components of the praxis in this field. These examples will be presented below.

Industrial policy in the region and the corresponding selection of strategies have tended to reflect the theoretical (or, at the least, analytical) preferences of the region's chief policy-making circles rather than more pragmatic considerations.

Although the early stages of the industrialization process in the larger countries of the region were sometimes marked by policy approaches that were not placed on a systematic basis (or even thought of in terms of systematic policies) until later on, dissatisfaction with the type of industrial development seen in the late 1960s and early 1970s led policy-makers to undertake formal planning efforts. Crucial elements behind this trend included the declining effectiveness of basic policy instruments and the fact that numerous decision-making levels had been co-opted by interest groups.

The large number of different agencies and interest groups and the diminishing returns of the policy then in force generated a glut of instruments which, in many instances, conflicted with one another. Against this backdrop, the formalization of policy tools and strategies within the framework of plans and programmes was the result of the policy-makers' will to change existing industrial structures, behavioural patterns and performance, and it took the form of initiatives founded upon broad-ranging analytical considerations. In some cases, the basic approach was the outgrowth of particular views as to how we should think about the process of economic growth as such; in others, it mainly arose out of the generalization of proposals aimed at the achievement of partial equilibrium in specific markets based on industrial organization analyses.

The theoretical framework for industrial policy tended to follow along the general lines of the Kaldor-Verdoorn tradition, which highlighted the role of market expansion as the driving force behind rising employment and labour productivity, expected to take place primarily in the manufacturing sector (Kaldor, 1966). The gains in competitiveness that would be made under conditions characterized by economies of scale, it was believed, would permit not only expansion of the domestic market but the conquest of external markets as well. Within this framework, trade protection to support import substitution was seen as the chief mechanism for internalizing the effects of the virtuous circle of growth-productivity-growth, especially since there were widespread doubts as to the major international markets' ability to absorb Latin American exports of manufactures. When it became necessary to relieve the negative impacts of overprotection (such as anti-export bias, insufficient pressure for the absorption of technical progress, etc.), the tendency was to establish across-the-board production subsidies by, for example, cutting the tariffs on imports of capital goods to little or nothing, offering preferential interest rates, and charging below-production-cost prices for inputs produced by State enterprises.

Sectoral policy approaches were primarily based, either explicitly or implicitly, on the structure-behaviour-performance model developed in the tradition of Mason, Scherer and Bain (Scherer and Ross, 1990). This model permitted analyses to be undertaken upon a solid empirical foundation and made it possible to identify policies for modifying industrial performance by making changes in the production structure or in corporate behaviour. Generally speaking, it was felt that structural changes should be accomplished through direct State regulation or intervention, whereas changes in entrepreneurial or corporate behaviour should be induced through

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modifications in relative profit rates. The structure-behaviour-performance model appeared to be particularly useful in closed economies in which a direct correlation existed between industrial concentration and market power.

Industrial policies in the region showed a quite remarkable degree of continuity, especially given that plans and programmes were changed every few years, often for the sole purpose of demonstrating that the administration currently in office was pursuing a different policy from that of its predecessor. In the early 1980s, for the most part industrial planners sought to combine import substitution with export promotion (especially exports of manufactures) as a means of reducing unemployment and boosting the production of essential consumer goods. In general, they were attempting to carry forward the integration of production chains to promote the production of widely-used inputs and, in some countries, of capital goods. The policy tools they used were also quite similar (promotion, protection and regulation), although there were differences of emphasis from one case to the next.

Although the manufacturing sector grew considerably in many countries of the region during the 1970s,[1] in the early 1980s industrial planning began to appear increasingly ineffective. This ineffectiveness was attributed chiefly to: (i) a persistent lack of consistency between the sectoral and macroeconomic levels of planning; (ii) strategies which failed to win the support of important administrative levels or which were combatted or ignored by major public agencies or groups that should be taking part in their implementation; (iii) the faulty implementation of programmes, for which no budget allocations were ultimately made because of their lack of goals for each policy instrument; and (iv) insufficient links with private agents, which consequently did not have confidence in such planning or support it.

The acceptance of this diagnosis by many decision-making circles generated a crisis in industrial planning which later spread to industrial policy as a whole. This crisis was not confined to Latin America. Indeed, the OECD (1987) has stated that, following a sharp increase in State intervention in its member countries during the 1970s and early 1980s, the interventionist wave then began to ebb and eventually receded to the lowest points it had reached during the period before the crisis of the 1970s. At the same time, questions were raised regarding the validity of some of the principles underlying governments' industrial policy. This questioning, which began in the industrialized countries, quickly spread to the Latin American region owing to the influence exerted by the ideas developed in those countries, as well as factors arising out of the industrial policy experiences of many countries in the region.

The industrial policy's validity was called into question mainly because of errors that had led policy-makers to overestimate the costs of market failures and underestimate the costs of government failures. Specifically, the industrial policies of the time ran up against limitations imposed by the following events. First, the range of options open to governments was narrowed by the growing internationalization of trade and production and by a progressive blurring of the borders between production sectors, while moreover the rapid changes in technology and markets made it increasingly difficult and risky for governments to try to control contextual variables affecting the planning process. Second, the policies being applied were hard to evaluate and control, and as a result their duration extended well beyond their validity horizon, owing primarily to the efforts of interest groups. The absence of clear-cut guidelines for determining when their implementation should begin and end made it difficult to achieve the often stated objective of using policy tools within a strictly-defined time frame, while the interest groups' success in co-opting decision-making bodies further added to the difficulty of eliminating policy instruments that had outlived their usefulness. Third, some policies were of intrinsically limited effectiveness, mainly because their complexity increased the probability that they would conflict with other policy objectives. What is more, the task of policy coordination posed often insurmountable problems, especially because of the lack of a clear compatibility between industrial policy and macroeconomic policy.

The consensus that arose in the mid-1980s regarding the reforms needed in Latin America tended to deny the validity or even the possibility of using certain instruments that had traditionally played a role in industrial policy in the region (Balassa, Bueno, Kuczynski and Simonsen, 1986). For example, the generally accepted policies on trade

[1] Different economic schools do not agree, of course, as to whether this growth occurred *thanks to* or *in spite of* the existing industrial policy, especially in situations marked by an abundance of external financing. See, for example, Chami Batista (1992) and Dias Carneiro (1990) for the case of Brazil and Peres (1989) for the situation in Mexico.

liberalization, interest rates, the channeling of public expenditure, privatization, deregulation and intellectual property rights came into direct conflict with the instruments on which industrial policies had been based and crowded them out. The idea that policies as such were no longer valid spread, and this, in conjunction with the impossibility or undesirability of using the instruments traditionally associated with them, caused such policies to disappear altogether or to be relegated to an exclusively symbolic role whereby they stood for a generic interest in "industry" which must be weighed against the attention merited by other economic sectors. This effort to balance sectors or to refrain from discriminating among them caused sectoral industrial policies, which were based on the intensive use of precisely those instruments described above, to be pushed away from the decision- makers' interest.

II

Changes in the late 1980s and early 1990s

In the 1980s, many Latin American countries apparently arrived at conclusions similar to those set out in the preceding section regarding industrial policy, which consequently tended to disappear from the ranks of major policies or, in the best of cases, to be identified with the elimination of structures and behaviour patterns associated with traditional industrial policies.[2]

Nevertheless, industrial policy practices continued to play an important role in most of the developed countries of Europe (OECD, 1987),[3] while the widely-studied features of the developmental State in Japan and the newly industrializing economies of East Asia remained basically unchanged.[4] With the benefit of hindsight, today we can see that the policies formulated or proposed during that period broke new ground and may prove to have determined the possible scope of industrial policy in the 1990s. Some of these experiences and proposals will be discussed below.

1. Possible policies in developed areas: Ontario, 1988

Based on work begun a few years earlier, the Ontario Premier's Council issued a report in 1988 in which it set out a wide array of policy objectives and instruments for restructuring the province's economy within a framework of globalization, technological dynamism and mounting external competition (Ontario, Premier's Council, 1988).

The problems faced by the Canadian province of Ontario had some elements in common with the types of difficulties encountered by developed countries and by countries at an intermediate, natural-resource-based stage of industrialization. On the one hand, the province had a modern industrial structure and patterns of innovation comparable with those of other highly developed areas (e.g., Baden-Württemberg, Lombardy or Catalonia), with internationally competitive firms such as Northern Telecom. On the other hand, however, its production base suffered from serious problems stemming from the heavy weight within the provincial economy of natural-resource processing activities (such as paper and pulp, processed food, iron and steel, and chemicals) and industries subject to fierce competition (such as automobile parts).

The industrial policy proposal put forward by the Premier's Council was based on analytical propositions which the Council itself saw as departing

[2] The virtual disappearance of industrial policy as such did not, of course, prevent the adoption of important measures in the fields of privatization and the refinancing of external debt (e.g., the authorization of debt-equity swaps) which had a strong impact on certain industrial sectors and enterprises.

[3] Ultimately, the consensus regarding viable policy packages tended to focus on three basic objectives: (i) compensating competitive asymmetries among firms of different sizes or located in regions having differing levels of development; (ii) promoting innovation and the diffusion of technology, because of these activities' important externalities; and (iii) at least partly offsetting the investment disincentives generated by macroeconomic policies (such as those giving rise to higher interest rates).

[4] For an interesting analysis of the persistence of the style of industrial policy typical of the newly industrializing countries of East Asia even at their present fairly high levels of development, see Lim (1993) regarding the case of Singapore and Choi (1993) on the Republic of Korea.

appreciably from the traditional types of industrial policies. Specifically, they entailed three basic conceptual elements which involved making the following distinctions:

(i) Between firms producing "traded" goods or services and those producing goods or services that were not "traded" on the international market. The former compete in world markets and are therefore the engine of the Canadian economy's growth; as a rule, they are large manufacturing companies which export to other nations and upon which almost all other activities depend for their own prosperity.

(ii) Between "wealth creation" and "job creation", the latter being a product of the former. The Council expressed the view that industrial policy-makers have habitually focused on firms that produce non-tradeables, in an effort to boost job creation, thus failing to take into account the fact that the tradeables-producing industries and the wealth which they create are what ultimately determine how many jobs will be created in a given economy and how well- or poorly-paid those jobs will be.

(iii) Between "indigenous" firms and nationally-owned firms. What matters for the prosperity of an economic region is not who owns the stock in a company but rather whether or not that company conducts its high value-added activities (product design, research and development, business strategy decision-making, etc.) in that region. The focus of industrial policies should therefore be on "indigenous" firms, regardless of who owns them.[5]

Based on these highly debatable principles, the Council stated objectives and proposed instruments for revitalizing the province's economy. These objectives include:

(i) Restructuring industry in such a way as to expand manufacturing activities producing a high level of added value; this is considered to be particularly important for an economy that is heavily dependent upon activities involving intensive use of largely unprocessed natural resources.

(ii) Developing or creating world-class manufacturing enterprises capable of operating on a transnational scale, especially in high valued-added industries.

(iii) Redirecting industrial policy so as to eliminate its bias in favour of the production of non-tradeables by small firms located in slow-growth areas and its failure to accord due consideration to the distinction between wealth-creating and job-creating activities.

(iv) Investing in fast-growing infant industries, most of which are technology-intensive.

(v) Backstopping "threshold" companies (i.e., firms capable of becoming world leaders in the medium term)[6] producing internationally tradeable goods and services. Policies aimed at promoting the creation of wealth should concentrate on this necessarily small group of business enterprises; in order for this to happen, the role of services in the province's development must be redefined and those services that could be converted into internationally tradeable activities should be encouraged.

(vi) Promoting the development of a risk-taking entrepreneurial culture which will foster the creation of new firms that produce internationally tradeable goods and services.

(vii) Investing in the development of technology and human resources.

(viii) Forming a national consensus that will diminish entrepreneurs' and civil servants' reluctance to act in concert in the area of policy-making and implementation.

On the basis of this set of objectives and strategy lines, the Council proposed a series of tools for their achievement, particularly:

(i) Tax incentives for investment in export firms having the potential to become world leaders in their respective sectors, for investment by workers in efficient, profitable business enterprises, for additional investment in research and development to bring the level of such investment above past corporate averages, and for investment in the stock of companies producing internationally tradeable goods and services which are making their initial public offering of stock.

[5] A similar argument has been presented by Robert Reich, the Secretary of Labour of the Clinton administration. See Reich (1991).

[6] The Ontario programme defines "threshold" companies as firms that are potentially capable of making the necessary effort to become world leaders. This province was felt to have firms of this type in what are regarded as strategic sectors, such as motor vehicle parts, aerospace components, integrated circuits and electronic data communication systems. See Ontario, Premier's Council (1988).

(ii) Establishment of a State procurement system guided by a strategic view of the province's development.

(iii) Promotion of the creation and expansion of financial funds for the development of export products or markets and for encouraging the formation of venture capital funds to backstop the initial stages of investment.

(iv) Subsidies for the hiring of technicians, scientists and engineers by mid-sized firms.

(v) Promotion of training programmes.

The policy lines and tools proposed in the Council's report are quite traditional –at least from the standpoint of the Latin American countries with more experience in the field of industrial policy– but they have a number of important implications. First, the fact that a highly developed area then looking forward to the conclusion of a free trade agreement with the United States nevertheless regarded active industrial policy approaches as both possible and valid suggests that Latin America may well have been too hasty in ruling out the need for industrial policies.

Second, on a more substantive level, some of the basic ideas set forth in the Council's report call for further thought about the types of firm that should be the focus of industrial policy in a context of globalization and intensification of international competition. In particular, they raise some questions regarding the traditional practice in the region of supporting small-scale industry in word while backstopping large companies producing non-tradeables in deed. Focusing on companies with the potential to globalize their trade and foreign direct investments could be a efficient course of action that would be more likely to create wealth in the sense referred to by the Ontario Premier's Council.

2. Emphasis on horizontal policies: ECLAC, 1990

In mid-1990, ECLAC proposed a development strategy for Latin America and the Caribbean in which it outlined a new approach to the relationship that ought to exist between economic growth and social equity and suggested policy lines and tools that could facilitate changes in the region's production structure (ECLAC, 1990). Some of the factors that made it both necessary and feasible to propose a new approach to the issue of development and social equity in the region were the following:

(i) The Latin American countries' resounding failure to combine economic growth with social equity stood out in sharp contrast to the situation in various countries outside the region which have undergone a very rapid development process in recent decades in which they have been able to combine a high growth rate with a much more equitable distribution of income than that prevailing in the region. This appears to have been so in economies such as those of China, Hong Kong, Israel, Portugal, the Republic of Korea, Spain and the former Yugoslavia (Fajnzylber, 1990), although in some cases tendencies towards a deterioration in income distribution appeared during this process.

(ii) An ongoing comparison between the experiences of the newly industrializing economies of East Asia and those of the Latin American countries has shown that the former have achieved much more in terms of higher savings rates, consumption patterns that are less oriented towards luxury goods, efficient integration into the international economy and dynamic, innovative absorption of technical progress at the company level. The spectacular performance of the Asian economies has been an undeniably important factor in fostering the view (which has been the predominant one in Latin America ever since the early 1980s) that the post-war development pattern has definitely outlived its usefulness.

(iii) The new analytical approaches taken to the relationship between economic growth and social equity demonstrate the possibility of a positive relationship between the two; according to these approaches, rather than being a result of economic growth, equity is a *requisite* for the achievement of such growth, especially within the context of a technological revolution that emphasizes the role of human resources in achieving and maintaining competitiveness. Social equity thus becomes a true "factor of production" by facilitating the consolidation of national systems of innovation: an element of the utmost importance in a world market where competitiveness is strongly influenced by the location of firms in different national systems of innovation.

(iv) The increasingly widely accepted view that there is a broad range of economic policies in which social equity and economic growth are complementary rather than antagonistic; this is the case, for example, of policies that promote the efficient creation of jobs, the dissemination of technologies and the training of human resources (ECLAC, 1992).

The ECLAC proposal sets forth both a fundamental objective and a strategy for its achievement, as well as guidelines for selecting the proper policies. The objective is efficient integration of the region's economies into the world economy on the basis of genuine competitiveness (i.e., competitiveness based on improvements in productivity made possible by the absorption of technical progress) rather than a spurious form thereof. ECLAC considers that the latter type of competitiveness was to be observed in many countries of the region during the 1980s, when improvements in those countries' competitive gains were chiefly attributable to wage cuts and the plundering of their natural resources.

In order to attain genuine competitiveness, ECLAC proposes a strategy for resolving three issues that dominated the debate on the subject within the region during the 1980s: (i) surmounting the dichotomy between the domestic and external markets through a strategy for a competitive integration in the world market; (ii) promoting the development of production linkages as a means of avoiding inefficient options that would involve supporting some production sectors to the detriment of others; and (iii) progressing beyond the stage of merely identifying conflicting interests of the private and public sectors and instead advocating options based on negotiation and consensus-building between them.

Based on these strategic guidelines, the proposal specifies a series of policies and policy instruments that would help attain a genuine form of competitiveness involving competitive integration in the world market, internal economic linkages and consensus-building. With specific regard to industrial policy, the proposal offers three guidelines for determining the priority status of different types of policies: (i) as a first step, it is suggested that the countries should use policies to stimulate market mechanisms by increasing their transparency or reducing the costs associated with the acquisition of information by economic agents; (ii) in cases where such stimuli prove to be ineffective, the proposal advocates the use of neutral or horizontal policies that will not discriminate among production sectors or subsectors, such as policies to help strengthen the entrepreneurial base, linkages between the universities and industry, the development and dissemination of technology, and the training of human resources; (iii) in specific cases where horizontal policies prove to be socially suboptimal, the proposal recommends the adoption of policies involving direct intervention at the sectoral level within an expressly limited time frame fixed on the basis of pre-established operational criteria for determining when such intervention should end.

This proposed package of market-stimulus, horizontal and selective-intervention policy measures appears to be broad enough to deal with widely differing situations while at the same time furthering the long-term agenda of ECLAC, which continues to call for active State policies, although now these policies are to be oriented towards efficient integration of the Latin American countries into the international economy rather than towards an essentially inward-looking development, as in the past.

Horizontal policies have a central role in the policy package proposed by ECLAC. Many of the policy tools suggested in its publications since 1990 clearly fall into this category, especially those relating to the creation of jobs, technological development and the training of human resources, which are pivotal elements in the positions espoused by the Commission (ECLAC, 1992). Although during the second half of the 1980s it appeared that policies calling for direct intervention at the sectoral level were to be regarded as beyond the pale, the events of the 1990s that will be discussed later on in this article have shown that there is indeed a place for sectoral policies in the region, although their features will be somewhat different from those of traditional sectoral policies.

3. A more limited scope for industrial policy: Brazil, 1990

Brazil's experience with industrial policy is one of the longest and most intensive in the whole region. In this section, however, we will discuss only those aspects of that experience which refer to changes in the scope of such policy.

In the past, the national authorities have often sought to solve problems arising in the implementation of industrial policy by expanding the scope of the corresponding plans, programmes and instruments. Thus, for example, Brazil moved from policy measures having a basically sectoral impact in the 1950s and 1960s to more comprehensive programmes in the 1970s, and in the mid-1980s it adopted policies covering whole complexes of industries. The basic idea was that it was inefficient to set goals and establish policy mechanisms for isolated branches of industry, because there were important

linkages among many of those branches when they shared a production chain or had a common technological base. These linkages had arisen as a consequence of the complexity of the industrial structure in Brazil in such fields as electronics, whose component industries included microelectronics, informatics, telecommunications and consumer electronics.

Thus, the chief mechanism of the industrial policy instituted by Brazil in 1988 consisted of integrated sectoral programmes covering complete production chains, even including the sectors supplying the necessary technology (Marcovitch, 1990). Within this framework, the policy tools must act not only on the main activities in a given industrial sector, but also on its suppliers of raw materials, components, capital goods and production services, so that ultimately these integrated sectoral programmes were intended to influence all the activities determining a given sector's competitiveness.

Of course, a policy with such a broad scope was extremely difficult to implement, particularly under conditions of extreme macroeconomic instability and a changeover of government. Thus, in June 1990 a major change was made with the issuance of the General Guidelines for Industrial and Foreign Trade Policy (Brazil, Ministry of Economic Affairs, Finance and Planning, 1990), which outlined a new type of relationship among economic agents and among markets and reduced the emphasis which Brazilian industrial policy had traditionally placed on State action and the domestic market.

With a view to boosting the efficiency of production and marketing activities, the General Guidelines also provided for programmes aimed at reducing protective trade barriers; increasing the supply of financing for foreign trade, training in the use of technologies and investment in fixed capital; promoting company modernization; strengthening modern sectors; and restructuring potentially competitive but currently troubled sectors. As a complementary measure, the use of new legal instruments to strengthen competition and consumer protection was also planned.

Promoting the modernization of business firms was to be the task of the Brazilian Quality and Productivity Programme (PBQP), which was to foster the introduction of modern management methods, human resources training, the development of technological infrastructure, the improvement of institutional links and the use of efficient methods for monitoring and promoting improvements in quality in production and trade (UNIDO, 1992). Activities concerning industrial restructuring proper would be backstopped by industrial competitiveness programmes that would gradually be designed on the basis of a consensus-building process with the private sector conducted within the framework of sectoral policy implementation groups.

The General Guidelines did away with the integrated sectoral programmes created under the 1988 policy (because they were considered to be excessively complex) and narrowed the scope of industrial policy by focusing it primarily on certain segments of the value chain (Porter, 1990). This segment-by-segment approach constituted a major change in that it reversed a long-standing tendency to increase the scope of policies and, hence, the difficulties associated with their implementation. Although the segment-by-segment approach is not necessarily the most efficient one in all cases, it does enable decision-makers to concentrate their efforts and to establish operational guidelines for deciding whether a policy measure should be continued or terminated.

4. A critique of the mainstream view: Japan, 1991

In the course of the 1980s, a view of the economic process and of development strategies gradually took shape which tended to disregard the role of industrial policy because it was felt that market mechanisms alone could ensure adoption of the most efficient production structure. This idea, which ultimately became the predominant view in the region's decision-making circles, was expressed in the "Washington Consensus" arrived at by the chief international financial institutions, the Republican administration then in office in the United States, and important opinion-makers and research centres (Williamson, 1990).

Within this context, late in 1991 a document prepared by Japan's Overseas Economic Cooperation Fund (OECF, 1991) began to be circulated which criticized some of the most important components of the above position. Although the document does not present any industrial policy proposals in the strict sense of the term, its conclusions concerning growth and growth policies are of the utmost importance in terms of the present article's objectives. In essence, the Japanese argument revolves around four main points:

(i) With regard to policies for achieving sustained growth, it considers that improving the climate for investment by deregulating economic activities

may not be enough to boost investment, and it may therefore become necessary to apply fiscal and monetary instruments designed specifically for this purpose.

(ii) A balance must be struck between trade liberalization and industrial development. This balance, whose importance is not recognized in the conventional approach, will not come about automatically since, even though liberalization does reinforce static comparative advantages, it would be overly optimistic to suppose that new industries (based on dynamic comparative advantages) will emerge solely as a result of private-sector action.

(iii) The efficiency of the operating mechanisms of financial markets has very definite limits. This makes it necessary to reconsider the possible application of below-market interest rates to investments that involve a high risk, generate externalities, produce social benefits, are located in markets working on the basis of imperfect information or are made in infant industries.

(iv) Privatization is not always the answer to problems of inefficiency in the public sector.

This set of propositions, many of which run counter to the mainstream view, can, in the final analysis, be seen as a synthesis of certain aspects of the development experiences of Japan and the newly industrializing economies of East Asia, whose growth has been based on cooperation between the private sector and a highly interventionist State in a strong leadership position. Although most of the Latin American States are not in this position and cooperation over the long term has not been a conspicuous attribute in the region, the OECF criticism of the mainstream interpretation does point to the need to reconsider options that may have been ruled out too hastily in the region.

5. The reappearance of sectoral policy: Mexico, 1992

The industrial and foreign trade policy applied in Mexico as from 1989 was not based on distinctions between sectors or branches of industry. On the contrary, it emphasized industry-wide –and, indeed, economy-wide– horizontal policy measures. [7] During Mexico's negotiation of the free trade agreement with the United States and Canada, some of the limitations of an approach based entirely on horizontal policies became evident, since the negotiations had a very marked sectoral focus and the resulting agreement set up different conditions for certain types or branches of industry, such as motor vehicles and computers.

In May 1992, against this backdrop of the reemergence of sectoral considerations, the Government announced its Programme to Promote the Competitiveness and Internationalization of the Textile and Garment Industry. [8] In view of this industry's importance to the national economy (it provides 10% of the manufacturing GDP and 850 000 jobs) and its potential for growth under the terms of the North American Free Trade Agreement, the programme aims to help create a more appropriate environment for firms in this industry and to lay the administrative and financial groundwork for improving their competitiveness.

The programme for the textile and garment industry covers four main areas: foreign trade, technology, industrial organization and finance. In the area of foreign trade, it lays down policies concerning labeling regulations, adjustment of tariffs on imports of machinery and equipment to ensure that the prices paid by Mexican producers for such items do not exceed those paid by their international competitors, mechanisms for preventing unfair trading practices, [9] and export promotion. In the area of technology, it identifies a number of problems affecting the sector and provides for the establishment of a working group formed by representatives of both the public and the private sectors to devise possible solutions.

In the area of industrial organization, the programme proposes measures for improving the structure and corporate behaviour of the sector. In particular, it notes that very little coordination exists among the sector's three main components (processing of natural and synthetic fibres, manufacture of

[7] See, for example, the chapter of the National Programme for the Modernization of Industry and Foreign Trade in the Period 1990-1994 on the lines of action to be pursued (Mexico, Ministry of Trade and Industrial Promotion, 1989).

[8] The Programme to Promote the Competitiveness and Internationalization of the Leather and Footwear Industries was announced on the same occasion; for the purposes of this article, its content may be considered as very similar to that of the programme for the textile and garment industry. See Mexico, Ministry of Trade and Industrial Promotion, 1992a and 1992b.

[9] In this respect, it sets up customs and inspection mechanisms to prevent the illegal importation of used clothing, stamp out underinvoicing, reduce the cost of customs formalities and facilitate access to foreign trade information.

yarns and cloth, and ready-made clothing). This lack of strong coordination and the overly fragmented nature of the garment industry prevent producers from making use of economies of scale and make it difficult for supply to be flexible enough to react to changes in demand. Better communication and coordination among the producers would make it possible to set up quick-response systems that would help attain the highest possible quality at each stage in the process, eliminate wasted time and optimize technology use.

The programme also places importance on the promotion of joint investments and strategic alliances with international producers and marketing concerns in order to improve the sector's ability to meet the challenges of globalization. It also aims to help firms in the sector to gain access to credit by, *inter alia*, offering preferential terms to micro-enterprises and to small and medium-sized firms and encouraging commercial banks operating at the national or regional levels to specialize in this sector.

The importance of this programme, which is to be monitored by a committee composed of representatives from the private and public sectors, lies less in any innovative aspects it may have than in the fact that its very existence points up the limitations of horizontal policies. Apart from certain extremely broad-scope policies (e.g., policies in support of elementary education), the scope of most of the policy tools varies widely depending on the sector in which those tools are to be used. Since human resources and financial constraints make it impossible to design policies for each and every industry, priorities must be established in order to channel efforts towards selected sectors, taking into account the usual sorts of variables (e.g., number of jobs provided, export potential, or the existence of a serious threat to the sector's survival). Above all, this programme shows that a radical change has been made in the set of basic policy tools used, as reflected in the elimination of tax incentives and outright trade protection barriers.

III

Conclusions: ongoing issues

This review of experiences and proposals in the field of industrial policy indicates that there are certain permanent issues in the debate on this subject. This section will present some of those issues, which are of great significance in terms of policy-making and implementation, and will suggest ways of dealing with them in the 1990s, some of which have already been mentioned in earlier sections.

The disappearance of sectoral industrial policies in the region appears to be due more to the influence of theoretical positions and bad experiences on the countries than to the solution of the problems which those policies were intended to address. Thus, some countries have taken steps that entail the adoption of horizontal policies, but the implementation of such policies necessarily has sectoral implications. Thus, for example, Brazil's "competitive integration in the world economy", Chile's "advance to a second export stage" or Mexico's bid to make the most of the potential offered by the North American free trade area have all led to the adoption of measures or the design of programmes whose scope is of a strictly sectoral nature. This stands out all the more clearly when an attempt is made to defend sectors experiencing problems of (often unfair) competition, such as the Chilean textile industry [10] or the Mexican garment industry.

Just how broad a scope an industrial policy should have is a question that remains open to discussion and to policy experimentation, and it is good that this is so. Although the trend towards all-embracing programmes or programmes aimed at extremely broad-ranging industrial complexes appears to have been reversed, no factors of analysis are at hand that would make it possible to determine *a priori* what scope would be most efficient. In the preceding paragraph mention was made of a number of conditions that have led to the persistence of sectoral approaches, but measures at the segment level

[10] In December 1992 the Chilean Ministry of Economic Affairs unveiled a restructuring plan for the textile industry that seeks to overcome that industry's "growing lag in terms of competitiveness". See *Estrategia*, 1992.

are also important, especially when the aim is to influence existing entrepreneurial dynamics.

Policy implementation capacity continues to be of great importance in determining optimum policy scope. In the region, although it could argued that some of the initiatives outlined above suffered from design flaws, their impact has invariably been different from what was expected because the State's implementation capacity has been insufficient. This shortcoming has frequently prompted assertions that it is impossible to forecast which sectors are going to be winners or losers. The truth of the matter, however, is that rather than making mistakes in selecting the sectors or subsectors to be promoted, the problem has been a lack of capacity to implement measures even in sectors that were clearly "winners", both in the region and elsewhere. Certainly, the exclusive use of horizontal or neutral policies will not solve the problem of inadequate implementation capacity, and in fact will often exacerbate it in cases where it is necessary to pursue policy actions in highly dissimilar sectors. Despite their undeniable advantages in terms of simplicity, strictly horizontal policies soon tend to reach limits imposed by the sectoral specificity of technology, markets, corporate organizational structures and even international economic negotiations.

Regarding policy instruments, no new policy tools have been developed; however, those instruments that are incompatible with trade liberalization and fiscal restraint have been discarded. Thus, the countries are turning away from widespread use of fiscal subsidies, import quotas and preferential interest rates, although almost all of them continue to utilize these instruments to promote activities that generate significant externalities or for what they consider to be key branches of industry, such as the automobile industry. At the same time, the move to privatize State companies has diminished the role of State procurement as a policy tool.

Although progress has been made in reducing information and transaction costs, in many Latin American countries there is still a good deal of room for the application of these types of market stimulation policies. There is also a need to undertake a more thorough-going effort to reduce coordination costs. This is the foundation for the success of industrial areas that have become local systems of innovation, as shown by general regional development experiences in, for example, Italy (Bianchi and Bellini, 1991).

Above and beyond the practical aspects of the failure of many industrial policies, there is also a theoretical factor that has to do with the current status of industrial organization analyses. [11] The theoretical problems attendant upon any essentially casuistic methodology have been compounded by two other elements which have heightened critics' dissatisfaction with these forms of analysis. One of these elements is that the critiques made by the neo-Schumpeterian school and by analysts of contestable markets have shown that industrial structure is endogenous to the structure-behaviour-performance model and therefore cannot be regarded simply as a policy tool, as has implicitly been the case in many sectoral programmes.

The other element is that the increasing openness of the region's economies tends to reduce the importance of a methodology of analysis that was developed primarily with reference to a closed economy (as was that of the United States in the 1940s and 1950s). In open economies undergoing a process of globalization, we must critically review many of the traditional arguments concerning the relations between entry barriers, product differentiation, diversification and concentration, on the one hand, and the power of the market, on the other. Moreover, the positive reassessment of the role played by transnational corporations and the negative reappraisal of the role of State enterprises has made many of the traditional assertions regarding the relations between the above variables and equity ownership less relevant from a policy-making standpoint, although it is debatable whether they have become completely invalid as a result. This crisis of industrial organization analyses is in sharp contrast with the prospects opened up by the "new growth theory" thanks to the incorporation into its models of crucial factors for the analysis of industry

[11] As noted in section II of this article, many of the sectoral policies formulated in the region have been based on traditional ways of analysing industrial organization. The main body of relatively recent theory on industrial organization –i.e., game theory– has supplied some interesting, but inconclusive, analytical results which are still a long way from the point where they could be forged into new policy tools and approaches (Norman and La Manna (eds.), 1992). Nevertheless, game theory, information theory, hierarchy analyses and approaches based on the correction of market failures constitute the analytical core, which may be expected to give results having a fairly similar impact to that generated by the structure-behaviour-performance model (see, for example, Katz, 1993).

and its technological determinants, such as learning -by-doing, economies of scale, and the widespread presence of externalities. The inclusion of variables of this sort within a framework of general equilibrium offers promising opportunities for linking traditional elements of industrial analysis and economic growth theories with sound microeconomic foundations (Grossman and Helpman, 1991).

In closing, it should be noted that the question of which industrial policy options may be considered viable in the region will be influenced by two processes that are taking place mainly in developed countries and particularly –insofar as Latin America is concerned– in the United States. First, the future course of policy-makers' thinking on the most efficient scope for State action will in large part determine whether or not the Washington Consensus will remain in effect as it has up through 1992 and this, of course, will have an influence on what sorts of policies are regarded as efficient and viable by the governments of the region. Second, the type of scenario towards which the international trading system evolves (open multilateral trade, relatively open blocs or closed trading blocs) will have a considerable influence on what type of industrial policy will be acceptable. While it is always possible that trade-based solutions will be found for trade problems, it would not be surprising if the real answers to these problems have to be sought in the underlying economic structures, as illustrated by the negotiation of the Strategic Impediments Initiative between the United States and Japan. In such a scenario, negotiations and trade retaliation may also incorporate considerations of industrial structure and policy. After all, first-best solutions are better than second-best solutions only when all the relevant actors behave as if they lived in a first-best world.

(Original: Spanish)

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The challenge *of industrial* competitiveness

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Latin American manufacturing industry has undergone various changes in recent years. It has registered a favourable performance as far as exports are concerned, but production and investment have grown only slowly in a context of sluggish recovery of domestic demand and greater foreign competition. Other features are greater specialization in natural resource-based intermediate goods characterized by the importance of economies of scale, relatively long lead times for the heavy investments required, and the presence of privatized and transnational enterprises. At the same time, there are signs of the emergence of a varied range of competitive manufacturing activities of a scale which is as yet too small to be clearly reflected in the aggregate indicators. This article reviews some of these cases and concludes that it is necessary to establish a favourable environment for this type of activities: to this end, higher productivity needs to be promoted at the enterprise level. Finally, from a sectoral point of view, emphasis is placed on the need to continue to promote exports, adding new products and exploring new markets, while it is also noted that competitiveness on the domestic market needs to be raised, as this market continues to be the main source of demand for industry in the region.

I

Introduction

In the post-war period, Latin American industry developed considerable production capacity, designed above all to satisfy domestic demand. Subsequently, in the 1980s, a combination of changes faced manufacturing with the challenge of improving its competitiveness. The sharp contraction in domestic demand, the application of macroeconomic policies which realigned relative prices in favour of exports, and the changes in trade policies which increased competition on domestic markets, together with the trends towards the globalization of enterprises and the changes which took place in the industrialized countries in production and organizational practices, gave rise to an economic environment totally different from that of only a decade before. These changes, however, were neither linear nor completely foreseeable. The privatization process, for example, led to the reallocation of private investment resources from tradeable to non-tradeable activities, while the opposing nature of some elements of change gave rise to uncertainty which conditioned business behaviour in this stage of transition to another strategic model.

In view of these changes, it may be assumed that manufacturing in the region is in the midst of a complex process of adaptation. This process may take different forms, as the changes have different effects on businesses depending on the nature of the market and sector in which they operate, their size and type of ownership, and their innovative capacity.

The present article will examine some macro- and microeconomic phenomena which bear witness to this process of adaptation which has taken place in recent years. At the macroeconomic level, the analysis reflects positive evolution of exports of manufactures, but sluggish growth of production and investment in view of the only incipient recovery of domestic demand and the stronger foreign competition on the domestic market. It also reflects structural changes in the direction of greater specialization in the intermediate goods sectors such as basic chemicals, iron and steel, pulp and paper, and the processing of various minerals. These sectors are based on the availability of natural resources and are characterized by the importance of economies of scale, the relatively long lead time of the heavy investments required, and the presence of (privatized) public enterprises and transnational corporations. This latter feature is explained by the fact that in these sectors the macrodevaluations carried out gave competitiveness to the output of production facilities financed with investments made before the crisis. It is even possible that in some cases the exports are produced on the basis of marginal costs, without any possibility of recovering the original investments. The other phenomenon observed is the relocation of certain activities by transnationals to a limited number of countries of the region. Thus, in order to cope with the competition, especially from Asian products, some United States firms have transferred part of their production to locations like Mexico (automobiles, electronics, textiles) and some of the Caribbean countries (ready-made clothing and other activities using relatively unskilled labour).

This may seem a gloomy picture, as it would appear to indicate that Latin America has few options open to it except to take advantage, at discount prices, of the investments made in earlier periods, exploit its natural resources in the same way, and also take advantage of its unskilled labour. However, this interpretation is not entirely in keeping with some examples at the microeconomic level. There are indications that a variety of competitive manufacturing activities are emerging which, because of their as yet small scale, do not show up clearly in the aggregate data. In the next section we will review some of these examples, which may well be signals that there are possibilities of expansion in areas which are difficult to imagine or plan. The challenge of improving the competitiveness of manufacturing firms may be tackled in many different ways. The industrial policies of the countries of the region –a matter which is touched upon briefly in the Conclusions– should not only deal with the problem of how to increase investments, productivity and authentic competitiveness in the sectors which are still strongly reflected in the aggregate data, but should also seek ways to stimulate creativeness and production capacity in this range of activities which have not yet reached readily appreciable levels in the macroeconomic indicators.

II

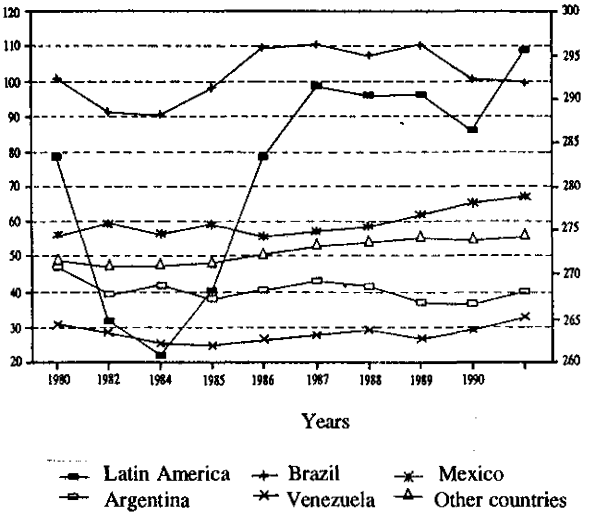
An overview of Latin American manufacturing industry[1]

1. Evolution of the manufacturing product and the degree of industrialization

The gross domestic product of Latin America is showing signs of recovery after a decade of virtual stagnation. The manufacturing product, for its part, has displayed procyclical behaviour, reflecting the greater elasticity of demand for manufactures. In 1980-1985, in reaction to the crisis, it suffered an average annual decline of 0.6%, in 1986 its "spurious" recovery was greater than the growth in GDP (+6.8%), and between 1988 and 1990 its relative stagnation led to a fresh setback in absolute terms. Its recovery in 1990 was somewhat less than that of the economy as a whole, due to the deterioration in manufacturing output in Brazil and Colombia (ECLAC, 1993, p. 89). The performance of manufacturing is shown in figure 1, in which the figures on the right-hand vertical axis refer to growth of the sector in the region as a whole and the figures on the left-hand axis refer to the performance of each individual country.

The degree of industrialization of the region went down from 26% of the total product at the beginning of the 1980s to 24% at the beginning of the 1990s. This indicator conceals great differences between the countries, however. Three of them –Argentina, Brazil and Uruguay– register a degree of industrialization higher than the mean of 24% in 1991, but in fact they had suffered a significant setback in this respect in the 1980s. The countries with a degree of industrialization slightly below the mean (Chile, Colombia, Mexico and Venezuela) generally maintained their position, as did those with a relatively lower level of industrialization (ECLAC, 1993, p. 90).

FIGURE 1
Latin America: Industrial GDP, 1980-1990
(Billions of dollars) [a]



Source: UNIDO Industrial Statistics Data Base.
[a] At constant 1980 market prices.

2. Employment and investment

As regards employment, [2] the number of persons employed in the industrial sector of the region went down by 5% over the period 1980-1990, the reduction being most marked in the first half of the 1980s and being concentrated in Argentina (figure 2 and table 1). In Mexico and Brazil there was no net generation of industrial employment over that period, but there was an increase in such employment in some countries with a smaller industrial sector, such as Chile and Venezuela, especially in the latter part of the period. In other words, in the countries with the biggest concentration of industry in the region, the sector ceased to generate new jobs in the 1980s, whereas in the previous decade employment in this

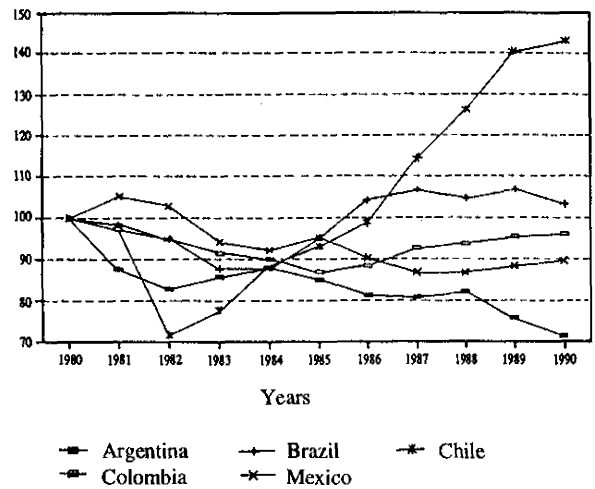
[1] Gaining an overall picture is made more difficult by the processes of heavy overvaluation and undervaluation of national currencies and changes in the structure of relative prices. In order to calculate growth rates, we used data in constant prices which basically represent the physical volume of production, valued at 1980 prices. Analysis of changes in the structure of production and the degree of openness of the economies was based on data in current dollars, thus simply accepting all the problems due to fluctuations in currency valuations and relative prices.

[2] Data from the Industrial Statistics Data Base of the United Nations Industrial Development Organization (UNIDO).

FIGURE 2

Latin America: employment in manufacturing, 1980-1990

(Indexes: 1980=100)



Source: UNIDO Industrial Statistics Data Base.

TABLE 1

Latin America: number of persons employed in industry, 1970-1990

(Annual average growth rates)

	1970-1980 [a]	1980-1990 [b]
Whole region	4.4	-0.5
Argentina	0.8	-3.2
Brazil	5.9	-0.1
Colombia	2.6	-0.5
Chile	1.3	0.4
Mexico	6.6	0.0
Uruguay	0.3	-5.5
Venezuela	6.1	0.4

Source: ECLAC, 1993.

[a] Industry includes mining, manufacturing, electricity and construction.

[b] Annual growth rates between the averages for the periods 1978-1980 and 1988-1990.

sector in this group of countries had grown by 4.4% per year. [3] Quite apart from the contraction in demand and the fall in investment, this decline in the capacity to create new jobs may be partly explained by the new pattern of sectoral specialization which is taking shape, as will be analysed in section 5 below. Another element which helps to explain this is the productivity strategy of the firms, which is marked by rationalization of labour use and low investments, which were limited to the replacement of old machinery but did not serve to bring about a significant increase in overall production.

3. Investment and productivity

Gross domestic investment, like the gross domestic product, only began to show signs of recovery in 1991, after its fall from 25% of the product in 1980 to only a little over 15% in 1990. There are also differences of behaviour among the countries: while Brazil and Colombia still maintained their downward trend in 1991, Mexico and Chile had been recovering steadily since 1988, whereas most of the other countries only began to recover as from 1991.

Investment in machinery and equipment accounted for almost 39% of total investment in the peak year of 1980, but subsequently dropped even more sharply than investment in general, so that its share in the total was only 34% in 1985. Since then, it has grown rather more rapidly than total investment at the aggregate level, and its share of the latter was once again over 38% in 1991.

A central element in the competitiveness of industry is productivity. If we look at the labour productivity indicator, we see that in general terms manufacturing added value remained steady or declined a little between 1980 and 1990, while manufacturing sector employment registered a decline of 0.5% per year, due above all to the contraction of activity in Argentina. Taken together, these two facts mean that, in terms of value added per worker, labour productivity increased.

In analysing the evolution of labour productivity and, above all, that of all the factors taken together, there is a problem of shortage of reliable and comparable data. Nevertheless, it was possible to determine some interesting indicators in this respect for certain countries, on the basis of national studies (table 2). [4]

[3] In terms of employment, it is not only the number of jobs which is of interest, but also their quality, the level of wages, structure by skills, age and sex, etc. There have been important changes in these respects which are not analysed here but have been dealt with in numerous country studies.

[4] Data up to 1985 may be found, for example, in Elias (1992).

TABLE 2

Latin America: evolution of productivity, 1980-1990
(Annual growth rates)

Country	Labour productivity [a]			Total factor productivity		
	1980-1985	1985-1990	1980-1990	1980-1985	1985-1990	1980-1990
Mexico	1.1	2.5	1.5	-0.7	6.5	-
Chile [b]	2.0	-1.0	-	-0.6 [c]	-2.0 [c]	-0.9 [c]
Brazil [d]	0.4	0.1	0.2	-	-	-
Colombia	4.2	1.9	2.8	-1.8	0.5 [e]	-1.1
Argentina [d]	-0.5	1.8	0.7	-	-	-

Source: ILO, 1991; Brown, 1993; Bonilla, 1992; Kantis, 1993; ECLAC, 1993a; Agacino and Rivas, 1993.

[a] Value added per person employed in industry.
[b] Average physical labour productivity (firms with over 10 workers).
[c] Firms with over 50 workers.
[d] Value added per hour worked.
[e] 1985-1989.

In the 1980s, industrial labour productivity in the five countries covered by table 2 remained bogged down at levels of between 0% and 1.5% per year (except in Colombia, where it rose by 2.8%), compared with the rates over 3% registered in Mexico and Brazil in previous decades. The productivity strategies adopted, although not identical in all the countries, had certain features in common. At the beginning of the crisis, the predominant objective was to minimize the loss of profits by *rationalizing* the factors of production in the sense of reducing them in absolute terms: less use of labour (reduction of staff) and of capital (use of plant which had already been depreciated), without making any substantial technological or organizational innovations. Whereas labour use could be reduced by cutting the number of jobs, in the case of machinery and equipment there was an increase in idle capacity and in the average age of the plant. The suppression of new investments led to a drop in net capital formation in a number of countries (table 3), as for example in Mexico, where this indicator went down by 20% in manufacturing firms between 1983 and 1987 (Hernández Laos, 1991). In spite of this rationalization, it was not possible to increase overall factor productivity –that part of growth attributable to advances in knowledge, technology and organization–, probably because of the increase in idle capacity.

Later on in the productivity strategies, the adjustment and rationalization phase changed to a phase of *intensification* of factor use, with increased efficiency, which coincided in a number of countries with the reactivation of demand. In this phase, the productivity strategy consisted of producing more and better goods with the same level of production resources.

While investments in machinery and equipment continued to stagnate until the end of the decade, a process of partial innovation in the organization of work and production was begun. [5] These innovations

TABLE 3

Latin America: investment in machinery and equipment in the 1980s. Gross fixed capital formation
(Annual growth rates)

Country	1980-1985	1985-1990	1980-1990
Mexico	-6.7	8.3 [a]	-0.3 [a]
Chile	-9.7	19.6 [a]	2.3
Brazil	-9.3 [b]	0.5 [b]	-8.8 [b]
Colombia	1.6 [b]	2.1 [b]	1.5 [b]
Argentina	-11.1	-4.8	-8.0

Source: Agacino and Rivas, 1993; Sarmiento, 1993; ECLAC, 1992.

[a] 1985-1989.
[b] Investment in machinery and equipment in all sectors of the economy. This has been taken as an approximation to the evolution of investment in machinery and equipment in industry. In the case of Mexico, where both sets of figures were available, the difference was one percentage point more for industry. In other words, the growth rate was 1% more on average.

[5] We refer to organizational innovations designed to ensure product quality and update production standards and times (reduction of lost time in production processes). Integral innovations would correspond to strategies designed to raise the quality and efficiency of the relation between direct and indirect areas of production and between suppliers and clients/consumers.

were designed to improve process and product quality. No big investments in equipment were made, and technical innovation was limited to making adaptations rather than reaching new technological frontiers. The exception to this was the increased investment in computers in the indirect areas of production [6] –information and process control systems. The strategy consisted basically of making better use of the existing capital and labour factors. Thus, overall factor productivity in industry began to improve in the second half of the decade in various countries. [7]

If the levels of productivity are compared with those attained in manufacturing in the United States, however, we note that the ratio remained constant at about one-third of the level registered in the latter country. This ratio conceals very different performances by the different sectors, as there was an excellent performance in terms of productivity in the leading sectors, such as chemicals, iron and steel, and non-metallic minerals, whereas productivity stagnated in the metal products and machinery industry and actually went down in the non-durable consumer goods sector (UNIDO, 1992, p. 71).

The need to raise levels of productivity has become a central element in economic policy in most countries of the region, especially Argentina, Chile, Colombia and Mexico. The importance of this objective is even more obvious in view of the urgent need to increase exports and compete on the domestic market in a context of appreciating national currencies and the rising cost of services because of the privatization processes: factors which have raised local production costs.

It may therefore be concluded that the productivity strategy based on more intensive use of production factors must be followed by a phase involving the *transformation* of those factors through integral innovation in the technical, organizational and human resources bases of the enterprises. This is reflected above all in the need to achieve a steady increase in the levels of investment in machinery and equipment and in systems for the organization and development of human resources. In some countries of the region, this phase only appears to have begun in the early 1990s, while in others there is still no sign of it beginning.

4. Foreign trade in manufactures

Because of the debt crisis, Latin America had to generate big trade surpluses in order to cope with external debt service commitments. Thus, in contrast with a trade deficit of over US$14 billion in 1981, the region registered a *surplus* of nearly US$36 billion in 1984. This was attained without any increase in exports of goods and services, which stood at US$113 billion in both years. The change was achieved entirely through the reduction of imports by US$50 billion, almost the whole of this saving being used to service the external debt.

Only from 1988 onwards was there an increase in exports of goods and services, which in that year exceeded for the first time the level of US$113 billion registered at the beginning of the decade. In three years, exports grew by a total of rather more than US$150 billion, 80% of which was due to exports of goods. At the same time, the trade surplus went down significantly, standing at US$5.5 billion in 1991, with a downward trend, and in 1992 there was a trade deficit for the first time since the debt crisis (ECLAC, 1992). This change was due to the recovery of imports, the policies of greater openness, and the process of appreciation of national currencies (except in Brazil) in more recent years. In 1991 total imports came to the unprecedented figure of nearly US$147 billion.

These figures rather underestimate the export effort, however, since generally speaking the terms of trade were unfavourable for the region. In fact, at the end of the decade the index of export volume was 75% higher than at the beginning.

Figure 3 reflects the above situation in two ways. In current dollars, it first of all shows the creation of a trade surplus, then a recovery in imports, which grow at the same rate as exports, and finally even faster growth of imports which ends up by virtually wiping out the trade surplus. In constant dollars, however, it shows the export effort made by Latin America and the results of the deterioration in the terms of trade.

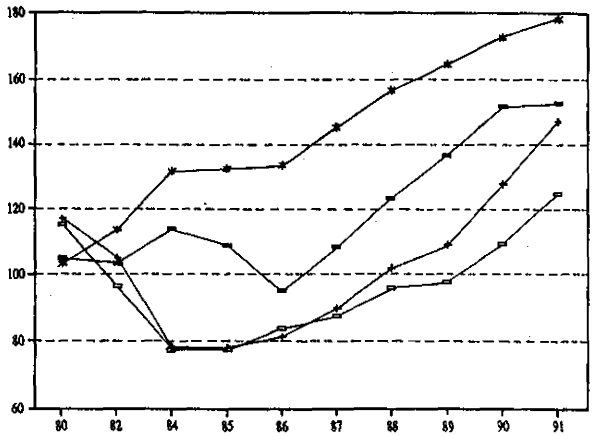
[6] The annual growth rate of investment in office equipment in Mexican manufacturing firms averaged 0.7% between 1980 and 1985 but 26.3% between 1985 and 1989 (Brown, 1993).

[7] This process did not take place in the same way in all countries. In Chile, for example, the increase in domestic demand led firms to adopt a strategy based on more extensive use of the factors of production (Agacino and Rivas, 1993).

FIGURE 3

Latin America: trade balance (goods and services), 1980-1991 [a]

(Billions of dollars)



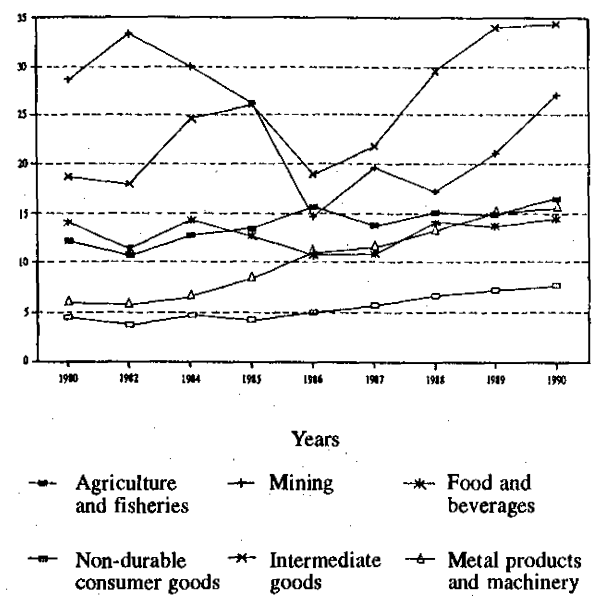
Source: UNIDO Industrial Statistics Data Base.

[a] At current prices and 1980 prices.

FIGURE 4

Latin America: exports of goods, 1980-1990

(Billions of current dollars)



Source: UNIDO Industrial Statistics Data Base.

If manufactures are defined as the products in major division 3 of the ISIC –a very broad definition of the manufacturing sector– they more than did their share in contributing to export growth. Whereas primary commodity exports turned in a poor performance between 1980 and 1986, mainly because of the fall in prices, exports of manufactures began to grow immediately. Thus, exports of manufactures rose from US$15 billion in 1982 to over US$40 billion in 1989 (figure 4).

In 1989, half the region's exports of manufactures came from Brazil and another quarter from Mexico. The other countries accounted for the remaining 25% –a good deal less than in 1980, when they accounted for 40%. Even though the growth in exports was due mainly to Brazil and Mexico, however, most of the other countries in the region also registered an upward trend in this respect.

5. Structural changes in the manufacturing sector

If we look at the sectoral structure of manufacturing in Latin America, we immediately see the favourable performance turned in by intermediate goods: wood, paper and pulp, chemicals, mineral processing, and iron and steel. This progress was registered in each of the countries in question, both in terms of added value (table 4) and of exports (table 5). [8] The sector whose share went down most in the global figures was that of foodstuffs, beverages and tobacco. However, this tendency was observed above all in Brazil and Mexico: in Argentina and the rest of the region the sector registered a slight upward trend.

If we look at the sectoral structure of growth of exports of manufactures, we see that the intermediate goods sectors have made a growing contribution to foreign exchange earnings, with notable relative increases in Argentina and Brazil. There has also been a significant –threefold– increase in the exports of the metal products and machinery sector, mainly concentrated in the Mexican automobile industry, which registered growth of US$6.5 billion.

The structural changes in the relative position of the metal products and machinery industry are not of

[8] These figures are affected by the fluctuations in relative prices, which in general have been favourable to the metal products and machinery sector. The structure in terms of constant prices or –which amounts to the same thing– physical volume therefore shows a decline for this sector (ECLAC, 1993).

TABLE 4

Latin America: structure of manufacturing added value, 1980-1990
(Percentages)

Sector [a]	Latin America		Brazil		Mexico		Argentina		Other countries	
	1980	1990	1980	1990	1980	1990	1980	1990	1980	1990
A	19.8	16.5	15.1	11.5	25.3	19.9	19.1	21.6	25.0	27.4
B	17.8	16.0	17.6	16.6	19.0	16.5	17.8	13.8	16.2	14.4
C	38.8	43.8	37.7	43.0	34.8	43.5	39.2	44.9	45.7	46.0
D	23.7	23.7	29.6	28.8	20.8	20.1	24.0	19.8	13.1	12.2

Source: Prepared by the authors on the basis of the UNIDO Industrial Statistics Data Base. The years correspond to three-year averages (1980=1978-1980; 1990=1988-1990).

[a] A: Foodstuffs, beverages and tobacco, ISIC 31.
B: Non-durable consumer goods, ISIC 32, 332, 342 and 390.
C: Intermediate goods, ISIC 331, 341, 35, 36 and 37.
D: Metal products and machinery, ISIC 38.

TABLE 5

Latin America: structure of exports of manufactures, 1980-1990
(Percentages)

Sector [a]	Latin America		Brazil		Mexico		Argentina		Other countries	
	1980	1990	1980	1990	1980	1990	1980	1990	1980	1990
A	32.5	20.1	47.4	22.1	21.3	5.6	53.1	44.4	14.8	17.7
B	10.3	10.7	9.2	11.3	8.3	6.5	15.4	11.1	10.3	12.2
C	43.6	47.8	20.7	40.8	47.8	37.1	19.6	35.2	71.2	66.2
D	13.6	21.5	22.7	25.8	22.5	50.8	12.0	9.4	3.7	3.8

Source: Prepared by the authors on the basis of data from ECLAC, 1993.
[a] A: Foodstuffs, beverages and tobacco, ISIC 31.
B: Non-durable consumer goods, ISIC 32, 332, 342 and 390.
C: Intermediate goods, ISIC 331, 341, 35, 36 and 37.
D: Metal products and machinery, ISIC 38.

a monolithic nature. Whereas in terms of added value this sector displayed relative stagnation, in terms of exports it was the sector with the highest relative growth. This indicates that heterogeneous structural changes took place within the sector: relative increases and setbacks took place at the same time in different subsectors or companies. In the foodstuffs, beverages and tobacco sector, this heterogeneity is reflected in differing behaviour between one country and another: the smaller economies registered relatively dynamic growth in this area, in contrast with the bigger economies. In the non-durable consumer goods sector, heterogeneous trends are observed both between countries and within the sector: there was a relative increase in terms of exports, at the same time as a relative decline in terms of added value.

The sector of greatest absolute importance as regards export of manufactures was the intermediate goods sector, whose exports doubled between 1982 and 1990, with outstanding performances not only by Brazil and Argentina but also by Chile and Colombia.

Exports of non-durable consumer goods, including textiles, clothing, leather and footwear, rose from US$4.4 billion in 1980 to US$7.7 billion in 1990. Particularly noteworthy were the extraordinary performances of Chile and Venezuela, whose exports in this sector grew from almost nothing at the beginning of the period to over US$200 million in 1990, and the above-average growth registered by Colombia and Mexico.

The region's export effort is expressed in the ratio of exports of goods and services to the value of domestic production. In aggregate terms, Latin America's exports of goods and services amounted to 14% of its gross domestic product in 1980, but this ratio rose steadily until it exceeded 20% in 1990 (ECLAC, 1993, p. 74).

Using data from the United Nations Industrial Development Organization (UNIDO), it is possible to make a breakdown by sectors. Thus, the main increases in the export effort (exports/gross value of output) were in transport equipment (from 7.2% to 19.2%), iron and steel (from 5.5% to 18.2%), paper (from 5.9% to 13%), and chemicals (from 12.7% to 19.1%). The export effort of the foodstuffs sector remained constant at around 15% (Buitelaar, 1992).

Finally, a more disaggregated breakdown of Latin America's performance on international markets shows a large number of relatively small product lines where the region is increasing its share. A study of the shares of the 240 sectors making up the three-digit SITC classification was carried out for the 11 ALADI countries, and it was found that in 183 of these sectors these countries have increased their share in the import market of the Organization for Economic Cooperation and Development (OECD). Annex 1 of this article shows the share of these countries in the OECD's imports of machinery and equipment, and it may be noted that this share grew steadily in 34 out of 45 product areas between 1970 and 1990, and in 37 areas between 1980 and 1990. However, the outlook with regard to the smaller countries is a good deal less encouraging.

The diversification of the region's export structure is also reflected in the data on the export importance of each country's ten main products (ECLAC, 1993), which show that the relative importance of these products is declining in all the countries.

At the same time (1982-1986) that exports of manufactures grew by 66%, imports of intermediate goods went down by 33% (from US$60 billion to US$40 billion). The total value of such imports rose again after 1986, but in 1990 it had still not reached its 1980 level.

Imports of capital goods went down in two years by 50% in terms of current dollars, from US$22 billion in 1982 to US$11 billion in 1984, and though they began to recover again as from that year, in 1990 they had still not returned to the level of ten years before. This means, *inter alia*, that there was an increase in the share of consumer goods in total imports between 1980 and 1990 (from 12% to 14%).

To sum up, manufacturing was a fundamental factor in the increase in the value of the region's exports during the 1980s, as well as in the reduction of imports of intermediate and capital goods.[9] Despite the growth in total exports, however, manufacturing activity as a whole did not register an increase because of the deterioration in domestic demand and the increase in foreign competition on domestic markets.

These changes set off restructuring processes which were reflected, in aggregate terms, in the relative strengthening of the chemical, paper and pulp and mineral processing (iron and steel) industries, with the other sectors turning in a varied performance. This tendency may be explained in the first part of the 1980s by the availability of natural resources, the completion of big long-term investment projects begun in the period before the crisis, and the devaluations which took place. Its subsequent continuation was probably due to the improvement in productivity and the development of systemic competitiveness in those sectors, facilitated by the high degree of concentration of these types of industries. This pattern of sectoral specialization has some negative aspects from the standpoint of the regional development strategy, however, due to its capital-intensiveness, degree of concentration, and the international demand prospects of the sectors in question. In these types of sectors, the direct and indirect distributive effects and capacity for generating employment are less than in others. Technological innovation and the improvement of productivity often demand heavy investments and very long-term projects, while the endogenous contribution to product and process development is only limited. Moreover, the profit margins in these kinds of sectors which are "distant" from the final consumer are small and tending to decline.

The trend towards specialization in intermediate goods does not mean that capacity for competitiveness does not exist in other sectors. In the other sectors of the economy, opposing trends have been

[9] In the case of intermediate goods, this could be attributed to the greater competitiveness of domestic production, while in the capital goods sector it was due to the failure to make investments.

observed: there have been some cases of improvement in the competitiveness of individual firms, but fewer in the sector as a whole. It would be interesting to identify the determinants of such competitiveness, in order to advance in the formulation of policies designed to support an alternative form of sectoral specialization or more balanced sectoral growth. After describing some general trends in microeconomic productivity and competitiveness strategies, section III below gives some examples of the varied range of activities which seem to be emerging at the company level.

III

Microeconomic strategies in the trend towards a new industrial production model

1. Evolution of competitiveness and productivity strategies

The parameters of industrial competitiveness that prevailed in the 1980s have been evolving, both internationally and in the region, towards higher demands in terms of quality, design and satisfaction of clients' needs. The challenge has been to meet these demands without affecting the cost structure too much, since price continues to be a key factor in competitiveness, in addition to the other dimensions (quality, design) (Mertens, 1992).

Latin American companies have not only been faced with the need to produce goods at international levels of price and quality, but have also had to adapt to more demanding relations with the outside world: that is to say, they have had to comply with the rules of international competition, which means applying international standards in terms of environmental conservation, labour relations, subsidies and incentives.

Both the requirements in respect of quality, products and processes and those connected with the environment are being incorporated in international standards governing company operations, such as ISO 9000 for the European market and EN 29000 for the United States and Japan. In other words, if a company wants to have access to these markets it must comply with these new rules.

The new parameters of international competitiveness therefore mean that the region's manufacturers must go through learning processes designed to raise their levels of productivity, and this involves the introduction of technical and organizational innovations.

The productivity strategies of the different companies may follow differing paths, but they are bound to have common elements in keeping with the objectives pursued (price, quality, design, customer service, or all of these together). The common feature of these strategies would appear to be the priority they assign to the reorganization of production practices through innovations (total quality control, continual improvement, adoption of "just in time" methods, reduction of the number of management echelons) in order subsequently to make effective use of the new technologies so as to reduce costs and at the same time improve quality and flexibility (Mody, Suri and Sanders, 1992). [10]

[10] The following stages have been observed in the implementation of the productivity strategies of Latin American companies: i) partial improvement of productivity through the production factors: ensuring product quality; increasing the volume produced per worker, and reducing down time of machinery; ii) improvement of process productivity: reduction of the quantity of goods in the course of manufacture and improvement of the various types of lead time; and iii) integral improvement of productivity by reducing movements and activities which serve no real purpose and/or add little value in the eyes of the consumer; reduction of losses of time and materials by directly linking production with indirect areas, suppliers and consumers. Although from the analytical point of view these stages can be identified separately, in practice they overlap and dovetail with each other (Mertens and Palomares, 1993).

The capacity to generate competitive advantages consists, on the one hand, in moving ahead in the learning process through faster introduction of technological and organizational innovations,[11] and on the other hand in minimizing the cost of making such innovations, that is to say, minimizing the costs which are external to the production process.[12]

When the concept of lean production was developed a few years ago, Western companies had before them the Japanese example of how to produce goods of high quality at low prices, with frequent design changes, by placing greater emphasis on innovation and on improved organization of work and production. Within a relatively short space of time, many companies went over to this system, and now that almost all the leading firms are using it, the question is how to gain a competitive advantage if all the competing firms are using the same strategy. Thus, something more is now needed to gain such an advantage, and this "something more" is beginning to be seen as the capacity of a firm to mobilize the available resources effectively in the pursuit of productivity. These resources are, on the one hand, those available for the actual process of production –labour, machinery and technology– and on the other hand those that could aid in the production process but are located outside it: that is to say, the resources of suppliers, marketing and sales departments, engineering and even those of customers must also be mobilized in order to gain competitive advantages (De Meyer, 1992).

It may be concluded from the foregoing that in their process of building up comparative advantages, companies are faced with the challenge not only of keeping up to date in the application of technological and organizational innovations, but also of making the necessary adaptations and improvements in them in line with their specific market and production conditions. In this latter aspect, the strategy has only limited leeway, for it is here, in the final analysis, that competition is concentrated: on the achievement of maximum innovative capacity at minimum cost. This is an individual optimization function of each firm, and it is a complex business because of the many interrelations that exist between costs, results and time. It is an organizational learning process: it involves learning to mobilize and manage the internal and external resources available for production. Although this concept of the strategic challenges that face manufacturing is based mainly on the ideas prevailing in advanced countries, it is also increasingly valid for Latin American firms.

In Latin America there have been many forms of mobilization of resources, aimed at making innovations in the fields of technology and organization. In the case of manufacturing firms in Santiago, Chile, out of a total of 301 firms interviewed, 26% stated that they had made technological and organizational innovations between 1988 and 1990, while 29% had only made technological changes, and 16% had only made changes in the area of organization (Geller, 1993). Of the firms which stated that they had made technological changes, over 80% referred to innovations in the electrical and mechanical field, while 16% said that they had made innovations in the area of microelectronics. A 1990 survey of export assembly firms in Mexico revealed that approximately 50% of them were using the "just in time" method in respect of at least 75% of their inputs (Carrillo (ed.), 1991). With regard to innovations in the organization of work, 40% of the staff directly involved in production was trained to carry out various tasks, and 30% rotated frequently between different tasks. According to a recent study made in Brazil among 132 leading manufacturing firms, in 44% of them at least 20% of their staff took part in total quality programmes, while 39% of the firms reported that they employed a similar percentage of their labour force on internal "just in time" programmes (Ferraz, Rush and Miles, 1993).

This information from surveys shows that there is at least an incipient trend towards innovation and learning processes in the manufacturing firms of the region. The following section analyses in greater depth the experience of some firms which have achieved commercial success with these types of learning processes.

[11] Companies which learn quickly have cumulative advantages over their slower competitors because of the complementary relationship which exists among innovations, which makes prior learning essential (Mody, Suri and Sanders, 1992).

[12] These external costs, which form part of the production overheads, refer to the costs of the competitiveness strategy which are not directly linked to production, such as research and development; closer relations with customers; establishment of branches and/or sales points abroad; improvement of logistics; etc., (Coriat and Taddéi, 1993).

2. Examples of successful firms

In 1991, the Spanish Government's CYTED-D programme invited Latin American manufacturing firms to take part in a study and competition designed to determine the level of technological innovation reached by them. Several hundred firms from a dozen countries of the region provided information, which makes it possible to get an idea of the range of activities engaged in by them, and the activities in which they had had clear commercial success (Waissbluth, Testart and Buitelaar, 1992).

Altogether, the Latin American enterprises selected for more detailed study, including interviews and visits to the firms, registered average growth in their sales of 16% per year between 1989 and 1991. This growth was due mainly to increased exports. Since these are firms which achieved success through technological innovation, they are marked by the high proportion of professionals on their labour force (31% of the total staff), high levels of investment in research and development (almost 4% of their total sales, on average), and unusually close attention to training and investment in human resources (expenditure of US$272 per worker in 1991).

The cases described below are examples of *integral* productivity strategies in which elements of technological change (improvements in products, processes and designs) are combined with organizational innovation and the penetration of new markets. In this process, resource management is of crucial importance, both in respect of ideas and creativeness and internal and external financial, material and human resources.

Analysis of the types of activities carried out by these firms permitted identification of the following list of elements favouring innovation, illustrated with some examples of specific firms. A distinction is made between elements in the environment of the firms and those actually within them.

a) *Elements in the environment of the firms which have promoted innovation*

i) *Availability of natural resources.* In firms engaged in the processing of natural resources and the production of intermediate goods, improvements in productivity and product quality are of fundamental importance for turning static advantages into dynamic ones.

It comes as no surprise to find that in the study of the hundred most innovative Latin American firms, processing of local natural resources is one of their main strengths. In fact, the competition for innovative firms was won by the Argentine firm ALUAR, a private company with local capital which has achieved high productivity and quality by world standards thanks to its own research and development efforts.

ALUAR's primary aluminium plant came into operation in 1974, and since 1979, when the Futaleufú hydroelectric power station began to operate, it has been working at full capacity.

Its first exports of metal go back to 1978, when they amounted to nearly US$8 million FOB; by 1991, in terms of volume, they had increased practically tenfold. As from 1985, the execution of a number of projects which increased the operational efficiency of the plant by incorporating new technologies made it possible to expand production levels to 20% more than the initial capacity. In recent years the level of utilization of installed capacity has been of the order of 97%-99%. The purity of the metal produced has been maintained at very high levels, making it possible, for example, to export 99.9% pure aluminium to Japan. Direct sales to foreign markets represented 65% of the firm's total sales, so that in 1990 it reached fifth place among the Argentine companies with the biggest exports, with external sales of US$185 million FOB in that year. It is worth noting from the scientific and technological point of view that some of its technological innovations have been incorporated into aluminium plants in other parts of the world. There is an ongoing exchange of information, and there are also close links with the Aluminum Company of America (ALCOA), the world leader in this sector.

ii) *Activities which were originally based on use of natural resources but subsequently acquire their own level of competitiveness.* Many of the activities of the firms covered by the study of the hundred most innovative companies may be linked in some respect with the natural resource endowment of the region. An outstanding example of this is the case of Xeltron of Costa Rica. This firm produces electronic equipment for sorting seeds by colour, originally for the Costa Rican coffee industry. This company has developed its own technology, protected by international patents, in the field of the application of microelectronics to sorting machines. The success of this home-grown technology is shown by the fact that a German firm has taken out a licence to use it. These

operations have caused accounting problems with the Central Bank of Costa Rica, which was not used to registering foreign exchange income from the sale of technology to Germany. In order to ensure a stable flow of exports it has been necessary to establish direct presence in the buying markets. Thus, the firm has a factory in Brazil and has marketing subsidiaries, which are important for after-sales service, in the United States, Guatemala and Panama.

iii) *Problems typical of the region which call for specific technological solutions.* Some Latin American firms have had success in dealing with production, economic and social problems specific to the region. Finding solutions to these problems may also open up interesting prospects on international markets. Three specific problems are mentioned below.

— Health and nutrition needs

The "Proteínas Uruguayas" firm set out from the idea that Latin America's food deficiencies could be solved with low-cost protein supplements. Through scientific research, the founder of this firm succeeded in obtaining a new protein from fish, and this was placed on the domestic market several decades ago, with reasonable success. The problem was, however, that the product had an unpleasant smell and an unattractive appearance. For open markets where consumers have a higher level of information, more attention needed to be given to the presentation of the product. The new generation of businessmen who inherited the firm realized this, and research was undertaken to change the basis of the product.

An example taken from the study on the hundred most innovative firms which is interesting from several standpoints, although it is to be hoped that it will not need to be repeated, is that of a Salvadorian firm producing canned and packaged foodstuffs. The food requirements of the Salvadorian army created an interesting captive market for typical Salvadorian dishes in cans, although because of their quality the products supplied to the army probably would not have had much success on open markets. After several years of experiments, however, it was possible not only to perfect the technology for the canning of Salvadorian vegetables but also to build up a raw material supply structure, through peasant cooperatives. The firm's experience in exports began with a contract with the Reynolds group to prepare these products in a form adapted to the needs of the Mexican market. Today, after substantial investments in a new production plant, the firm is venturing into the Hispanic food market in the United States, with its own brands which highlight the products' Salvadorian origin.

— Deterioration of the environment

A serious problem in various countries of the region is that of deterioration of the environment. There are several firms offering innovative solutions for improving environmental protection. The "Julio Berkes" company in Uruguay, for example, is a small engineering firm which occupies second place on the domestic market in the manufacture of industrial boilers. This firm has made interesting innovations in boiler design which permit more effective fuel use. In order to understand how a small Uruguayan firm has come to make significant technological innovations in this field, it should be noted that Uruguay is one of the countries which make the most use of firewood as an industrial fuel in the whole world. Thanks to its research efforts to gain a better understanding of the process of combustion of firewood and other solid materials, it was able to patent a boiler with exceptional features. The heart of the innovation is the spiral combustion chamber, which, by precisely controlling the circulation of the air, achieves near-perfect fuel utilization. These boilers have great advantages for agroindustries, which require a great deal of energy and have large amounts of waste material which can be used as fuel. Among the biggest installations made are those of large boilers for the Uruguayan sugar industry, and also that of Paraguay. Such boilers have also been installed for the rice and soya industries, and they can be used for almost any solid fuel, making possible big energy savings and causing less damage to the environment.

— Different scales of production and appropriate technologies

The third typical Latin American problem requiring specific technological solutions is that of achieving suitable scales of production. Technology developed in the industrialized countries is often not the most appropriate from the point of view of its capital/labour ratio, or because it does not permit the optimum scale for the market. Suitable solutions

have been found in this respect, however, especially in the field of telecommunications. Thus, Siemens Argentina and Microtel of Venezuela have produced telephone exchange systems which are smaller than those of the advanced countries and are more in keeping with the needs of the countries of the region. This makes them particularly attractive for rural areas of low telephone density. Likewise, for the same reason, Interfase of Uruguay has designed low-capacity switchboards for small telex systems and multiplex packages.

iv) *Need to adapt international technological advances to the specific circumstances of Latin America.* Because of the rapid rate of technological change, it is essential that companies should have the technological capacity to give users after-sales advice and service, for which direct contact with them is vitally important. Outstanding examples of this need for technological innovation are to be found in the fields of microelectronics applications and software development.

Medix i.c.s.a. is an Argentine firm producing incubators for newly-born babies. This equipment contains microelectronic control boards of the company's own design. This is a case where the technological learning process reflects special features of the region. The existence of a fair number of incubators of earlier generations, using obsolete technology, together with the hospitals' shortage of resources, generated a need for technological solutions to permit the re-use of old incubators. The firm's contacts with various organizations abroad, and its participation in scientific congresses and exhibitions (MEDICA in Dusseldorf, for example), provided it with sufficient experience and prestige to win the Middle East market and make occasional exports to South-East Asia and Europe. Mention may also be made of a cooperative production agreement with Cuba, where the firm set up a technical office for the transfer of technology.

Although it is very useful to "explain" the innovation strategies successfully applied by some manufacturers in the light of the special features of the environment, it is important to note that there are also cases where it is not easy to detect any clear influence of the environment in the adoption of innovation strategies by firms. The effort to make innovations is often motivated by the corporate vision of the firm or its sense of "corporate mission", frequently without there being any major direct stimulus from the environment. What is clear, however, is that there is a set of internal factors in firms which are essential for the success of innovation strategies.

b) *Internal elements in firms which stimulate innovation*

The study of innovative firms can bring out some elements which are of key importance for the reorientation of corporate strategies. Two leading elements of this type are described below.

i) *Human resources.* These resources are often the main asset of companies in their attempts to win markets on the basis of productivity.

This could be illustrated with almost any of the examples already mentioned in this section. The President of Xeltron, the Costa Rican manufacturer of equipment for sorting seeds by colour already referred to earlier, attributes his company's success to its technological capacity and considers that the best means for maintaining this is the ongoing contribution made by the firm's human resources. This view is an intrinsic part of the company's outlook. A suitable organizational environment is therefore highly favourable to ongoing innovation in all aspects (processes, markets, organizational structure, etc.). The Argentine firm Nicrodur (see section iii below) places emphasis on team work and the creation of a favourable working environment. At all organizational levels, it gives priority to functions rather than timetables, it uses a system of rotation so that all its workers are familiar with the different tasks, and in terms of human relations the organization structure is free and open, with direct relations between the workers and the management, including the Director himself. In the case of Medix (also from Argentina), the company invested in the training and professional development of its staff, which, together with competitive wage-levels, has contributed to the firm's high degree of retention of staff, especially in the case of workers. Because of the type of equipment it produces, an above-average sense of responsibility is needed, and this spirit is transmitted from the management down to the rest of the staff, giving them a sense of pride in their work.

ii) *International contacts and knowledge of foreign markets.* This element is of fundamental importance for the export of manufactures.

The Colombian firm Andrés Garzón Acero (AGA) Ltda., which began its operations in 1949, is engaged in the manufacture of spare parts for beer bottling machines. In recent years it has registered substantial growth, with annual sales of a little over US$1 million, and its exports have increased to a current level of 50% of total sales. This success has been possible because it embarked on a research process to improve the Italian Simonazzi bottling machine. The innovation consisted basically of changing the filling tubes and valves for others of its own design. The support of the Barry Wehmiller Co., of the United States, was a decisive element in developing this idea, and direct contacts with domestic (Cervecería Unión, Cervecería Aguila) and foreign users (Cervecería Cuauhtemoc, Miller Brewing Co., CSS, and Simonazzi itself) also aided in carrying out this project.

iii) *In-house design as a strategic weapon.* Nicrodur (Argentina) began as an electroplating firm, but from 1986 onwards it devoted itself to the production of photo-sensitive cylinders, the technology for which belonged to big world firms like Xerox, Nashua and Ricoh. After the participation of some of its staff in a 1984 conference in Sweden, the company carried out research work on the product and the construction of the necessary machinery. The design developed by Nicrodur is unique because of its double input. Within a few years, the firm won half of the Argentine market for replacement photo-sensitive cylinders. The strategy followed was to promote an innovative outlook within the firm in both the production process and the areas of organization, marketing and management, and to place emphasis on team work and worker participation. In terms of customer relations, the strategy was personalized, and records were kept of every cylinder sold. The firm's current activities are based on an export contract with Brazil, under the MERCOSUR agreements, to supply the Brazilian replacement cylinder market.

iv) *Corporate outlook.* The attitude to change is an essential element for mobilizing internal and external resources for innovation.

At present, when Latin America is in a stage of transition from one system of industrialization to another, firms seeking to compete on international markets on the basis of productivity often run into conflict with their environment. The inertia of the institutions and policies of the previous industrialization system raise serious obstacles to the expansion of companies operating in open markets on the basis of their competitiveness. For example: employers' and workers' organizations were originally formed in order to gain participation in the determination of national-level policies, but today their role is conditioned more by the support that businesses need at the company level in shaping productivity strategies.

The change to a strategy based on competitiveness on open markets often begins with *greater international contacts.* Employers' and workers' organizations can play an important role in the many forms that this change can take, ranging from the appearance of foreign products on the local market, the intensified use of telecommunications, visits by foreign businessmen, study tours and participation in fairs and congresses, to the formation of strategic alliances and the establishment of international marketing networks.

However, change gives rise to conflicts not only between modern businesses and their sluggishly-adapting environment, but also within companies themselves, where institutions and policies designed under the previous system still persist. It is necessary to change the prevailing climate in the firm so as to guide the attitudes and actions of all its members towards the establishment of an organizational structure capable of responding quickly to the signals of a changing environment. For example, the change to less vertical organizational structures is effective provided that it forms part of a broader change in the values, prevailing climate and image of the firm (Mertens and Palomares, 1993).

Handling the change in corporate strategies must begin with the will of the management to make changes, which permeates the whole management structure, and it must also be based on active participation by the trade unions. In quite a few cases it has been noted that the will to change enters a firm along with a change in the generations responsible for its management.

IV

Conclusions: towards the establishment of a more favourable environment

The challenge raised by the need to increase the competitiveness of Latin American industry takes the form of the need to promote a process of continual improvement in company productivity. At the macrosectoral level, this challenge is expressed in foreign trade. Thus, action must be taken to strengthen the capacity to impart ongoing dynamism to exports, for which purpose it is necessary to add new families of products, renovate the existing ones, and explore new markets, while at the same time maintaining competitiveness on the domestic market, which is still the main source of demand for industrial products in the region.

At the company level, the challenge is to make progress in learning how to combine efficiency, quality and competitiveness in terms of costs. The difficulty of reconciling these variables has led to a search for a balance between technological and organizational innovations, which is made more difficult by the accumulated lag in terms of investment in both machinery and equipment and in human resources and management capacity.

The problem at the macrosectoral level is that the financial resources needed for a structural increase in such investment are only generated gradually during the process. On the other hand, the concept of productivity is changing in the sense of assigning more importance to efficiency in the overall production process (flow) and to customer or user satisfaction than to the partial productivity of individual factors. Ultimately, it is not just a question of increasing investment in machinery and equipment, but also of changing and enhancing the prevailing climate and organization of the firm. It is therefore necessary to prepare a set of policies, at both the company and the public sector level, which support the efficient use of the available resources, mobilize new resources for furthering investment and organizational change, and promote the learning process both in companies and in public institutions.

There is a high level of consensus on the factors in the environment which limit the sound growth of a competitive manufacturing sector. Emphasis is habitually placed on price structure and stability, restrictive trade and industrial policies, the undesirability of State ownership of production activities, and the need for an efficient and above-board civil service, but what is less clear is the nature of what might be termed a "favourable environment" for the development of a competitive industrial sector. A *passive approach* would be the elimination of the factors responsible for a "restrictive environment". It would involve price liberalization and macroeconomic stabilization, the elimination of protectionist trade policies and arbitrary and unclear industrial policies, the removal of market monopolies, and the modernization and reduction of the State civil service. A "favourable environment" must not be confused with an environment which ensures higher profits for companies, however. Negative interest rates, downward wage trends, failure to include environmental costs in company operating costs, and subsidized energy prices would all favour company profitability, but cannot be considered as suitable elements of a favourable environment which is sustainable in macroeconomic, social or environmental terms.

The essence of a "favourable environment" could include: i) Provision of the elements needed to face competition on open markets, namely, information, efficient communications and transport systems, technological and organizational know-how, and skilled human resources. The nature of these elements presupposes suitable collaboration between the public and private sectors. ii) Measures to ensure that the profitability structure between the various economic activities is globally in line with the development priorities. In general, this structure should be basically determined by the market forces. However, there is a need for the creation of a larger number of markets (long-term markets, for example). There are also serious market distortions which will need to be corrected. In a new industrialization strategy, such correction should not discriminate

between sectors of production, but should rather seek to promote areas with positive externalities, such as the incorporation of technological progress and training of human resources in the companies, and to discourage activities with marked negative externalities, such as those which damage the environment. iii) Action to ensure the availability of financial resources for investment. To this end, steps must be taken to place financial institutions on a sounder footing, improve the procurement of long-term savings through reform of the social security system, and modernize the supply of financial instruments for investment. iv) Measures to further social cohesion and promote the necessary adaptation of labour relations and the upgrading of human resources in the context of the new parameters of competitiveness and productivity.

It is therefore necessary to develop the possibility of adopting an *active approach* which seeks not only to eliminate restrictive factors but also to create conditions in the environment which did not previously exist, in order to enable companies to compete successfully on a macroeconomically, socially and environmentally sustainable basis. This active approach could include areas of cooperation between the public and private sectors aimed at objectives such as improving the physical, economic and social infrastructure to support production; expansion of the channels for technological and trade information; strengthening of the relations between the educational and academic systems and production activities; promotion of improved entrepreneurial capacity, and exploration and development of areas of complementation and cooperation between companies.

This active approach is itself an ongoing learning process, specific to each country, on the part of the competent institutions and actors of the production sector. Publicizing the examples of successful experiences and public management strategies which have been accumulated over the years will naturally form part of the process of designing new policies in this direction, although this does not mean, of course, that single universal formulas should be sought.

(Original: Spanish)

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ANNEX I

Shares of the ALADI member countries in OECD imports of machinery and equipment

Sector		ALADI			Less Brazil and Mexico		
		1971	1980	1990	1971	1980	1990
711	Steam boilers	0.12	0.18	3.71	0.01	0.15	0.97
712	Steam engines	0.03	0.05	0.17	0.02	0.03	0.01
713	Internal combustion engines	0.72	3.96	8.23	0.01	0.06	0.11
714	Non-electrical machinery	0.30	0.33	0.78	0.14	0.17	0.13
716	Electrical equipment	1.08	2.30	4.93	0.01	0.05	0.07
718	Other energy-generating machinery	0.18	0.48	0.34	0.18	0.18	0.03
721	Agricultural machinery	0.10	0.15	0.58	0.04	0.01	0.06
722	Tractors	0.02	0.63	0.66	-	0.21	0.10
723	Civil engineering machinery	0.08	0.47	1.32	0.01	0.04	0.04
724	Textile machinery	0.14	0.34	0.94	0.03	0.01	0.01
725	Pulp and paper machinery	0.02	0.17	2.10	0.01	0.01	0.03
726	Printing presses	0.06	0.5	0.29	0.02	0.01	0.01
727	Food processing machinery	0.11	0.23	0.37	0.02	0.06	0.10
728	Other industrial machinery	0.12	0.74	0.35	0.01	0.02	0.02
736	Metalworking machine tools	0.07	0.31	0.32	-	0.03	0.02
737	Metalworking machinery	0.11	0.09	0.41	0.01	0.02	0.01
741	Heating equipment	0.05	0.30	2.33	0.03	0.07	0.07
742	Pumps for liquids	0.17	0.67	1.33	0.04	0.06	0.10
743	Pumps and compressors	0.04	0.30	2.31	0.01	0.02	0.04
744	Goods handling equipment	0.03	0.26	1.80	-	0.04	0.02
745	Other machinery	0.12	0.46	0.99	0.02	0.02	0.04
749	Non-electrical machine parts	0.17	0.55	1.38	0.02	0.12	0.09
751	Office equipment	0.38	0.67	0.86	0.28	0.03	-
752	Automatic data processing equipment	0.92	1.52	1.26	0.32	0.32	0.10
759	Exclusive parts and accessories	2.33	1.80	1.12	0.19	0.26	0.07
761	Television receivers	2.19	0.19	8.26	-	-	-
762	Radio receivers	0.14	1.39	8.62	0.01	-	0.01
763	Phonographs	0.13	0.52	1.53	-	-	-
764	Telecommunications equipment	2.82	7.09	3.28	0.05	0.05	0.02
771	Electrical equipment	-	5.03	6.85	-	0.05	0.04
772	Electrical connection equipment	0.84	2.97	4.38	0.01	0.03	0.02
773	Electrical switchgear	1.12	7.87	18.58	0.01	0.50	0.34
774	Electrical medical equipment	0.07	0.28	0.71	0.01	0.02	0.01
775	Domestic appliances	0.02	0.58	2.28	-	0.02	0.01
776	Lamps	3.25	1.95	1.45	0.01	0.01	-
778	Electrical machinery and equipment	0.77	2.42	3.20	0.02	0.02	0.03
781	Passenger cars	-	0.24	1.87	-	0.01	-
782	Goods vehicles	-	0.13	1.75	-	0.02	-
783	Road vehicles	0.02	0.05	0.21	0.01	0.05	0.03
784	Vehicle parts	0.40	1.62	3.57	0.02	0.12	0.18
785	Motorcycles	0.07	0.24	0.51	0.01	-	0.02
786	Trailers	0.04	0.26	0.66	0.01	-	0.09
791	Railway vehicles	0.86	2.74	0.98	-	-	0.02
792	Aircraft	0.15	0.52	1.02	0.05	0.13	0.03
793	Ships and boats	0.64	0.65	0.30	0.15	0.08	0.05

Source: UNIDO Industrial Statistics Data Base.

Rural society: *its integration* and disintegration

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The various sectors of rural society have seen sweeping changes during the second half of the twentieth century. These changes have included agrarian reforms (and counter-reforms); the modernization of technology and society; demographic pressure; an increase in temporary work at the expense of permanent employment; migrations; the replacement of authoritarian regimes by democracies (and vice versa); decentralization processes; greater access to mass media, and stronger influence by such media. This article outlines some of the ways in which these changes have affected the processes of social integration and disintegration in rural areas and relates them to the recent writings on social theory. In view of the deep-seated nature of these changes, and of the acculturation processes being undergone by young people, it had been expected that the literature would place greater emphasis on social disintegration processes. Instead, however, it focuses on the formation of social movements and on the failures –but especially the successes– of social movements oriented towards the presentation of demands and grievances.

I

Introduction

A number of major trends are to be observed in the rural environment which in some cases are the cause and in others the effect of processes of social integration and disintegration. These trends involve, among others, the disappearance of the structures associated with the great landed estates, or latifundia, and master/servant relationships; the modernization of society in general and the waning influence of cultural and family traditions; changes in the production structure, the increased importance of the market and the growing use of temporary labour; temporary and permanent migrations and the demographic changes they entail; the transition from the extended to the nuclear family, an increase in the number of women who are gainfully employed and their shifting position within the family unit; transitions from authoritarian regimes to democratic systems and their influence on rural associations, cooperatives and other such organizations; recent regional decentralization efforts, and the prospects for increased organization and participation at the local level.

At the same time, however, changes are needed in some of society's existing structures, along with new forms of social organization that will enable people to adapt to a world that is in constant flux without losing their own identity or social cohesiveness. These changes are necessary in order to ensure the rural population's active participation in the modernization process as it relates to production and to society in general, as well as in the processes of democratization and decentralization (Benado, 1992).

It is therefore important to try to gain an understanding of the causes and effects of social integration and disintegration and to propose measures and policies for ensuring that these processes will contribute to the social and economic development of rural areas rather than working to their detriment.

Four theoretical formulations have been selected from the recent literature which appear to be relevant for an explanation of some of the reasons why people act one way or another in response to a given situation or to perceived changes. The first concerns the elements that lead an individual to participate or to refrain from participating in a group effort for the good of all. The second relates to the individual's self-identity and defence mechanisms, and to the stress that results when changes occur in the individual's environment or when the individual's self-perception differs from that of others. The third regards conformity to social norms and the costs of non-conformity, while the fourth concerns power relationships and the mutual benefits for the parties involved.

This article will not address the issue of organized forms of disruptive social reactions, such as guerrilla movements and organizations connected with illicit drug trafficking, because although such groups may arise out of a perceived lack of other opportunities or other channels for negotiation and a sense of frustration or rebellion, they are also a product of external interference, support and situations that lie beyond the bounds of this analysis.

II

Participation in collective action

Decision-making processes may be parallel or serial in nature. In a parallel decision-making process, each individual decides to participate without knowing or considering the decisions of the others. In serial decision-making, each individual watches what the others are doing. In order to decide on his own participation, the individual needs to see a minimum number –in his view– of others participate. Decisions to take part in a strike, to migrate, to use contraceptives or to go to school all tend to be serial rather than parallel. In fact, it has been observed that even in the face of a pressing need for action, people tend to be reluctant to participate immediately –although at times the costs of non-cooperation are high– and

instead wait to see what is going to happen and who else will decide to act. This initial wait-and-see period appears to be part of the same process that ultimately leads to sudden active participation. Conversely, collective action tends to end in failure when decisions are taken without reference to what others are doing.

It might be supposed that in participating in a collective action, the individual is guided purely by criteria of marginal utility for him or herself, i.e., people will participate only if they feel that their personal investment (in the form of their participation) will be profitable and will make a difference in the results achieved by the group. But although it has been demonstrated that those individuals who stand to gain the most from a collective action will make the greatest effort and that those who already have the most are the least likely to become involved (regardless of what added benefits they may derive from common action), they are also probably influenced by other factors, such as the number of people who are already participating or the enthusiasm sparked by a successful movement, even if the result benefits the group more than the individual. In other words, the theory of marginal utility must be handled with flexibility when it comes to exploring people's motivations for participating in collective action.

The tightness of the communication network that links individuals within a group and links the group with the rest of the community influences the speed of information transmission, its accuracy and the importance attributed to it. There is compelling empirical evidence that social contacts and the participation of family members, close friends or people who carry weight in the community are important channels determining participation in organizations, interest groups and social movements. The web of social ties that link the members of a group lessens the chances that a chain reaction will die out before the movement has reached a critical mass. "Cliquishness", however, whereby members of a given group maintain strong ties but tend to isolate themselves from outsiders, may inhibit social mobilization if the movement is begun outside the group or transcends it.

The theory of rational choice predicts that the number of individuals constituting a movement's critical mass will be assembled more quickly when it is possible to rely on the efforts of a few highly interested and resourceful individuals. Michael M. Macy, however, contends that although this concentration of interests and resources may explain why most contributions are made by a hard core of dedicated activists, collective action based on such individuals' efforts will not necessarily have a greater likelihood of success than actions founded upon a broader participatory base (Macy, 1991, pp. 730-747).

The density of organizations has an influence on their life cycles. Thus, when few organizations exist and few new ones are being created, the legitimation of the organizational process is weak and it is difficult to attract resources and members, so that the incidence of dissolution will be high. As the number of organizations rises, however, their legitimation increases as well. Greater legitimacy facilitates the acquisition of resources and, hence, heightens an organization's chances of surviving. This process continues until the number of organizations reaches a certain threshold, after which they will begin to compete against one another for members and resources; when this happens, the rate of dissolution will start to rise once again (Petersen and Koput, 1991, p. 399).

Collective democratic action is much more difficult to accomplish in a rural environment than in an urban setting. A number of factors cause the costs inherent in the decision to participate to be higher for rural residents. One factor is that it is more difficult to assemble a critical mass of participants in rural zones because the people are geographically scattered, the range of economic activities is more diverse and the household's day-to-day survival is a more uncertain proposition. Another is that both public and private coercive forces are stronger, and the relative absence of mass media makes it more difficult for rural inhabitants to gain access to political information and allows certain acts of violence to go unpunished. During periods of transition to democratic regimes, anti-democratic political forces in a country often band together with rural autocrats, and the result may be increased violence in rural areas even as controls on political activity are being lifted at the national level (Fox, 1990, pp. 1-4).

The lack of a critical mass and the scattered distribution of the population may explain, for example, why less than 4% of agricultural wage-earners were unionized in Argentina in the 1980s. That country's active agricultural population is quite small (10% of the economically active population in 1990), and the modernization process and increased capital intensiveness have given rise to a very marked proletarianization of the labour force living in small towns (fewer than 2 000 inhabitants) or in the open countryside. This contributes to these

people's isolation, while the traditional peasantry has all but disappeared, except in some marginal areas (Chonchol, 1990, p. 152).

In Peru, too, there has been a failure to respond to an issue which, it had been thought, was sure to elicit a strong reaction. Although the end of the *hacienda* structure and the redistribution of land have all but done away with the patronal and clientage-based system of relationships, thereby opening up opportunities for peasants to organize freely, the liberalization of the land market decreed by President Fujimori in 1991 (which includes, among other things, a provision allowing land owned by peasants to be mortgaged, thereby eliminating the last vestiges of the agrarian reforms of the 1970s) sparked little debate or organized action. This indifference, indecision or ambivalence on the part of those who may be affected by these measures demonstrates that although agrarian reform irreversibly altered the relationships among social classes, in the succeeding 20 years the country has not managed to replace the old oligarchic order with structures that could serve as the underpinnings for a new way of organizing rural society and agricultural production. The quasi-absence of public officials and political parties in rural areas has fostered the emergence of a series of heterogeneous organizations that are beyond the control of local authorities (notables, businessmen) and the State; their actions are often sporadic and their ties with national organizations are generally loose. Universal suffrage and the right to organize, as well as the increased number of municipal, regional, parliamentary and presidential elections, have been a real political initiation for most of the population. The existence of parents' associations, irrigation committees, production or marketing committees, etc., with their respective elected boards of officers, has augmented individual participation in civil and public affairs. The multi-ethnic make-up of Peruvian society, however, is conducive to the formation of highly differentiated local and collective identities. There are virtually no institutional communication channels with State authorities, and these community organizations' opportunities for action are for the most part extremely limited. Even when it is a matter of defending the economic interests of the agricultural sector, the distances separating the trade unions that claim to represent the rural population are enormous. Thus far, the State's advocacy of decentralization has not been accompanied by effective means for taking into account and strengthening real participation by these cultural, production-oriented, trade union and political organizations, which constitute the social fabric of rural zones (Revesz, 1991, pp. 13 and 17-18).

In Colombia, on the other hand, President Barco (1986-1990) made an effort to consolidate the institutional channels between the State and the peasant community by, among other things, establishing a State fund to finance the regular operations of peasant organizations, promoting their participation in Congressional debates on agrarian reform, and providing greater representation by increasing the number of their delegates on the boards of governmental agencies concerned with the agricultural sector. In areas where there were integrated rural development projects, steps were taken to strengthen users' committees, which were given a direct role in decision-making and programme evaluation (Zamosc, 1990, p. 65).

Positive examples of how a critical mass for action is reached and new forms of action have legitimized and promoted further action are to be found in the strikes called by the *boias frias* (day labourers) and rural workers in Brazil, the indigenous uprising in Ecuador and the increasingly influential position of trade unions in the Chapare region of Bolivia.

There are now at least 4 million *boias frias* in Brazil. The expansion of sugar-cane production at the expense of other crops in the state of São Paulo led to an increase in temporary wage labour, which doubled in the space of 10 years, as well as in unemployment during the period between the two annual harvests. In 1984, the *boias frias* employed in the São Marinho plant went on strike to protest against their working conditions. In the following two weeks similar conflicts involving a total of 48 000 similar workers broke out, and the ensuing negotiations resulted in the conclusion of 27 different agreements. In 1985, a number of strikes involving 30 000 *boias frias* were again called. The state government decided to take steps to forestall any repetition of the previous year's conflicts for a number of reasons, one of them being that it feared such conflicts could jeopardize the country's recently initiated democratization. These were the circumstances in which the *boias frias* programme was born. Even though the programme had a limited impact, it did show that the current generation of such workers identify with the rural population and aspire to own a plot of land from which they can derive part of their livelihood; that they easily integrate direct food production into their survival

strategies and obtain good results, and that their households' strategies adapt to their many different activities, one of which is farming for their own food consumption (Chonchol, 1990, pp. 154-156). Another important case is the movement organized by landless rural workers, known as the MST. Although it does not have strong organizational ties to other union movements or to political parties, the MST has displayed a great deal of cohesiveness and agility; for example, between January and June 1989 it was able to mobilize more than 10 000 landless families in 15 states. The MST is organized into local units and into municipal and state commissions, with a national executive representing 16 states. Its social base is quite limited, however, and it works in relative political isolation. The movements formed by rural wage-earners –who constitute a separate social class in Brazil– have their own particular characteristics. Millions of rural workers earn their living through the daily sale of their labour, and most of them live in villages or small towns or on the outskirts of the cities. These movements differ widely in terms of their organization and geographic base, are motivated by their commitment to defending workers' rights (which are defined by law but not upheld) and are especially strong on the sugar plantations of the Northeast (Pernambuco) and in São Paulo. Many of them are affiliated to the CUT (Grzybowski, 1990, pp. 33-36).

In June 1990 there was a "native uprising" in Ecuador which was organized outside the framework of the political parties. This movement differs from others in this country's history in that participation in it was on a mass scale, was coordinated and was virtually non-violent. The road blocks and other types of action taken did not have much of an effect on Quito, Guayaquil or Cuenca, and many Ecuadorians learned of what was happening only through the mass media. Nevertheless, the uprising did succeed in bringing the Government to the bargaining table and had more of an impact than its indigenous leaders had expected, perhaps because it touched a chord in the collective conscience of the country's white and mestizo inhabitants regarding the indigenous population. The most important and immediate outcome of this uprising was that it afforded visibility and a measure of legitimacy to the indigenous movement and elicited a form of sympathy with this group, whose existence and problems were suddenly brought out into the open. Numerous acts of solidarity were mounted by trade-union, student and grass-roots organizations and by political parties, even though, with few exceptions, these groups had never shown any interest in the indigenous population before. Articles concerning indigenous groups had previously been relegated to the cultural section of the country's newspapers, but after the uprising the progress of the negotiations was analysed in detail on their front pages (Fassin, 1991, pp. 92-93 and 105).

The trade unions of the Chapare region of Bolivia were founded in the 1960s but did not begin to play a role in national affairs until the 1980s, when they came out in opposition to policies regarding the control of coca production and organized a movement against those policies. Today, the peasants of Chapare (some 40 000 families) belong to 160 trade unions based in their communities, under the aegis of 30 general unions which are in turn organized into five federations. Of these, the Special Federation of Tropical-Zone Farmers of Cochabamba (FETCTC) and the Carrasco Federation count 85% of the trade unions as their members and themselves belong to the Consolidated Confederation of Peasant Labour Unions of Bolivia (CSUTCB). Through their activities they have managed to mobilize peasants from non-coca-producing regions as well, and their collective protests have led to the negotiation of agreements with the authorities concerning both coca-related issues and questions relating to land tax reforms, which were being demanded primarily by peasants in zones where coca is not produced. They have also worked to defend the cultural values associated with the use of coca, have proposed legislation, and have been active in the area of alternative rural development programmes. In the early 1980s, they also organized invasions of property owned by professionals, government employees, members of the military and commercial groups. In fact, the Chapare trade unions' mobilizational power has become so great that it may now actually be the strongest in Bolivia, and the Bolivian Workers Confederation (COB) has become eager to join in the coca producers' protests: something which would never have happened ten years or so ago (Healy, 1991, pp. 88-121).

In various cases democratization processes have created opportunities for, and have legitimized, the organization and activities of trade unions and other groups having more specific claims or grievances. In Bolivia, for example, even though the first peasant unions were organized in 1953 as a result of Bolivia's national agrarian reform programme, it was not until 1977 that, thanks to the country's progress towards

democracy, the CSUTCB was founded. The CSUTCB, which represents nearly a million peasants throughout the country and is thus the largest union federation, has extended its activities to Bolivia's smallest communities in order to bring peasant households into its organizational structure, thus linking together communities, provinces and regions under its national leadership based in La Paz.

In Chile, cooperatives were harshly persecuted during the military regime that ruled the country from 1973 to 1989. According to the National Confederation of Peasant Cooperatives (CAMPOCOOP), today there are 87 confederated and 29 non-confederated peasant cooperatives in the country. The first meeting of the Consultative Advisory Committee for the development of peasant cooperativism was held in June 1992. The goal is to help build a better future for the peasant population by making production systems more dynamic, organizing market links and providing institutional backstopping for the coordination of the cooperative movement. [1]

In Mexico, the agricultural crisis of the 1970s, the loss of legitimacy of official bodies, and the populist discourse and policies of President Echeverría (1970-1976) paved the way for the expansion of the peasant movement. This populist stance also opened up political opportunities for renewed efforts in the fields of organization, mass education and the defence of cultural and multi-ethnic identities. Land takeovers and squatter settlements proliferated throughout the country, with the press reporting on some 600 takeovers in three states during 1973. Small landholders were also mobilized by production-related issues (as in the case of sugar producers) as they strove to redefine their relationships with industry and the State, but the hallmark of this period was the peasants' demands for land. One of the most important events was the emergence of regional fronts that brought together students, workers and peasants in the states of Oaxaca, Durango, Zacatecas, Puebla and Chihuahua. President López Portillo (1976-1982) reversed many of Echeverría's policies and acted against the independent peasant movement in an effort to regain the confidence of the rural bourgeoisie. The peasant movement defended itself by organizing its activities at the national level, whereas before it had operated primarily at the local and regional levels. In the early 1980s the National Coordinating Body for the Ayala Plan (CNPA) embraced 21 organizations from different states whose members were mainly poor peasants, landless peasants and day labourers. Fourteen of these organizations had an indigenous membership base. Indigenous groups' demands usually differ from those of other peasants because they claim communal property rights on the basis of deeds dating back to the colonial period and because their communities tend to be more united. Today, for the most part, they do not lay claim to specific territories but rather to the right to have enough land to support themselves as individuals and as a group. Their struggle for land should not be seen as separate from their struggle to preserve their language and culture. The CNPA has distanced itself from the corporativist and clientage-based tradition through a combination of mobilization and negotiation (with the movement's rank and file actively participating in the latter), political autonomy for CNPA member organizations (they may belong to any political party or none) and an elected, rotating leadership. Other organizations, including those formed by teachers and the urban poor, have emulated the CNPA's organizational practices. Since the early 1980s, however, producers' organizations are the ones that have displayed the greatest mobilizational and bargaining capacity. Isolated organizations have joined together to form national and regional networks, the most important of which is the National Union of Autonomous Regional Peasant Organizations (UNORCA), founded in 1985. The two main objectives of UNORCA have been to obtain higher support prices for their members' products (readjusting them by at least as much as the rate of inflation) and secure participation by the peasants in the formulation of agricultural policies. UNORCA has avoided direct confrontations with the authorities and has therefore not participated in the activities of such organizations as the CNPA (Paré, 1990, pp. 83-87).

A strong unionization movement is also found in tandem with the political transition in Brazil. This movement finds its rural expression in, for example, Santarém, where the peasants have won control of the local trade union, and in Acre, where it is represented by the latex gatherers on the rubber plantations. In Xapurí, the latex gatherers have joined forces with the indigenous groups of the Amazon region and have organized "empates" (a form of organized resistance to the destruction of the area's natural forests), which have managed to save

[1] Inaugural address delivered on behalf of the Consultative Advisory Committee by its chairman, Francisco León Tovar, on 12 June 1992 in Santiago, Chile.

1.2 million hectares of forest. Although all these movements have essentially been based on the initiative of the rural population, a very important role has also been played by outside allies such as the Church, the mass media and political circles of the Left. These allies are often able to offer valuable assistance in the form of political expertise and the dissemination of information through their networks, which can help to ward off violent reactions and promote solidarity, even at the international level. Among the resistance movements formed to oppose the mass expulsion of people from certain areas, those protesting dam projects have had the greatest political impact and the broadest participatory base, including thousands of rural households and workers. As a rule, each movement encompasses entire rural zones, which makes mobilization and organization more difficult. Moreover, since the construction of a dam affects a wide variety of groups, such movements have to forge new alliances and seek out common interests. Generally speaking, groups are organized locally in each community, village or town and elect representatives to sit on regional commissions (Grzybowski, 1990, pp. 29-32).

The heterogeneity of the actors found in rural areas and the difficulty that organizations and institutions have in meeting their needs are illustrated by the case of Nicaragua, as well as by various other examples presented in this article. The Rural Workers' Association (ATC), founded in 1978, quickly became the largest organization of peasants and agricultural workers in Nicaragua. However, the ATC tended to provide better representation for wage-earners –in their demands for wage increases and improved working conditions– than for its other members and, as a result the peasants, who wanted access to land and production resources, gradually lost interest in it. The *comarca*, or district, became the new centre of power from which rural affairs were organized and resources distributed as this administrative unit reclaimed its legal functions and coordinated land takeovers. It was not until the very existence of civilian life in rural areas was threatened by the advancing battlefront of the *contras* that poor peasants and rural workers began to regard an alliance of interests with richer peasants and small-scale agricultural capitalists as being possible and desirable. In 1980, the Sandinista National Liberation Front (FSLN) gathered together peasants, small and medium-scale farmers and stock-raisers to discuss the question of political organization in rural areas and ways of meeting the social and economic needs of the rural population. The outcome was the formation, in 1981, of the National Union of Farmers and Stock-breeders (UNAG), a trade union of rural producers with organizational links to the FSLN whose objective was to strengthen the democratization of rural civil society. Despite the proposals of the UNAG, the State and the Ministry of Agricultural Development and Agrarian Reform continued to place emphasis on State-run firms, collectivization strategies, the control of marketing activities and mandatory membership in cooperatives in order to have access to land and the means of production. Members of the military (many of whom were of peasant origin or knew the countryside well thanks to the years they had spent as guerrilla fighters) and young military personnel who had returned to their districts after they were demobilized, however, realized that the rural poor had progressed very little and that the contras were recruiting large numbers of peasants who were dissatisfied with the revolution. They therefore brought pressure to bear in favour of an agrarian policy that would be more in line with the needs of the peasants and the re-establishment of the District Committees and Community Councils (Ortega, 1990, pp. 128-133).

III

The concept of identity

When a person has a certain perception of his identity but other people send out signals that they do not share that perception, he will try to adjust his behaviour so that other people will react as expected, in keeping with his self-image. If, after a number of adjustments, the person in question still does not receive the expected signals, he will begin to feel considerable anxiety. Thus, for example, people who see themselves as being dominant will act in an even more dominant manner if they receive signals indicating that other people see them as submissive; conversely, people whose self-image says they are submissive will respond even more submissively if they receive signals that other people see them as being dominant.

The stress generated by a mismatch between the self-image and the image held by other people will arise even when the signals sent out by other people denote a more positive image of a person than that person's self-image, and a person's efforts to reconcile the two will tend to be directed towards making the signals fit in with his self-image. This is why people who expect to fail are disconcerted when they succeed and may even suffer from health problems owing to the high degree of stress which this causes them. Obviously, the more importance a person attributes to a specific feature of his identity, the stronger his reaction will be if this trait is not "correctly" reflected in the perceptions of others.

Changes in a person's environment will prompt adjustments –at times very significant ones– in the role a person plays and the way he plays it, and this, too, entails adjustment of his self-image. The responses and signals of a different environment may diverge substantially from what a person may expect and may therefore trigger a whole process of identity-adjustment, perplexity and stress (Burke, 1991, pp. 836-849).

Research on lower-class household survival strategies during the crisis of the 1980s found that they tended to continue or resume "traditional" forms of behaviour that had supposedly been discarded during the transition to modern life styles (household structures other than the nuclear-family model, shifts in household composition in response to the temporary or ongoing problems of other family or non-family members, and the maintenance of subsistence-oriented production activities), in combination with the generation of income via participation in the labour market. In tandem with these economic and social changes, there were also non-quantifiable changes in the internal dynamics of family life, in the assignment of roles to the various family members, either because some members were unable to play their prescribed roles properly or because, within the framework of a model of social change lacking any definite direction, other family members took on the functions abandoned by the social mechanisms and institutions that had once performed them. This phenomenon was complemented by the appearance of new social actors –non-governmental organizations (NGOs), professionalized activists, State agents– whose job it has been to generate "from below", through collective action and against the background of State budgetary constraints, conditions that will make survival possible.

Very profound changes underlie all the examples given below, regardless of the situation described or rural dwellers' response to them. Proper weight should be given to those changes and the stresses that have accompanied them. Migrations, changes in employment, and the reasons for them all make up extremely disquieting situations.

In Chile, as a result of the policies applied in the years after 1973, peasants were expelled from their traditional places of residence on a mass scale. Several thousand peasant households were expelled from land that had previously been redistributed as part of the agrarian reform process; many peasants who had received plots of land were unable to maintain them owing to the absence of any support policy and had to sell or abandon them; most of the permanent workers who had previously lived on the *haciendas* were edged out by the new capitalist form of agriculture; the economic policies calling for the concentration of credit and the opening-up of the Chilean market (up to 1985) to food imports ruined many food producers; and finally, the purchase of land by financial groups meant that the peasants living on that land had to leave. All these changes led to a substantial

decrease in permanent employment in rural areas, particularly in regions suitable for forestry and fruit-growing, and to a very marked increase in temporary employment, with the demand for labour being very high in certain months, but very low during the rest of the year. The peasants who had been expelled from their former places of residence settled in small population clusters, most of which had not existed before, taking the form of housing developments, hamlets, villages or shanty towns. These clusters were usually located on land belonging to the national government –sometimes even in disused railway stations– around existing villages or on the outskirts of cities. Around 1980, it was calculated that between 200 000 and 250 000 families (i.e., nearly a million people, or about 10% of the total population) were living in these rural population clusters. Surveys conducted in various parts of the country in the early 1980s indicate that at that time 55% of rural inhabitants worked in agriculture, 25% in the city and 20% in emergency employment programmes. Only 10% had permanent jobs (in agriculture, in the case of middle-aged men, and in the cities for the remaining men and women (as labourers and domestic servants, respectively). The urban employment crisis also pushed numerous urban workers into temporary agricultural work (Chonchol, 1990, p. 153).

In the coffee-growing zones of Colombia, an increasing degree of occupational specialization is to be observed. For example, the application of fertilizers, the preparation of seedlings in bags, soil preparation and the transplanting of young coffee bushes are all done by workers hired specially for each of those tasks. At the same time, there is also migration from the countryside to the city. A 1988 household survey conducted in poor districts on the outskirts of the cities of Manizales and Chinchiná (both in the Department of Caldas) found that a large percentage of workers (41.5%) were employed in the agricultural sector. Subsequent interviews indicated that none of the interviewees really wanted to work in that sector, but due to their lack of qualifications, the fact that they did not have the documents needed to gain entry to the formal labour market, and the absence of other employment opportunities (or as a source of supplementary employment), the coffee sector offered them an easy alternative. All the interviewees felt that their living standards had risen since they had migrated to the city (Hataya, 1992, pp. 63-83).

In Mexico, most peasant and indigenous households had land, whether in the form of *ejidos*, communal lands or small private holdings. The household was organized around the eldest man (the patriarch), who represented a moral authority for his wife, single and married children, daughters-in-law and grandchildren. All these people formed a domestic production and consumption unit. When the patriarch died, new independent nuclear families were formed, with his older sons assuming responsibility for the care of the widow and younger siblings. Lately, however, the lack of land or resources is giving rise to new survival mechanisms that are changing the family group and the community as it becomes necessary for the members of the rural labour force to abandon their places of origin. The economic and social bonds existing among family units are not necessarily severed, but they become more difficult to maintain, and all sorts of other problems arise. In the case of temporary workers, low wage levels generally make it necessary for the entire family to work in order to subsist; this means that the children will not attend school and the women will have to participate in the labour force while continuing to shoulder all the housework, and it also leads to emotional instability, alcoholism and other problems. Because they are constantly on the move and are isolated from each other, these workers have little opportunity to organize themselves. It is estimated that there are 4.5 million temporary workers in Mexico.

Other forms of migration have different impacts depending on the situation in each case. In some instances, women assume the responsibilities of heads of household while the men are away and the other members of the household share out the tasks of the family member who has left, who returns when there are town holidays, ritual ceremonies or family crises. This type of scheme is viable for extended families, but it does not work for nuclear families having no close relatives or quasi-kinship ties. In the case of permanent migration, the entire nuclear family is usually involved. The living conditions of Mexicans who have emigrated to the United States, although they are far from good and expose illegal immigrants to the constant threat of deportation, are better than those of temporary workers in Mexico. Such immigrants are, however, subject to emotional instability as a consequence of discrimination against them, their constant homesickness for their families and communities, and their practice of clinging to their

cultural values even when they are undergoing a rapid acculturation process that modifies their language, style of dress, behaviour and traditional family life (Muriedas, 1988, pp. 72-74).

Another severe form of destabilization was caused by the dramatic increase in poverty observed in Venezuela during the 1980s. If we define households living in extreme poverty as those that do not have access to a basic food basket, and if we define poor households as those that do not have access to a national basket of consumption goods that includes food and other essentials, then between 1983 and 1989 the number of rural families living in extreme poverty skyrocketed from 44 000 to 257 000, while the number of poor households increased from 408 000 to 435 000 (Venezuela, Ministry of Family Affairs, 1992, pp. 17 and 20). The transition from non-poverty to poverty or extreme poverty not only causes the members of the households in question to suffer anxiety about their physical survival but also triggers a profound crisis in terms of their self-images, with all the stresses and reactions which this entails.

We have already outlined the kinds of changes that occurred within the family unit in Mexico. We shall now consider two very different types of situations that have had opposite effects in terms of family cohesiveness.

In Cuba, in both urban and rural areas, the mother is the one who wields true authority and shapes her children's living habits, while the father takes a passive attitude to household questions. The proportion of female heads of household rose from 9.6% in the 1953 census to 19.7% in the 1981 census. The actual increase must be even greater, since, because of the housing shortage, divorced or separated women live in their parents' households, which are generally headed by a male. Growing numbers of married women in rural areas have entered the economically active population (although the increase is less marked than among urban women), with the gross number of economically active years rising from 3.6 to 10.5. These changes in terms of women's participation in the labour force enable them to contribute income to the family unit, and one way or another this tends to have an impact on the roles assumed by each member of the household. Greater independence for children has also led to changes in the functions of the family. Some of the factors that have made this greater independence possible are the award of scholarships and youth-led campaigns in such spheres as literacy, voluntary teaching services, helping with the coffee harvest and participation in the *Isla de la Juventud* (Youth Island) programme. Another factor is participation by young people in political and other mass organizations, where they take decisions independently of their family ties. The family is usually not fully prepared to act in accordance with this new independence, however, and although the family unit does undoubtedly play an important role in the transmission of new values, it is also true that it transmits and reproduces values of the past which the current ideology and laws (e.g., regarding equality for women) have tried to change (Pérez Rojas and Díaz González, 1988, pp. 162-163).

In El Salvador, in the midst of the country's severe social conflicts and traumatic war experiences, the family structure appears to be changing. One of the most significant aspects of this change is the shift away from an individualistic concept of the family, in which the emphasis is on reproducing the nuclear family, towards a broader, more socially-based concept of the family unit. Families from war zones tend to broaden their concept of what constitutes a family, welcoming close or distant relatives into their fold. The internal cohesiveness of these family groups engenders a high degree of functionality and solidarity. Those who survive place a great deal of value on kinship, as they identify with them and have shared their hardships and difficulties. For most of the families from war zones living in El Salvador, the search for satisfaction is focused within the family. The family structure tends to extend its links to protect itself from the surrounding environment, and its members usually go out all together, or at least in groups, for reasons of safety (Rodríguez, 1988, pp. 141-142).

The changes taking place in society have affected communities as well as families. The economic and political reforms imposed upon the indigenous communities of Bolivia (*ayllus*) in the name of modernization and democracy have fostered a concept of citizenship that has in fact displaced and undermined their indigenous forms of social organization and political activity. The expansion of the latifundia in the nineteenth century and the transformation of the communal *ayllu* members into sharecroppers were the first signs of crisis in many indigenous communities. The national revolution of 1952 and the agrarian reform that followed it also marked a critical turning point in the organizational

patterns, ideology and identity of the indigenous communities. In the 1980s, the progressive political parties and non-governmental organizations carried on with the dismantling and marginalization of the organizational patterns peculiar to the *ayllu* (Rivera Cusicanqui, 1990, pp. 97-99).

As already noted, and as will be shown again in the following discussion, contrary to the image frequently held of traditional rural areas, such areas are in fact highly flexible and adaptable and display a positive response capacity. Thus, according to León Zamosc, even though Colombian peasants may have appeared to be quite reactionary following the initial impact of capitalism in the countryside, this image now needs to be revised because, as capitalism has taken root and spread in the area, the peasants' aspirations seem to be pointing in two complementary directions: the defence and promotion of a freely-functioning peasant economy and the attainment of the political liberties promised to the citizens of this new society (Zamosc, 1990, p. 46).

Most of the people living along the Peruvian coast who benefited from the agrarian reform programme were agricultural labourers who worked on clearly-defined tasks and were never called upon to take any decision regarding crop selection, monitoring of the crop cycle, or the maintenance of even simple accounts of farm operations. Moreover, they were accustomed to working with the machinery and following the agricultural practices used on large landholdings. Today, these new producers are combining farming with stock-raising and are using draft animals for power and manure for fertilizer in what amounts to a spontaneous rediscovery of a form of peasant agriculture which was important in Europe in the past but which now seems like a new development in comparison to the practices of large agribusinesses or, for that matter, Andean farming practices (Bourliand, Dollfus and Mesclier, 1991, pp. 30-31). Most economic, sociological and anthropological studies have found a high degree of dynamism and mobility in rural Peru: the extended family is multi-active, significant migratory exchanges are taking place, a monetary economy exists throughout the national territory, a great deal of importance is placed on education, and the absorption of new technologies is the rule rather than the exception, although on a small scale, with few means and under adverse socioeconomic conditions (Revesz, 1991, pp. 17-18).

IV

Social norms and the costs of non-conformity

The control that institutional norms exert on moral-based individual behaviour is always imperfect, since it will have more influence over some individuals than others and there will always be some tendency to depart from mainstream values. There will thus always be a place for a secondary type of control based on the (positive or negative) interests of the individual or group which, if moral tenets were the only consideration, would not behave as prescribed by established institutional norms.

The personal advantages of departing from established norms may be outweighed by costs that are not inherent in the act of non-conformity but are instead generated by the response of the community; these costs may take the form of penalties ranging from disapproval to outright punishment, and in this way they restrict non-conformity.

The weaker the moral arguments for abiding by established norms are, the stronger the secondary forms of control will tend to be. Obviously, there is a limit for this process, beyond which the entire system collapses, since the power of sanctions and the will to apply them are largely –though not entirely– an expression of moral attitudes. Furthermore, the application of penalties requires the presence of a social body, and it is doubtful whether the process can be based on sanctions alone. Determining the relative importance of these primary and secondary motivations for conformity is necessary in order to ascertain the degree of stability of a given institutional system and its social norms.

From an institutional standpoint, a society is fully integrated when it meets the dual requirement

of having a completely harmonious set of norms and of having authority and moral arguments for abiding by them (Parsons, 1990, pp. 319-345).

Whether a group will choose to use its internal control capacity to buttress or to counter a form of control emanating from outside the group will depend on the costs of yielding to those external controls, the costs of maintaining control within the group, the forcefulness of the external sanctions, and the external agent's monitoring and follow-up capabilities (Heckathorn, 1990, p. 382).

As the twentieth century comes to a close it is clearly still true that social relationships based on family, language, religion, race and customs are a powerful force in the political and economic systems found in all the regions of the world. Rather than fading away with the advance of industrialization, education, better communications and the development of bureaucracies or losing validity as a result of the formation of classes, these elemental bonds assert themselves day in, day out. However, if they are to be activated and utilized, they require maintenance and investments in the form of social transactions, ceremonies and periodic rituals. Hence, in the presence of recessions, deteriorating terms of trade, drought, war or other such problems, agricultural producers diversify their economic options and reduce their risk by increasing their investments of all types in the social relationships which may give them access to additional resources. Under more favourable conditions, modified "traditional" institutional relations have worked to promote saving, capital formation, investment, management and a variety of entrepreneurial activities by providing an environment marked by communication and confidence in countries where the mainstream culture or national institutions do not ensure this (Hoben and Hefner, 1991).[2]

There are a number of examples of new types of activities that use traditional forms of organization either deliberately, as in Bolivia, by necessity, as in Nicaragua, or spontaneously, as in Peru. During the 1970s various opposition movements were organized by peasants, the largest one being the "katarist" union of the Aymara altiplano, or highlands. A combination of class and ethnic identities served to unite vast sectors of the indigenous peasants of Bolivia and challenged the ideological foundations of the post-1952 State. This process culminated with the creation of the United Confederation of Peasant Labour Unions of Bolivia (CSUTCB). The katarists believed that trade union structures could be linked up with the *ayllus'* organizational traditions, and indeed, the Aymara unions of the altiplano succeeded in combining the direct democracy of the *ayllus* with the unions' representative democracy, thus forming a powerful confederation capable of acting as a united front while at the same time respecting organizational and cultural diversity (Rivera Cusicanqui, 1990, pp. 107-108).

Contrary to what happened in the urban areas of Nicaragua, where the new State apparatus was able to gain institutional control over civil society with relative ease, in the rural areas of the country it was nearly impossible for the State to establish itself except through the channels provided by traditional rural institutions. Consequently, the new bodies of authority in rural areas began to be formed by peasants and rural workers on the basis of the traditional power structures of rural civil society. The strength of the communal tradition of rural civil society and of peasant lifestyles has been reflected in the ways in which life in the *comarca* has adapted to the presence of military conflict. The peasants have tended to react to the conflict as a community and have thus allied themselves as a group with the contras or with the revolution and the Sandinista regime. This social cohesiveness is also evident in the way in which communities that have been relocated because of the war have managed to re-establish their social patterns and traditions, whether in their home district or elsewhere, without outside involvement. Urban concepts of social organization cannot account for the strength of these family and community ties, nor can they explain how these experiences are creating a framework for the consolidation of rural civil society. The electoral laws of 1989 and the daily interchanges between the population and the Government give priority to indirect forms of representation. In response, peasant organizations have started to build links among several different districts in an attempt to forge a democratic model in which the peasants will retain control over the power structure within their area. The type of organization that is emerging from this process has yet to take on a definite form (Ortega, 1990, pp. 122-123, 128 and 137).

In Peru, thanks to agrarian reform, only about 10% of the peasant population in the highlands still maintains pre-capitalist links to the haciendas. The great majority work within the framework of a small

[2] The article in question refers to Africa, but its authors' argument is valid for Latin America and the Caribbean as well.

economy that is becoming more and more integrated into the market. These families do, however, continue to exchange labour with each other in accordance with long-standing Andean traditions.

In the cases of Bolivia and Paraguay, traditional structures are being undermined and young people are actively seeking a better economic environment and a means of escaping from traditional social pressures. In the crisis years of the 1980s, food aid and donated means of production were deliberately used by some progressive organizations to promote the establishment of trade unions in the ayllus in a way which explicitly sidestepped their communal resource-distribution system and their social norms. Desperation and famine in these communities made it possible for this type of "blackmail" to work, and the rhetoric of the revolution served to legitimize it. Union advocates claimed that the trade unions were more modern, democratic and revolutionary than the ethnically-based system of authority left over from pre-capitalist times. This linking of food aid with the establishment of trade unions has augmented the mentality of dependence which, in turn, has weakened this population's capacity for self-government. The ayllus see the NGOs as a source of resources that is parallel to the State and to which they must make concessions, such as, for example, agreeing to vote for a particular candidate in trade-union, municipal or national elections. Inter-generational tension has also sharpened, and young people see the NGOs as an escape route from collective social control and as a means of seeking out alternative means of individual subsistence, such as migration, which adversely affects these communities' production potential. This organizational and ideological crisis has so shaken the collective mental frame of reference that it has led to a loss of confidence and self-esteem, especially among the younger generations; some members of this population group have been so severely affected that they have reached the point of taking a disparaging view of their own culture and ancestral customs. Members of indigenous groups feel constrained to abandon their moral and psycho-social frame of reference in order to win a minimum of respect and be treated as "equals". All these factors have weakened the communal system of land tenure, crop rotation and traditional systems of authority and representation, while at the same time failing to promote any alternative organizational scheme. The *ayllus* have, however, developed various forms of resistance, ranging from selective, conditional acceptance of the trade unions to openly hostile opposition (Rivera Cusicanqui, 1990, pp. 111-113).

Migration from rural areas to the cities and to other countries is always a possible escape route for peasant families when their economic position becomes unstable. In Paraguay this phenomenon is a constant fact of life [3] and becomes still stronger during times of crisis, as in 1992 when cotton-growing ceased to be profitable. Reports from the departments of Misiones and Ñeembucú tell of thousands of peasants emigrating to Buenos Aires because of lack of land, poor harvests, low producer prices and unemployment. Over 80% of the emigrants are said to be under 25 years of age (*Informativo Campesino,* 1992).

V

Power relations

Power is a product of the amount and distribution of behavioural exchanges over a lengthy period of interaction. Such exchanges may be rewarding or punitive, may be of high or low frequency, and may be distributed symmetrically or asymmetrically among the participants. As in the case of power strategies, the results or outputs of power are measured in behavioural terms, and the social actors attempt to modify these results in a way that will be favourable to them.

The consequences of a person's or group's behaviour for another may involve tangible things (e.g., money), social rewards in the form of status or approval, or psychological states, such as happiness and self-esteem. Social actors are mutually dependent because they provide each other with such benefits. The

[3] Indeed, as far back as 1915 Eligio Ayala already spoke of such migrations in his book *Las migraciones paraguayas.*

degree of one actor's dependence on another will vary in direct proportion to the value of the benefit which the latter can provide to the former and in inverse proportion to the chances of obtaining benefits from other sources; exchanges with these other sources also, of course, involve power relationships.

Punishment is highly likely to elicit a response from the other party, in the form of either a counter-punishment or the withholding of the reward sought by the first actor.

Regardless of how aware a social actor is of existing power relationships or of how he may try to influence them, an unequal power relationship will lead the more powerful actor to diminish the exchange because he has more valuable options. These options generate a structural incentive for holding back the rewards intended for the weaker actor (Molm, 1990, pp. 427-447).

The moral economy centres around the rights and duties surrounding interpersonal and inter-class relationships in rural societies and studies the patterns of commonly held standards of what constitutes appropriate behaviour. The sum total of rights and duties of dominant and subordinate groups creates a complex tradition of unequal reciprocity, a structure for a shared moral universe, and a common idea of what is fair. In times of structural change, a pattern of reciprocity that had formerly been regarded as fair or just begins to be seen in a different light, and this may trigger a violent collective reaction involving such acts as, for example, land takeovers (Flórez Malagón, 1990, pp. 133-150).

Research on trade unions and cooperatives indicates that even those leaders who are not very democratic in their outlook may find themselves pressured into providing benefits to the members of their organization. Democratic values and rules are therefore not the only motivation for responsible leadership. The State and formal and social organizations as a whole make up a system of opportunities, risks and benefits that must be taken into account when leaders choose to ignore their followers' interests, on the one hand, and when members choose to hold their leaders accountable, on the other. Grassroots movements often undergo changes that bring them closer to or farther away from democratic structures, with differing degrees of responsibility being attributed to their leaders at different points in their history.

At the community level, informal consultative, punitive and decision-making mechanisms can help to compensate for the weaknesses of formal channels of participation, which may be reflected in such forms as poor attendance at meetings, ethnic and gender biases, clientage-based government intervention, and interference with election results. Moreover, peasant organizations rarely take major decisions at mass meetings or through votes. These formal procedures are generally used only to ratify decisions taken beforehand on the basis of discreet informal debates and pressures. In any case, groups that include many different communities are too big to be governed through direct democracy, and the informal mechanisms for holding their leaders accountable are too weak. This makes horizontal inter-community channels especially important in preventing domination by the central leadership. In remote communities, these horizontal links are rarely forged spontaneously, and deliberate organizational efforts are therefore necessary in order to maintain them. In popular political memory, equal emphasis is probably given to the importance of tactical alliances and to collective horizontal action in defence of class interests.

Regional organizations are essential for the democratization of the rural development process. In much of Latin America, the main obstacle to rural development is the entrenched power of the regional elite, whose members are drawn from both the public and private sectors (and, in most cases, are allied with one another). This elite often monopolizes the most important markets, thus preventing peasants from retaining or investing the fruits of their labour. Regional organizations are in many cases the only actors capable of opening up these markets and of imposing more equitable and responsible policies. Furthermore, they play a crucial role in upholding the right of assembly and in creating an environment conducive to increased community organization (Fox, 1992, pp. 3, 7-8, 10 and 27).

The political sidelining of rural opposition movements by means of subverted electoral systems has caused peasant movements to stress direct action by the masses and armed opposition as the main means of bringing about change. In areas where vote-buying, fraud and sham elections had been the norm for decades, participation is gradually becoming more active and independent as increasingly viable options become available. The rural poor may not be in a position to offer their own political options, but they are sufficient in number to persuade urban political parties to champion such measures as agrarian reform. Large-scale landholders deduce, correctly,

that genuine political competition within the rural environment could jeopardize the continued existence of highly inequitable land tenure systems. And indeed, the existence of pluralistic electoral systems in combination with highly polarized social structures, as in Brazil and Colombia, has led to a great deal of violence, whereas the agrarian reform carried out in Bolivia gave the country's competitive electoral system a much less polarized social foundation (Fox, 1990, pp. 7-8).

The disarticulation of an economy diminishes the effect that growth can be expected to have on well-being in various ways. First, when there are a large number of low-paid workers in low-productivity sectors, then sectors having higher levels of productivity need to pay only slightly higher wages in order to attract more experienced and productive workers. This weakens the link between an increase in productivity and an increase in real wages and between growth and well-being. Second, it is usually supposed that growth will enable the public sector to obtain more revenue, which can then be used to raise the population's level of well-being. However, there are a number of reasons why public funds are less likely to be used for that purpose in a disarticulated economy. One such reason is that disarticulation reduces the economic incentive for politicians to transfer income or to pass legislation for that purpose. Third, a disarticulated economy looks outside itself in respect of both the inputs and the outputs of its more developed sectors, and wages therefore become a net cost, since the workers are not a significant source of demand. Moreover, the modern sector of an underdeveloped society will attract the lion's share of available capital (both national and foreign) and the solicitous attention of governmental officials. Consequently, that portion of the agricultural sector which is not linked to export activities will remain stagnant and unproductive (Strokes and Anderson, 1990, pp. 66-67).

The power of the rural elite is illustrated by the cases of Brazil and Mexico as well as, to a certain point, Colombia and Ecuador. The 10 most rural states in Brazil (with over 50% of their population living in rural areas) represent 20% of the national electorate but elect 25% of the lower house and 42% of the upper house of Congress. Owing to the existing electoral rules, the failure to uphold the right of assembly and the accumulated weight of traditional power relationships, however, rural conservatives monopolize formal political representation in rural areas. Consequently, even moderate urban politicians often ally themselves with these conservatives in order to pursue their own objectives. The rural elite makes use of its influence within the national political system not only to block agrarian reform but also to thwart a wide range of other political and social changes. There are instances in which judges, public prosecutors and the police are all under the control of large landholders, and the political will to combat rural violence is not always in evidence (Grzybowski, 1990, pp. 22-25 and 36).

The *cacique* system continues to pose a major obstacle to the democratization of the rural areas of Mexico. Since the *caciques*, or local political bosses, are backed by the governing Institutional Revolutionary Party (PRI) they play a central role in electoral affairs, monopolizing resources, credit, services and communications and thereby holding back any competition. This clientage-based relationship is further fortified by family and other ties, and the distribution of public goods and services is thus influenced by personal and political loyalties (Paré, 1990, p. 82).

The range of different movements and the diversity of their claims and demands highlights the fact that Colombian peasants (as is also true of the peasants of Brazil, Nicaragua and so many other countries) are not a homogeneous group: sharecroppers and tenant farmers want their own land, small landholders want to defend their market position, and settlers want to improve their production conditions. Their methods also vary, although they share a number of traits worthy of mention. First, the movements which have taken place have been on a mass scale, which indicates that they have grassroots support and their leaders have organizational capabilities; second, the peasants have eschewed official channels and have instead turned to non-institutional measures, especially the use of force; and third, they have taken action aimed at forcing the authorities to enter into high-level, direct negotiations. The last two of these characteristics point up the lack of appropriate political channels linking the rural population with the various levels of government. In actual fact, there are two different systems for interaction between the population and the Government and political parties: one is a modern, organic channel open to agricultural entrepreneurs which is routed either through their trade associations or through the rotation of members of this sector in government posts or within the legislature; the other is a clientage-based system in which

access to scarce public services and other personal favours is paid for with votes. Clientage has been effective in subverting reform initiatives emanating "from above" and pressures for change coming "from below" (Zamosc, 1990, pp. 48 and 50-51). As we noted in an earlier section, the Barco administration took steps to set up more direct channels between government circles and the peasants.

Although there are no official statistics on the subject, it is known that during the 1970s military personnel were among the few in Ecuador who acquired large tracts of land (and, what is more, in the most fertile and productive areas). The indigenous movement therefore poses a direct threat to them, and since July 1990 the rural areas of the Sierra region, or highlands, have become increasingly militarized, with the inhabitants being subjected to constant identity checks. In each province there is a list of the Ecuadorians who are to be arrested and the foreigners who are to be expelled in the event that another uprising seems imminent. These actions are accompanied by a (dis)information campaign alleging infiltration of the indigenous movement by international communism, extremist groups, leaders who have received political and military training in Cuba, foreign priests who espouse the theology of liberation, etc., and these campaigns have found an echo in certain sectors of the press and public. In addition, some large landholders have felt threatened by the indigenous movement and have sold off their land at low prices. Although there have only been a few cases of such sales, they have made a big impression on other large landholders and have prompted agricultural producers –who claim that the authorities are unable to protect their property– to form para-military forces in rural areas and to intensify the "self-defence" actions which they have been practising for some time now and which have caused a considerable number of victims (Fassin, 1991, pp. 100-101).

There have also been instances in which trade associations have learned to express their message in an appropriate way and have consequently been more successful than others in establishing strong links with their members, as in Brazil, or with the authorities, as in Mexico. The Rural Democratic Union (UDR) has managed to reach out beyond Brazil's large landholders and has rallied many small-scale producers against agrarian reform thanks to its messages not only on the protection of private property but also concerning production, credit, the market, prices, etc. The modern, technical language it uses is in step with the concerns of many distressed small and medium-scale agricultural producers. The UDR's success shows up the weakness of the social movement –represented by the Confederation of Agricultural Workers (CONTAG) and the Consolidated Workers Federation (CUT)– which is having difficulty in finding a unifying strategy for incorporating the modernization process into its message and addressing the concerns of many small landowners (Gros, 1991, pp. 63-65).

Most of Latin America's peasant movements exclude women, either explicitly or implicitly, and this is especially the case in situations where agrarian laws deny women access to land. In Mexico, the *ejido* system specifically denies land rights to women, except for widows and, in some cases, unmarried mothers. In the Lázaro Cárdenas Ejido Union (UELC), however, women living on *ejidos* won representation at the regional level –for the first time in Mexico– through the Union's Women's Agribusiness Units (UAIMs). The UELC started out with a rural housing project based on government loans. In order to qualify for subsidized credit, the Government required the UELC to conduct a detailed study on the economic status of its members, and this study brought to light the significance for the local economy of the informal sector, where the main actors were women. In cooperation with two (female) UELC consultants, the women drew up projects that would integrate them into the region's economic development effort. Despite a lack of cooperation on the part of the majority of UELC members, these women successfully coalesced their 15 different community groups into a single network: the UAIM. When the UELC leaders realized that they could gain access to economic resources and win political recognition through the UAIM network, they awarded it official representation at their assembly, and as it became increasingly clear that a greater degree of participation and democratization was essential in order to carry forward a pro-peasant agrarian policy, peasant movements began to focus their attention on municipal elections (Fox, 1992, pp. 19-29).

VI

Conclusion

Social mobilization initiatives require legitimacy and a critical mass of participants in order to become mass movements. Owing to the distances separating rural settlements, the scattered distribution of their populations, as well as, in some cases, such communities' social isolation and the possibility that greater repression may be practised with impunity, a rural movement is more difficult to form and organize than an urban movement is.

The move towards democracy being made by most of the countries of the region has created opportunities and stimuli for the formation of structured groups seeking to champion a given cause as well as for spontaneous –and, at times, violent– acts such as land takeovers. These illegal actions and acts of violence can be accounted for by the fact that in the past little importance was attributed to peasant movements, and these movements therefore resort to such tactics in order to force the authorities to give them what they are asking for, rather than entering into negotiations through more formal channels.

The changes experienced by the region's rural population in the past few decades have been particularly rapid and far-reaching. Examples include agrarian reform and counter-reforms, rural-urban migration, the penetration of the mass media, an increase in temporary wage labour, and greater participation by women in gainful employment outside the home. All this has had an effect on the self-images of the persons involved, generating stress and triggering the use of tactics of adaptation and accommodation which, in some cases, have led people to cling even more firmly to their traditions but, in others, have prompted them to quickly abandon those traditions. Thus, although the basic relationships remain strong, there is no doubt that they are changing: roles within the family (of women, children, and hence also of men); traditions; market relations and consumption patterns; relations between members of society and between groups (*compadrazgo* (godparent relationships), *mingas* (reciprocal work aid), *ayllus* (indigenous community institutions)); alliances of groups within society; etc.

As a result of the sweeping changes seen in rural areas, voluntary conformity with social norms has tended to decline, as have the costs of non-conformity. Young people, in particular, try to get away from these norms, whether by participating in activities governed by a different set of norms or, in a more drastic step, by migrating.

The traditional types of power relationships existing among different societal groups have also changed appreciably in recent decades, partly due to the impact of agrarian reforms and partly as a consequence of society's evolution towards different models and values and a more individualistic and egalitarian outlook. Some sorts of power, such as that held by large landowners –who often used to represent some degree of legal and moral authority as well– have disappeared without being replaced by other types of power or have continued to exist but now receive less tacit approval from the rest of society. Changes in mutual demands and expectations, and their non-fulfilment, have at times led to acts of violence, such as land takeovers.

In general terms, it may be concluded that during the second half of this century sweeping changes have taken place in rural society which have led to greater social integration in some spheres. Organized movements (trade unions and trade associations, political movements) appear to be stronger, have extended beyond the community level, are governed by formalized hierarchical structures and elect their members indirectly under a democratic system. In other areas, however, these changes have led to social disintegration and acculturation. Nevertheless, the articles appearing in journals published between 1990 and 1992 which were consulted in the preparation of this overview place more emphasis on the former, thereby giving this article a more positive tone than would result from the author's own perception of the situation.

(Original: Spanish)

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Indigenous peoples *and modernity*

To be absolutely modern means
to be helping to dig your own grave.
Milan Kundera, *Immortality*

There is not just one single form of modernity, but many different –and sometimes contradictory– ones . . .
...Modern development does not necessarily do away with traditional folk cultures.
Néstor García Canclini

John Durston

Social Development Officer, ECLAC Social Development Division.

Many indigenous leaders and intellectuals in the region are asking themselves how the current rapid spread of free market principles and the process of integration into a single world economy is likely to affect their cultures. The answer depends on what we mean by "culture" and what we mean by "modernity". Cultures are not rigid sets of traditional norms and values, but instead have a deep-seated logic and a whole constellation of alternative processes which, like constantly evolving computer programmes, give each culture considerable flexibility and capacity to adapt to changes in its environment. Modernity, in turn, should mean tolerance and an appreciation of diversity. The proposals put forward by ECLAC regarding competitiveness, current uses of knowledge and the indispensable element of social equity provide guidelines that can help indigenous peoples, once they have been allowed to assume their role as recognized social actors, to make use of the advantages and sidestep the pitfalls of their situation as this century nears its end.

I

Introduction

This article explores three concepts –culture, knowledge and modernity– [1] and analyses their implications in terms of a more forceful role for the indigenous peoples of Latin America as social, economic and political actors capable of pursuing their own strategies for overcoming poverty and increasing their well-being in the broad sense.

The analysis is based on elements of comparative anthropology and the current debate within ECLAC concerning what must be done in order to change production patterns with social equity within the current Latin American context (ECLAC, 1990, 1992a and 1992b).

Our starting point is provided by an observed fact and an anguished question. The observed fact, in the words of José Bengoa, is that the inexorable spread of the market economy is one of the facts of Latin American life in the 1990s. The question, which has been posed by various indigenous leaders and intellectuals, is: What effect will this style of development have on our values and our cultures?

II

The crisis of social actors

In the view of many experts, collective actors are in crisis the world over. The percentage of the population belonging to trade unions or mass parties based on class identity is steadily shrinking, and these organizations' places are being taken by causes which temporarily unite individuals from diverse social groups in order to further demands concerning a single issue (e.g., environmental protection). At the same time, the global planning and administration of broad, monolithic policies and their implementation by a national bureaucracy are rapidly being replaced by a search for swifter, more flexible mechanisms based on decentralization and a mounting degree of regional and local autonomy.

Against this background of a changing manner of carrying on political activity all over the world, the indigenous movement is virtually unique in that it combines a cause which draws together individuals having diverse social identities with the incipient strengthening of a social actor in the classic sense: the indigenous peoples themselves, organized and mobilized to deliberate and act on a collective basis.

In order for a social actor to be successful, determination alone is not enough. Indigenous peoples also need to have four other elements: resources, alliances (as noted by Victor Hugo Painemal), a favourable environment and a strategy. For purposes of analysis, the following thesis will be developed here: that the resources essential to the success of indigenous groups are their own culture and the appropriation of the "universal knowledge" which exists in the world as a whole, and that both the favourable conditions and the alliances they need for their success may be generated by the spread of modernity throughout the world.

☐ This article is a revised version of a paper presented at the seminar "The Mapuche people and development: challenges and proposals for meeting them", sponsored by the Food and Agriculture Organization of the United Nations (FAO) and the Government of Chile, which was held in Angol, Chile, on 14-16 January 1993.

[1] Most of the propositions set forth in this article fall squarely within the bounds of what, according to the jargon of the day, is known as **post-modernism**: the rejection of facile "certainties", whether of a pseudo-scientific, technological, positivist or ideological stamp; a very favourable attitude to multiculturalism and inter-culturalism; and an attitude of humility in the face of complexity and randomness. It seems linguistically absurd, however, to relegate the term "modernity" to a realm associated with ideas of the past. We prefer (as does Berman, 1982) to retain this useful word and to use it to refer to vigorous aspects of the present that have projections for the future. In other words, we seek to gain an understanding of "modernity after post-modernity" (García Canclini, 1990).

III

Culture: definitions and connotations

How can it be claimed that favourable conditions exist for the indigenous peoples of the region in view of the progressive disappearance of traditional practices and institutions in many indigenous communities and the declining use of their native tongues by young people, many of whom also choose to migrate to the cities? In large part, the answer lies in how we define the concept of culture.

If we are to understand each other on this subject, it is important that we should not use the term "culture" to express different concepts or –even worse– fuzzy ideas. Many people have a picturesque, folkloric image of indigenous culture, and different writers have used the word "culture" to mean different things. Indeed, a still-unresolved theoretical debate surrounds this concept, and it has a number of different definitions. However, we need to decide on an explicit definition and also on the shades of meaning and connotations that we attach to the concept of culture or, for that matter, to any concept which we wish to use to carry on a meaningful dialogue.

Anthropologists are generally agreed that all cultures have two major components: a world view or *weltanschauung*, i.e., a coherent set of beliefs about reality, and an ethos, composed in turn of a scale of values that determines attitudes about good and evil and a set of norms or rules as to how people should behave.

In order to constitute a culture, this dual perspective –of reality and of what is proper– needs to be shared and transmitted within specific groups of people via a common language. In modern anthropological analysis, there is a tendency to separate the concept of culture (an abstract system of ideas not observable as such in the physical world) from the concept of social structure, i.e., a set of practices, customs, regular forms of interaction and institutions that do exist in the real world and can be observed as they are expressed in people's behaviour. It may also be useful –for reasons that will become evident– to make a distinction between the concept of knowledge and that of the values of a culture. A culture –in this latter sense of a coherent system of values– is the ethical foundation shared by the people concerned which makes it possible for all the institutions of a given society to function and for its members to interact.

Culture is not, however, a simple set of immutable rules. Many anthropologists believe that, in addition to expressing themselves through language, cultures *function like computer languages or programmes* in that they are mutable and involve statements, routines and sub-routines that usually remain latent, manifesting themselves only under appropriate circumstances.

According to this view, each culture is a mental construct which has a deep-seated logical structure (Levi-Strauss, 1962): a not immediately discernible grammar which governs and reinforces stated values and offers different rules for different circumstances. Its enormous variety of principles or practices may even contain mutually incompatible elements that only come into play when different circumstances call for different responses. This flexibility gives people and societies the ability to respond to the wide range of differing –and in some cases entirely new– situations that arise every day.

Ultimately, it is the deep-seated structure of a culture that will determine the social institutions and forms of behaviour that are required by any society. This underlying structure is expressed symbolically and is learned, largely unconsciously, by children at their mothers' knee through legends, stories, ceremonies, rituals, proverbs and sayings; it is reinforced each time the members of the social group conduct a ceremony or turn to each other for help, or when someone repeats a traditional saying.

Nevertheless, all cultures are constantly changing and adapting their beliefs and norms in response to the changes that occur day in and day out in the social, economic and intellectual environment. In this sense, there is no such thing as a traditional culture; no culture in the world today is exactly the same as it was a generation ago or even last year. Culture, as a "silent language", is continually evolving as people change the ways in which they use it. The Spanish spoken by Cervantes and the English used

by Shakespeare differ substantially from the present forms of these languages, and some of these differences even involve their deep underlying structures, though most of the changes are in the vocabulary used. They are still Spanish and English, however, even though they have been transformed. The English and Spanish cultures have been similarly or more profundly transformed in the same period.

In order to illustrate the mutability of cultures by making an analogy with computers, we might say that cultures, like computer programmes, can incorporate new ideas, principles and procedures, with corresponding adjustments in the original programme, so long as those changes do not threaten to throw the internal logic of the cultural system's underlying structure totally and irremediably out of balance. Cultures are regenerated and altered every day as their members strive to confront old and new problems and challenges. The more creative individuals, in particular –inspired by their readings of new elements seen through the eyes of their own culture– invent new forms of expression and new social arrangements. These experimental innovations are then evaluated by the other members of the community or population and are eventually either rejected or integrated into the culture and shared practices of the group.

When considered from this vantage point, it is obvious why it makes no sense to talk about one culture being superior to another. One system of values, religion, etc. is not intrinsically more or less efficient or "correct" than another in universal terms; each culture is the most appropriate one for sustaining that particular social system, because the two developed together. It is also the most appropriate for that particular group of people, because that group's members have, consciously and unconsciously, incorporated the deep-seated structures of the culture in which they were raised into their own value systems and their own personalities. This does not mean, of course, that any culture has ever attained complete perfection, either in its present form or any of its past expressions.

No culture is, in and of itself, better or worse than any other, but it is indeed true that groups of people who have suffered deculturation (i.e., the total or partial destruction or loss of the *weltanschauung* and norms that guided a culture's members in their original social setting) are clearly at a disadvantage. Theoretically, it is possible for individuals to change over from one culture to another, but it is a long and sometimes painful process that will always remain incomplete. And when the original culture is associated with an ethnic identity involving distinct physiological features, then a person's or group's effort to assimilate an alien culture and to integrate themselves entirely into a dominant society marked by racist stereotypes is doomed to failure.

IV

What do we mean by "knowledge"?

1. Information, tools and beliefs

Two important components of knowledge are information, on the one hand, and the ability to handle methods and tools of communication and analysis on the other. Some of the most important such tools are reading, writing and arithmetic; mastery of these tools provides easier access to other more specific tools, such as scientific methods of analysis, foreign languages and computer skills, and possession of them permits the absorption of ever-greater amounts of information.

But knowledge is also belief. We often lapse into ethnocentrism, thinking that our particular store of knowledge enables us to "know the truth", whereas the knowledge of other cultures merely consists of blind beliefs or, even worse, superstitions. However, what we believe to be true this year will surely have changed by next year and may be discarded entirely a decade or century hence. The essence of modern scientific method is to remember always that there is no such thing as *absolutely certain knowledge*: only *knowledge of hypotheses* which, though they may be widely shared by many highly intelligent and learned people, are always subject to possible revision or improvement.

As the counterpart to the type of knowledge peculiar to a specific culture, or "local knowledge"

(Geertz, 1982), there is now also "universal knowledge", which has been amassed and built up over time with inputs from all the peoples of the world, is available to all, and has already been integrated into a large number of specific cultures all over the world.

Thus, the "local knowledge" of the Mapuche people, for example, includes specific knowledge in such areas as the sustainable management of the ecosystems of southern Chile, natural medicine, and cooperative forms of labour. These types of specific knowledge can and should be shared with other people by being written down and published, so that they can become part of the universal body of knowledge.

This also means that a given culture cannot be regarded as superior to another merely on account of the *knowledge* possessed by its members. If knowledge is a universal asset, then it is the common heritage of all mankind, and anybody can take that knowledge and integrate it into their own culture. Of course, a given people may be in an advantageous or disadvantageous position *vis-à-vis* other social actors with whom they interact in terms of the power they hold at any point in time, depending on that people's particular mix of their own culture with appropriate elements of the universal culture that they have incorporated up to that time.

2. Knowledge and economic power in the 1990s

The new economic significance of knowledge in the closing years of this century is a result, in particular, of the way in which the relationship between knowledge and production has changed (Toffler, 1991; ECLAC, 1992a). Today, the production of goods and services requires proportionally less energy and materials than in the past, but an increasingly large amount of knowledge. This also means that less and less capital per unit of product is required as the proportion of information used in that unit's production and marketing grows. Knowledge is reducing the need for raw materials, manual labour, time, space and capital, and it is becoming the chief resource of economically advanced economies. Since knowledge is always progressing, competition for markets means that knowledge is increasingly taking the place of capital as the scarcest factor of production.

Although this description of what is beginning to take place in advanced economies may sound very remote from the world of indigenous peoples, there are two aspects which are actually highly relevant: first, that a firm or nation which has the necessary knowledge can always attract financial capital and, second, that knowledge, unlike capital, cannot be held for long as private property but can instead be shared and used by anyone.

Today, owing to the degree of economic interpenetration and interconnected communications that exists, the specific, exclusive "local" knowledge possessed by any given culture is not enough for coping with the complexity of the outside world. The members of a community or a people also need the background information and technical tools existing in the universal pool of knowledge (which is available to all, generally free of charge) if they are to take the right decisions and appropriate actions with respect to other social actors, when reacting to the rapid changes taking place in the conditions for that interaction. In order to have the ability to act within the larger society, profound cultural self-knowledge must be coupled with a wide-ranging body of knowledge about the rest of the world and the universal sciences.

V

Modernity and indigenous peoples

Contrary to what is often believed, modernity is much more than the mere adoption of the latest technology in order to boost productivity; social and cultural aspects also form an essential part of it. Modernity means that the common man can begin to control his own collective destiny by becoming the subject of his own modernization (Berman, 1982). In the words of García Canclini, modernity involves movement in four basic directions: "towards emancipation, towards expansion, towards renewal and towards democratization" (García Canclini, 1990, p. 31). Democracy and equal opportunities are thus pivotal aspects of modernity; neither the extreme poverty of a large portion of the population nor inequity are

compatible with it. The neoliberal economic model is not modern either, since it is incompatible with many of the basic ethical postulates of modernity which are gathering force in the world. In the field of economic systems, modernity is not the tooth-and-nail, headlong form of capitalism espoused by the neoliberal model but rather a type of market economy that has been tamed by an active civil society, with social actors who take part in the government of an active, interventionist, but not hypertrophic State.

Modernity is also defined by the acceptance of conflict as a normal part of democratic life and by the reciprocal tolerance that permits social conflicts to be resolved without violence. Little by little, these ideas –tolerance of diversity, democracy, the negotiated settlement of disputes– are gaining ground. Cultural modernity entails, above all, the end of dogmas, greater humility regarding our real knowledge of mankind's complex intercultural reality, and a large dose of caution in proposing or imposing measures based on our own beliefs about what is true and what is good.

Indigenous peoples have lived through a long history of conflict and domination in which sectors of society and many national governments have mounted frontal attacks against them. Today, many governments and portions of national societies seem willing to support these peoples' efforts to defend their right to exist, to have a culture of their own and to raise their material living standards. This more favourable situation for the cause of indigenous peoples is a new development. It is one aspect of Latin America's –and other regions'– entry into the modern world.

Within this new context, new ways of fighting injustice and upholding legitimate rights also need to be found. Confrontation still has a place, but a very different one: as a starting point for a process of competition and negotiation, and as an effective and dramatic way of presenting negotiable demands.

In a sense, we may see modernity as one aspect of the relatively recent emergence of a universal culture. In addition to universal knowledge, a system of values –the other facet of any culture– is also beginning to find its own universal, modern expression in, for example, the Universal Declaration of Human Rights.

At this stage in the discussion it is important to emphasize a point about which there is as yet little awareness. The acquisition of technology and of formal education by the indigenous peoples of Latin America does not necessarily entail their absorption by national, European or North American culture. On the contrary, the type of modernity that is becoming a growing presence throughout the world not only tolerates diversity but actually values and strengthens it. Thus, aspects of modernity include the activities of the worldwide environmental movement and the increasing awareness and understanding of the rights of indigenous peoples.

In the economically more advanced countries, what we are seeing now is not the monotonous cultural uniformity that was predicted in past decades but rather the most heterogeneous array imaginable of cultures and subcultures, all of which are constantly engaged in an effervescent process of reciprocal –although not always harmonious– exchange.

This diversity and this flourishing multiplicity of cultures in the societies of the centre is, in large part, a result of recent changes in the cold world of economics. In that world, diversity –both the genetic diversity of plants and animals and the cultural diversity of mankind– is valued because it is seen as a pool of opportunities, of resources that are potentially valuable as a source of profits for modern capitalism.

Although it is highly doubtful that entrepreneurs value cultural diversity as much as they have learned to value the potential of biodiversity, they nonetheless benefit from cultural diversity in three ways: from the wealth of creative energy that gives rise to the invention of new products and tastes; from the store of cultural and material goods that already form part of existing cultures; and from the demand for culturally-specific products generated by members of the various cultures. The remarkable agility of communications and of technological response in today's globalized economy makes it possible to satisfy highly specialized tastes and demands in small niches within the world market. Although mass production and the formation of mass tastes through advertising still predominate, what this market is now seeking is not so much mass-produced, uniform goods designed for standard tastes as infinitely diversified products to satisfy infinitely diverse tastes. If there is a demand for indigenous Andean music, for example, capital will become available to enable some firm to satisfy that demand and turn a profit.

Indeed, the market for all kinds of products to satisfy the demand of the Afro-American and Latin American cultures is already a vast one that provides multimillion-dollar profits for countless companies of all sizes. What counts, in this context, is purchasing power and effective demand: if there is an effective

demand, backed up by hard cash, for the creative expressions of a given culture or subculture on the part of its members or admirers, then that culture will prosper.

A significant portion of the effective demand for indigenous cultural expressions today comes from a vast, amorphous sector of the population; it is chiefly among the more educated strata that an appreciation of indigenous cultures transcends the context of the market. This is based on a modern scientific and ethical mind-set into which certain anthropological, ecological and other ideas (whether clearly defined or rather vague) have been incorporated. These strata's impact also extends beyond their actual economic demand, because their members are accustomed to acting and to expressing their views publicly, thereby influencing government policy.

The indigenous cultures and societies of today have been under siege for centuries, but they have not been wiped out. As true modernity takes hold (after all, everyone claims to want to "modernize"), the characteristics of that modernity outlined above will give rise to an environment which, in net terms, would appear to be more favourable for the cultural and physical survival of indigenous peoples. If the State, rather than laying siege to indigenous peoples, fights against such harassment, and if those peoples take up the role of effective social actors on the basis of the power of their own culture and the universal knowledge they have incorporated, and if they take advantage of the alliances offered by the environmental and indigenist movements, then there is a good chance that they will flourish, even though harassment in the form of racial discrimination and the fierce and as yet untamed aspects of the market economy may persist.

VI

Ethno-development and modernity

1. Social development and the reduction of extreme poverty

How do these concepts of culture, knowledge and modernity influence the development of indigenous peoples? Social development means increasing the well-being of the entire population in various ways: in material terms, in the perception of self-worth and in the realization of individual potentials. Ethnodevelopment may therefore be defined concisely as the formulation and fulfilment by an ethnic group of its own objectives in respect of its well-being and of a strategy for attaining them.

One of the greatest obstacles facing indigenous peoples who are trying to attain a state of well-being and preserve their culture is extreme poverty. This is all the more true when there are opportunities for escaping poverty that involve bypassing the local economic system, when is barely sustaining the population and, hence, the reproduction of their culture. If the only prospect that an indigenous community can offer its young people is an unremitting struggle simply to survive, then the chances of that society and that culture actually surviving are much lower than what they will be if that community can offer ways of satisfying its members' basic needs that do not involve self-exploitation.

Escaping extreme poverty in today's world entails more than merely acquiring the necessary material resources; it also involves achieving sufficient levels of productivity to permit participation in increasingly integrated and competitive markets.

2. A simplistic vision of culture and economic development

Generally speaking, the relationship between culture and economic development is still very poorly understood. The problem starts with the mistaken idea, as mentioned earlier, that some cultures are superior in every way to most others. A simplistic and ethnocentric evaluation of the cultures of the rich nations led to the persistence of another simplistic proposition: that development meant the wholesale adoption of the basic elements of Northern European cultures or, later, the culture of the United States or Japan.

It is important to remember, however, that the United States and Japan –and, more recently, the so-called "Asian tigers"– have developed their *own* production, social and political models based on their own cultures and on the integration into those cultures of universally available scientific and technological knowledge along with a few specific

organizational elements observed and analysed in various other nations.

In the light of what has been said above about the characteristics of culture, it can be deduced from these examples that increased productivity based on the incorporation of universal knowledge is not only compatible with the maintenance of a people's own culture, but is actually essential in order for an increase in output to result in a higher real level of well-being for the population. The choice is thus between "inward-looking" modernization, which involves making changes in a people's own culture without causing a breakdown in the system, and "outward-looking" modernization, pursued in a futile and harmful attempt to identify with another culture and another people.

In order to compete internationally, a nation needs not only a high level of productivity and strongly motivated enterprises, but also a social system in which all groups and sectors are involved –and feel involved– in the development of the nation as a whole (ECLAC, 1992a and Toffler, 1991). In order to achieve systemic competitiveness, a nation needs to attain a sufficient level of equity for its population to ensure long-term socio-political stability and a high degree of motivation in the spheres of labour and civic affairs. Hence, avoiding a situation in which whole sectors of society are excluded from the benefits of development and from a democratic decision-making process regarding the development style to be used is a necessary condition for the type of economic change required in the Latin America of today (ECLAC, 1992a).

This analysis of the new requirements for competitiveness suggests three conclusions of relevance to indigenous peoples. First, these new requirements involve remedying the marginalization and exploitation of indigenous peoples within each national State. Second, these same systemic principles can be used as guidelines by a people or even a community; for communities, too, have to compete, economically and politically, with other social actors, although in their case it is within the same national territory and State. Third, indigenous peoples have certain comparative advantages: they possess their own, relatively intact culture; their individual members are beginning to exhibit a renewed identification with their destiny as a people; and they have a fairly equitable distribution of wealth.

Finally, indigenous peoples can become more competitive than before because their members no longer totally lack formal education: for example, according to a study in which ECLAC took part through the Latin American Demographic Centre (CELADE), only 1% of the Mapuche people between 10 and 29 years of age living on reservations in southern Chile have not finished at least one year of schooling. Moreover, for the first time, more young Mapuche women have received schooling than their male counterparts: only 0.8% of the young women, versus 1.5% of the young men, have had no formal schooling (CELADE/INE/Universidad de la Frontera/Instituto Indígena/PAESMI, 1990). This positive trend is also to be observed in Bolivia, Peru and many other countries of the region (CELADE, 1992). In many indigenous societies, women constitute a valuable but thus far underutilized resource. In addition to their newly acquired formal education, indigenous women's age-old ability to manage their households' resources and their inclination to be of service without personal ambitions ought to make a useful contribution to recent efforts to practise community self-management and pursue collective deliberations. Realizing this potential would involve making some changes in interpersonal relationships, the institutional structure of the household and some elements of indigenous culture. It is a question that merits in-depth analysis, especially by the male members of the indigenous population.

We should not, however, lose sight of the fact that the amount of universal knowledge taken in thus far by indigenous peoples is less than what has been acquired by other social sectors or actors with which they must compete. This gap, rather than reflecting some "necessary" threshold of knowledge for development, represents a disadvantage that needs to be progressively narrowed on an ongoing basis.

3. Knowledge for political competition and negotiation

The principles and weapons of modern competition do not apply only to the economy; competition is also an essential part of successful socio-political movements. Within the region (even in those cases where the dominant society persists in its attempts to assimilate the indigenous population), the imposition of the Spanish language, training of indigenous persons as professionales and the penetration of the mass media in indigenous communities are in large

measure having a boomerang effect: they are serving as resources and vehicles for a heightened awareness, are giving this population a renewed appreciation of its own culture and are leading to a "bolder and more global approach on the part of what are now called the Indian Nations in their statements and proposals" (Albó, 1991, pp. 330-331).

One of the non-economic competitive applications of knowledge is in litigation (regarding land, racial discrimination, etc.). Participation in lawsuits is, in a sense, a form of competition, since the party which has the best prepared case and the fullest understanding of how the judicial and legal systems work has improved its chance of winning. The use of learning experiences that incorporate numerous and varied elements of universal knowledge is also a valuable way of dealing with profit-seeking incursions into the community by outside agents, even though these incursions may be within the current laws, since either some type of agreement must be reached with these agents or else some legal way has to be found to thwart them.

Accomplishing this calls for mastery of a type of skill which, until recently, was not studied: the art of negotiation, whether to find a solution acceptable to both parties or to forge effective alliances with other social forces. Negotiating techniques have now been studied in various contexts in different parts of the world, and although each culture has its own way of negotiating, the abstract principles (when presented in a suitably didactic form) constitute a set of skills that can be learned. Since each indigenous community and group competes –and needs to coexist– with other social actors, these skills can play a valuable role in helping them, for example, to negotiate more successfully with a neighbouring community, to negotiate water rights with non-indigenous firms or social sectors, to negotiate shared rights to land, forests or subsoil mineral deposits, or to improve alliances and political platforms in cooperation with other indigenous or non-indigenous forces.

4. What is to be done?

The time has come to re-state our original question in the light of these various considerations. Rather than assuming a passive, defensive stance and asking "what will happen", however, we should ask what can be done to make use of the openings and alliances which the development style now emerging in the region offers the indigenous peoples and their cultures while, at the same time, they prepare themselves to face the sizeable risks that it entails. It is not, of course, a matter of writing up recipes for success but rather of reflecting upon some of the implications of the preceding analysis.

Such an analysis leads to the conclusion, first of all, that increasing a people's level of formal education is of fundamental importance. A comprehensive universal education, in this context, means that all young persons belonging to a given ethnic group should gain a solid grasp of their own language and history, traditional techniques for managing the local ecosystem, their natural medicine, their norms, values and religion, and the mode of operation of their social institutions and practices based on reciprocity. It involves going beyond the mere expression of appreciation of the indigenous culture and, instead, actually transmitting the culture itself. It might be better for the public educational system to leave this job to the local wise men and women rather than attempting to prepare a standard textbook aimed at providing a faithful interpretation of this complex and subtle mental construct, part of whose richness may lie in its local variations. An essential foundation for such an undertaking is a mastery of the native language, which contains the logical structure of a group's particular way of thinking, as well as countless idiomatic expressions that reflect and transmit the culture's *weltanschauung* and values.

A universal education, however, also means learning to read well and to analyse wisely what is said on television and radio about economics, politics and culture. It means that a large number of young members of the indigenous population must attend university so that they may assume important positions within the national society or serve their communities and movements by providing professional analyses and technical expertise. It means that these people must study their own history as professional historians so that, rather than repeating the single, definitive "truth" that they have been taught, they will be capable of developing increasingly novel hypotheses based on fresh data and acquiring an ever-deeper comprehension of their own ethnic group's history and culture. It means that the upcoming generation of indigenous peoples, as well as developing a deep-seated appreciation of their own identity and tradition, will also gain an understanding of the scientific, technological, economic and political

changes taking place in the world in which their people must live. And it means that the not-so-young will also continue to learn on an ongoing basis by using their reading skills and study habits to continue absorbing elements of universal knowledge. The important thing is that this process of appropriation must emanate from the culture itself, so that the culture will be a force in its own modernization and thus contribute to selecting which new elements are to be incorporated.

VII

Some final thoughts

The arguments set forth in this article are intentionally optimistic, with the aim of promoting debate on the subject. The final word is far from having been said; there are empirical data which indicate that the multi-faceted assault being mounted against indigenous cultures continues to weaken their institutions, practices and self-images in many specific cases. The optimistic viewpoint taken here therefore needs to be tempered somewhat in order to bring it more closely into line with the complex, contradictory and poorly-understood situation as it actually stands: a task which needs to be pursued on an urgent, sustained basis.

1. Culture: imperfect and abstract

As we have seen above, no culture is intrinsically better or worse than others, and each is "the best" only for its own members. The corollary of this principle is that no culture is perfect, and this truth must be borne in mind in order to prevent Indianism from becoming a form of ethnocentrism or of reverse racism. The idealization of the current or past manifestations of a culture is a serious mistake. The first reason why this is so is that all cultures conflict, to some extent, with the principles of human rights which hold that the highest value, in this new universal culture, is the well-being of all individual persons. Second, in a world that has always been in flux, and in which cultures are also always in a process of evolution, the achronistic overvaluation of a fleeting manifestation of a given culture is a negation of that force which is generated by its ongoing, changing re-creation. Third, the people who re-create their cultures in response to these changes are fallible, and sometimes their responses are ineffective; because of this possibility of error, feedback is needed in the form of information and thought, along with timely corrections, in a process of trial and error that is an important part of the means by which cultures survive.

In analysing cultural change, it is essential that we avoid anthropomorphizing culture, which, after all, is an abstraction, not a thinking being capable of independent action. It is incorrect to say that traditional culture is wise; it is living beings who know –or do not know– how to make use of their cultures. We therefore need to rectify the possible impression that it is the culture as such which reacts to changes in the environment. It is *people* who react to changes, although in so doing they do indeed use the values and knowledge of their culture when they take decisions or act. People can also make mistakes: they may fail to take necessary actions, or they may act in a way that weakens their own institutions, the practices that uphold their form of social organization, and the ways in which their culture is transmitted and reaffirmed.

2. Obstacles to the resurgence of indigenous culture

It is very important, then, not to overstate our case or to give the impression that the flourishing of indigenous culture and the material well-being of indigenous peoples are ensured. There are at least three types of obstacles that may stand in the way of this, and they are connected with the incorporation of elements from the universal culture, the consolidation of a context and ethos of modernity, and the cultural impacts of new sorts of economic relations.

a) *Incorporation of elements from the universal culture*

A culture's norms and values are based on certain beliefs about reality and about the forces at work

in the world, either for good or for evil from a human viewpoint. Obviously, many components of the universal body of knowledge may run counter to a given culture's vision of the cosmos, especially if that vision has little in common with the European view. There is a very real danger that, if new beliefs are implanted on a systematic, comprehensive basis, they may weaken the culture's value system and hence the social system of a people or nation that is absorbing a large quantity of new knowledge very rapidly.

The human psyche can accept the coexistence of two types of beliefs, however: one based on evidence and deduction, the other based on faith. It is perfectly feasible to reconcile a vast body of modern scientific knowledge with religious faith. Acceptance of faith healing, for example, is quite common among people who are completely integrated into Western culture and universal knowledge. It may therefore be supposed that the indigenous religions of the Americas, too, can coexist and prosper as universal knowledge becomes incorporated into their own cultural frameworks.

b) *Limited consolidation of modernity*

Socio-cultural modernity is still a long way from becoming firmly prevalent in the world. For example, tolerance among different ethnic groups and cultures as a basis for peaceful, democratic forms of competition is still not really widespread. This raises two problems, one of which is obvious while the other may be less so. The evident problem is that there are still large reactionary sectors of the population that seek to promote an order based on the repression of divergent opinions and the continuation of inequalities in terms of well-being and decision-making power. This hinders the implementation of strategies aimed at preserving each group's own culture and reducing poverty. In their contacts with the indigenous population, members of the dominant society transmit their cultural stereotypes, which, in "pre-modern" contexts, include the image of the indigenous culture as barbaric. The power of this dominant culture –by virtue of the universal knowledge that has been incorporated into it, rather than through any merit of its own– has caused many indigenous persons to feel that their identities are worthless and to conclude that the dominant culture's stereotypes and racial prejudices are as accurate as its practical knowledge is. But perhaps even greater harm is done by those actors in the dominant society who want to help indigenous peoples by "civilizing" them. The key to combating the extremely harmful effect which this has on indigenous people's psycho-social well-being and on the vigour of indigenous cultures lies largely in strengthening modern scientific and ethical values within non-indigenous society and promoting a greater awareness on the part of the less educated members of the dominant society about the value and dignity of indigenous cultures. At the same time, in order to combat the effects of the dominant society's racial prejudices, the indigenous movement can increase its ties with institutions that work to strengthen the indigenous population's sense of identity and self-esteem as a means of laying the groundwork for economic progress.

The other, less obvious, problem may be stated as follows: although a feeling of self-worth is essential to psychological well-being, if exaggerated it can lead to disparaging attitudes towards other cultures. Especially in the case of people whose own cultures have been discriminated against and denigrated by dominant groups, reactive ethnocentrism and reverse racism are very real dangers. The consequences of such racism are there for all to see in the daily news. Its current manifestations include the suffering caused by the fanaticism of the Shining Path guerrillas among the indigenous population of Peru, the barbaric intercultural war in the former Yugoslavia, attacks by neo-Nazi groups in Europe, and the fratricide perpetrated among different religious groups in India.

c) *The cultural impact of new types of economic relations*

Any innovation in a people's economic relations will undoubtedly have a cultural impact, because cultures are also expressed and reinforced through the economic relations of production and distribution. A changeover from annual to permanent crops, for example, will eliminate the *raison d'être* of many forms of reciprocal aid in agricultural tasks and take away the significance of rituals associated with the annual renewal of the crop cycle: planting, praying for rain, harvesting, threshing, etc. The establishment of a tourist centre may provide gainful employment, but may also involve servile positions or entail posing for snapshots, which may do serious harm to those so employed.

In the final analysis, we must ask just how fragile indigenous cultures are, or just how adaptable

they are. The argument has been put forward here that cultures are generally more flexible and adaptive than is commonly thought. The current indigenous cultures of the Americas, in particular, have remained vigorous despite their history; clearly, they are especially hard to kill off, partly because they have become "cultures of resistance".

Not all the original cultures of the Americas have been able to resist, however, nor can all those that exist today be described as vigorous, especially as far as the younger generation is concerned. Nor should we arrive at generalizations covering highly specific situations, each of which should be analysed within its own context by the relevant community so that this community can make the necessary decisions. What impact would a new production system have on the culture? Is that impact acceptable, or does its cultural cost outweigh the material benefits? How could the proposed new system be renegotiated in order to make it less harmful for the culture? The fact of the matter is that these questions are very difficult to answer even when all the background material is at hand. Especially in cases of absolute poverty, when people are barely eking out a living, many individuals are likely to take advantage of any opportunity whatsoever to raise their income level, without stopping to reflect or hesitating for a moment, because they are desperate to ease the constraints of a nearly intolerable situation.

Of course, the decision to adopt a potential economic innovation or not is a decision to be made by the community itself through its decision-making institutions. Information feedback and the rectification of decisions are guided by the culture, but they are obviously actions taken by fallible persons, whether as individuals, as a household or collectively as a social actor. Indigenous communities or movements should constantly be monitoring events in their environment and should gather, analyse and discuss the available information. There should also be periodic collective decision-making processes, and an ongoing dialogue should be held with the main actors, whether they are allies or adversaries (none of which should be categorized *a priori* as an unconditional enemy).

3. Mechanisms for decision-making and action

Decision-making and action at the local level call for institutional forums where issues can be debated; if such forums do not exist, they have to be invented, but without slavishly importing models used by other cultures or, on the other hand, imposing a model chosen by national indigenous leaders. For the most part, the specific configuration of such forums will take shape spontaneously within each local group in response to the need to create mechanisms that fulfil these purposes along with a number of common basic conditions.

The answer to the anguished question of "what should we do?" will come from the community and the local environment, but the national indigenous movement can create general conditions conducive to community activation and can provide assistance for specific local processes as a way of influencing that answer. One example is the formation of commissions to influence the national political debate; another is the selection, by majority choice, of a common stance to be maintained at the national level.

Indigenous communities or organized national movements, just like any other substantive decision-making entity, may find the services of outside consultants to be useful. A particularly valuable contribution may be made by a supportive form of social anthropology (Colombres, 1982), in which anthropologists and other professionals –ideally, themselves members of indigenous peoples– provide analyses and formulate considerations as inputs for the councils formed by indigenous peoples, so that these councils may arrive at the best possible decisions when dealing with economic and political changes, opportunities and hazards. The use of advisory assistance furnished by specialists is, in fact, a typically modern phenomenon in that it provides a way of making use of specialized universal knowledge whose internalization by individual leaders or at the grass-roots level would be inefficient or would take too long. Non-indigenous agencies that seek to support the indigenous cause, for their part, are in even greater need of analyses regarding the effects of their assistance on the culture and social institutions of the relevant indigenous population, so that they can avoid approaches that do more harm than good in terms of that population's quality of life, in the broad sense of the term.

In sum, it seems inevitable that indigenous cultures will change, just as they have always changed in order to respond more appropriately to new demands, whether those demands take the form of threats or opportunities. But it is not inevitable that they will disappear, at least not if they make use of

both their own knowledge and universal knowledge with a view to the development of their own culture, if they keep a close watch on changes in their surroundings, and if they take the necessary steps to deal with the changes –both negative and positive– that take place within that environment.

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Women: productivity *and labour in the* United States

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An attempt is made in this article to gauge the effect on productivity of women's move out of the home and into gainful employment in the United States during the period 1960-1980. It questions the validity of the frequently-made assertion that women's growing participation in the labour force has lowered productivity. The authors contend that, compared with a broader method of measuring economic production, the traditional gross domestic product underestimates the growth of productivity during periods when increasing numbers of women are joining the labour force. They demonstrate that the shift made by women from housework to gainful employment during the period in question constituted an efficient reallocation of labour hours. Quantitative estimates of changes in productivity occurring in an economy that includes both a household sector and a market sector show that women's shift out of the household sector has had significantly positive effects in terms of productivity, and although the increase in productivity resulting from women's shift out of the household sector did not completely offset the decrease in private sector productivity which occurred during that period, it nevertheless mitigated the decline considerably.

I

Introduction

Women's participation in the Latin American labour force has increased in recent decades. Between 1950 and 1980, the female labour force in the region trebled, expanding from 10 to 32 million. Despite this increase and the steep rise in women's participation during the 1980s, however, even now only one-third of working-age women enter the labour market in Latin America. Since this percentage is still quite low, it would therefore be premature to attempt to determine this phenomenon's impact on the productivity of labour in the countries of the region.

In the United States, however, the slowdown in the growth of labour productivity seen since the mid-1960s, and especially since 1973, has been attributed to the increase in the number of women working outside the home, as well as to such other factors as slower growth of the economy, demographic changes, more regulations and higher energy prices. Thus, the experience of the United States, together with the methodology developed in this study, may be useful in evaluating and predicting the effect on Latin American labour productivity of the sustained incorporation of a significant number of women into the labour force.

The purpose of this article is to analyse the impact of increasing female participation in the labour force on the evolution of productivity in the United States.[1] It will, first of all, demonstrate that the shift made by women from the household sector to gainful employment during the period in question constituted an efficient reallocation of labour hours even though it led to what appeared to be a drop in productivity due to the fact that the gross national product (GNP) does not include hours spent on housework or the household sector's output. A quantitative estimate will then be given of the changes in productivity occurring in a "broad" economy –i.e., an economy that includes both the household sector and the market sector– and it will be shown that the use of the conventional GNP instead of a broader measurement of economic output results in the underestimation of the growth of labour productivity in the United States.

II

Theoretical considerations

GNP is really only a partial measure of economic activity.[2] For example, since the factors of production used in the household sector receive no remuneration whatsoever and since its output is not marketed, this sector is entirely omitted from national accounts. If the significant shift of resources that has taken place between the household sector and the market had not occurred, changes in GNP would accurately reflect changes in the efficiency of resource use, since a change in real GNP per worker would then correspond to a change in productivity.

The absence, until the 1960s, of a significant flow of women between the household and market sectors served to justify the position taken by those who regarded the measurement of housework as nothing more than a methodological curiosity. Up to that time, the percentage of women working in the home had remained relatively constant; in other words, the participation rate of the household sector had held fairly steady.

Since the mid-1960s, however, the percentage of women working in the home has changed. For example, the female labour force in the United States expanded by 20 million between 1960 and 1980 (it

[1] This article analyses the period 1960-1980 because these were the years (particularly between 1970 and 1980) when the decrease was most marked. Thereafter, labour productivity began to rise, albeit slowly.

[2] In 1991, the Bureau of Economic Analysis of the United States Department of Commerce stopped using GNP as its basic yardstick for economic activity and instead started to use the gross domestic product (GDP), because the latter is a more appropriate short-term means of measurement.

grew by 12 million during the 1970s alone). Altogether, women's participation in the workforce climbed from 32% in 1947 to 39% in 1965 and to 51% in 1980. In 1947, only one out of every five women worked outside the home; around 1980, one out of every two women did so.

Although this phenomenon has had a variety of complex causes, there can be little doubt that many women began to participate in the labour force because they saw that opportunities in the wage-earning sector exceeded the value of the time they devoted to housework. The study of time allocation carried out by Gary Becker, 1992 Nobel Prize winner, suggests that women in the household sector will shift over to wage labour if the latter's opportunity cost exceeds the value of the housework produced for the family unit (Becker, 1965; Becker and Michel, 1973). Clearly, such a shift would lead to greater efficiency.

However, because the output of the household sector is not included in GNP, this increased efficiency is not reflected in a higher level of productivity. In contrast, the increase in women's participation in the paid workforce *is* included, so that a shift of labour from the household sector to gainful employment will necessarily result in an increase in output, but the level of output per hour will expand or shrink, depending on whether the new wage-earners produce more or less than workers who joined the labour force earlier.

In conventional national accounts, which exclude the household sector, total productivity is a weighted average of men's and women's productivity in paid jobs, with the weightings corresponding to the relative distribution of the two sexes in the labour force. Since in 1960-1980 women who entered the workforce earned less, on average, than men, the increase in the percentage of women entering the labour force caused productivity to seem to be lower than it would have been if the proportion of men and women in the workforce had not changed. Baily (1981), Denison (1974) and Perry (1971) use this approach to explain why the productivity slowdown can be attributed partly to the existence of a larger percentage of women in the labour force.

If the household sector is counted as part of the economy, however, it then becomes possible to measure the increase in efficiency generated by this shift out of the household sector. In this more broadly defined economy, women's changeover from unremunerated to remunerated labour does not constitute a change in the distribution of the labour force by sex (as would occur if a large number of women immigrated from another country) but instead a change in the sectoral distribution of output. If the output per hour is lower in the household sector than in the wage-earning economy, then the shift away from the home and towards gainful employment will raise total productivity. If we use a model that includes two sectors of this sort, the level of productivity will be determined by the weighted average productivity of the household sector and that of the rest of the economy, with the weightings being based on the percentage of hours worked in each of these sectors. As workers move out of the less productive sector, productivity will rise.

In order to illustrate this point, let us consider an economy in which there are two wage-earners whose average output is equal to three units (see table 1). Let us further suppose that a housewife's marginal product is two units in her paid job and one unit in the home. According to a conventional analysis of GNP, if the housewife changes over to paid work, total output will increase by two units while average output will fall from 3.0 to eight-thirds (8/3), as shown below. However, if household output were included in GNP, then total output would still rise (although by only one unit), but average output would also increase (from seven-thirds (7/3) to eight-thirds (8/3)). Thus, we see that the traditional approach overestimates the net increase in production resulting from the movement of resources out of the household sector and underestimates the effect of this resource shift on productivity.

The shift by women out of the household sector and into gainful employment is analogous to the movement of workers out of the agricultural sector in the United States during the 1950s and early 1960s. Like agriculture, housework is a traditional mode of production. As job opportunities in the modern sector of the economy increase, workers forsake the traditional sector for more productive and economically profitable employment in the modern sector. Like housewives, many of the workers who left the farms were not earning wages. Both the agricultural and the household sectors have been transformed by the combination of productivity differentials (improvements in productivity made possible by technological progress and a fairly constant level of demand for traditional-sector output) and a weakening of barriers to inter-sectoral mobility.

TABLE 1
Effect on GNP of women's shift from the household sector to wage labour
(Units)

	GNP	GNP plus household output
Total initial output	6	7
Total output after the shift	8	8
Average initial output	3	$\frac{7}{3}$
Average output after the shift	$\frac{8}{3}$	$\frac{8}{3}$

Studies conducted by Kutscher, Mark and Norsworthy (1977), McCarthy (1978), Nordhaus (1972) and Norsworthy and Fulco (1974) show how the shift away from agriculture was an important source of productivity growth in the post-war period. The transfer of workers from low-productivity tasks on the farms to more productive work in other sectors contributed nearly four-tenths of a percentage point to the annual rate of increase in productivity in the private sector of the economy between 1948 and 1965.

The effects on aggregate productivity of women's departure from purely domestic work should be the same as the movement of workers out of the farming sector. However, since agricultural output is included in GNP while the output of housework is not, conventional studies only pick up the positive effects of the move out of agriculture. Women who change over from housework to gainful employment are treated as if they were low-productivity immigrants rather than previously-employed labour. Since the shift away from the household sector has been on a much larger scale than the flow out of the agricultural sector, however –during the period in question only 3.3 million workers left the farms, whereas 20 million housewives transferred into the market sector– the latter's potential contribution to productivity is much greater.

III

Methodological considerations relating to the estimation of the household sector's output

In order to estimate the growth rate of productivity accurately, a broad measurement of GNP that includes the household sector must be used. Using such a measurement, the hours worked by women for pay can then be compared with the hours they used to work in the home.

It is only fair to point out that no universally accepted methodology has been found for setting a value on household production, and existing estimates therefore vary widely. There are two basic problems. One is to develop a definition of household production that will distinguish it from recreational activities. Some authors feel that the latter are economic activities, since the time spent on them does have an opportunity cost; others limit household activities to those not involving consumption. The inclusion or exclusion of recreational activities is the main reason for the discrepancies between different estimates of household activity. In the final analysis, the decision whether or not to include these activities will be determined by the specific purposes of the research being conducted. Thus, such activities should be included in studies having to do with well-being, but they would not be relevant to estimates of household labour that focus on productivity.

The other methodological problem lies in placing a value on household output, since it does not carry a price. Trying to measure it on the basis of the goods produced in the home is very complicated, because this involves assigning values to a wide variety of items. Researchers usually prefer to look at factor costs and thus measure the value of household production based on the inputs used. The most difficult aspect of this approach is the assignment of a value to household labour, since household capital goods can be purchased in the market.

Because housewives are not paid wages and many of them have not participated in the labour market in the recent past, ambiguities arise when an attempt is made to assign a value to their labour. One of the two existing methods for estimating factor costs is based on *market prices* and sets the cost of labour by referring to the cost of acquiring equivalent household services –babysitters, cleaning women, drivers, cooks, etc.– in the market. There are two types of market prices: replacement value, i.e., the cost of hiring someone to do all the work a housewife performs; and the service value, i.e., the cost of obtaining substitutes for each household function.

The other method of estimating factor costs is based on *opportunity cost* and assigns a value to the labour employed in household production by referring to the wage that is forgone in the market. This method assumes that the household is a rational unit which allocates its time in a manner equal to the marginal utility of all uses. Time is thus seen as a basic constraint for the family unit. On balance, the net return on an hour of marginal labour will represent the marginal value of that time.

In this approach, however, housewives' lack of remuneration and of work experience poses a problem. One way of dealing with it is to assume that the value of household labour is equal to the wage that could be earned in the market and, on that basis, to determine an appropriate wage for each housewife. The assumption of rationality implies that the housewife will work in the home without pay so long as the value of this labour for the family unit equals or exceeds her potential market wage. If the value of the work performed in the home is less than the potential market wage, then housewives will turn to paid occupations, whose marginal product is greater.

This line of reasoning, however, overlooks the relationship between factor (and more specifically, labour) mobility and the assignment of value to household labour. In fact, it assumes that there is perfect mobility of household-sector labour. All other things being equal, in the absence of barriers to labour mobility the marginal productivity of household labour will be equal to the housewife's potential market wage. Although a housewife earns no pay for the services she provides, the value of the labour involved in performing housework is equal to her potential wage, since otherwise the housewife would switch over to a sector with higher marginal productivity. The housewife's decision to refrain from engaging in gainful employment would seem to indicate that she places a marginal value on the time she spends in the home that is at least equal to the wage she forgoes.

If there are barriers to mobility, however, then it is not valid to assume that the wage will be equal to the marginal product of labour. The housewife's decision to remain outside the market will not necessarily mean that she places a marginal value on her time in the home that is at least equal to the wage she forgoes, and it would be reasonable to assume that she may stay in the home even if the value of household labour is lower than this wage. For example, she may remain in the home owing to family or social constraints or because her form of socialization says she should not work outside the home. Under these circumstances the forgone wage may well be greater than the marginal product of her labour. Hence, if the opportunity-cost approach is used, the forgone wage would be an overestimation of the value of household labour.

Thus, unless the presence and magnitude of barriers to mobility are taken into account, opportunity costs will skew estimates of labour and of the value of household production. At the same time, the existence of barriers to mobility will increase the potential contribution to productivity of the shift from one sector to another. In the absence of perfect mobility, it may be assumed that the value of household labour will move closer and closer to the potential wage as barriers to mobility diminish. In other words, in the presence of such barriers, the potential wage will overestimate the value of household labour, and the extent to which it does so will depend on the magnitude of the barriers. If these barriers decrease over time, then the magnitude of the overestimation and the bias distorting the value of household labour will diminish as well. In turn, since the bias introduced in this valuation of labour diminishes as barriers to mobility weaken, the growth rate of household production, as measured across time, will be underestimated.

In point of fact, events seem to indicate that barriers to mobility are indeed diminishing as the years go by. According to a number of studies on prevailing attitudes about female and male roles in the United States, opinions about men's and women's roles in society have changed considerably, especially since 1960. In 1964, for example, only about 50% of the women surveyed believed that a woman who worked outside the home could have a close

relationship with her children. Just six years later, however, the figure had risen to 75%. Even more significantly, more women felt that working outside the home did not interfere with other activities (Smith (ed.), 1979).[3]

For the purposes of this article, the opportunity-cost approach has been used to determine the value of housework.[4] However, since basing the calculations on the wages paid in the marketplace overestimates the value of the household sector's output and skews estimates of productivity growth in situations where labour cannot move freely from one sector to another, this wage will be adjusted.

Once a value has been assigned to labour as a factor of production, the household sector's output can be estimated with the help of a production function. A broad measurement of the economy which includes the household sector can then be obtained. The methodology used to calculate household output is outlined in the annex.

IV

The productivity model

The effect on productivity of the shift of housewives into work outside the home can be measured with the help of the sectoral breakdown of productivity growth devised by Norsworthy and Fulco (1974) to study the effect on productivity of workers' departure from agriculture. Their methodology breaks down the change in output per worker/hour into three separate effects.

The "productivity effect" is the portion of total productivity growth generated by the growth of each sector. The "shift effect" is the portion that derives from the shifting of workers between sectors having different levels of productivity or, in other words, from changes in sector weightings. Finally, there is the "interaction effect", which is usually quite small.

Since the focal point of this article is women's shift out of the home, what is of interest to us here is the magnitude of the "shift effect", i.e., the contribution made by women's shift out of the home to productivity growth in a broadly-defined economy which includes household production.

In an economy composed of a household sector and a non-household sector, changes in the economy's average productivity will stem from changes in the weightings of the household and non-household sectors and from changes in productivity within each sector.

In other words, if $P(t)$ is the average productivity of the economy in year t, then:

$$P(t) = P(t)^{nh} W(t)^{nh} + P(t)^{h} W(t)^{h}$$

where:

$P(t)^{nh}$ = output per worker/hour in the private sector in year t;

$P(t)^{h}$ = output per worker/hour in the household sector in year t;

$W(t)^{nh}$ = percentage of total hours worked in the private sector in year t; and

$W(t)^{h}$ = percentage of total hours worked in the household sector in year t.

A change in productivity can be broken down into three effects:

$$\Delta P(t) = \Delta P(t)^{nh} \cdot W(t\text{-}1)^{nh} + \Delta P(t)^{h} \cdot W(t\text{-}1)^{h} \text{ (productivity effect)}$$

$$+ \Delta W(t)^{nh} \cdot P(t\text{-}1)^{nh} + \Delta W(t)^{h} \cdot P(t\text{-}1)^{h} \text{ (shift effect)}$$

$$+ \Delta W(t)^{nh} \cdot P(t)^{nh} + \Delta W(t)^{h} \cdot P(t)^{h} \text{ (interaction effect)}$$

where:

$t\text{-}1$ is the value of a variable in the preceding period;

Δ is an operator of first differences, $X = X(t) - X(t\text{-}1)$.

[3] For a description of how barriers to mobility have grown weaker during this period, see Oppenheim, Czajka and Arber (1976).

[4] This model has been used because its bias is simpler to correct than that due to the market-price method. At all events, given the duality of production and distribution, and assuming that household units base their decisions regarding participation in the labour force on an optimization pattern of the type described by Becker, these two different approaches ought to be essentially consistent. Actually, the largest discrepancies found in the literature regarding the value of domestic production arise out of the use of different assumptions in respect of the inclusion or exclusion of recreational activities, which are not relevant to the present study.

Table 2 shows productivity growth rates and their breakdowns. The first row corresponds to the conventional measurement of private-sector productivity growth taken by the Bureau of Labor Statistics of the United States Department of Labor for the periods preceding and following 1973, when the slowdown occurred. These figures indicate the presence of a productivity slowdown from 1960 on, with a decrease in the average growth rate from nearly 3% in 1960-1972 to slightly over 0.7% in 1973-1980.

TABLE 2

United States: Overall productivity growth and the contributions made by the "productivity effect", the "shift effect" and the "interaction effect"
(Average annual rates)

	1960-1980	1960-1972	1973-1980
Productivity growth, excluding household sector (conventional GNP)	2.036	2.917	0.716
Productivity growth, including household sector	2.246	2.865	1.319
Productivity effect	2.059	2.774	0.986
Shift effect	0.186	0.089	0.330
Interaction effect	0.002	0.002	0.002

The second row gives the growth rates of productivity when the household sector is counted as part of the economy. These rates also indicate the presence of a slowdown, but the decline is less pronounced. For example, in the period 1973-1980, average productivity growth was equivalent to 46% of what it had been during the preceding period if the household sector is included but was equal to only 24% if that sector is not included. Considered from another angle, the productivity slowdown in the private sector amounted to 2.2% according to the conventional measurements but only 1.5% when the household sector is taken into account.

The third and fourth rows give the breakdown for productivity growth. The "productivity effect" may be interpreted as the growth of total productivity that would have occurred if there had been no movement of women from the household sector to the market. The reader will note that this hypothetical productivity growth rate is slightly lower than the rate obtained using the conventional measurement for the period 1960-1972, indicating that the private sector's productivity growth rate decreased at a slower rate than the domestic sector's.

Contrary to the conventional belief that women's entry into the formal labour force has lowered productivity, the "shift effect" is both positive and strong. During the period 1960-1980, the shift effect's contribution to the growth rate of productivity was around one-fifth of a percentage point per year. Even more significantly, it began to increase as from 1972. Moreover, the annual data show that as the percentage of hours devoted to household production decreased, the shift effect's contribution to productivity increased. At the same time, the growth rate for private-sector productivity fell sharply. Thus, we see that when we use a broad measurement of productivity, the slowdown in its growth is reduced by nearly one half.

V

Conclusion

If women's changeover from unpaid household labour to gainful employment is interpreted as a shift in the sectoral composition of the product rather than as a change in the composition of the workforce, then women's growing participation in the labour force can be said to have increased the efficiency of the economy. The magnitude of this effect has grown since 1972 as the relative size of the household sector has diminished.

It has been demonstrated here that a productivity model which excludes the household economy does not pick up the real effect on output per hour of the shift from the household sector to the market. When the household sector is included, although a decrease in the productivity growth rate is still seen between 1960-1972 and 1973-1980, the annual decline averages only 1.5%, as compared to 2.2% when the conventional GNP is used.

ANNEX

Methodology used to calculate household production [5]

In measuring total production, only the household and non-household sectors need be considered –the non-household sector corresponds to the private sector of the economy, for which conventional estimates are available– since most studies on productivity omit the government sector. The production and hours worked in a broadly-defined economy that includes the household sector are simply the sum of the production and hours worked in the non-household and household sectors.

In order to estimate household production, a Cobb-Douglas production function was used in which:

$$Q = (wL)^{\alpha} \cdot (rK)^{1-\alpha}$$

where:

Q = household production
w = wage
L = hours worked
r = the price of capital
K = the stock of capital
α = the share of labour in the economy
$1-\alpha$ = the share of capital in the economy.

The number of hours worked in the household sector were calculated annually for the period 1960-1980. Since this article focuses on changes in the output per hour by housewives who made the switch to gainful employment, the analysis is confined to activities involving a 40-hour work week, which is the standard work week in a market economy and constitutes the "economic activity" used in the conventional GNP and in productivity statistics. This approach deliberately underestimates the *level* of household production, but it enables us to examine changes in *output per hour* resulting from increased participation by housewives in gainful employment.[6]

It is assumed that full-time housewives (adult women who do not participate in the labour force) and "unemployed" adult women work 40 hours per week in the household sector. It is further assumed that adult women who work part-time in the market devote 20 hours per week to housework. Adolescents, men and single (never-married) women were excluded from the analysis because they did not constitute a significant factor in terms of the shift in question.[7] Thus, the total number of hours worked in the household sector in one year is equal to 2 000 hours multiplied by the number of full-time housewives (in accordance with the above definition) plus 1000 hours multiplied by the number of part-time housewives.

Using the opportunity-cost approach, it would have been a very laborious task to attempt to estimate the potential market wage of each housewife. Instead, the housewife population was divided into 12 categories according to the main determinants of women's participation in the workforce: race, marital status and presence and age of children. The number of hours worked in the household sector was then calculated for each of these categories.

The ages and educational levels of women wage-earners were analysed, since these features largely determine their wage levels, and 30 different age/education combinations were defined. The average hourly wages for each of these 30 combinations were obtained from the *Current Population Survey* prepared by the United States Department of Commerce.

The percentage distribution of each of these 30 age/education combinations was then calculated for the 12 categories based on race, marital status and presence and age of children; this permitted the demographic characteristics to be collated with the wage determinants so that the opportunity cost could then be computed. This operation yielded a set of wage levels and weightings that could be used to

[5] See Bustillo (1985) for a complete description of the methodology and data used.

[6] One justification for standardizing the work week at 40 hours is that official employment statistics are based on the assumption that agricultural labourers who work their own farms do so for 40 hours per week (unless they indicate that they work less than full time). This same is true of wage-earners who work more than 40 hours.

[7] Consideration was given to the possibility of including single (never-married) women with children in the category of housewives, but the data on this group are either unreliable or non-existent. Apparently, many of these women also report their marital status as that of separated or divorced; in any event, the number of women in this category was fairly small during the period under study.

estimate potential wages. These wages were then multiplied by the number of hours worked in the home for each of the 12 categories. The resulting series of weighted wages represent a measurement of the value of the labour employed in the household sector.

In dealing with barriers to mobility, the researchers experimented with a series of assumptions which yielded four different estimates of the value of labour. The ratio of female to male participants in the labour force was used as a substitute for barriers to mobility, with annual adjustments of the wage level assigned to each category being made using an adjustment factor calculated on the basis of this ratio. This had the effect of reducing the value of the labour employed in the home in all the years covered by the study, but the reduction was proportionally greater in the earlier years. As women's participation in the labour force increased during the 1960s, the adjustment factor decreased to almost nothing. (It was assumed that the female labour-market participation rate would never equal the male participation rate even under an assumption of perfect mobility). Hence, the adjustment for barriers to mobility underestimates the shift in the value of the labour factor as compared to unadjusted series. In all cases the real minimum wage was used as a floor for assigned wage levels.

A sensitivity analysis of the four different series obtained using the different assumptions concerning barriers to mobility demonstrated the soundness of the results, regardless of which measurement was used. This was because the average remuneration of women wage-earners was not much higher than the minimum wage, which was used as the floor level in all cases. Only one of these results is presented here.

The flow of household capital services is a combination of the cost of the capital stock and the imputed depreciation value. The stock of household capital was assumed to be composed of the net stock of household appliances and equipment plus a portion of the net stock of motor vehicles. Annual data on this stock and estimates of depreciation were obtained from the United States Department of Commerce.

To calculate the coefficients of the Cobb-Douglas production function, the corresponding shares of labour and capital in the income of the economy were used. The share of labour amounted to 0.73, while that of capital was 0.27.

Finally, data on annual production and hours worked in the private sector between 1960 and 1980 were obtained from the Bureau of Labor Statistics of the United States Department of Labor.

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Capital flows *and their effect* on the monetary base

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The large capital inflows into some Latin American countries since 1990 are a mixed blessing, for they widen the trade-off between disinflation at home and competitiveness abroad. A large part of the flows seems to be temporary rather than permanent. Permanent flows should be accommodated by an upward float of the currency, temporary flows by sterilized intervention on the foreign exchange market. Recent evidence suggests that sterilized intervention is more effective and carries lower fiscal costs than is often maintained. Asian policy practice suggests ways of sterilized intervention even with underdeveloped securities markets.

I

The policy setting

Much of Latin America has enjoyed a substantial revival of foreign capital inflows since 1990. While the region received about US$8 billion per annum on average in the late 1980s, capital inflows rose to US$24 billion in 1990, US$40 billion in 1991, and US$57 billion in 1992. To be sure, after a decade of foreign capital shortage it is nice to be rediscovered as a viable investment location for funds available on world financial markets, especially when foreign investors are prepared to pay higher prices for a country's domestic assets, and it is even nicer if the underlying capital inflows can be sustained.

An optimistic interpretation of the origins and permanence of the current investment flows to Latin America would exclude any major role for policy intervention. Such an interpretation would hold the revival of flows as home-made: balanced budgets, lower inflation, privatization and deregulation, trade liberalization and the restructuring of the external debt would all be seen as having contributed to the re-entry of Latin America into the list of viable investment locations, and little reason would be seen to expect an early reversal of the capital flows which Latin America is now enjoying.

Yet the present episode of substantial capital inflows is not the first this century. The most recent such inflow before the early 1990s occurred during the period from 1978 to 1982 and led to the Latin American debt crisis (Calvo, Leiderman and Reinhart, 1993, pp. 108-151). Another important episode of capital flows was noted in the 1920s. Both periods were dominated by inflows from the United States, and in both periods the capital inflows were eventually reversed, leading to major crises. Such a reversal cannot be excluded this time, either, since many of the current inflows seem to be chasing the high interest differentials which exist between the United States and Latin America. Temporary flows may give rise to policy intervention, as their sudden reversal can trigger a domestic financial crisis and such "hot money" may cause undesired appreciation of the real exchange rate and misallocation of resources.

II

The 1990s inflows: "cool" or "hot" money?

A reversal of fortune (and flows) is less likely this time than it was in the past, according to many observers. Some hold that the flows are not hot money at all, but only lukewarm to cool –money that comes to stay, such as foreign direct investment (FDI)– and that the proportion of cool money will go on rising. Nunnenkamp (1993), for example, argues that the structure of capital flows to Latin America closely resembles those to East Asia, and that the reversibility of capital inflows is linked primarily to country-specific policy performance. According to this view, capital flows are unlikely to be reversed as long as economic reform is maintained. In fact, however, the precarious database on capital flows makes it difficult to judge the real "temperature" of the money Latin America is now receiving.

For industrialized countries, Turner (1991) recently examined the volatility of different capital-account items in order to arrive at a distinction between permanent versus temporary and autonomous versus accommodating flows. For the period 1975-1989, the capital flows that were most closely correlated with financing requirements were classified as the most accommodating, and the most accommodating types of capital flows closely corresponded to

□ Part of this article was originally published in Reisen (1993), pp. 21-23.

the most temporary flows, proxied by their standardized variability (coefficient of variation) over the period 1975-1988. Finally, Turner made a ranking of four capital-account items, ranging from the most autonomous and permanent to the most accommodating and temporary (i.e., volatile) flows: i) long-term bank lending; ii) foreign direct investment; iii) portfolio investment, and iv) short-term bank flows.

There should be no cause for concern or for policy intervention when net inflows mainly consist of long-term bank lending and foreign direct investment. Ever since the debt crisis, however, long-term bank lending has been only an unimportant source of foreign finance for Latin America. Foreign direct investment, for its part –the second component of "cool" capital inflows– has actually declined as a proportion of net capital inflows, going down from 40% in 1990 to 30% in 1991 and 27% in 1992 (Jaspersen and Ginarte, 1993).

Private portfolio investment flows are on the rise, and tending to become the most important source of foreign finance in advanced developing countries. According to *AMEX Bank Review* estimates, between 1989 and June 1992 Latin America received the bulk of private portfolio flows (US$31.6 billion), while Asia received only US$13.3 billion over the same period. Latin American countries are more open (with the exception of Chile) than the Asian markets and therefore predominate as recipients of portfolio flows, accounting for over half of the investable index of the International Finance Corporation (IFC), compared with only a third of the global IFC index.

The breakdown of portfolio flows reported by the OECD does not permit any judgement on their reversibility (table 1). For this, more data (consistent across sources) would be needed, especially data about the sources of investment (Gooptu, 1993). Institutional investors (such as pension funds and life insurance companies) may be taken as a more risk-averse group interested in making long-term, high-yield investments. Euro-bond houses, for their part, will be driven by portfolio diversification motives: exploiting higher mean returns and the low correlation of returns between emerging and established financial markets. While this group of investors is likely to become more important for Latin America in the future, they did not seem to provide the bulk of portfolio investment in the early 1990s. Most of the portfolio investment has come from more speculative sources in the expectation of short-term returns: notably from domestic residents with overseas holdings, private foreign investors, and managed funds (country funds and mutual funds).

TABLE 1

OECD: Portfolio investment flows to Latin America

(Billions of dollars)

	1990	1991	1992
New bond issues	1.0	4.6	8.2
Equities	-	4.4	4.5
Borrowing facilities [a]	-	4.7	6.4
	1.0	**13.7**	**19.1**

Source: Organisation for Economic Co-operation and Development (OECD), 1993.

[a] Includes note issuance facilities, multiple-component facilities, and other facilities underwritten by banks (for Mexico only), as well as Euro-commercial paper programmes and other non-underwritten syndicated borrowing.

There are several reasons for considering the current rate of capital inflows as temporary rather than permanent. First, a large part of the inflows has been in response to privatization processes, which in countries such as Chile and Mexico are now by and large completed (Oks and van Wijnbergen, 1993). Second, part of the increased capital inflows consisted of the return of previous flight capital, which can only be repatriated once. Third, the sharp drop in United States interest rates has been an important stimulus to relocate assets from that country to Latin America (Calvo, Leiderman and Reinhart, 1993, pp. 108-151). This drop reduced external debt service on floating-rate debt, thus improving the solvency of Latin American debtors, and it provided increased incentives not only for the repatriation of funds held in the United States but also for increased borrowing on United States capital markets by Latin America. The corollary, of course, is that a future cyclical swing in the United States back to higher activity levels and returns on assets will be associated with decreased or reversed capital flows to Latin America. Fourth, some countries –notably Mexico, Argentina and Peru– are heavily dependent on short-term capital inflows vulnerable to quick reversal in the event of a change in investor sentiment. It should be noted that the structure and maturity of capital inflows depend on the exchange rate regime (Schweickert, 1993). As long as a peg to, say, the US dollar is credible it allows investors to exploit nominal domestic-foreign differentials in short-term interest rates: the peg is apt to raise the "hot money" share in capital inflows. The recent surge in capital flows to

Latin America can thus be interpreted as the result of both cyclical and portfolio stock-adjustment phenomena, which are unlikely to be sustained. Last but not least, the sustainability of capital flows to Latin America will greatly depend on future export performance. Since the Latin American debt crisis, exports have become an important indicator of creditworthiness, and ratios of debt stocks and debt service to exports are now routinely used in quantifying country risk.

III

The case for sterilized intervention

The rediscovery of Latin America for global asset portfolios amounts, after years of credit constraint, to the effective financial opening of the region. The resulting capital inflows cause the domestic currency to appreciate in real terms, however, unless there is sterilized intervention on the foreign exchange market. The nominal exchange rate appreciates when it is flexible, while domestic price levels rise when the nominal rate is pegged. With either fully floating or pegged exchange rates, the real appreciation of the exchange rate reflects the failure of the monetary authorities to supply the mix of assets which domestic and foreign investors are now demanding. In the case of floating rates, the authorities do nothing, while when rates are pegged they issue money in exchange for foreign assets. Instead of this, they should issue bonds, thereby engaging in sterilized intervention (Kenen, 1993, pp. 237-262). To the extent that reform and stabilization cause investors to increase their demand for both domestic money and domestic bonds, the optimal response will be a higher money supply and fractional sterilization (Frankel, 1993). Many economists tend to dismiss sterilized intervention, however, for various reasons.

First, while there is agreement among economists that non-sterilized intervention (like any other monetary policy) can affect nominal exchange rates, the effectiveness of sterilized intervention is much more controversial. Changing the composition of Central Bank assets without changing their aggregate size, it is often argued, cannot be an effective policy for influencing the relative price of two currencies.

Such agnosticism ignores two channels through which sterilized intervention can influence exchange rates:

i) The information channel: Kenen (1987, pp. 194-199) suggests that intervention signals may effectively "change the market's confidence in its own projections ... when expectations are heterogeneous and especially when a bubble appears to be building" (p. 198). Here, it is assumed that the monetary authority has more information about relevant fundamentals and is able to convey that information. However, if the information revealed involves their own future policy intentions, then sterilized intervention should not be considered an independent tool for Central Banks.

ii) The portfolio-balance channel: in the case of capital inflows, the corresponding rise in the Central Bank's net foreign assets will be sterilized by the rising supply of domestic-currency bonds. If domestic and foreign bonds are imperfect substitutes (due to currency or sovereign risk), investors will require a higher expected return on domestic bonds in order to be willing to hold their larger outstanding stock, and the currency will tend to depreciate. Casual observation (Cumby and Obstfeld, 1983, pp. 245-269 on Mexico; Edwards and Khan, 1985, pp. 377-403 on Colombia) suggests that the portfolio-balance channel can be exploited by Latin America's monetary authorities: uncovered interest parity is not observed, and there is a stable relationship between domestic government debt and the domestic-foreign interest differential.

For OECD countries, recent empirical evidence shows that sterilized intervention operations do indeed affect exchange rates. While the Jurgensen report (1983) found only small and transitory effects for the period 1973-1981, studies of intervention policies in the 1980s suggest that more recent operations have been more effective (Domínguez and Frankel, 1990). A recent study, using daily data on official intervention operations of 16 Central Banks participating in the procedure, shows that coordinated interventions since the Plaza Agreement[1]

[1] Signed in New York by the Group of Seven countries in 1985.

proved in practice to be both effective and repeatedly strong enough to reverse the market direction of exchange rates (Catte, Galli and Rebecchini, 1992, pp. 17-21). This improved empirical support for the efficacy of sterilized intervention may be explained by the fact that the United States, Japanese and German authorities avoided intervening at cross-purposes in the 1980s, in contrast with the previous decade. Efficacy also requires a certain degree of exchange rate flexibility in order to create sufficient investor awareness that the exchange rate really is variable (Frankel, 1993).

A second objection to sterilized intervention, raised especially in the Latin American context (Calvo, Leiderman and Reinhart, 1993, pp. 108-151), stems from the alleged fiscal costs and is based on two arguments. First, in order to dampen the appreciation, the Central Bank typically has to swap low-yield foreign exchange for high-yield domestic bonds, and the accumulated interest differential can become a substantial fiscal (or quasi-fiscal) burden. Second, sterilized intervention deprives the government of the benefit of a reduced debt service burden by preventing the decline in the domestic interest rate that normally accompanies a capital inflow.

Both these arguments are unlikely to hold good in present value terms if the capital inflow and exchange rate appreciation are correctly assessed as temporary, however.

With risk premiums on domestic rates sufficiently small, the short-term fiscal losses derived from swapping low-yield foreign exchange for high-yield domestic bonds should be partly offset by a subsequent capital gain derived from the appreciation of foreign exchange reserves. The Central Bank, like Friedman's (1953, pp. 157-203) "stabilizing speculator", should make money by buying dollars when they are cheap (in peso terms) and selling them when they are dear. Moreover, the evidence for developing countries has shown that the domestic-foreign return differentials are not sufficient to offset depreciation losses (Frankel, 1989). This would imply that the authorities derive a net fiscal gain from engaging in sterilized intervention of temporary capital inflows. It should be noted, however, that sterilized intervention may raise interest rates when the disturbance is not external (as assumed here) but is due to higher domestic money demand or an improvement in the trade balance, which require monetary or fiscal expansion (Frankel, 1993).

While it is true that sterilized intervention prevents the decline in real interest rates that normally accompanies a capital inflow, it does not follow that alternative exchange rate regimes would compare favourably in the longer run. Sterilized intervention aims at dampening real exchange rate overshooting. This implies less real appreciation of the exchange rate first, and less real depreciation back to the equilibrium rate later. Interest parity requires a corresponding move in real interest rates, whereas with sterilized intervention the lower real appreciation entails a comparatively higher level of real interest rates which is then offset by a comparatively lower interest rate level when the currency depreciates. But what really matters for public debt dynamics in the long run is the real GDP growth relative to real interest rates (Reisen, 1989). The Asian example suggests that sterilized intervention can succeed in keeping monetary aggregates on target, hence keeping inflationary expectations down, that it simultaneously dampens real exchange rate variability, hence keeping foreign exchange risk in check, and that low inflation and reliable exchange rates are good for long-run growth.

Third, developing countries may experience practical problems with sterilized intervention due to underdeveloped domestic securities markets (Fischer and Reisen, 1992). Lack of government debt paper (which is often the case in Asian countries) forces Central Banks to issue obligations of their own, thereby swelling their liabilities relative to the monetary base. By putting pressure on the refinancing schedule of Central Bank liabilities, sterilized intervention can endanger future control of the monetary base. Such pressure can be attenuated to some extent by carrying intervention in the foreign exchange market from the spot to the forward market, however. Finally, with shallow domestic securities markets, sterilized intervention in developing countries can exert a contractionary supply effect which is felt much quicker than in the typical OECD country: the sectoral distribution of the domestic credit squeeze is sharper; working capital costs for non-preferred borrowers in the informal credit markets rise faster; and the sale of government bonds tends to crowd out the shallow corporate bond market. But these are second-order objections to a first-best policy response. Some Asian examples will demonstrate that there are always ways to solve these practical problems.

IV

Generalized forms of sterilized intervention: some Asian examples

Asian sterilization practice holds lessons for open economies with underdeveloped securities markets. In fact, the monetary authorities in Singapore, Malaysia, Indonesia and Taiwan have dealt with massive capital flows without losing price stability and external competitiveness. Moreover, they have not been helped by capital controls in their efforts to simultaneously target money supply and exchange rates. But they do not shy away from (sometimes mandated) transactions designed to manipulate the flow of liquidity into the banking system in response to external capital flows. They often swap government excess savings (originating, say, in social security funds or public enterprises) held with banks into (and also out of) government bonds. This practice can be considered as a generalized form of sterilized intervention. It should be noted that this approach relies on the existence of public-sector savings and hence on "fiscal complicity". Moreover, Frankel (1993) suggests that Asia retained the ability to sterilize with open capital markets because domestic financial liberalization has been delayed.

Singapore and its neighbours Malaysia and Indonesia have been largely (though not continuously) successful in reconciling exchange rate stability at competitive levels and a fair amount of monetary independence with an open capital account. In Singapore, any remaining capital controls had been abolished by June 1978 because of its aspiration to strengthen its role as an international financial centre. Moreover, Singapore's financial centre has traditionally been to Indonesia and Malaysia what the informal kerbside market is to so many developing countries. Hence, capital controls could not have been effective. The Indonesian and Malaysian authorities simply had to cope with open capital accounts. All three countries have nevertheless managed to shelter their monetary base from increases in foreign exchange reserves and to slow down incipient appreciation of their currencies.

Singapore has been extremely successful in reconciling financial openness with stable money supply growth, very low inflation, and remarkably stable real effective exchange rates. Its authorities did not only have to cope with the usual constraints imposed on stabilization policies by financial openness: by choosing the U.S. dollar (in addition to the Singapore dollar) as a vehicle for the development of an international financial centre, they also had to cope with the risk of currency substitution in favour of the U.S. dollar (or, alternatively, the "internationalization" of the Singapore dollar).

The division of Singapore's banking system into a domestic sector operating in Singapore dollars and an offshore sector transacting in U.S. dollars has provided the monetary authorities with a separation fence against speculative capital movements. Since the establishment of full convertibility in 1978, however, the height of this fence has been reduced, notably with residents' access to loans and deposits on the U.S. dollar market. The main explanation for Singapore's achievements in targeting the money supply *and* exchange rates therefore does not seem to lie in the insulation of its domestic financial sector, but rather in its exchange rate management and sterilization policies (Claassen, 1992, pp. 136-167).

Since 1975, Singapore has chosen a multicurrency peg for stabilizing the effective (trade-weighted) exchange rate. Official foreign exchange reserves were four times higher than the monetary base in 1990, pointing to considerable sterilization activity in the past. As a result of heavy sterilized intervention, strong net capital inflows in 1984/85 and 1989/90 resulted neither in an increase in the monetary base nor in a rise in the real effective exchange rate.

Central to the understanding of Singapore's sterilized intervention policies is the combined effect on the management of domestic liquidity exerted by a public-sector budget surplus and the portfolio allocations of the Central Provident Fund, a mighty social pension fund. Until recently, employers and employees each had to contribute 25% of wages to the Fund: a very high proportion which goes a long way towards explaining the high level of Singapore's domestic saving. Currently, the combined rate

stands at 40% (17.5% for employers, 22.5% for employees). For prudential reasons, the Central Provident Fund's portfolio consists mainly of government bonds. With the government budget mostly in surplus and with a high level of forced private saving, private sector liquidity is always tight. Consequently, while sterilized intervention is usually characterized by, say, the Central Bank's purchase of foreign exchange in return for Central Bank liabilities (i.e., a rise in the monetary base), with subsequent contraction of Central Bank credit to the domestic sector, the order is exactly reversed in Singapore, where intervention in the money and foreign exchange markets regulates the money supply instead of reacting to changes in the latter (Moreno, 1989, pp. 21-42).

Figure 1 illustrates the specific monetary-fiscal policy mix on which sterilized intervention has been based in Singapore: virtually permanent budget surpluses, together with government deposits and other Central Bank liabilities (mostly to the Central Provident Fund) have consistently tended to contract the money supply. Non-sterilized intervention on the foreign exchange market has offset the liquidity drain, while fine-tuned exchange market intervention has served to adjust the money supply to satisfy the government's exchange rate target.

Malaysia shares with Singapore a common monetary history (and an excellent track record of low inflation and Central Bank credibility), due to the Currency Board established in 1897 and ended in 1967. Government revenue is still quite dependent on oil and other raw materials, and thus tends to rise and fall with the movements in the foreign exchange reserves. Since Malaysia has registered permanent budget deficits over the past two decades (in contrast with Singapore), higher raw material prices raise government revenues and lower Central Bank credit to the government, thus tending to stabilize the monetary base.

The Malaysian *ringgit*, pegged since 1983 to a basket of currencies, is increasingly determined by asset markets, but the Central Bank intervenes actively on the foreign exchange and monetary markets. For foreign exchange management, the public oil company (which brings in up to one-fifth of the country's foreign exchange earnings) has been an important instrument, while for the management of domestic liquidity the Employee Provident Fund has played an important role, although less so than in the case of Singapore. The Fund is the country's biggest saver and holds 20% of total domestic financial assets. Intervention is usually carried out directly on the foreign exchange market, and often the sterilization is only effected subsequently. The well-developed swap market was used extensively in the past. Meanwhile, open market operations have become increasingly important, thanks to an active policy of fostering direct securities markets (credit rating for private debt paper, broad supply of government securities, regulation of share issue prices for the stock market).

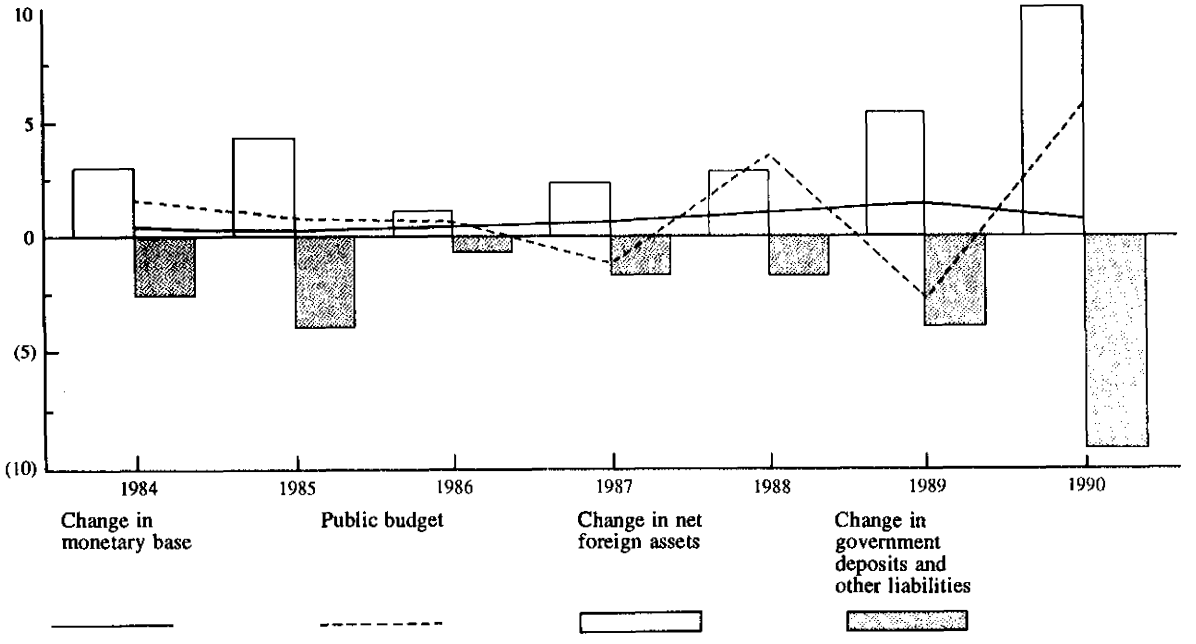
From 1989 on, however, the policy of targeting interest and exchange rates simultaneously became increasingly unsustainable. Strong domestic credit demand, growing foreign direct investment and short-term capital inflows which were incompletely sterilized produced an inflationary rise in the monetary base. Rescue measures were implemented without much hesitation. Thus, the legal reserve ratio of the banking system was significantly raised to dampen the rise in the volume of currency outside the banking system. In order to drain off excess liquidity before it entered the banking system, the monetary authorities resorted to quantity-oriented measures in 1990, especially the central management of government deposits, which were withdrawn from the banking system and transferred to a special account in the Central Bank.

Indonesia has quite successfully defied all orthodox prescriptions on the sequencing of reform laid down in the development literature. Thus, the capital account was opened first (1971), trade was gradually liberalized in the early 1980s, interest rates were freed in 1983, and institutional aspects of the financial system were deregulated in 1988. Indonesia –a resource-rich but low-income country– did not encounter the usual difficulties in targeting money and exchange rates until quite recently. The government controlled a large share of foreign exchange earnings from oil and gas exports, which could be used to counteract movements in the country's private capital account. On the other hand, the Indonesian private sector lacked creditworthiness on offshore markets.

Indonesia's real effective exchange rate has been remarkably stable since the end of 1986. According to textbook economics, the peg of the Indonesian rupiah (even though it is not a nominal peg to a single currency but a peg to a trade-weighted basket of currencies) should in theory deprive the monetary

FIGURE 1

Singapore: Sources of monetary base, 1984-1990
(Billions of Singapore dollars)



Source: International Monetary Fund (IMF), *International Financial Statistics* (various issues), Washington, D.C.

authorities of all power to influence domestic economic conditions with open capital markets, since monetary tools could only be assigned the task of preserving external balance (keeping the foreign exchange reserves stable, for example), while internal balance (with absolutely flexible labour markets, this could only consist of keeping inflation low) would be the responsibility of fiscal policy. In practice, however, the Indonesian Central Bank has retained considerable power of monetary control, in joint action with the government.

Monetary independence in spite of an open capital account stems largely from two different sources: i) the risk premium (or credit rationing) of private Indonesian offshore debt, and ii) the use of public enterprises' deposits in commercial banks for monetary management. Indonesia's capital account is still dominated by concessional long-term capital flows, while the foreign exchange reserves are dependent on the trade balance. This reflects the fact that until recently the Indonesian private sector had almost no access to commercial foreign lending. Now, however, things have started to change, with short-term flows gaining importance in the capital account. Indonesian companies have tried to escape monetary tightening at home by borrowing offshore to avoid rising domestic interest rates.

The internationalization of the big Indonesian companies and falling liquidity constraints in the wake of the 1988 deregulation of the banking system have strengthened the potential for "hot money" movements. The two abrupt devaluations of the rupiah in 1983 and 1986 (each around 30% against the U.S. dollar) underline the potential return to speculation in foreign exchange. Meanwhile, the Central Bank is only trying to build up its reputation to defend the stability of the currency. Unlike most Central Banks in OECD countries, however, it cannot spread the costs of external shocks and financial crises over time. The country's fragile international credit standing inhibits the smoothing of consumption on the basis of commercial foreign borrowing, while domestic securities markets are too small to absorb shocks through variations in domestic liquidity. Therefore, instead of using indirect money tools, the monetary authorities resorted twice recently to direct credit rationing by way of mandated transactions.

Early in 1991, rumours of an imminent devaluation started to spread because of falling oil prices

in the wake of the Persian Gulf War, and official exchange reserves started to decline slightly. At the end of February 1991, State enterprises were instructed to convert their bank deposits into holdings of Bank of Indonesia certificates (SBIs); actual conversions totalled 42% of the outstanding money supply (M_1), equivalent to about 7.5% of GNP. At the same time, in order to ease the immediate liquidity impact of this move, the Central Bank acquired an equivalent amount in money market instruments (SBPUs), resulting in a net withdrawal of liquidity. These mandated transactions were similar to those effected in mid-1987, when State-owned enterprises were ordered to withdraw rupiahs from government banks for the purchase of SBIs equivalent to about 5% of the 1987 money supply (M_1). In both cases, the relocation of government-owned deposits served to defend the currency and to contain inflationary pressures. Strong interest rate hikes had to be accepted, but they were short-lived and thus failed to cause a recession. The pragmatic use of credit-rationing measures also helped to strengthen SBIs and SBPUs as instruments of monetary control. Banks that lost their deposits were in turn partially compensated through the sale of SBPUs to the Central Bank. Since the latter instruments are of shorter maturity than the 12-month SBIs, the Central Bank has gained better control of the domestic component of base money through the timing of SBPU repurchases.

Taiwan's foreign exchange reserves grew from a level of around US$10 billion in 1981 to more than US$80 billion ten years later. Most of that rise occurred during 1985 and 1987. To smooth out the inevitable appreciation of the New Taiwan Dollar (which rose by almost 40% against the U.S. dollar over that period), the Central Bank engaged in frequent sterilization policies. An amount equivalent to 65% of the increase in the Central Bank's net foreign assets was sterilized by forcing commercial banks to buy Treasury Bills and Certificates of Deposit issued by the Central Bank. The remainder was sterilized by using Taiwan's Post Office Savings System. Part of the Post Office savings is redeposited with the Central Bank, and part with the domestic banking system. In order to contract the net domestic assets component of base money, it sufficed to order a rise in the share redeposited with the Central Bank. It has been quite an achievement on the part of Taiwan's monetary authorities to sterilize the country's excess savings (running up to 20% of GDP a year) and to keep the monetary aggregates, inflation and exchange rate appreciation in check.

The Asian evidence clearly shows that sterilized intervention is an effective instrument for targeting money and exchange rates, even in the absence of capital controls. Many economists tend to explain the effectiveness of sterilized intervention solely in terms of foreign exchange risk and the expectations thereof. Such explanations not only ignore the dualism between the formal and informal sectors and the informational imperfections which give rise to kerbside markets whose assets have a low degree of international tradeability, but also ignore the art of central banking in South-East Asia, which consists in the pragmatic use of public institutions such as social security funds, State banks and public enterprises as monetary instruments. The use of public-sector savings or of mandatory private savings is necessary in order to make up for the lack of developed domestic money markets on which open-market operations are effected in most industrial countries. Such a policy requires public-sector savings and hence fiscal discipline, however. In those countries of Latin America where tax ratios have been raised and government budgets have been balanced, the fundamental requirement for repeating the Asian example of sterilized intervention has now been fulfilled.

(Original: English)

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Old and new *trade policies*

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Latin American development strategies have historically been inextricably linked with trade theory and policy. The author's main argument is that the old infant industry and the new strategic trade arguments are fundamentally similar. Among their similarities is the justification of selective protection of certain economic sectors. Among their differences, the infant industry argument justifies temporary protection, while the argument in favour of strategic protection of certain industries justifies their protection on an indefinite basis. Yet, in the context of turning inward-oriented into outward-oriented economies, the difference between trade policy and industrial policy becomes nebulous. This is due to the theoretical conclusion drawn by both arguments –both of which favour protectionism– that the best, most welfare- enhancing policy choice, even for strategic sectors, is the use of subsidies. After examining the theoretical rationale of both arguments, this essay concludes with a set of observations and prescriptions concerning the economic, political and institutional implications which should be taken into account by policy-makers when attempting to design a viable, long-term strategic development plan.

I

The contemporary debate over protectionism and development in Latin America

Debates over development strategies have been permeated by theoretical discussions on trade policy. The infant-industry argument for protectionism was fundamental for the rationalization of the import-substitution strategy, which was actively pursued by Latin American States in the 1950s and later. Advocates of both heterodox and orthodox structural adjustment in the 1980s argued that export promotion (via domestic currency devaluations and market liberalization to enhance competitiveness) was needed to augment foreign currency revenues, to finance external debt service payments, and to reach equilibrium between the internal and external balances. By the second half of the 1980s, these policies had produced mixed results. Because high real international interest rates peaked in 1985, while a prolonged recession in the OECD countries reduced the growth rate of international trade and the terms of trade for exporters of primary goods worsened, the process of adjustment initially dampened the demand for imports, so that export earnings remained relatively stagnant (Bianchi, Devlin and Ramos, 1987). By the early 1990s, fast-reforming countries like Argentina and Mexico have been relying on capital inflows to finance growing current account deficits. Chile remains the only case where exports are driving economic growth, while capital inflows have helped to create upward pressures on its exchange rate.

The debate over development strategies and trade policy in Latin America now revolves around the issue of turning inwardly-oriented economies outward. The former Executive Secretary of the United Nations Economic Commission for Latin America and the Caribbean (ECLAC), Norberto González, has concluded that turning economies outward can be understood in two different ways. On the one hand, it may focus on the export of new goods and services and the conquest of new markets. On the other hand, it may be interpreted as the dismantling of protectionism, thus allowing the free inflow of foreign commodities (González, 1988). Choosing trade policies cannot be limited exclusively to protection or openness in order to bring about beneficial structural adjustment. Moving from an inward to an outward orientation, while enhancing the marginal productivity of labour in a developing economy, cannot be achieved in these terms simply by indiscriminately liberating market forces. In this context, protectionism as a means for promoting exports is central to the debate over development strategies. The new strategic trade justification for protectionism is an emerging but tempting theory. In the present essay, this argument will be compared with the older infant-industry argument in order to assess similarities and differences. In discussing the trade policy alternatives, the menu of options will be limited to tariffs and subsidies in general. Hence the differences between "industrial policy" and "trade policy" are blurred. So-called neutral policies, such as fiscal expenditures on education and training, research and development are not addressed. This approach is justified by the fact that both the infant-industry and strategic trade arguments make a prior assumption that some sectors are superior to others in terms of the benefits that can be extracted from their protection.

The notion of comparative advantage, focusing on national differences as the driving force behind international trade, is an essential element in the neoclassical and the newer market structure theories of trade. After examining both theories, and the corresponding notions of comparative advantage, the protectionist arguments will be compared by examining the theoretical explanations of comparative advantage, and the accompanying policy prescriptions. Criticisms of the infant-industry argument will be summarized, and then applied to the strategic trade argument to assess whether the newer argument survives an old test. The final section will comment on the economic, political and institutional implications of the strategic trade argument, and will shed doubt on the need to adopt new trade theories as guidelines for trade policies.

II

Comparative advantage and international trade

According to the Ricardian model based on a single factor of production, a competitive economy will produce goods according to two principles. Producers attempt to maximize earnings, and the method of production will be determined by a country's level of technical progress. Hence, the amount of labour required for the production of a particular good is determined by the technique of production. A country's labour force is allocated according to the wage levels of the productive processes, which in this model are determined by the costs of production.

Comparative advantage is derived from national differences. In the classical model, the difference lies in the technique of production. One country is able to produce a good at a lower opportunity cost than another, in terms of its domestic relative price ratio. Thus, country "A" is said to have a comparative advantage for the production of a good "a" if this good is more cheaply produced, relatively to good "b", than in country "B". Trade occurs when countries specialize in the production of the good for which they have a comparative advantage. In classical theory, all countries derive gains from international specialization.

1. The neo-classical explanation

The Heckscher-Ohlin-Samuelson theory of trade expands on the classical model and simplifies economies into a model with two factors of production: labour and capital. However, it provides a different explanation of comparative advantage, the driving force behind international trade.

In the two-factor model, comparative advantages (or the domestic relative price ratios) are determined by a country's endowment of each factor of production. A key assumption is that techniques of production are the same for all economies. Hence the underlying assumption is that all countries have the capabilities for producing any good at the same marginal productivity of factors of production. In other words, the technology of production is one of fixed coefficients and the marginal productivity of labour and capital are the same across borders. International trade is the indirect result of differences in national factor endowments, not disparities in technological advancement. Assuming diminishing or constant returns to scale, a country will specialize in the production of goods that require the factor intensity that best fits its factor endowment.

This latter element of neo-classical theory is the principal point of departure for the new strategic trade theory, which emphasizes that costs of production, the acquisition of intermediate inputs and know-how affect the structure of particular strategic markets which provide opportunities for greater capital accumulation.

2. Market structure, history and luck [1]

Strategic trade theory explains *why* production tends to concentrate in particular geographic areas. This approach is subtly different from neo-classical theory, which tries to explain *where* production of particular types of goods is concentrated.

In seeking to redefine the explanatory objective of trade theory, Paul Krugman and others have argued that "comparative advantage need not be the whole story. Increasing returns can be an independent cause of international specialization and trade." By borrowing from models of imperfect competition that were developed in the field of industrial organization in the 1970s, strategic trade theorists were able to model the hypothesis that economies of scale may be external to firms, and that increasing returns can lead to imperfect competition. Market structure, shaped by the existence or non-existence of economies of scale and increasing returns, is hence a major determinant of the direction and composition of international trade.

[1] This section is based on Krugman (1987a, 1987b, 1988, 1990a, 1990b and 1990c).

Under this scheme, history and luck play a crucial role in determining the direction of trade. Since it is assumed that capital accumulation is indispensable for conceiving certain industries, the effect of economies of scale has been manifested in the rapid growth of international intra-industry trade throughout the postwar era. Comparative advantage is still, however, according to Krugman, a driving force of inter-industry trade. Oligopolistic, rent-seeking industries can emerge under self-perpetuating historic conditions in a particular geographic area. According to Krugman, "Whether one prefers to explain the greater initial accumulation of capital in one region by the slave trade or the Protestant ethic, this is a model in which small beginnings can have large consequences."

Perhaps the market structure explanation of international trade gives a more realistic picture of international and domestic markets. Its emphasis on imperfect competition has the virtue of incorporating factors affecting a country's productive base, but it also "offers no guarantee that potential benefits from trade will necessarily be realized". Hence it provides a clear justification for active trade policy which, according to the logic of the theory, should be designed to attract oligopolistic rents away from foreign firms. The appropriate policy instruments would therefore have to be well-focused, so as not to distort trade driven by clear comparative advantages. It is worth mentioning at this point that the aircraft and semiconductor industries and other high-technology activities are among the most popular candidates for strategic protection.

However, this approach is not the first to consider factors that affect the productive base.

III

The infant-industry argument

The traditional infant-industry argument for protectionism also incorporates production costs into the picture. Buying technology and knowhow is costly. At first, marginal costs may be greater than marginal productivity of labour and capital for certain productive activities, especially those requiring sophisticated manufacturing technology and management techniques.

The basic assumption is that some industries are "initially uncompetitive internationally, but in the longer term, and after *temporary* protection, they have a comparative advantage" (Milner, 1988). The leading theoretical question is why certain industries cannot flourish without protection from foreign competition. A common answer is that nascent firms can learn by experience and in the longer run become internationally competitive.

1. Technology, knowhow, and learning by experience

The infant-industry argument is an explicitly dynamic argument for temporary trade protection. While it assumes that firms can surpass their infant status if they are temporarily protected, it also assumes that the initial costs of protection will be outweighed by the long-run benefits. The justification for protection therefore vanishes with time.

Learning by experience may allow firms to develop if they are assisted in covering the initial costs of importing technology, training the labour force and improving management. Hence it is often argued that protecting infant industries requires an "optimal" form of protection. The objective of optimal protection is to develop industries with higher profit margins and thus expand the economy's production possibility frontier so as to increase the society's welfare in the long run (Johnson, 1966).

Trade policy instruments, such as tariffs and quotas, may not be adequate means of achieving these objectives, however.

2. Trade policy instruments and overcoming market distortions

Discussions about trade policy instruments lead to the problem of identifying the reason why the industry cannot develop without intervention. In the presence of high initial fixed costs, when marginal revenue is lower than marginal cost, trade policy alternatives may be designed to relieve this entry burden directly. Production subsidies could

accomplish the task without lowering consumer welfare. Yet it has also been argued that tariffs, or for that matter quotas,[2] even if maintained indefinitely, can transform infant into competitive firms in the domestic and international markets in the long-run through learning-by-doing (Johnson, 1966, p. 30).

However, in this case trade policy aims to overcome what can be considered as a market distortion. If there were no such distortion, and infant industries were perceived by financial markets as being capable of "growing-up", financial intermediaries should provide the credit necessary for the industries to develop. Financial institutions would be able to perceive a future gain in present value terms if credit were offered for the long term, or at least for long enough to make firms capable of making service payments after having learned by experience.

Hence, the problem becomes one of resolving market distortions in the financial market, not in the goods market. If, in the words of Jagdish Bhagwati, "the foolish assumption that learning automatically follows from doing" were correct, the distortion that needs correction is that financial markets capture the full benefits of this learning process for firms in protected or promoted infant industries (Bhagwati, 1988, pp. 96, 97).

Indeed, within a hierarchy of options, the infant-industry argument would place direct trade intervention "low down in the rank order" (Milner, 1988, p. 67). Moreover, temporary subsidies would be preferable to tariffs or quotas because they would not mean altering consumption patterns. When subsidies are used, the State becomes the arbiter, and the responsibility of choosing winners over losers falls on the fiscal budget. That the infant-industry argument has been used as a justification for indefinite implementation of tariffs, and even for overall insulation of developing economies, is a "political fact, it is not always an economic necessity" (Johnson, 1966, p. 30).

[2] Jagdish Bhagwati has explained that in the context of models that assume (i) competitive foreign supply, (ii) perfect competition in domestic production, and (iii) a quota which is allocated so as to ensure perfect competition among the quota-holders, tariffs and quotas have the same effect on the relative price ratio of imports to domestically produced goods (Bhagwati, 1966, p. 54).

Although it was oriented toward dealing with worsening long-run terms of trade for primary good exporters and structural sources of inflation, the import-substitution industrialization strategy incorporated the infant-industry argument into its defence of protectionism. Consequently, many of the criticisms of this protectionist apologia are intrinsically connected with its application through the import-substitution strategy.

3. Criticisms of the infant-industry argument and of its application through the import-substitution strategy

In 1972, Werner Baer observed that radical critiques of import substitution industrialization (ISI) could be placed under two categories. The "market" critics view ISI as an "inefficient way of using resources to develop" (Baer, 1972, p. 101). "Structural" critics point to the failure of ISI to create sufficient employment opportunities, "not only because of social problems of urban unemployment or underemployment, but also because of their implications for income distribution" (Baer, 1972, p. 107).

Moderate critics converged on several points. First, a common finding was that tariff protection was implemented indiscriminately, without considering the promotion of productive activities that exhibited potential comparative advantages. Secondly, it has been observed that autarkic development promoted inefficient, high-cost industries in economies with small markets, limited capital for investment, and unskilled labour. This was especially true of industries with high fixed costs, which required large-scale output in order to lower costs to levels similar to those in developed economies.[3] In attempts to implant domestic competition where restrictions had blocked international competition, government efforts resulted in further obstacles to the development of economies of scale, and inefficiency prevailed.

Another critique highlights the excessively high rates of "effective protection". Consumer goods were protected, and their prices rose, while imports of intermediate and capital goods were made cheaper for firms which received advantageous treatment in respect of foreign exchange controls. These benefits eliminated incentives for improving efficiency as profits skyrocketed for industries privileged by this autarkic environment.

[3] Werner Baer gives two good examples: the automobile and steel industries (Baer, 1972, p. 101).

The common denominator among critiques of ISI is their emphasis on the autarkic nature of the environment that was created in Latin American economies. The indiscriminate implementation of protectionism produced inefficient firms, while the agricultural sectors –those with most obvious comparative advantage in international markets– were heavily taxed.[4] In economic terms, the infant-industry argument can only justify subsidizing production costs if financial markets are irreparably imperfect. Finally, the argument itself focuses on industries that have the potential for learning from doing, for overcoming their infant status. Only very selective protectionism is justified by the infant-industry argument.

The strategic trade argument is similar in various aspects. The most obvious similarity is contained in its name, for the word "strategic" of itself implies selectivity. Examining the rationale of this newer justification for protectionism will shed light on other similarities that it shares with its old predecessor.

IV

The strategic trade argument

Krugman, in defending selective protectionism for the United States economy, has argued that: "The issue is not one of overall competitiveness but of competition over those sectors that are of special value to an economy" (Krugman, 1987b, p. 208). International trade, he held, does not occur as a substitute for the migration of factors of production; it is due rather to the impetus for maximizing profits in a market with increasing returns to scale. Thus he turned to the identification of so-called strategic industries.

A strategic industry can be defined in two ways. First, increasing returns to scale can be achieved when competition is imperfect; when economies of scale are internal to the firm. Secondly, a sector may yield high returns indirectly when external economies of scale are generated in a differentiated product market (Krugman, 1987b, p. 230).

Hence this new argument for protectionism is not based on the trade structure of a country. Krugman does not believe in the long-run deterioration of the terms of trade for exporters of primary goods (Krugman, 1988, p. 56). Rather, the strategic trade theory focuses on potential gains from capturing a specific differentiated market. Active trade policy can enhance development, according to this logic, by achieving economies of scale irrespective of whether or not the market is imperfect.

In sharp contrast with the infant-industry argument, this justification for protectionism is static.[5] It justifies protectionism for an indefinite period of time, or until the market share is lost to foreign competitors and economies of scale disappear.

The strategic industry argument, however, claims that active trade policy is a means for promoting exports of strategic goods. In this sense, it does not make a new claim; the infant-industry argument also portrays protection as a means of tapping potential comparative advantage. The first-best policy choices are those that enable firms to reach economies of scale without distorting relative price ratios. Direct production subsidies, or public or private investment in infrastructure, for example, may do the trick. The latter is not usually considered to be a trade policy instrument, and both press the issue of fiscal spending.

In sum, we are left with one major difference: a newer static model confronts an older dynamic justification for protectionism. Subjecting the strategic trade argument to the above-mentioned criticisms of its older counterpart is another way of tasting "old wine in new bottles".

[4] Taxation of the traditional agricultural sector occurred in three ways. First, credit and investment were reallocated to industrial development, thus reducing the resources available for enhancing agricultural efficiency. Second, overvalued exchange rates (to provide cheap imported manufacturing inputs) hurt agricultural competitiveness in international markets. Third, the combination of high prices of domestically produced manufactures and price controls over agricultural goods produced a deterioration of the internal terms of trade for agricultural sectors (Baer, 1972, p. 104).

[5] It is noteworthy that Harry G. Johnson made this distinction in 1966, with reference to a comparison of the infant-industry argument with market failure arguments (Johnson, 1966, p. 27).

V

Does the strategic trade argument stand up to old criticisms?

Moderate criticisms of the infant-industry argument revolved around the issue of autarkic development. It is highly questionable whether the cost of taxing traditional sectors which are internationally competitive is outweighed in the long run by such benefits as may be obtained from indiscriminate protectionism.

Strategic protection, as mentioned above, does imply selectivity. But so did the infant-industry argument. Strategic protection implies indefinite protection in order to extract oligopolistic rent from foreigners. The infant-industry argument suggests temporary protection, but the criticisms of ISI point to the many cases of inefficient industrialization promoted by indefinite, indiscriminate protectionism. In this sense, the newer justification scores lower.

Nonetheless, it is also obvious that the infant-industry argument did not, in economic terms, justify the implementation of ISI in the way that it actually occurred. The danger of the strategic trade argument is that it justifies, in economic terms, a major and questionable component of the ISI strategy; indefinite protection of particular industries. The lesson to be drawn from this comparison has nothing to do with the virtues of trade theories, new nor old. Decisions as to the appropriate development strategies that should be pursued by Latin American States should not focus on the logic of justifications for protectionist trade policy. Instead, more emphasis should be given to the economic, political and institutional implications of the strategic trade argument.

VI

Economic, political and institutional implications

Given the similarities between the infant-industry and the strategic trade arguments, some of the economic implications of the temporary and selective protectionism they prescribe may seem applicable to both.

Market forces played an important role in deepening industrialization in Latin America during the era of import substitution (Hirschman, 1992, p. 1230). Market size allowed some of the larger economies, through backward linkages, to move from primary import substitution to secondary import substitution; from producing consumer goods to producing capital and other durable goods. This effect would probably not occur if a strategic trade policy is properly implemented, primarily because the domestic market is not the target of strategic policy.

Another insight is that import substitution was initiated in response to international shocks and deepened as domestic markets grew out of the vestiges of the Great Depression. Strategic trade, at least in theory, has long-term objectives. The dependence on the global marketplace poses dangerous obstacles for strategic policies. While strategy is designed for the long-run, global markets react to business cycles, especially those of the largest export markets, and there is a risk of becoming over-extended in periods of recession and under-funded during periods of growth. Policy designers must keep in mind that strategic policy must be federally funded and financed through taxation. It is worth recalling that non-strategic (i.e., non-selective) trade policy has often been used to solve balance of payments disequilibria in the past. The indirect link between the domestic economy and the performance of the global economy or major export markets is strengthened when pursuing long-term trade strategies. The temptation to

mismatch trade policy instruments with balance of payments targets must be resisted.

The connection between fiscal policy and strategic trade leads to some political implications. On the one hand, if strategic policies succeed, increases in GDP may lead to relaxed fiscal policies, in the same way that the exuberant phase of import substitution industrialization led to over-extended public policies. If the sense of selectivity is not maintained, the national economy's tendency to overextend is exacerbated with respect to the global economy. The institutionalization of rent-seeking practices is certainly not the only explanation of how import substitution strategies lost their focus. However, such practices may have played an important role in prolonging its historic span.

The institutional implications of strategic trade are perhaps the most important. After all, the objectives are ambitious, the focus should be selective and the process must be flexible. The issue of flexibility is especially important during the initial phases of the implementation of strategic policies. The theory is vague on what constitutes a strategic sector, and the institutional process should be able to withdraw fiscal resources on a trial-and-error basis.

The problem, then, is how to deal with institutional inertia.[6] Aside from leadership, the centre of decision-making on matters of trade policy should be clearly defined. Concentrating trade policy decision-making in one institutional entity limits the channels of bureaucratic influence, thus reducing the possibility of being distracted from strategic trade objectives. The governments of Costa Rica and Colombia took steps in this direction when they recently set up specialized foreign trade ministries.

Another institutional requirement is to open up channels of communication with potential strategic sectors. This calls for a special business-government partnership based on consultation. These channels should be institutionalized in the form of public consultations and information gathering in order to prevent specific interests from dominating them. Policy-makers should constantly be reminded that previous decisions may not have been ideal, especially in the initial phases of implementing strategic policy. This system of public consultation is highly advanced in the United States, where, incidentally, the Office of the United States Trade Representative (USTR) has set up a permanent system of consultations under its legislative prerogatives. Like the foreign trade ministries of Costa Rica and Colombia, the USTR is above all an international negotiating agency.[7] In the United States, subsidies and other forms of protection are monitored and implemented by the US Department of Commerce and the Department of the Treasury. In addition, the US International Trade Commission conducts trade research investigations for Congress and the Executive upon request, and participates in the process of determining whether US industries have been hurt significantly by unfair trade practices of other countries.

In this paper, a more powerful, overarching trade policy agency than the USTR is recommended for the largest and most industrialized Latin American economies. Greater concentration of executive powers on trade issues is also justified for countries whose trade-to-GDP ratio is high.[8]

Nonetheless, it cannot be over-emphasized that certain sectors are not strategic. For instance, it is difficult to portray small agricultural economies as offering strategic options. These countries are better off not risking the stability of their fiscal policies. Their economies should specialize according to more traditional concepts of comparative advantage. It is not surprising that countries with small domestic markets were the least successful in their ISI period. For larger, more industrialized developing economies the centre of strategic trade decision-making should leave out certain sectors. In other words, departments of agriculture and domestic commerce should not be eliminated and taken over by a powerful trade institution. Nor should traditional sectors be taxed while strategic sectors are subsidized. In the end, the sectors which are more

[6] A.O. Hirschman wrote that: "Special institutions designed to supply capital and entrepreneurial guidance... became important in most of Latin America after the import substitution industrialization process had already been underway..." (Hirschman, 1971, p. 95).

[7] The lack of institutional concentration of trade negotiating authority may also cause problems. For instance, in a process of regional trade liberalization, the sequence of negotiations may be debatable. Differences may arise between the judgements of the ministries of finance, economy and external affairs, and such conflicts may produce policy deadlocks. However, this is an entirely different subject, outside the scope of this paper.

[8] In the case of the United States, this ratio is below 15%.

clearly competitive are the ones that will produce capital accumulation to finance strategic policy; consumers pay for strategic trade policy through taxation.

In conclusion, strategic trade policy requires new ways of organizing government. In terms of theory, strategic trade is too similar to past justifications for protectionism. Without new political and institutional thinking, strategic trade theory remains old wine in new bottles.

(Original: English)

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Integration *and trade* diversion

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Regional integration has once again become an important issue for Latin America and the Caribbean. Compared with previous experiences, however, recent integration commitments have a number of new aspects in such areas as negotiating procedures, the issues involved in the various agreements –some of which are as unprecedented as the adoption of common currencies, the creation of binational companies, common labour laws, etc.– and the actual timing of these steps. Among the various integration initiatives now being pursued, four are particularly important by virtue of the relative weight of the economies involved: MERCOSUR, the Andean Pact, the Central American Common Market (CACM) and the Caribbean Community (CARICOM). This article presents estimates for one of the possible outcomes of these four integration processes in terms of the resulting trade flows –within each country group and between each country and the rest of the world– on the basis of an arbitrarily defined criterion for estimating trade diversion, and goes on to discuss some of the resulting implications for integration policies and negotiating procedures.

I

Introduction

Regional integration is a long-standing issue in Latin America and the Caribbean, with early efforts in this area dating back to the late 1950s. The prospect of what was to become the Treaty of Rome (signed in 1957) led to a number of studies at the regional level to evaluate the possibility of fashioning a local replica of the then prospective effort to form a European Union.

A number of now well-documented problems (the practice of undertaking integration initiatives in parallel with efforts to deepen the industrial production structure, misconceived negotiating formulas, etc.) led to no more than piecemeal achievements in the following two decades, notwithstanding the strong official emphasis placed on the issue.

The situation changed somewhat in the late 1980s, when a number of commitments were made among groups of neighbouring countries which resulted in the formation of several subregional custom unions within a relatively short time span.

These commitments cover several new areas, including such topics as negotiating procedures, inherent problems associated with the various agreements –including some issues never tackled before, such as the adoption of common currencies, the creation of binational companies, common labour laws, etc.– and the actual timing of these steps.

Another feature common to a number of these initiatives is that they all look to the mid-1990s as a target date for the consolidation of integrated international structures.

Among the various integration initiatives now being consolidated, four are particularly important by virtue of the relative weight of the economies involved: (i) the Common Market of the South (MERCOSUR), formed by Argentina, Brazil, Paraguay and Uruguay; (ii) the Andean Pact, composed of Bolivia, Colombia, Ecuador, Peru and Venezuela; (iii) the Central American Common Market (CACM), comprised of Costa Rica, El Salvador, Guatemala, Honduras and Nicaragua; and (iv) the Caribbean Community (CARICOM), made up of Antigua and Barbuda, Bahamas, Barbados, Belize, Dominica, Grenada, Guyana, Jamaica, Montserrat, St. Kitts and Nevis, St. Lucia, St. Vincent and the Grenadines, and Trinidad and Tobago (Bahamas does not participate in the Caribbean Common Market).

Successful integration efforts on the part of these four groups of countries may, of course, be expected to lead to larger intrazonal trade flows and to increased production within each group of goods designed to take the place of imports from third countries. The scale of such import substitution and its probable sectoral concentration are seldom examined in the related literature, however.

This article presents estimates of one of the possible effects of these four integration processes on the resulting trade flows, on the basis of an arbitrarily defined criterion for estimating trade diversion which makes it possible to analyse the probable changes in the trade flows within each country group and between each country and the rest of the world.

Section II gives a brief description of each of these four integration processes and presents basic data on pre-integration trade flows. Section III describes the basic assumptions made, and the methodology and data used. Section IV discusses the main findings, and section V speculates about these results and some of their possible policy implications.

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II

Four country groups in pursuit of integration

In recent years we have witnessed renewed efforts on the part of the Latin American and Caribbean countries to intensify their integration processes.

On the political front, one feature which sets these movements apart from previous integration initiatives is that those sponsoring them are democratically elected governments. On the economic plane, their simultaneous adoption of uniform liberalization policies has no precedent in the region and probably accounts for the novel aspects of these commitments to integration, which is no longer seen as a way of replacing imports from third countries, but rather as a means of enhancing the competitiveness of the member countries' exports and establishing fuller and closer links with the international economy. It is also the main reason why these integration initiatives' objectives and timing are so similar.

MERCOSUR was born in March 1991, when previous commitments between Brazil and Argentina to establish a common market were extended to include Paraguay and Uruguay. The target date for MERCOSUR's entry into operation was set at January 1995, and a similar time horizon was adopted by the countries of the Andean Group (under the Act of La Paz, signed in November 1990) and by the Caribbean countries, under an agreement signed in August of that same year. The year 1995 has also been chosen as the target date for the creation of an economic community among the Central American countries, in line with the Central American Economic Action Plan.

For the purposes of this analysis, the most important aspects to be explored here have to do with the (pre-integration) trade structure of the countries which are to make up these four free trade areas. The following paragraphs will provide an overview of the basic features of the intrazonal trade flows for these four country groupings in 1991. Detailed analysis at the product level could only be carried out on the basis of the most recent information available for this level of disaggregation, corresponding to 1989 in the cases of MERCOSUR and the Andean Pact and 1988 in those of CACM and CARICOM.

1. The Common Market of the South (MERCOSUR)

This is the largest of the four country groupings, with intrazonal exports in 1989 totalling US$4 billion, as compared to nearly US$1 billion for the Andean Pact and (in 1988) a little over US$600 million for CACM and less than US$200 million for CARICOM.

In all four country groupings, trade flows are quite concentrated, with the three main bilateral export flows accounting for well over half the total value of intrazonal exports. In MERCOSUR, bilateral trade between Brazil and Argentina and Brazilian exports to Uruguay represented 57% of total intrazonal trade in 1989.

Given the differences in the degree of openness and size of the economies involved, the relative importance of the intrazonal market varies sharply from country to country, although in all of them there are at least some sectors where that market accounts for more than half of the total value of sectoral exports (see table 1).

Clearly, the relative importance of the zonal market for, say, Paraguay and Uruguay is far greater than it is for Brazil. This is true not only in broad terms, but also for a number of specific industries: when the various industries were considered individually, it was found that the exporting sectors accounting for over one-third of the total value of Paraguay's exports sell more than half of their exports within MERCOSUR.

In view of the zonal market's limited importance for the main exporters, there would seem to be quite a significant margin for trade diversion, and the contribution made by intrazonal trade flows to the overall trade balance will obviously vary from one country to the next. Although all four countries participating in MERCOSUR had trade surpluses with the rest of the world, in 1989 Brazil and Uruguay were net importers in their intrazonal trade. (Trade balance figures are discussed in section IV, where a comparison is made between pre- and post-integration trade flows.)

TABLE 1

MERCOSUR: Some basic indicators

Country	Relative weight of zonal market in 1991 (%)		Sectors deriving over 50% of the total value of their exports from sales to MERCOSUR, 1989	
	Exports	Imports	Number of sectors[a]	Share of exports to MERCOSUR in total exports of the sector (%)
Argentina	16.06	12.75	44	3.1
Brazil	4.04	10.80	10	0.2
Paraguay	35.19	36.00	42	36.0
Uruguay	35.14	30.26	105	20.6

Source: International Monetary Fund (IMF), *Direction of Trade Statistics, Yearbook, 1992*, Washington, D.C., 1992, and estimates based on primary data from the ECLAC External Trade Data Bank for Latin America and the Caribbean (BADECEL).

[a] Out of the 237 three-digit product groups contained in the Standard International Trade Classification (SITC).

If we look at the most important trade flows, we find that in 1989 Argentina's main exports within MERCOSUR consisted of wheat, dairy products, fruits and nuts, petroleum products and motor vehicle parts. Brazil exported coffee, iron ore and concentrates, petroleum products, steel products and automobiles. Uruguay mainly exported meat, rice, processed cereals and some chemical products such as pigments and paints, while the principal Paraguayan exports were cotton, meat, coffee and essential oils.

2. The Andean Pact

The Andean Pact, which is the second-largest of the four groups, has a long history of integration initiatives involving such issues as common industrial policies and other measures that go beyond the idea of simply granting trade concessions. Recent efforts have been much less ambitious, and have focused mainly on trade policies with a view to the overall goal of forming a common market.

Here, too, intrazonal trade flows are fairly concentrated, with bilateral trade between Colombia and Venezuela, along with Ecuador's exports to Peru, accounting for 58% of total trade within this group in 1989.

The degree of integration –as measured by the proportion of total trade represented by intrazonal trade– is quite limited for all the countries involved, with intrazonal trade accounting for around 10% or less of total exports and imports, except in the case of Peruvian imports. Unlike MERCOSUR, the Andean Pact's indicators of zonal dependence for the exports of individual sectors are also very low (see table 2).

In 1989, the main exports to other countries in the zone were copper, zinc, synthetic fibres and petroleum products from Peru; crude petroleum, petroleum products and prepared fish, crustaceans and molluscs from Ecuador; petroleum products, various chemical products, steel products and aluminium from Venezuela; meat, cotton, some chemical products and light manufactures such as outerwear and travel goods from Colombia; and sugar, wood, some chemical products and non-ferrous metals from Bolivia.

3. The Central American Common Market (CACM)

Central American could perhaps be said to have the most ambitious of the recent integration initiatives, since the aim of the participating economies is not only to create a free trade area with common import barriers –as in most other subregions– but also to go a step further and form an economic community equipped with common institutions.

In 1988, however, intrazonal trade was highly concentrated (56%) in bilateral trade between Guatemala and El Salvador and Guatemalan exports to Costa Rica.

The figures given in table 3 attest to the fact that quite a significant percentage (over 20%) of El Salvador's and Guatemala's exports, and a somewhat smaller proportion of Costa Rica's exports, are sold on the intrazonal market.

In 1988 the main products exported by Costa Rica to the zonal market were rubber tyres, medicinal and pharmaceutical products and steel products.

TABLE 2

Andean Pact: Some basic indicators

Country	Relative weight of zonal market in 1991 (%)		Sectors deriving over 50% of the total value of their exports from sales to the Andean Pact countries, 1989	
	Exports	Imports	Number of sectors[a]	Share of exports to Andean Pact in total exports of the sector (%)
Bolivia	10.32	3.74	6	4.2
Colombia	7.54	8.53	54	1.6
Ecuador	4.97	7.55	32	0.9
Peru	7.73	17.15	48	1.7
Venezuela	3.21	2.49	17	0.3

Source: International Monetary Fund (IMF), *Direction of Trade Statistics, Yearbook, 1992*, Washington, D.C., 1992, and estimates based on primary data from the ECLAC External Trade Data Bank for Latin America and the Caribbean (BADECEL).

[a] Out of the 237 three-digit product groups contained in the Standard International Trade Classification (SITC).

TABLE 3

Central American Common Market (CACM): Some basic indicators

Country	Relative weight of zonal market in 1991 (%)		Sectors deriving over 50% of the total value of their exports from sales to the CACM, 1989	
	Exports	Imports	Number of sectors[a]	Share of exports to CACM in total exports of the sector (%)
Costa Rica	10.42	8.05	71	6.3
El Salvador	21.33	16.29	115	22.9
Guatemala	26.96	8.54	135	21.1
Honduras	3.59	7.95	59	1.6
Nicaragua	9.64	15.68	69	6.3

Source: International Monetary Fund (IMF), *Direction of Trade Statistics, Yearbook, 1992*, Washington, D.C., 1992, and estimates based on primary data from the ECLAC External Trade Data Bank for Latin America and the Caribbean (BADECEL).

[a] Out of the 237 three-digit product groups contained in the Standard International Trade Classification (SITC).

Exports from El Salvador consisted mainly of paper and paperboard, medicinal and pharmaceutical products and footwear. Guatemala's chief exports were medicinal and pharmaceutical products, food products, and perfumery and cleansing preparations. Honduras' share of zonal exports was primarily composed of fixed vegetable oils, fruits and nuts, and wood, while Nicaragua mainly exported iron and steel bars, some chemicals and wire products.

4. The Caribbean Community (CARICOM)

CARICOM is the smallest of the four groups considered here and also has the lowest integration coefficients.

According to the 1988 figures and to data available at the product level for only some of the countries participating in this integration process, CARICOM's intrazonal trade was concentrated

TABLE 4

Caribbean Community (CARICOM): Some basic indicators

Country	Relative weight of zonal market in 1991 (%)		Sectors deriving over 50% of the total value of their exports from sales to CARICOM, 1989	
	Exports	Imports	Number of sectors[a]	Share of exports to CARICOM in total exports of the sector (%)
Bahamas	1.05	1.10	...	...
Barbados	19.13	21.58	4	0.1
Belize	8.61	3.26	...	...
Dominica	12.96	4.96	...	...
Grenada	9.21	21.59	...	...
Guyana	4.35	16.83	...	...
Jamaica	5.08	4.94	11	-
St. Kitts and Nevis (1988)	2.06	5.40	2	-
St. Vincent and the Grenadines	6.68	2.88	...	...
Trinidad and Tobago	16.17	4.83	1	-

Source: International Monetary Fund (IMF), *Direction of Trade Statistics, Yearbook, 1992*, Washington, D.C., 1992, and estimates based on primary data from the ECLAC External Trade Data Bank for Latin America and the Caribbean (BADECEL).

[a] Out of the 237 three-digit product groups contained in the Standard International Trade Classification (SITC).

(64%) in bilateral trade between Jamaica and Trinidad and Tobago and in the latter country's exports to Barbados.

The zonal market is of some importance only for the exports of Barbados, Dominica and Trinidad and Tobago, although it accounts for less than 20% even in these cases (see table 4). For the rest of the CARICOM countries, the relative share of total exports accounted for by this integration grouping generally ranged from less than 1% to around 9%, and 1988 data indicate that the percentages were small even at the level of individual sectors.

In 1988, Barbados' exports to the rest of CARICOM consisted mostly of paper and paperboard, some chemical products and construction materials. Jamaica exported mainly chemicals, non-alcoholic beverages and food products. Trinidad and Tobago's zonal exports consisted chiefly of petroleum products, non-alcoholic preparations, cereal preparations and some steel products. Sales by Dominica consisted largely of soap and cleansing and polishing preparations, while products such as margarine and shortening were the principal exports from St. Kitts and Nevis.

This is the basic framework of trade relations which forms the setting for efforts to promote integration in these four groups of countries. The relatively low level of dependence on zonal markets (which is very low indeed when compared, for instance, with that of the European Community) would suggest that –so long as the overall composition of commodity trade is compatible with the excess demand met by imports from third countries– a significant margin exists for trade diversion.[1] The following section outlines the basic assumptions and methodology used here to simulate the possible impact of this diversion.

[1] The margin for trade diversion appears to be even greater when one considers the increasing participation of several of these economies in the trade in manufactures, as well as the opportunities offered by intra-sectoral trade. Such considerations go far beyond the scope of the present analysis, however.

III

Assumptions and methodology

According to international trade theory, there are certain inevitable consequences whenever a customs union is formed between any two countries. This theory emphasizes, *inter alia*, two economically important effects: the creation of new trade flows between the partners in the union, and –as a result of the adoption of common barriers to imports from countries that are not part of the union– the diversion of trade, meaning the purchase of products supplied by the other partner in the union instead of the (cheaper) imports previously obtained from third countries.

In the present analysis we set out to estimate these effects for the four integration processes currently taking place in Latin America and the Caribbean.

The estimates of trade diversion and of the subsequent trade flows given in the simulations presented here do not take account of the entire potential demand in each member country: the analysis is confined to these processes' first-round effects on trade flows and does not consider possible substitution effects in domestic production. Thus, it is essentially a (static) analysis of what would happen if –given the trade flows existing at the start of these integration processes, along with some assumptions about what the criterion for trade diversion might be– the integration processes embarked upon by these four groups of countries were to be fully realized.

1. Assumptions

For the purposes of the present exercise, it is assumed that:

(i) Trade diversion reaches the point where one member country (chosen in accordance with a specific criterion, as will be detailed below) can meet the import needs of its other partners in the union for some products. Such demand needs are defined in terms of the real import structure of each country before integration;

(ii) There are no supply constraints;

(iii) Traded goods are homogeneous and the domestic supply and demand structures in each market are such that there is perfect substitution between the goods demanded by local consumers and those consumed in third countries (i.e., there are no restrictions to impede the diversion of exports from one market to any other market);

(iv) The post-integration supply structure is the most efficient one, which means that the most competitive pre-integration exporter will provide the products that will take the place of those sold by suppliers from outside the union;

(v) The process of integration will not affect (at least in the beginning) the relative import mix, so that, since there are no changes in consumption patterns, both the sectoral composition of imports and the relative share of each country in each integration group's total imports will remain constant;

(vi) The above assumptions also lead to the additional condition that the overall trade balance for each country will not be altered by the integration process, since total exports and imports do not change in value, but are only partially re-directed;

(vii) Needless to say, it is further assumed that these four processes of integration will not be aborted, and that the trade structures reflected in the most recent data correspond to those prevailing at the start of the integration process. In other words, the analysis compares two set situations and makes no allowance for any changes during the time period separating the two.

2. Methodology

In the present analysis of the effects of intra-zonal integration on trade flows, the margin for substitution in the supply of traded goods is defined as the current (pre-integration) level of those imports from non-member countries for which there are clear indications that excess demand within the integration zone could be met by diverting products currently exported to third markets to the members of the union, in order to replace external suppliers.

In other words, the analysis concentrates on those products for which there is evidence that the amount actually exported by one of the partners to

the rest of the world could –given the above assumptions– be diverted in order to supplant suppliers from third countries.[2]

The satisfaction of this excess demand as a consequence of the zonal integration process entails diversion of trade (since existing supply conditions and the overall trade balance are assumed to remain constant), and this should be carried out as efficiently as possible.

The present exercise was thus designed to be a highly specific simulation based on the assumption that the most efficient supplier should provide the products for which there is excess demand within each grouping. As thus defined, trade diversion involves the following steps:

(i) The excess demand within the integration grouping open to each participating country is defined, for each product, as the sum of the real (pre-integration) imports purchased from the "rest of the world" by the other members.

(ii) The "competitiveness indicator" to be used for this analysis is the amount actually exported by each member country to third markets: the greater the amount of exports, the more competitive the country of origin (in relation to its partners in the grouping). One obvious limitation of such a procedure is that it does not take account of the scale of domestic production (thus discriminating against the smaller economies in each group of countries). It is implicitly assumed that the country which exports the most of a given product is the most efficient and is therefore a "natural candidate" for the job of supplying the other members of the group with those products for which there are indications of excess demand (as defined above).

(iii) According to the criteria adopted, trade diversion will occur only in the case of those products for which one of the member countries' (pre-integration) exports to the rest of the world are greater than the excess demand existing within the group that could be met by that specific country. In such a case, "the efficient supplier" as defined above is most readily identifiable.[3]

(iv) Trade diversion is therefore measured for each country and product by separating the amount required to meet the excess demand of the zonal market from the current total exports to third markets. This obviously entails identifying different countries as possible future (supplementary) suppliers of specific products to the zonal markets, with obvious implications for their exports to third markets. As an illustration, using this methodology it was possible to deduce the probable trade diversion of a given product –e.g., wheat– following the formation of MERCOSUR. In the case of this commodity, it would fall to Argentina, as the main exporter in the group, to satisfy the group's (pre-integration) needs by reducing the amount it currently exports to other areas.

(v) After determining the extent of trade diversion for each country, it then becomes possible to compute the value of that country's new (post-integration) export flows to the zonal market as well as to other markets.

(vi) In order to estimate post-integration import flows, a number of additional assumptions are required. Clearly, each country's imports from other member countries will be equal to the pre-integration level of such imports, plus some portion of the new trade flows generated by the integration process. It must be remembered, however, that the estimates of trade diversion were made for each country, i.e., from the standpoint of the *supplier* of each product. How much of the diverted value will be *imported* by each country individually remains to be estimated. It was further assumed that there would be no change in the sectoral structure of each country's imports and that each country's share in the total imports of each product would therefore not be altered by the integration process. That same percentage share for each country was then used to

[2] Ideally, the estimates of trade diversion should take into consideration all the relevant information, including the phasing- out of trade barriers, as well as the relevant supply and demand elasticities of all the countries involved in each integration process. Such an approach would require a great deal more data than were available at the time of this article's preparation, however, and thus goes beyond the scope of the present analysis.

[3] Obviously, some other procedure for defining trade diversion could be used, and it might be argued that an alternative criterion involving all the participants in the union would be more acceptable. No matter what procedure were chosen to determine the amount that should correspond to each country, however, it would be just as arbitrary as the one adopted here.

determine the amount of the diverted trade in each product that would be imported by each member country.

(vii) Once post-integration zonal imports had been estimated, it then became possible to calculate the new intra-zonal and global import flows and, hence, each country's new balance of trade with its partners in the union and with the rest of the world.

3. Information

The data used for this purpose were taken from the External Trade Data Bank for Latin America and the Caribbean (BADECEL) maintained by ECLAC and corresponded to product groups at the three-digit level of the Standard International Trade Classification (SITC). At the time when this study was conducted, the most recent data available at that level were for 1989 in the cases of MERCOSUR and the Andean Pact and 1988 in those of CACM and CARICOM.

Data were available for every country in MERCOSUR, the Andean Pact and CACM. In the case of CARICOM, however, the analysis had to be limited to Barbados, Dominica, Jamaica, St. Kitts and Nevis, and Trinidad and Tobago.

IV

Main results of the simulation

The simulation exercise permitted the identification of six basic product vectors: (i) export products which would be diverted from third markets into the zonal market; (ii) products that would continue to be imported from third countries because the countries forming the union cannot meet the local demand;[4] (iii) the new vectors of total exports and imports in (post-integration) zonal trade; and (iv) the new vectors of total exports and imports in (post-integration) trade with the rest of the world.

Analysis of the resulting vector for products diverted into the zonal market illustrates the differences in the conditions existing in the various economies and makes it possible to identify the products that each country would contribute to the zonal market.

As mentioned in the previous section, the exercise was carried out using trade statistics at the three-digit level of SITC, which contains 237 product groupings at this level of aggregation. One indicator of the extent of each country's involvement in trade diversion would thus be the actual number of product groupings which each country would divert to the zonal market, under the assumptions used in this simulation (see table 5).

[4] These would be products which, during the period prior to integration, no single country exported to third countries in an amount exceeding the total demand for imports of such products on the part of the other member countries.

Table 5 shows that trade diversion would tend to be more intensive in the case of the main exporting economies in each group. This result, which is partly due to the methodology used, is particularly clear in the case of MERCOSUR, for example. The reader will notice, however, that this admitted bias is not a generic characteristic: in the case of the Andean Pact, it is estimated that Peru would divert a larger number of products than any of its partners, even though Colombia's and Venezuela's total exports are greater. The same holds true for Costa Rica in comparison to Guatemala in CACM, and for Jamaica in relation to Trinidad and Tobago in CARICOM. Specific sectoral specialization would seem to play an important role in this regard.

Table 5 also gives two indicators of the relative weight of the estimated diversion in terms of export value, thus giving an approximate idea of the relative impact on (pre-integration) export flows to the zonal market and to the rest of the world. This table also (predictably) suggests that in more homogeneous country groupings the various members are likely to account for a fairly similar number of products, while the opposite is observed in those groups with more pronounced differences. The figures for MERCOSUR and the Andean Pact are quite illustrative in this respect.

Not surprisingly, in view of the Caribbean countries' low degree of prior integration, the consolidation of CARICOM would probably have the greatest impact. The effects of MERCOSUR on Brazil's

TABLE 5

Estimated trade diversion in four integration processes in Latin America and the Caribbean: Product groups affected and relative magnitude of diversion in each country

	Trade diversion		
	Number of product groups	Relative magnitude of diversion:	
		In intrazonal exports (%)	In total exports (%)
MERCOSUR (1989)			
Argentina	21	25	4
Brazil	98	77	8
Paraguay	-	-	-
Uruguay	3	3	1
Andean Pact (1989)			
Bolivia	7	117	7
Colombia	16	21	2
Ecuador	9	17	1
Peru	20	310	23
Venezuela	16	154	6
CACM (1988)			
Costa Rica	15	20	2
El Salvador	1	3	1
Guatemala	9	3	1
Honduras	9	66	3
Nicaragua	2	25	2
CARICOM (1988)			
Barbados	3	15	1
Dominica	1	233	16
Jamaica	11	164	4
St. Kitts and Nevis	1	8	0
Trinidad and Tobago	9	622	21

Source: Estimates based on primary data from the ECLAC External Trade Data Bank for Latin America and the Caribbean (BADECEL).

intrazonal exports and of the Andean Pact on those of Peru would also be quite marked.

Given the initial low level of dependence on zonal markets, however, even these dramatic increases in zonal trade would have only a limited impact on each group's total exports. With the exception of Trinidad and Tobago and Dominica in CARICOM and of Peru in the Andean Pact, trade diversion, when calculated in this way, would account for about 8% or less of the total exports of each of these countries. [5]

These figures seem to suggest that even under the extreme hypothesis of assuming that all potential trade diversion were concentrated in a single economy within each group, the overall impact on total trade would still be limited.

An analysis of the sectoral trade-diversion estimates provides a rough idea of how much each country would contribute to the intrazonal market following the creation of the free trade area. According to these estimates, the main products corresponding to each country (i.e., those products that would account for half or more of the trade diverted by each country in terms of value) would be as indicated in table 6.

The figures shown in table 6 may be interpreted as the sectoral results of trade diversion, providing that present market conditions remain unchanged and the process of integration is carried out without any

[5] The reader is reminded that, under the assumptions used in this simulation, the figures in table 5 do not refer to changes in total exports (which are assumed to remain constant although they have been re-directed), but instead simply illustrate the relative magnitude of the new trade flows.

external interference (e.g., common sectoral policies, sectoral differentiation in the trade liberalization process, etc.).

It is interesting to note that in most cases the new trade flows would consist mainly of primary products or light manufactures containing a large component of natural resources (chemicals and textiles). In none of these cases would there be an increase in intrazonal exports of capital goods.[6] One possible explanation for this fact may be found in the existing product mix of trade in Latin America and the Caribbean, since most of the region's exports of capital goods are already sold to other Latin American and Caribbean countries, although in reality the OECD countries supply most of the region's needs (indeed, this continues to be one of the main categories of products imported from the industrialized world).[7]

When tables 5 and 6 are taken together, this may lead to the following conclusions: (i) there is significant potential for the intensification of intrazonal trade, i.e., similarities in the existing export and import structures do not appear to constitute a major obstacle in and of themselves; and (ii) it is very possible that non-induced (spontaneous) integration processes may not have the effect of promoting intrazonal trade in manufactured products which is often hoped for.

Table 7 lists, for each country group, the products that would continue to be imported from third countries even after completion of the integration process, i.e., those products for which, according to the selected criteria, no margin exists for the replacement of external suppliers (here again, we refer to products representing half or more of the total value of excess demand for imports from third countries).

This simulation appears to suggest that MERCOSUR, the Andean Pact and CACM would remain dependent upon external supplies of chemicals and related products, machinery (electrical and non-electrical) and some intermediate industrial goods, such as paper and steel products. In CACM it is also likely that excess demand for transport equipment would continue to exist. These three groups, as well as CARICOM, would also continue to be dependent upon external supplies of mineral fuels, lubricants and related materials. Two other specific products for which excess demand would continue to exist are copper ores, in MERCOSUR, and wheat in the Andean Pact.

These results suggest that it might be wise to adopt certain policy measures in connection with these integration processes, such as the promotion of even closer relations between MERCOSUR and Chile (the main supplier of copper) and the creation of specific mechanisms to improve the intrazonal market for producer goods that can be supplied by member countries.

Before going into these sorts of inferences, however, it might be useful to gain an idea of how the integration process will affect the trade balance of each country group. The demand for hard currencies in these countries is obvious. Hence the importance of assessing the implications for the trade balance of each country with the rest of the world and with its partners of the trade diversion estimated to be likely in this simulation.

It can naturally be predicted that the trade balance with the relevant country group is likely to improve for each of the countries that will supplant external suppliers, as judged from the criteria adopted here. The intrazonal trade surpluses of Argentina, Brazil,[8] Costa Rica and, most of all, Peru, Venezuela and Trinidad and Tobago can therefore be expected to increase significantly as a result of the shift in trade flows. In contrast, Uruguay, Paraguay, Colombia, El Salvador, Barbados, Dominica, Jamaica and St. Kitts and Nevis would increase their net imports from their zonal partners.

Due to the methodology used for this simulation, these results entail a corresponding variation in these countries' trade surpluses with the rest of the world. The impact on these trade balances with the rest of the world would be fairly slight, however, as the previous evidence pertaining to relative dimensions would lead us to expect. In the specific case of Trinidad and Tobago, if the predictions derived from these simulations are correct, then that country would see its trade surplus with the rest of the world turn into a small deficit.

[6] Brazil is the only country for which the simulations have yielded trade diversion figures in respect of SITC section 7, "Machinery and transportation equipment". This category includes not only road vehicles but also specialized machinery for particular industries, general industrial machinery, electrical machinery, and other transport equipment.

[7] See ECLAC, *Latin America: Trade of Capital Goods and the Need for Export Financing* (LC/R.967/Rev.1), Santiago, Chile, 1991.

[8] Brazil's considerable deficit would be converted into a surplus.

TABLE 6

Trade diversion: individual countries' simulated sectoral contributions to the corresponding zonal market

Country	SITC	Product
MERCOSUR		
Argentina	041	Wheat
	054	Fresh or frozen vegetables
	611	Leather
	678	Tubes and pipes, of cast iron
Brazil	334	Petroleum products, refined
	583	Polymerization products
	672	Ingots and other primary forms of iron and steel
	674	Universal plates and sheets, of iron and steel
	743	Pumps and compressors
	781	Passenger motor cars
	784	Parts and accessories
Uruguay	654	Textile fabrics, woven, other than of cotton or man-made fibres
Andean Pact		
Bolivia	248	Wood, simply worked
	687	Tin
Colombia	292	Crude vegetable materials
	671	Pig iron, iron or steel powders and shot
	842	Outer garments, men's and boys', of textile fabrics
Ecuador	057	Fruit and nuts, fresh and dried
Peru	081	Feeding stuff for animals
	287	Copper ores and concentrates
	682	Copper
Venezuela	334	Petroleum products, refined
	673	Iron and steel bars, rods, angles, shapes and sections
CACM		
Costa Rica	057	Fruit and nuts, fresh and dried
	292	Crude vegetable materials
	842	Outer garments, men's and boys', of textile fabrics
	843	Outer garments, women's, girls' and infants', of textile fabrics
El Salvador	658	Made-up articles, wholly or chiefly of textile materials
Guatemala	075	Spices
	263	Cotton
Honduras	686	Zinc
Nicaragua	971	Gold, non-monetary
CARICOM		
Barbados	091	Margarine and shortening
Dominica	057	Fruit and nuts, fresh and dried
Jamaica	061	Sugar and honey
	843	Outer garments, women's, girls' and infants', of textile fabrics
Saint Kitts and Nevis	268	Wool and other animal hair
Trinidad and Tobago	334	Petroleum products, refined
	522	Inorganic chemical elements
	562	Fertilizers, manufactured

Source: Estimates based on primary data from the ECLAC External Trade Data Bank for Latin America and the Caribbean (BADECEL).

TABLE 7

Latin America and the Caribbean: Simulation of remaining imports from third countries after the formation of free trade areas

Country group	SITC	Main products
MERCOSUR		
	287	Copper ores and concentrates
	322	Coal, lignite and peat
	333	Petroleum oils
	514	Nitrogen-function compounds
	515	Organo-inorganic and heterocyclic compounds
	541	Medicinal and pharmaceutical products
	562	Fertilizers, manufactured
	724	Textile and leather-working machinery
	749	Non-electric parts and accessories of machinery
	776	Thermionic, cold cathode and photo-cathode valves and tubes
Andean Pact		
	041	Wheat
	515	Organo-inorganic and heterocyclic compounds
	541	Medicinal and pharmaceutical products
	562	Fertilizers, manufactured
	583	Polymerization and copolymerization products
	598	Miscellaneous chemical products
	641	Paper and paperboard
	674	Universal plates and sheets, of iron and steel
	678	Tubes and pipes, of cast iron
	713	Internal combustion piston engines
	723	Civil engineering and contractor's plant and equipment
	724	Textile and leather-working machinery
	728	Other machinery and equipment for specialized industries
	737	Metalworking machinery
	743	Pumps and compressors
	749	Non-electric parts and accessories of machinery
	752	Automatic data processing machines
	764	Telecommunications equipment
	778	Electrical machinery and apparatus
	781	Passenger motor cars
	784	Parts and accessories
	874	Measuring, checking, analysing and controlling instruments and apparatus
CACM		
	333	Petroleum oils
	334	Petroleum products, refined
	541	Medicinal and pharmaceutical products
	562	Fertilizers, manufactured
	583	Polymerization and copolymerization products
	591	Disinfectants, insecticides, fungicides
	641	Paper and paperboard
	674	Universal plates and sheets, of iron and steel
	782	Motor vehicles for the transport of goods or materials
CARICOM		
	334	Petroleum products, refined

Source: Estimates based on primary data from the ECLAC External Trade Data Bank for Latin America and the Caribbean (BADECEL).

V

Some final considerations

The debate on regional integration and, more generally, on the whole question of the advantages of forming free trade areas, either at the subregional level among Latin American and Caribbean countries or with the involvement of other important partners such as the United States, has gained momentum in recent years. New approaches to trade policy as a whole have also engendered new ways of looking at trade preferences in the sense that countries are tending to regard recent integration experiments as a means of enhancing competitiveness and using it as a tool to improve the broader international economic relations of the Latin American and Caribbean economies.

The customary argument is that access to larger markets could allow production activities to be pursued on a larger scale and with more efficient methods, thereby opening up greater opportunities for the adoption of up-to-date technologies and gradually increasing the competitiveness of the countries' production structures. The main reason for preferring bilateral concessions at the subregional level rather than unilateral moves to open up domestic economies is the bargaining process which is inherent in the former approach, which enables each participating country to be assured of obtaining increased market access in exchange for the concessions it makes. Subregional integration processes may thus be understood as an intermediate "learning" stage on the path towards multilateral trade liberalization. [9]

Although this debate is an increasingly important one in Latin America and the Caribbean, it often fails to assess the probable economic impact of such experiments, partly because of the difficulty of determining, with any acceptable degree of accuracy, how the foreign trade flows of the countries involved may be affected. Estimating the likely effects may be a very complex task, especially if an effort is made to take account of the relevant elasticities and intertemporal changes, if general equilibrium models are used to deduce the impacts of integration on the various product and factor markets, etc.

In this analysis we set out to simulate one of these possibilities, by defining one specific criterion for determining the probable trade diversion, on the basis of admittedly extreme assumptions, namely, that only one of the countries involved in the formation of these zonal groupings would replace the outside suppliers of the products for which there is evidence of excess demand. One argument in favour of this line of reasoning might be that in dealing with the most extreme cases, in which only the most efficient producers play a role, it may therefore reflect situations similar to those created by market-determined movements.

At all events, the simulation has yielded some interesting results. It was found that, owing to each country's low level of dependence upon intrazonal trade, the overall impact of the consolidation of the four integration processes on the total trade levels of the countries involved in these processes is likely to be rather limited, unless there is an expansion of the overall levels of trade involved.

At the same time, the low level of pre-integration trade is in itself a guarantee of significant margins for trade diversion. It was found that, for some countries, intrazonal exports are likely to grow quite significantly as a consequence of the formation of these subregional markets.

This does not mean that dynamic comparative advantages will necessarily be generated by the integration process. Indeed, it was found that the new trade flows (i.e., trade in those products where member countries supplant outside suppliers) are likely to be concentrated in primary products and in natural resource-intensive light manufactures.

This is in part a reflection of the existing structure of trade –since a large portion of the Latin American and Caribbean countries' exports of manufactures is sold within the region (which means that the corresponding figures will be affected by the methodology used in this analysis)– but it also points up the need for further consideration of the way in which bilateral concessions are defined.

These results indicate that trade preferences differentiated on a bilateral basis –if left to the free market forces– may not have the effects which zonal

[9] This is true so long as they provide only for trade concessions or, in other words, so long as they do not involve parallel measures such as common policies affecting factor movements.

integration is often expected to produce (i.e., enhancement of the competitiveness of manufactured products), except in some specific sectors. Insofar as the present exercise reflects the natural tendencies of existing demand, it is more likely that the effects will be felt in the trade in products involving relatively little industrial processing.

The foregoing observations do not make a clear case for intervention. The results should be examined with great care, given the rigid nature of the assumptions made. Nevertheless, they do illustrate the need for a more active debate regarding the specific role to be attributed to the expected effects of such integration initiatives. Furthermore, they may serve as rough guidelines for the definition of possible compensatory mechanisms for participating countries, as well as providing an argument in favour of sectorally defined (rather than linear, across-the-board) tariff reductions in connection with the formation of these free trade areas.

What policy lessons can be derived from these findings?

First and foremost, since the exercise indicates the existence of significant margins for trade creation, one obvious recommendation is that these processes should be stimulated, even if this means we must downgrade our expectations regarding the dynamic effects of integration.

A second point to be considered is that, as mentioned at the beginning of this article, the integration processes reviewed here all have objectives that go beyond trade concessions; in many cases they call for common treatment for investors, harmonized labour laws, etc., and in some cases they even go so far as to envision the creation of common currencies. Under such circumstances, there are at least two important qualifications to be made in respect of the results obtained here. First, the outcome in terms of trade structure will probably be affected by other factors apart from the actual pre-integration composition of trade. Second, in such a broad policy context there is certainly a place for the proposal of a carefully predefined reformulation of trade barriers based on commonly agreed sectoral approaches in order to reduce the costs of the disruption that could be created by an abrupt, across-the-board form of trade liberalization.

A final point to be considered –although it concerns an aspect of the integration process that has not been dealt with here– has to do with the complementarity of these various integration initiatives as seen from a broader regional perspective.

The negotiations that lead to the formation of these country groups are in large part pursued within the framework of broader regional agreements. This is the case, for example, of the concessions made among the member countries of MERCOSUR: all these countries' reciprocal tariff reductions are registered as bilateral concessions with ALADI, as a signal that at some future date they may be extended to other countries of the region.

This leads to a taxonomic approach to free trade, whereby subregional agreements would be the first step, to be followed by regional integration and, finally, multilateral liberalization. This sequencing is more justifiable on geopolitical grounds than on the basis of sound economic arguments, however, and should therefore not be viewed as representing an automatic form of determinism.

What is important to note here is that similar types of exercises regarding groups of countries –not just individual countries– would seem to indicate the existence of a potential complementarity that should be explored in greater depth. One obvious example that came out quite clearly in these simulations is the indication of a continued need for copper imports on the part of the MERCOSUR countries. This appears to provide a strong argument in support of the efforts now being made to devise ways of bringing Chile closer to those countries in the economic sphere.

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European integration
and Latin American trade

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Difficult as it is to forecast the magnitude of the impact of the Single European Market (SEM) on the rest of the world and on the European Community (EC) itself, the predominant feeling is one of concern, especially in the developing countries. This article seeks to determine how the completion of the SEM may affect Latin America's exports to the Community, using basically a short- and medium-term analytical approach. This is because a series of elements make it possible to predict with some confidence that the deepening of Community integration will take more time than originally foreseen. Especially noteworthy among these elements is the need for the EC to carry out an economic adjustment, for which purpose it will be necessary to coordinate the macroeconomic policies of its member countries more effectively and to resolve various important political problems, starting with the ratification of the Maastricht Treaty. In any event, it is reasonable to assume that, in the long run, the economic implications of the SEM for the rest of the world, including Latin America, will be positive. Section I of the article discusses the most probable effects of the deepening of European integration on the EC itself and on the rest of the world in the short and medium term. Section II examines the structural weakening of trade links between Latin America and the Twelve in recent decades and identifies the key reasons for this phenomenon, while Section III summarizes the effects that the SEM may have on Latin America's trade in the foreseeable future, which, unlike the Single Market's positive impact in the long term, may not be beneficial for Latin America.

I

The economic impact of the Single European Market on the European Community and on the rest of the world

1. Potential economic benefits for the EC

The basis of the SEM is the dismantling of physical, technical and fiscal borders, allowing people, goods, services and capital to circulate freely throughout the Community's territory. Theoretically, this deregulation will lead to greater competitiveness, forcing entrepreneurs to reduce prices and production costs. In turn, the drop in prices will stimulate demand and therefore raise output, and the resulting economies of scale will cut costs even further. Gains may also be expected from the use of new marketing strategies, the greater efficiency that business enterprises can achieve through the adoption of technological and management innovations, and the introduction of new production processes, all of which will be driven forward by the dynamics of the internal market itself.

The Cecchini report (Cecchini, 1988), which was prepared at the request of the Commission of the European Communities (CEC), quantifies the effects of streamlining customs formalities, government procurement procedures and financial services. It estimates that the greatest gains would result from the removal of barriers in financial services markets, in the expectation that the reduced costs of these services would be transferred to the economy as a whole. This would lower prices and increase demand and output, in turn bringing down the cost of credit and boosting investment.

All the foregoing would generate a 4.5% increase in the Community's gross domestic product (GDP), create 1.8 million new jobs, deflate consumer prices by 6.1%, improve the balance of public finances by the equivalent of 2.2% of GDP and strengthen the current account of the Community's balance of payments by around 1% of GDP. The biggest growth in the Community's GDP would be obtained, however, if EC Governments adopted more expansionary fiscal policies and spent the entire increase achieved in the public sector balance; under these circumstances, the GDP growth rate would rise to 7.5%, 5.7 million new jobs would be created, retail prices would be reduced by 4.3%, but the current account would show a deficit equivalent to 0.5% of GDP. Both scenarios would result in a one-time gain in the medium term, four or five years after the culmination of the Single Market.[1]

2. Some qualifications regarding the Cecchini report

It is important to note that the benefits projected in the Cecchini report are based on a methodology which takes into account only the static economic effects of the completion of the SEM. Consequently, it does not quantify the dynamic growth effects. In that regard, a study by Baldwin (1989) finds that the latter would be similar in magnitude to the static benefits projected by Cecchini. However, Baldwin's estimates have been seriously questioned, not only because of the methodology he used but also because, even if we accept that these effects would indeed manifest themselves, they would do so only in the long term.[2]

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[1] It should be noted that the methodology used and the projections made in the Cecchini report served as the basis for a study directed by Emerson and others (1988), which was also published officially by the Commission of the European Communities (CEC) (1988).

[2] See the comments by Pierre-André Chiappori and Anthony Venables at the end of Baldwin's article (1989).

The Cecchini report has also been severely criticized because the benefits it predicts, even in the case of its most pessimistic estimates, are based solely on the most favourable scenarios. An important argument in this connection is that the report does not delve deeply enough into the economic adjustment that would necessarily take place in the nations of the Community, nor does it examine in sufficient detail the intensity and duration of this adjustment or its possible adverse effects in terms of unemployment. In principle, taking full advantage of the economies of scale would involve restructuring production in a way that would inevitably lead to the disappearance of a significant number of the Community's enterprises.

Thus, a study by Smith and Venables (1988) notes that the number of EC enterprises would be likely to decline in all but two industries, namely cement and office machinery. The most extreme case is footwear, in which 207 of the existing 739 firms in the Community would disappear. A significant part of these losses would be concentrated in a few countries; for example, the United Kingdom would lose 46 of its 65 footwear firms, 31 of its 52 carpet factories and 1 of its 3 motor vehicle companies. This means that the unemployment problem could become more critical in the short or medium term, which might in turn bring social and political pressures to bear and thus lead to an increase in EC protectionism. Otherwise, the costs of unemployment would have to be absorbed by the governments through the payment of benefits or through a more expansionary fiscal policy, whose financing would have to come from the private sector and would thus tend to push up the interest rate.

Another line of criticism regarding the benefits projected by the Cecchini Report is that the report was written before certain historic events of momentous importance to the world, and especially to the EC, had taken place. These include, in particular, German reunification, the events that are reshaping central and eastern Europe, the Gulf War and the Enterprise for the Americas Initiative. It is also argued that a considerable portion of the anticipated benefits of the Single Market have already been reaped through intra-EC mergers, acquisitions, joint ventures and investments on the part of a number of Community enterprises.

All this explains why most economic analysts who have studied the topic agree that the Cecchini Report overestimates the economic gains that the EC would obtain as a result of the establishment of the SEM. From this standpoint, the Institute for European-Latin American Relations (IRELA, 1991, p. 19) states that "various unofficial studies have estimated the acceleration of growth at no more than 1.5% - 2.5%". By way of illustration, it is worth noting Peck's estimate (1989, p. 289) that the economic gains would only be about 2% of the Community's GDP.

3. Likely prospects for the rest of the world

From a systemic viewpoint, the SEM can only be understood within its global historical context. On the one hand, this programmatic advance further deepens the most highly evolved regional integration model currently in existence. On the other, it is imperative that the EC enhance its technological capacity in order to improve its international competitiveness, especially compared with the United States, Japan and the newly industrializing countries (ECLAC, 1990a). Thus, looking beyond all the rhetoric and well-meaning statements, we see that the Community's motives for bringing the Single Market into operation clearly have to do with internal needs associated with its own development. The economic impact of the SEM on the rest of the world is thus a factor that will be determined primarily by the way in which Community dynamics unfold.

There can be little doubt that the SEM will have negative economic implications for the rest of the world, at least in the short and medium term. The basis for this assumption is that the elimination of internal barriers is clearly intended to increase Community demand for goods and services produced within its own territory, whose prices will be lower in comparison both with those existing before the Single Market and with those of non-Community imports. Indeed, the whole methodological formulation of the Cecchini Report is based on this argument. The Commission of the European Communities (CEC, 1989) has explicitly stated, moreover, that it expects the SEM to further stimulate the rising trend in the ratio of intra-Community imports to total EC imports.[3]

[3] In 1963, intra-Community merchandise trade represented 48% of total EC trade (CEC, 1989), but by the beginning of the 1980s this coefficient had risen to over 50%, and by 1991 it stood at nearly 62% (CEC, 1992, p. III).

It is therefore evident that there will be diversion of trade in respect of imports from the rest of the world, and the scope of this diversion, other things being equal, will depend mainly on the price elasticity of EC demand. The Commission of the European Communities (1988) estimates that non-EC imports will drop by between 7.9% and 10.3%. It should be noted that this effect cannot possibly be offset by any increase in trade flows that might be created by additional EC growth, because under the assumption of linear behaviour, even if the generous estimate of a 4% rise in the Community's GDP proves to be correct, this would bring about an increase of only 0.4% in non-EC imports, since they are equivalent to rather less than 10% of Community GDP.

Ultimately, then, even in an optimistic scenario where the Community grows by an additional 4% and the reduction in its imports from outside the EC does not exceed 7.9%, exports from the rest of the world to the EC will still drop by 7.5%. Therefore, the net trade effect on non-EC economies will be generally negative. Moreover, a series of other factors would appear to indicate that the trade-related costs to the rest of the world would be much higher than this estimate.

Another element to bear in mind is that EC exports to third markets would be relatively more competitive, thereby crowding out exports from the other countries of the world and diverting a portion of their trade, to an extent which remains to be estimated. Another argument along the same lines has to do with the Community's order of preferences: a topic which, because of its importance to Latin America, will be discussed below. Nevertheless, it is worth noting here that some other regions of the world may also have to face considerable –although differentiated– economic costs, especially because the creation of the European Economic Space will promote trade between the Twelve and the members of the European Free Trade Association (EFTA), a group which is already the main trading partner of the EC.[4]

Another area where there may be negative implications for the rest of the world is that of economies of scale. If the EC can achieve minimally efficient operations of scale on its own, then restrictions on imports from outside the Community would seem to be a natural counterpart (Dornbusch, 1989). Among other factors, this explains why a good many transnational corporations are reallocating resources to Community territory as a way of helping to forestall the negative impact which the SEM is likely to have on them. Between 1981 and 1983, 15% of United States foreign direct investment went to the EC, but between 1984 and 1987 the figure rose to 55%, while during the same years the corresponding indicator for Japan climbed from 10% to 17% (CTC, 1989).

Thus, there is every reason to assert that the Single Market will, implicitly and inherently, have adverse economic effects on the rest of the world.[5] The real question, then, is not whether the Single Market will have negative implications for the rest of the world, but how strong the impact will be. Similarly, there is little point in asking whether the internal barriers to be eliminated will be transferred to the borders of the EC; as noted earlier, there is no need to do so in order to build a "European castle", i.e., a scenario which would have negative economic implications for the rest of the world even if the EC did not consciously and deliberately apply an economic policy expressly aimed in that direction, as it would in the case of a "Fortress Europe".

In any case, as we have already seen, everything seems to indicate that the Community will inevitably have to face up to the need to adjust its economy in the process of constructing the Single Market, at least in the short and medium term. Accordingly, higher unemployment can be expected to result from the enhanced competitiveness which will be made possible by the free circulation of goods and services throughout the Community's territory, and this could trigger the adoption of an expansionary fiscal policy (which would be perfectly consistent with the "social dimension" of the agenda being pursued by the Twelve), thereby pushing interest rates up and hence imposing a further burden on the developing countries, especially those with high levels of external indebtedness.

[4] EFTA accounts for more than 20% of the Community's non-EC trade.

[5] In addition to all the reasons mentioned earlier, it is common knowledge that when the Single Market is in operation the EC will apply certain technical standards to its imports which will make it even more difficult for exports from the rest of the world to gain access to this market. This point will be discussed in section III below.

Nor can the application of a complementary trade policy which would tend to exacerbate EC protectionism be ruled out.[6] In this scenario, "Fortress Europe" would indeed be the appropriate term, in the sense that the "castle of the Twelve" would be explicitly and consciously defending itself against the rest of the world, launching "missiles" in the area of economic policy –especially trade policy– of a calibre which cannot be gauged at present but which would affect above all the developing countries,[7] especially since the Community's capacity to negotiate and retaliate would undoubtedly be even stronger if all its trade regulations were centralized. It should also be noted that the developing countries' share of EC trade has been declining steadily in the past few years. In the 1980s alone, the share of the latter nations fell from 20% to 13% of Community trade, whereas the share of the developed countries in EC trade rose from 76% to 84% during the same period.[8]

Nevertheless, the EC is making a big effort to show that the Single Market will have beneficial consequences both for the Community itself and for the rest of the world because, it claims, it will represent a big step towards deregulation and economic liberalization which will in turn give rise to a more competitive international economic environment. Even admitting that this might be true in the long run, however, it is difficult to reconcile this statement with the fact that the EC has been one of the main obstacles to the timely and fruitful completion of the Uruguay Round of GATT, which would indeed bring about a considerable improvement in the operation of the multilateral trading system.

II

Weakening of trade relations between Latin America and the EC[9]

The European Community is the biggest trading bloc in the world, not only in terms of its total trade but also of its merchandise transactions with the rest of the world.[10] Since 1975, however, it has ceased to be the principal market for Latin American merchandise exports. In 1970 the EC received over 33% of all Latin America's exports, surpassing even the United States, which accounted for only 28%, but this order was reversed in the mid-1970s when the United States became the number one recipient of exports from the region, and the trend later became even more marked. Thus, in 1990 the EC bought only 24% of Latin America's exports, whereas the United States received 36% of the total.[11] The Community has also become less important as a supplier of Latin American imports. In 1970, over a quarter of the region's purchases from abroad were from the EC, but in 1990 the figure stood at only 19%.

This situation becomes even clearer when the trends in Latin America's share in EC trade are taken into consideration. In 1965, the region received 6.1% of the Community's exports to the rest of the world, while it supplied 9% of the Twelve's imports from abroad. By 1990, however, these shares had fallen to 3.4% and 5.2%, respectively. There has thus been a structural weakening of trade relations between the

[6] Such protectionism might even be backed up by discriminatory, non-transparent application of new technical standards in EC trade: an issue which will be analysed in the last section of this paper.

[7] This view coincides with that of Emmerij (1990, pp. 248-249), who says: "To sum up on the question of trade diversion versus trade creation, my understanding is that the dangers for the developing countries are greater than the opportunities".

[8] The remaining share corresponds to trade with Central and Eastern Europe, according to data from the *United Nations Monthly Bulletin of Statistics*, New York, various issues.

[9] The statistical data on trade between Latin America and the EC whose source is not explicitly stated were prepared by the author on the basis of figures provided by ECLAC.

[10] In 1990, the EC accounted for almost 38% of all world trade in goods, and even if only its merchandise transactions with countries outside the Community are taken into account, its share still came to 20% (ECLAC, 1992a).

[11] It is worth noting that whenever Latin America is taken as a whole, this obscures the big differences between the individual countries of the region.Thus, for example, Ecuador is the Latin American country for which the EC market is the least important (10%), but the opposite is true of Chile (37%), where the weight of EC trade is greater than that of the United States (17%).

two regions, reflected in Latin America's virtual marginalization from the circuit of European merchandise transactions.

It is important to note that trade is not the only area in which economic relations between the EC and Latin America have lost ground in the past few decades. A similar process has taken place in the financial sphere, especially in foreign direct investment. At the same time, the amounts of official development assistance which Latin America receives are not very significant as a proportion of total EC contributions to the developing world (Izam, 1991). All this stands in curious contrast with the notable tightening of political ties between Latin America and the EC (ECLAC, 1990b).

The responsibility for the structural economic distancing being witnessed between Latin America and the EC cannot be solely attributed to either of the two trading partners. In fact, over the past 20 years Latin America has been going through a process of virtual marginalization from world trade flows as a whole in terms of both exports and imports of goods. [12] This phenomenon is largely due to the fact that the region's export structure has not evolved in line with the dynamic changes that have taken place in international demand. [13]

Thus, even though the share of manufactures in Latin American exports stands at 34% (a notably high coefficient in comparison with the 9% recorded in 1970), the region's economies are still preponderantly primary-commodity exporters, although appreciable differences exist among them. [14] The countries of Latin America need to confront this reality and gear their economies to a change in production patterns based on the deliberate and systematic absorption of technological progress in order to gain a greater competitive edge in the international market (ECLAC, 1990c and 1992c).

As a reflection of this situation, the structure of Latin American exports to the EC has been highly concentrated in commodities. In 1970, 61% of this trade flow was composed of agricultural commodities and foodstuffs, and exports of non-manufactured goods as a whole represented 95% of the total. By 1990, the share of the latter had dropped to 77%, while the proportion of agricultural products had fallen to 42%. Even so, however, this means that over two-fifths of Latin American merchandise exports to the EC still face problems in gaining access to this market as a result primarily, but not exclusively, of the Community's Common Agricultural Policy (CAP).

In the past 20 years manufactures have increased from 5% to 23% of Latin American merchandise exports to the EC. This figure must be qualified, however. In 1980, the share of manufactures in Latin American exports to the Community was similar to that of manufactures exported to the United States, i.e., about 12%. In 1990, however, while manufactures represented 35% of Latin American exports to the United States, [15] in the case of Europe they barely amounted to 23%, which was a good deal less than the share of manufactures in total Latin American exports to the rest of the world (34%) in that same year. Hence, the EC has lost importance as a market for Latin American exports of manufactures, with its share falling from 17% to 14% between 1970 and 1990.

The size of this decline cannot be explained merely by stating that the export performance of Latin American manufactures is lagging behind that of the newly industrializing countries of Asia, or by pointing out that the manufactures which Latin America exports to the EC are suffering waning demand in that market. The fact is that a significant proportion of these exports are subject to various protectionist measures that make it difficult for them to enter the Community. In short, as will be analysed below, Latin America's commodity exports and its sales of manufactures are both confronted with tariff and non-tariff barriers that hinder their access to the EC market.

1. Tariff barriers to EC imports

The average tariff rate applied by the EC to imports from GATT member countries is only about 5%. However, this apparently low figure masks the tariff barriers which the EC applies to production activities

[12] Its export coefficient has fallen from 4% to 3.2%, while that of imports has dropped from 3.8% to 2.7%.

[13] Another very important reason has to do with the difficulties experienced by the region in gaining access to international markets for its exports.

[14] For example, manufactures represent over 50% of Brazil's total exports, whereas in Ecuador they account for less than 2%.

[15] Note also that the figures for exports from Latin America to the United States do not include transactions related to in-bond assembly industries.

that have a higher value-added component. This practice penalizes certain Latin American exports, especially manufactures, by impeding their access to the EC market through the application of duties that rise in direct proportion to the product's degree of processing. One illustration of the Community's escalating tariffs is the case of Chilean tomato exports to the EC market: fresh tomatoes are subject to a 3% tariff, but the rate for tomato paste is 18% (Sáez, 1992).

It should be noted that the EC applies tariff escalation schemes to a very substantial proportion of its imports of manufactures. What is more, in a number of economic sectors, this type of protectionism is more restrictive in the EC market than in the United States and Japan. It applies, *inter alia*, to the production chains for beef, vegetables, vegetable oils, paper, lead, zinc and petroleum, all of which are vitally important categories in Latin America's exports to the Twelve (Butelmann and Campero, 1992). The EC tariff structure thus distorts the competitiveness of the more highly processed Latin American products exported to this market, not only hampering their access to it but also, in many cases, actually preventing it.

2. Non-tariff barriers to EC imports [16]

In the agricultural sector, most non-tariff barriers (NTBs) are applied through the CAP, affecting temperate-zone crops –including sugar– which make up nearly three-quarters of the value of the Community's agricultural imports. [17] These measures are applied not only to unprocessed agricultural commodities such as fruits, vegetables, seeds, fish and beef, but also to certain more highly processed goods such as wine. Besides the CAP limits, quantitative restrictions are also applied to exports of some tropical products such as bananas, as a means of reserving preferential access for exports from Caribbean and African countries. In the final analysis, over a quarter (in terms of value) of the foodstuffs exported by Latin America to the EC is subject to NTBs.

Manufactures are also liable to various types of non-tariff barriers to access to the EC market. [18] Excluding chemicals, 26% of the total value of Latin American manufactures exported to the EC is subject to NTBs. Textiles, clothing and footwear –which face barriers equivalent to 90%, 55% and 99% of their respective values– are among the most seriously affected goods.

Apart from the above-mentioned sectors, NTBs have a strong impact on two other categories of Latin American exports to the Twelve, namely, fuels and iron and steel, whose exposure to protectionist measures amounts to 44% and 92%, respectively. In sum, 22% of the total value of Latin America's merchandise exports to the Community is liable to non-tariff barriers, which have a relatively greater effect on manufactures than on foodstuffs and agricultural products.

In its use of non-tariff barriers, Europe is a much more protectionist market with regard to Latin American exports than are the United States and Japanese markets, since NTBs are applied to only 13% of Latin American merchandise exports to each of the latter markets. The Community's non-tariff protectionism is also systematically higher than that of both the United States and Japan for Latin American exports of fuels, iron and steel, and manufactures other than chemicals. In foodstuffs, Japan's non-tariff barriers exceed those of the Community, which in turn are higher than those imposed by the United States.

Because of the great heterogeneity of the Latin American countries, the implications of the Community's non-tariff barriers are very different, in terms of magnitude, for each individual country. These effects depend on the composition and total value of the various products which the countries export to the EC [19] and on the sectoral distribution of NTBs in that market. Thus, in terms of the proportion of total exports from each of the countries to

[16] Statistical data on non-tariff barriers were taken from ECLAC, 1992b. Note that the coverage coefficients cited in the text mean that at least one non-tariff barrier is applied to Latin American exports in their target market.

[17] The most frequently used measures are variable duties, reference prices and voluntary export restraints.

[18] The most frequently used instruments are quantitative limits. supervision measures, licenses, quotas, voluntary export restraints, anti-dumping measures, countervailing duties and safeguard clauses.

[19] Nearly 80% of Latin American exports to the EC come from just four countries, namely Brazil (38%), Argentina (14%), Mexico (13%) and Chile (12%). The concentration as regards exports of manufactures is even greater, with three countries –Brazil, Argentina and Mexico– accounting for almost 85% of total Latin American exports of such goods to the EC.

the EC that is subject to non-tariff barriers, those which suffer most are Mexico (52%), Uruguay (47%), Ecuador (29%), Argentina (28%), Costa Rica (20%) and Honduras (20%).[20] In contrast, the consequences are practically nil for Nicaragua (2.4%), Bolivia (0.1%) and El Salvador (0.1%). These figures indicate that the effects on Latin America of the completion of the Single European Market are likely to be highly differentiated in the various countries that make up the region.

In conclusion, EC protectionism is responsible, on the one hand, for much of the gradual weakening of the Community's trade with Latin America in both commodities and industrial goods and, on the other, for the fact that the share of manufactures in Latin American exports to the EC market is still very small and, in fact, is even well below the share of these products in Latin America's total exports. All this seems to suggest that the Community assigns relatively low priority to its trade with Latin America.

3. The European Community's scale of preferences

The Community's first aim is to strengthen its ties with the member countries of EFTA (Delors, 1991). At the same time, as a result of the political and economic reforms being undertaken in Central and Eastern Europe, the EC is having to redefine its relations with these countries, both for economic and social reasons and from a geo-political standpoint. In fact, there is currently a spate of trade negotiations between the Community and practically all these nations, a number of which already enjoy trade preferences under association agreements or under the Generalized System of Preferences (GSP).

As for the Community's position regarding the developing world, the countries with the highest priority are those of Africa, the Caribbean and the Pacific (ACP) which are signatories to the Lomé Convention. They are former colonies of European countries to which the EC offers trade preferences, institutional advantages and development assistance. The trade preferences include free access for industrial goods and most tropical agricultural commodities, even though some of them compete with the Community's own products, as in the case of sugar.

The second line of Community preferences is extended to the Mediterranean countries which have signed agreements with the EC on trade cooperation and development aid. These agreements provide for duty-free entry of industrial goods other than textiles. Agricultural products that compete with Community products protected by the CAP are subject to quotas, in connection with which they receive partial exemption from customs duties. It should be noted that a number of these countries have applied for membership in the EC.[21]

The EC has also shown considerable interest in the Arab countries of the Persian Gulf region, essentially because of the Community's energy dependency on that part of the world. Specifically, the EC has sought to expand existing trade agreements to include matters concerning trade cooperation, technology transfer, investment incentives, agricultural development and other areas related to development assistance.

The Asian and Latin American countries come last in terms of priority, since they only enjoy the advantages to which they are entitled under the GSP.[22] Moreover, it is important to note that, in the case of Latin America, the GSP has not afforded the anticipated benefits, even though the advantages it does provide have increased considerably during the past decade. In 1980, 10% of Latin American exports to the EC entered under the GSP, and by 1988, this coverage had risen to 20% (IRELA, 1992). Because of certain features of the Generalized System, the Latin American countries with the most highly diversified structures of production and well-established trade networks are the ones that have gained the most from it (e.g., Brazil, and to a lesser extent, Argentina and Chile).

[20] The sectors affected in the various countries are as follows: Mexico, mainly petroleum; Uruguay, foodstuffs and textiles; Ecuador, foodstuffs and clothing; Brazil, foodstuffs, iron and steel, and footwear; and Argentina and Chile, foodstuffs. Tropical products, particularly bananas, are seriously affected in such Central American countries as Costa Rica, Honduras and Guatemala, as well as in Colombia and Ecuador.

[21] Namely Cyprus, Malta, Morocco and Turkey.

[22] Apart from the GSP which the EC grants to the entire Latin American region on an equal basis, some nations are accorded special treatment whereby they receive greater benefits than those afforded by the common system. However, these preferences are temporary in nature, and the advantages they provide are not comparable with those received by the ACP countries. For example, the Andean countries are granted such benefits as a way of encouraging them to produce crops other than coca.

There are a number of reasons for Latin America's limited benefits from the Community's GSP. First, the great majority of agricultural products are excluded from the System, because since their entry would affect the economy of the Twelve, they are therefore considered "sensitive" products. In effect, this means that a large proportion of Latin American exports to the EC are simply denied the advantages of the Community's system of preferences. Second, in Latin American trade circles the GSP is accused of suffering from a notable lack of transparency and coherence, which severely hinders its effective use and leads to difficulties in its application; in particular, countries must apply for concessions in order to receive them, and the System thus tends to favour countries that possess more export experience and dynamism, such as certain Asian nations.

It is hoped that in the future the EC will reformulate the GSP by giving it greater stability and easing the rules of origin, as well as opening up the possibility of granting a cumulative form of treatment at the regional or subregional level, which would facilitate access to the EC for Latin American exports and also provide a further incentive for the economic integration of Latin America (SELA, 1992). However, "the possibilities are remote that the GSP will have a significant impact on the current situation in the coming years" (IRELA, 1992, p. 28).

The foregoing lends weight to the view expressed by a President of the European Parliament, who said: "to put it bluntly, Europe has never set its sights on Latin America" (Barón, 1991, p. 95). It is therefore probable that the EC will continue to show little economic interest in Latin America, although some advances may still be made through the various forums that exist for dialogue between the Twelve and Latin America. [23]

III

Effects of the Single European Market on Latin America's trade

1. General effects

As we have seen from the foregoing, all in all the impact of the Single Market on Latin American trade will be more negative than for the rest of the world. This is mainly a consequence of the historical process of weakening economic relations between Latin America and the EC –a phenomenon for which both sides are responsible, although not necessarily to the same degree– and of the fact that the Twelve have shown little interest in this region of the developing world. The trade costs to Latin America cannot be precisely measured, for they will basically depend, first, on these developing countries' capacity to react in a way that will increase their exports' access to the EC market and, second, on the economic dynamics generated by the Single Market within the EC and the possible further heightening of Community protectionism.

In institutional terms, EC protectionism is scheduled to undergo a fundamental change in 1993. The Single Market presupposes a common trade policy, and the countries will therefore not be able, on an individual basis, to impose national restrictions on certain direct imports from third countries or on products which have passed in transit through other Community countries. [24] In the past, these national barriers have been utilized, in particular, to protect "sensitive" sectors such as textiles, clothing, footwear, agriculture and steel, all of which, as noted earlier, are a vital part of Latin America's export trade with the EC. It is not clear, however, whether the benefits afforded by the establishment of homogeneous Community measures to take the place of national restrictions will outweigh the potential costs.

[23] One example would be consideration of the feasibility of expanding the operations of the European Investment Bank to include the financing of Latin American projects.

[24] Consequently, article 115 of the Treaty of Rome (the Treaty establishing the European Economic Community) will no longer be valid.

The types of restrictions most frequently applied to these sectors are quotas, the use of "basic import prices", which can be used to impose anti-dumping measures, and voluntary export restraints. The EC may be tempted to utilize these types of protection more intensively after the establishment of the Single Market (Koopmann and Scharrer, 1989).

These measures are on the very borderline of legality under GATT, since they contravene the spirit if not the letter of the General Agreement. They are therefore known as "grey-area measures" and are the subject of negotiation in the Uruguay Round under the heading of safeguards. Other instruments of major concern are local-content rules, reciprocity agreements and the possible abuse of what is known as the "new trade policy instrument".[25] Should the Uruguay Round fail, this would encourage the build-up of trade mega-blocs. In this scenario, the EC (but not only the EC) might close its borders by erecting extraordinarily high protectionist barriers.

Community protectionism could also increase under the Single Market even if the Uruguay Round reaches a successful conclusion, however. As already noted, the number of firms in the Community as a whole would decline in practically all production sectors (Smith and Venables, 1988). Moreover, it is a fact that the less developed countries within the Community will, as a result of the Single Market, face a very critical situation in certain economic sectors which are in direct competition with Latin American exports. Thus, a recent EC study found that the hardest-hit categories of exports from Greece and Portugal will be textiles and knitwear, the food industry and metal products (Instituto de Estudios Económicos, 1991). All these are traditional labour-intensive sectors, and their importance is illustrated by the fact that the textile industry, which provides 9% of all jobs in the manufacturing sector at the Community level, accounts for over 23% of such jobs in Greece and Portugal (ECLAC, 1992a). It would be no surprise, then, if these nations try to secure protection against third countries when the Single Market comes into effect.

It is important to add that an increase in protectionism is to be expected not only in "sensitive" traditional sectors, but also in others that may emerge in the event of an economic adjustment, which, as stated earlier, is quite likely. This raises serious doubts about the accuracy of estimates regarding the benefits that would accrue to Latin America and the rest of the developing countries as a result of the Single Market, when those estimates are based on methodologies which assume that the degree of EC protection will remain stable.[26]

Another cause of concern is the new common provisions which will enter into effect following the elimination of the national technical borders that have prevented the free circulation of goods within the Community. These provisions mainly deal with production, labeling and packaging standards; brand-name registration and quality certification procedures; safety and consumer protection standards; and environmental and plant and animal health regulations.[27] According to the United Nations Conference on Trade and Development (UNCTAD), most of these measures are considered to be tantamount to non-tariff barriers to trade.

There is no question but that it will be easier and less costly and uncertain to deal with each of the EC countries on the basis of a single system of standards and of commercial and economic requirements, instead of negotiating individually with each of the twelve nations that make up this integration scheme. However, it is more than likely that these provisions will be harmonized on the basis of the strictest national laws, and this will make it more difficult, in the short term, for some Latin American products to gain access to the market. The EC would do well, therefore, to give the Latin American countries enough time to adapt to the new standards, with the actual amount of time depending on their level of development. This extension could also be complemented with meaningful, integrated support in the form of dissemination of the relevant information among the economic agents.[28]

[25] This instrument allows private EC entrepreneurs to apply directly to the Commission for protective measures against imports that allegedly use "unfair trading practices".

[26] For an example of this type of estimate, see Page, 1990.

[27] As of 1993 the EC countries were to be required to recognize as equivalent the standards of the other countries, with the temporary exception of regulations concerning public health and safety.

[28] This support could be provided through the joint programme currently being designed by the Permanent Secretariat of SELA and the Commission of the European Communities for evaluating the impact of the harmonization of EC technical standards on Latin American exports.

It is a fact that European consumers are leaning more and more towards higher-quality products, since their standard of living, basically reflected in a high and ever-increasing level of disposable income, is such as to allow them to turn their attention to health-related and environmental matters. One expression of this phenomenon is the tightening of Community environmental regulations, which is expected to cause some EC smokestack industries, especially mineral-processing plants that pollute the environment, to relocate to Latin America (Grandi, 1991).[29] As IRELA put it, "Latin America will thus be in a position to benefit not only from an increase in its exports of minerals to the EC but also from sales having a higher value-added component" (IRELA, 1991, p. 38).

This point of view, which appraises only the short-term benefits for Latin America, takes into account neither the need for ecologically sustainable development in the countries of the region nor the fact that environmental protection is the whole world's responsibility. Moreover, the supposed gains for Latin America of serving as a "garbage dump" might not even be realized, since the EC plans to maintain its tariff escalation system, and Community ecological standards will also be extended to imports, as for example in the case of Latin American tropical timber (Grabendorff, 1992, p. 230).

In any event, Latin America will have to meet the challenge of responding to these new international demand requirements by diversifying its export structure with the help of more aggressive commercial policies and by making the necessary investments to increase the competitiveness and quality of its products through the application of socially and environmentally sustainable economic models. It is vital, however, that these standards should operate transparently and on a non-protectionist basis. Unfortunately, there is no guarantee that the EC will apply these measures in an unbiased manner. This concern has led one United States Assistant Secretary of State for Economic and Business Affairs to affirm that his country's "bottom line" in this critical area is transparency" (McAllister, 1989, p. 20).

[29] However, the relocation of polluting enterprises from developed to developing countries is a phenomenon which is not yet borne out by sufficient empirical evidence (Dean, 1992).

All the above factors indicate that the EC's non-tariff protectionism will probably increase as the Single Market enters into operation. Against this backdrop, the cost of a "Fortress Europe" –whether partly or fully realized– would be higher for Latin America than for the rest of the world. However, as discussed in Section I of this article, the impact on both areas would be less under the "European castle" hypothesis, i.e., in a scenario in which protectionism does not get worse. Even in this case, however, for the same reasons mentioned earlier, the cost for the Latin American countries would still be comparatively greater than for the rest of the world.

2. Effects on specific sectors

The demand for most agricultural products shows little price or income elasticity, so that neither the lower prices nor higher incomes which are anticipated outcomes of the SEM will lead to significant increases in the Community's demand for imports. Such increases are even less likely if an appreciable proportion of Latin American merchandise exports to this market must compete directly with European products or with the output of the African, Caribbean and Pacific countries, which are protected by the CAP and by the Lomé Convention, respectively.

The products that could be affected the most severely include bananas, tropical woods, sugar, cocoa and temperate-zone agricultural products such as grains, soya and products thereof. This would hurt practically all the Latin American countries in varying degrees. On the other hand, one product on which the impact may be positive is coffee, but even so this would benefit the Central American countries more than, say, Brazil or Colombia, since Community consumer preferences will probably be for the higher-quality coffee blends from Central America (Grabendorff, 1992, p. 229).

The demand for minerals and metals is also quite inelastic with respect to price and income, and Community imports of these goods are therefore unlikely to increase significantly. Moreover, as one of the main purposes of the Single Market is to enable European firms to absorb technological innovations and thus reach higher levels of efficiency, the introduction of new production processes may be expected to lead to a decline in the Community's consumption of minerals and metals.

Indeed, the Community's technology policy points in this direction, since its objectives include

promoting the replacement of traditional materials by less costly ones (e.g., fibre optics) and the recycling of waste. Thus, "products that may run up against problems or sustain negative impacts include iron ore and concentrates and undressed ores of such non-ferrous metals as copper and bauxite" (Grandi, 1991, p. 100). At the same time, since the EC is expected to maintain its tariff escalation system, the prospects for more highly processed goods are not very bright either. The Latin American countries whose mineral and metal exports to the EC may be the most severely affected are Bolivia, Brazil, Chile, Peru and Venezuela.

The outlook for oil exports is even bleaker. IRELA reports that representatives of the Member States of the Conference on Security and Cooperation in Europe, of the Republics of the former Soviet Union and of Australia met on 17 December 1991 in the context of the Hague Conference on the European Energy Charter, "whose ultimate purpose is to create an energy market in Europe based on the rich petroleum and gas reserves of the former USSR. The combination of supplies from the East and investments from the West could eventually lead to European self-sufficiency in the energy sector, which would cause Latin American fuel exports to lose a large portion of their European market" (IRELA, 1991, pp. 36-37). Moreover, the EC's energy policy involves using energy-saving technologies or petroleum substitutes. Thus, the impact on Ecuador, Mexico and Venezuela would be significant.

In contrast, the demand for manufactures is highly income- and price-elastic. Consumption of manufactured goods may therefore be expected to rise, but this will not necessarily increase imports of such products from non-EC countries, since the Single Market will make the Community's own production more competitive, especially in this sector. Hence, even if Community protectionism does not increase, the outlook is bleak for Latin America. The tariff escalation system and the existing non-tariff barriers are quite enough, just as they have been in the past, to form a tough barrier to Latin American manufactures seeking access to the EC.

As a matter of fact, just three categories of manufactured products –footwear, textiles and leather goods– account for over 5% of Latin America's total exports of tangible goods to the EC, and in all three, Latin America has gradually been losing ground in terms of its share of Community imports, while stronger East European competition may further accentuate this decline in coming years (Grabendorff, 1992).

Latin America's trade in services will not readily benefit from European liberalization either, since it is not yet sufficiently competitive in international markets in this sector. One of the few exceptions to this rule is tourism: an activity that could eventually bring some benefits to Latin America owing to the higher incomes of EC citizens.

In conclusion, all the indications are that the repercussions of the Single Market on Latin America's trade will, at least in the short and medium term, be negative. This applies not only to the Community's own territory but to the rest of the world as well, since the EC will also improve its own competitive position in international markets, including that of Latin America. [30] Thus, the Latin American region has no choice but to face the challenge of making the necessary structural transformations in order to become more fully integrated into the world economy while also broadening its trade options so as to diversify its export products and markets as much as possible. Even so, the need to build stronger economic ties with the EC should not be neglected. To this end, Latin America will have to strengthen its bargaining power both by making a greater effort to work towards regional integration and by making better use of existing forums for political and economic dialogue with the EC.

3. Other considerations

It should be borne in mind that the above conclusions are based on an approach that focuses on the Single Market's short- and medium-term effects. In the long run, a more optimistic scenario could be envisioned, for three reasons. The first would be the EC market's eventual success in dealing with the vicissitudes of economic adjustment within the framework of more coherent macroeconomic policies. It is quite probable

[30] A drop in the prices of Latin American imports coming from the EC is therefore likely. However, this benefit may be offset, first, by the costs associated with a decline in the competitiveness of Latin American exports *vis-à-vis* Community exports in external markets and, second, by the possible deterioration of the terms of trade for Latin America's principal exports as a consequence of the greater international supply resulting from the exportation of European products that compete with those of Latin America (especially temperate-zone farm products).

that the Single Market, as it matures, will move towards a dynamic restructuring of comparative advantages among its member countries and will attain high enough levels of productive efficiency to make its products more competitive in the international market.[31] Under such conditions, EC protectionism on a scale comparable to present levels or those foreseeable over the medium term would no longer be justified. Furthermore, in the long run the dynamic benefits of deepening the European integration process should manifest themselves, with the resulting external economies for the rest of the world.

The second reason would be the assumption that the multilateral trading system will evolve in the direction of greater openness and competitiveness, with international trade regulations being geared to the achievement of greater transparency in international trade, not only in goods but also in services and financial flows. An obvious precondition for this outcome is the satisfactory conclusion of the Uruguay Round within a reasonable space of time.

Finally, with regard to the possible benefits for Latin America, it will be crucial for the countries of the region to continue making headway in their efforts to restructure production within the framework of an open economy and political and economic stability so that they may develop the dynamic comparative advantages they need to fill the available niches in international markets. This means that the Latin American export structure will have to evolve in a dynamic manner in line with the changing conditions of world demand, which will require the application of a technically, economically, socially and environmentally sustainable long-term development model.

(Original: Spanish)

[31] All this would be in a context of European political and economic reorganization involving not only the successful resolution of certain political conflicts within the EC and the strengthening of its free trade agreement with EFTA, but also the attainment of a more integrated and virtually continental-scale European economic scheme.

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Natural resources: *the current* debate

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This essay identifies the main points in the natural resources debate. After highlighting the issues of sovereignty, distribution of benefits, deterioration in the terms of trade, and the institutional structure of world markets, which have been particularly important over the last forty years, it suggests that the debate should now get away from demands and counter-claims and concentrate instead on questions of sustainability and competitiveness. In conclusion, it proposes a regional initiative to strengthen the capacity to manage the natural heritage and resources and promote the wider spread and incorporation of technical progress.

I

Introduction

When the value attached to the national heritage and natural resources in developing countries was only viewed in terms of external demand, patterns based on extraction for sale predominated, but when more endogenous considerations prevailed this made possible closer links with domestic production.

In the developed countries, the decision to establish such production activities depended initially on the availability of natural resources and above all their competitiveness compared with other supply options. But it was without doubt their capacity to generate technical progress which enabled them to advance towards stages involving greater added value and to project themselves abroad in order to overcome physical limitations and obtain the natural resources needed to build up their productive structures. The developing countries, for their part, played the role of primary suppliers, without worrying too much about the impact of these resource exploitation processes on the diversity of their natural heritage.

At the same time, the segmentation of production facilities and the terms of the trade synchronization between the primary processing phases and those involving more advanced forms of manufacture meant that the amount of value retained within the developing economies was only small and the sharing of benefits was unequal.

The international economic cycles and the advance of technical progress, for their part, gave rise to constant fluctuations in external demand which repeatedly affected the terms of trade and undermined the natural advantages of some areas of extraction.

The market position or status of natural resources depended on how functional they were to the economies which controlled the store of knowledge, while the shares of the suppliers were dictated by the quality of the resources and their extraction and transport costs. The control of knowledge conditioned the values of the use and trading of natural resources, while the dynamism of such resources depended on the secondary effects of booms in activities involving more highly processed products.

Exploitation of their natural advantages gave the resource-extracting economies the capacity to buy more highly-processed goods, whereas fully integrated economies controlled trade in both directions (primary resource exploitation - trade - added value - trade).

The circulation of goods with unequal levels of added value brought out the segmentation of technical knowledge and established various forms of discrimination which further increased the unequal sharing of the benefits of international trade.

Natural resources with a lower degree of processing were traded primarily in oligopsonic markets or intra-firm trade circuits and their value was usually fixed under the rules of a "buyer's market", whereas products with a higher degree of processing were valued on a "seller's market".

Consequently, the bargaining power of economies depending on the extraction of natural resources was seriously restricted, and much of the income that they should have received from their operations was transferred to the economies which controlled the production chains transforming those resources into more highly processed goods.

II

The natural resources debate from the 1950s onward

Much of the natural resources debate from the 1950s onward was taken up with questions of sovereignty, sharing of benefits, deterioration of the terms of trade, and the institutional structure of world markets.

In many countries of the region, the State was gradually taking on a dominant role in resource exploitation, and this trend became even more marked in the 1960s and 1970s, when foreign interests in the fields of agriculture, mining and petroleum were nationalized.

In other countries, the exploitation of certain natural resources was reserved for nationals of those countries, or preference was given to forms of operation in association with the State, against a background of frequently conflictive relations with foreign investors.

These conflicts concerned the sharing of benefits. Those who supported policies of State ownership demanded absolute control of operating revenue, while those who took a more flexible stance nevertheless insisted on the application of arrangements which guaranteed the national economies a bigger share. The incorporation of foreign firms in domestic structures of production was also questioned because of the purely extractive nature of their activities, often converting them into virtual enclaves. These criticisms generally favoured greater government intervention, on the assumption that State control would guarantee greater sectoral and spatial integration and better terms of access to world markets.

Against this background, the countries of the region sought to change the institutional structure of the markets by participating in various concertation and cooperation schemes and denouncing discriminatory and protectionist trade practices. Some of them adopted the so-called "minimax" approach, through agreements between producers and consumers, while others took "zero-sum" positions which reflected only the interests of producers. The "minimax" options assumed that it was possible to strike a balance between what was minimum for some and maximum for others, and vice versa, while the "zero sum" options adopted an attitude of confrontation: what was good for some was bad for others, or in other words, some won while others lost.

Little by little, experience showed that such options were not viable. Today there are very few agreements between producers and consumers which are really working, while producers' organizations have been unable to secure changes in the practices and institutions of the markets.

III

Main lines of the natural resources debate in the 1990s

In the 1990s the debate has centered on the patterns of exploitation to be adopted in the context of the tendency towards the internationalization of environmental questions. Conflicts with the transnational corporations have diminished, and hopes are placed on a new form of cooperation based on mutual benefits. However, price fluctuations and a decline in some of their natural advantages continue to affect the countries of the region, while natural resources are steadily losing their relative position in world trade.

1. The new form of cooperation with transnational enterprises

A substantial change has been taking place since the 1980s in the relations between transnational corpora-

tions and the developing countries. Most of the countries of the region have been abandoning Statist attitudes and defensive positions in general, since they considered that foreign direct investment (FDI) was the most important manifestation of a process of transnationalization from which they could not and indeed ought not try to escape.

World FDI had been concentrating in the developed nations and the newly industrialized countries, while the region had been gradually losing its share of international flows of risk capital. This was a negative development, as FDI was the main vehicle for the spread of technical progress and the most promising way of diversifying export markets. [1]

Among the factors responsible for this change of attitude was the low level of capital formation in the exploitation of natural resources; the perception that Statist policies tended to exclude the countries of the region from the benefits of technical progress; the lower level of interest that the region was attracting compared with other developing countries, and the need to expand exports in order to cope with the heavy external debt service commitments.

Other additional factors were the lower availability of credits for State operations, doubts and criticisms regarding the projects undertaken, the financial difficulties of public enterprises, management problems, and fiscal restrictions.

The new policies adopted with regard to natural resources assign special importance to the participation of transnational corporations for at least three reasons: because these corporations provide capital for exploiting new resources and expanding and modernizing existing operations; because they permit the expansion and diversification of markets with, where possible, an increase in the degree of processing; and because they make it possible to take advantage of technical advances in the identification and exploitation of natural resource endowments.

Sovereignty over such endowments is of vital importance in the new form of cooperation with transnational corporations, but this does not mean that it is considered necessary to have direct control over the operations. What is important is that the presence of such corporations should help to gain more dynamic positions in the world economy and that the fair sharing of benefits should be guaranteed.

Thus, the 1990s marks the beginning of a new stage in which the participation of transnational corporations in the exploitation of natural resources could regain the leading position it occupied before the 1960s.

2. The dynamics of world trade

The growth rate of international trade in natural resources has been slackening for several decades. Thus, the share of agricultural and mining products in the total value of world trade dropped from 48% in 1960 to only 26% at the end of the 1980s, while world primary commodity trade increased by a factor of only 12 between the mid-1950s and the end of the 1980s, whereas trade in manufactures grew by a factor of 55.

Moreover, the developed countries have been accounting for an increasing proportion of trade in primary commodities (excluding fuels), raising their share from 56% in the mid-1960s to 65% at the end of the 1980s. In contrast, the region's share of world primary commodity exports (excluding petroleum) went down over the same period from 14% to 11%, representing 42% of the total loss of participation of the developing countries as a whole.

This combined with the deterioration in the terms of trade, which was 25% lower at the end of the 1980s than at the beginning of the decade.

3. The deterioration in natural advantages

Natural resource exploitation has suffered not only from the slower growth of international transactions but also from a rapid process of substitution and a decline in the weight of such resources as components of more highly processed goods.

The less intensive use of natural resources has naturally tended to weaken demand for them, and it is estimated that the content of natural resources per unit of industrial production is now only 40% of what it was at the beginning of the century (ECLAC, 1988).

Consequently, an outstanding feature of the new technological pattern now prevailing is that the restructuring of production will involve not only the development of new materials but also changes in the previous conditions of resource exploitation.

[1] In the mid-1980s, 75% of the annual flow of FDI was concentrated in the developed countries, and the developing countries only received the remaining 25%. In the case of Latin America and the Caribbean, their share of world FDI had gone down from 12% in 1975-1980 to only 10% in the five-year period from 1981 to 1985.

The weakening of natural advantages has been due not only to the rapid displacement of conventional materials, however, but also to the very limited capacity for incorporating new technologies. In this respect, it is true that technical progress also offers a certain margin for the reduction of costs, which highlights the importance of proper management of relative prices, but income-elasticity nevertheless indicates that a higher degree of development is accompanied by lower demand for primary commodities.

Technical progress therefore stands at the centre-point of the debate (ECLAC, 1991c). Efforts should therefore be made to seek closer links between the natural resource endowment and research and development activities, with a view to the incorporation of new technologies which will make it possible to revive some comparative advantages and discover new potentials.

4. Net contribution and sustainability

The most recent debates on these issues have helped to bring out the importance of resource accounting and the possibility that it may give rise to qualitative changes in exploitation patterns, in view of the implicit costs involved in use of the natural heritage (ECLAC, 1991c). What has been proposed is that in calculating total income account should be taken of the depletion of the stock of natural resources, thus severely questioning short-sighted resource use criteria.

Since the Brundtland Commission defined sustainable development as the capacity to satisfy present needs without jeopardizing the resources of future generations, the debate on sustainability has revolved around this central idea (London Environmental Centre, 1989).

What this approach means is that societies should satisfy their needs without adversely affecting their environment: this involves the need to place limits on growth, either by controlling the demand for natural resources or by managing the supply, with the problem centering on the relation between technology and the environment.

Thus, sustainable development should permit a harmonious relationship between satisfaction of needs and preservation of biodiversity. This position is based on the assumption that development will foster its own weaknesses unless it protects the structure, functions and diversity of natural systems. Since the human race, and all other living beings, depend on these systems, loss of biodiversity would reveal an imbalance between human needs and the natural environment in which they are satisfied. Natural resources must therefore be protected and used in an equitable manner, without reducing their variety or affecting the existing habitats and ecosystems: in other words, taking care of nature so that it will take care of the human race.

These proposals are linked with other views that take up the debate on growth and development once again, concentrating on the relationship between production systems and the natural heritage. For those holding these views, the problem is not so much in growth itself as in the form it assumes, its content, its spatial location, the distribution of its benefits, and its ecological rationale (Fajnzylber, 1992b). Advocates of this approach take a historico-structural view, giving special attention to styles of development, which are responsible for the state of the environment and the specific ways the natural heritage is used, and they conclude that the international division of labour is not based on an ecological rationale which takes account of the sustainability of growth and the equitable distribution of its benefits.

The most economicistic approaches hold that societies should be capable of living within their income and not using up their assets: an attitude deriving from their own definition of income as the maximum resources which can be demanded without reducing future consumption (Gómez Lobo, 1991). They stress the limitations of the market in terms of ensuring that there is a balance between the interests of producers and the sustainability of development, and they emphasize the risks involved in the internalization of benefits and the externalization of costs. In this respect, appropriation without payment of environmental goods belonging to society as a whole is not taken into account by the market mechanisms.

This approach is diametrically opposed to that which considers that it should be the market which gives the signals favouring substitution, variations in relative prices, and technological changes.

5. The internationalization of environmental questions

Environmental issues have transcended national frontiers to become one of the basic items on the international agenda.

It is considered that present forms of growth are generating an eco-environmental and eco-political

crisis which is likely to jeopardize the stability of present-day civilization because it is connected with the progressive exhaustion of some resources, the lower recovery capacity of ecosystems, and the power factors determining their exploitation (ECLAC, 1992c).

This is beginning to give rise to the increasing currency of positions favouring an international environmental order which could have substantial repercussions on the trade in natural resources. Since it is considered that the process of changing production patterns cannot be halted and that moreover this is one of the aspirations of the developing countries, precautions must be taken to ensure that sustainability is not imperilled (Schaper, 1991).

Within this context, the relations between trade liberalization and protection of the environment have formed a central part of the debate. GATT has come out against the establishment of environmental trade barriers, and for the critics of free trade this amounts to questioning the power of governments to use trade in support of environmental policies (GATT, 1992).

These critics have proposed alternatives along four lines: that the least restrictive standards should be brought in line with the severest ones; that imports from countries which use production techniques harmful to the environment should have to pay compensatory duties; that producers should be subsidized to cover the extra costs caused by more restrictive environmental standards, and that, in extreme cases, it should be forbidden to import products which harm the environment in their countries of origin.

GATT, however, holds that trade liberalization would increase national income and also promote greater absorption of technology, thereby giving countries more resources for protecting the environment, and that there is no reason to assume that such increased income might not be used for that purpose. The establishment of trade barriers, in contrast, would have harmful implications for the environment because it would reduce trade opportunities, and giving way to such pressures would merely foster a new type of protectionism on top of the existing one.

The question has now arisen in the debate as to whether a new environmental order is being constructed or not. The answer would appear to be in the affirmative in view of the 127 multilateral agreements on the environment which are now in force, together with the 211 notifications under the Agreement on Technical Obstacles to Trade provided for in the Tokyo Round, which regulate protection of the environment and of human health and safety in various areas of ecological interest.

While the globalization process may further the construction of a new environmental order, for this order to be equitable it must be based on a reasonable balance between the various options for changing production patterns. Thus, countries which are so advanced technologically that they enjoy higher levels of well-being and are in a position to assign greater relative importance to protection of the environment should not do so to such an extent that they adversely affect countries which are not leaders in technological change and have high levels of poverty.

IV

Natural resources and changing production patterns

The debate was to take on new significance with the proposal for "changing production patterns with social equity", which assigns a central role to the incorporation and spread of technical progress (ECLAC, 1990, 1992a and 1992b).

Issues connected with discriminatory trade practices and the deterioration in the terms of trade will continue to receive attention, as they are recurring phenomena. However, giving priority only to trade-related demands could lead to the evasion of domestic responsibilities and of aspects connected with sustainability and competitiveness.

In order to define this new significance and understand its real content and projections, certain concepts need to be clarified.

1. The natural heritage and natural resources

The natural heritage covers all the elements of nature and all the natural processes taking place in a given

space. This concept includes the soil, the subsoil, air and water, and in more general terms biotic and ecosystemic diversity, as well as the interrelations of all these factors and their capacity for reproduction and self-sustainment.

Each physical space has a corresponding set of laws of configuration and functioning defined by the existing natural systems, as well as a heritage bequeathed by earlier generations, so that the concept of natural heritage also has historical dimensions.

In contrast, the concept of natural resources stems from the use human societies make of the various natural elements and processes with the aim of increasing their value in terms of their use and trade.[2] This concept therefore involves the idea of tangible or intangible usefulness as a result of the application of technical progress. This makes it possible, firstly, to identify and place a value on those resources, and secondly, to collect and process them in line with the state of science and technology and the prevailing patterns of life.

Thus, the variables of time and space mean that both the natural heritage and natural resources have a relative value which depends on technical progress. Although the natural heritage has an intrinsic value, the values of use and trade generated by its exploitation are relative and variable in time and space. Consequently, natural advantages should always be treated as dynamic and not static factors.

2. Changing production patterns

The concept of changing production patterns is also relative and variable in time, since it depends on the degree of technical progress attained. It should therefore be associated with the accumulation of knowledge on natural elements and processes and on the exploitation processes created by human societies.

This consideration is very important, because if the concept is linked solely with the exploitation processes it would be restricted to the idea of industrialization. A fuller definition of the concept of changing production patterns should therefore include the investigation and conservation of the natural heritage, the identification and use of natural processes, and the generation and application of exploitation processes in order to obtain resources which can be incorporated into the areas of production, circulation and consumption of goods which are increasingly highly processed and increasingly differentiated from each other through the incorporation of knowledge.

The process of changing production patterns should result in greater availability of goods and services in order to satisfy social needs and to investigate, evaluate, conserve and manage the potentials of the natural heritage and natural resources. Just as this would enable human societies to find better options for meeting social demands, it would also enable them to choose the best way of interfacing with their natural environment, given a certain level of technical progress.

The main objective of changing production patterns would therefore be to know and master the natural environment so as to manage it in order to give a better quality of life. This would depend not only on access to increasingly highly processed and better distributed goods, but also on the impact of such management on the natural heritage.

The process of changing production patterns begins, then, with a proper knowledge of natural elements and processes –which calls for a complex set of non-natural goods and processes which will further both their understanding and their use– followed by the interrelation of both types of processes to generate goods of growing added value.[3]

Because of its relative nature, the process of changing production patterns assumes that there are no limits on knowledge of the natural heritage or on the future interrelation of processes and goods. It therefore includes the idea of movement and depends on considerations of time and space.

3. Competitiveness, competitive position and efficiency

In simple terms, competitiveness could be defined as the capacity to occupy the most dynamic areas of the market to an increasing extent. In the proposal for changing production patterns, this concept also includes the ideas of sustainability and equity, which means that the use of resources should not adversely affect the natural heritage or belittle the effective contribution of labour.

[2] In order to gain an idea of the true magnitude of the natural resources of Latin America and the Caribbean and the proportion of total world resources which they represent, see the appendix at the end of this article.

[3] Natural processes are a datum of the real world and reflect the various interrelations of the elements which make up nature and their capacity of reproduction and self-sustainment. Non-natural processes, on the other hand, are the result of human action and vary with the degree of knowledge attained.

Consequently, a form of competitiveness based on over-exploitation of the natural heritage, wage levels below those of labour productivity, or the application of subsidies will be of a spurious nature and will therefore be dependent on circumstantial factors which cannot persist in the long term. In contrast, however, competitiveness will be truly authentic if it guarantees the sustainability of the natural heritage and contributes to greater equity.

Competitiveness is an ongoing, systemic process and involves a set of situations linked with the concepts of competitive position and efficiency. Competitive position means the greater or lesser dynamism of transactions in goods and services, while efficiency refers to the proportion of the market obtained by the agents of production.

The evolution of competitiveness will therefore depend on the various permutations of competitive position and efficiency. If the natural heritage has advantages which mean that it can be used and converted into resources that gain a significant and growing share of the market, then an optimum level of competitiveness will have been reached. [4]

4. Natural advantages and technical progress

Technical progress can have a two-sided effect on natural resources: positive when it makes possible the use of fresh potential, but negative when it reduces or destroys existing advantages.

Natural advantages are therefore not static factors. Their heightening, decline or recovery are dynamic phenomena which depend on the state of science and technology.

Technical progress can open up undreamed-of opportunities for making use of the natural heritage. In this respect, while it is true that natural resource-based exports have registered lower growth rates, it is also true that in recent years there has been considerable diversification of such exports, especially in the agricultural and fishery sectors.

The dynamic nature of natural advantages may be illustrated through the new opportunities that biotechnology has been opening up in the areas of agriculture, agroindustry and preservation of the environment. These advances have made it possible, for example, to use living organisms or parts thereof for the generation or modification of plants, animals and various products, as well as for the development of micro-organisms for specific purposes, thus facilitating the replacement and improvement of agricultural and livestock species and contributing to better linkages between agriculture and industry.

The deterioration of natural advantages should therefore not be viewed with unrelieved pessimism, as this phenomenon is an inherent part of changing production patterns.

Natural resources have a useful life which may be either prolonged or shortened by technical change, but which is generally longer than that of many manufactured products. What is important is to preserve the natural elements and processes which have a an ongoing useful life. Although technical progress may cause some advantages to decline over time, their value as determinants of the equilibrium of physical spaces is permanent.

The maintenance and generation of new competitive advantages should therefore be based on the development of endogenous capacities which will promote a high degree of knowledge and proper management of the natural heritage, eschewing short-sighted simplifications. The preservation of natural balances, for its part, could come to be seen as a more valuable economic asset, since competitive advantages are likely to be increasingly based on the differentiation of physical spaces.

5. Physical spaces and competitiveness

Competitive advantages based on the differentiation of physical spaces are variable over time. Classical approaches saw the advantages of these spaces as being static, for they did not take account of the role of technical progress in overcoming spatial difficulties.

Thus, for example, advances in means of transport and processes for the conservation of natural products (packing, refrigeration, etc.) mean that differences of season between one region and another are now very important: something which was not the case when transport to the centres of consumption took a long time, so that it was impossible to market perishable goods.

[4] If the competitive position were favourable but the market share were only small, this would be a situation of missed opportunities. If the opposite were the case, then there would be a situation of vulnerability. Finally, if both competitive position and market share were unfavourable, this situation would lead to withdrawal from the market.

At the same time, progress in engineering has made it possible to overcome natural obstacles and open up new productive spaces through better physical planning, while genetic engineering has made it easier to handle natural processes and improve the quality of natural species by giving them new qualities and adapting them to different environments from those of their place of origin, thus permitting the wider spread of consumption patterns, so that products which are consumed on a massive scale in spaces which enjoy natural advantages can also be consumed in other parts of the world at prices much higher than those paid in their places of origin.

6. Natural resources and competitiveness

The competitive advantages of natural resources are closely linked with knowledge of the natural heritage and the capacity for the absorption of technical progress. The level of competitiveness is higher when the national environment is such that it allows enterprises to develop innovative strategies.

Strategies for increasing the competitiveness of natural resources have some special features connected with the way the markets are organized, however. Basic commodities are obliged to accept the prices offered on the international market, so that strategies for increasing their competitiveness are linked to their cost structures and stability and timeliness of supply, rather than to price management proper or product differentiation. Since the prices of these products correspond to homogeneous levels of processing or quality, there is less leeway for improving their competitive position or efficiency than in the case of manufactures.

There are a number of factors, however, which influence competitiveness on both an *ex ante* and an *ex post* basis. *Ex ante* factors furthering competitiveness include identification of the natural heritage potential (geological maps, cadasters, agro-ecological zoning, etc.) and registration of the geographical location of resources and the level of equipment of the territory (roads, energy supplies, financial systems, telecommunications, public services, etc.). *Ex post* factors, for their part, include the criteria for determining prices and charges for use of the infrastructure, customs and financial restrictions, the tax burden, and other aspects having an incidence on the cost structure.

All these factors also affect the competitiveness of more highly processed goods. In this case, strategies place greater emphasis on product differentiation, market segmentation and price management, and factors influencing the cost structure. Thus, for example, measures could be taken to promote both natural advantages (geographical location, seasonal factors and quality) and acquired advantages (genetic management, contacts with centres of consumption, transport, packaging, preservation, etc.). The biggest limitations, however, are encountered in the areas of market knowledge, volume and timeliness of supply, and trade barriers affecting more highly processed products.

V

Natural resource management

Although the prevailing international order and the deterioration in the terms of trade are inescapable aspects in this connection, it is important to center the debate on the capacity for natural heritage management.

Thus, it is important to see to what extent the countries of the region have endogenous capacity to generate, absorb and adapt knowledge which will permit them to identify natural elements and processes and conserve, use and manage them for the purpose of changing production patterns. It is also important to determine to what extent these countries are in a position to achieve a dynamic combination of sustainability and competitiveness with a view to generating, spreading, homogenizing and leading patterns of production, circulation and consumption on the basis of an endogenous capacity for enhancing and making use of their natural heritage.

The necessary integral management of the natural heritage and resources should form part of a systemic concept stemming from the linking together of the various public and private attitudes and actions on the basis of values, organizational criteria and codes of conduct conducive to increased sustainability and competitiveness (Fajnzylber, 1992a and 1992b).

This would allow the behaviour of the various actors (the State, the business community and the population at large) to follow the same general lines, while at the same time ensuring the compatibility of the strategies, policies and measures applied in the legal sphere (rights and obligations regarding access and ownership), in the economic field (the market versus intervention), in the area of physical or natural considerations (knowledge, conservation and use of resources), in science and technology (generation and absorption of knowledge), in the area of education (dissemination and training), in cultural matters (preservation and transmission of values), in social affairs (participation and mobilization), and in the field of organization (functions and aims of institutions).

The systemic approach assumes that it is possible to advance towards the objectives of sustainability and competitiveness simultaneously rather than in a sequential manner, and this undoubtedly raises an enormous challenge (ECLAC, 1991d). It involves, on the one hand, facing up to the deterioration of natural advantages, and on the other, recovering or discovering new natural potentials, which can only be done through greater spread and incorporation of technical progress. Although this would have some disturbing effects on certain natural advantages, it would at the same time make it possible to reduce operating costs, generate new uses and applications, and spread new patterns of production and consumption based on the use of natural resources.

1. The new main lines of the debate

From the standpoint of the objective of changing production patterns with social equity, the debate should be centered on four main items: human capital, natural capital, compatibility between natural processes and those aimed at the exploitation of resources, and the diversification of natural resources.

a) *Human capital*

In natural resource management, special importance should be assigned to the development of human capital, since education and training facilitate the spread and incorporation of technical progress, while at the same time creating favourable conditions for increasing sustainability, competitiveness and equity.

Special attention should be given to sectors which are in a situation of extreme poverty, which are associated with the phases of lower productivity, less incorporation of technical progress and greater degradation of the natural heritage. In order to tackle the vicious circle of natural and social deterioration it will be necessary to redefine the spatial location of certain human settlements by promoting migration to more favourable spaces; to stimulate educational programmes adapted to the needs of the natural environment; to promote the spread and adaptation of appropriate technologies; and to foster a new appreciation of traditional species and techniques, as well as the values of native cultures.

To this end, efforts must be concentrated on the spaces suffering from the greatest natural degradation. Although conditions vary greatly from one country to another, the general diagnosis would appear to indicate that priority attention should be given to the human capital in marginal peasant economies, whose interaction with their corresponding natural systems leads to frequently irreversible losses of the productive capacity of the soil and of biodiversity.

b) *Natural capital*[5]

Greater incorporation and spread of technical progress should ensure better identification and evaluation of the natural heritage, as well as a fuller understanding of the factors behind its configuration. It is not just a question of having increasingly broad and comprehensive inventories, but also of gaining fuller knowledge of the mutual relations between natural elements and processes.

The preparation of natural capital accounts would undoubtedly be an essential tool for gaining an idea of the impact of changing production patterns on the physical environment: it would make it possible to measure the costs in terms of the natural heritage and form an idea of the probable tendencies in its long-term exploitation. In this respect, it would be essential not to take account only of the short-term income, because this would mean evading the need for sustainability and basing the evaluation on a spurious form of competitiveness, since the depletion of the resources would affect income in the more distant future.[6]

[5] All the figures on renewable resources in sections b) and c) are taken from FAO, 1988, 1992a, 1992b and 1992c.

[6] In this respect, it is necessary to take account not only of the marginal operating cost but also of the opportunity cost, which is equal to the difference between prices and marginal costs. From this point of view, the market configuration and the price formation mechanisms could become a significant obstacle to ensuring sustainability, if prices were lower than the marginal cost.

This approach is particularly important for Latin America and the Caribbean, since although they have significant natural potential compared with other developing regions, this potential is very unevenly distributed and is subject to a series of restrictions. For example, only 3.4% of the arable land could be considered competitive because of the absence of problems of climate, slope and fertility,[7] and although there are substantial mineral and energy reserves, their effective use would depend on changes in cost/price ratios and in the capacity to absorb technologies capable of lowering those ratios.

In order to tackle these problems, it is necessary to avoid further deterioration of the natural capital while reducing costs and raising productivity, thus underlining once again the importance of incorporating and spreading technical progress.

Efforts should therefore be made to ensure that the income from natural resources is distributed in a manner that reconciles exploitation with sustainability, leaving a margin of revenue that can be deposited in funds for conservation and improved exploitation of the natural heritage.

With regard to non-renewable resources, funds should be made available for surveying, prospection and exploration, so that a better knowledge can be gained of their potential, while part of the income from renewable resources should go to help the attainment of higher productivity of natural elements, genetic improvement of species being exploited, and fuller knowledge and conservation of biodiversity.

The management and conservation of biodiversity are of fundamental importance, since it is the unequal distribution of resources in the world that determines natural advantages and, ultimately, the competitiveness of renewable resources.

It is therefore necessary to promote the use of funds for the identification, description and evaluation of biological diversity and for its conservation, protection and proper management, in order to heighten the advantages offered by natural capital.

The use of such funds should have effects at the genetic level and at the levels of species and ecosystems, through the collection and processing of data on the whole range of genes, plants, animals and micro-organisms; expansion of our knowledge of living organisms, and the fullest possible understanding of the various habitats, biotic communities and processes of the biosphere.

All this would make it possible to gain a better appreciation of the natural capital, accurately identify the existing competitive advantages, and guide the behaviour of the productive agents by widening the range of tangible assets that could be converted into natural resources while also identifying intangible assets whose use will depend on the future course of science and technology. The tangible assets would be used and traded, while the intangible ones would form a reserve whose potential value would depend on the future advance of knowledge. It should be borne in mind at all times, of course, that the use of the tangible resources should never jeopardize the potential of the intangible assets.

The generation of tangible and intangible assets will depend on the existence of endogenous capacity for ranking and associating, as necessary, such factors as biological variety, the existence of spaces for the conservation of fauna and flora, the potential of river basins, the importance of migratory fauna, the existence of unique vegetable formations, the presence of endemic species, and the geomorphological or landscape value of natural formations.

c) *Natural processes and processes of exploitation*

It is not enough, however, merely to have a knowledge of the natural capital and an inventory of the available natural heritage. It is also necessary to promote greater generation, assimilation and dissemination of technical progress in order to secure increasing compatibility between knowledge of the processes behind the growth of natural capital and knowledge of the means for its use. The debate should therefore center on ways to improve both the conservation and the productivity of natural capital, in view of the fact that its deterioration is reaching alarming levels, as we shall see below.

i) *Deterioration of the productive capacity of land.* It is estimated that two-thirds of the land under permanent cultivation in Latin America and the Caribbean has lost nearly 25% of its productive capacity. The incompatibility between natural processes and the forms of exploitation gives rise, *inter alia*, to the following problems:

—Soil erosion has reached alarming levels in certain parts of the region, where it is estimated to affect between 30% and 90% of the land, depending

[7] This land is in flat or gently rolling areas with a climate ranging from tropical to temperate, mostly in the Southern Cone countries.

on the country (in the mountainous ecosystems of the Andean and Central American regions, for example, erosion affects nearly 50% of the available land).[8]

—The loss of land fertility is particularly severe in humid and sub-humid areas, but over-exploitation is also reducing the fertility of the available land in less humid climates.[9]

—Problems of compaction, which adversely affect crop growth and yields, usually occur in fertile land as a result of the excessive or unsuitable use of heavy machinery.[10]

—Salinization and sodification, which already affected 25% of the agricultural land in the region at the beginning of the 1980s, continue to get worse.[11]

—Desertification affects 20% of the land in the region, and it is estimated that it may spread to 50% of the land in the future (over 10% of the land in Argentina, Bolivia, Chile, Mexico and Peru is believed to be deteriorating from moderate to severe desertification).

Soil management should be aimed not only at avoiding degradation of the land, but also at recovering the productivity of affected areas, in view of the restrictions on further expansion of the agricultural frontier.

Higher crop yields would not have any significant effect on employment, however, so that although there would be an increase in the value added per unit of labour employed, rural poverty could become even more serious. Consequently, and also in order to comply more effectively with the objective of greater equity, measures should be taken at the same time to promote the execution of programmes of drainage (to solve problems of salinization and flooding), land rehabilitation (to restore lost fertility), and afforestation and reafforestation.

More attention should also be given to land zoning according to agro-ecological criteria, in order to ensure land use compatible with bio-physical factors. This would increase sustainability and competitiveness and make it possible to guide the work of dissemination and training more effectively, as well as facilitating the planning and coordination of endogenous research and development capacity.

ii) *Rapid deterioration of forests.* The rapid deterioration of the region's forests shows how little importance is attached in practice to the role played by forests in conserving the environment and promoting orderly use of the natural heritage.

The answer is not, of course, simply to classify forested areas and declare which of them are available for exploitation and which should be protected areas. What is needed is integral management of the existing resources. Thus, the exploitation of forest species should form part of the orderly management of river basins, management of wildlife and agroforestry systems, control of desertification, reafforestation, and forest management for energy purposes.

These actions assume special importance when it is remembered that during the last thirty years over 200 million hectares of woods and forests have been destroyed, nearly half of which was deforested or degraded in the 1980s, when the average rate of deforestation was 8.3 million hectares per year: a million more than in the preceding decade.

From the standpoint of equity, it should be recalled that the deforestation of the arid and semi-arid areas of Latin America and the Caribbean, together with their upland ecosystems, is one of the main causes of the impoverishment of the population and the deterioration of the environment in the region.

The desertification process in arid areas of the region has converted some 20 million hectares of land into outright desert, while over 176 million hectares display high degrees of desertification or are in danger of suffering this fate.

In semi-arid and sub-humid areas, desertification is related with extreme poverty and is due to slash-and-burn practices designed to make way for subsistence crops or extensive stock-raising, since the disappearance of trees and shrubs leaves the soil without any protection against torrential rains and wind erosion.

Moreover, the settlement of lower-lying areas formerly covered with tropical or sub-tropical forests has not only failed to solve the problem of rural poverty but has actually destroyed many such areas, with

[8] Erosion reduces the depth of the soil, thus adversely affecting root length and the capacity for storing water and nutrients.

[9] Loss of land fertility is due to over-intensive or prolonged exploitation using unsuitable crop-farming, stock-raising or forestry techniques which do not replace the nutrients consumed.

[10] Compaction reduces the soil's capacity to retain moisture, makes it harder for roots to develop, and reduces the permeability of the soil, thus impeding the passage of water and air.

[11] Excessive content of salts is the main cause of declining productivity in irrigated agriculture. Salinization is particularly prevalent in arid and semi-arid regions, but it is not restricted to them, as it can also be caused by inefficient irrigation.

extremely adverse effects on the environment. It should not be forgotten that the shortage of energy which directly affects some 200 million people means that much of the timber extracted from these forests is used for firewood and charcoal.

Likewise, the over-exploitation of the forest biomass in areas of precarious ecological balance (arid, semi-arid and upland areas) has been doing away with the protective function of the trees, destroying the productive capacity of the soil and forcing the local population to emigrate to even more fragile land.

The over-exploitation of forest resources is thus a dramatic case not only because of the incompatibility between natural processes and the processes of exploitation but also because of the prevalence of a low level of change in production patterns, accompanied by social inequity.

iii) *Integrated natural resource management.* The need for compatibility between the natural processes and the processes of exploitation makes necessary the integrated management of the natural heritage resources. Special attention should therefore be given to multiple forms of forest use which involve not only extraction and processing activities but also soil protection, regulation of hydrological cycles, and conservation and utilization of genetic diversity.

Integrated management should guarantee respect for the balance of natural processes and should ensure that processes for the exploitation of one resource do not damage other resources.

In the case of *water resources*, integrated river basin management is of fundamental importance, since water is needed for multiple purposes and the water balance is becoming a significant obstacle to changing production patterns and equity in many parts of Latin America and the Caribbean (ECLAC, 1991b).

Water has the curious characteristic of being a scarce resource in spite of its apparent abundance, because only a small percentage of the water existing on this planet can actually be used by human beings. Lakes and rivers contain only 93 000 cubic kilometres of fresh water, which represents only 0.0067% of the 1 386 million cubic kilometres of water that exist in the world.[12] Out of this total volume of water resources, only a small fraction have the quality, magnitude, and easy and reliable availability needed in order for them to be of use for productive purposes.

As well as the shortage of usable water, there is the uneven distribution of precipitations in both spatial and seasonal terms. This unevenness is one of the most significant constraints on water use, since a quarter of the region's territory consists of arid or semi-arid areas. Thus, the generalized and persistent falling-off of atmospheric currents causes drought in the sub-tropical zones, while the localized reduction of such currents caused by the Andes is responsible for a diagonal belt of arid land extending to Patagonia.

Thus, great expanses of territory are affected by permanent or long-standing water shortages, while other equally large areas are subject to seasonal or random droughts.

The problem is seen to be very considerable when it is borne in mind that over 60 million people live in areas of water shortage where the average per capita income is only 80% of that of the region as a whole.

It is therefore vitally important to order and use water resources through an integrated system of management and to distribute human settlements better over space, as technical progress has not so far been able –and may never be able– to alter the essential role of these resources in production processes and the quality of life of the population.

With regard to *hydrobiological resources*, the preservation of seas, lakes and rivers so as to guarantee conservation of the natural habitat of species and their repopulation should also be the subject of integrated management, since this hydrobiological potential could cover part of the demand for food and open up dynamic demand for species which are in international demand.

This is why priority should be given to the control of water pollution, the preservation of ecosystems and of the hydrobiological mass, and regulations limiting the extraction of the main species and conserving the secondary ones. Failure to do this would be tantamount to incorporating only the most negative aspects of technical progress.

iv) *Diversification of natural resources.* It is clear from the foregoing that although the natural resources debate should continue to express demands for an improvement in the terms of access to world markets, it should not overlook the domestic problems regarding management of the natural heritage and natural resources.

The deterioration of natural advantages should be understood as a process which is inherent to technical progress and is constant in time. Such management should take account of the two-sided

[12] With regard to the question of water, see ECLAC, 1991a and 1992d.

nature of technical progress: on the one hand, by dealing with the changes in technological patterns which affect competitiveness, and on the other, by incorporating new knowledge in order to overcome restrictions and identify new natural potential.

The current debate should also consider the question of relative prices, in view of their influence on substitution phenomena. This would mean placing greater emphasis on the cost structure, seeking to raise productivity and diversify product uses in order to boost demand.[13]

In this respect, although technical progress promotes substitution phenomena, it also opens up alternative possibilities: for example, an increase in the value of resources which had ceased to be competitive or could not be exploited with conventional technology, such as low-quality mineral deposits or very deep-lying mineral or oil deposits. This shows the importance of having endogenous capacity for securing greater dissemination and absorption of technical progress in order to make fuller use not only of traditional resources but also of other natural advantages such as biodiversity.

Such measures could have very favourable effects on equity, since many of the resources used in small communities could enjoy broader demand if suitable conditions were created for the assimilation of technical progress.

VI

The need for a regional initiative

Efforts to raise productivity should be of such a nature as to change relative prices and at the same time permit the absorption of the costs of environmental protection. This approach, rather than a purely commercial view, could facilitate action to further the region's legitimate demands.

The marked tendency towards the internationalization of environmental issues undoubtedly favours a convergence of interests between Latin America and the Caribbean and the developed countries. For example, the region has 42% of the total forested areas of all the developing countries (23% of the world total), and this has decisive importance for the ecological balance of our planet.

At the same time, domestic responsibilities should not be evaded, and there should be a proper awareness of the influence that endogenous management capacity could have on the world ecological balance. In this respect, the environmental emphasis has not always been accompanied by strengthening of endogenous capacity in keeping with the commitments assumed by governments. The development of such capacity should be viewed in the context of a system of management which integrates the efforts and clearly defines the responsibilities of the public and private sectors.

Sustainability should not be viewed only in the light of aspects connected with natural capital, since this might mean giving preference to a purely conservationist approach which might run counter to the need for changing production patterns. Instead, sustainability should mean a dynamic balance among all forms of capital (natural, human, financial, cultural, etc.), which could only be attained through greater spread and incorporation of technical progress. Such a balance should reflect a dynamic synthesis which would lead to true competitiveness through the strengthening of endogenous management capacity.

In this context, it would be reasonable to call for a regional initiative, which would undoubtedly involve a big domestic effort but which should be able to secure international cooperation in the following tasks:

i) Developing endogenous capacity for identifying, evaluating, using, accounting for and protecting the natural heritage and natural resources by uniting the areas of management, regulation, control, science and technology, education and training, business skills and international negotiation within a system of management of the natural heritage and resources;

ii) Identifying the areas of management depending on market-related factors and those which call for greater State intervention, and proposing appraisal mechanisms which allow the effectiveness of public and private actions to be determined;

[13] A typical case which illustrates these possibilities is that of the new situation of aluminium production due to the reduction in energy costs. In this case, the availability of low-cost energy sources is a more important factor than the existence of the natural resource itself.

iii) Deconcentrating and decentralizing State functions, strengthening the local and regional levels of State action, and ensuring the participation of users and non-governmental organizations in management bodies;

iv) Promoting educational and training programmes designed to gain a fuller knowledge and make better use of the natural heritage and to select technologies that will ensure sustainability and competitiveness;

v) Incorporating questions relating to the natural heritage and natural resources in multilateral negotiations.

Such an initiative will require an effort of assertion which must go beyond mere declarations, complaints or demands.

(Original: Spanish)

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APPENDIX

Latin America and the Caribbean: Natural resources at the end of the 1980s
(Approximate figures)

Resources	Magnitude	Proportion of world total (%)
1. Territory (millions of hectares)	2 054	15
2. Agricultural land (millions of hectares)	1 176	8
3. Per capita land availability (hectares)	4.4	
4. Grazing land (millions of hectares)	964	14
5. Permanent pastures (millions of hectares)	588	18
6. Forests (millions of hectares)	954	23
7. Wooded areas (millions of hectares)	1 255	24
8. Land reserves (millions of hectares)	890	
9. Flora		
a) Higher species identified	90 000	36
b) Genetic self-sufficiency		
Food crops		44
Industrial crops		28
c) Contribution to world genetic material		
Food crops		36
Industrial crops		34
10. Fauna: species identified		
a) Mammals	800	16
b) Birds	1 700	20
11. Water resources		
a) Average annual precipitation (mm)	1 500	
b) River systems (km)	124 500	
12. Potential fishery catch (millions of tons)	16-24	
13. Mineral reserves (% of total world reserves)		
Lithium		59
Copper		36
Bauxite		27
Nickel		25
Silver		25
Molybdenum		34
Bismuth		25
Iron ore		13
14. Energy reserves (TPE)[a]	68.7×19^9	35
a) Total reserves/production (years)	134	
b) Petroleum: total reserves/production (years)	54	
c) Coal: total reserves/production (years)	600	
15. Structure of energy sources (%)		
a) Hydro-power	36	
b) Coal	27	
c) Petroleum	24	
d) Natural gas	8	
e) Others	5	
16. Petroleum reserves (millions of barrels)	123 357	12
17. Natural gas reserves (billions of cubic metres)	7 456	6
18. Coal reserves (millions of metric tons)	21 000	2
19. Geothermal energy: potential generating capacity in the 1990s (MW)	1 200	20
20. Firewood reserves (millions of TPE)[a]	1 226	
21. Solar energy reserves (millions of TPE)[a]	10	
22. Wind energy reserves (millions of TPE)[a]	7	

Source: Estimates based on data supplied by the United Nations Food and Agriculture Organization (FAO, 1988, 1992a, 1992b and 1992c); World Resources Institute, 1990-1992; Latin American Energy Organization (OLADE, 1993), and ECLAC.

[a] TPE: Tons of petroleum equivalent.

Guidelines for contributors to *CEPAL Review*

The editorial board of the *Review* are always interested in encouraging the publication of articles which analyse the economic and social development of Latin America and the Caribbean. With this in mind, and in order to facilitate the presentation, consideration and publication of papers, they have prepared the following information and suggestions to serve as a guide to future contributors.

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

—Papers should be submitted in Spanish, English, French or Portuguese. They will be translated into the appropriate language by ECLAC.

—Papers should not be longer than 10 000 words, including notes and bibliography, if applicable, but shorter articles will also be considered. The original and one copy should be submitted, as should the diskettes, if any (in IBM compatible Word-Perfect 5.1 format).

—All contributions should be accompanied by a note clearly indicating the title of the paper, the name of the author, the institution he belongs to, and his address. Authors are also requested to send in a short summary of the article (no more than 250 words) giving a brief description of its subject matter and main conclusions.

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

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

—The editorial board of the *Review* reserve the right to make any necessary revision or editorial changes required by the articles.

—Authors will receive a courtesy copy of the *Review* in which their article appears, plus 30 offprints of the article, both in Spanish and in English, at the time of publication in each language.

Recent ECLAC publications

Periodic publications

Estudio económico de América Latina y el Caribe, 1992 (Economic Survey of Latin America and the Caribbean, 1992), vol. I (LC/G.1774-P), Santiago, Chile, September 1993, 297 pages. United Nations publication, Sales No. S.93.II.G.3 (Spanish version; the version in English will be published shortly).

This first volume of the *Economic Survey of Latin America and the Caribbean, 1992* analyses the economic evolution of the region during the year in question. Part One gives a general overview of the main features of the regional economy, with special attention to macroeconomic policy and inflation; level of activity; total supply and demand; employment and wages; and the external sector and the external debt. It also gives an overview of the evolution of the Caribbean economies.

Part Two reviews the situation of the world economy, while Part Three examines external capital movements in Latin America and the Caribbean.

Volume II of the *Economic Survey*, which will be published shortly, gives details of the evolution of the individual countries during 1992.

Other publications

El papel de las empresas transnacionales en la reestructuración industrial de Colombia: una síntesis (The role of transnational corporations in the industrial restructuring of Colombia: a summary analysis), "Estudios e Informes de la CEPAL" series, No. 90 (LC/G.1759-P), Santiago, Chile, July 1993, 131 pages. United Nations publication, Sales No. S.93.II.G.9.

This study analyses the role that transnational corporations could play in the modernization of Colombian industry. It begins by examining the salient features of the import substitution industrialization process, with special emphasis on the aspects of concentration and centralization of capital. It then goes on to study the performance of industry in the 1970s and 1980s and reviews the characteristics of transnational corporations in the context of import substitution industrialization and their main differences from national firms. It then compares the performance of transnational and national companies as regards the export of manufactures. Finally, it summarizes the industrial restructuring and modernization policies applied by successive governments and analyses the possible reactions of transnational corporations to the situation which is taking shape.

Cambios en el perfil de las familias. La experiencia regional (Changes in family profiles. The regional experience) (LC/G.1761-P), Santiago, Chile, July 1993, 434 pages. United Nations publication, Sales No. S.93.II.G.7.

This study describes some of the main changes which have affected families in Latin America and the Caribbean in the last three decades. The complexity of this subject –due to the multiplicity of approaches and interrelationships involved in the analysis–, together with the very limited studies previously made of it, clearly indicated the need to take steps to gain a more systematic knowledge of these phenomena, and this study seeks to contribute to this objective.

The first part of this book contains four regional studies which provide a general frame of reference on the subject. The second part, which analyses the situation of the family in some individual countries of the region, seeks to maintain a fairly homogeneous approach to the subjects dealt with, so as to make it possible to compare the situation of various countries of the region with regard to common dimensions of family issues. Nevertheless, the studies show differences with regard to the approach taken and the levels and periods of analysis, reflecting the preferences of the authors, the special features of family problems in their respective countries, and the availability of research results and up-to-date information.

Most of the studies cover a period extending over the 1960s, 1970s and 1980s, in order to bring out the combined influence in the 1960s of various phenomena which significantly affected changes in the family, namely, the initiation or acceleration of the changes in fertility and urbanization; the universal extension of education, primary health care and social security as aspirations of the population in general and guiding principles of government programmes; industrialization in a context of economic growth; the sustained increase in the wage-earning labour force, and the expansion of the communications media and the emergence of a culture of the masses.

Understanding of the studies contained in this book on the changes which have taken place with regard to the family over the last thirty years and the possible future outlook is enhanced when they are read with an awareness of the periods involved, so that the changes can be located in the specific context to which they belong. In this respect, it may be noted that there was a sub-period of economic expansion, in which the social role of the State was very noteworthy; a second sub-period marked by adjustment and economic stabilization policies, with reduction of public social expenditure; and in some countries, a third sub-period in which they began to emerge from the economic crisis and began reforms of the system of social benefits.

From the analytical point of view, these three sub-periods make it possible to identify forms of relationships between the State and the family which are very useful when dealing with the formulation and execution of social policies. Thus, the reforms which are underway in the social services have already begun to reflect the role assigned to the family in policies for the expansion of domestic saving and in the financing of investments and social expenditure in health, housing and pensions systems. This division into sub-periods also helps to understand the changes in approaches and levels of analysis for research on the dynamics of the family. Thus, for example, during the crisis of the 1980s many studies were carried out on the survival strategies of families which simultaneously suffered a decline in their income and exclusion from public sector social benefits.

On another level, the differences of approach and subject-emphasis of the chapters making up this book also reflect cultural diversity. As is well known, the region contains a variety of ethnic groups, some of which correspond to indigenous cultures which inhabited vast areas of Latin America before the Conquest, and others which are descendants of population groups transplanted

from other parts of the world as slaves. Some elements of the traditional patterns of values of these groups withered away, but others were consolidated, during their long history of suffering from discrimination, prejudice, economic exploitation and social and political exclusion. Thus, for example, in order to understand the high rates of illegitimacy and abandonment by fathers of their wives and children, in countries where a high proportion of the labour force consisted of slaves in the past, it must be borne in mind that slaves were generally not allowed to marry, so that the children born had to be taken care of by the slave-owners and the mothers of the children in question. Generally speaking, it is difficult to understand the forms of creation of personal unions, the nature of intra-family conflicts and the options for their solution unless proper account is taken of the complex problems of identity which occur in individuals who have suffered long periods of exclusion and have been given little control over their own fate, and the ways in which the community and members of the extended family mobilize in support of their members.

This heterogeneity of approaches is further accentuated when account is taken of the time differences involved in the processes of demographic transition, urbanization, industrialization and agricultural modernization and the wide variety of national development models and policies applied in the Latin American and Caribbean countries. However, this should not cause us to lose sight of the importance of the homogenization factors which also exist. Thus, for example, the demographic transition has taken place simultaneously in the great majority of countries; the policy of import substitution and promotion of mixed economies was a decisive element in shaping government policies in the 1960s and 1970s in much of the region; and the transfer to local conditions of Welfare State-type models inspired by European and United States experiences was a sustained and widespread effort, carried out in some countries before the Second World War.

El régimen jurídico de la planificación en América Latina (The legal framework of planning in Latin America), "Cuadernos del ILPES" series, No. 37 (LC/IP/G.64-P), Santiago, Chile, June 1993, 253 pages. United Nations publication, Sales No. S.93.III.F.1.

This study offers a comparative analysis of the main questions raised by the legal framework for planning in Latin America.

It has four parts. Part I analyses the constitutional framework for planning, while Part II covers the administrative aspects: i.e., the institutions which carry out this function of the State. Part III describes the planning process itself, and Part IV deals with the relation between the State budget and planning. The study ends with a set of conclusions on the four main topics analysed.

As the drafting of this study was completed in April 1989, this version does not take account of some changes in the legislation of the countries studied which have taken place since that date and which affect the legal framework for planning.

Clasificaciones estadísticas internacionales incorporadas en el Banco de Datos del Comercio Exterior de América Latina y el Caribe de la CEPAL (International statistical classifications incorporated in the ECLAC External Trade Data Bank for Latin America and the Caribbean), "Cuadernos Estadísticos de la CEPAL" series, No. 18 (LC/G.1744-P), Santiago, Chile, May 1993, 313 pages. United Nations publication, Sales No. S.93.II.G.6.

This study lists the international statistical classifications incorporated in the External Trade Data Bank for Latin America and the Caribbean maintained by the ECLAC Statistics and Projections Division and describes their main features and interrelations. An effort is also made to provide both producers and users of external trade statistics with an overview of the subject through the presentation of comparative descriptions, since a knowledge of the objectives and nature of the various international statistical classifications is an indispensable requisite for their proper use.

Part I of the study therefore sets out some general considerations and briefly describes the scope and objectives of each classification. In addition, in order to help to understand the features and structure of the classifications, a description is given of the most general categories of the Harmonized Commodity Description and Coding System (HS); the Standard International Trade Classification (SITC, Rev.3); the International Standard Industrial Classification of All Economic Activities (ISIC, Rev.3); the Classification by Broad Economic Categories (CBEC, Rev.2), and the provisional Central Product Classification (CPC). The interrelations between these classifications, which are presented in two different ways in Parts II and III of the document, are also briefly described.

Part II presents a correlation matrix prepared in line with the sequence of all the (five-digit) items in SITC, Rev.3. In other words, a correspondence is established between the item codes of SITC, Rev.3 and those of the HS, the CPC, the ISIC, Rev.3 and the CBEC, Rev.2. In the case of the CPC, only the first four sections, corresponding to transportable goods, are taken into account. The links between Rev.3 and Rev.2 of the SITC and between the SITC, Rev.2 and the CBEC, Rev.1 and the ISIC, Rev.2, as well as between the SITC, Rev.2 and SITC, Rev.1, and between the SITC, Rev.1 and the CBEC are also indicated.

It should be noted that the correlation between the three revisions of the SITC has been established by the Statistical Division of the United Nations Department of International Economic and Social Affairs. Starting from SITC, Rev.3, which is the classification with the highest degree of openness of the items, correspondences are established with SITC, Rev.2 and between the latter and SITC, Rev.1.

Part III was prepared in the same way as Part II, but in this case the classification on which the correlation matrix was based was the HS. A literal description of the HS codes is not given, however, firstly, because of the great magnitude of such an undertaking, and secondly, because the countries which have adopted the HS already have a description of those codes, since their first six digits form the basis for the national tariff classifications.

Industrialización y desarrollo tecnológico (Industrialization and technological development), Report No. 13, Division of Production, Productivity and Management (LC/G.1752), ECLAC, Santiago, Chile, December 1992, 76 pages.

The three articles making up this report seek to enter in greater detail into the role of small and medium-sized enterprises (SMEs) in development and the industrial policies which are important for them.

The first article seeks to define an original theoretical framework for analysing the specific problems of PMEs. On the basis of systems theory, the author gives a critique of Williamson's transaction theory. He concludes that the capacity to adapt the operating rules of a system of production to different competitive scenarios is a key factor for development. This capacity is connected, in turn, with the underlying logic of the production subsystem, which

depends on the ratio between information costs and coordination costs. The author uses this new analytical framework to draw some important conclusions for the design of industrial policy.

The second article examines the experience of Italian industrial districts in the light of the theoretical concepts developed in the previous article. Through a critical analysis of this experience, it seeks to go beyond the limits of the debate on the possibility of reproducing the "Italian model", while at the same time identifying elements that would be useful for the design of industrial policies in countries at a lower level of industrialization.

The third and last article studies the spread of technical change in small enterprises of a traditional sector in Chile, and their impact on the organization of production and human resources management. On the basis of an empirical investigation, the author shows that the technological modernization effort in PMEs tends to be concentrated on the acquisition of machinery, with little attention being given to the introduction of new methods of management and organization of work. He also concludes that the actual conditions of these enterprises are not properly taken into account in the definition of an entrepreneurial development model suitable for the present technological era, and identifies important areas of action for public policy in this field.

Transformación de la producción en Chile: cuatro ensayos de interpretación (Changing production patterns in Chile: four interpretative essays), "Estudios e Informes de la CEPAL" series, No. 84 (LC/G.1674-P), Santiago, Chile, March 1993, 372 pages. United Nations publication, Sales No. S.93.II.G.4.

The studies in this volume were carried out in 1989 and concern the process of changing production patterns in Chile as viewed from complementary angles and outlooks.

In the first study, "Changing production patterns, growth and international competitiveness: the Chilean experience", *Alejandro Jadresic* examines the factors determining growth and international competitiveness in the light of the changes undergone by the Chilean economy from the 1940s until the end of the 1980s. He notes that, as a function of these variables, the Chilean economy's performance has not been very satisfactory, even compared with other countries of the region: a situation connected with the likewise unsatisfactory evolution of investment and technological innovation.

In explaining the weak process of investment over that period, the author gives less importance to the factors traditionally adduced: the relative poverty of the national private sector, the low level of development of the financial system, the prevailing culture of conspicuous consumption, a deficient social security system or the persistence of interest rates that were negative in real terms. Instead, he emphasizes other factors which have not often been analysed, such as the private sector's negative appraisal of the profitability of investments and the stability of policies and of the regulatory framework, the limited control of the economy over the exchange rate, the monopolistic structure of domestic markets, foreign ownership of the large-scale copper mining industry, and the configuration and evolution of the sociopolitical system.

He notes that the State played a significant part in the modernization of the productive apparatus, especially in the period 1945-1970, although this was a negative element as far as the private sector's propensity to invest was concerned.

In his analysis of the weakness of the technological innovation process, parallel to his examination of investment, the author notes that the most convincing explanatory factors are to be found on the side of the demand for technology, rather than its supply, and the sluggish incorporation of technical progress into production was connected not so much with the country's lack of technical or entrepreneurial capacity, the underdevelopment of its science and technology system, the difficulty of gaining access to foreign technology or the insufficiency of State support as with a non-competitive market structure, a rigid yet unstable economic and political system, and economic policies which assigned low priority to technology.

The study concludes with a description of the challenges facing economic policy in the future in a democratic Chile. The strengthening of the investment capacity and propensity of the private sector and the active role that the State should play in correcting market shortcomings and guaranteeing satisfaction of their basic needs and equality of opportunity for the poorest sectors, while maintaining the macroeconomic balances and the rules of a democratic society, are priority issues in an economic policy programme.

In the second study, "The Production Development Corporation (CORFO) and the process of change in Chilean manufacturing", *Carlos Alvarez* concentrates his attention on this institution which played such an outstanding part in the process of expansion and change of production in Chile. The author seeks to assign its true value to the role of CORFO in the process of change in manufacturing in the twentieth century and to describe the main features of the institution's work, both as regards its internal development and the relationships which it established with other public and private agents of the system of production.

Alvarez considers that CORFO was an important investor in the period 1939-1973, judging by the enterprises which it helped to set up and which were responsible for nearly 20% of the growth of the industrial product over that period. Even between 1974 and 1983, when CORFO made practically no new investments, its companies registered higher growth rates, on average, than the other Chilean firms.

A feature distinguishing CORFO from other similar institutions in Latin America is the importance it assigned to export activities, especially from the late 1950s up to 1973. Indeed, the companies set up with its participation accounted for a bigger share of exports than of total production. This policy was a big success in terms of forward-looking strategies, for when it was first applied such projects did not yet form part of conventional business practices.

Many of CORFO's industrial initiatives survived very difficult conditions for industry, such as those deriving from the process of increased openness of the 1970s. This would appear to indicate that, contrary to what is sometimes alleged, CORFO's investment allocation decisions were efficient ones for the most part.

The capacity for action displayed by the institution over the period 1939-1973 was due to a set of features which grew up over time, including a high level of autonomy with regard to the taking of decisions and the fact that it was a body which acted directly, as well as the application of two complementary lines of action: one which went beyond short-term considerations in order to discover the country's potential and ways of making it a reality, and another which involved the taking of initiatives without worrying too much about the resulting form of ownership. In the period 1973-1988, however, most of these features disappeared and the institution ceased to be a major actor capable of taking decisions within the industrial system.

Basically, CORFO was a leading actor in the construction of the national productive system when there was a national consen-

sus on the course that economic development should take. When this consensus was weakened, it became just another department of the Central Government.

In the period under review, many initiatives were carried out which gave rise to great changes in the structure of Chilean production and hence also in the agents at the head of economic activity. CORFO's participation was very important, especially in some sectors such as forestry, fisheries and fruit production. There were both errors and successes, as in any learning process by a society which aspires to rise to higher levels of economic development and tackle untried tasks. What was learnt in various fields has now been absorbed by the agents of production and forms the basis for their future decisions. These achievements are probably among the least visible, but they are perhaps some of the most important contributions that CORFO made to the development of production in Chile.

In the third study, "The technological and productive impact of the copper mining sector on Chilean industry, 1955-1988", *Jean-Jacques Duhart* examines production linkages, with special attention to the interactions between the copper mining sector and manufacturing and above all the direct impact of copper mining on the dynamism, incorporation of technical progress and competitiveness of the segments of Chilean industry which supplied it with goods and services over the period 1955-1988.

The author comes to the conclusion that during this period generally speaking the copper mining industry helped to give a boost to the specialized intermediate goods and capital goods industries and to engineering services. In quantitative terms, however, this effect only became appreciable towards the end of the 1960s, becoming more marked in the 1980s. Consequently, the impact of the copper mining sector on its national supplier industries has not been as great as might have been expected –in view of the weight of this sector in the national economy and its large size compared with the corresponding sector in other mining countries– especially as regards the manufacture of mining machinery and equipment.

The boost given by copper mining has taken place in practice through the demonstration effect: by bringing new products and technologies into the country and placing them within the reach of local firms; by imposing higher technical demands and new production standards on its suppliers; by expanding markets, first under conditions of lower relative protection and later in a context of intense foreign competition; and by directly promoting partial integration of foreign manufacturers with local producers. The interaction between the copper mining sector and industry has given the latter an unmistakable and ongoing incentive (though of varying magnitude) for the incorporation of technical progress. The companies supplying the copper mining sector have traditionally been among the most efficient and modern branches of Chilean industry, always leading the way with their products, and though they have aimed their activities primarily at the domestic market they have nevertheless been exposed to greater foreign competition than many other sectors of the economy.

A second conclusion of a general nature concerns the main factors conditioning the relationship between copper mining and industry. Among these factors are the level of activity and rate of investment of the mining sector and the type of policies and intensity of the actions (both public and private) affecting the production linkages between the two sectors, together of course with macroeconomic factors, which have naturally been of decisive importance.

The periods of faster integration between copper mining and its supplier industries have coincided with periods in which explicit policies have been established or strengthened and measures to promote such links have been intensified and diversified. Generally speaking, the policies and measures have given good results, with a rapid and effective response on the part of both domestic and foreign suppliers. There were two main boom periods in this respect: from 1965 to 1970, and after the crisis of 1982-1983, the latter coming after a long interregnum in which many of the previous initiatives were abandoned.

At all events, the study shows that in order to further the links between copper mining and its supplier industries, there must be a combination of various conditions. These include: a stable macroeconomic framework, with a reasonable level of openness to the exterior which favours healthy competition and gives local industry easy access to external technologies, components and financing; development of a certain minimum technological capacity in industry (metal products and machinery, chemicals) and services; a substantial presence of domestic engineering in the management and project design of mining companies; existence of specialized institutions of legitimate standing in the field of intermediation and information (proper knowledge of the demand of user sectors and industrial capacity, as well as personal contacts; and political will at the highest levels of government to strengthen competitive supporting industry.

There is a good deal of consensus that the process of the integration of mining with industry moved in the right direction in the 1980s, since various of the above conditions were present. In order to intensify such integration in the future and consolidate more specialized supplier industries with a higher level of technology, in which some lines of mining equipment and machinery assume greater importance, it will be necessary to take fresh initiatives aimed at overcoming the main difficulties facing industry as regards supplying the mining market and other key export sectors, for such difficulties may become critical in the relatively near future. These difficulties include local producers' inadequate capacity in the areas of product conception, design and marketing; little interest or experience in forming consortia or signing industrial complementation agreements; absence of financing mechanisms to support the purchase of domestically-manufactured capital goods; and a growing shortage of skilled technicians and workers.

In the fourth and last study, "The Chilean export diversification process, 1960-1988", *Carlo Pietrobelli* analyses the various explanatory, institutional and economic policy factors behind the evolution of exports in that period. He breaks the overall period down into sub-periods, formulates a set of hypotheses, and then, on the basis of a survey of a sample of businessmen, seeks to appraise their probable correctness and applicability. He gives a holistic view of the emergence of new export lines, with emphasis on products of higher added value, and considers various dimensions that may be behind this process, namely historical conditions, macroeconomic policies, export promotion policies, technological aspects, administrative and institutional reforms, and external conditions.

The author concludes that export growth and diversification was not just the result of good macroeconomic management in the late 1980s or solely the consequence of the exploitation of labour through low wages, temporary employment and easy dismissals: the explanation should also include structural and historical variables and institutional changes. He considers that the export diversification process is not yet satisfactory, especially in view of the relatively low added value of most of the new exports. He therefore makes a number of policy recommendations for making the export diversification process more thorough and sustainable, re-

garding the capacity for the incorporation of technical progress, institutional changes, the need for selective policies, and a different policy with regard to the country's place in the international economy.

The experience assembled in this study does not permit the drawing of simple or one-dimensional conclusions regarding the success of the Chilean model. It shows that changing production patterns in Chile is a process with deep historical roots and has often followed an irregular course because of the instability of economic policies. Support is given to the conjecture that the economic and social costs associated with this process are due to a lack of consensus between the State and the private agents, and it is suggested that a process of changing production patterns requires that the State should play an active role in seeking such a consensus through flexible and selective policies. In the case of Chile, it is concluded that the process of changing production patterns needs to be intensified and consolidated.

El procedimiento del hijo previo para estimar la mortalidad en la niñez (The "previous child" procedure for estimating child mortality) (LC/DEM/G.122), CELADE, Series E, No. 36, Santiago, Chile, January 1993, 215 pages.

One of the most common observations made in Latin American demographic studies refers to the limitations of the information available from traditional data sources. The national surveys carried out in the 1970s and 1980s filled a number of gaps in the information on fertility, mortality and mother and child health, and in general the results and analyses derived from them have been very useful for national health planning.

More recent research in Latin America, however, has come up against the need for information broken down at the local level. For this purpose, instruments are needed which make possible a diagnosis of the demographic situation in specific areas within each country, as well as the follow-up of social policies and their measurable demographic effects. This growing need for disaggregated information has unfortunately coincided with situations of economic crisis which mean that only very limited resources are available for such tasks.

It was in this context that CELADE began in 1983, for the first time in the region, to try out in the field a new procedure developed by William Brass and Sheila Macrae for estimating child mortality. Using this procedure, just a couple of questions to women attending maternity clinics or health centres are sufficient to make quite a recent estimate of child mortality. If these questions are incorporated in a continuous system of records or are already part of it, changes in mortality over time can be followed up: something which is very important for evaluating the effects on mortality of health programmes which have been applied in the area covered by the health centre or centres being studied.

Thanks to the progress made in the development of this procedure, it is considered useful not only for measuring child mortality but also for studying some of its determining factors (space between births, weight at birth, etc.). Moreover, when incorporated in hospital records it could be useful in studies on adolescent fertility, incidence of abortion, pre-natal checks, etc.

With regard to possible disadvantages or shortcomings of the procedure, particular mention has been made of the distortions that could occur because the women attending a health centre are not necessarily representative of the whole population of the area in question, since there is social and demographic selectivity which is reflected in differences of composition as regards the women's social status, level of education, income, age distribution, number of children, etc., so that the estimate obtained using this procedure should only be considered representative of the mortality of the children of the women attending that particular centre, and not the whole area studied. If it is assumed that this selectivity does not vary with time, however, it is possible to follow up the mortality trend for the group without this being seriously affected by the selectivity.

An intrinsic feature of the "previous child" procedure is that information is never available on the most recent child (who generally displays a higher level of mortality than the mean), and neither does the procedure take account of women who have only one child. It has been shown, however, that the distortions produced by these factors are only minor, and moreover they work in opposite directions and tend to cancel each other out.

This study gives a detailed account of the various experiences accumulated in Latin America, especially those in which CELADE has participated directly, and analyses their main results and identifies possible new lines for the use of this procedure.

Las desigualdades sociales ante la muerte en América Latina (Social inequalities and death in Latin America), *Hugo Behm Rosas*, Cooperation Programme between the Netherlands Government and ECLAC/CELADE (LC/DEM/R/182), Series B, No. 96, December 1992, Santiago, Chile, 58 pages.

This study was prepared at the request of the Latin American Demographic Centre (CELADE) in order to supplement training material on differential mortality by socio-economic groups.

It begins by presenting a theoretical frame of reference on the determining factors of the health-sickness-death process in order to make possible a better analysis of the problem. Child and adult mortality are dealt with separately. For each of these age-groups, a description is given of the nature, magnitude and trends of inequalities with regard to death, together with some of the conditions which seem to determine them. Their various implications, especially for policies designed to overcome such disparities, are analysed, and it is noted that, if suitable methods are used, the information normally available in Latin American countries can provide a useful knowledge of the problem.

In the chapter on child mortality, extensive use is made of the studies which already exist in Latin America. With regard to adult mortality, in the absence of studies in the region some examples are given of the most important results obtained in studies carried out in other countries, and comments are made on their significance for Latin American conditions.

The studies on child mortality in Latin America note that there are systematic differences between the social groups studied, whatever the indicator used for defining those groups. Those which show the highest risk are always the lowest social groups in each country, including poor peasants, unskilled manual workers (whether wage-earners, such as agricultural workers in particular, or members of the informal sector), parents with little or no education, persons living in low-quality dwellings, and indigenous groups.

In the most under-privileged social groups of Latin America, the risk of dying during childhood can be as much as 70 - 100 per thousand, even in the 1980s. This was the average rate prevailing

in the more advanced European countries and the United States in the period between 1910 and 1920.

The high-risk groups form a substantial proportion of the national population. In Central America, between 57% and 81% of the births in the countries with the highest mortality rates are registered among women with little or no education. This contrasts with the situation in advanced countries. In England and Wales, for example, the population in class V (that with the highest mortality) only amounts to 4% of the total population.

Up to at least the mid-1980s, national child mortality rates were on the decline in all countries, including those where they were originally very high. The fragmentary studies available, which cover only the 1970s or the early 1980s, indicate that this decline was observable in all the social groups studied, even those in the most adverse conditions.

It goes without saying that these rates are still high, the contrasts between groups are enormous, the risks in the most vulnerable groups are unacceptably high, and the rate of decline is insufficient. Nevertheless, the improvement in survival rates among children, which is to be observed in the most varied epidemiological contexts, seems to be a general phenomenon, and it is likely that the social differences within this broader rate of survival are also generally tending to diminish. It should be noted that the present analysis concerns only mortality: within the overall health-sickness process the social contrasts may be greater and more persistent.

There are virtually no studies in Latin America that permit the identification of the changes in the overall set of factors conditioning mortality which are responsible for this evolution.

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