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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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Aníbal Pinto Santa Cruz

Aníbal Pinto Santa Cruz, Director of the Review since 1986, died on 3 January. His death fills us with profound grief and leaves a deep vacuum in this organization.

The Economic Commission for Latin America and the Caribbean benefited for many years from the intellectual sparkle and human warmth of Mr. Pinto, who served for several years as Director of the Economic Development Division. What is more, he was one of the personalities who gave the ECLAC *secretariat a clear institutional identity. The depth and clarity of his analyses of Chile and its development process were matched by his real dedication to Latin America, which inspired him to make solid and valuable contributions to the progress of ideas in our region. He belonged in his own right to the select group of those thinkers whose new categories and concepts afford others a richer vision of reality. It is not surprising, therefore, that followers and former students of his abound in the region.*

A person of great intellectual generosity, impatient with conventional wisdom and intolerance from all academic and political quarters, Aníbal Pinto received recognition from the international academic community, as embodied in the Raúl Prebisch Ibero-American Prize in Economics, an honorary doctorate from the University of Campinas, Brazil, and the Chilean National Prize in the Humanities and Social Sciences for 1995. In recent months he received two further distinctions: first, a tribute from his ECLAC *colleagues on the occasion of the fiftieth anniversary of the United Nations, and second, a collection of his writings published by the Universidad Nacional Autónoma de México which was presented to him in a ceremony held at the Santiago Book Fair in December 1995.*

ECLAC *has been immensely fortunate in having among its senior officials great personalities who have left behind a legacy of values, principles and key ideas -institution-builders, if you will. If there is anything which distinguishes* ECLAC *from other United Nations bodies, it is this. Aníbal Pinto's name will undoubtedly be among those which resound the loudest. For this reason, and for his exceptional human qualities, we shall remember him with affection and admiration.*

Gert Rosenthal
Executive Secretary
of ECLAC

Social policy *paradigms* in Latin America

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In recent years, a new development model has arisen in Latin America whose spread has been facilitated by the changes which have taken place in the world economy (globalization, technological innovation) and their repercussions on the region. A consensus has been generated in respect of the model's economic tenets, and there is also widespread agreement –which is gradually being reflected in concrete measures– on the role that should be assigned to the State. With regard to social policies, an awareness has been growing –with some difficulty– of the limitations of the traditional way of implementing them and the need to develop new criteria on their design and application. On the one hand, this article analyses the ways each development model relates to the role of the State and the social component, while on the other it sets forth two social policy paradigms (the prevailing one and that which is now emerging) currently found in Latin America and contrasts them in various dimensions: institutionality, decision-making logic, financing, objectives, criteria with regard to priorities and expansion, population benefitted, basic approaches and indicators used. Finally, various social programmes are described which illustrate the innovations put into effect in the region.

I

Development models and social policies

Every development model implicitly or explicitly includes within it a conception of the social dimension. This is also true in the case of the models which have prevailed in Latin America. Models are, of course, stylized simplifications of the features characterizing various stages of development (table 1) and do not take account of all the variations that may be found in each country due to the political solutions sought for the social conflicts found in each case.

1. Outward-oriented growth

In this phase, the Latin American countries exported primary commodities and received manufactures in return. The State was of the classic liberal model, so that its functions were limited to external security, keeping order within the country, and striving to ensure the conditions needed for the fulfillment of contracts.

Social policy was not among the concerns of these governments. As the World Bank (1995) has noted, throughout the course of history people have gone to private teachers and private schools for their education, and to private doctors and hospitals when they fell ill. This situation led a Brazilian President of the time to assert that the social dimension was merely a police matter (Cardoso, 1983).

Nevertheless, during this period other "solutions" were emerging for the "social question". Thus, in the countries which had received a large number of immigrants from Europe there were "private" social policies, known under the general title of mutualism, which were promoted by the prospective beneficiaries themselves, organized in cooperatives, mainly for the purpose of providing health services. Furthermore, in the face of international migration, governments began to feel some concern which led them to place stress on basic education, seen as the main channel for the transmission of national values and a common language.[1] This gave rise to the principle of the teaching State, centrally organized and inspired by a non-religious and liberal ideology, which was to experience rapid growth in those countries which were politically more stable, were further ahead in the processes of urbanization and formation of middle classes, and had higher levels of per capita income and a greater degree of ethnic and social integration (Romero-Lozano, 1993).

2. Import substitution

In the import substitution phase, which is usually said to have begun as a result of the 1929 world crisis –although it began earlier in some countries and much later in others– the State took on new roles (in the fields of regulation, intervention, planning, entre-

TABLE 1
Development models and social policy

Outward-oriented development	
Motive force:	External market
Basic product:	Primary commodities
Type of State:	Classic liberal State
Social emphasis:	"A police matter" (Cardoso, 1983) (Private) self-protection "Nation-building"
Import substitution	
Motive force:	Domestic market
Basic product:	Manufactures
Type of State:	The State as intervening agent, entrepreneur and promoter of social initiatives
Social emphasis:	Protection for wage-earners (organized groups presenting demands). Political and social links with the labour market. Creation of a "middle class": measures to ensure purchasing power for the acquisition of locally-produced goods
Post-adjustment	
Motive force:	External market
Basic product:	Competitive goods incorporating technical progress (often based on the use of natural resources)
Type of State:	Regulator, "neo-social"
Social emphasis:	Investment in human capital

Source: Prepared by the author.

[1] It was out of the question to propose a multi-cultural, multinationality or multi-ethnic State such as is currently frequent in the region (at least at the level of theory and discussion). Consequently, there was no question either of the promotion of bilingualism or multilingualism, which is based on the idea that the different languages spoken in a country should be recognized as being of equal value and that it would be desirable to preserve them.

preneurial activities and "social affairs") in order to aid the functioning of the new "inward-looking development" model whose motive force was the domestic market.

In fulfilling these new responsibilities, in a situation where natural barriers had been reduced as the result of the crisis and wars, governments established tariffs in order to defend national industry from foreign competition. The State also carried out activities which were not attractive to private enterprise but which were necessary in order to make possible other productive activities (building up the infrastructure, electricity supply, etc.).

The "easy" stage of import substitution permitted the local manufacture of a wide range of goods characterized by their limited technical requirements. In this context, social policy sought to protect wage-earners in response to pressures from the growing trade union organizations, whose activities were facilitated by the concentration of workers and the increasing importance of industry. The next stage of import substitution –the "difficult" phase– was only within the reach of those countries whose domestic markets were big enough to interest the transnational corporations, who owned the technology needed to manufacture more complex goods. In one case, these comparative advantages gave rise to a "triad" of social actors in the field of industry (national, transnational and State), leading to the establishment in greater depth of the so-called "associate" capitalism (Cardoso, 1973). In other cases, efforts were made to expand the economic space through regional integration agreements, some of which, in their early stages, managed to attract foreign investment and secure a high rate of economic growth.

In this period, social policy helped to create or further consolidate a middle class, [2] since it was necessary to keep up the purchasing power required to ensure demand for these new high-cost domestically manufactured products, such as motor vehicles. This probably helped to further aggravate the already unequal structure of income distribution.

However, the model began to suffer from increasing difficulties, and this led the groups which felt that their benefits were being adversely affected to press for measures in support of their interests. This led to the deterioration of social harmony and political life and eased the way for the emergence of authoritarian governments which were seen by some as a means of heightening the sway of capitalism (O'Donnell, 1973).

The weaknesses that were intrinsic in the functioning of the Latin American economies were covered up through the application of policies that showed little respect for fiscal orthodoxy, thus leading to serious macroeconomic imbalances and outbreaks of hyperinflation. Excessive use was also made of external indebtedness, facilitated by the glut of petrodollars in the international financial system; this was to lead later to the debt crisis, which burst upon the scene with the cessation of payments by Mexico in 1982. [3]

3. The post-adjustment model

During the so-called "lost decade" (which was not lost in economic terms for all countries and was actually a decade of progress for many countries because of the restoration of democracy), a new model began to gain currency whose main economic criteria are: i) attaining or maintaining the economic balances; ii) bringing down inflation; iii) withdrawing the State from some areas where private actors can be more efficient; iv) increasing exports, because the motive force of these economies lies once more in the international market; v) raising the competitiveness of national producers, even by eliminating tariff protection, and vi) modernizing the public apparatus so that it uses its resources (especially financial resources) more efficiently and is more effective in achieving its objectives.

In order to overcome the crisis and comply with these criteria, the Latin American countries applied stabilization and adjustment policies which in many cases had high social costs.

The early 1990s have shown some positive results of the economic reorganization measures adopted (lower inflation, recovery of growth, etc.), accompa-

[2] "The development model that prevailed during the period after the war –it has been said– was successful in building new economic structures, in raising the standard of living of the middle class, in forming new social strata, and in furthering the industrialization and urbanization of the region" (Ibarra, 1985).

[3] During the 1980s there were cuts in the resources devoted to social programmes and there was an increase in poverty. It is worth noting, however, that these programmes were then at an all-time peak and that there is not necessarily a causal relation between social expenditure and poverty. Fundamentally, poverty is linked to the economic cycles. In the period in question, the increase in poverty was due in some cases to the decline in economic activity and the consequent reduction in employment, which was not offset by suitable social compensation measures, while in others it was due to economic failures and exaggerated populist measures, and may be considered as a social cost of failing to adjust or not adjusting in time.

nied in some cases by reductions in poverty (ECLAC, 1994b), although at mid-decade a number of countries may be registering setbacks in this respect. [4]

This new phase of development shows radical changes compared with the region's previous experience in terms of the need to incorporate technological innovation, achieve competitiveness and deal with international competition. It is no longer possible to base a growth strategy solely on abundance of cheap labour or the over-exploitation of natural resources (spurious competitiveness). It is now necessary to incorporate technical progress into the production process in order to raise productivity (ECLAC, 1992). This requires a well-trained and flexible labour force, whose members will very likely be obliged to change their jobs several times during their working life.

At the same time, however, the competition of other countries makes it necessary to try hard to win and keep market segments. This calls, among other things, for an austere State which must give up part of its income in order to reduce the tax burden on enterprises so as to help them become competitive.

This gives rise to a contradiction between the new importance of social matters, which must incentivate the State (and other actors) to create the necessary conditions for the attainment of systemic competitiveness, which naturally requires increasing resources, and the need to reduce public revenue in order to cope with global competition. It is therefore particularly important to analyse the criteria underlying the design and implementation of social policy and to seek new paradigms for carrying out this task.

II

Social policy characteristics in the prevailing and the emergent paradigms

Two social policy paradigms may be distinguished: one which originated in the import substitution phase, and which still prevails, and another which is as yet latent or emergent (table 2).

1. Institutional forms

a) *Centralized State responsibility or a multisectoral approach*

Traditional social policy is based on programmes carried out by the State, which is responsible for financing, designing, implementing, supervising and occasionally evaluating them. In other words, all the functions are unified in the hands of a single actor.

The emergent paradigm takes account of the indications that this concentration of responsibilities in the hands of the State is running out of steam and asserts that the State should no longer do the same things as in the past, or in the same way. The State will be partly responsible for financing, especially of programmes aimed at the poorest sectors of the population, and it will also have to be responsible for the execution of programmes, although according to some circles it should do so only in a subsidiary manner, when it has to take the place of other social actors who would normally be the prime candidates for these tasks.

It is maintained, however, that social policy functions can be divided up and carried out by other subsectors: by charitable or voluntary, commercial, or informal groups (Bustelo, 1989).

The presence of these subsectors is quite evident. Indeed, in some countries of the region non-governmental organizations (NGOs) handle more resources than the State social sector itself (Anaya, 1990).

The family (informal sector) has always been the main body responsible for social functions, including the main educational function, but it has very gradually been replaced by the State and other social agents. It nevertheless continues to play a role of fundamental importance, yet it is not usually taken into account in the design of social programmes. [5]

[4] Reducing the number of people who are unable to satisfy their basic needs becomes increasingly difficult if the measures in this respect are not accompanied by changes in social policy guidelines which enable the hard core of poverty to be attacked.

[5] For an analysis of programmes whereby it is sought to promote the collaboration of the family with the schools in the learning process of children, see Mayorga, 1995.

TABLE 2

Social policy paradigms

	Prevailing	Emergent
Institutional form	State monopoly Finance Design Implementation Control	Multiple subsectors State Private (commercial) Philanthropic (NGOs) Informal (family)
	Unified functions	Separate functions
	Centralization	Decentralization
Decision-making process	Bureaucratic Macro-strategies "The State knows what to do" Resources allocated administratively Users have no say or choice	By projects Competitive allocation Tendering Allocation proposed by users "Innovative capacity exists throughout society and every effort should be made to take advantage of it" (Social Investment Funds)
Financing		
Source of resources	The State	Co-financing "No charge=No good" Recovery of costs: "He who can pay should pay" Risk: marginalization of the poor
Resource allocation	Subsidization of supply Absence of competition	Subsidization of demand Creation of quasi-markets Competition Freedom to choose Does the consumer have enough information?
Objective	Universality of supply High cost, low impact Homogeneous available supply favours those who are best-informed and best-organized	Universality of satisfaction "Unequal treatment for those who are socially unequal"
Criterion as regards priorities for expanding the system	Gradual expansion from the top down Segmented access "Less social expenditure = less equity"	The neediest first Instrument: targeting
Beneficiary population	The middle class Organized groups	The poor
Approach	Centered on the means Social infrastructure Current expenditure	Centered on the ends Impact: size of benefits received by the target population, according to ends pursued
Indicator used	Public social expenditure	Cost-impact ratio

Source: Prepared by the author.

The commercial sector serves those groups which have some money to spend. At first sight, it would therefore appear to have very little to do with equity and attention to the needs of the poor. However, its participation can take two forms. Firstly, the existence of this private subsector can help to ensure that State resources are concentrated on the less-privileged, because if the groups with some money were not in a position to satisfy their needs through payment, they would try to satisfy them by pressuring the State to serve them through public programmes. Secondly, the commercial sector can carry out some social service functions –probably very efficiently– through third-party procedures.

Various countries in the region are carrying out reforms whereby responsibility for certain stages of the implementation of social policies is transferred to the private sector. This is so, for example, in the case of health insurance, where although the law may fix compulsory contributions to be paid by wage-earners, it allows the latter to choose the institutions –public or private– which are to manage those resources and provide health care when needed (as in Chile, Argentina, Colombia and Peru), or in the case of pensions, where the public regulations provide for compulsory saving but also allow private firms to manage pension funds, as in Chile, Argentina, Peru and, latterly, Uruguay. [6] In Chile, this transfer to the private sector has made possible the creation of a successful financial market and the accumulation by those companies of over US$ 20 billion of resources which have been a factor in that country's increased investment, which now amounts to 25% of GDP. [7]

[6] This is not a question, as is often claimed, of processes of "privatization" of social security, for the private firms which participate in the management of individually capitalized pension contributions do so within a legal framework which assigns very important functions to the public regulatory bodies. There are supervisory bodies which lay down detailed rules on the functioning of these companies and even on the type, quality and mix of financial instruments in which the pension fund management companies can invest.

[7] It is necessary to take into account the costs of the transition from a public to a private pension system, however. In Chile, the payment of pensions due under the old (public) system absorbs 40% of total social expenditure.

b) *Centralization or decentralization*

The prevailing model is based on a highly centralized State, whereas the emergent paradigm tends to encourage the taking of decisions at the local level, to which end it promotes both deconcentration and decentralization.

It is worth recalling that the historical tendency in Latin America has been towards centralization. This has been due, on the one hand, to purely economic reasons, such as the indivisibility of scale of certain decisions and the feedback between centralized decision-making and the concentration of economic activity (Boisier, 1976), as well as the process of concentration of the population in big cities, while on the other it has been favoured by political features such as the unitary matrix typical of most States in the region, the underlying leaning towards centralization which exists even in countries which have adopted federal structures, and the cultural influence of traditionally centralized countries such as France. This tendency is also heightened by the weakness of local institutions and their lack of practical experience of taking decisions on matters which concern them.

The criticisms of centralization stress that under that system decisions are taken without having the necessary information on the special features of each area and there is a tendency to adopt homogeneous solutions for heterogeneous situations, which leads to inefficient resource allocation and failure to solve problems.

It is also noted that centralization has sometimes favoured dominant groups installed in the capital, which use resources taken from the rest of the country. It is also maintained that the tendency to increase the functions of the State means that there is a constant increase in the number of important decisions taken in the capital, so that the provinces and regions are subjected to what has been called "the pace of a distant and indifferent governing bureaucracy" which constantly expands, untroubled by the concerns of other areas, is inaccessible, and has generated its own interests which are, or may be, contrary to the objectives for which it was set up.

It is also asserted that centralization inhibits participation, since the way and the places in which decisions are taken makes it difficult for citizens to influence them or monitor the handling of matters of interest to them.

The advantages of decentralization are said to lie in the fact that it can generate greater social consensus, thanks to participation, and greater control of the bureaucracy, which, in the opinion of Tullock, hides in the impenetrable jungle of centralization. Furthermore, smaller scales, both in terms of territorial extension and number of persons, would facilitate calculation of the costs and benefits of the actions it is planned to take and would even make it possible to experiment with alternative methods of providing given services: something that would be almost impossible to achieve with centralization, in view of the great operational complexity of that system (Weale, 1978).

However, there are also arguments against decentralization. Some experts, for example, claim that local autonomy in the provision of social services would lead to unacceptable variations in the standard of provision of services between different areas.

As for the possible link between decentralization and democracy, it is argued that in quite a few cases the central authorities or their representatives have played a fundamental role in doing away with forms of oligarchical domination which existed in more or less isolated regions. One example of this, it is suggested, is the French educational system, which, through the work of teachers appointed by the central government and rotated every so often so that they do not come under the influence of local powers, has helped to establish a common language, to foster "modern" social values, and to consolidate the Nation-State.

It is common practice to maintain that redistributive activities must be centralized in order to ensure a balance between supply and demand, for otherwise there could be an incentive for beneficiaries to flock to areas offering the biggest benefits and for taxpayers to migrate to places where the tax burden is less (Larrañaga, 1994).

This argument coincides with the view that the main reason for educational inequalities in the United States is its decentralized educational system, which allows corporative groups to influence the allocation of resources for education in order to further their own interests. In this way, the financing of education for the poor is limited firstly because the tax base varies with the wealth of the local community, and secondly, because there is little incentive to spend money on the poor because, once they have got an education and attained some degree of social and economic success, they will probably migrate elsewhere and will thus not contribute in their turn to finance the expenditure of the district which invested in their education (Owen, 1974).

Owen concludes that the decentralization of decisions in the field of education tends to give disproportionate weight to private demands and to adversely affect the satisfaction of social needs in education. He suggests that an educational system centralized at the national level is better placed to help solve the problems in question by setting standards that must be complied with in all schools, even those located in poor communities, which should be given supplementary federal funds to enable them to meet those requirements.

It is important to take into account the degree of decentralization desired and the forms and ways in which it is to be implemented. Thus, many of the arguments put forward by Owen stem from the fact that in the United States the decentralization of education extends not only to management but also to the procurement of resources, and there is little or no general regulation of the system.

This does not necessarily need to be the case, however. A decentralization policy for education could, for example, transfer the management of educational establishments but maintain in the hands of the central authorities such functions as general regulation, monitoring, and all or some financial functions.

Nevertheless, these more detailed decisions can only be taken once it has been decided to adopt one or another of the proposed solutions, [8] which is a political decision that cannot be taken solely on the grounds of efficiency and efficacy.

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[8] This is an appropriate place to quote Givaudan (1980): "Thus, in the face of equal kinds of tyranny, the question is whether it is preferable to be the victim of a ponderous, far-off system which treats individual cases with indifference, or of a system closer at hand which knows all about its subjects and always holds out the possibility of "getting another chance"... State administration has its advantages and its disadvantages. In the face of its dusty offices, its laws, its rules and regulations, its customs and its discretionality, the user feels something like fear. In contrast, local administration suffers from its own advantages. In the face of an administration which knows him personally only too well, since nothing escapes its eagle eye, the user has a feeling of mistrust and doubts whether the local administration is really objective".

2. The decision-making process: bureaucratic procedures or a project-oriented approach

The prevailing paradigm is based on the implementation of social programmes by the public sector, which delivers them in the amounts and qualities that it sees fit, for reasons stemming from administrative or political considerations or corporative pressures. It is based on the principle that the State knows what needs to be done. Users have no real choice: all they can do is accept the service offered or not, provided of course that it is not compulsory.

The emergent paradigm, in contrast, tends –as far as possible– to encourage the participation of other actors. It seeks to allocate public resources in the light of projects prepared and presented by the users themselves, according to their own ideas of how given social problems should be solved. This conception believes that the capacity for innovation is to be found throughout the whole of society, not exclusively in the State, and that it is necessary and desirable to take advantage of that capacity.

In the case of education, for example, it is recommended that schools should be given technical autonomy to prepare their own educational "project", thus making possible the existence of a varied supply which would be better adapted to the variety of situations, needs and value options which exists in the field of education.

Another objective is that the teachers should take on responsibilities in the area of school management, where they could develop alternative projects on the basis of their own experience. In Maringá (Paraná, Brazil), the running of some public schools was transferred from the public sector by handing them over to teachers' cooperatives with autonomy in technical and administrative aspects, while the municipal authorities retained responsibility for financing the schools and evaluating the results. "This measure created a new relationship between the teachers and the students and parents: a relationship which was much more integrative, responsible and receptive than the other forms of management adopted in the past" and various studies found that there were "marked improvements in the provision of educational services", but even so, because of the determined opposition and pressure movements of the teachers' unions, the Prefecture decided to discontinue the project (Silva and Cruz, 1995). In Las Condes (a sector of Santiago, Chile), the Municipality has handed over the administrative and curricular management of several schools to companies formed by teachers who have taken on this responsibility although they risk losing their status of municipal teachers protected by the State regulations applicable to publicly-employed teachers (Lavín, 1995).[9]

The Educational Improvement Projects of the Chilean Ministry of Education also aim to encourage teachers in schools of medium and high risk levels to submit projects for obtaining resources to facilitate teaching activities (Téllez, 1995).

3. Financing

a) *By origin of resources: provided by the State or obtained through co-financing*

The prevailing paradigm is based on the State, and consequently social policy is mainly financed from fiscal sources, which are faced with growing demands for funds. The resources are always limited in the face of growing needs; as soon as one need is satisfied, another arises which is probably even more complex. Thus, for example, as soon as total coverage of primary education is attained, the problem of its quality arises.

The emergent paradigm, in contrast, considers that the State is not the only actor in social policy and that it should be only one of several possible sources of funding. In the final analysis, what is needed is co-financing, or the contribution of resources by the beneficiaries themselves, which would not only mean extra resources but would also heighten the community's commitment to the programme. The underlying criterion is that anything which is provided free tends not to be properly appreciated by its recipients. The risk of marginalizing the poorest sectors, who are not in a position to take on financial commitments, can be avoided by establishing the necessary incentives (Larrañaga, 1994; Lehmann, 1994).

Another form of co-financing is the recovery of costs by making a charge for the provision of public social services. The principle applied here is "he who can pay, should pay", especially in the case of social programmes which are not aimed at the poor: free higher education is an example of this.[10]

[9] For more details on this subject, see Lehmann, 1994.

[10] Measures to recover costs can lead to a substantial reduction in the demand for services (Makinen and Bitrán, 1993), because the charges made drive away those who do not have the resources to pay. It is therefore necessary to establish criteria which distinguish among beneficiaries according to their ability to pay: those with high incomes should pay the whole of the real cost, middle-income recipients should repay at least part of the cost, while the poor should receive attention free (Cornia, 1987).

In Chile, there are possibilities for shared financing in all the public secondary schools and in the primary-level subsidized private schools (municipal schools are obliged to provide education free). [11] In that country, 91% of all students receive their basic and secondary education entirely at the cost of the State, which gives the advocates of co-financing grounds for maintaining that families should have a bigger commitment to the education of their children, through a financial effort in keeping with their income and the number of their children. The State could then concentrate its resources on those who are really unable to pay (Passalacqua, 1995). [12] At all events, suitable machinery is needed to ensure that co-financing does not lead to the exclusion of those who are not in a position to contribute.

Co-financing can also come from commercial firms in various ways: i) firms running subsidized schools can help to finance school infrastructure; ii) business firms can make donations or finance the current expenses of schools; iii) business associations can assume responsibility for running schools, and iv) firms can be given tax rebates if they provide resources for education (Martinic, 1995).

b) *By the form of allocation of resources: supply-side or demand-side subsidies*

In the prevailing paradigm, the financing is designed to cover the relevant costs of the supplier (some State body) which provides goods or services to solve or alleviate the social problem in question.

In the case of subsidies for demand, in contrast, the financing agent transfers purchasing power (in the form of coupons or vouchers) so that the beneficiary can "buy" the goods or services he deems appropriate in the (quasi) market thus created. The existence of more than one supplier is a fundamental requirement in this form of subsidy. Calculating the value of the voucher raises some difficulties, however (Levin, 1995).

A way of linking the subsidy to demand is that used by the Chilean Ministry of Education, which gives a direct subsidy to the respective schools for each student who enrolls and effectively attends classes, since when parents select the establishment where their children are to be educated they also decide which of the suppliers are to be given fiscal resources. [13] In Colombia, too, the authorities have implemented a system of vouchers (jointly financed by the central government and the municipalities) which seeks to increase the opportunities for secondary education open to the poorest children by giving them access to fee-paying private schools. In this way, it is hoped to expand enrolment from 47% to 70% and create 546 000 new school places (World Bank, 1995). It has also been proposed to reform health financing by giving demand-side subsidies so that wage-earning workers can join the private health system (Caviedes, 1994a and 1994b).

This freedom to choose given to users is often criticised on the grounds of the lack of information for making decisions. This problem is also faced, for example, by those who pay for some educational or health service, although it is argued that their economic and social status and consequent educational and cultural level, as well as the fact that they are true "clients" in view of their solvency, naturally tend to make them seek the best offer and demand results (Larrañaga, 1994). The alternative would be to take steps to ensure the provision of "products" which satisfy the needs of those who have no resources of their own to make payments and are not in a suitable position to make informed choices. However, it must be acknowledged that even the State itself has not been

[11] Co-financing is applied in 976 private schools and 150 municipal establishments, covering a total of 628,000 students. In 1994 the contribution obtained in this way amounted to US$ 37 million and in 1995 it was expected to amount to US$ 50 million (Passalacqua, 1995).

[12] The prevailing system is criticized on account of the way these contributions are allocated and administered. Firstly, when the family contribution is more than the minimum not subject to deductions (which is equal to half the fiscal subsidy per student), the State contribution is reduced, and the amount thus saved is returned to the Ministry of Finance instead of being allocated to education. Secondly, the firms which run subsidized private schools can do what they like with the resources thus received: even use them to swell the firm's profits if they like. Finally, the contributions collected in municipal schools go to the municipality and are not administered by the directors of the educational establishments in question (Passalacqua, 1995).

[13] With regard to the choice between subsidies and vouchers, it has been noted that "the direct transfer of a subsidy from the government to an educational establishment has clear administrative advantages over a traditional voucher system. On the other hand, it means that the right of parents to choose and make demands in terms of educational decisions is not so clear-cut, since their perception is that they are receiving education free rather than acquiring that service in return for payment. In this sense, a system of vouchers or direct subsidies for demand would be preferable if it could be operated satisfactorily at reasonable cost" (Larrañaga, 1994, p. 529).

able to do this so far, partly because it usually lacks adequate information.[14] One alternative for overcoming this shortcoming could be to establish tests to measure school results (as in the case of the Chilean Educational Quality Measurement System (SIMCE), which is already being applied in other countries too) or whatever is appropriate for each service; publication of the results of these tests would then allow users to make informed choices.[15]

The increase in the demand for educational and health services should encourage the emergence of a larger and more varied range of options, which would generate competition among suppliers and thus lead to an improvement in the quality of the services offered. In order to achieve such a competitive environment and link up the public-private mix, the State must regulate, supervise and selectively intervene whenever necessary, so as to induce suppliers to lower costs and meet users' needs.

4. The objective to be pursued: universal supply or universal satisfaction of needs

The prevailing paradigm favours universality, understood as a homogeneous supply open to all. The underlying element in this conception is the need to spread values and beliefs which will further social integration and the idea of equality. In practice, however, the main beneficiaries of the public social services in Latin America have been those sectors which are best educated, best informed and best organized, living in the areas best equipped with services and possessing the necessary resources for covering the transaction costs (transport, time) that have to be expended in order to receive them. Taking advantage of this State supply has always been difficult for those who, although they may have the greatest needs, lack the above-mentioned characteristics and therefore have difficulty in gaining access to the services available.

In the case of education, although national Constitutions lay down the duty to provide a certain number of years of free education, a by no means negligible proportion of each cohort does not even enter school at all, and a further proportion soon drops out of it. This is by no means a matter of chance, as the lowest-income groups form a disproportionate part of these losers.

Universality-oriented policies have a high cost and low impact. It is obvious that a form of supply which serves the whole population will be very expensive, and its cost can only be cut either by reducing its quality and hence its impact on the supposed beneficiaries, or by limiting the "universality" through unclear criteria which focus the services on a restricted group.

The emergent paradigm proposes a different kind of universality: not of supply, but of satisfaction of people's needs. It is based on the principle of equity whereby in order to overcome differences it is necessary to give unequal treatment to those who are economically and socially unequal ("affirmative action" or "positive discrimination"). A homogeneous supply for heterogeneous situations can only result in the perpetuation of the original differences. Such a supply will correspond to the needs of a certain subgroup of the population, but it will not be suitable for all, for cultural or economic and social reasons. Thus, ensuring that children from poor families go to school and stay in it means that they must be provided not only with good-quality education but also with an extended timetable of lessons to make up for the limitations imposed by their family environment on their learning capacity (ECLAC, 1995; Gerstenfeld, 1995), special nutritional programmes, and even a subsidy to cover the opportunity cost of opting for school attendance rather than some job opportunity (Levin, 1995).

5. Criteria on priorities and expansion: gradual expansion from the top down, or priority attention to the neediest

The prevailing paradigm envisages the gradual expansion of the social protection system by the progressive incorporation of those who were initially excluded, as more resources become available. In the final analysis, coverage expands from the top down, beginning with those with fewest needs and most capacity to defend their interests. The most typical

[14] "Are the officials of the Ministry of Education or of its regional offices better placed to choose the right educational establishments and guide the transfer of resources in the sector?" (Larrañaga, 1995, p. 52).

[15] "Those who oppose publication of the number of points received by individual schools in the SIMCE tests (namely, teachers and Ministry officials) argue that this should not be done because it would create extra tensions in a field where there is a shortage of resources and few real possibilities for making improvements" (Larrañaga, 1995, p. 54).

example of this process of segmented access in Latin America has been the social security system (Mesa Lago, 1985), which expands its protection to landless peasants and urban own-account workers only at a very late stage or not at all.

There are three possible criteria for allocating social resources: to allocate them to those who are first to apply, to those with fewest needs, or to the neediest members of society. Of these, the emergent paradigm favours the last criterion, which it proposes to implement through targetting.

Targetting means identifying the potential beneficiaries as precisely as possible and designing the programme so as to ensure a major per capita impact on the selected group, through monetary transfers or the supply of goods or services (Franco, 1990 and 1995).

Targetting allows programme design to be improved, because the more accurate the identification of the problem (the needs to be satisfied) and the nature of the beneficiaries (the target population) is, the easier it will be to design differentiated, specific measures for its solution; furthermore, this approach ensures more efficient use of scarce resources and increases the impact of the programme by concentrating the resources on the highest-risk population. [16]

Among a variety of examples of targetting, mention may be made of the Chilean "900 schools" programme, which is aimed at the poorest and most academically unsatisfactory 10%, with the purpose of improving the quality of the education provided and the learning process of the students. [17] The criteria for this targetting are: i) poor average performances by the students in the SIMCE tests and other indicators of the Ministry of Education; ii) low economic and social level of the students' families, as registered in the school records, and iii) the size and accessibility of the schools concerned.

The Educational Improvement Programme (PME), mentioned earlier, also uses targetting to identify three types of schools (of high, medium and low risk). The criteria used are: i) time series on performance scores; ii) grades of schooling offered by the establishment; iii) rates of dropping-out and repetition; iv) degree of rurality; v) school enrolment, and vi) economic and social level of the student population (Cardemil and Latorre, 1992; Wolff, Schiefelbein and Valenzuela, 1994, and Espínola, 1995).

6. The beneficiary population: organized groups (middle class) or poor groups

Because of its relation with a particular phase of Latin American economic growth, the prevailing paradigm sought to attend to sectors which had some capacity for pressuring the State, especially the middle class. In this way, the State facilitated the expansion of the domestic market, which was important to national industry.

For the emergent paradigm, in contrast, the only way of achieving equity is to take care of the neediest, both because of their situation of extreme need and because the sectors which have received benefits so far are now able (or at least more able) to solve their problems themselves.

7. Emphasis on the means or on the ends

The prevailing paradigm tends to emphasize the importance of expanding the coverage of the services provided. This is very important, of course, but it cannot be the be-all and end-all of a policy. How can success be claimed if the education provided is of unsatisfactory quality? This concern for coverage can even lead to distortions, because it is easier to expand by serving concentrated population groups –especially urban groups– than scattered rural groups, even though the needs of the latter are greater. Likewise, high coverage does not necessarily bring the desired results, as in the case, for example, of nutrition programmes which seek to cover more people by reducing the amounts of calories and proteins supplied to levels below the minimum standards. Furthermore, coverage can be expanded without this having any impact whatsoever, as for example by including among the beneficiaries of a programme people who do not in fact have unsatisfied needs (Cohen and Franco, 1992).

[16] "For a [Chilean] family in a state of extreme poverty, the complete set of State allowances it can apply for represents a monthly income 90% higher than the minimum income" (Vergara, 1990, p. 327), while "targetting heightens the impact produced per unit of resources invested and reduces the final costs" (Schejtman, 1989, pp. 118-119).

[17] This objective is pursued by providing resources for the rehabilitation of the schools themselves and the supply of teaching material, classroom libraries, exercise books, textbooks, learning modules for the students and teaching modules for the teachers.

This paradigm also stresses investment in social infrastructure (building schools, clinics, hospitals) even when there are not enough resources for current expenditure (staff, equipment, instruments, disposable materials). On other occasions, current expenditure is raised to pay wages, regardless of whether staff have performed adequately or beneficiaries have benefited from the services provided.

The traditional paradigm allocates resources according to a historically determined budget: with no instruments to check the appropriateness of expenditure, it is accepted that the allocation and implementation are correct and thus changes are only made if existing categories are broadened and, as far as possible, in accordance with established criteria.

The emergent paradigm, in contrast, attempts to use its programmes to change the living conditions of the population and is concerned about their impact: that is to say, about how much beneficiaries really receive compared with the original objectives.

Under this approach, it is necessary to use criteria which permit both identification of the target group and also measurement of results through an evaluation methodology appropriate to what is being measured. Cost-impact analysis measures both the efficiency and the efficacy of projects (Cohen and Franco, 1992). This requires a diagnostic "base line" and an "end line" which, when compared with each other, make it possible to determine the effective magnitude of the changes attributable to the project.

8. The indicator used: public social expenditure vs. cost-impact ratio

The chief indicator in the prevailing model is the size of public social expenditure and its fluctuations. It is tacitly accepted (although it is not explicitly established) that there is an inverse relationship between the level of expenditure and the level of poverty: the more resources are available, the lower the number or the proportion of poor people. However, the level of social expenditure is a poor indicator, both of social development –which is also connected with a country's economic performance– and of investment in human capital. The level of such expenditure could be high, and yet it might be put to poor use to achieve those ends.

Social expenditure is the sum of "all expenses with some social significance that the State incurs" (Haindl, Budinich and Irarrázabal, 1989). Opinions differ as to which budget items to include. There is usually agreement on education, health and housing, but not on justice and other expenditure. [18]

The Human Development Report (UNDP, 1991) suggests four ratios for use in measuring human development: public expenditure/GDP, social spending/total public expenditure, social priority spending/social spending, and social priority spending/GDP. These ratios represent a questioning of the idea that there is a direct relationship between total resources allocated to the "social side" and the level of social development. However, in no way do they indicate how progressive the expenditure is, since it may be that the actual recipients of "social priority" programmes –where resources should be concentrated, according to UNDP– are not the neediest. Nor do they show the efficiency with which resources are used, nor the efficacy of the programmes which they finance.

In order to appreciate these aspects it is useful to disaggregate social expenditure and analyse who its real beneficiaries are. Public social expenditure, as defined above, contains an administrative element that does not signify real benefit for the population: "there only has to be a rise in public administration salary levels for public social expenditure to go up accordingly. An increase in the size of the State bureaucracy also raises expenditure defined in this way, without necessarily improving the situation of the poorest people" (Haindl, Budinich and Irarrázabal, 1989). Fiscal social expenditure only includes the fiscal contribution which reaches beneficiaries (subsidy) and the amount which goes to finance part of the administrative apparatus of the various ministries: it excludes financing contributed by the beneficiaries themselves. Direct social spending is the fiscal contribution which is converted into monetary transfers or goods and services provided directly to people (subsidies), and excludes administrative costs. Lastly, effective social expenditure is that part of direct spending that reaches the poorest sectors of the population. On the basis of the results of surveys such as Chile's socio-economic CASEN survey, which show

[18] There are also many unanswered questions: "Should private-sector contributions be included, or only those of the public sector? Should only fiscal contributions be taken into account, or total public-sector expenditure? Should fiscal contributions to pension funds be included? How should administrative costs be accounted for in these programmes and, even more important, what is the status of the administrative costs of ministries whose work has some social significance?" (Haindl, Budinich and Irarrázabal, 1989, p.31).

how the income generated by social programmes is distributed among the different deciles of the population, it has been possible to determine that in some countries of the region the amount received by the poorest 30% of the population (effective social spending) is only a very small proportion of total public social expenditure (*ibid*).

This confirms the results of several studies which show that social spending (like any other kind of spending) can be used more or less efficiently and can thus have a varying impact on beneficiaries. The World Bank (1990, p. 37) maintains that "data for Latin America show that the pattern of social expenditures is regressive in most countries", which means that increasing it "is not always the answer to improving the well-being of poor people. Better allocation of expenditures within the sector and more efficient use of funds are often more important" (p. 46), and adds that "further spending on social services in general will not automatically help the poor. The structure which exists for provision of those services needs to be reoriented in their favour, both quantitatively and qualitatively".

Another problem with using social spending as an indicator is its level of aggregation. It is difficult to make adjustments to a given programme on the basis of changes in social spending or on the basis of some relationship between social spending and social indicators at the macroeconomic level. Any relationship that may exist is affected by innumerable variables which are not taken into account.

This is why the emergent paradigm stresses the need for indicators related to each specific programme. Use of the cost-impact ratio is recommended, since this makes it possible to judge whether the programme optimizes resource use, or, in other words, if it achieves maximum impact at minimum cost.

III

Conclusions: a model that works

There is a growing consensus as to the limitations of the prevailing paradigm, which are very well-known because it has been in operation for so long. In many cases, the State has become more of a hindrance than a help to development and to improving the population's living conditions. These deficiencies in State action have given rise to efforts to "reinvent government" (Osborne and Gaebler, 1992) and to make changes in the traditional institutional structure of the State, the functions it should take on and the way it should carry them out. It is therefore necessary to try to adopt an innovative approach, presented here in the form of an emergent paradigm.

Social policy contributes to governance and renewed legitimation of the State (Franco, 1991), but its importance today lies above all in its contribution to the formation of human capital, which is indispensable for the medium-term competitiveness of our countries. Knowledge has become the main factor in production, and consequently any delay in the implementation of social policies which increase the possibilities of expanding human capital is not only a failure in terms of ethics but also an economic error which deprives society of qualified, flexible resources capable of adapting to the rapid incorporation of technical progress into production processes.

Social policy is thus an economic as well as a political prerequisite. However, it has to be implemented in situations where resources are scarce and there are constraints imposed by considerations of competitiveness. This is why it is so important to analyse the possibilities for reforming social policy and exploring fresh options in this field.

It is likely that the greatest efficiency and efficacy will be achieved through a combination of the best features of these two paradigms – the prevailing model and the proposed emergent paradigm.

(Original: Spanish)

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Virtues and *limitations of census* maps for identifying *critical deficiencies*

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Critical deficiency maps, conceived as objective, uniformly applicable technical tools that could be employed to make social expenditure more efficient and effective, constitute the most ambitious and successful method devised to date for using census data for social planning in Latin America and the Caribbean. Nevertheless, while their importance and potential as a policy tool have gained increasing recognition, questions have arisen concerning their virtues and limitations and on how they could be made to serve the need for more complex social information or to reveal the changing forms that poverty assumes. This article addresses five of the questions most frequently posed about the maps: How accurately do they identify or exclude beneficiaries of anti-poverty programmes? How well do they handle comparisons over time? How well do they handle spatial comparisons? How easily can they incorporate updated information? And how appropriate are the research variables chosen?

I

Introduction

Maps identifying critical deficiencies [1] have been seen as objective, uniformly applicable technical tools that could be used to make social expenditure more efficient and effective. They are created by estimating the ratio of households with critical deficiencies to total households in a given locality or settlement stratum. They help to identify the most serious deficiencies in a given geographical area and to analyse the socio-demographic profile of households with deficiencies, comparing it to the profile of other households.

Critical deficiency maps, in my opinion, constitute the most ambitious and successful method devised to date of using census information for purposes of social planning. Their usefulness becomes obvious when one considers how hard it is to expand census research beyond the purposes for which censuses were originally designed. The simultaneous collection, processing and distribution of reliable information on the entire population of a country requires an organization that can control the specifics of each step in the census process. The cost and complexity of the operation discourages offices of statistics from including questions beyond the minimum necessary to take a periodic "x-ray" of the socio-demographic situation. Despite these limitations, now that widespread recognition of the usefulness of maps of unmet basic needs as guides to social policy has enhanced the prestige of the work of national offices of statistics, the officials in charge have shown themselves to be more willing to add or modify questions in order to improve research into the extent, location and characteristics of households with critical deficiencies, without undermining the original purposes of the census.

In Latin American countries that have employed this method, the results published have shown the great potential of the census as a source of information in the fight against poverty, have increased public awareness of the issue and have stimulated a national debate on the appropriateness of poverty indicators. The overall effect has been beneficial; it has encouraged the use of a uniform set of definitions and indicators by all agencies responsible for social action, cut down on duplication of efforts and created the conditions for integrating information and coordinating initiatives directed towards the poor.

The importance of the latter achievement has not been sufficiently emphasized, in my opinion. In recent years, those who deal with the issue of poverty from various angles have observed an increasing rapprochement among professionals involved in the tasks that mediate between theory and social action –the thinkers who define and operationalize the problem, the data producers who compile and process data, the computer experts who develop or adapt georeferential technologies, [2] the data analysts, and the programme designers, decision-makers, implementers and evaluators. This tendency has generated a positive synergy, in which efforts to make social expenditure more cost-effective have reinforced and been reinforced by more cost-effective investment in methods and techniques and by continual conceptual refinement. Because they are simple, attractive and readily understandable formats for presenting diagnostic analyses, critical deficiency maps have become a key link in the chain between theory and action in the fight against poverty.

On the part of users, recognition of the importance and potential of the census-based maps for identifying critical deficiencies has raised questions about their virtues and limitations and about the degree to which they could be made to serve the need for more complex social information or to reveal the changing forms that poverty assumes. In this article, I will address five of the questions most frequently posed about the maps: How accurately do they identify or exclude beneficiaries of anti-poverty programmes? How well do they handle comparisons over time? How well do they handle spatial comparisons? How easily can they incorporate updated information? And how appropriate are the research variables chosen?

[1] In this article, the terms "critical deficiencies" and "unmet basic needs" are used interchangeably.

[2] That is, technologies that allow for rapid location –and profile analysis– of small geographic units that meet previously defined criteria.

II

Problems relating to inclusion and exclusion of categories of the poor on critical deficiency maps

In order to provide an answer to the question of how accurately the maps include or exclude categories of the poor, it will be helpful to do a quick review of the criteria applied in formulating indicators of unmet basic needs. There are essentially five.

The first criterion, which we may call "geographic grouping", aims at locating households with critical deficiencies and analysing them with the most detailed geographical breakdown possible. The only means of collecting data with the coverage required for this purpose is a population census. The choice of a census as a data source in turn places definite limits on the choice of indicators.

The second criterion is representativeness. Given the above-mentioned limitations, in order to ensure that the characteristics selected are representative of an inability to meet an array of needs broader than that covered by the census, the indicators constructed must show a statistically significant correlation with the household income level that defines the poverty line.

The third criterion is universality. This means that access to the goods or services that meet what are considered basic needs must be a reasonably feasible option for all households within the territory of the country. A need is considered "unmet" only when it implies acute deprivation and "met" if there is any doubt about the critical nature of the deficiency or if the indicators tend to reflect heterogeneous situations in different geographic areas.

The fourth criterion is stability. Preference is given to indicators that are less sensitive to economic cycles and hence reflect relatively stable characteristics of households.

The final criterion is simplicity. Whenever a choice must be made between two or more equally valid methods of measuring a critical deficiency, the simplest, most readily understood indicator will be chosen.

Indicators constructed on the basis of the above criteria minimize the risk of including households of low social vulnerability in the category of households with deficiencies. The detailed level of breakdown possible using census data, coupled with increasing access to blocks of data with methodologies that make it possible to work with small localities that are highly homogeneous with respect to the deficiencies suffered by the households comprised, makes the maps thus prepared very useful for targeting social policy programmes.

With respect to their limitations, it is true that the chosen indicators do not make it possible to locate and analyse households that could be considered "new poor" after experiencing recent downward mobility and that therefore still have the educational levels, school attendance standards for their children and housing infrastructure characteristic of their former situation. This is undoubtedly a major drawback given the present circumstances in many Latin American countries; new poverty is emerging from the processes of restructuring and adjustment common throughout the region, and its significance with respect to changes in the social structure has not yet been properly diagnosed, much less thoroughly evaluated in terms of its socio-political consequences. What is already clear is that in the immediate future we will have to prepare ourselves to estimate the numbers of the new poor, identify their characteristics and produce information useful in designing and implementing policies to reduce their vulnerability and prevent the activation of mechanisms that could lead to marginalization and chronic poverty.

Another drawback is that the maps identify geographic aggregates. This leads to at least two distortions. The first is that a certain amount of resources find their way to non-poor households, which, by virtue of residing in a communities with high concentrations of poverty, enhance their likelihood of benefiting from the goods or services resulting from the new policies. Second, households that are part of the population targeted by the programmes but live in localities with low poverty densities are not reached by policies designed on a territorial basis. This means that the effectiveness of the maps as sources of information for anti-poverty policies is closely linked to the degree of spatial concentration of households with critical deficiencies and the homogeneity of their profiles. Nevertheless, the maps are usually quite efficient, because the cost of the resources diverted is usually lower than the cost of the administrative resources that would have to be mobilized in order to narrow the field (ECLAC, 1995b, pp. 13-25).[3]

III

Comparability over time

1. General considerations

Although critical deficiency maps were not designed for the purpose, most users draw inferences about trends in critical deficiencies when they have information for two or more points in time. Some sorts of inferences can be drawn, while others cannot. The data have been found useful in identifying advances and setbacks with respect to each indicator considered separately. With the support of some additional information, advances or setbacks can also be interpreted in part as being due to the success or failure of different programmes. When making such an interpretation, however, caution is in order. An improvement in some indicators (e.g., overcrowding, subsistence capacity and school attendance) may be due less to specific programmes on housing, education, or aid to large families than to phenomena such as declining fertility or increasing employment, which are determined by other factors.

Even greater caution should be exercised when, instead of monitoring separate indicator trends, the aim is to seek a general interpretation of changes in the percentage of households or individuals whose basic needs are unmet. First of all, such changes cannot be interpreted simply as a change in the extent of poverty. It has already been pointed out that the current indicators of unmet basic needs do not detect the existence of the new poor, and, as we shall see, given the way the indicators are constructed, it is quite likely that they also underestimate chronic urban poverty. As a result, even though the original rationale for the maps was a desire for information on situations affecting high-risk groups, the fact that the general index of unmet basic needs measures only some of those groups means that time comparisons do not provide a basis for judging whether poverty on a whole is increasing or declining.

Secondly, it should be borne in mind that the degree to which census indicators of basic needs correlate with other dimensions of poverty varies over time, an important consideration when one is working with census data collected at periods at least ten years apart in countries undergoing rapid socio-economic changes. If we compare this situation with the methodology employed to estimate poverty lines, we find that the latter takes into account temporal relativity. It is implicit, for example, in the periodic update of the list of products included in the basic shopping basket, to reflect changes in food habits, average weight and height, proportion of the population engaged in activities requiring various levels of energy consumption and hence of caloric intake, and changes in the weighting of food products in total consumption. The underlying notion is that the basic shopping basket as redefined should reflect cultural changes in the ways that basic needs are satisfied and, ultimately, changes in threshold levels of what is considered a decent standard of living. Theoretically, the methodology for constructing indicators of unmet basic needs also allows for periodic updates of the indicators through their individual correlation with the level of household income that defines the poverty line and through consultation with specialists in the various dimensions of basic needs. In practice, however, when comparisons over time have been made, to my knowledge, the indicators applied have not been modified from their original version.

To illustrate the importance of modifying the indicators of unmet basic needs for a valid time comparison, let us consider subsistence capacity. This indicator is designed to identify households with a low potential capacity to earn the income needed to provide adequate subsistence to all of their members.

[3] On the factors that determine the relevance of territory in allocating resources, see ECLAC, 1995a, p. 7.

To measure that capacity, it classifies as households with critical deficiencies households headed by persons with a level of education so low that it constitutes a clear disadvantage in a job market of ever-increasing skill requirements, along with households that include a relatively high number of non-income earners in proportion to income earners, with unpaid family workers classified under the latter category (Uruguay, Department of Statistics and Censuses/ECLAC, 1989, pp. 68-70).

The first refinement that had to be made was an adjustment of the education requirement, depending on the age of the head of household. Analysis of data from a household survey in Uruguay showed that while for heads of household under 45 years of age failure to complete their primary education correlated closely with personal earnings below the poverty line, for those above 45 the number of years of education needed to rise above the poverty line was much lower. The difference was due in part to rights and privileges acquired by seniority on the job, but also to the changes that had come about in hiring criteria. A good portion of those over 45 years of age joined the labour force at a time when knowing how to read and write were sufficient skills for a job candidate in the public sector and in many private-sector occupations. Once they found their place in the workforce, the accumulation of experience and accrual of rights in a heavily unionized market enabled them to reach and maintain an income level that was high compared to what individuals in later generations with similar levels of education could obtain.

These considerations led to the definition of different levels of education for the two age groups to indicate a roughly similar advantage in the labour market. For the younger group a minimum of five years of primary education was postulated. For the group over 45 years of age, the minimum was set at only two years of formal education, reflecting the fact that for a long time schools in rural areas of Uruguay offered only three years of primary education.

Looking at the data for this indicator ten years later, two changes were observable. First of all, the average educational attainment of heads of households in both age groups had risen. The over-45 age group now included the cohort that had been aged 35 to 44 at the time of the previous census, characterized by more years of schooling, while the under-45 age group now incorporated a cohort many of whose members had been students at the time of the previous census. Moreover, education had become devalued, as reflected in lower average absolute and relative incomes earned for a given level of formal education. The latter phenomenon was observable not only in Uruguay, but in all the Latin American countries for which information is available between 1980 and 1990 (ECLAC, 1994, table 51, pp. 203 and following). In other words, in order to allow for a valid comparison, the changes mentioned should be reflected by modifying the minimum number of years of schooling established for each age group as an indicator of subsistence capacity.

To sum up, even without modification, the indicators of unmet basic needs still make it possible to track advances or setbacks with respect to each indicator taken separately and, with due caution, to draw inferences concerning the success or failure of policies aimed at overcoming a specific deficiency. But they do not provide a sound basis for estimating an overall increase or decrease in poverty or the number of households with critical deficiencies. For the latter estimate, the selected indicators will need to be revalidated in order to ensure that they are representative of the set of psychological, material and cultural factors that constitute at any given point in time the minimum conditions considered necessary for a decent standard of living in a given society.

2. Factors that affect trends in the index of unmet basic needs

At this point, it may be helpful to take a moment to consider more closely some of the factors that determine the trends in indicators of unmet basic needs. In this regard, let me begin with an observation. Contrary to what one might expect, in most of the countries for which data is available on trends in unmet basic needs of households during the economic crisis of the 1980s, the deterioration in the situation of households was not in keeping with the decline in employment and income.

This fact emerges from analysis of the data contained in a number of national and regional documents showing the trend in the percentage of households with basic needs unmet at different periods in the 1980s in eight countries: Argentina, Bolivia, Chile, Colombia, Ecuador, Peru, Uruguay and Venezuela (UNDP, 1990; Uruguay, Social Investment Programme, 1994; Ortega and Tironi, 1988). Of these eight, only Peru showed a small increase from 1981 to 1985 in the percentage of

TABLE 1

Latin America (five countries): Urban households with unmet basic needs and below the poverty line
(Percentage of total urban households)

	Year	Unmet basic needs	Year	Below the poverty line
Argentina [a]	1980	16.6	1980	5.0
	1988	11.5	1990	16.0
Colombia	1973	50.0	1970	38.0
	1988	15.1	1988	35.5
Peru [b]	1981	27.0	1979	29.0
	1986	27.2	1986	37.0
Uruguay [c]	1984	11.1	1985	20.5
	1989	8.4	1992	9.2
Venezuela	1981	34.3	1981	12.0
	1988	27.0	1988	20.0

Sources: Households below the poverty line: ECLAC, 1994. Households with unmet basic needs: UNDP, 1990; for Uruguay: ECLAC, 1990.
[a] Greater Buenos Aires. [b] Lima and Callao. [c] Montevideo.

the urban population with basic needs unmet. Moreover, in the few cases in which I was able to roughly match up the areas and periods of the data on percentages of households with basic needs unmet and on percentages of households below the poverty line, the results show a striking divergence between the trends in the two indicators (see table 1), with a markedly more positive evolution of the unmet basic needs indicator.

The reasons for the discrepancy have been analysed from different perspectives in several studies (Bustelo and Minujin, 1994; Botvinik, 1990; Kaztman and Gerstenfeld, 1990). In general, they reflect the impact of such factors as:

i) The maturation period of investments in education, housing, sanitation and drinking water infrastructure that were made prior to the crisis but only began to have an effect on household living conditions during the crisis;[4]

ii) The inertia of cultural factors, so that, for example, once the idea is implanted that education leads to better living conditions, parents tend to make sacrifices to keep their children in school;

iii) Reluctance to give up advances in access to public services (water, sanitation, education) or gains resulting from investment realized in the past (housing); this reluctance creates priorities in the dissaving process, i.e., in the order in which households affected by economic crisis relinquish goods and services;

iv) The priorities Governments assign to action in "soft" areas of social intervention, i.e., areas that offer less institutional, political or cultural resistance, rather than in "hard" areas, such as wages, employment and income generation and distribution, which have a greater impact on levels of social equity;

v) Government preferences for selecting and setting readily understandable goals;[5] a number of Governments in the region have used some of the indicators that make up the index to set social goals and have concentrated their efforts on reducing the level of critical deficiencies that the indicators reveal;

vi) As mentioned earlier, a number of the indicators selected are linked directly or indirectly to the birth rate (overcrowding, school attendance and subsistence capacity). The indicators are likely to fall when there are fewer children or when children make up a smaller proportion of total population (the percentage of households below the poverty line should decline for the same reasons). Given the long-standing trend towards a declining birth rate in all the countries of the region, one could expect that for that reason alone there would be a drop in the percentage of households with unmet basic needs.

Consideration of these factors will help to clarify what the reduction in the percentage of households with unmet basic needs actually means in the context of an anti-poverty programme, without denying that such a reduction may imply a real improvement in household living conditions.

[4] This observation calls attention to the need to take account of time elements in evaluating the impact of programmes.

[5] It should be born in mind that support for a social goal depends not only on its content but also on the way it is presented. If a programme is well launched, so that it is immediately clear what it aims to accomplish, it facilitates communication of the objective, arouses more popular support for the idea and ensures a better reception for its contents. This has been the case with the unmet basic needs approach.

IV

Spatial comparability

As we have said, one of the basic criteria for defining the indicators that make up the index of unmet basic needs is that the cut-off point for each indicator must be situated at a sufficiently critical level (indicating acute deprivation), while the alternatives for fulfilling each unmet need must be within the domain of options generally available to households in the statistical universe analysed.

The application of the above criterion, however, has been subordinated in some cases to the nature of the need. It is assumed that in the case of some of the needs analysed, it is essential that a given level be met in order for individuals to become integrated into their society, regardless of whether it is hard or easy to attain that level given the local infrastructure. One such need is school attendance by children of school age. It is well understood that such factors as the distance between home and school, the condition of the roads, the problem of transportation, the climate, the school infrastructure, the teaching materials and staff the schools have available, and the demand for child labour in agricultural tasks all tend to make it harder for children in some rural areas to attend school. Nevertheless, it is felt that if a school-age child does not attend school, he or she is condemned to exclusion and marginalization in either a rural or urban environment and has been denied a right that is a necessary precondition for integration into today's labour market and for the exercise of full citizenship. In other words, non-attendance at school is a critical deficiency anywhere within a country, and as such is a fact of great relevance for the design and implementation of educational policy.

Leaving aside school attendance, however, it can be said with respect to the other indicators that the decision to select satisfaction thresholds that are within the domain of options available to all the households of a given country, while it offers the advantage of minimizing the risk of including the non-poor, also entails the disadvantage of a downward-levelling effect, which, by accentuating the critical nature of each deficiency, biases the data towards the exclusion of the urban poor and ultimately results in an underestimate of urban poverty.

The decision to apply the same indicators to both urban and rural areas implies an assumption of cultural homogeneity. It is undoubtedly true that the way individuals perceive their situation is greatly influenced by the images prevailing in their world of what is considered a decent standard of living. Their perceptions in turn affect their attitudes and behaviour, their feelings of belonging or exclusion with respect to the community in which they live, their capacity and disposition to make use of the "social capital" that results from participation in their community and, ultimately, their response to opportunities that may come their way to escape poverty.[6] In many countries of the region, for example, the lack of a television or access to piped water produces a sense of relative deprivation in the members of an urban household, whereas very likely this situation would not evoke the same response in a rural environment.

Considerations such as these underline the advisability of developing separate indicators for rural and urban areas, or assigning a different weighting to indicator components. To do so, however, necessitates a more complex methodological design and ends up being more costly. In the first place, adjusting the definition and validation of indicators to living standards in different areas involves more detailed work. Secondly, having admitted the importance of the cultural element in differentiating rural from urban and having thus made the significance of deficiencies relative, one then has to apply the same criterion (or justify not applying it) to differentiate other areas (urban centres of different sizes, for example, or regions such as northeastern and southern Brazil).

[6] In a recent work on the new poor in Argentina, Minujin and Kessler speak of the "social capital" of households, in the sense of the resources households can muster through networks of personal contacts, and of how this capital is "spent" as the households fall into poverty (Minujin and Kessler, 1995).

Given the costs and design complexity involved in taking subcultural factors into account, this should be done only when the significance of such factors is very evident. Since it is not easy to come up with evidence in this regard, a practical solution is to take as an approximate indicator the extent of the differences in the standard of living between the various areas of a country. In countries with greater homogeneity, the same indicators can be applied to the entire country, while in countries with more pronounced differences, one can try to define indicators that reflect the different meanings that populations assign to access to the same services. This approach avoids downward levelling and hence reduces the risk of excluding from the category of urban poor those who consider themselves poor and act as such.

V

Timeliness of the information

The census basis of the maps imposes definite limitations on their capacity to reflect changes in the situation of potential beneficiaries of social policies. Countries that have a system of annual or semi-annual surveys and succeed in combining information from this source with census data are able to monitor trends in the proportion of households with critical deficiencies and in their socio-demographic profiles. In order for such monitoring, which of course applies only to the localities represented by the survey sample, to have validity, it is necessary to keep close track of what constitutes the threshold standard of living that most of the society considers acceptable and to have the human and financial resources to adjust the indicators whenever there are significant changes in the threshold.

While it is theoretically possible to monitor trends for the entire population during the period between censuses, in most cases household surveys do not allow for a level of breakdown of the updated information that is useful for targeting social policies, and hence there is a mismatch between the flow of data and the evolution of beneficiary needs and anti-poverty programme management requirements.[7]

VI

Appropriateness of the research variables

Indicators of unmet basic needs are selected to be representative of the critical deficiencies from which a country's households may suffer. Since, however, different social groups admittedly suffer from different deficiencies and since for practical reasons it is sensible to keep the number of indicators small, the index that summarizes the combination of the necessarily limited number of indicators will inevitably be more sensitive to deficiencies that affect some segments of society than others.

To illustrate: it is frequently objected that the indicators commonly used are slanted towards families with children (overcrowding, school attendance, subsistence capacity) and do not give due consideration to households whose members are in other stages of the family life cycle (homes with elderly people, for example). A bias obviously does exist. The direction of the bias depends on the limitations of the information sources and on the priorities of those responsible for social policy, expressed within the narrow margin of indicator choice that the sources permit.

With respect to social policy priorities, the decision to select indicators more apt to identify situations that chiefly affect minors is based on the conclusion, supported by the results of many studies, that it is precisely among families with children that

[7] The reader is referred to ECLAC (1995a) for a detailed examination of the virtues and limitations of various instruments for selecting beneficiaries of social programmes and of the drawbacks of each with regard to updating information with the periodicity required for programme management.

the proportion of poor households is the largest, that the proportion of children in poverty is greater than for any other age group, and that policies to break the cycle of poverty perpetuation are best targeted towards households where children predominate. Breaking the perpetuation cycle appears to be the most effective way of attacking the problem of poverty over the medium and long term.

VII

Conclusion

A map of unmet basic needs is an extremely useful tool for designing and implementing social policy and particularly for making the best use of resources in the fight against poverty. It is highly efficient in view of the relative ease with which it can be applied and the low cost involved in utilizing the results of an operation –the census– which already has its own funding, which States regularly perform and which covers the entire population at once. The maps make it possible to pinpoint small areas of human settlement that have a high concentration of households with unmet basic needs, to examine the specific critical deficiencies from which they suffer and to analyse their socio-demographic profiles.

The limitations of the method are clear. Census data are far less reliable and accurate than data obtained using a tool specifically designed for investigating critical deficiencies. When the same threshold indicators are applied uniformly to the entire country, the new poor are not identified and urban poverty is underestimated.

Monitoring the trend in the proportion of households with unmet basic needs requires close attention to changes in general living standards and constant adjustment of the indicators, or their relative weighting, to reflect those changes. Spatial comparison necessitates consideration of the cultural patterns that affect how people in different geographic areas evaluate their own living conditions.

The decision whether or not to elaborate and apply methodological designs to overcome some of these limitations will have to be made on a case-by-case basis by weighing the extra costs the procedure would entail against the extra benefits in achieving the goals that justify the preparation of census maps.

(Original: Spanish).

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Central America: *inflation and stabilization* in the crisis and *post-crisis eras*

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The small, open economies of the Central American countries have all, to a large extent, been subject to the same determinants of inflation. The oil shocks of the 1970s brought the era of stable prices and steady growth in the subregion to an end. External factors continue to have a significant influence on price movements. In addition to the direct impact of international prices, the availability of external resources, which eases supply and demand pressures, also plays a role. It is true, however, that the nature of the national economic policies adopted to deal with fiscal imbalances have led to a progressive differentiation of the inflationary processes experienced by each country. The expansion of the money supply in relation to GDP has come to be a significant factor in some countries; furthermore, an increase in public-sector credit relative to import capacity has also proved to be inflationary. Lastly, a number of market imperfections have created rigidities in the behaviour of prices by introducing a large measure of inflationary inertia. Central American inflation has prompted a wide range of stabilization efforts. Governments first tried countercyclical policies that gave little consideration to external constraints, then moved on to anti-inflationary policies which used the nominal exchange rate as a price anchor –with severe repercussions for the external sector– and eventually resorted to tight-money policies that led, in some cases, to deep recessions. Thus, in situations marked by frequent domestic and external crises, learning to live with moderate, stable inflation rates may be the most effective macroeconomic policy and the option that is most in keeping with a sustained growth path.

I
Introduction

Up to the end of the 1970s, Central America exhibited a degree of price stability rarely seen in the rest of Latin America. Because of the small size of the Central American economies and the fact that they mainly export traditional agricultural products, they remained comparatively more open than those of the other countries of the region during the 1960s and 1970s. The countries applied an import-substitution strategy in a limited way and had a readily accessible subregional market –the Central American Common Market (CACM)– at their disposal. This factor contributed to the economic growth shown by the subregion, which was interrupted only by the oil shocks (especially the second one). From 1962 to 1975, Central America grew at an average annual rate of 5.6%.

When they found themselves faced with the external constraints associated with higher energy prices (and, to a lesser extent, higher food prices as well), the subregion's Governments –believing these difficulties to be temporary in nature– opted for countercyclical measures that were paid for by external resources and larger fiscal deficits. Economic adjustment efforts were thus deferred, and pressures built up in these economies as a consequence of mounting external debts, artificial price controls and excessive public spending.

In the late 1970s, the economic picture darkened in several of these countries as seemingly intractable political and military conflicts erupted. This state of affairs limited the economic policy options open to some of these Governments and this, together with the external-sector crises precipitated by trade deficits and the external debt burden, seriously undermined the trade relations and economic complementarity which the countries of the subregion had achieved through CACM.

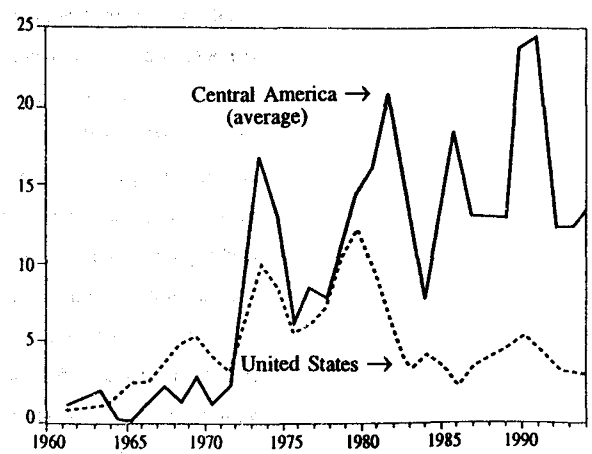
The crisis in the real economy was exacerbated by the outbreak of a crisis in the financial sector as sources of external financing dried up and national capital fled abroad. This seriously curtailed the countries' investment capacity and their ability to modernize their production facilities.

The combination of these elements resulted in a deep recession and an unprecedented rate of inflation in the Central American countries. After having been held in check by direct controls during the 1970s, inflation flared in the 1980s (except in Honduras, where, on the whole, prices did not begin to climb until the 1990s) and began to move farther and farther away from both international inflation and the rate seen in the United States, Central America's main trading partner (see figure 1).

Faced with persistent macroeconomic imbalances, the countries were forced to undertake an economic adjustment in the 1980s. The nature of this process changed, however, over the course of the decade. The first stabilization policies to be implemented were of an unorthodox nature but, in view of the persistence of both inflation and the countries' external and fiscal deficits, as well as the terms and conditions imposed by international financial institutions, these policies were later abandoned in favour of more orthodox approaches.

The aim of this article is to examine both the inflationary process in the Central American subregion, taking into account the particular features of its economy, and the adjustment and stabilization policies that have been adopted in an effort to elimi-

FIGURE 1
Comparison of trends in inflation in Central America [a] and the United States, 1962-1994
(Consumer prices, percentage variation between annual averages)



[a] Regional average; does not include Nicaragua.

nate its disequilibria. Section II presents an analysis of the subregion's various stabilization efforts, the circumstances in which they were undertaken and their results. The following two sections deal with the empirical aspects of inflation; section III explores the possibility of a common econometric model for the subregion, while section IV analyses other dynamic factors which have a bearing on the design of stabilization policies. Section V outlines a number of conclusions.

II

Stabilization and macroeconomic adjustment in Central America

During the 1980s, the influence which external prices have traditionally exerted on domestic price levels was compounded by the emergence of various internal sources of inflation; as a result, the upward momentum of prices took hold in a more lasting and complex way than it had before and began to diverge from the trend of international inflation (see table 1).[1]

In the late 1970s, numerous domestic and external factors began to destabilize the Central American economies. The drop in the prices fetched by traditional export products and the rise in international oil prices generated sharp external imbalances after 1974 and especially from 1979 onward. Even before 1979, tense military situations were prompting capital flight, which added to the external deficits not only of the countries directly affected by the conflicts, but of the rest of the subregion as well. In some cases, a misperception of the seriousness of these problems and a desire to prolong the economic bonanza of the 1970s led to the implementation of countercyclical policies which propped up aggregate demand with the help of international reserves or loans.

During the remainder of the 1980s, at least two types of stabilization strategies were employed: an unorthodox approach that used control of the exchange rate as a nominal anchor and placed restrictions on imports, and a more orthodox strategy which relied on control of the money supply as the backbone of anti-inflationary policy.[2] Thus, the 1980s can be seen as consisting of two distinct periods: during the first of these periods unorthodox strategies prevailed, while during the second, most of the countries decided to tighten up the money supply while at the same time devaluing their currency.

1. Early stabilization efforts (1979-1985)

Although the reduction of fiscal and external deficits figured among the main objectives of the first stabilization and adjustment efforts –particularly those signed between 1979 and 1980– these programmes also included clauses designed to boost economic activity (El Salvador) or strengthen public investment (Honduras). Subsequent arrangements focused on eliminating the countries' major macroeconomic imbalances, which had worsened during the early 1980s. Some of these early programmes also provided for quantitative import restrictions and exchange controls aimed at eliminating the deficit on the current account of the balance of payments (e.g., the agreement signed by El Salvador with the International Monetary Fund in June 1980); later on, such instruments disappeared entirely from these programmes. Unlike the other four countries of the subregion, in 1980 Nicaragua embarked upon an expansionary economic policy, particularly with regard to social spending and government investment, based on the country's ready access to credit, an ample supply of external resources and the successful renegotiation of its external debt in 1980-1981.

The majority of the subregion's stabilization and adjustment initiatives called for cutbacks in public spending (especially in the area of current expenditure), although most of the countries revised their investment plans as well. As a way of ensuring the implementation of such measures, a ceiling was placed on the amount of credit that the Central Bank could extend to the public sector; limits were also

[1] The statistical information mentioned in this section is presented in a more detailed form in table 1.

[2] For an analysis of the different effects of these two strategies on economic activity, see Kiguel and Liviatan, 1990.

TABLE 1

Central America: Selected macroeconomic variables

	1970-1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994
Inflation (December-December, percentage variation)																	
Costa Rica	11.7	13.2	17.8	65.1	81.7	10.7	17.3	10.9	15.4	16.4	25.3	10	27.3	25.3	17	9.0	19.9
El Salvador	8.8	14.9	18.6	11.6	13.4	14.8	9.8	31.9	30.3	19.6	18.2	23.5	19.3	9.9	19.9	12.3	8.9
Guatemala	8.0	13.6	9.1	8.7	-2	8.5	5.2	31.4	25.7	10.1	11	17.9	60.6	10	14.2	11.6	11.6
Honduras	7.2	22.5	11.5	9.2	9.4	7.2	3.7	4.2	3.2	2.9	6.7	11.4	36.4	21.4	6.5	13.0	28.9
Nicaragua	2.1	4.3	10.4	23.2	22.2	32.9	50.2	334.3	747.4	1 347.3	33 657.3	1 689.1	13 490.1	865.6	3.5	19.5	12.4
Real wages (percentage variation)																	
Costa Rica	...	...	...	-11.8	-19.8	-10.9	7.8	9.1	6.1	-9.7	-4.5	0.6	1.7	-4.6	4.1	10.2	3.7
El Salvador	...	...	...	-12.9	-10.5	-11.6	5.8	-18.3	-12.5	-19.9	0.2	-15.0	-5.9	-2.2	3.3	-3.2	2.0
Guatemala	...	...	...	...	...	...	-8.2	-13.9	-15.7	8.1	5.7	3.8	-18.1	-6.4	15.0	7.0	6.7
Honduras	...	...	...	...	...	...	-4.5	-3.2	-4.2	-2.4	-4.3	-8.9	16.7	0.1	13.3	1.8	-14.0
Nicaragua	...	...	...	-8.8	-11.4	-13.8	-5.8	-30.0	-63.9	-31.4	-58.7	66.0	61.5	3.2	19.2	-3.4	2.4
Fiscal balance/GDP (%)																	
Costa Rica	-3.5	-7.0	-8.2	-3.6	-2.6	-4.2	-3.0	-2.0	-3.3	-2.0	-2.5	-4.1	-4.4	-3.1	-1.9	-1.9	-7.0
El Salvador	...	-0.7	-5.3	-6.7	-7.2	-9.0	-6.1	-4.1	-3.1	-4.2	-3.6	-5.5	-3.6	-5.2	-5.2	-3.3	-2.1
Guatemala	-1.6	-2.6	-4.7	-7.4	-4.7	-3.3	-3.8	-1.8	-1.9	-2.4	-2.4	-3.8	-2.3	-0.1	-0.5	-1.5	-1.5
Honduras	-4.3	-4.8	-8.7	-8.1	-13.0	-10.9	-12.3	-9.8	-8.7	-8.1	-6.9	-7.4	-6.4	-3.3	-4.9	-9.3	-5.2
Nicaragua	-4.8	-7.0	-8.0	-11.3	-11.5	-28.8	-24.8	-23.3	-17.6	-16.8	-26.6	-6.7	-20.2	-7.5	-7.6	-7.4	-9.7
Money (M1)/GDP (%)																	
Costa Rica	18.1	17.9	17.2	18.9	18.6	19.0	17.4	16.2	17.0	15.4	15.2	14.8	13.0	12.7	13.2	11.6	11.5
El Salvador	18.3	15.3	15.8	16.3	16.7	14.6	15.3	16.1	14.6	12.5	11.4	11.9	11.5	10.5	11.6	10.6	0.1
Guatemala	10.0	10.0	9.0	8.6	8.6	8.7	8.9	11.8	9.9	9.9	9.7	10.2	9.4	8.1	7.6	7.8	7.7
Honduras	13.8	13.6	13.2	12.5	13.4	14.4	14.0	13.1	13.5	14.7	13.1	14.1	14.6	13.1	13.0	12.3	11.4
Nicaragua	12.7	24.2	21.3	23.2	24.4	35.0	46.4	50.6	47.3	56.9	...	...	...	10.54	8.98	7.27	8.8
Public-sector credit/GDP (%)																	
Costa Rica	6.9	18.2	21.5	18.8	14.4	22.9	21.1	17.4	18.5	17.9	17.1	13.7	14.6	11.6	8.5	7.3	7.0
El Salvador	3.3	6.2	17.5	25.5	28.8	17.2	18.0	21.1	15.0	14.1	12.4	7.7	8.2	8.7	8.5	7.2	4.5
Guatemala	3.4	1.7	4.5	9.3	12.6	13.9	16.6	15.5	8.1	5.7	4.3	4.6	3.2	4.5	2.7	1.5	1.5
Honduras	4.9	4.9	8.9	10.4	13.8	18.4	19.4	18.1	18.3	21.7	19.8	21.2	18.9	6.3	4.2	3.9	4.3
Nicaragua	1.7	12.4	31.1	40.2	51.8	72.3	82.4	69.2	43.9	40.7	64.4	1.2	35.7	29.6	213.6	190.5	179.6
Private-sector credit/GDP (%)																	
Costa Rica	28.4	30.8	29.1	23.2	18.7	21.4	19.9	19.0	17.9	19.1	17.8	16.1	17.0	14.1	15.9	18.1	17.7
El Salvador	26.9	28.7	25.8	28.3	31.2	35.6	34.8	31.3	28.5	26.8	25.4	24.6	20.3	19.6	22.0	24.9	27.0
Guatemala	13.7	16.2	17.0	17.4	18.5	20.5	21.7	20.0	15.5	17.2	17.1	16.2	13.1	11.2	13.3	13.0	13.6
Honduras	31.4	33.9	31.9	31.5	33.9	35.5	36.7	37.7	38.6	41.1	34.5	33.5	29.4	26.3	28.5	27.5	28.1
Nicaragua	27.6	59.6	41.4	39.0	35.4	31.6	25.2	16.4	16.2	13.1	14.9	0.2	6.1	22.5	22.1	27.6	32.9

Source: ECLAC.

placed on external borrowing by the central government and its subsidiary bodies. All the countries overhauled their tax systems, and in some cases an effort was made to increase the tax load. In addition, in an attempt not only to eliminate lags but also to boost public-sector income, public utility rates were raised. As a result, by 1985 the fiscal deficits of Costa Rica, El Salvador and Honduras were considerably smaller than they had been in 1979 or 1980.

A greater degree of flexibility was gradually introduced into the exchange system in order to eliminate lags in the real exchange rate and cut down on the central banks' exchange losses. Almost all the agreements that were reached also provided for the liberalization of interest rates. These measures had a number of different aims, including those of checking the steady outflow of flight capital from the subregion and of encouraging domestic saving and thereby curbing external borrowing, which had reached alarming levels. The arrangements made with the International Monetary Fund (IMF) during this period did not call for the liberalization of foreign trade, but they did include clauses that pointed in that direction.

On a different front, policies providing for the deregulation of prices (especially in Costa Rica, Guatemala and Honduras) and, to a lesser extent, of wages were launched. As a consequence of those policies and the slower pace of production activity, a steep downturn in real wages was observed throughout the 1980s (except in Costa Rica).

Meanwhile, in response to a reduction in the flow of external resources and sharp macroeconomic imbalances, Nicaragua embarked upon its first stabilization effort in 1982-1984. In regard to liberalization, however, it chose a path that was diametrically opposed to that taken by the rest of the countries in the subregion, as it proceeded to impose increasingly strict governmental controls in an effort to promote the development of a mixed economy. The changes made in the country's exchange policy failed to ease the pressures building up in the economy, however, and inflation continued to climb.

As of late 1982, hardly any of the stabilization programmes undertaken in Central America had been brought to a successful conclusion. As noted by Bulmer-Thomas (1985), the adjustment programmes implemented in 1979-1982 were not actually subject to conditions stipulated by the IMF. As the deficits on their balance-of-payments current accounts soared (from 3.5% to 11.7% of GDP between 1970 and 1981), almost all the countries placed controls on imports, began to require import deposits, applied exchange controls and delayed payments on their external debts (Costa Rica actually declared a moratorium in 1981). These measures invariably led to the suspension of their arrangements with the IMF.

Quite apart from any errors that may have been made in the implementation of economic stabilization policies, the seriousness of the adverse domestic factors (especially in El Salvador and Nicaragua) and unfavourable external (i.e., outside the subregion) conditions which the Central American countries had to face from 1979 onward was not fully recognized at the time that the targets for their adjustment plans were being set. In point of fact, the decline in coffee prices and, in general, the deterioration of Central America's terms of trade (by around 15% between 1980 and 1982) were very severe during the early years of the decade. In addition, the fact that tax revenues were so strongly influenced by international trade hurt public finances and thus pushed up the fiscal deficit. The capital flight that went hand in hand with the growing uncertainty felt by economic agents and the shortage of external credit inevitably sparked currency speculation.

2. Towards macroeconomic orthodoxy (1985-1994)

Controlling inflation was one of the areas in which the Central American countries' early adjustment policies met with failure. From 1983 on, new stabilization initiatives conformed much more closely to the conditions set by the IMF in the agreements it signed with the Central American countries; a greater degree of discipline was also to be observed, partly because the countries' external debt renegotiations were directly or indirectly contingent upon the fulfilment of their agreements with the IMF. [3]

The nominal anchor used to stabilize prices also was changed, as policy-makers switched their attention from controlling the nominal exchange rate to controlling the money supply. In addition, the focus of economic policy shifted from stabilization to structural

[3] A number of countries (such as El Salvador in 1986 and Guatemala in 1986 and 1989) did, however, carry out adjustment programmes without necessarily having the support of international financial agencies.

adjustment, with emphasis being placed on downsizing the State and liberalizing domestic markets.

The stabilization and adjustment loans that began to be granted in 1985 reinforced the changes in the direction of economic policy that had started with the adjustment programmes of 1982. The countries' economic programmes were aimed at consolidating those changes: export promotion measures, the negotiations undertaken by most of the countries with a view to becoming party to the General Agreement on Tariffs and Trade (GATT), the creation of free zones, and inbond assembly (*maquila*) activities.

For the most part, the stabilization efforts undertaken in previous years bore fruit after 1985, except in Costa Rica, which was able to bring about a successful reorientation of its economy's production patterns earlier on. Rebounding coffee prices and lower oil prices on the world market in 1986, together with the resumption of external capital inflows thanks to the provision of international assistance in the form of official loans and grants, helped to ensure that the countries' adjustment policies were successful in reducing their macroeconomic disequilibria.

Nevertheless, the hefty debts built up during the early years of the decade and these economies' progressively greater openness to the external market –which led to an immediate surge in imports, whereas the development of new exports was slower in coming– continued to generate disequilibria in the balance-of-payments current account (in 1985 the deficit climbed to 10.1% of GDP for the subregion as a whole). Heavy defence spending and the reduction in tax revenues occasioned by tariff roll-backs hampered efforts to cut the fiscal deficit, and tight money policies therefore had to be kept in place throughout the remainder of the decade.

In the particular case of Nicaragua, stabilization policies became increasingly strict as the country's hyperinflation –which reached over 33 600% in 1990– gathered speed. The stabilization and adjustment plan of 1985-1986 brought an end to the populist orientation evident in earlier programmes and called for the implementation of a steep devaluation as its central component. The Government also began to decontrol prices, cut subsidies, raise taxes and hike nominal interest rates. The devaluations undertaken as part of the series of programmes launched to combat inflation never seemed to be enough to alter the real exchange rate, and this, along with a number of other obstacles, blocked the country's efforts to overcome the severe external constraints it faced. Even the most orthodox of programmes (June 1988 and 1989), under which public spending and primary liquidity were slashed, failed to bring inflation under control.

As Central America's adjustment process proceeded, a number of problems arose that made additional policy changes necessary. For example, the reductions made in tariffs and taxes on traditional exports and the elimination of import surcharges cut deeply into fiscal revenues from foreign trade (which accounted for about 30% of total tax receipts in the mid-1980s). The public sector's capital expenditures, which had already been sharply curtailed under previous economic programmes, could not be trimmed down much further, and structural adjustment policies failed to make any appreciable decrease in current outlays. Thus, the countries urgently needed to undertake tax reforms in order to boost revenues.

On another front, the liberalization of the financial market and the widespread use of open-market operations to control monetary liquidity made financial deepening a necessity. The above-mentioned limitations on the amount of credit that the Central Bank could provide to the Government,[4] which were an outcome both of the many conditions laid down by international agencies and of the Governments' own economic policies, also made it impossible to continue relying on seigniorage to finance the fiscal deficit and promoted the development of a financial market for government bond issues.

Towards the end of the 1980s, another downturn in international coffee prices, together with a number of other obstacles to export activity in some of the countries, gave rise to further balance-of-payments difficulties which, in turn, prompted sharp devaluations. This was particularly true in Honduras and Guatemala, where inflation reached record highs in 1990.[5]

In 1991, falling international interest rates and greater exchange stability began to make the national rates of the Central American countries particularly attractive, thus sparking a heavy inflow of private short-term funds (much of which corresponded to capital repatriations). This enabled the countries to

[4] Between 1985 and 1992, the level of credit in the subregion dropped from 17.3% to 7.5% of GDP, on average.

[5] Honduras had resisted the idea of adjusting its exchange rate and had instead relied on export subsidies and tight money policies. In 1990, for the first time in more than 40 years, it devalued its currency from 2 to 4 lempiras to the dollar.

fund their mounting external deficits without having to draw down their international reserves. One of the traits shared by all the countries of the subregion was a sizeable deficit on current account as a consequence of the large trade deficits occasioned by import liberalization. In addition, these heavy capital inflows caused a number of the countries' currencies to exhibit a tendency towards overvaluation.

Around 1991-1993, after a decade of adjustment, the behaviour of most macroeconomic variables in the Central American economies began to converge. All the countries had made substantial reductions in their fiscal deficits,[6] and their inflation rates were moderate. Most of them had achieved their objective of raising fiscal revenues in order to finance public-sector expenditures, but this was not true of Honduras and Guatemala.[7] Inflation had slowed in all the countries by the end of the period under consideration here.

Even Nicaragua's inflation rate was only 3.5% in 1992 (actually, it was the lowest in all of Central America) following a decade of high inflation and hyperinflation. The unorthodox programme it launched in March 1991 stabilized the exchange rate, thanks to a sufficient supply of external resources, and imposed a freeze on key prices while at the same time ensuring an adequate level of supply for the market. The precarious nature of this situation became apparent in early 1993, however, when the devaluation brought on a swift reaction from domestic prices; soon thereafter, however, an adjustment was made to a sliding parity system (12% annually).

As this period drew to a close, an upsurge in inflation was seen in Costa Rica and Honduras against a backdrop of macroeconomic imbalances and devaluation, but the stabilization process took a firmer hold in Guatemala and El Salvador.

III

Inflation in Central America: an aggregate empirical model

1. Methodology, background information and data used

This exercise has a dual purpose. The first objective is to determine whether inflation in Central America can be explained by a single theoretical model or whether its causes are too complex for that; the second is to find out whether the crisis of the Central American integration model and the countries' responses to this crisis have disrupted their shared pattern of price behaviour. In order to represent the effects of various potential sources of inflation and establish the existence of a common inflationary pattern that might be shared by the subregion as a whole, a general model was constructed. The selected methodology pooled time series and cross-section data. This approach yielded a sample of 112 observations for each of the explanatory variables in four countries (Costa Rica, El Salvador, Guatemala and Honduras), which was large enough to permit the researchers to estimate an equation for a broad universe of explanatory variables and to define a subregional model while still retaining some elements specific to each country. In essence, the model includes elements associated with different schools of thought and incorporates the effects of imported inflation, the internal money supply, national structural imbalances and inflationary inertia.

As is generally recommended in situations involving fairly long time series for a small number of countries, a model was developed using fixed coefficients for the main explanatory variables (Hsiao, 1986). In order to register cross-country differences, factors of scale were added that changed from one country and time period to the next. In particular, the study left open the possibility that trend coefficients might vary from country to country, since these variables measure, *inter alia*, the effects of changes in the model's general environment (e.g., domestic markets'

[6] Nicaragua's deficit still amounted to 8% of GDP in 1992, but even so this was much less than 10 years earlier (when it had stood at nearly 30%).

[7] In El Salvador, the tax burden decreased considerably (from 11.6% to 8.5% of GDP), while in Guatemala it remained at what were already low levels (8.3% of GDP in 1992).

degrees of development and integration, the monetization of the economies in question, etc.).

The resulting model is as follows:

$$Y_{it} = \beta_1 + \mu_i + \delta_i t + \sum_{k=2}^{K} (\beta_k X_{kit}) + \varepsilon_i \qquad (1)$$

where:

- i: country index number (1, ..., 4);
- t: time index number (0 = 1965, ..., 28 = 1993);
- Y_{it}: mean inflation (calculated as the difference in the logarithm of the GDP deflator);
- β_1: a constant term for country 1;
- μ_i: (i = 2, 3, 4) reflects the differences from β_1 for country i;
- $\delta_i t$: trend variable for each country i; and
- X_{kit}: the other explanatory K variables (see box 1).

Under an assumption of fixed factors, the model was estimated using the method of ordinary least squares. In order to ensure the homoscedasticity of the error term, it was necessary to alter the initial specification by adding in four dummy variables for 1977 in Guatemala, 1982 in Costa Rica and 1990-1991 in Guatemala. In this case, including these variables is, to some extent, tantamount to eliminating the corresponding observations from the sample. It is noteworthy that in a similar study on each of the Central American countries (ECLAC, 1995), much the same sort of modifications had to be made when estimating the models for the research project. Even so, the sample yielded by the set of time series is large enough to ensure that these modifications do not impair the representativeness of the results.

With respect to the validity of the results, it is important to note that a number of precautions were taken to rule out any illusory correlations deriving from the dynamic properties of time series. Specifically, one point that can be established at the outset is that the variables in these equations are stationary. Nevertheless, the results correspond to the historical period covered by the study, and no attempt is made to use the experiences of the last 30 years as a basis

Box 1

EXPLANATORY VARIABLES INCLUDED IN THE MODEL[a]

Relating to imported inflation

Change in unit value, in dollars, of imports of goods and services (DLDM)
Variation in exchange rate, in dollars (DLTC)

Relating to increases in nominal demand

Change in money (M1) supply (DLM1)
Variation in domestic credit for public sector (DCREPU) and for private sector (DCREPR)
Alteration of ratio between domestic credit and value of imports of goods and services (DCREM)

Relating to total supply and internal supply imbalances

Variation in real GDP (DLPIB)
Variation in quantum of imports of goods and services (DLMB)
Variation in coefficient of the share of imports of goods and services relative to GDP (COEFM)
Differential between the growth of output in the agricultural sector and in the rest of the economy (CADAR)
Differential between the growth rates of the goods-producing and services sectors (CADBS)
Dispersion of sectoral growth rates (CADEST)

Relating to past inflation

Sliding average rate of inflation for the three preceding years (DLPE), which minimizes losses from prediction errors (Nugent and Glezakos, 1979). The specification based on an adaptive expectations model gave a great deal of weight to inflation during the preceding year. It also picked up the impact of contract indexation and other inertial dynamic effects.

[a] Obviously, many of these variables are related to similar concepts and it is therefore not always possible to include all of them in a single equation without introducing a problem of collinearity. The monetary and national accounts data were obtained from the IMF, while the unit values for imports of goods and services were derived from foreign trade indicators published by ECLAC. The period covered is 1962-1993. The documentation for the above data may be found, respectively, in IMF (several years) and ECLAC (1986).

TABLE 2

Central America: Contemporary effects of explanatory variables on variations in the GDP deflator [ab]

Annual inflation (GDP deflator)	Model A	Model B	Model C
General constant term	-0.141	-0.116	2.134
	(0.08)	(0.08)	(1.08)
Constant term in El Salvador	-1.429	-1.436	-2.726
	(0.76)	(0.77)	(1.24)
Constant term in Guatemala	-0.178	-0.180	-1.727
	(0.09)	(0.10)	(0.79)
Constant term in Honduras	-0.301	-0.307	-1.875
	(0.16)	(0.17)	(0.84)
Trend in Costa Rica	0.282	0.282	0.286
	(2.92)	(2.94)	(2.49)
Trend in El Salvador	0.283	0.282	0.341
	(2.94)	(2.97)	(3.03)
Trend in Guatemala	0.176	0.176	0.230
	(1.71)	(1.743)	(1.91)
Trend in Honduras	0.106	0.106	0.151
	(1.21)	(1.22)	(1.44)
DLDM (unit value of imports	0.212	0.212	0.150
	(3.66)	(3.86)	(2.18)
DLTC (exchange rate)	0.180	0.180	0.184
	(9.22)	(9.31)	(7.92)
DLM1 (money)	0.235	...	...
	(6.11)		
DLPIB (GDP)	-0.230	...	-0.083
	(1.46)		(0.45)
DLM1/GDP (ratio of M1 to GDP)	...	0.235	...
		(6.15)	
DLMB (quantum of imports)	0.062	0.063	-0.023
	(1.15)	(1.43)	(0.35)
DCOEFM (import coefficient)	-0.095	-0.096	-0.027
	(2.02)	(2.12)	(0.49)
DCREM [-2] (domestic credit relative to imports)	0.118	0.117	0.118
	(2.17)	(2.30)	(1.83)
CADAR (performance of agricultural sector)	-0.203	-0.202	-0.201
	(2.71)	(2.77)	(2.28)
DLPE (past inflation)	0.232	0.231	0.261
	(3.65)	(3.90)	(3.46)
DCREPU (credit to public sector)	...	...	-0.011
			(1.05)
DCREPR (credit to private sector)	...	...	(0.091)
			(1.50)
R2 (adjusted)	0.86	0.87	0.81
Standard error of regression	3.51	3.49	4.11
Durbin-Watson	1.97	1.97	1.79
Residual autocorrelation [c]		0.27	1.08
Residual heteroscedasticity [c]		0.22	0.46

[a] For a more detailed explanation of the abbreviations used in this table, see box 1.
[b] All variables are expressed as percentage rates of annual variation. For reasons of clarity, the coefficients for the dummy variables are not shown. The figures given in parentheses refer to the absolute value of Student's *t*-statistic.
[c] Value of F statistic, obtained with two lags.

for projecting the behaviour of inflation in a hypothetical situation of dynamic stability. As mentioned earlier, during the period in question the Central American countries underwent a number of structural changes and worked with a series of very different economic systems, many of which were marked by severe external constraints, imbalances and internal malfunctions. Such a state of affairs could hardly be expected to become the norm over the long term. [8]

2. The aggregate subregional model

At this stage, only the contemporary effects of the explanatory variables were considered (except in the case of the relation between domestic credit and the value of imports). The dynamic component was incorporated by means of the figure for expected inflation (DLPE). Unlike the models used to study very short-term (monthly or quarterly) price variations, which have to deal with complex dynamic structures (seasonality, among others), in this case the use of annual data makes it reasonable to expect that the contemporary effects of the explanatory variables will play a predominant role in the generation of annual inflation and that the variable of adaptive expectations will reflect lagged effects. [9] There is, however, one important exception to the above, in that the relation between domestic credit and the value of imports of goods and services does serve as a leading indicator of future inflation (two years ahead).

Three different specifications (models A, B and C) were prepared for the contemporary effects of the explanatory variables in terms of variations in the GDP deflator in Central America (see table 2).

Model A

In addition to the variables that register the effects of the fixed factors for each country (trend and dummy variables), the initial model includes the variables for imported inflation (exchange rate and unit value of imports) in an initial group of explanatory variables; a second set of variables registers changes in total supply and demand (of both internal and external origins); the final set includes inflationary factors associated with explanations that we may identify with structuralist schools of thought. [10]

Using this initial specification, we confirmed that Central American inflation is a multifaceted phenomenon and that, as such, it cannot be encompassed by any single theoretical model. [11] Indeed, the data support the view that a number of different factors influenced the inflationary process over the 30-year period covered by this study. Among the most important, by virtue of both the strength of their influence and their statistical significance, are the two factors relating to the external sector, the increase in nominal demand (represented in an approximate way by M1), the relative supply of agricultural goods and past inflation.

Factors linked to the level of total supply were not always so influential. Although the variation in domestic supply (GDP) had a strong deflationary effect which was (inversely) identical to the effect of stronger nominal demand, it was not very significant in statistical terms (registering major standard deviations). Meanwhile, the supply of imported goods had a considerable anti-inflationary effect when considered as a percentage of GDP (the imports/GDP coefficient). As an individual variable, the quantum of imports was not highly significant, possibly because of the complementarity between imports and national output.

The variable that reflects the effect of an increase in domestic credit relative to the value of external purchases proved to be of great help in accounting for the build-up of inflationary pressures

[8] The econometrics of long-term relationships enjoyed somewhat of a boom in the 1980s. Thus far, however, little is known about unit root tests and co-integration in data sets. Moreover, the statistical implications of unit root concepts are not entirely relevant when using multivariate equations (Spanos, 1990).

[9] In each country series, inflation can be characterized as an autoregressive process of the first order, i.e., stimuli dating back more than two years are not significant factors in determining the current level of inflation.

[10] For this last group of variables, only the results obtained using the growth rate for the agricultural sector relative to that of the rest of the economy will be presented. As it turns out, these results are virtually identical to those obtained using the differential growth rate for goods production relative to the rate for services and construction, which can be interpreted as a rough indicator of changes in the ratio between tradeables and non-tradeables in the economy. In contrast, no significant results were obtained when the scatter coefficient for sectoral growth rates was incorporated in an attempt to capture the de-structuring effect of the unbalanced growth typical of growth-driven inflation (Blondel and Parly, 1977).

[11] This also has implications for stabilization policy: "Behind every stabilization programme lies a diagnosis of the cause of inflation and, hence, of the most suitable tools for bringing it under control" (Ramos, 1986).

that would later (with a two-year lag) erupt into open inflation. The coefficient for domestic credit/value of imports of goods and services was thus found to be a leading indicator of inflationary pressures, which corroborates the argument made by Bulmer-Thomas (1985). An oversupply of credit relative to import capacity may be interpreted as the result of countercyclical monetary policies having an inflationary impact, which would fit in with a monetarist interpretation. However, it could also occur as a consequence of external bottlenecks (a decline in import capacity owing to a shortage of foreign exchange) that are not accompanied by an adjustment in the supply of credit, which would be more in line with a structuralist model.

In any event, the subregional model succeeds fairly well in accounting for the changes in inflation rates occurring in the four countries that were studied, taken as a group. The homoscedasticity of the error term resulting from the application of the ordinary least squares method also supports our initial hypothesis regarding the fact that (constant and trend) parameters that register cross-country differences are fixed factors. It is interesting to note that these parameters indicate the presence of a greater propensity towards inflation in Costa Rica and El Salvador than in Guatemala and Honduras.

Model B: symmetry of supply and demand effects

As mentioned earlier, a remarkable degree of symmetry exists between the coefficients for monetary expansion (linked, under certain conditions, to an increase in nominal demand) and for the growth of output (domestic supply). To determine exactly how variations in the money supply and inflation are connected, the dynamic interrelationships between the two were explored by alternately performing regressions on changes in inflation and in the money supply for past variations in prices and in money. In order to take the specific traits of each country into account, the relevant constants and dummy variables were also added. The next step was to gauge to what extent the incorporation of past inflation would improve the model's predictive power for M1 and, reciprocally, whether or not past changes in the money supply provided us with more information regarding present inflation.

The statistical tests performed using three lags for both prices and money point to the existence of a cross-correlation between the money supply and prices; however, an increase in the money supply (as a cause) apparently played a more systematic role in price increases than the other way around. Thus, changes in the money supply are not endogenous (i.e., they are not an entirely passive factor that simply provides a *post facto* validation of price changes).[12] It is therefore reasonable to expect that the correlative intersections between inflation and changes in the money supply and between inflation and variations in production will not only be inverse but will also be of a comparable strength.

The equality of the coefficients was tested and, since this hypothesis was not rejected, the restricted model was estimated by substituting the ratio M1/GDP for M1 and GDP. The good statistical fit of these results attests to the soundness of the initial specification.

Model C: the respective contributions of credit to the private and public sectors

Monetary expansion is linked to the expansion of domestic credit and the monetization of international reserves. Earlier we succeeded in demonstrating that an increase in credit coupled with greater external liquidity (import capacity) did not pose an inflationary threat. In order to delve more deeply into the correlations between credit policy and inflation, an effort was made to dissociate the effects of monetary expansion linked to public credit from those linked to private credit. The statistical results deteriorated, however, and neither of the two new variables' coef-

[12] The equations may be written as follows:

$$X_{kit} = \mu_i + \theta_i + \sum_{j=1}^{3} \sum_{K=1}^{2} (\beta_j X_{ki[t-j]}) + \varepsilon_{it} \qquad (2)$$

where:
μ_i (i = 1,...4) is a constant for country i;
θ_i : is a dummy variable for country i;
X_{1it} denotes a price change (DLPE); and
X_{2it} denotes a change in the money supply (DLM1).

The test consists of reducing the coefficients for X_{2it} to zero when X_{1it} is the elucidated variable and comparing the results with those obtained using the initial equation (F = 140.16) and, reciprocally, restricting the coefficients for X_{1it} to zero when X_{2it} is the elucidated variable and comparing the results with those of the unrestricted model (F = 28.04). Although in both cases these null hypotheses are rejected due to the high values of the F-statistic, the effects of M1 on the inflation indicator appear to be more systematic than the effects that prices have on money (note that the inclusion of dummy variables improves the quality of the estimate but does not make any meaningful change in the result).

ficients differed significantly from zero. In fact, the coefficient for an expansion of public credit (i.e., the portion of the fiscal deficit that is not financed with external resources) had the opposite sign from what was expected. The other explanatory variables also declined in importance as compared to the factors specific to each country, and the equation's overall explanatory power diminished.

Thus, in the case of Central America, the inflationary effect of an increase in the money supply cannot simply be attributed to domestic financing of the fiscal deficit. Contrary to the conclusions reached by the leading schools of thought, the inflationary forces associated with an overly large money supply do not match up with an expansion of domestic public-sector credit. Thus, the financing of budget deficits and inflation do not appear to be directly related, which tallies with the available information on other Latin American countries (Meller, 1994). None the less, as will be discussed later on, the chain of causality is of a more complex nature and the relationship is an indirect one.

IV

The inflationary dynamic in Central America and some of its implications for stabilization policy

1. Inertia or adaptive expectations

a) *Interpretation*

As mentioned above, the inertial component derived from the model's estimation constitutes an important determinant of Central American inflation. Although there may be various economic explanations for this,[13] it is also possible that it is nothing more than a merely statistical result. In that case, the coefficient calculated for the variable DLPE (see table 2) would simply be registering the lagged effect of explanatory variables (international prices, monetary expansion, etc.) rather than corresponding to an economic phenomenon as such.

In order to clear up this point, a general model was estimated which, in addition to the contemporary effects of the explanatory variables, included their lagged effects for the two preceding years. We reasoned that if the DLPE term retained its significance when a general dynamic model was specified, then the hypothesis that an independent inertial component was present would be strengthened. The results of this exercise are presented in table 3.

As may be seen from the table, the initial effect of some of the variables did not last for long, and there appear to be self-correcting phenomena at work that tend to blunt the long-term impact of the main variables (exchange rate, supply-demand imbalances). The specification of the model in a reduced form does not explain the reason for this result, which may be caused by factors not included in the equation or by interrelationships among the explanatory variables. Hence, the deflationary impact observed one or two years after a devaluation may be attributable to the types of controls that are usually implemented following such a step, which (all other things being equal) tend to dampen inflation. This phenomenon may have been reinforced by the overadjustment of the real exchange rate which preceded many of the stabilization programmes of the 1980s.[14] It is also noteworthy that the regression's fit was not significantly better than the results obtained using only the contemporary impacts when these lagged effects were included.

[13] The most common ones being the adaptive formation of inflationary expectations and the indexation of contracts (particularly labour contracts) based on past inflation.

[14] It is interesting to note that an increase in international prices has a greater long-term inflationary impact than a devaluation does, whereas in the short run the effects of the two are comparable.

TABLE 3

Central America: a dynamic model

Annual inflation in Central America (GDP deflator)[a]	Explanatory variables with dynamic effects		
	No lag	1-year lag	2-year lag
General constant term[b]	-0.341	...	...
	(0.23)		
Constant term in El Salvador[b]	-1.840	...	...
	(1.03)		
Constant term in Guatemala[b]	-0.365	...	...
	(0.20)		
Constant term in Honduras[b]	-0.287	...	...
	(0.17)		
Trend in Costa Rica[b]	0.360	...	...
	(3.69)		
Trend in El Salvador[b]	0.333	...	...
	(3.42)		
Trend in Guatemala[b]	0.230	...	...
	(2.28)		
Trend in Honduras[b]	0.114	...	...
	(1.33)		
DLDM (unit value of imports)	0.170	0.031	-0.090
	(3.00)	(0.44)	(1.32)
DLTC (exchange rate)	0.142	-0.062	-0.065
	(6.70)	(2.11)	(-2.21)
DLM1/GDP (ratio of M1 to GDP)	0.236	0.084	-0.081
	(6.03)	(1.96)	(1.91)
DLMB (quantum of imports)	0.067	0.008	-0.056
	(1.51)	(0.13)	(1.00)
DCOEFM (import coefficient)	-0.087	0.085	0.051
	(1.84)	(1.46)	(0.80)
DCREM [-2] (domestic credit relative to imports)[b]	...	...	0.128
			(1.57)
CADAR (performance of agricultural sector)	-0.214	0.029	-0.111
	(2.98)	(0.40)	(1.58)
DLPE (past inflation)[b]	0.339	...	...
	(3.53)		
R2 (adjusted)	0.88		
Standard error of regression	3.24		
Durbin-Watson	1.92		
Residual autocorrelation[c]	1.01		
Residual heteroscedasticity[c]	0.14		

[a] All variables are expressed as percentage rates of annual variation. The figures given in parentheses refer to the absolute value of Student's t-statistic. For reasons of clarity, the coefficients for the dummy variables are not shown.
[b] Lags were not applied in this case.
[c] Value of the F-statistic, obtained using two lags.

Nevertheless, the coefficient for inertial inflation remains highly significant when the lagged effects of the other variables are included. Thus, there is a strong presumption that inertial inflation was very much a factor in Central America during the period in question and should not be regarded as merely an extension over time of the effects of the factors which caused the imbalance in the first place.

Many studies on this subject have sought to attribute this inertia to the expectations of economic agents in situations of imperfect information or to the existence of indexation clauses in contracts between agents (Schuldt and Acosta, 1995). When a majority of the economy is organized around nominal or implicit contracts, then the indexation of contracts on the basis of expected inflation makes it possible to adapt the negotiation process to accommodate the uncertainty generated by persistently high inflation. In practice, inflationary expectations are based on past inflation and on a few key variables, such as public-sector prices, the exchange rate and others.

There is, however, no need to invoke the short-sightedness of economic agents in order to explain the existence of inertia in the price formation process. Inertia may coexist with rational expectations because of rigidities in the adjustments made by an economy.[15] Specifically, if economic agents' decisions regarding their prices are not well synchronized, substantial modifications and inertia in the relative price structure may result (Blanchard, 1983). This line of reasoning leads to the same conclusions as those drawn by traditional structuralists regarding the imperfection of market mechanisms in developing economies (Lambert, 1959). It is important to bear in mind that, despite the Central American economies' small size, their markets are imperfectly integrated, and the prices of similar goods may differ considerably between one segment and another within the domestic market (Cáceres and Jiménez, 1988). It is quite likely, moreover, that the political crisis experienced by most of the countries in the subregion since the late 1970s has increased the fragmentation of their markets at both the subregional and national levels.

This market segmentation very probably compounded the effects of the oligopolistic structure that predominated in many sections of the subregion's product market as a result, in particular, of the import-substitution industrialization policies that began to be implemented within the CACM in the late 1950s, which gave rise to rigidities in the price formation process.[16] This causes the general price index to exhibit inertia even in cases such as that of Central America, where inflation has been moderate and the indexation of formal contracts (especially labour contracts) has been less prevalent than it has in South America.

b) *Implications in terms of the velocity of disinflation*

The persistence over time of inflationary effects strongly influences the extent of a shock's net impact on some of the explanatory variables for inflation in Central America. A 5% increase in international prices will, in and of itself, translate into a 0.6% rise in domestic price levels three years hence; however, the net effect will be an increase of nearly 1% in inflation due to inertial effects (see table 3).

This rigidity in the price formation process influences the social cost of a stabilization effort. Indeed, the coefficients obtained using model **B** (see table 2) indicate that in order for the effects of one percentage point of inertial inflation (which may, for example, be an after-effect of earlier surges) to be counterbalanced without delay, money creation would have to be reduced by over 4 points of GDP. Another consequence as regards price formation is the existence of a reciprocal relationship between monetary and real variables; thus, a country cannot rule out the possibility that a stabilization policy of this nature may have a negative impact on the performance of domestic supply, at least in the short and medium terms. If demand is the only variable that is being controlled and a strong inertial component exists in the inflationary process, then if the authorities move to stamp out inflation quickly, they may run the risk of triggering a reactive process of stagflation via an over-adjustment of macroeconomic policy. In particular, it would be unrealistic for the authorities to try to achieve and maintain zero (or very low) inflation in cases where a number of external and internal inflationary factors are beyond their control and may even involve a large measure of seasonality, as in the agricultural sector. Hence, the success and viability of a stabilization policy will depend on how credible the target level for inflation is.[17]

2. Public credit, fiscal deficit and inflation

Persistent inflation is usually identified with periods of fiscal disequilibrium. As we said earlier, in the case of Central America we were unable to find any direct relationship between an increase (that had not been financed with external resources) in the fiscal deficit and an increase in the general price index (see

[15] For a review of technical studies on this subject, see Mankiw and Romer, 1991.

[16] Empirical studies of industrial economies have demonstrated the existence of a strong correlation between the degree of concentration in a market segment and the rigidity of its prices (Carlton, 1986).

[17] Ramos (1986) has analysed a type of stabilization programme designed to minimize the risk of recession.

table 2). However, the maintenance of large public deficits is not without its costs, especially in view of the inflationary effect of import constraints, as measured by the variable DCREM.

The available statistical information[18] indicates that monetary expansion, when based on domestic credit for the private sector, does not have any substantive effect on the "domestic credit/value of imports of goods and services" coefficient, which is a leading indicator of a build-up of inflationary pressures. This is not true in the case of public-sector credit, however. Owing to this sector's weaker propensity to import, an expansion of public credit will raise the quotient of credit over external supply and is therefore more likely to generate persistent inflationary pressures than is monetary expansion based on private-sector credit.

In view of the above finding, it is not surprising that the accumulation of inflationary pressures in the Central American countries coincided with the growth of their fiscal deficits, although the complexity of the inflationary process in the subregion is such that the increase in domestic prices cannot be attributed entirely to the imbalance in public finances.[19]

V

Conclusions

Even though Central America is composed of small countries that are heavily exposed to the influence of the international market, it has exhibited an increasingly complex pattern of inflation since the late 1970s or early 1980s. Furthermore, despite the growing sophistication and diversification of these countries' economic structures and the differences in their macroeconomic policy, they still share a common explanatory model for inflation.

Specifically, the inflationary effects to which they are subject still stem largely from the external sector. The availability of foreign exchange, in particular, plays an important role in easing the pressures which excess demand or insufficient supply exert on prices.

Thus, for example, the fiscal deficit did not, in and of itself, have any major direct impact on inflation. On the other hand, an increase in public-sector credit relative to the country's import capacity did have lagged inflationary effects of some significance. A rise in this coefficient foreshadows an inflationary process driven by excess demand that cannot be satisfied with greater imports or with imports which the country purchases on a regular basis but for which the flow of financing is reduced by a crisis in the external sector.

Another indicator of just how strongly the external sector's financial standing influences the behaviour of prices is the fact that the imports/GDP coefficient is a highly important variable with regard to inflation. However, not all demand pressure is siphoned off by higher imports, given the growing significance of non-tradeable goods and services within the economy. In fact, an increase in M1 as a percentage of GDP is a very significant inflationary factor.[20]

General or sectoral imbalances –i.e., the more structural sorts of effects– were of some importance in determining the level of inflation in certain cases, especially in terms of the anti-inflationary effect of increases in agricultural supply.

[18] The correlation between a variation in the "domestic credit/value of imports" coefficient and a change in the amount of credit supplied to the private and public sectors is -0.03 and 0.45, respectively. What is more, unlike what happens with a variation in private credit, an increase in public-sector credit tends to be associated with declines in the volume of imports. This may be linked to the countercyclical nature of fiscal policy in the subregion, especially during the late 1970s and early 1980s, when the restriction of external capital flows militated against a satisfactory economic performance.

[19] In particular, the possibility cannot be ruled out that inflation has weakened the tax base owing to the absence of appropriate indexation mechanisms for maintaining real tax receipts at constant levels as prices rise.

[20] Considered separately, these two variables have symmetrical effects on the level of inflation, of opposite signs but similar weight.

The inertial component of Central American inflation is significant and, as we demonstrated, is not derived from the accumulation of the lagged effects of other explanatory variables. In contrast to the situation in South American countries with high inflation, the indexation of contracts does not appear to be a very important determinant of this variable either. Instead, market imperfections and segmentation, which have given rise to oligopolistic practices and rigidities in the price formation process, appear to be the most important sources of inertia.

Thus, for the most part, the countries have been unable to bring the inflation rates observed in the wake of their adjustment and stabilization efforts back down to the levels registered prior to the oil shocks of the 1970s. There are at least two obstacles to a rapid return to complete stability in Central America: (i) given the inertial aspects of inflation in the subregion, the countries would have to make too severe an adjustment in order to lower inflation any more than they already have; and (ii) tax reforms of the type needed to cover the Governments' financing requirements have yet to be undertaken (after years of relative neglect, the countries' infrastructure is such that public investments cannot be postponed any longer).

The stabilization policies applied during the 1980s were designed to cope with the factors that were thought to be the main causes of inflation, with the most important such factor being the fiscal deficit. Sooner or later, this led to the implementation of recessionary stabilization policies. The factor that invariably determined the degree of success of the countries' macroeconomic adjustment programmes, however, was the supply of external resources. Therefore, the inflationary process seen in the 1980s cannot be considered in isolation from other aspects of the crisis experienced by the subregion or, in particular, from the external constraints affecting Central America since the late 1970s as a result of its balance-of-payments difficulties and the deterioration of its terms of trade.

The volatility of the external resources available to the subregion in the early 1990s raises some doubts as to just how solid the foundations for its present macroeconomic stability are and point up the importance of deepening its financial markets and retooling its manufacturing and agricultural sectors in order to establish a more stable position in international markets. Relying on short-term external resources to fund the subregion's growing trade deficits is a very risky strategy for stabilizing the exchange rate and, hence, the level of inflation. In addition, the Central American countries' external debt burden is quite heavy in comparison to that of other Latin American nations, and they therefore do not enjoy much latitude in terms of increased borrowing. Nor does it appear likely that the flow of official assistance can be sustained at its present high levels (equivalent to 2% of GDP in Costa Rica and Guatemala and perhaps as much as 9% in Honduras and 30% in Nicaragua) in the future.

An examination of Central America's experiences with stabilization programmes in the 1980s and of the factors that have influenced inflation in these countries during recent decades leads to the conclusion that the subregion needs to devise formulas of its own in order to deal with inflation. When, in the late 1970s, these countries chose to ignore the external constraints affecting them and resorted to countercyclical policies involving the imposition of governmental controls on selected prices, they only managed to stave off the effects of the strong inflationary pressures generated at that time. In the 1980s, the initial decision to use the nominal exchange rate as an anchor for prices and the subsequent move to tighten up the money supply for the same purpose also had serious disadvantages. In the first case, policy-makers failed to take the limits of external resources into account –a truly essential consideration for these countries– and, in the second, they resorted to recessionary measures that weakened these countries' production base.

With the exception, of course, of situations marked by high and erratic rates of inflation, macroeconomic policies designed to maintain a moderate yet stable level of inflation may be the most effective means of promoting steady long-term growth, whereas an over-adjustment that achieves zero inflation may not be the best choice from this standpoint.

(Original: Spanish)

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The State, business and *the restoration of the* neoclassical paradigm

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The author describes the neoclassical restoration, which, from the 1970s onwards, took a radical approach to the search for a theory of development by attempting to fuse the particular characteristics of developing economies with the central ideas of economic theory. Intervention with the aim of furthering development was perceived not as a solution but as part of the problem, and adjustment programmes were oriented not so much towards correcting imbalances as towards establishing an economic structure close to neoclassical precepts. Several East Asian economies were chosen as examples of the application of correct policy, since they were seen as being market-driven, but closer analysis revealed that behind their export success lay the firm guiding hand of the State. Aside from the market-State dichotomy, however, the discussion has overlooked the main actors: the companies. The perception of companies as agents who simply react to a series of opportunities suffers from limitations, as it fails to analyse how companies learn and how they may change when faced with different situations. In this sense, it would be appropriate to reexamine the costs and benefits of industrial promotion in developing countries. It would also be appropriate to analyse in more detail the current process whereby companies are seeking a new identity, in the context of new conditions. The author concludes that it is necessary to study companies more closely: they have never been the puppets of public policy and will not be mere automata in the marketplace.

I

The conceptual debate in relation to East Asia

1. Introduction

The ideas on economic development prevailing during the postwar period were subjected to a massive and radical frontal attack from the mid-1970s onwards. The aim of this offensive was to extend the scope of the notion that a freely operating market was the best known mechanism for attaining general welfare, so as to embrace developing countries too. The restoration of this view, which economists refer to as neoclassical, was to undermine the central hypothesis of the then current development theories, which held that the less developed countries were strongly conditioned by certain typical historical-structural characteristics.

One of the most important consequences of the restoration of the neoclassical paradigm was that it took away the authority of the current development promotion policy platforms. Even the development theoreticians' typical line of argument was turned on its head: now, far from being inherent in their historical condition, developing countries' problems were seen as the product of the pervasive and failed doctrine of "development promotion". Agricultural supply, for example, was attributed with a poor response capability; at another level, "external constraints" on growth were continually cited. In both cases, it was held that the problems which supposedly derived from structural conditions should actually be interpreted as the result of government interference which stifled or even blocked the operation of the market. [1]

Finally, it was maintained that, in view of the manipulation of foreign trade barriers, public service charges, interest rates and nominal wages in accordance with the political designs of those in government, it should come as no surprise that genuine market opportunities could not be adequately perceived or grasped.

Clearly, if the arguments of the neoclassical restoration are conceded, there would not even be any need for a special field of knowledge known as development theory. The presumed specificity of developing countries could once more be put in a historical context, thus reestablishing the ideal of the unification of the core ideas of economic knowledge, which would thus have been only temporarily threatened by the dichotomy between a powerful central economy and the peripheral economies (Hirschman, 1980).

During the 1980s these ideas gained considerable strength, and their sphere of influence expanded. Suffice it to mention in this respect the application of the methods of economic theory (in other words, neoclassicism) to the study of phenomena hitherto considered essentially political in nature. In this connection, it is indispensable to refer to the work of Krueger (1974) on the practice of granting import licences, adopted by a number of countries in the postwar period. His position is that basically both parties –the applicant and the official who grants the licence– try, within certain limits, to maximize the benefits obtained from this "transaction". This creates a kind of archetype of the relationship between the public and private spheres, giving rise to the so-called "new political economics". The most salient features of this are the public authorities' rent-seeking activities and the transfer of these rents to clients in the private sphere. There is nothing particularly new about the analytical content of the study. It merely represents the application of conventional instruments of economic analysis to a relationship which had previously been seen more as an anomaly than a routine economic transaction. Nevertheless, it is difficult to overestimate the impact of this approach, both on the way in which we understand our economies and societies and on the economic policy agenda for developing countries. The main changes could broadly be described as follows:

i) Governments began to perceive themselves as having an aptitude for –indeed, being skilled in–

[1] For a systematic analysis of these issues, see Little, 1982 and Lal, 1983.

rent-seeking, and as being dependent on those rents. This phenomenon was of such importance that countries previously known as developing countries came to be known as "rent-seeking societies". Paradoxically, here again we see a differentiation of these societies from the central economies (although, as mentioned earlier, the critics of the 1970s sought to abolish this distinction), and in this case the differentiation was much more insidious than the characterization of under-development as being due to structural rigidity and barriers to growth.[2]

ii) So-called "adjustment" programmes, which hitherto had merely claimed to reestablish macroeconomic equilibrium, took on new dimensions. It was no longer a matter of putting countries back on course, but rather of turning the page of history, ushering in a new kind of economy and a new society. Strictly speaking, criticism was no longer directed at the performance of the economy, which, in the last analysis, is of minor importance: the economy and society now began to be indicted for their structure and constitution, as though the malevolence formerly attributed to governments had profoundly infected economic agents and political actors.

iii) Reforms aiming to establish the rule of the market were no longer considered conservative. With the blame duly transferred to the local élites, the neoliberal prescriptions also began to have a certain political appeal, even for those who had traditionally adopted a critical stance *vis-à-vis* the market and were generally opposed to capitalist culture. The movement had reached its peak: the notion of (localized) "market failures" had become "government failures", which in turn became failures inherent in the economy and society. Practically everything was now being repudiated.

iv) Putting the blame on the private sector (for being as it was, not as it should have been) radically transformed the relationship between economic policy managers and the economy. Theoretically endowed with not just scientific but also moral superiority, the (new) policy formulators saw the protest and resistance (and ultimately even the bankruptcy) of private agents or interests as proof that they were on the right track. They conceived of the economy as a *tabula rasa* on which they aimed to write and install a new order. The fact that they were not inventing this order, but copying it from other market economies, was seen as giving their task an aura of neutrality and inexorability.

2. The difficulty of resisting the new proposals

There were many who, partly or wholly, refused to accept the new ideas. In practice, however, resistance to the wave of restoration proved utterly ineffective, which is extremely surprising, because on the one hand the movement ignored decades of accumulated knowledge, while on the other –and most importantly– once the new approach had taken hold, capital, companies and vested interests –all of them undoubted realities– began to be viewed with mistrust. The following explanations will help to understand how the overwhelming advance of the new proposals was made possible:

i) Since the 1950s there had been cases or situations of "frustrated development" (Pinto, 1959). By the end of the 1960s, rebellion against, and at times repudiation of, the development-centered perspective had become the norm among the very followers of that tradition. In the end, what seemed crucial was that development theories had proved incapable of explaining either the success of the "Asian tigers" or the "development disasters" which were occurring in Africa and in Latin America itself.[3]

ii) This restoration of orthodoxy occurred at practically the same time as in the developed central economies: Harry Johnson's anti-Keynesian crusade could be cited as a form of behaviour which *mutatis mutandis* was to be repeated among development critics of neoclassical stripe. In practice it meant that the formidable academic machine of the central countries, and most particularly the North American arm, was united in the attack on development theories.

[2] We will return to this topic below. Nevertheless, it should be borne in mind that a similarly negative picture had already been painted by Paul Baran and, particularly, Gunder Frank. This observation comes from Toye, who makes the point that neo-Marxism, by discrediting the State (and élites, it should be added) in developing countries, paved the way for the restoration of the neoclassical paradigm (Toye, 1987).

[3] Theories of stagnation and dependence are completely inadequate for the study of what happened either in South Korea or –at the other extreme– in disaster-ridden Zaire under Mobutu Seko. For details on Zaire, which, to the delight of the new political economists, is an extreme example of the "predator State", see Evans, 1992.

iii) The indefinite duration of the macroeconomic upheaval unleashed by the debt crisis (with momentary slumps into hyperinflation), the virtual cessation of growth and the deepening of the overt misery of the big cities of Latin America all helped to create a climate of extreme pessimism. In this context frequently contradictory notions began to gain ground: on the one hand, the ills which afflicted our economies were seen as the expression of a past which was in many ways reprehensible, while on the other they were perceived as the result of repeated wrong decisions and choices made by governments of the day. In this way external influence was played down and a blind eye was turned to the effects of the powerful inflationary feedback and propagation mechanisms characteristic of chronic inflation.

In the case of Brazil, at least, this interpretation seems to bear no resemblance whatsoever to the reality of the situation. It was the collapse of the cruzado experiment that plunged the country into the mad macroeconomics of the late 1980s. This argument has been developed in another paper where, apart from considerations of a general nature, an analysis is presented of developments in the automobile industry as an example of the setbacks suffered in the second half of the 1980s. Briefly, the idea is that the deterioration set in late and was essentially a reflection of events in the macroeconomic environment, i.e., it had no connection with the origins or early years of the industry. [4] As a General Motors executive put it, "Brazil at the end of the 1980s was a mess and the company was a mess". [5]

3. Advances, retreats and surprises in East Asia

In their critique of the import substitution route to industrialization, the opponents of development theory chose experiences in East Asia as a point of reference and contrast. They argued that East Asia had explored (external) market opportunities, instead of trying to reproduce at all costs an industrial structure like that which existed in the developed countries. Their experiences had, therefore, been market-driven. In Latin America, on the other hand, the public authorities, in reaching decisions or guiding the decisions of others, had attempted to govern the market itself. Ultimately, then, failure in Latin America and success in Asia could be explained in the same terms: (greater or less) distance from the signals and opportunities of the market. Where the distance was greater, price manipulation ruled, hand in hand with unambiguously political objectives; where it was less, the (world) market directed and determined decisions.

This line of argument, tirelessly repeated by some, ultimately constituted a stumbling-block for the neoclassical restoration: perhaps its only setback to date. In fact, in the light of the accumulated knowledge of the experiences of the Republic of Korea, Taiwan and Singapore (in this sense, Hong Kong is an exception), it can in no way be maintained that the State's presence in these cases was remotely related to the orthodox model. A vast body of evidence shows that behind the Asian tigers' aggressive export drive lay the firm guiding hand of the State. [6] This fact –an indisputable element in the heroic phase of Korean and Taiwanese industrialization– gave rise to a debate that is still raging. Some authors simply speak of a "third wave", toning down the conclusions reached in the literature of the 1970s (Evans, 1992). Others, taking more radical positions, argue that the classic case of Japan (Johnson, 1982) and, *a fortiori*, the "economic miracles" of the Republic of Korea, Taiwan and Singapore should be viewed as "State-led" experiments in development. By contrast, in countries where promotion of development yielded nothing, the failure is ascribed not to attempts to "govern the economy", but to mistaken forms of intervention, or even insufficient intervention, because of weakness on the part of the State (Migdal, 1988).

The cases of Korea and Taiwan bear out those who think the State *can* promote development. Thus, the problem with certain theories of development is not be that they acknowledge that this is possible, but that they tacitly accept that this *always* happens. However, once it is recognized that the promotion of development may or may not be successful, the focus of discussion tends to shift towards the question of what elements are essential to enable the State to stimulate and influence decisions which produce development. Selecting appropriate objectives, for

[4] A preliminary version of this study was published in Barros de Castro, 1993.

[5] E. Sanchez, 1994, quoted in Shaiken, 1995.

[6] See especially Wade, 1990 and Amsden, 1989.

example, demands considerable independence and great competence. Even simply keeping those objectives firmly in view over the course of time –a fundamental requisite if decisions are to be coordinated and forecasts are to become self-fulfilling prophecies– requires very sound institutions and firm political will. As to the internalization of national objectives on the part of companies, this presupposes a substantial degree of trust and motivation, which demands a certain level of acceptance of the broad policy options.

The World Bank recently revised and moderated its position somewhat, in the light of the accumulation of evidence (World Bank, 1993). However, critics of the Bank's new report soon abounded, so that clearly it would be difficult to stick to the initial positions set forth in it. This is not the place to go over those arguments again, [7] but what should be noted is that the World Bank study continues to be fundamentally concerned with the opposition between market failures and government failures, thus ignoring the question of the actors involved. In other words, it continues to skirt around a question that development economics –and indeed, *mutatis mutandis*, Keynes himself– had basically evaded: what State? what company?

Unless progress is made towards answering these questions (and I believe that the debate on East Asia enabled a good deal of progress to be made on the first one), it will not be possible to continue an inquiry which is of fundamental importance to those who –impelled by the current rapid growth in Asia– are now trying to reopen issues which were formulated and addressed in pioneering fashion by postwar theoreticians and politicians: how to produce miracles that are not fleeting and illusory, or, from another angle, how to enable companies to operate as vectors of development policy without losing their character or altering their profile.

Finally, the debate on East Asia highlights not only the ingenuousness of development theories (as regards the State and policy) but also the determinism that imbues them. It also shows up the falseness of the neoclassical reading of events in East Asia and, in this sense, invalidates the comparison between Latin America and the Asian tigers in the form in which it was presented by the neoclassical restoration. On the other hand, it should perhaps be added that the tremendous success of the Asian tigers on the one hand and the "development disasters" on the other focused attention –rightly, but perhaps too much– on the quality of public authorities. Greater understanding is needed of an actor that has a direct relationship with those authorities: the company. It is particularly necessary to look into companies' decision-making processes, as is done below. In the final analysis, it is the companies that carry out, sometimes half-heartedly but sometimes also wholeheartedly and creatively, many of the changes that constitute economic development.

II

The company as a problem in the reforms inspired by the neoclassical restoration

1. The microeconomics underlying the reforms

It is a tenet of conventional economic theory that companies make decisions on the basis of given prices - those of factors, inputs and rival products. In other words, these prices form the elements of an economic calculation which determines what position each economic agent chooses (decides) to adopt. Few people realize that this does not imply any attempt to outline or describe the decision-making process: on the contrary, it is claimed that economic agents' decisions do in fact derive from certain rational criteria (Arrow and Hahn, 1971, p. v). Lucas states quite clearly that economic theory is used to calculate how certain variations in a situation will affect behaviour, but that these calculations *are neither a reflection of nor a model for the process of adaptation* through which a decision is reached (Lucas, 1986, p. S402).

[7] See especially Rodrik, 1994; Wade, 1994; and Amsden, 1994.

According to Friedman's well-known image, in practice an economic agent proceeds like a billiards player. He does not openly make the calculations needed to select the angle at which he should hit the ball, yet the success of his stroke shows that he has obeyed the relevant laws of physics (Friedman, 1953, p. 22). The message is clear: a physicist does not need to take account of the style or the mood of the player, and the economist, similarly, should concentrate solely on the logic of the decision. In this context, decision essentially means calculation. This may remain implicit (as in the case of the billiards player) but it nevertheless identifies, for instance, the point at which marginal income equals marginal product for each factor or input. In short, there is no need to concern oneself about the character of the economic agent, nor about the "context", just as there would be little or nothing to be gained in knowing the history of a game (or of the players): each individual play obeys both the laws of physics and the rules that make billiards the game it is.

Against this background, we shall now try to study the significance of the reforms suggested by supporters of the neoclassical restoration. What is particularly interesting are the reactions these reforms produced and, more specifically, the difference between the reactions it was assumed would be produced and those which companies actually tended to evince.

The aim of these reforms is to reestablish the idea that prices are reliable indicators both of shortages and of consumer preferences. The assumption is that, with prices adjusted by the processes of liberalization, privatization and deregulation –and, it should certainly be added, the new political economics, given the drastic reduction in opportunities for obtaining sinecures and privileges from public bodies– companies will reexamine their purchasing and selling policies. In so doing, they will try to adjust to the (new) signals from the market, which will now be free of government interference. Basically, then, they will adjust their aim and keep on firing, which would not, in principle, be a cause for concern.

It has to be recognized, naturally, that under certain circumstances price correction impairs companies' opportunities. However, in these (tacitly deemed exceptional) cases this is simply seen as the end of a promiscuous relationship with the State –the "guichet model"– whereby economic difficulties were resolved by the granting of favours. In short, the reforms inspired by orthodox thinking ultimately signify a return to the rule of neoclassical rationalism and the disappearance of the spurious political dimension inappropriately acquired by companies. Only one area of compromise is recognized: the acknowledgement that in practice there are imperfections or failures in the market, as for example in the fields of education and basic services, which will generate external economies for companies as a whole. In such cases, and after careful examination (since government errors are usually worse than market errors) it would be legitimate to implement certain policies.

2. Beyond the maximizing agent

Some highly respected and increasingly influential authors do not agree with omission of the adaptation process through which decisions are reached (Lucas). Indeed, for Schumpeter, Simon, Penrose, Chandler, Rosemberg, Nelson and Winter, Freeman, Porter and Dosi, companies do not by any means limit themselves to merely "responding" to the relative prices they face, in at least two senses.

First, study of the development of companies over time leaves no doubt that they organize themselves, or rather, structure themselves so as to establish long-term positions in the markets they are most interested in (Chandler, 1962; Nelson and Winter, 1982). In order to do this, they need the capability to make decisions under changeable and inescapably unpredictable conditions. This in turn leaves (or should leave) a space in economic theory for the incorporation of multiple, open-ended solutions rather than fixed, unequivocal ones and, in particular, for recognition of the importance of strategies (Possas, 1996). Moreover, as a result of their efforts to get greater and better yields from the resources available to them (particularly their workers), and because of the competitive context of their development, companies tend, over the course of time, to be constantly acquiring knowledge. This is how new opportunities come to light and unique identities can be established for different companies. [8]

[8] This idea was developed by Penrose and deservedly highlighted in Burlamaqui and Fagundes, 1996. As regards the uniqueness and differentiation of experiences, a radical position can be found in Caulliraux (1996), who concludes, on the basis of a study of information technology companies, that companies in the same sector, making the same product, with the same scales of production and the same relationship with the market, may nevertheless have different business/production strategies.

In acknowledging these two characteristics, which are what effectively define and differentiate companies, it should be recognized that company behaviour cannot be adequately represented by models which focus primarily on optimization. Companies do not in fact even lay claim to this level of rationality (Simon, 1982). Furthermore, in the light of their accumulated experience, the challenges and constraints they face and the creativity they embody to a greater or lesser extent, they also innovate from time to time. Conventional analysis thus leaves out an important dimension which would allow us to understand company decisions: it lacks a theory of action which is not based on choices, but on the creation of new opportunities and the discovery of new approaches. [9]

The importance of the changes that arise within companies –and it is now not unusual for them to be generated on the shop floor itself– forces us to take greater account of an issue which is missing from conventional microeconomics, i.e., communication and cooperation among those who work within a company. A minimum of communication was essential for production even in the Fordian system, and that minimum is multiplied many times with the intellectualization of production brought about by computerization (Valle, 1996).

To conclude these brief remarks, it may be recalled that in many sectors, not only in the industrial area but also in the field of modern services, there has been a noticeable increase in "extra-market" inter-company relations. Subcontracting, cooperation with suppliers and clients (and even between competitors) [10] and the granting of autonomy to government departments and services –often by making them business units– have given rise to a network of companies very different from that which existed in the past. Multiple centres, all with relative autonomy, compete and, at times, cooperate with each other in widely varying ways and degrees (Burlamaqui, 1995). This suggests not only that companies are not monolithic (as though they were equipped with a chip which optimizes results under restrictive conditions), but also that they are social creatures, or are on the way to becoming so. From this simple fact arise problems of coordination which take on special importance once reforms are in place.

It goes without saying that these few comments take us right away from the "reflex" concept, according to which, as mentioned above, the decision-making process of business companies is in practice limited to constant repositioning in response to the fluctuations of relative prices on the market. This argument cannot be side-stepped through the mere enhancement of neoclassical models by working in transaction costs, uneven access to information, learning curves and the like. The crucial point is that, by resolving (or getting round) a given situation in a particular way, companies learn and quite likely change. Decisions in some way become a part of companies' history and culture, and may alter their repertoire of typical reactions (sometimes called path dependency). Clearly, however, what is learned may be superseded or even "forgotten" in the future and in the light of new experiences (Lundvall, 1995).

3. On the reactions to the reforms: preliminary aspects

In the past, manufacturing companies in developing countries could generally rely on benefits stemming from public policies, and this was of decisive importance in the case of those which were covered by the planning and goals of the State. In most cases, such policies, together with quite favourable regulatory regimes,[11] offered a high degree of protection from foreign producers, credit on favourable terms and fiscal favours of various kinds.[12] Companies frequently also had access to goods and services offered by the public sector at subsidized rates. Lastly, they naturally had cheap labour available, although this did not necessarily mean lower labour costs per unit produced.

In practice, these advantages were offset to some extent by the challenges and difficulties involved in introducing new activities and sectors into the manufacturing field, [13] in contrast with the comfortable and safe option of traditional activities (including trade). It was not simply a matter of "blazing a trail"

[9] This observation, which refers to Porter's position, is from Rumelt, Schendel and Teece, 1991.

[10] This seems particularly true in cases where the cost of new technological advances practically demands that costs and risks should be shared (Prochnik, 1996).

[11] See Katz, 1995, on the crucial role that regulatory regimes may play.

[12] For a careful reconstruction of the incentives available in Brazil in the 1970s, see Suzigan, 1978.

[13] An extreme case where the granting of great privileges was combined with the challenge of great disadvantages was Polo Petroquímico da Camaçarí, in Bahía. See Araújo and Dick on the complex operation launched to set this venture up.

through an environment devoid of industrial culture,[14] where adequate suppliers and a reasonable infrastructure were unavailable. There was also the risk of policy swings which could partly or totally dismantle the regime of benefits which had hitherto prevailed. The history of Latin America includes several such instances, some of which had disastrous consequences for industry.

To the extent that they exceeded the disadvantages inherent in the less developed environment, the benefits mentioned above encouraged the rise of "quasi-rents" –a term generally used to characterize the profits obtained in markets where supply is for some reason limited. This type of quasi-rent resembles the profit generated by innovations (the so-called Schumpeterian profit). We should not, however, ignore the fact that shortages connected with true innovations are generated in the innovating company itself, whereas in this instance they originate in (and are guaranteed by) government decisions. In the final analysis, this is a government "reward" to those who diversify the structure of production by moving into non-traditional activities. When these initiatives are due to the government's desire to give a spectacular impression of modernization to the populace, the result can be (indeed, usually is) the production of "white elephants", incapable of evolving towards a modern industrial system.[15] However, in other cases the aim may be to promote the establishment of an industrial structure with modern characteristics. If successful, this policy brings robust economic growth, and genuine companies spring up. Two conditions are necessary for this to happen. First, the quasi-rents must be used in the same way as Schumpeterian profits and be reinvested, along with new credits, in the sectors where they originated, which ensures the rapid expansion of those sectors. Moreover, throughout the evolutionary process thus initiated, lessons should be learnt and economies of scale and scope should be obtained, leading to a gradual reduction in the need for promotion and protection.

This is not the place to address the opportunities for high, sustainable growth rates in the economy as a whole that can be presented by growth through diversification. It should be noted, however, that there is now renewed interest in this road to growth, owing to the impact of the current experiences in East Asia.[16] Strictly speaking, as is well known, various Latin American examples have already shown that this could be a good way to raise GDP. The experiences in East Asia (particularly in the Republic of Korea, Taiwan, and Singapore), which were on a far greater scale, showed that this road could bring countries close to the technological frontier, with solid, competitive companies where wages rise rapidly.

As to the second condition (or bid) mentioned above, in a number of cases the promotion of diversification certainly did not lead to the creation of industries with high levels of efficiency and productivity. This was particularly evident where industry was essentially oriented towards the domestic market. What happened in those cases was that the limitations and uncertainty of local conditions tended to give rise to insufficient scales of production and over-reliance on vertical integration (in response to the lack of local suppliers). Scale, in particular, appears to be a crucial factor in explaining the modest results (in comparative international terms) of many of these experiments.[17] The relationship between small markets and competitiveness, however, is not so clear. Faced with narrow markets with little prospect of liberalization, companies may opt –as seems to have happened in the Argentine metalworking sector– for learning routes which are not only different from those of companies in the central countries but also largely, and indeed excessively, "idiosyncratic"

[14] The lack of entrepreneurial spirit, essential for the launching of new projects, was considered by many to be one of the main obstacles in the path of developing countries. For a study of the ideas behind this view, see Leff, 1979.

[15] This links up with other topics previously discussed, relating to the State as actor and, in particular, to the autonomy and competence of those who formulate and implement economic policy. See Evans, 1992.

[16] In this respect, see the stimulating article by Lucas (1993). The best-known contemporary call for growth through diversification, as opposed to growth stimulated by lower costs, is to be found in Porter, 1991. On the subject of rapid growth *per se*, see Hikino and Amsden, 1994.

[17] Referring to transnational corporations operating in Argentina, Kosacoff and Bezchinsky state that the scale of production of a typical industrial plant of the local branch of a transnational corporation was generally no more than one-tenth that of a plant producing the same good in developed countries (Kosacoff and Bezchinsky, 1993, p. 252). On scale, vertical integration and other characteristics (and peculiarities) of Argentine industry, see the important work by Katz and Kosacoff, 1989.

(Katz, 1993, pp. 396-397). It is also important not to lose sight of the fact that, even where substantial benefits were derived from the application of policies, the introduction of new equipment (which generally brought technical progress with it) and changes in the production, marketing and other fields themselves produced effects which compounded the impact of those policies. This is not to say, by any means, that learning and, ultimately, higher yields take place automatically: the aim is simply to explain that the benefits derived from economic policy should not overshadow the improvements made in the companies' own performance. This suggests that, bearing in mind the various levels of decision-making, although winning favours may be important, it is only one dimension of the process whereby companies seek to establish themselves. It is worth repeating that ignoring these latter elements means ignoring the decision-making process followed by business firms, which is all the more serious at a time like the present when they are faced with real transformations in their environment.

In the light of all the foregoing, it is necessary to be cautious when analysing the connection usually perceived between the shortcomings of industries promoted by government policies and the benefits assigned to them. It should not be forgotten that as far back as the late 1970s United States and European companies felt threatened by Japan's export drive and that of the recently-industrialized countries, of which the most important at the time were Brazil and Mexico (OECD, 1988), and this despite the fact that these countries had started at an enormous disadvantage. This reaction continued during the 1980s (this time with reference to the competition of Japan and the Republic of Korea) and took the form of increasing adherence to a new organizational and technological paradigm.[18] Meanwhile, companies located in Brazil, Argentina and to some extent in Mexico –whether domestic companies or subsidiaries of transnationals– were undergoing the disorientation of the macroeconomic turbulence of the 1980s. It goes without saying that local industries, seeing their favourable position evaporate rapidly after the State's fiscal crisis, and obliged to resort to any measures to protect their capital resources, were in no condition to keep pace with the feverish technological renewal produced by flexible automation and the new generations of products which were beginning to find their way into the marketplace.

The combination of the severe recession of the early 1990s and the start of liberalization sparked an intensive movement for change with the aim of reducing the need for working capital, eliminating everything that was superfluous, and raising labour productivity. Initially, the profound changes focused on management and organization (Fleury and Arkader, 1996); investment in equipment was generally put off for a later date.

Most recently, the stabilization process, coinciding as it has done with an increase in liberalization, a change in the parameters of the State/company relationship [19] and changes in sectoral regulatory frameworks, has forced a thorough review of the behaviour of enterprises. Their capital resources are enhanced by stabilization (wealth effect) but threatened by the qualitative leap forward produced by the pressures of competition. The image of the main competitor (or market leader), which is an obligatory point of reference in the formulation of strategies, has also altered dramatically. In an open economy, copying makes practically no sense, and this calls into question some of the lessons learned from previous experience. Local connections, on the other hand, are more highly valued, partly because potential foreign investors may wish to be able to take short cuts. In the face of such contradictions, national companies, like multinationals in the same location, face a situation which demands decisions but at the same time makes them more difficult. Their own identities, shaken by the apparently interminable inflationary whirlwind from which they are finally emerging, call for an authentic redefinition. Defensive or offensive strategies may be adopted.[20] There may be tactical retreats (by-passing more technologically advanced production lines) or, in contrast, specialization may be deemed more promising, with or without associations with other companies. Taking a position on such important issues requires great discernment and entrepreneurial

[18] See Proença, 1996, for a comparative appreciation of total quality control, the Toyota system of production, and just-in-time production.

[19] For an analysis of the changes in the relationship between the State and business firms in Brazil in the early 1990s, see Erber and Vermulm, 1993.

[20] Kosacoff was a pioneer explorer of this topic: see, for example, Kosacoff, 1993. Company reaction to liberalization plus stabilization is also examined in Barros de Castro, 1994.

spirit. This is particularly true if governments, faithful to the doctrine of the neoclassical restoration, focus on a policy of results in macroeconomic terms and establish new "ground rules", abandoning the functions of delimitation and coordination of decisions (Barros de Castro, 1995).

In line with the ideas expressed in this article, the study of possible company reactions to the current transformations in the economy requires an appreciation of the extreme variety of their positions. Thus, even for multinationals, being previously installed in a country or not makes a crucial difference as regards the strategies that need to be defined. What is more, some of the most important "information" needed to make a decision simply does not exist, since it depends on decisions that have not yet been taken. Under such circumstances, there is little point in persisting with the idea that transparent, friction-free markets are being established which simply convert families' desires for consumption and entertainment into decisions on production and employment (Solow, 1989). If there is a genuine wish to explore the practically virgin territory of the reactions of economic agents to changes in parameters [21] and to formulate useful hypotheses as to what can be expected from the current reforms, it is as well to start with a good typology of companies. In this respect, there is one thing that can already be asserted: existing companies have never been the puppets of policy and will never be mere automata in the marketplace either.

(Original: Portuguese)

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[21] It should be remembered that the Schumpeterian school helps to understand ruptures when these are the result of companies' own initiatives. Here, however, the lack of continuity is due to policies which claim to be natural and neutral.

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Globalization and *loss of autonomy by* the fiscal, banking *and monetary authorities*

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The idea that globalization impairs the sovereignty of the modern nation-State is increasingly accepted in some academic, government and international circles. Currently, there is generalized concern over the progressive erosion of national authorities' leeway for making decisions on matters of internal interest independently of outside influences. This perception has reached its extreme among those who feel that globalization has transformed the nation-State into a dysfunctional entity in a world without frontiers. It is understandable that a consensus should have grown up around this thesis, in view of its general nature and in particular because of the conceptual flexibility with which the notions of globalization and sovereignty are usually treated in some professional circles. The term globalization is frequently used in the fields of communications, culture, politics and economics, while the notion of sovereignty is current in the political and military areas, whence it has been extended to apply to economic matters too. This paper examines the thesis in question, restricting it to the economic sphere. Even in this limited form, there is a certain lack of clarity in the idea that globalization of the economy curtails the autonomy of the authorities responsible for economic policy, since there is no single, or at least generally prevalent, interpretation of the concept of globalization within the field of economics. Similarly, the fact that the concept of autonomy did not originate in the economic sphere means that it is used with some latitude. In order to analyse the content, scope and limitations of the thesis, various examples are drawn from the areas of banking, monetary, exchange-rate and fiscal policy.

I

A characterization of the process of economic globalization

The phenomenon of globalization is arousing considerable interest in a number of professional circles, and it is understandable that this expression should be used in several ways. Moreover, the empirical rule that a range of opinions among economists is always positive is as applicable here as anywhere. It is thus necessary to explain the concept of globalization adopted in this study.[1]

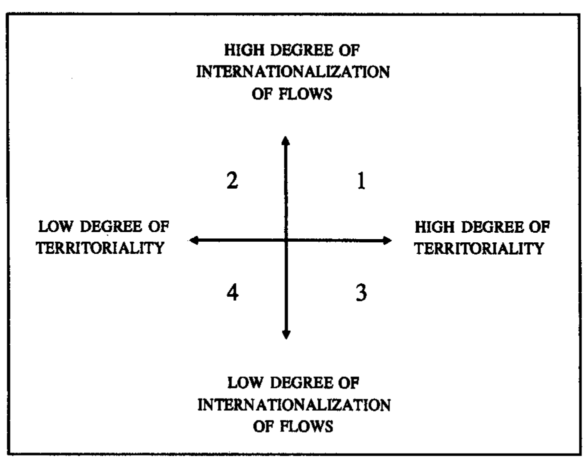
The characteristic feature of the type of globalization referred to here is the gradual erosion of the territorial basis of economic activities, as industries, sectors or entire production processes –whether real or financial– begin to operate increasingly independently of the specific resources of a particular national territory. Under these circumstances, the location of the various operations of a corporation becomes a variable option for the hierarchies of the transnational corporations.[2, 3]

The gradual lessening of the dependence of economic activities on territorial considerations has a number of causes, whose relative importance varies according to the field, sector and industry in question, and also from country to country: they have to do with the pattern of technical progress, consumer preferences, corporate organization and the public policies of national government. At all events, the increase in factor mobility (particularly capital mobility) encouraged by these trends allows the corporate hierarchies to select and juggle with territories within the "global village" without loss of efficiency, competitiveness or profitability (figure 1).

Figure 1 allows us to distinguish analytically between two phenomena which habitually appear in conjunction, since each one to a greater or lesser extent reflects and conditions the progress of the other. First, an increase in the degree of openness or internationalization of the national economy (or a sector of the economy) can be interpreted as a South-North movement (typically from quadrant 3 to quadrant 1). Second, globalization of an industry or sector is an East-West movement (typically from quadrant 1 to quadrant 2). When the latter movement occurs simultaneously in a significant number of industries or countries, we talk of globalization of the world economy.

From a broader perspective, globalization is a microeconomic process of dynamic interaction between corporate hierarchies and markets, characterized by increasing interdependence between and

FIGURE 1
International flows and territoriality in economic activities



Source: Prepared by the author.

[1] On the concept of globalization, see the more exhaustive descriptions of Baumann (1995), Di Filippo (1995), Oman (1994) and Storper (1995).

[2] This is the characterization given by Storper (1995). The specific "assets" of a territory range from natural resources (mineral deposits, tropical forests, unskilled labour, etc.) to resources which have been "constructed" by humans, such as the availability of "symbolic analysts", financial centres, networks and other computer services, airports, highways, favourable regulatory standards (flexible labour markets, etc.) and preferential tax treatment (tax incentives).

[3] Throughout this study, a distinction will be made between the market and the corporate hierarchy (considered as the structure of control and government of an organization), using Williamson's idea that "hierarchies are no more than the continuation of market relations by other means" (Williamson and Winter, 1991).

within companies and industries, which links corporate organizations and integrated markets throughout the world. However, from the standpoint of this essay, the essential characteristic of globalization is the progressive "de-territorialization" of economic activities. [4]

Analysis of the process of globalization is further enhanced when globalization is seen as the result of complex evolutionary processes which began in a rather remote past. [5] Thus, for example, the growing intensity of flows –of trade, foreign direct investment, short-term capital, technology– which accompanies, reflects and conditions the process of economic globalization should be interpreted as the acceleration of a historical process whose roots can be discerned in the last century. [6]

II

Determining factors in the globalization process

The phenomenon of the globalization of the world economy is based on trends in at least three determining factors: technology, corporate organization and public policies.

In recent decades, the interaction of these key factors has increased noticeably and their mutual reinforcement and feedback have constantly extended the globalization process. A brief review of each of these factors is given below.

1. Technology

Of the two routes to growth –by mobilizing resources such as investment, demographic dynamics, education of the workforce, etc., or by making more efficient use of resources through the incorporation of technical progress– the second is generally preferred now. At the same time, raising total factor productivity is a task which entails ever more intensive use of knowledge, and it is therefore understandable that a variety of organizations –from transnational corporations to national governments– are focusing increasing attention and effort on promoting the development, dissemination and adoption of new technologies. [7]

It is thus hardly surprising that during the last two decades the world has seen a spectacular wave of innovation in key areas, the most important of these being microelectronics and information technology. Separate and joint applications of innovations in these two areas have had a very favourable effect on the costs of activities with high "synergic" potential (communications, storage, information and data transfer, and transport in general). [8]

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[4] Oman (1994) identifies two uses of the term globalization. The first refers to a microeconomic process: here analysis concerns, for example, issues of international competitiveness. The second use stresses the notion of globalization as a synonym for multilateralism: here, analysis is oriented towards issues of trade policy and, in particular, agreements on the system of world trade, such as the General Agreement on Trade in Services (GATS) and the Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS). These, together with an agreement on trade in goods (which basically implements the standards established under GATT), are the pillars of the new World Trade Organization (WTO), which was born of the Uruguay Round.

[5] On the nature of evolutionary processes in economics, see Nelson and Winter (1982), Nelson (1995) and North (1990); on the discontinuities see Gerschenkron (1966).

[6] These roots include, notably, i) the legitimizing function of the doctrine of "free" trade inherited from David Ricardo; ii) the reduction in production and transport costs stemming from the innovations which followed the industrial revolution; iii) the consolidation of a system of "nation-States" rooted in legal frameworks compatible with private property rights, and the institutional arrangements that cut transaction costs; iv) the determination, on the part of the colonial powers of the time, to implant "free" trade and ensure the openness of markets, by force if necessary. A shining example of the latter was the so-called "opium war" (1839-1842) waged by Great Britain against China to force the Chinese to open their doors to the opium trade (and, in the process, to make Hong Kong into a British colony from 1842 to 1997).

[7] On the relationship between growth and the adoption of technologies, see Parente and Prescott (1991). Other excellent recent contributions to the economic analysis of the spread of innovation may be found in Freeman (1994), Stoneman and Diederen (1994), Metcalfe (1994) and Rosenberg (1994).

[8] The great economic impact of the spread of innovations in the area of new materials, microbiology and biotechnology is compounded by the enormous potential displayed by the "information technologies" (IT) resulting from the combination of computation, microelectronics and telecommunications in many sectors of the economy. For more details on this, see Milgrom and Roberts (1990), Alcorta (1993) and Rosenberg (1994).

This type of technological progress is exactly what the corporate hierarchies need in order to develop and consolidate the microeconomic dimension of the globalization process. This progress makes it possible to shorten distances, save time, reduce size and weight, greatly improve accuracy and quality, add or remove components and, ultimately, attain an explosive expansion of the options available to those hierarchies. Thus, corporations have total flexibility in deciding how to organize themselves, what and for whom to produce, and how, when and where to do so. The progressive de-territorialization of economic activities therefore owes much to technological innovation.

2. Corporate organization

The great reduction in production, marketing and transaction costs brought about by the incorporation of technical progress of this type opened the doors to the adoption of new models of organization on the part of the transnational corporate hierarchies (both in the real and the financial spheres of the economy). The favourable synergistic effect exerted by the combination of highly advanced technical innovations and sophisticated organizational systems characterized by their flexibility has made a crucial contribution to the consolidation of the economic globalization process.[9]

While in the recent past the strategy of transnational companies was often to set up a small-scale copy of the original company in the countries where they began operating, the new organizational model tends to locate operations (production, supply, publicity, legal advice, accounting, auditing, inventory control and handling, product and process research and devlopment) in different territories around the world.

The new system of "flexible" production seeks to locate each corporate function in the most suitable place, in order to exploit the comparative advantages of each territory.[10] Selecting the optimum combination of locations for the various functions or operations is the same as constructing advantages since, among other things, it allows corporations to: i) obtain cheaper or better-quality suppliers or ones that are closer to the centres of production; ii) locate production plants strategically in relation to major centres for the sale or consumption of their products; and iii) use more suitable technologies, independently of their country of origin. This is very similar to piecing together a gigantic jigsaw puzzle, where the final picture, like the position of the pieces themselves, may vary depending on the requirements of a corporate strategy which aims to ensure the competitiveness and profitability of the organization as a whole.

The economic superiority of this organizational model stems from its flexibility and the fact that it can adapt to generally changeable and rather unpredictable circumstances, thus allowing the corporate hierarchies to improve the efficiency and productivity of their organizations by giving them greater exposure to global competition (i.e., pitting them against the best practices of the best producers, in the most sophisticated and demanding markets, wherever they are located).[11]

[9] As Freeman (1994) points out, any technical innovation of importance involves changes in the organization of production and of the markets. Similarly, organizational innovation can lead to important technical innovations (classic examples are the creation of the assembly line, the introduction of containers, self-service cafeterias and supermarkets and hypermarkets). The current phase of globalization is noteworthy, among other aspects, for the special, intensive interaction between technology and a system of production that is integrated on a global scale and which, as far as the major corporate functions are concerned, is structured around a sophisticated international distribution of intra-company tasks. On this topic see UNCTAD (1993) and Oman (1994).

[10] For a recent evaluation of various possible sources of comparative advantages, see Dollar (1993), Leamer (1993), Tybout (1993) and Hummels and Levinsohn (1993).

[11] Baily and Gersbach (1995) studied the considerable variations in productivity (measured as value added per hour) observed in nine industries (automobiles, auto parts, metal products and machinery, steel, computers, consumer electronics, foodstuffs, beer and soaps and detergents) in the United States, Germany and Japan, and came to the following conclusions: at the first level of analysis (the production process), the majority of the differences in productivity can be attributed to the way in which functions and tasks are organized (innovations in the design of manufactures and in the organization of the workplace) in each industry and in each country; traditional determining factors such as the degree of capital-intensiveness and the scale of the plant play a less important role. At the second level of causality, the authors establish a positive correlation between the level of productivity and the degree to which an industry is exposed to global competition (defined as above in the text). This reinforces the message of Porter's oft-quoted "diamond" (Porter, 1991), i.e., that the secret of competitive advantages lies in competition (first with domestic rivals and later with the best firms in the rest of the world).

3. Public policies

Clearly, had it not been for public policies compatible with the functioning of a global economy, this combination of technology and corporate organization would not have had the globalizing effects that can be seen today. What is more, the very processes of internationalization and opening-up of national economies –with the scale and characteristics that can be seen today– are in large part due to domestic policies which are compatible with the increase in cross-border flows. [12]

Examples of public policies which have clearly intensified trade flows over the last fifty years are the government agreements which led to the creation of the General Agreement on Tariffs and Trade (GATT) in 1947. At that time, customs tariffs on imported manufactures in industrialized countries were around 40%, which after several rounds of negotiations (including the Dillon, Kennedy and Tokyo rounds) was brought down to an average of 4% in the Uruguay Round. This and many other government initiatives, such as those relating to the creation of the United Nations and its various specialized agencies, come under the heading of national foreign policy and have given rise to the aforementioned concept of globalization, in the form of multilateralism.

At the same time, such foreign policies also created conditions which favoured the development of globalizing forces in the sense which most interests us here, since cross-border flows –which "multilateralism" undertook to promote– are the mechanism whereby transnational organizations can develop and apply their microeconomic strategies.

Meanwhile, a number of domestic market liberalization and deregulation policies –starting in the industrialized countries in the 1970s and subsequently adopted by many other countries around the world in the 1980s and the first half of the 1990s– created ideal conditions for the expansion and subsequent consolidation of the process of economic globalization as a microeconomic phenomenon.

These domestic policies were formulated, designed and implemented in the context of stabilization and adjustment programmes or liberalizing structural reforms, with the aim of raising the efficiency and flexibility of national economies and increasing their external competitiveness and productive capacity. Conspicuous examples of such policies are programmes of fiscal decentralization, financial deregulation, trade liberalization and privatization or disincorporation of public enterprises, together with the tax reforms which these programmes (especially foreign trade liberalization) naturally made necessary. The set of policies associated with such programmes is well-known under the name of the "Washington consensus". [13]

The fact that a virtually identical set of domestic policies should have been adopted in many different countries almost simultaneously is unusual enough to warrant an explanation. It seems highly unlikely that such a sudden and massive conversion to a new form of "conventional wisdom" could be the result of completely independent national decisions.

Rather, an alternative explanation suggests itself: that national governments, caught between constant, cumulative internal pressures relating to income distribution which could not be accommodated by the now obsolete model of inward-oriented growth, together with more or less simultaneous external pressures, finally succumbed to the forces drawing them towards the new "conventional wisdom". Thus they rallied to its cause and endorsed its pledges. [14]

The growing mobility of the capital –tangible and intangible, real and financial– controlled by transnational economic agents operating in increasingly "de-territorialized" fashion gradually translated into demands and promises –concrete or potential,

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[12] Even contraband activities –which should undoubtedly be classified as part of the process of internationalization of economic activities– reflect public policies. Thus, for example, adoption of a highly protectionist trade policy (with average import tariffs of, say, over 80%) will certainly be perceived as an incentive (indeed, an implicit subsidy) for smuggling.

[13] The expression "universal convergence" has been suggested as an alternative to the controversial "Washington consensus", coined by John Williamson. For the origin and evolution of this terminology see Williamson, 1993.

[14] Although the "World Bank version" of the causes of the "East Asian economic miracle" was not widely publicized until the appearance of its report *The East Asian Miracle: Economic Growth and Public Policy* (World Bank, 1993), it should be recalled that the programmes of stabilization and adjustment implemented in those countries that signed agreements with the IMF and the World Bank itself during the 1980s contained the basic elements of that "conventional wisdom" (accompanied by the famous conditionality clauses).

explicit or implicit, expressed by the markets or by the transnational corporate hierarchies themselves– which national governments were unable to withstand.[15]

All the foregoing leads to the conclusion that the causal thrust in the proposition under consideration –i.e., that globalization brings a loss of autonomy– ignores a number of important and complex interactions between the variable which is deemed to be the determinant (globalization) and the sphere in which the loss of autonomy is deemed to occur (public policy). On the one hand, it ignores the important contribution made by foreign policy to multilateralism, which helped foster a globalized economy, and on the other hand it does not explicitly recognize that the implementation of important domestic policies is a rational adaptative response to external pressures connected with the process of globalization.

III

The various possible forms of loss of autonomy

Autonomy, defined as the freedom to govern oneself or administer one's own affairs independently of outside influences, is a concept drawn from the political sphere. Thus, in order to discuss loss of autonomy in the economic sphere, we need to import and then adapt the concept to our own purposes in this essay.

This is not without risks and complexities. In the first place, the very essence of political processes is negotiation. Thus, it is normally impossible to distinguish between concessions a national government makes as part of an agreement with opposition parties in order to gain some tactical or strategic advantage (which are described as "skilful political negotiation") and concessions it makes as a result of external circumstances connected with the process of globalization (which are described as "a regrettable loss of autonomy"). Second, if political negotiation means making concessions in one area in order to gain advantages in another, higher-priority area, then the problem of loss of autonomy may simply be that it is the price to be paid to achieve other aims. Lastly, it should be understood that this issue is not of a kind that lends itself to considerations of a cardinal nature. "Loss" of autonomy is an ordinal notion which leaves open spaces where indeterminacy and ambiguity reign.

At all events, the central governments of nation-States intervene in the economy with four general aims: i) to allocate resources for the provision of public goods; ii) to stabilize the course over time of macroeconomic variables such as production levels, employment, prices, the currency and public indebtedness; iii) to correct the distribution of income (personal, institutional or regional); and iv) to ensure an adequate and sustainable growth rate. To do this, they normally use three instruments: i) regulation (setting prices and public-sector charges, determining market entry and exit conditions, locating activities, ensuring compliance with standards of quality in production and marketing); ii) economic policy (policy on taxation, tariffs and public expenditure; monetary, credit, financial, exchange-rate, trade and industrial policy); and iii) direct participation as producing/distributing agents (public utilities) or financial backers (development banks).

Underlying these interventions there is always the assumption that the economic authorities are capable of setting objectives and outlining compatible goals, selecting and using efficient and effective instruments, minimizing the cost of their interventions and maintaining control of the constraints –political, economic and social– within which their policies operate. We will therefore speak

[15] The basic elements of this not-so-new "conventional wisdom" were established very early on by Harberger (1984) in a set of 13 rules for conducting economic policy (these were increased to 14 by Fischer, 1987). Little, Cooper, Corden and Rajapatirana (1994), for their part, put forward nine general guidelines to the same end. More recently, Harberger (1995) reexamined his recommendations, comparing them with Williamson's 10 points of convergence. Two important evaluations of the rise, development and subsequent decline of the new "conventional wisdom" can be found in Bierksteker (1995) and Krugman (1995).

of loss of autonomy by the national economic authorities whenever the process of globalization of the world economy has an adverse effect on the operation of this assumption.

This loss of autonomy may take various forms, of which the following are the most outstanding:

a) *Instrument-related*
   i) Loss of instruments.
   ii) Reduction in the efficiency or effectiveness of instruments.

b) *Constraint-related*
   Increase in the number, complexity and strategic importance of the constraints within which the economic authorities have to work.

c) *Objective-related*
   i) Increase in the number and importance of the political objectives that cease to be viable options.
   ii) Increase in the cost of separating domestic policies from the markets and maintaining what the transnational corporate hierarchies regard as "fundamental" values.
   iii) Rise in standards for setting and achieving quantitative goals.

Based on this list, which is merely illustrative and far from exhaustive, let us now examine some examples drawn from monetary, banking, exchange-rate and fiscal policy.

IV

Banking and monetary authorities

Discussions of the process of de-territorialization of economic activities usually refer only to the activities of transnational companies operating in the real sphere of production, trade and direct investment in risk capital (cf. Dunning, 1993). However, the most obvious example of globalization is to be seen in the activities of commercial and investment banks, insurance companies and other agents in that field (including transnational corporations themselves, in their financial dealings with some of those institutions). Thus, the typical activities and operations of the financial markets are those which best fit the characteristics of figure 1, quadrant 2. [16]

Globalization of financial markets is the epitome of the synergistic interaction of technical progress, deregulatory policies and models of corporate organization. The spectacular advances in communications systems and in the technology of processing, storing and transmitting data and information have given rise to imaginative financial innovations characterized by sophisticated "products" and complex techniques of analysis and management. Likewise, the widespread financial deregulation –consisting basically of the elimination of controls on cross-border capital movements and the abolition of ceilings on loan and deposit interest rates– has fostered greater internal competition, higher international mobility of short-term capital, and growing international financial integration. [17]

The figures cited by Baumann (1995), Griffith-Jones and Stallings (1995) and the IMF (1995) for the scale and rate of variation of some international flows, both in the real sector and in the financial sector, clearly show that the traditional quantitative relationship between the two sectors is very much out of balance. Indeed, it could be said that financial flows have acquired a life of their own, crossing borders back and forth many times a day in a flurry of speculation, quite independently of the real economic base to which until recently it was assumed they were tied. The growing mobility and dematerializa-

[16] The possibility of links between transnational corporations and banks depends on the model of corporate control and financial intermediation in use in each country. For a recent analysis of the advantages and limitations of the basic models (American, German and Japanese), see Porter (1992), Gray (1994) and Prowse (1994).

[17] The origin of the current globalization of financial markets can be found in the rise of the Eurodollar market at the end of the 1940s, when the former Soviet Union placed its dollar holdings in French banks in order to forestall the eventuality of the United States freezing its accounts. When the United States imposed controls on capital in the 1960s, American banks and companies "discovered" the Eurodollar market, which they used as a source of funds to circumvent the exchange controls and thus finance their operations. The end of the Bretton Woods system in 1971 and the recycling of petrodollars which began in 1973 gave a new dimension to this market, which was finally "globalized" when deregulation of financial markets began in industrialized countries during the 1970s.

tion of money –which has now been reduced to pure electronic information transmitted across cyberspace instantaneously and simultaneously through networks of computers– has transformed the activities of the financial markets into a prime illustration of the de-territorialization characteristic of the globalization process. [18]

As can easily be imagined, this new situation creates enormous challenges for Central Bank authorities and for others who are responsible for the implementation of banking, monetary and exchange-rate policies.

In the first place, the extraordinary growth of the interdependencies between financial institutions –both domestic and foreign– made possible by the deregulation and innovation that accompany the globalization process increases the system risk. The origins of such risk are invariably to be found at the microeconomic level, in the possibility that a financial institution may be unable to meet its obligations. This could drag others along in a chain reaction towards insolvency, and even possibly lead to the breakdown of the whole system. After the Barings Bank episode, it is easy to see that an increase in external exposure means an effective reduction in the efficiency and effectiveness of the instruments of banking supervision.

The financial system's greatest vulnerability stems from:

i) the growing lack of transparency of institutions' statements and balance-sheets, due to the intensive use of derivative products and other instruments of extreme technical complexity, with associated risks which are very difficult to estimate; [19]

ii) the increasing fragility of the inter-bank payments system, which has become the weakest link in the chain of institutional arrangements designed to avoid systemic crisis, as a result of the rocketing value of the payments made through these mechanisms as compared to the average net resources available to the participants in the system; this means that any failure of synchronization –because of one agent's lack of liquidity– could spark off a major systemic crisis; [20]

iii) the instability of the prices of financial assets, which translates into greater short-term volatility (in, for example, foreign currency markets) or, even more seriously, into misaligned medium-term prices (as, for example, in foreign-exchange, property and bond markets during much of the 1980s in some industrialized countries). Clearly, when these bubbles burst, the system risk increases.

The increase in system risk which results from the globalization of financial markets translates into potential adverse effects on the management of monetary and fiscal policy. In the monetary sphere, an injection of credit to revive institutions that are "too big to bust" is a threat to trends in monetary aggregates and inflationary expectations. In the fiscal sphere, any systemic crisis may entail a large tax increase in order to restore macroeconomic equilibria.

Second, it is clear that, as domestic financial institutions become more vulnerable owing to the interdependencies associated with the globalization of the world financial system, national Central Bank authorities lose the incentive to control the rise of monetary aggregates in a manner consistent with bringing down the annual rate of inflation. Under these circumstances, the authorities' first priority will be to safeguard the integrity of the financial system, with anti-inflation policy taking second place.

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[18] O'Brien (1992) coined the expression "the end of geography" (possibly by analogy with Fukuyama's "the end of history") as a metaphor for the idea of the de-territorialization of a large part of contemporary financial operations. Such operations take place, as my colleague Edgardo Noya puts it, in "Borgesian space", where the infinite and the simultaneous unite in the twinkling of an eye.

[19] On the lack of transparency in financial institutions' statements and balance-sheets, the current President of the European Monetary Institute (formerly General Manager of the Bank for International Settlements) stated recently: "Not to put too fine a point on it, I would defy even a professional in financial matters to take the published accounts of a major international bank or other financial institution and come up with an accurate assessment of that institution's affairs. This lack of transparency not only invalidates one of the key assumptions needed for the free economy to produce an optimal allocation of resources, but it also means that participants may not be in a position to apply to financial institutions the de facto market discipline required to prevent the risk of systemic problems." (Lamfalussy, 1995).

[20] It is well known that when agents pull out of interbank payments systems because they anticipate problems in the way they function, this triggers a crisis of liquidity which could lead to a systemic crisis. This example of a self-fulfilling prophecy bears the name of "Herstatt risk", in memory of a German bank which foundered in 1974 for this reason. According to Crockett –the present General Manager of the Bank for International Settlements– it is estimated that in two and a half business days the interbank settlement systems of Switzerland and Japan generate a turnover equivalent to those countries' annual GDP. In the United States and Germany, the corresponding time is between three and four days (Crockett, 1994).

Third, the surge in financial innovations and in the volatility of the prices of assets such as foreign exchange, property, and stocks and bonds tends to undermine the stability of the relationship between the main monetary aggregates and GDP. Financial globalization thus renders monetary transmission mechanisms less and less predictable (which reduces the efficiency and effectiveness of monetary policy).

Fourth, the existence of currency markets around the world which operate 24 hours a day, with information provided through computers connected to a network, allows instant substitution of currencies in investors' portfolios. This phenomenon of monetary substitution between countries suggests it may be most efficient to control monetary expansion at the supranational level. [21]

Fifth, with sufficient international mobility of financial capital, a policy which sets the nominal exchange rate but does not restrict currency trading in any way makes the base monetary supply endogenous (i.e., there is a loss of autonomy in the management of monetary policy as an instrument to determine the level of activity and prices).

In other words, in an economy with globalized financial markets and highly mobile speculative capital, the economic authorities must choose between i) replacing the exchange-rate anchor by a monetary anchor, whatever the cost in terms of loss of control over the stock of public debt which may be caused by the rise in interest rates on public securities, a decline in private investment and in activity levels, and greater vulnerability of the banking system; or ii) maintaining the nominal exchange rate, whatever the cost in terms of exchange-rate slippage and consequent loss of tax revenue on foreign trade operations, in terms of a rise in the trade deficit, and in terms of fluctuations in the international reserves. Thus, the "impossible trinity" (fixed nominal exchange rate, movement of capital and monetary autonomy) may be seen as a sign that the domestic authorities have lost autonomy as a result of the financial globalization process.

Sixth, as the instability of European exchange rates has shown since the crisis of September 1992 –and as the recent Mexican and Argentine experiences also reminded us– global financial markets are growing less and less tolerant of domestic policies which involve significant or permanent exchange-rate slippages. Since the Mexican crisis of December 1994, the behaviour of the markets has enormously reduced national economic authorities' leeway for using the nominal exchange rate as an anchor for the price system. The Mexican experience speaks volumes, for since then the country has had to accept a floating currency. The Argentine experience was based on a determination not to devalue; however, the recent announcement of an unemployment rate of 18.6% (national average) may be interpreted as an indicator of the political and social price that has to be paid for insisting on an autonomous course of action. The Brazilian experience illustrates an intermediate situation, in which it was necessary to alter the original design of the "Plan Real" –first by adopting a floating currency band and later adjusting the band in a manner consistent with devaluation– in order to satisfy market expectations.

Seventh, the discipline imposed by the functioning of global financial markets affects even the way quantitative targets are handled by the monetary authorities. Thus, for example, in an economy with annual rates of inflation and of growth in the monetary base equal to 50%, an announcement by the Central Bank that it intended to cut growth in high-powered money only to 48% per annum would probably be seen by the markets as a lack of political will to deal with the problem. On the other hand, if it were announced that primary money creation would not exceed 0% per annum, the markets probably would not take this announcement seriously (or would interpret it as consistent with plans for a price freeze).

Finally, in so far as the numerous creative innovations in the financial sphere allow private-sector agents to protect themselves against possible changes of course in monetary or exchange-rate policies, such policies tend to become less efficient. This is a variant of Goodhart's law, which in its original version stated that when economic agents discover the existence of a stable relationship (between two or more variables), the relationship breaks down (because it is then overexploited). In this case, when agents learn to use instruments arising from banking deregulation promoted by the Central Bank, the efficiency of the Bank's monetary policy tends to be neutralized (since the agents have an incentive to cover themselves against Central Bank initiatives through adroit use of those instruments).

[21] Lane and Poloz (1992) show that aggregate demand for money among the members of the Group of Seven tends to be more stable than the demand for each currency on its own.

V

Fiscal authorities

When seeking to illustrate the restrictive effect of trade liberalization on fiscal authorities' freedom of movement, the first case which comes to mind is the well-known example of the public expenditure multiplier. In the context of Keynesian policies, which aim to make up for lack of (or excess) demand in the private sector, trends in aggregate demand in a closed economy (D = Ad = Cd+Gd+Id) can be stabilized by means of a compensatory variation in the level of public expenditure or taxation. However, as the economy internationalizes, aggregate demand becomes ever more sensitive to fluctuations in the determining factors of the trade balance (D = Ad+X = A+X-M = C+G+I+X-M), causing the public expenditure multiplier to go down as a result of "leakages" originating in the demand for imports.

This well-known argument is the result of comparing the same economy in circumstances of autarchy and of openness, and it shows the degree of loss of freedom suffered by the central government of a nation-State when the domestic economy opens up to external trade.[22] However, this is not sufficient to demonstrate the effects of world economic globalization on the level of autonomy of national authorities in devising and implementing their own fiscal policy objectives. The reason, as mentioned above, is that globalization and liberalization are not synonymous.

The fiscal complexities that result from globalization are brought out when we look at the levels of taxes levied on transnational corporations' profits by rival tax authorities: the difficulties arise in respect of the allocation of the right to levy taxes among different nation-States where the companies operate or where the head office is situated.

The foregoing is related to the structural change that globalization provokes in the patterns of international trade and of foreign direct investment (figure 2).

[22] An estimate of this loss can be obtained by calculating the increase that would be required in the public sector deficit in order to reach a given degree of growth in the level of activity or employment, compared with that required in a situation of autarchy.

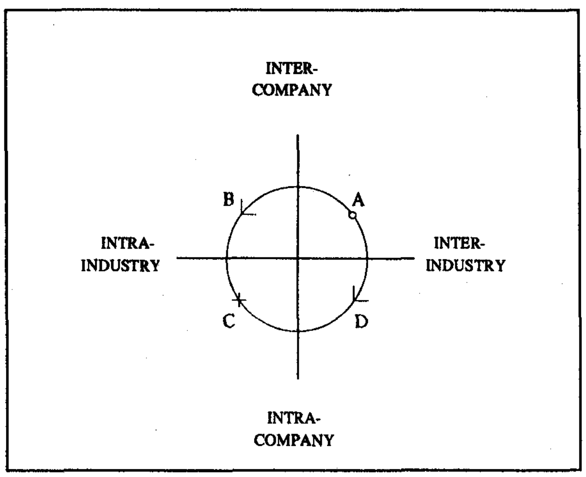
Area A corresponds to the foreign trade operations with which we are familiar from Heckscher-Ohlin's arguments. In this area, each country exports (imports) the good that makes intensive use of the production factor with which it is best (worst) endowed. This is the basis for the conventional notion that trade is carried out between unlinked enterprises (the "arm's length" principle) from two countries that buy and sell products from different industries (say, textiles from Britain and wine from Portugal). This traditional pattern of international trade between companies and between industries can be interpreted as typical of the primitive phase of internationalization of the world economy (although it may be noted that it still obtains for many products).

Area C corresponds to the most typical aspects of the current phase of globalization. The emphasis here is on intra-company and intra-industry trade and investment, carried out by transnational corporations which operate on the basis of global logic and use a flexible form of organization of the type described earlier.

The following is a list of some of the many problems that fiscal authorities must deal with as cross-border operations (trade, investment and finance) tend to concentrate in area C.

FIGURE 2

International trade and intra-company trade



Source: Prepared by the author.

First, the institutional arrangements for the control of cross-border flows –i.e., national customs services– are a legacy of the time when international economic relations were typical of area A. Thus they are basically designed to contend with traffic in merchandise susceptible of physical control (tons of meat or sugar, cases or hectolitres of wine, hundreds of tyres, thousands of trucks or cars), carried out by companies which are not linked with each other and therefore use market prices to determine credit and debit. The transactions which are typical of area C, however, involve trade flows which contain an increasing element of services, information and knowledge. It could be said, in a way, that flows are becoming more and more "conceptual", and their increasingly intangible nature tends to make it difficult to assign to them the monetary values every country requires for tariff and taxation purposes in general.

Second –and this point is connected with the foregoing one– it happens that the agents involved in activities in area C tend to be members of transnational hierarchies for which the essential point of international trade is to move goods and services –including financial products and services– within their own organization. When this involves moving the goods and services between different countries, this is because such movements are in the organization's interests and serve its global strategy better. It sometimes happens that the "transfer prices" used in internal buying and selling operations (between different subsidiaries and affiliates and the head office) facilitate well-known manoeuvres which may have by no means insignificant consequences for taxes and the exchange rate. This issue is of considerable importance to tax administrations and the Central Banks of countries such as Brazil: when dealing with trade in services (accounting, credit and finance, research and development, personnel training, etc.) and in other valuable intangibles (patents, formulas, processes, designs, copyright, trade marks or brand names, models, franchises, licences, technical data, customer lists, etc.) the fiscal authorities have to work hard if they are not to lose some degree of liberty –in the form of loss of tax revenue– because of the globalization process.

Third, it has to be borne in mind that there are incentives for transnational corporations to manipulate "transfer prices" not only to optimize their global taxation plans (by transferring profits from countries where the tax burden is high to others where it is lower), but also –among other things– in order to repatriate profits over and above the levels permitted by local regulations, to reduce risks in exchange operations, to capitalize assets, to circumvent price controls, to respond to charges of dumping or other monopolistic activities, to neutralize wage demands, to subsidize an "infant" subsidiary, to penetrate new markets or to increase their share in traditional markets. Clearly, there are many ways in which economic globalization, in the form of transfer prices, can have an adverse effect on the interests of the national treasury.

Fourth, it is worth looking at the growing interaction between the financial side of national economies and dynamic international financial markets. In this context, it is evident that "global banks" –such as Chase Manhattan, Chemical Bank and others– represent a very particular form of transnational corporate hierarchy, from the standpoint of the type of "products" with which they work and the type of control to which they are subject in each country (usually through the Central Bank). At the same time, it is important not to lose sight of the fact that such banks –along with the other financial agents who carry out international financial operations– have the same incentives as transnational corporations on the real side of the economy (and possibly more facilities) to manipulate their own "transfer prices". Given the enormous volumes handled by these institutions (in cross-border intra-company hedging, speculative and arbitrage operations), even small price spreads may represent huge losses for the fiscal authorities.

Fifth, the growing importance of transnational corporations is becoming more and more evident in the volume of foreign direct investment and trade they generate (area C in figure 2). It can be assumed that these activities have important counterparts on the financial side (such as the creation or destruction of financial holdings connected with export and import payments, hedging operations to reduce exchange-rate risk, foreign-exchange market operations to repatriate profits or capital, etc.). In view of the quantitative importance of these operations within total external operations, the average level of international reserves and the volume of operations in the foreign-exchange market, taken as a whole, it is clear that Central Banks need to keep a close watch on what transnational corporations may be doing (or may do in the future), in coordination with the "global banks", with regard to transfer prices.

Sixth, there are various niches where there is strong interaction between the real side and the financial side of transnational corporations. For example, at any given moment transnational corporations have liquid assets and liabilities denominated in various currencies and located in many countries, and the movements of foreign exchange brought about by these companies' cash-flow management techniques thus involve enormous transfers even when small interest rate spreads apply, owing to their volume and the fact that they are carried out on a continuous basis. Another example of such niches is the so-called "captive insurance industry" –in other words, an insurance company that is a subsidiary of a transnational corporation in the non-financial sector (e.g., an automobile manufacturer) or is controlled by one. The motivation behind the creation of such "captive" insurance companies is evident from the fact that in 1991 75% of them were located in offshore tax havens. This and other patterns of operation in transnational corporations implies a further loss of autonomy for fiscal authorities.

Lastly, the tax burden of a transnational corporation in a country can also be altered by i) replacing trade flows with foreign direct investment flows (the profits from which tend to be exempt from tax for several years); ii) reorienting production towards the export of manufactures (allowing the mechanism for the refund of value-added tax to reduce the net contribution from its operations to the treasury); and iii) reorienting the composition of its exports towards services (which means that tax administrators will find it practically impossible to exert adequate fiscal control).

The foregoing examples barely skim the surface of the many and complex ways in which the autonomy of national fiscal authorities can be diminished by the behaviour and strategies of the chief agents of the globalization process: i.e., transnational corporations on either the real or the financial side. There are of course many other channels which this essay does not touch on and which are not directly or necessarily connected with these economic agents.

As a brief illustration of this last point, let us return to the case of small economies which are open to short-term capital flows and which maintain a fixed nominal rate of exchange as part of an anti-inflation programme. Obviously, the disadvantage of easy access to external financing is the potential adverse effect of excessive money supply on inflation targets. The Central Bank is forced to intervene through sterilization operations, with a resulting increase in the supply of domestic bonds and a rise in interest rates.

The foregoing has at least two consequences: i) it reinforces the system of incentives that encourage a net inflow of capital (which leads us to expect that in the future, all else being equal, there will be further sterilization operations which will raise interest rates in order to ensure that the market continues absorbing more and more domestic securities); ii) it tends to make the public accounts more vulnerable, owing to the corresponding increase in public debt service. As Calvo (1991) anticipated, this combination of effects provokes a loss of confidence among economic agents in the sustainability of the anti-inflation programme, and the greater the net inflow of short-term capital, the more pronounced this effect.

VI

Final remarks

The globalization of the world economy is an ongoing process whose long-term consequences in different areas can as yet only be partially glimpsed.

What is clear, however, is that this process poses extraordinary challenges to those responsible for the stability of the financial system and the implementation of monetary and exchange-rate policy. Similarly, tax administrators and those responsible for other areas of fiscal policy face increasing difficulties in devising and implementing policies which are capable of neutralizing the adverse effects of globalization on the autonomy of the economic authorities.

The globalization phenomenon effectively restricts national governments' freedom of movement. However, the disciplining force of international competition which underlies at least a large part of the process may have considerable beneficial effects on the future course of public policy in the countries of the region. Thus, when talking about "loss of autonomy", care must be taken to check whether it is not rather a matter of a welcome "reduction in the level of arbitrariness" with which public policy is sometimes applied. It is worth asking, for example, whether the international financial markets' growing intolerance –of arbitrary manipulation of the exchange rate, or of sustained high public deficits– really affects domestic authorities' autonomy (by tightening the restrictions on governments) or if it is not rather a force for good which will prevent greater evils in the future (such as the accumulation of large exchange rate slippages which give rise to financial traumas with considerable negative effects in the real sphere of the economy when devaluation inevitably occurs).

Be that as it may, the nation-State as we know it is going to remain for a long time yet the basic organizational unit of the political, economic, social and cultural life of our peoples.[23] Globalization presents it with new, complex challenges, but also great opportunities. National economic authorities have at their disposal powerful instruments to help them meet these challenges, and they must work up a level of enthusiasm to match in order to make the enormous effort needed to take advantage of the opportunities thus presented. Among the many options open to national governments –which for reasons of space are not dealt with here– one which should be borne in mind is the ECLAC (1994) proposal on open regionalism. As Stallings (1995) shows, national governments are already making significant regional responses to these global challenges. The question is to determine which of the broad integration schemes through which these responses are being channelled –i.e., those in the tradition of the Treaty of Rome (where the leadership is exercised by government hierarchies, as in MERCOSUR), or those alone the lines of the Chinese experience (where leadership is exercised by private agents through the markets)– is least damaging to the future autonomy of the nation-State.[24]

(Original: Spanish)

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[23] One of the most fervent exponents of the thesis of the nation-State's obsolescence and the rise of the region-State is Ohmac (1993, 1995).

[24] For details of the Chinese experience, see Jones, King and Klein, 1992.

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The macroeconomic *context and investment:* Latin America since 1980

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This article analyses the evolution of regional investment within the context of general macroeconomic trends. First, trends in the macroeconomic context of investment between 1980 and 1994 are examined, and it is concluded that the economies' vulnerability to external shocks was crucial to the decline in the rate of investment and its subsequent slow recovery: in countries where indebtedness and external account imbalances were lower, investment levels and rates fell less sharply. Next, the factors determining trends in private investment are reviewed, and it is concluded that, over and above those traditionally taken into account by economic theory, a further three also played a part: the stability of policies and their consistency with structural reforms, which ensures the sustainability of regulations over time; access to the infrastructure, where public sector investment has traditionally been supplemented by private investment; and the availability of financing. Finally, some policy recommendations are put forward, based on the recognition that macroeconomic stability is fundamental (although not of itself sufficient) for maintaining a favourable climate for investment, and that government thus has an important part to play in stimulating private investment. This role is related to the function that public sector investment should perform in the future, to the role of taxation in the reinvestment of company profits and personnel training, and to policies affecting financial development and the capital market.

I

The macroeconomic context and investment

1. Trends in the 1980s

Over the last fifteen years, Latin America has been exposed to strong external shocks which have given rise to clearly defined stages in the region's macroeconomic development. Each stage has also registered differences in the process of capital accumulation: indeed, the way in which the shocks and the subsequent imbalances were dealt with –by means of stabilization and adjustment policies, along with structural reforms such as trade and financial liberalization, market deregulation and privatization– had a direct effect on public sector investment. This also affected the economic picture as a whole –political and economic stability and the potential for savings and financing– and thus private investors' expectations (degree of certainty and confidence) and incentives.

During the first of these stages (1978-1981), the region benefited from the improvement in the terms of trade and from an ample supply of external credits from the international private banking system, making possible the implementation of expansive economic policies, which in many cases gave rise to unsustainable balance of payment deficits. A second stage (1982-1984) began when voluntary inflows of international capital were reversed (after Mexico ceased its debt payments in August 1982), international interest rates rose and the terms of trade deteriorated. This stage saw the beginning of a stringent adjustment process, designed to produce a trade surplus to cover the external sector deficit.

FIGURE 1

Effect of the macroeconomic context on investment

Effect of external shocks on public sector investment

Direct effect on investment financing
(-) Terms of trade
(-) Capital flows → Income falls, External credit shrinks, Debt service rises → (-) Investment financing
(+) External interest rate

Effect on public spending
(+) Debt service, External debt → (+) Domestic borrowing, (+) Currency issue → Fiscal constraints

(+) Inflation (-) Investment

Effect of external shocks on private investment

Public sector deficit, Monetary expansion, Devaluation → Instability in: * Prices * Exchange rate * Interest rates → (+) Risk → (-) Profitability

Closure of external and fiscal gap → Drop in demand → Under-utilization of production capacity

Financial crisis → * (+) Domestic interest rates → Decline in financing
* (-) Long-term credit
* (+) Devaluation → Increase in external debt in local currency

Source: Prepared by the author.

TABLE 1

Latin America (17 countries): Evolution of gross fixed capital formation and GDP, 1978-1994

Country	Gross fixed capital formation [a] *(Index, average 1978-1990=100)*				GDP [a] *(Annual average variation over the period)*				Gross fixed capital formation as a proportion of GDP[b] *(Percentages)*			
	1978-1981	1982-1984	1985-1989	1990-1994	1978-1981	1982-1984	1985-1989	1990-1994	1978-1981	1982-1984	1985-1989	1990-1994
Argentina	97	73	67	82	0.3	0.9	-0.9	6.1	24.0	18.1	16.2	19.0
Bolivia	95	52	68	81	0.4	-3.1	1.3	4.0	16.6	9.9	13.3	14.2
Brazil	99	80	94	84	4.4	1.1	4.5	1.0	22.5	17.5	17.0	15.5
Chile	111	82	130	229	7.2	-3.1	6.1	5.6	17.4	14.0	17.8	22.3
Colombia	104	121	128	157	5.0	2.2	4.8	4.0	16.3	17.6	15.6	16.0
Costa Rica	93	61	90	135	2.3	1.1	3.8	4.7	24.5	16.5	21.3	24.5
Ecuador	99	79	76	80 [c]	5.3	0.7	2.2	3.3	23.2	17.2	15.2	14.1
El Salvador	92	57	72	91 [c]	-3.2	-0.9	1.5	4.2	15.2	11.2	13.3	16.6
Guatemala	100	70	66	85 [c]	3.7	-2.0	2.2	3.8	13.5	9.5	8.6	9.7
Honduras	95	74	78	113 [c]	5.2	0.5	3.9	2.6	24.5	18.2	16.9	21.9
Mexico	109	92	86	119	9.2	-0.4	1.1	3.0	23.9	18.6	17.2	20.8
Panama	108	111	84	120 [c]	8.3	1.6	-1.1	6.5	21.4	18.7	13.6	17.8
Paraguay	110	102	106	135 [c]	10.5	-0.2	4.2	2.9	25.8	21.4	19.9	21.4
Peru	109	104	89	89	3.9	-2.3	-0.2	2.8	22.9	22.0	17.6	19.7
Dominican Republic	100	87	114	129 [c]	4.0	2.2	4.4	1.8	22.5	22.0	21.6	21.1
Uruguay	102	66	49	71	4.9	-5.5	3.9	3.7	17.2	12.7	9.7	12.5
Venezuela	96	64	55	60	-1.1	-2.7	1.7	3.8	29.2	20.1	15.9	16.1

Source: ECLAC data, based on national accounts of each country.
[a] In 1980 dollars. [b] Coefficient in constant currency of each country. [c] Average 1990-1993.

Figure 1 summarizes the mechanisms whereby the effect of the external shocks examined in this section is transmitted to public and private investment. One effect of the debt crisis was a generalized drop in the rate of growth of GDP, which contributed to the sharp contraction in investment owing to a slowdown in demand and the resulting under-utilization of production capacity. However, the adjustment process and the subsequent recovery of investment show clear differences from country to country.

Chile, Colombia and the Dominican Republic, for example, already exceeded their 1978-1981 investment levels by the period 1985-1989 (table 1). Studies carried out in the region [1] show that the factors affecting the differences in behaviour of the process of capital accumulation relate to: i) the level of indebtedness of each country at the beginning of the period; ii) trends in the terms of trade; iii) the relative amount of external financing received during the adjustment period; iv) the initial degree of openness of the economy, and v) the consistency of economic policy, particularly foreign exchange and trade policy. Countries such as Colombia, Paraguay and the Dominican Republic, which had a low level of indebtedness and a small balance of trade deficit when the external debt crisis struck and were thus less vulnerable to external financial shocks, were able to deal with the deterioration in external conditions by means of gradual and moderate adjustment policies, without causing sharp drops in output or investment.

Countries which had borrowed heavily, in contrast, had to contend simultaneously with high external debt service payments and an external credit squeeze, which on the one hand cut their income, causing a contraction in domestic demand, and on the other reduced the availability of financing. The lack of foreign currency in turn led to a reduction in import capacity, which in less industrialized countries also sharply curtailed investment and the purchase of machinery and equipment (table 2). It is therefore not possible to understand the behaviour of investors in the region without taking into account the external constraints prevailing between 1982 and 1989.

[1] See Serven and Solimano (1993a), Bacha (1993a) and Schmidt-Hebbel, Serven and Solimano (1994).

TABLE 2

Latin America (9 countries): Evolution of investment components

Country	Index of volume of imports of goods, FOB (*Base period 1978-1980=100*)				Index of investment in machinery and equipment (*Base period 1978-1980=100*)			
	1978-1981	1982-1984	1985-1989	1990-1994	1978-1981	1982-1984	1985-1989	1990-1994
Argentina	104	67	59	127	106	99	100	112
Brazil	97	68	75	115	96	62	77	67
Chile	109	75	96	170	109	61	144	290
Colombia	104	122	110	181	104	116	116	166
Costa Rica	93	66	103	176	92	54	94	139
Mexico	117	91	132	279	111	78	77	136
Peru	112	123	106	128	112	96	59	39 [a]
Uruguay	101	61	76	132	101	49	47	81
Venezuela	799	79	80	84	97	69	75	65
	Private investment (*As a percentage of GDP in constant currency of each country*)				Public investment (*As a percentage of GDP in constant currency of each country*)			
Argentina	17.0	13.4	11.5	16.7	7.0	4.6	4.7	2.4
Brazil	15.1	11.9	12.1	11.2 [b]	7.4	5.6	4.9	4.4 [c]
Chile	8.2	7.9	9.4	16.8	7.7	5.0	6.9	5.7
Colombia	8.7	7.7	7.6	...	7.6	9.9	7.9	...
Costa Rica	15.5	9.4	12.8	15.9	9.0	7.1	8.5	8.6
Mexico	13.0	11.0	12.0	16.0 [a]	11.0	8.0	6.0	5.0 [a]
Peru	16.6	15.3	13.4	15.7 [a]	6.3	6.7	4.2	4.0 [a]
Uruguay	10.8	7.3	5.9	8.9	6.4	5.5	3.8	3.6
Venezuela	15.8	8.2	6.9	5.9 [a]	13.4	11.9	9.0	10.3 [a]
	Investment in non-residential construction (*As a percentage of GDP in constant currency of each country*)				Investment in machinery and equipment (*As a percentage of GDP in constant currency of each country*)			
Argentina	7.4	3.9	2.6	2.9	7.8	7.4	7.2	7.2
Brazil	8.9	7.4	7.1	6.3	8.0	5.4	5.5	4.7
Chile	5.6	4.3	5.6	5.9	6.6	3.9	7.9	11.9
Colombia	6.4	7.3	6.6	5.4	7.4	7.7	6.6	7.6
Costa Rica	...	...	...	...	13.1	7.9	12.3	14.6 [d]
Mexico	9.1	7.5	5.6	3.5	10.3	6.6	6.7	9.9
Peru	...	...	...	...	10.6	9.1	5.1	4.0 [a]
Uruguay	...	...	...	...	6.4	3.4	3.5	5.1
Venezuela	11.1	8.3	5.6	6.7	12.2	9.0	8.7	7.0 [d]

Source: ECLAC, on the basis of official data, and Hofman, 1995.
[a] Averages for 1990-1993 only.
[b] Averages for 1990-1991 only.
[c] Includes investment in public enterprises.
[d] Averages for 1990-1992 only.

The deterioration in the terms of trade, which had a generalized effect on all the countries of the region, also adversely affected the capital accumulation process. To begin with, a drop in the prices of the products that a country sells abroad has a direct effect on the export sector's profits and reduces the incentive to invest in the sector. If this situation is exacerbated by any links that may exist between the export sector and other fields of economic activity, the economy's global accumulation process suffers. What is more, where the public sector owns the exportable natural resources (as in Ecuador, Chile, Mexico, Venezuela), volatility in their prices gives rise to unplanned budget imbalances which generally tend to translate into cutbacks in investment due to the increased constraints on current expenditure.

The relative amount of external financing the countries received also influenced their ability to control and limit imbalances. Countries such as Chile and Costa Rica diverged from the prevailing pattern in the region during this period: one received support from multilateral organizations and the other, unrequited transfers, and this made it possible for them not only to renegotiate their debt with the international private banking system but also to obtain external credits which supported their import capabilities.

One important component of the adjustment programmes designed to deal with external shocks was the increase in the real exchange rate. Although this policy was considered essential in order to provide an incentive to exporters, it pushed up the price of the capital goods required by all sectors of economic activity. On the one hand, the increase in the real exchange rate raised the cost of imports of machinery and equipment, especially in countries where capital goods manufacturing was less well-developed. In countries where the level of industrialization was higher and the degree of openness to the world economy lower (Brazil, Colombia, Mexico), this real devaluation compounded the effect of other policies which also raised the cost of capital goods, such as higher import tariffs and profits taxes. Companies with foreign currency debts also saw a rapid rise in the financial cost of those debts.

At the same time, the use of a crawling band exchange rate in many countries of the region to deal with external shocks gave rise to expectations of devaluation which helped to raise domestic interest rates and bring down the real price of capital, thus slowing private investment.

External constraints had a direct impact on the financing of public sector investment and indirectly affected the public sector deficit. With the exception of Colombia and Peru (the adjustment process in Peru occurred at the beginning of the 1990s), all the countries considered showed significant drops in public sector investment between 1982 and 1989: in some of them the position worsened between 1985 and 1989 and showed no sign of recovery in the first half of the 1990s (table 2).

The drop in public sector investment was not due only to the financial constraints generated by negative external shocks, but also to the heavy imbalances the latter caused in the fiscal accounts. From 1984 until the end of the decade, the increase in public debt service (mainly public sector debt or debt transferred to the public sector through various mechanisms), the reversal of capital flows and the fall in tax revenue resulting from the decline in economic activity all made for a growing fiscal deficit, which became one of the determining factors in the rapid acceleration of inflation characterizing the region in this period.

In countries where the public sector was a net purchaser of foreign currency, such as Argentina, Brazil and Uruguay, the interaction between the processes of external and fiscal adjustment generated violent friction as a result of the phenomenon of internal transfer. The purchase of foreign currency to pay the interest on external debt was made through domestic borrowing, which put pressure on the financial markets, and/or by resorting to money creation, which exacerbated macroeconomic destabilization.

At the same time, in cases where the public sector was not able to obtain all the foreign currency it needed and major devaluations took place in order to boost the export process, pressure on the fiscal deficit mounted as a result of the local currency increase in external debt interest payments. Recovery of growth and stability in these countries was more difficult and more expensive. Public sector investment was cut back sharply, which also affected private investment in those countries with high complementarity between the two. Where the adjustment process was delayed (Argentina, Brazil, Peru), the inflationary process speeded up, as did demonetization of the economy and capital flight, and there was little incentive for capital accumulation amid the prevailing instability, uncertainty and risk.

The countries where the accumulation process revived rapidly were those whose imbalances were not as great and whose policies were relatively moderate and gradual (Colombia), or those which had access to external financing (Chile and Costa Rica). In addition, the recovery of stability reduced uncertainty and thus had a favourable effect on expectations.

In other countries, however, the sharp fall in the terms of trade, the scale of external transfers and the severe cutbacks in public expenditure in order to control hyperinflation, in combination with the scarcity of external assistance, dragged the economy into a deep recession, from which recovery was extremely slow even where inflation was quickly brought under control (Bolivia is one of the extreme cases). In the remaining countries, adjustment and stabilization policies generated great instability in key variables which affect the expectations of profitability of investments, such as the inflation rate, interest rates and the real exchange rate.

2. The 1990s: favourable macroeconomic context but poor investment rates

By the end of the 1980s, with the change in international strategy on external debt represented by the Brady Plan and with the development of the process of structural reform, a new economic environment was taking shape that offered greater stimulus to investment and growth. From 1991 onwards, there was a reversal of the negative trend displayed during the previous decade by key variables in the international context: there was a strong revival of international capital flows, external interest rates fell, debt service payments dropped, and the terms of trade stabilized. The increase in flows of foreign direct investment, though weak at first, and the public sector's saving drive also combined to improve investment performance. In 1990-1994 foreign direct investment in 10 countries of the region showed a sharp increase over the average for 1978-1980, except in Brazil and Uruguay (table 3). In countries such as Argentina, Mexico, Peru and Venezuela, a substantial part of these resources were devoted to acquiring privatized companies, which did not represent capital accumulation in the receiving country. However, over the last five years direct investment has made a significant contribution to the financing of new investment in countries such as Chile, Colombia and Costa Rica.

The internal macroeconomic picture during the first half of the 1990s also reveals greater stability at the regional level: the inflation rate has take an extraordinary plunge, and the public sector has gone into surplus or is registering low, manageable deficits. In this context, economies are regaining a certain capacity for growth, against a background of greater stabilization and relaxation of external constraints, which has helped to raise investment as a percentage of GDP.

As regards gross fixed capital formation (table 1), in Chile, Colombia, Costa Rica, Paraguay and the Dominican Republic the level has risen by more than 30% between 1990 and 1994, as compared with the 1978-1980 average, and in the case of Chile it has more than doubled. The other countries considered in the table have not yet reached the level of the base year. Investment as a proportion of GDP between 1990 and 1994, however, appears more negative: only in Chile does it exceed the 1978-1980 average, which was extremely low.

What is the explanation for the low rate of accumulation in the region, under conditions of economic stability and in a favourable international context? There are a number of hypotheses. The first stresses the speeding-up of the process of structural reform in recently stabilized economies. Trade and financial liberalization, the opening up of economies to foreign direct investment and the new regulatory framework for this, the deregulation of markets and the application of competitive policies to previously monopolistic markets all brought about great changes in the ground rules for entrepreneurs. In conjunction with the abolition of the State's role as protector of private agents and the unwillingness of the region's entrepreneurs to take risks, this has meant that the recovery of investment has been slow.

Although structural reforms were undoubtedly necessary, in practice they were not always coordinated with short-term macroeconomic policy, and thus mistakes were made which led in some cases to a reversal of the new policies. It is well known, for example, that financial deregulation at first caused crises of solvency in the system in nearly all countries, in the wake of which the bodies responsible for supervising banks and financial institutions were regulated and institutionally reinforced. The same happened with privatization operations, which were not at first backed up by policies to promote competition, especially in the public service market. Another example of high stabilization costs resulting from a lack of adequate coordination of short-term policies and reforms can be found in the abrupt liberalization of trade and the capital market, which coincided with inrushes of external capital and constant currency revaluations. This led in the end to major balance of payments crises, recent examples of which are those in Mexico and Argentina at the end of 1994 and the beginning of 1995. It is understandable, then, that initially entrepreneurs do not perceive new policies as being stable or irreversible, but prefer to wait for them to settle and bear fruit.

The second hypothesis turns for an explanation to the behaviour of public sector investment, which fell in all the countries examined between 1990 and 1994 (table 2). However, this should not have pushed down total gross fixed capital formation, unless it

TABLE 3

Latin America (10 countries): Foreign direct investment

Year	Argentina	Bolivia	Brazil	Chile	Colombia	Costa Rica	Mexico	Peru	Uruguay	Venezuela
					Millions of 1990 dollars					
1978-1980	758	53	3 406	371	133	1 982	2 454	74	368	127
1982-1984	308	20	2 396	268	612	1 958	2 463	1	-2	151
1985-1989	826	5	1 374	814	618	1 994	2 271	31	28	-75
1990-1994	3 442	67	319	409	568	195	3 905	117	17	536
					Index 1978-1980=100					
1978-1980	100	100	100	100	100	100	100	100	100	100
1982-1984	41	37	70	72	460	70	100	1	-1	119
1985-1989	109	10	40	220	465	114	93	42	8	-59
1990-1994	454	126	9	110	427	238	159	159	5	423

Source: ECLAC, on the basis of official figures.

affected the externalities that public sector investment usually provides to private investment. The reason could lie in the privatization process, but if this process transfers to the private sector part of the investment activities previously carried out by the public sector, total capital formation should not fall. However, experience of privatization processes indicates that they do not themselves lead to an increase in capital accumulation, and a number of countries have therefore chosen to introduce clauses or conditions in this respect into the negotiation of sales of public sector enterprises (as in Bolivia and Peru).

The third hypothesis puts the blame on the lack of the long-term financing necessary to make new investment projects viable. Global figures on sources of finance for gross fixed capital formation show that national saving has fallen five percentage points of GDP over the last 15 years without recovering, and that, as in 1980, external saving equivalent to four percentage points of GDP is needed to finance the current level of investment. Compared with East Asian countries, these levels of saving and investment are extremely low, especially if the region wishes to achieve higher and more sustained growth of GDP.

II

Determining factors in private investment

The previous section shows that private sector investment decisions in the region depend both on what have traditionally been considered determining factors in economic theory,[2] and on specific factors deriving from the macroeconomic context within which companies operate, which relate to the stability of policies and the degree of certainty within which agents have to work, to the characteristics of the region's financial markets, and to access to the infrastructure.

1. Private investment and macroeconomic stability

The empirical studies reviewed[3] show that, in Latin America, one of the characteristics of the macroeconomic context of investment decisions which is clearly different from that of developed countries is the instability of basic prices (exchange rate, interest rates and consumer prices). They show that entrepreneurs in the region are averse to risk and that their decisions take account of both the average and the variations of

[2] I.e., the income accelerator, in the Keynesian approach, to which relative factor prices are added in the neoclassical approach; or the relation between the book value of an additional unit of capital and its market value, as in Tobin's Q theory.

[3] For a good summary of these, see Serven and Solimano (1993a).

variables affecting the yield from their investment projects. In other words, a stable, predictable set of incentives would seem to be at least as important as the actual level of the incentives. This underlines the importance of macroeconomic stability and clear, well-established regulations in order to elicit a positive response from entrepreneurs to new policies. Thus, the performance of private investment in countries which undertook structural reforms but where investors responded very slowly to the new incentives may have been due to inadequate follow-up or to inconsistencies in economic policy or between different areas of economic reform which may have reduced the stability or predictability of relative prices.

Recent publications also stress the importance of risk and introduce the idea of irreversibility (Dixit, 1992; Dixit and Pyndick, 1993; Pyndick, 1991; Pyndick and Solimano, 1993): generally speaking, investments are made in a specific sector and, once the project begins operating, switching the capital to another sector implies a considerable loss in most cases. Thus, investors put off making decisions, especially if the macroeconomic and policy environment is not stable. Consequently, the greater the uncertainty, the greater the advantage to be gained from waiting, and thus the slower will be the response of investors to improvements in macroeconomic conditions. As regards variability, examination of the rates of variation in the consumer price indices, real exchange rates and interest rates of 11 countries from 1978 to 1994 (table 4) shows that all experienced a sharp rise in these rates during the subperiods 1982-1984 and 1985-1989. It is worth noting that at the beginning of the 1990s, Argentina, Brazil and Peru were still experiencing hyperinflation.

It can also be seen that the variability of real interest rates has been much greater than that of the consumer price index (CPI) and the real exchange rate in all the countries. The combination of this factor and often extremely high interest rates helped to discourage investment projects, the only viable ones being those with a very high return, those located in monopolistic markets, or those with related financing.

As to relative prices, empirical studies in the region make reference to three important variables, two of which relate to the return on investment (the terms of trade and the real price of shares, or Tobin's *Q*) and the third of which relates to the cost of capital, which in some cases is measured using the relative price of investment (ratio between the investment deflator and the GDP deflator) or using the real exchange rate index (in order to incorporate the importance of the cost of imported machinery and equipment in the behaviour of investment).

The deterioration in the terms of trade affected all the countries of the region, adversely affecting the process of capital accumulation and saving. In this connection, Cardoso (1993) carried out panel regressions including data on the coefficient of private investment in GDP for Argentina, Brazil, Chile, Colombia, Mexico and Venezuela in 1970-1983, 1974-1977, 1978-1981 and 1982-1985, and he concluded that this deterioration was a significant factor in the variance of investment.

As noted in the preceding section, a central component in policies to deal with the external debt crisis was real devaluation. Although this was considered essential as an incentive to the export sector, it had side-effects: it depressed investment in the other sectors of economic activity and pushed up the cost of imported machinery and equipment and thus the cost of capital, particularly in countries where capital goods manufacturing was not well developed. It also meant that companies with foreign-currency debt suffered a rapid rise in the financial cost of their debt.

In countries where the level of industrialization was higher and the degree of openness to the world economy lower (Brazil, Colombia, Mexico), the effects of the rise in the real exchange rate were accompanied by those of other policies which also raised the cost of capital goods, such as higher import tariffs and profits tax. Furthermore, the drop in domestic demand in these countries caused a contraction in capital goods production, leading to acute under-utilization of installed capacity; to maintain profitability, these industries passed the effect on in their prices.[4] Between 1978 and 1994 (table 5), there was a generalized rise in the cost of capital goods as compared with overall prices in the economy, and during the 1990s the ratio of the gross fixed capital formation deflator (roughly speaking, the price of capital goods) to the GDP deflator (overall prices in the economy) fell below 1978-1980 levels in only half the countries considered.

[4] In Brazil's case, Dias Carneiro and Werneck (1993) show that the relative cost of investment in machinery and equipment rose 42% in relation to the GDP deflator between 1986 and 1989, and they explain this behaviour by the sharp drop in utilization of capacity in the capital goods producing sector and the high level of protection during this period.

TABLE 4

Latin America (11 countries): Indicators of instability
(Coefficients of variation)

Country	Consumer price index				Real exchange rate				Real interest rate			
	1978-1981	1982-1984	1985-1990	1991-1994	1978-1981	1982-1984	1985-1990	1991-1994	1978-1981	1982-1984	1985-1990	1991-1994
	Stabilized countries											
Colombia	0.11	0.07	0.09	0.04	0.03	0.02	0.03	0.04	0.80	0.23	0.39	0.29
Chile	0.18	0.28	0.15	0.12	0.05	0.09	0.03	0.03	0.41	0.55	0.66	0.86
	Countries which have successfully applied stabilization policies											
Mexico	0.05	0.19	0.17	0.09	0.04	0.09	0.05	0.03	...	0.72	0.59	1.15
Costa Rica	0.22	0.33	0.18	0.14	0.08	0.06	0.02	0.02	0.33	2.26	0.23	0.21
Bolivia [a]	0.24	0.44	0.49	0.08	0.06	0.31	0.13	0.01	0.26 [b]	0.45	0.01 [c]	0.19 [a]
	Countries with persistently high inflation											
Ecuador	0.11	0.29	0.13	0.12	0.03	0.05	0.07	0.04	0.36	1.65	3.68	2.19
Venezuela	0.16	0.16	0.25	0.09	0.04	0.06	0.11	0.05	...	...	0.58	0.39
Uruguay	0.13	0.19	0.08	0.09	0.06	0.11	0.04	0.04	3.03	0.38	0.24	0.14
	Countries with hyperinflation											
Argentina	0.11	0.18	0.52	0.47	0.14	0.15	0.17	0.04	0.15 [b]	1.13	2.25	0.33
Brazil	0.09	0.08	0.33	0.34	0.04	0.04	0.04	0.07	0.68	0.81	1.00 [d]	1.18
Peru	0.10	0.10	0.44	0.40	0.05	0.04	0.18	0.05	...	...	0.53 [c]	1.35

Source: Prepared by the author on the basis of official figures.
[a] Average 1991-1993. [b] Average 1980-1981. [c] Average 1986-1989. [d] Average 1985-1989.

At the same time, as happened in many countries of the region, the maintenance of a crawling exchange rate as a defence against external shocks, devaluing by more than the inflation rate, gave rise to expectations of devaluation which helped to push up domestic interest rates, widening the gap between them and international rates, pulling down the real price of capital (i.e. share prices or the value of investments already made), and thus acting as yet another source of discouragement to private investment. [5]

2. Private investment and the availability of financing

A further key factor in the ability to control and limit imbalances was the relative amount of external financing received. An organized approach to the financing of external disequilibria greatly influenced the agents' expectations by reducing the level of uncertainty, which is vital when deciding to invest. Empirical studies of private investment in the region [6] show that variables relating to the availability of external financing are significant. [7]

The level of financial consolidation, particularly the availability of long-term credits which make investment projects viable and the way in which credit is allocated (through the market or by administrative means), is another basic constraint on private investment in Latin America. Empirical studies have taken account of this constraint, but in general it has not been measured very well: the variables used to estimate it are liquidity coefficients (M1/GDP or M2/GDP) and do not reflect the effective availability of credit to com-

[5] Cardoso (1993) adapts the Mundell-Fleming and Dornbusch models of 1976 in order to show the mechanisms whereby external shocks are transmitted to the real value of invested capital.

[6] De Melo and Tybout (1986) on Uruguay; Ocampo, Londoño and Villar (1988) on Colombia; and Greene and Villanueva (1990) and Love (1989) on a group of developing countries.

[7] The studies in question use a variety of indicators to measure the availability of external financing: exports, international reserves, capital flows, real exchange rate. As Rama (1993) points out, these indicators may relate to the "climate of investment" but not necessarily to the rationing of credit.

TABLE 5

Latin America (11 countries): Relative price indicators

Country	Indexes of real exchange rate (Average 1978-1980=100)				Ratio of investment deflator to GDP deflator (Indexes, average 1978-1980=100)				Real interest rates (Percentages)			
	1978-1981	1982-1984	1985-1990	1991-1994	1978-1980	1982-1984	1985-1990	1991-1994	1980-1981	1982-1984	1985-1990	1991-1994
Argentina	92.5	144.8	129.4	48.8	100	104	97	86	17.7	61.9	39.7[a]	33.9
Bolivia	90.5	71.8	82.7	76.9	100	117	87	100	-11.2	-53.0	-12.2	32.2
Brazil	97.2	107.6	91.9	52.3	100	116	131	...	-13.3	20.6	99.8	[b]
Chile	91.6	91.3	115.4	83.4	100	105	105	107	17.7	25.5	9.2	9.8
Colombia	94.7	78.1	107.0	93.9	100	98	114	110	2.4	6.3	6.2	8.7
Costa Rica	114.1	127.9	106.7	88.9	100	127	100	95	-17.0	-8.9	11.8	13.8
Ecuador	94.1	80.2	110.5	98.7	100	103	128	135	-5.6	-10.6	-7.4	-1.1
Mexico	91.8	94.7	85.4	50.3	100	103	110	96	...	-12.8	-2.1	5.6
Peru	92.0	72.5	48.0	17.9	100	112	126	...	...	...	...	27.1
Uruguay	90.6	98.8	97.6	56.2	100	101	113	106	10.3	27.6	18.9	29.0
Venezuela	93.0	72.6	101.7	94.4	100	87	98	94	...	...	-13.6	-2.1

Source: The figures for the real exchange rate and real interest rates were prepared by the author on the basis of the averages of monthly figures obtained from the International Monetary Fund, *International Financial Statistics* (various issues). The deflators of the national accounts were taken from the ECLAC data base, prepared on the basis of official figures from each country.

[a] The year 1990 has been excluded on account of hyperinflation.

[b] The figure calculated is not given here because it does not correspond to the effective rate charged to firms.

panies nor the changes that have been made to banking regulation systems, which usually determine the availability of financing (Rama, 1993). On the other hand, statistical analysis has found a correlation between liquidity coefficients and private saving, both measured as a proportion of GDP. According to Burki and Edwards (1995) and Held, Titelman and Uthoff (1995), this finding tends to confirm that the accumulation of funds in financial institutions contributes to capital formation through the financing of investment projects which otherwise would not have been carried out.

The high domestic interest rates prevailing in the region (table 4) have presented a further obstacle to the growth of investment, affecting both the cost of capital and the process of financial consolidation. Although this phenomenon was not inconsistent with the adjustment and stabilization processes of the 1980s, Held, Titelman and Uthoff (1995) assert that it contributed to an increase in the "systemic" risk in bank portfolios. This, in conjunction with major failings in prudential regulation –such as weak supervision of solvency, excess of related credits and capitalization of interest on risky credits– unleashed deep crises in the financial systems of nearly all the countries of the region: in the Southern Cone during the 1980s and in Bolivia, Mexico, Paraguay and Venezuela during the 1990s.

The conclusion to be drawn from the Latin American experience and from empirical studies of different groups of countries at the international level (Larraín and Vergara, 1993) is that moderate, positive interest rates are closely linked to favourable economic performance and financial consolidation.

3. Private and public investment in infrastructure

The scarcity of financing which predominated after the external debt crisis, and the need to sharply reduce the fiscal deficit in order to control inflation, led to cutbacks in public sector investment, which until then had accounted for virtually all infrastructure investment. These cutbacks held up important projects –and at times even delayed spending on maintenance– in the areas of energy, port infrastructure, irrigation and roads.

Private enterprise did not escape the consequences of this. Lack of maintenance has shortened the useful life of installations and reduced available capacity and the efficiency of services, thus affecting productivity in real activities as a whole. Examples of this are the limits on exports imposed by lack of port installations, the drop in production caused by electricity cuts due to lack of maintenance or expansion, and the deterioration in supply due to lack of roads. To illustrate this process in the region, it may be noted that between 1990 and 1994 investment in non-residential construction had still not recovered fully from the sharp decline which began in 1982, except in Chile (table 2). A study carried out by the World Bank and quoted in Burki and Edwards (1995) draws a number of conclusions from this fact, noting that the region faces serious deficits in electrical energy generation, road construction, water supply and telecommunications, and that, in order to provide the capital necessary for export-led growth, infrastructure investment would need to rise by US$60 billion per year over the next ten years (equivalent to 4.4% of the region's GDP).

Considering the process of structural reform that became a general phenomenon at the end of the 1980s, it might be thought that it would be most appropriate for the private sector to take on this expense. However, trends in private investment from 1978 to 1994 (table 2) are no different from those for public sector investment, which prompts the question of whether a joint effort is not called for. The debate on this subject is not new, but it is still relevant: on the one hand, there are those who hold that an increase in public sector investment would raise the capital accumulation rate above what private agents would like, with the result that the latter would reduce their spending on machinery and equipment. However, expenditure on capital to be allocated to infrastructure also has a complementary relationship with private investment, so that it would be necessary to assess the predominant effect. In Latin America, the limited development of statistics precludes rigorous analyses. Serven and Solimano (1993b), however, found in a sample of nine Latin American countries between 1982 and 1988 that the contraction in public-sector expenditure on gross fixed capital formation explained an annual drop in private investment equivalent to 0.5% of GDP. Similarly, with regard to the United States, Aschauer (1989a and 1989b) shows that public sector spending on infrastructure and non-military equipment complements private capital in the production of goods and services, by raising both the profitability and the productivity of private capital. The author emphasizes the close relationship between total factor productivity and public sector capital, and points out that the decline in productivity from 1970 onwards was preceded by a cut in public sector investment.

It can be argued that however clear the complementarity may be between public sector and private investment, there is simply no financing available in the region for public sector investment, and countries that attempt to stimulate it are open to a resurgence of inflation. Indeed, in a number of countries the privatization process can be closely linked with the need to balance public sector finances in order to control inflation. This would in fact be an appropriate point to make some observations on privatization and the future of public sector investment.

First, if the sectoral distribution of privatization operations is analysed (Cominetti, 1995), it may be concluded that within public utilities the process has mainly affected the telecommunications and electricity sectors, which, once they were deregulated, became profitable for private agents; it has been much weaker in the infrastructure sector –water, ports and roads– where profitability is less easily identified and investment is riskier. In these areas, as in the developed world, the public sector has an important role to play both as regards financing (including obtaining external resources) and in taking the lead in forming investment partnerships with the private sector. Many of these investments take a long time to mature, and the private sector finds it difficult to identify them or does not see them as profitable.

Second, the privatization process in Latin America has suffered from a number of flaws (Devlin and Cominetti, 1994), some of which have been persistent obstacles to a proper accumulation process, such as the lack of regulation in non-competitive markets –which has meant that the gains in efficiency supposedly resulting from privatization have not been passed on to the community in the form of lower prices– and the scant progress in the coverage and quality of services. It is not always evident, then, that the sale of such services to the domestic or foreign private sector brings improvements.

Third, since in many cases the main objective was to obtain income in the short term, it was only exceptionally that a process of accumulation was encouraged in the privatized sectors by making the promotion of new investment an explicit part of the bidding conditions, as in Bolivia and Peru. In Bolivia, under the capitalization mechanism, strategic partners are obliged to contribute 50% of the value of the company when they buy. In Peru, clauses on future investment were incorporated in the bidding conditions, with definite undertakings on amounts and dates: thus, between 1992 and 1994, the public sector received the equivalent of US$3.544 billion for 83 privatized enterprises, while US$4.067 billion was committed in respect of investment projects

TABLE 6

Latin America (8 countries): Estimated effect of macroeconomic context on productive investment [a]

Investment in machinery and equipment as % of GDP	Price ratio			Demand						
	TI [a]	Tobin's Q [b]	CK [c]	% of GDP [d]	UCAP [e]	Debt burden [f]	Insta-bility [g]	DEP [h](-1)	R2 [i]	Durbin Watson statistic
Argentina:	-	-	-0.002	-	-	-	-0.03	0.17	0.71	2.1
(1971-1994)	-	-	(-2.4)j				(-3.3)	(1.1)		
Brazil: IPROD/GDP [k]	-	-	-	-	0.11	-0.04	-0.04	0.73	0.97	2.1
(1971-1994)					(3.2)	(3.8)	(-4.9)	(11.8)		
Colombia: IMYE/GDP [l]	-	-	-0.03	0.02	-	-	0.13	0.49	0.72	2.0
(1971-1994)			(-1.9)	(3.1)			(0.19)	(3.0)		
Costa Rica: IMYE/GDP	-	-	-0.11	-	0.26	-	-0.08	0.30	0.91	1.96
(1971-1994)			(-3.80)		(3.6)		(-1.0)	(2.6)		
Chile: IMYE/GDP	-	0.04	-	-	0.06	-0.8	-0.02	0.03	0.94	2.0
(1971-1994)		(5.6)			(2.0)	(-2.8)	(-0.7)	(.03)		
(1971-1984)	-	0.07	-	-	0.07	-0.01	-0.03	-	0.90	1.9
		(5.3)			(3.4)	(-4.3)	(-1.5)			
Mexico: IMYE/GDP	-	-	-	-	0.44	-0.15	-0.04	0.80	0.95	2.0
(1971-1994)					(7.8)	(-1.5)	(-2.2)	(12.6)		
(1982-1994)	-	-	-	-	-	-0.06	-10.0	0.70	0.87	1.9
						(-1.4)	(-2.5)	(4.9)		
Peru: IMYE/GDP	0.06	-	-	0.10	-	-0.07	-	0.70	0.93	2.2
(1971-1994)	(2.5)			(2.6)		(-1.9)		(9.6)		
(1983-1994)	0.06	-	-	-	-	-	-0.04	0.34	0.99	2.0
	(5.2)						(5.8)	(8.8)		
Venezuela: IPROD/GDP	0.04	0.58	-	-	-	-	-0.38	0.43	0.78	2.0
(1971-1994)	(1.2)	(2.54)					(-1.9)	(2.3)		

Source: Prepared by the author, on the basis of national accounts in the case of IPROD/GDP, IMYE/GDP, CK and annual variations in GDP; on the basis of ECLAC data in the case of T and the debt burden; and on the basis of data from IMF, *International Financial Statistics*, in the case of Tobin's Q and instability.

[a] TI: Index of ratio of terms of trade for exports FOB to terms for imports CIF (1980=100).

[b] Tobin's Q: Index of value of shares deflated by CPI (1980=100).

[c] CK: Ratio of deflator of gross fixed capital investment to GDP deflator.

[d] Percentage of GDP: Annual variation of GDP (logarithmic difference).

[e] UCAP: Quotient of effective and potential product (the latter variable being estimated by the maximum values method) (1980=100).

[f] Debt burden: Index of quotient of total debt/exports or debt service/exports (1980=100).

[g] Instability: Index based on coefficient of annual variation of CPI, or of real exchange rate, or of real interest rates, on the basis of monthly data.

[h] Lagged dependent variable.

[i] Correlation test.

[j] Figures in brackets correspond to Student's T statistics.

[k] IPROD/GDP: Index of quotient of productive investment (machinery and equipment + non-residential construction)/GDP (1980=100).

[l] IMYE/GDP: Index of quotient of investment in machinery and equipment/GDP (1980=100).

(Cominetti, 1995). In the other countries, the privatized companies that have increased their capital and investments have been in telecommunications and energy (hydroelectricity, gas and oil) or have been big mining companies with good potential for expansion. However, as this is a recent process in many of the countries, it may not yet be reflected in the figures for gross fixed capital formation at the global level.

4. Empirical estimates of the factors determining investment

In order to assess the effect on investment of the macroeconomic environment and financial constraints, functions for productive investment were estimated, measured as proportions of GDP, for eight countries which had figures available for 1970-1994 (table 6). The exercise was carried out using a partial adjustment model traditionally employed to reflect the dynamics of an adjustment process applied to a desired stock of capital. The explanatory variables may be grouped as follows: i) those related to the income accelerator effect (variation in GDP or in degree of utilization of installed capacity); ii) relative prices (including the cost of capital, an approximate index of Tobin's Q and the terms of trade); iii) an indicator of instability, such as the rate of variability of the CPI, of the real interest rate, or of the real exchange rate (this latter indicator gave the best results); and iv) –since no suitable indicator of financial constraints was available– an indicator of the debt burden (measured as the amount of total external debt or of financial debt service) over exports of goods and services, on the assumption that this indicator is in inverse relation to the availability of finance in the private sector.

The results show that in Brazil and Mexico the relative price indicators were not significant, and the variables which explained over 90% of the variance of the coefficient of productive investment were the use of installed capacity, instability and the debt burden. Only in three of the eight countries did indicators of investment cost and profitability have a significant impact. However, it was confirmed that risk coefficients, measured by the coefficients of variation of monthly inflation, real exchange rate or real interest rates, had a significant negative effect in all those countries which have undergone periods of high instability, such as Argentina, Brazil, Mexico and Peru. In Colombia, Costa Rica and Chile (this last from 1985 onwards), it was established that investment was not appreciably affected by variability in basic prices.

In countries where the adjustment of domestic demand was sudden, intensive and prolonged, the indicator of utilization of installed capacity (effective output/potential output) was significant and had a greater impact on investment than that of relative prices. This was only to be expected, since those countries faced severe constraints on sales, and although these gradually recovered, this led at the same time to great under-utilization of installed capacity and did not fulfil investment requirements. Later, the reorientation of production towards external markets, with the consequent need to modernize and raise production, created a new drive in investment, particularly from the early 1990s onwards. As to debt burden indicators, in four of the countries worst affected by the crisis of the 1980s (Brazil, Chile, Mexico and Peru) the variables were negatively significant, as expected: i.e., higher debt service payments reduce savings for financing investment, while a higher level of borrowing affects the country risk coefficient and the feasibility of obtaining external resources.

IV

Policies to stimulate investment

It may be concluded from the foregoing analysis that, in the first place, although macroeconomic stability is not of itself a sufficient condition, it is certainly fundamental to the establishment of a favourable climate for investment, and it is the government's duty to maintain it. Short-term successes in stabilization or growth are not enough if they are not backed up by progress in the macroeconomic base.

The experience of the early 1980s and, more recently, the 1990s, when the availability of external financing coincided with inducements to spend, reveals the danger of suffering balance of payments crises or having to make harsh adjustments of economic activity to avoid such crises, with their corollary of marked fluctuations in key prices and the subsequent disincentive to investment. This suggests that a process of growth that is moderate and consistent with trends in potential GDP, and in which prices remain stable and predictable, carries the assurance of greater potential for growth in the future.

Second, Latin American entrepreneurs are rather conservative in their behaviour, with marked aversion to risk, which is not surprising in as yet fragile macroeconomic scenarios where economic reforms are still being consolidated. They are cautious about moving into new scenarios of economic reform and hesitate to show confidence in new policies until these attain a certain level of permanence in time, since investments are long-term operations and it is costly to reverse them once they have been made.

Private investment has thus been rather slow to react to the structural reforms of recent years. Policy modifications in some countries, or the implementation of reforms in line with inconsistent macroeconomic policies, have also not helped to establish a climate favourable to investment. Consequently, consistency between economic policy and reforms, and the long-term stability of both these elements, are fundamental.

Third, the drop in public investment during the 1980s led in many countries to a serious deterioration in the infrastructure of sectors where it was complemented with private investment and provided positive externalities (the energy, telecommunications, port infrastructure and roads sectors). In order to increase competitiveness and continue promoting exports, these countries will have to undertake large investment projects in the areas in question over the next five years. Cooperation with the private sector, through concession systems, co-management or joint exploitation, is a formula which has allowed joint financing of projects, sharing a task which was previously the sole responsibility of the State. Examples of such cooperation, which is spreading through the region, are road construction, which in a number of cases (such as Mexico) has been left entirely in the hands of the private sector, which recoups its investment by charging users directly according to State-regulated tariffs, and joint or State-subsidized financing of projects where there are multiple externalities (less pollution, improvement of the environment, elimination of traffic jams and noise, etc.)

With regard to telecommunications and the energy sector, there is general consensus that it is necessary to get away from both the traditional public service model and that of private monopolies. Currently, national debates cover issues ranging from the need for regulations that stimulate private competition and make it work when such services are privatized, to the need for clauses and undertakings on the coverage and modernization of services and the execution of investments in them. The recently-established process of public link-ups with private investment in the health sector in Chile and the privatization operations which have got under way in Bolivia and Peru in recent years are moves in this direction.

Among policy instruments, one which has not yet been developed very much in the region is the establishment of tax incentives for entrepreneurial investment. Despite the reforms carried out, the tax burden in the countries of the region continues to be low, and modernization of tax administration and control of evasion is still by no means completed. The structure of the system also allows for fresh modifications tending to create tax incentives for ploughing profits back into companies. One mechanism applied in other countries is to transfer the tax burden from the companies to individuals, by exempting profits reinvested in the company.

The 1984 Chilean tax reform sought explicitly to create tax incentives for company savings, through the reinvestment of profits. This reform significantly reduced the marginal tax rate on profits ploughed back into companies, as compared with the tax on distributed profits; it equalized the tax treatment of corporations and limited companies, eliminating the additional tax on the former; it taxed retained earnings at a rate of only 10%; it removed retained earnings from the taxable income of owners of limited companies, and it standardized tax credits on non-wage income for all entrepreneurs. After the reform came into effect, company savings rose from 8.0% to 16.3% of GDP between 1986 and 1994. This progress was also aided by average annual GDP growth of over 6%, rapid financial development, a climate of macroeconomic stability and the long-term continuation of the incentives.

Another mechanism that is not sufficiently widely used is the financing of personnel training through matching tax reductions, that is to say, promotion of investment in human capital. This instrument has taken a variety of forms (training in specialized institutions or abroad, agreements between business organizations and universities) and has raised worker productivity and improved business competitiveness.

Lastly, it may be noted that the public sector savings drive of the 1990s has not been matched by a similar drive in the private sector, and this has limited the availability of internal financing for investment. Financial reform has not always favoured the process of investment, whether because appropriate long-term instruments have not been developed or because the task of completing markets was not addressed in the best way, by attending to sectors which were marginalized in terms of access to credit. Furthermore, high domestic interest rates, which varied enormously with respect to international rates, did not help to create competitive conditions for new investment projects. Currently, a number of countries are implementing policies which aim to link financial saving with investment, to improve prudential regulation and supervision of the banks, to expand and disseminate long-term instruments and to regulate international capital flows. However, these policies are not yet general throughout the region.

(Original: Spanish)

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Property rights *and the rural* land market in *Latin America*

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Land distribution in Latin America is characterized by striking inequality. Notwithstanding the emergence of modern structures in some regions, a few huge land holdings are found alongside a large number of small ones. This situation has long been considered undesirable for reasons of social equity as well as for reasons of efficiency. The topic remains high on the political agenda. The ultimately disappointing results of past redistributive reforms have caused contemporary policy-makers to search for alternatives. In recent years attention has focused on the institution of private property rights and land transactions through market mechanisms. This paper argues that it is extremely helpful to approach the issue from an institutional perspective. The objective here is not to prescribe concrete solutions, but rather to shed light on issues such as how transactions are actually being carried out in the rural setting; the role of transaction costs and of institutions such as property rights; and what influence externalities may have. The theme of this paper is that a meaningful analysis of how rural land markets work cannot be done in a conventional neoclassical framework. The rural economic environment is characterized by imperfect markets, asymmetric information and uncertainty. In addition, economic behaviour is often guided by the intrinsic logic of the peasant farm, which differs markedly from the way in which commercial agriculture operates. No single property rights regime is universally valid. Indeed, a whole array of agricultural institutions has emerged as a response to different and evolving economic parameters. The complexities of rural land markets have to be considered in order to design effective policies. This article hopes to contribute to a deeper understanding of the issues. Thus, after laying the theoretical groundwork, an overview of viable policy instruments is given and a number of case studies are presented.

I

Introduction: Land-market reform vs. land reform

In rural areas, land performs an economic function of paramount importance. It is the primary production factor, source of employment and repository of personal wealth. Thus social status and power relations in rural societies are often largely determined by the structure of landholdings. Although in many cases this is still an adequate description of the situation in contemporary Latin America, a modernization process has clearly begun. With the emergence of agroindustry and modern, well-managed, mostly medium-sized farms, the polarization in land distribution is no longer as stark as it has been in the past.

Nevertheless, the distribution of this vital resource within the region as a whole remains highly inequitable even when we take into account that "lumping all parcels of land together in an economic analysis, by counting acres, certainly violates every rule of aggregation" (Schultz, 1953, p. 141). On huge properties, wide tracts of land are underutilized or lie idle while significant portions of the rural population are struggling for access to land, a predicament which has led to civil unrest in the past and continues to do so at present. [1] Additionally, the environmental degradation that occurs as peasants penetrate the fragile frontier in search of land has become a cause for concern.

This has fuelled demands to change the skewed land tenure structure. Generally speaking, the argument rests on grounds of social equity, efficiency, or both. However, the first justification may be open to subjective interpretations, while the second point does not provide a clear-cut tool for analysis.

From a use-efficiency point of view, the case for more equitable land distribution that is made in much of the existing literature on the subject assumes a systematic relationship between farm size and land productivity. The discussion of this "inverse relationship" can be complicated and sometimes confusing. Some authors even discount the existence of such a relationship altogether, while others argue that the postulated size-productivity correlation is actually incorrectly defined. According to this argument, the observed connection simply stems from the fact that population growth is fastest in areas of high soil fertility, thus leading to the subdivision of land into parcels of high productivity, or quality concentration, as it were (Jonakin and Carter, 1987).

Hypotheses which try to explain the inverse relationship usually look at wage differentials between small-scale and commercial agriculture, given the intrinsic economic logic of the peasant unit (Schejtman, 1980), or concentrate on the failings of contingent markets for labour and/or credit. Yet another interpretation emphasizes certain diseconomies of scale found in large commercial farms, such as higher labour supervision costs.

Other authors maintain that the inverse relationship observed in these investigations is probably much smaller in reality. Feder (1994) offers three criteria for empirical testing of the size-productivity relationship:

i) A distinction has to be made between owned holdings (where capital-constraint effects are dominant) and operated holdings (where the effects in terms of supervision costs are more important). The number of family members who could act as supervisors should also be taken into account;

ii) For census data on total factor productivity, farm profits net of family labour cost rather than yields should be used as the appropriate efficiency indicator; and

□ The author wishes to express his gratitude for the helpful suggestions made by his colleagues at ECLAC, by Alejandro Schejtman of FAO and by Carl Bauer of the University of California at Berkeley.

[1] Witness, for example, an incident on 9 August 1995 in a Brazilian state bordering on Bolivia, when 10 people died in a dispute over land. Around 500 landless farmers had occupied parts of a huge *hacienda*, and attempts by the police to evict them resulted in a shoot-out. Reportedly, 379 similar conflicts left at least 36 people dead during 1994, making land disputes the chief cause of violence in the interior of Brazil.

iii) Adjustments for land quality should be made.

The author suspects that under these conditions the magnitude of the inverse relationship detected in these empirical tests would be reduced, but not eliminated altogether.

It is not entirely clear whether the assumption of an inverse relationship is still valid in an environment of rapid technological change and progress in mechanization. Whatever the case, all the approaches described above contribute to a theoretical foundation for the inverse relationship which is strongly supported by a considerable number of empirical studies. It should therefore not be viewed as a strictly scientific hypothesis, awaiting refutation. Rather, the overall consensus in the literature is that it is a helpful working premise that is valid under a certain set of circumstances and parameters. It should be kept in mind, however, that the existence of an inverse relationship and the link between land ownership and rural poverty are methodological assumptions that have to be verified case by case.

Assuming the existence of such a size-productivity relationship, the conclusion to be drawn would be that: "... for given technology, factor prices, land quality and farming skills, there is an optimal operational holding size where the economies of scale from lumpy inputs and management skills start to be fully offset by the costs of adding more workers" (Feder, 1994, p. 136).

It follows from the assumption of an optimal, size-sensitive distribution of holdings over time and space that a highly skewed distribution of land which does not allow for optimization adjustments in size will almost certainly be undesirable from an efficiency standpoint as well.

It should be pointed out at this stage that whether an inverse relationship holds or not, from the perspective of a socially optimal resource allocation the existing tenure structure, in which agricultural land is underutilized or allowed to lie fallow, is not acceptable. But rather than trying to validate the justifications given for reforming the structure of land tenure in Latin America, the objective of this paper is, first and foremost, to shed some light on two fundamental questions: first, why does a situation persist which *prima facie* is ineffective and, second, what are the perceivable outcomes of a market-led redistribution of rural land assets?

Over the last few decades attempts have been made to alter the existing tenure structure through redistributive land reforms. These initiatives have so far failed to bring about any decisive change, however. Apart from the fact that reform efforts in individual countries have differed in terms of both their initial political resolve and their scope (compare, for example, the extensive reforms in Mexico in the 1930s or Bolivia in the 1950s with the much weaker efforts in Brazil), the post-reform situation has been affected by factors such as the poor quality of the land redistributed, insecure land titles, a lack of farming know-how on the part of the beneficiaries, and a number of policy distortions. These experiences have led to the search for alternative solutions.

The question today is how agrarian structures would evolve if agrarian property rights were marketable and land markets were active. To put it differently: Would competitive market forces break down and reform a bimodal tenure structure, shifting land to the landless and land-poor? Would small-scale producers end up selling their plots, thus either creating further land concentration, or possibly allowing the emergence of a new, efficient subsector made up of medium-sized operational holdings with the characteristics of commercial agriculture? Or would the outcome be altogether different?

As will subsequently be seen, these are rather complex questions. The outcome of the land market process depends on whether or not the inverse relationship holds, the nature of conditions in complementary markets (capital, labour, insurance), power structures, the initial land distribution, whether property rights are assigned and secure, the quality of the soil, the choice of crops cultivated, and not least on whether it has been a good year for agriculture or a bad one.

II

Understanding the logic behind transactions

We often apply the simple "laws" of market supply and demand without being fully conscious of the complex of institutions on which contracts in actual markets crucially depend.
Pranab Bardhan

1. An institutional perspective

This chapter attempts to illustrate that it can be immensely helpful to analyse the issue of rural land markets within the framework of institutional economics.

To this end, it will suffice to describe institutionalism in terms of two central premises, both showing that its analytical focus differs from that of conventional neoclassics. The first point is the belief that social institutions matter in shaping economic behaviour and performance. Second, it is crucial to grasp the evolutionary aspect of the concept. Institutions change over time in response to changing economic circumstances.

A distinction is often made between old and new institutionalism. Briefly, followers of the old school reject the neoclassical assumption of rational behaviour, while new institutionalists are, at the most, willing to modify it. While, in much of what follows, the underlying premise is the abstraction that institutions are the result of optimizing decisions made by individuals and respond to changing sets of relative prices, it is not suggested that factors such as status, group identity, or power, which clearly may influence behaviour in a rural environment, should be completely disregarded.

The fundamental idea in this context is that markets are nothing other than transactions between economic agents, and that transaction costs [2] are of enormous importance in shaping the way these transactions take place. One of the reasons for the emergence of social and economic institutions such as property rights is to reduce transaction costs. Lipton (1993, p. 642), who refers to this body of ideas as the "new paradigm", describes its fundamental premise –i.e., the existence of endogenous, rural institutions that reduce transaction costs– as being: "in four words, that transaction costs endogenize institutions".

This new understanding of institutions, including agrarian institutions, which constitutes a body of knowledge that was not available for the land reform efforts of the 1960s and 1970s, can help to understand past failures and provide guidelines for future intervention.

Typically, there are three ways in which economists have treated agrarian (or rural) institutions: i) in *standard neoclassical economics*, these institutions are a given. Knowledge, organization and technology remain constant. Within this framework, individuals maximize utility and the outcome will usually be Pareto-optimal; ii) for *structuralists*, rural institutions are the result of power relations between groups and classes, and emerge through "extra-economic coercion". Such institutions will persist as long as those who benefit perceive the situation to be to their advantage and as long as "the gainers can brainwash, bribe, compensate or coerce the losers into acceptance" (Lipton, 1993, p. 631); iii) *institutional economics* views agrarian institutions as the endogenous outcome of measures taken partly in order to reduce transaction costs.

While it is not my intention to discount the contributions of neoclassical and structuralist economics, I suggest that institutionalism attempts to bring parts of the three approaches together. Of central importance in the current context is the institution of property rights. To understand rural land markets it is helpful to shift the analytical focus from the physical ownership of land to the prevailing system of property rights. This means that control over an asset

[2] The term here is defined as all costs associated with transfers of property rights other than direct production costs. Examples include costs of information, of negotiation, of drawing up and enforcing contracts, or of defining and enforcing property rights.

such as land has to be seen as a web of entitlements between persons, rather than merely as the possession of something. "Property" is defined as the "bundle of rights" of one individual in relation to others. In the words of Hoff (1993, p. 231), "little economic activity would occur in the absence of rights, or powers, to consume, obtain income from, and transfer assets. The level of economic development of a region will therefore depend on its system of property rights".

2. Property rights and land

Land is a special commodity: it is completely immobile, it can be put to different uses and it can be used by several parties simultaneously. What governs the use of this resource is a system of property rights. Agrarian property rights have some peculiar features: they can be very complex and they vary over space and time. Feder and Feeny (1993, p. 242) illustrate this point: "uses of land may include hunting, passage, gathering, grazing, cultivation, the mining of minerals, the use of trees, and even the right to destroy the resource. For instance, in medieval England and contemporary South India, rights to the crop are private, while rights to the stubble after harvesting are communal. Similarly, in many parts of Sub-Saharan Africa land and tree tenure are separate".

Property rights are so important because they determine resource allocation in a world of conflicting user interests. It has been noted that only on Robinson Crusoe's island was there no need to define property rights –at least not until the arrival of Friday. This obviously means that the outcome of land (re-)distribution via market transactions will also depend on the prevailing system of property rights. Why, then, is so little attention paid to them? The answer is that economic analysis usually assumes Western-style systems of property rights which are exclusive, transferable, alienable and enforceable. In such an environment, it is acceptable not to include property rights issues in the analysis. But this is often not the case for developing countries, and the results of a study that does not consider the impact of the existing system of property rights are therefore misleading.

Any attempt to alter the inegalitarian pattern of landholdings found in Latin America necessarily implies shifting individual property rights in land, plus their associated rents, from the relatively rich to the relatively poor. It is important to note that an analysis of these issues often "... fails to recognize the subtlety and complexity of property rights in land, so that the question of what, precisely, is being transferred is often obscured" (Bell, 1990, p. 148). One of the reasons for the unsatisfactory results achieved by redistributive land reforms is that they often ignored the hugely complex economic realities involved.

According to Feder and Feeny (1993), property rights should be thought of as a social institution. These authors distinguish three basic categories of institutions: i) *the constitutional order*, which is made up of the fundamental rules about how a society is organized –the rules for making the rules, so to speak; ii) *institutional arrangements* such as laws, regulations, associations, contracts and property rights, which are created within the framework of the constitutional order; and iii) *normative behavioural codes*, which are determined by the cultural values that legitimize the above arrangements and constrain behaviour. Categories i) and iii) evolve only slowly, whereas the second may be more readily modified.

It is important to note that all three categories are interlinked and may influence each other. Feder and Feeny give examples:

"Although the formal legal system may provide for alienability of land, the transfer of land to persons from another clan or ethnic group may represent a violation of cultural norms. Similarly, although the constitutional order may make provisions for private property rights and there may formally be laws establishing such rights, the corresponding registration and enforcement mechanisms may be largely absent" (Feder and Feeny, 1993, p. 241).

For analytical purposes, property rights in land may be classified into four theoretical types: i) no rights or open access, i.e., property rights are left unassigned; ii) communal property; iii) State property, and iv) private property, where exclusive rights are given to a group of people, the State, or some private entity, respectively. All four forms may be found in one society. Similarly, more than one category may apply to the same tract of land.

The concepts of State and private property are quite straightforward when compared with common-property and open-access regimes. The demarcation line between the latter two can become somewhat blurred, since the incentive structure in a common-property system may be such as to cause the economic behaviour of individuals to resemble the type of behaviour observed under open-access regimes. In many countries of Latin America, it is often the case that up to 50% of the cultivated land is untitled, thus giving rise to a de facto open-access system. Therefore, a closer examination of the characteristics of non-private property rights systems –other than State property– seems justified.

The rediscovery of an article published almost 30 years ago (Demsetz, 1967) appears to be particularly helpful in this context. Demsetz's approach is at times broad, and it can be difficult to see the practical applicability of his contentions. Nevertheless, the basic premises of his paper help to shed light on many of the questions which are of interest to us.

For Demsetz, property rights "derive their significance from the fact that they help a man form those expectations which he can reasonably hold in his dealings with others" (Demsetz, 1967, p. 347). He sees a very close relationship between property rights and externalities. "Externality" here means any harmful or beneficial effect that someone suffers or enjoys through the activities of someone else. The classic example is smoke from a factory chimney; another might be the shadow a tall building casts on the swimming pool of a neighbouring hotel. These effects are "external" in that no prices are attached to them and they thus have little or no impact on the decisions of economic agents, since no information is transmitted through the price mechanism. "Internalizing" external effects accordingly refers to a process or mechanism whereby such effects are brought to bear on the behaviour of those affected.

Demsetz maintains that "a primary function of property rights is that of guiding incentives to achieve a greater internalization of externalities" (Demsetz, 1967, p. 348). His article analyses the different patterns in the emergence of property rights among North American Indians belonging to two groups. One of these groups inhabits the northern Labrador Peninsula and engages in a profitable fur trade. The hunting of forest animals under a common-property regime eventually makes it necessary to define and establish clear private property rights as the cost of coordination of user entry –unavoidable in (de facto) open-access systems– becomes excessive and the resource runs the risk of over-utilization.

The second group is made up of the Indians of the south-western plains, where the indigenous grazing animals are of no commercial value –unlike the fur animals of the north– and, in addition, tend to wander over wide tracts of land. These two conditions make the establishment of enforceable private property rights neither highly desirable nor feasible. As a result, a long tradition of private property rights in land could be observed in the case of the Labrador Indians, whereas no similar arrangement could be found among the Indians of the south-west.

The analysis then turns to the issue of communal ownership. The distinction between "communal" and "common" ownership is not made clear, but the observations are instructive nevertheless. Demsetz was apparently thinking of open-access regimes when he referred to communal ownership. Because of the difficulty of making a clear distinction between the two in certain cases, however, his conclusion –that such a property-rights arrangement results in significant externalities which are not internalized– may none the less be valid. External effects may be less obvious in the case of communal ownership when the community is sufficiently small and exhibits a certain degree of coordination among members, to the exclusion of outsiders. In this case, externalities may be internalized through negotiations whose costs rise in direct proportion to the size of the community concerned. This points up the second advantage of private property rights: negotiation costs tend to be considerably less than under communal ownership. Thus, Demsetz (1967, p. 358) plainly states that "ownership tends to be an individual affair".

The main lessons to be learned from this proposition may be that: i) property rights internalize externalities; ii) property rights emerge when the benefits of internalization become greater than the associated costs; iii) this is precisely what usually happens in the course of economic development; iv) private property rights provide the best mechanism for internalizing external effects; v) such rights therefore appear to be –generally speaking– a necessary, though not sufficient, condition for development; and vi) consequently, it seems crucial that the State should allow property rights adjustments, because over time new technologies and markets appear on the scene and old property rights regimes are ill-equipped to deal with new realities.

This is not to say that private property rights constitute the first-best solution in all instances at all times. The most suitable property rights regime will depend on the particular circumstances of a given society, including its stage of economic development. Demsetz takes this into account when he writes that account must be taken of "... a community's preferences for private ownership. Some communities will have less well-developed private ownership systems. But, given a community's tastes in this regard, the emergence of new private or state-owned property rights will be in response to changes in technology and relative prices" (Demsetz, 1967, p. 350).

Lastly, property rights also play an important role in providing incentives for efficient land use and investments by making the flow of information less asymmetric and thus reducing the associated inefficiencies and uncertainties, all of which facilitates transactions in financial markets. Asymmetric information in land markets can emerge in the course of the (agrarian) development of a society. In the early stages, land transactions will largely be carried out among members of the same community, where information is still mostly symmetrical. The individuals know who they are dealing with and which tract of land belongs to whom. As the mobility of individuals and capital increases in the more advanced stages, more and more transactions take place with outsiders and, consequently, problems of imperfect information and therefore of land disputes arise. This can lead to efficiency losses since in such a scenario the market price of land will move away from its shadow price and the level of land transactions will be sub-optimal. This, of course, assumes that land transactions generally increase efficiency because they allocate resources according to their potential marginal productivity.

It is important to note "that changes in economic relations and in power structures that characterize the development process generate changing needs for property rights and the institutions to regulate or enforce them" (Feder and Feeny, 1993, p. 242). Factors such as population pressure or technological change that make investments in land quality more attractive create a need for property rights to be more precisely defined. There is a strong demand for institutional arrangements to do just that in many of today's developing countries, where these factors are at work.

It can now be argued that, even though the "optimal" property rights system in any given situation is not necessarily equivalent with the institution of private property, in the course of the "modernization" of a society, private property becomes ever more important. The economic history of European countries, for example, indicates that, as the development process progresses and the division of labour increases, economic interaction between agents becomes more complex and factor markets slowly emerge; accordingly, the institution of common land ownership has to give way to private property arrangements (Barlowe, 1958).

III

Land transactions in the rural setting

"The world operates, at best, in a second best framework"
Erik Thorbecke

1. The economic environment

According to De Janvry, Sadoulet and Thorbecke, rural economies in developing countries are "... characterized by highly imperfect markets, with low transaction costs within the community but high with the outside, asymmetrical information, fragmented oligopolies, lack of formal collateral, and highly covariant risks" (De Janvry, Sadoulet and Thorbecke, 1993, p. 569).

In these circumstances, rural transactions can be highly complex. Market as well as non-market configurations may emerge, transactions may take place within the household or among members of an organization and may not have a visible price. Or they may set up links between labour and land and between credit and labour. Furthermore, the way in which these transactions are carried out depends, among other things, on the relative power position of an individual in society or on such institutions as cultural norms and the legal system. Therefore it can be grossly misleading to view transactions in the rural community as taking place within perfect markets and to disregard the whole array of agrarian institutions that may exist (Bardhan (ed.), 1989).

The basic conclusion here is that the emergence of an organized, formal market or a non-market configuration to carry out transactions for a certain good will depend –in a world of imperfect and asymmetric information and multiple imperfections in associated markets– on the transaction costs involved. Similarly, it is important to see that the different market and non-market configurations that exist in an economy do not operate independently from one another, but instead interact.

It has to be made clear in this context that non-market operations should not be perceived as taking place in some sort of vacuum, outside the economic sphere. The very existence of a certain economic rationale (minimizing transaction costs) explains this type of configuration.

The crucial question is whether relatively free transactions between economic agents will allow all the necessary information to be processed and thus accomplish more than past redistributive reforms.

2. Market transactions in land

While there are different ways to acquire land (for example, inheritance, granting of ownership by the State or squatting, all of which may be important factors in determining the structure of landholdings), this section deals exclusively with formalized market transactions.

In analyses of rural land markets, the focus is usually on land sales markets. How do they work? What determines the outcome of the process? Consequently, we, too, will start by looking at these questions. However, as will be suggested in point b) below, land rental markets probably deserve considerably more attention than they commonly receive.

a) *Sales markets and their limitations*

In general it can be said that land sales markets in Latin America have been inactive in the past. Recent adjustment policies have initiated a change, but the problem persists in many cases. Thus, there must be factors at work which hinder these markets from functioning more vigorously. Shearer, Lastarria-Cornhiel and Mesbah (1991) distinguish between demand and supply constraints.

Supply constraints are considered more crucial. The authors mention three: i) supply constraints due to land concentration: it is assumed that a skewed distribution of land is somewhat self-perpetuating because large landowners are seldom willing to sell. Explanations for this include the preference for land as a repository of wealth, an effective hedge against inflation, and also as a source of power; ii) constraints due to a lack of private land titles: untitled land is either kept off the market or sold at a price below its real value to compensate for uncertainty (for reverse effects of land titling, see section IV below); iii) legal, administrative, and fiscal constraints: these include lengthy as well as costly transfer and registration procedures, restrictions placed on beneficiaries of land reform programmes (who are often not allowed to sell or rent their land for many years) and fiscal requirements such as transfer and capital gains taxes.

The main constraints on demand are the lack of resources to purchase land and high land transfer costs. The rural poor have neither sufficient assets to buy land nor the ability to obtain financing through commercial channels due to their lack of collateral, to imperfections in financial markets or to the absence of such markets. High transaction costs, which mainly stem from bureaucratic inefficiencies, taxes, or the search for information, exacerbate the situation by causing effective land prices to rise.

The authors place greater importance on demand constraints and maintain that land markets alone, given the environment in which they operate, will not be able to bring about a decisive change in the existing structure of holdings. The basic argument is that this failure is caused by numerous imperfections and inefficiencies in such areas as land-credit links and policy distortions. The point here is that, even though increases in efficiency through land transactions are likely, markets are nevertheless unable to achieve a first-best solution.

As concerns price distortions, a present-value consideration is at the heart of the matter. For a variety of reasons, the equilibrium price of (unmortgaged) land will, at given credit costs, always exceed the discounted present value of the income stream generated by it. However, in an idealized case of perfect markets, the value of land for agricultural use would equal the present value of agricultural profits, capitalized at the opportunity costs of capital.

This observation holds because: i) land has a collateral value (i.e., it provides access to credit); ii) it helps to spread risk (e.g., it serves as a hedge against inflation), and since the "services" of this type which land provides enhance its utility for its owners, buyers need to offer compensation for this attribute;

iii) the transaction costs incurred when acquiring land or accessing credit are usually fixed and are thus subject to regression (i.e., the bigger the holding or the larger the amount of credit, the lower these costs are in proportional terms); iv) the future real appreciation of land prices (as well as credit subsidies or tax breaks on agricultural income) as population and urban demand for agricultural land grows is –at least partly– capitalized into the current market price. Thus, the market price of land is not determined solely by its productive use.

All this contributes to the financing problems faced by poor groups, in addition to the general difficulty they face in accessing capital markets due to a lack of collateral and insufficient income flows. The argument presented in the preceding paragraph implies that those buyers who need credit (but have no access to it) have to finance the purchase out of savings; this situation favours wealthy players and thus tends to make the distribution of holdings even more unequal. To summarize:

"Land is often a preferred store of wealth, so with imperfect inter-temporal markets the utility derived from landownership will exceed the utility derived from farm profits. Its immobility makes land a preferred form of collateral in credit markets, which confers additional utility from landownership, especially in an environment where production risk cannot be insured" (Binswanger, Deininger and Feder, 1993, p. 50).

There are additional factors that obstruct the process and reduce its efficiency. As a rule of thumb, it could be said that in good crop years, the supply of land will be limited while in particularly bad years, distress sales will go up, again hurting the poor first.

The main point here is that price distortions, stemming from a variety of sources, will make it hard or impossible for the rural poor to acquire land. Thus, Lipton (1993, p. 651) concludes that: "price distortions favouring large farms mean that inverse relationships, strong at shadow prices, are suppressed at market prices, and even at effective prices including transaction costs. *Correcting such distortions therefore helps to get land into smaller holdings*" (emphasis added).

b) *Tenancy markets*

It is important to note from the start that, contrary to a widely-held belief in policy-making circles, there is strong evidence in the literature on rural land markets to suggest that rental (or tenancy) arrangements are a rational response on the part of economic agents to a certain set of variables which overcomes or softens some of the above-mentioned impediments to a more equal distribution of land.

Fixed-rent tenancy can be seen as the alternative to wage labour. In a perfect market environment, either contractual choice would have the same outcome; in other words, it would not matter whether land hired labour (wage employment) or labour hired land (fixed-rent tenancy). Given the existence of the inverse relationship discussed earlier, however, it will often be more profitable for large landowners to rent out part of their holdings.

An even more important factor than this gain to the landlord, however, is that the evidence suggests that rental arrangements can also be beneficial to the rural poor. Besides being a natural response to thin sales markets, tenancy markets emerge in a world of multiple imperfections and uncertainty. They may solve supply constraints such as landowners' reluctance to sell (because, for example, they prefer to keep their property as a hedge against inflation) or demand constraints such as a lack of equity to purchase land.

Smallholders may prefer to rent out all or part of their plots. In an interesting case in Peru (Figueroa, 1995), agroindustry firms rent land from peasants in the region and often hire the owners to work the fields as paid labourers.

Depending on the environment, different kinds of rental arrangements may make sense. In imperfect inter-temporal risk insurance markets, for instance, sharecropping contracts may work well to insure against stochastic fluctuations in output (due, say, to weather factors).

However, concerns have been raised which have caused policy-makers to place restrictions on tenancy arrangements, particularly share contracts. The doubts of some hinge on considerations of social equity, since the weight of relative bargaining power usually lies with the wealthy landowners. Many economists also view sharecropping as being problematic from an efficiency point of view (Marshallian inefficiency), since under share contracts the tenant receives only a fraction of the marginal product of the inputs used. Available empirical evidence suggests, however, that these inefficiencies are not large at the farm level (Binswanger, Deininger and Feder, 1993). These studies have not found significant differences between yields or input intensities in ownercultivation and land tenancy systems. In any case, Bell (1990, p. 161) points out that, "whether there is constrained efficiency or not, however, the role of share tenancy in a static system of incomplete markets appears to be useful, because it provides an inducement to risk-averse individuals to supply family resources and skills to cultivation, as opposed to unskilled wage employment, in which some skills and resources are of no account, and which is usually less remunerative".

In addition to this static argument, the case for rental markets can also be made by reference to their dynamic role as a vehicle for the accumulation of assets and skills. This is what is known as the *agricultural ladder* hypothesis, according to which "Young, relatively poor individuals begin as laborers and acquire sufficient skills and capital through experience, work, and saving to progress through the succeeding stages of share tenancy, fixed rent tenancy, and, with good fortune, outright ownership." (Bell, 1990, p. 162). Although this scheme will depend on a whole array of favourable conditions, it is surely feasible in many cases where rural farmers start out with few assets or limited skills, or both. For them, tenant farming might be the best, if not the only, way to grow out of poverty. Some research suggests that the agricultural ladder performed an important role in rural development in the southern United States after the abolition of slavery (Binswanger, Deininger and Feder, 1993).

In conclusion it can be said that, in a world of multiple imperfections and uncertainties, tenancy arrangements are often a very useful tool for arriving, if not at an optimum, at least at a second-best solution. Some of the apprehensions mentioned above are attributable to a failure to understand the fact that sharecropping arrangements, widely used all over the world, emerge as a response to an imperfect environment and thus should not be blamed for inefficiencies caused by this environment. However, if as a result of these reservations rental markets are heavily regulated, even greater efficiency losses may result.

IV

Policies for successful land-market reform. An overview

1. Government action in an imperfect environment

When analysing policy measures related to rural land markets, attention should be given to the fact that the foregoing observations on agrarian institutions are highly significant for the decision-making process. In a rural setting where economic transactions take place under complex property rights systems, imperfect interrelated markets and non-market configurations, it is difficult to foresee the consequences of government action. Instruments designed to affect a particular configuration may have spillover effects that influence other configurations. So, for example, it is conceivable that liberalizing the official financial market could raise interest rates in the informal market because savings would be diverted from the latter to the former.

Generally speaking, the question as to whether there is a strong case for government intervention in agricultural markets should always be asked. Stiglitz (1987) provides a helpful framework for answering this question. He mentions five points that describe forms of market failure and therefore constitute reasons for government action: i) incomplete markets in insurance futures and credit; ii) increasing returns in the provision of public goods (for example, publicly financed water projects); iii) imperfect information; iv) externalities; and v) income distribution.

What matters most in our context is a special type of market failure: the non-emergence of a market. A market also fails: "(...) when the cost of the transaction through market exchange creates disutility greater than the utility gain that it produces, with the result that the market is not used for the transaction. Either surrogate institutions will emerge to allow the transaction to take place or the transaction simply does not occur. Non-existence of the market is thus the extreme case of market failure. In a more general sense, the market exists, but the gains for a particular household may be below or above costs, with the result that some households will use the market while others will not." (De Janvry, Fafchamps and Sadoulet, quoted in Thorbecke, 1993, p. 598).

It is these "surrogate institutions", which Thorbecke calls *"non-market configurations"* and Bardhan calls *"agrarian institutions"*, that make the outcome of government intervention somewhat unpredictable.

Caution in this area therefore seems in order. As one researcher points out: "if, in our reformist zeal, we do not pay enough attention to the underlying economic rationale of pre-existing institutions and their interconnections, and hack away parts of them, we may not always improve (and may even worsen) the lot of the poor tenant-labourer-borrower, the intended beneficiaries of our programme" (Bardhan, quoted in Thorbecke, 1993, p. 594).

In addition, Carter and Mesbah (1993, p. 1088) observe that land-market reform policies rely "... on the presumption that the resource-poor do not suffer a fundamental competitive disadvantage in the sphere of production which spills over into the land market." Therefore, such policies ultimately require a framework which explicitly links both aspects.

Having said this, there nevertheless seems to be ample room for public policies to invigorate or create rural land markets. However, it is often not so much a question of what new policies should be designed. Rather, attention should be given to regulations that are already in place and that often have undesirable efficiency as well as equity effects.

Lawmakers should be cautioned not to prefer one form of economic organization over another. For example, the existence of a wide variety of tenure arrangements can also be explained in part by the fact that decisions are taken by individuals who differ in capacities and preferences: some may be more inclined towards wage labour or share tenancy, while other more entrepreneurial, risk-taking individuals may prefer cash renting and aspire to owner-operatorship (Schweigert, 1989).

2. Land-market policies

Land-market reform through programmes such as land banks or the financing of land purchases with the help of government subsidies has played an important role in the United States and Europe during much of this century. In contrast, there have been few similar experiences in the Latin American region, and the literature on rural land markets is very limited.

Policy instruments should focus on improving the supply of land (for example, through titling programmes) and the demand for land (for example, by eliminating certain subsidies in order to lower land prices).

Shearer, Lastarria-Cornhiel and Mesbah (1991) mention five areas in which they see a need for government action to give the poor greater access to land:

i) *Eliminating subsidies to scale:* Subsidies such as credit at negative real rates of interest tend to favour large landowners. They have better access to the relevant information and legal counsel, and financial institutions prefer them to small farmers because they can offer better security. In addition, such subsidies are often capitalized into the land price, which makes it even harder for the rural poor to purchase land. Eliminating subsidies to scale should therefore improve the relative bargaining position of the poor.

ii) *Land taxation:* The main point in this context is the assumption that a progressive tax on land will induce large landowners to break up their holdings and sell portions of their land. However, implementation of such tax programmes has been very difficult, mainly because of existing power relations and ample opportunity for evasion ("paper subdivision"). Another point raised in favour of improved land taxation is that the revenue thus obtained could be used to finance land or mortgage banks that could provide loans at preferential rates to the rural poor.

The numerous problems involved in taxation issues will only be touched upon here. Hoff (1991, p. 93) compares the effects of land taxes and output taxes, and comes to the conclusion that the preference for land taxes rests on the "... assumption that institutions for pooling and spreading production risks are perfect. When account is taken of the imperfections in those institutions, some use of output taxes will be Pareto-superior to a pure land tax regime and may induce higher output, as well".

Skinner (1991) points out that introducing a land tax in lieu of an export/output tax may, under certain circumstances, even increase land prices and thus thwart its redistributive purpose. This could happen when the capitalization effects of the export tax (depressing land prices) are larger in magnitude than those of land taxation. In his view, the main obstacle to effective use of a land tax consists of administrative factors:

"Unlike the commodity or export tax, which is based on readily observable measures of output, the land tax is based on site value, market value, or net income, measures which in rural areas with sparse land markets are often difficult to observe" (Skinner, 1991, p. 114).

iii) *Land registration:* Of importance here is the fact that highly bureaucratic and cumbersome registration procedures carry significant transaction costs which work against an active land market. Moreover, this affects both the demand and the supply side, since transaction costs are incurred by sellers and buyers, and may thus be part of the reason why large landowners are reluctant to break up their holdings and sell to numerous buyers, since they would incur hefty costs for each operation.

iv) *Land titling:* Several arguments can be made in support of land titling programmes. Registered title will most likely increase a holder's security in terms of future expectations. This may improve productivity since the incentive to invest in machinery or fertilizers will be higher if you know that you will be able "to reap what you have sown". In addition, only secure title will allow the smallholder to use his land as collateral to raise additional capital.

Some authors doubt the validity of these arguments. They point to the possibility that land secured by legal title may command higher prices, thus making it more difficult for the resource-poor to become buyers. It is also argued that future expectations are only one input in the decision to invest in land improvement and that other factors such as alternative off-farm investment opportunities or the availability of capital play an important role. While this is undoubtedly true, it is probably safe to assume that secure title will not harm investment decisions.

Similarly, some maintain that titling will actually increase insecurity. They contend that if titled land functions as collateral, then foreclosure and land loss become a real possibility. It is hard to see, however, how this kind of risk is any worse than the risk associated with having no title or no access to credit whatsoever.

There is a critical point, however. In an environment of imperfect or missing capital and risk markets, communal tenure systems can act as important substitutes for those markets. In such a situation, it is conceivable that awarding private title to individuals takes away the "protective shell" of the community and can thus lead to distress sales (that is, sales made to meet basic needs such as food) in many cases.

These difficulties make it clear that full ownership security involves much more than the mere possession of legal title. The surrounding infrastructure in terms of adequate credit, existing contingent markets and access to them, as well as other public assistance, has to be in place too.

Last but not least, it must be remembered that titling programmes are not without cost. In each case, the benefits to be derived from such a programme and the resources needed to carry it out should be weighed against each other.

v) *Mortgage banks and land banks:* As has been mentioned before, the lack of external financing for the rural poor constitutes a major obstacle in the effort to improve their access to land. Part of the problem is that financial institutions are unable to supply credit because of the conflict between the short-term capital they raise in the market and the long-term capital required for land purchases. The huge transaction costs involved when lending to large numbers of small farmers is another point.

In this scenario, the establishment of mortgage banks, which make preferential loans to individuals, and/or land banks, which acquire large holdings and then resell smaller plots, may bring substantial benefits. However, obtaining funding for these institutions in developing countries, where financial markets are usually not well developed and capital is thus difficult to raise, is a daunting task and thus often falls to international donors.

V

Selected country experiences

An analysis of the countries in this sample reflects regional policy-makers' recent preoccupation with market solutions. It is clear that attempts have been made to correct misconceived policies of the past. In some countries, rural land markets have been operating during the last few decades at a modest level of activity, and some observations on the outcomes are possible. In others, the mechanisms for transferring property rights still lie dormant.

A look at individual cases also highlights the complexity of the issue: the degree to which land distribution is still monopolistic, the wide variety of existing property rights regimes, the sorry state of cadastral systems, frequently counterproductive and inconsistent policies, the multiple factors that influence the behaviour of rural agents, and the extent of untitled land. It also gives a sense of the diversity of conditions within a given country. The need for institutional innovation becomes evident. Rural institutions and/or configurations may differ from region to region, thus calling for diversified instruments to foster land markets.

1. Chile

Under the two governments that preceded military rule, Chile experienced two waves of comprehensive expropriations which eventually encompassed 40% of the national territory. Economic policy after the *coup d'état* in 1973 prioritized private property, and a process of returning land to the previous owners began. Although in many cases there was a return to the situation as it had been before agrarian reform, by the end of the redistributive procedure, around 48 000 peasant families, known as *parceleros*, had received tracts of land fit for agricultural production.

Around 45% of the land distributed to the *parceleros* was subsequently resold by the new owners. An analysis of the background for this process affords valuable insights into the workings of a considerably liberalized rural land market.

In an interesting publication, two Chilean researchers provide a case study of the Metropolitan Region in Chile's Central Valley (the agricultural heartland) and Region VIII in the southern part of the country, where traditional agriculture plays an important role (Echeñique and Rolando, 1991). They found that by 1991 around 70% of the previously-assigned parcels in the Metropolitan Region and roughly 45% in Region VIII had been sold. The level of market activity was highest in the areas with the most fertile land and the best surrounding infrastructure. This is accounted for mainly by the substantial demand for quality agricultural land generated by the rise of Chilean fruit and horticultural export crops, primarily in the Central Valley. While the *parceleros* slowly began to sell their land one or two years after it had been given to them, the bulk of the sales took place in the years between 1979 and 1982. These four years marked a deep crisis in the country's agriculture, but this was also around the time that fruit exports began to boom and thus began fuelling a strong demand for land, with the result that 58% of all sales of *parcelero* holdings took place within this period.

To explore the motivations of the sellers, Echeñique and Rolando carried out a survey among former *parceleros* and rural agricultural leaders which produced some remarkable results. The major reasons mentioned for selling were excessive debts and a lack of working capital. A total of about 40% of the peasants surveyed in the Metropolitan Region claimed that these two factors induced them to give up their land (the breakdown of these two factors was 23% and 19%, respectively). This was far from being the whole explanation, however. Some 19% of the peasants who sold their land said they did so because they had no interest in agriculture and preferred to engage in other activities, which means that this motivational factor was as important in the peasants' decision as the lack of working capital and almost as important as debt. In addition, in some 10% of the cases, the reasons cited were old age and the fact that the sellers had no children willing to continue with their farming activities, while 8% admitted to family problems such as alcoholism or plain laziness. In some cases the families were so large (10 or more children) that, upon the death of the father, the heirs decided that the only practical way to divide the inheritance among them was to sell the land. In addition, legal regulations put the *parceleros* at a disadvantage in some instances. For example, until 1980 the sale of land that had been distributed to peasants was illegal under the country's military government. To circumvent this rule, many *campesinos* entered into long-term lease arrangements that gave leaseholders the option to buy later. The peasants often did not understand these contracts well, however, and in a number of cases they thus became victims of fraudulent practices.

The majority of the buyers of these parcels were farmers or agricultural entrepreneurs, but there were also urban professionals and business people in this group. However, the predominant motivation for the acquisition of agricultural land was to put it to productive use.

These characteristics of the Chilean case suggest that care is needed when evaluating some of the prevailing ideas about rural land markets. One such contention is that the economic situation typical of the peasant population makes it impossible for market mechanisms to shift land to this group. However, 19% of smallholders covered by the above survey said they sold their parcels out of a lack of interest in agriculture, and another 18% mentioned family problems, old age or a lack of children to carry on the tradition. While it cannot be claimed that this is a representative sample, this is nevertheless surprising. A large number of the sales were not motivated by a lack of capital or excessive debt, but were instead attributable to extra-economic factors. These land-market transactions in Chile by and large allocated the resource according to production potential, thus promoting the emergence of modern, successful agriculture.

2. Colombia

An analysis done by the Food and Agriculture Organization of land markets in several municipalities in Colombia (FAO, 1994) illustrates the difficulties involved in changing ownership patterns through market transactions.

In Colombia, too, land distribution is highly skewed. In 1992, 78% of the holdings were of a size of 10 hectares or less and accounted for only 8.8% of the total agricultural land area. In contrast, 1.3% of the holdings comprised 200 hectares or more and accounted for over 48% of the total area.

In 1994, with this situation in mind, the Colombian Government passed the "New Agrarian Reform Act" (Law 160 of 1994) (Colombia, Ministry of Agriculture/INCORA, 1994) establishing a national system of agrarian reform and rural peasant development, introducing a subsidy scheme for land purchases by the rural poor, and reforming the Colombian Institute of Agricultural Reform (INCORA).

The report finds that in the municipalities examined, 4% of all holdings, equivalent to around 9% of these municipalities' total area, changed hands in 1991. The structure of these transactions reflects the segmentation of rural land markets. The vast majority of transactions took place between smallholders and accounted for a smaller total transfer in terms of land area than the relatively few large holdings that were sold. Thus, the study concludes that buyers and sellers usually belong to the same socioeconomic level.

Another important observation is what the authors call the "social segmentation" of the market. The social norms of groups such as extended families or closely-knit rural communities often result in the exclusion of outsiders. Cases are reported of individuals who did acquire land in such communities but who eventually had to give it up because they were denied certain services or could not find people who were willing to work for them.

Usually transactions are carried out only among members of the same group, and this (in addition to hereditary customs) has led to worrisome degrees of fragmentation. The report found that, in 1991, in areas dominated by peasant farming, over 50% of total land sales were carried out among family members. In this environment, efforts by State agencies to redistribute land may be frustrated. In one case, INCORA had purchased land with the intention of reselling it to small producers of a certain municipality. The offer was rejected because the peasants refused to give up the holdings they owned and did not want to relocate to other regions.

Another form of denying market access to unwanted parties is the authoritarian rule of guerilla or paramilitary groups over an area. Coercion and the application of sheer physical force make sure that only sales that are welcomed by those in power take place.

The study also found that land prices were closely linked to the revenue-generating capacity of the land in question. The location of the property, surrounding infrastructure and the prices which the produce can command in the marketplace thus become determining factors. In one predominantly coffee-producing region, the extent of land sales was about three times less than normal during a period of depressed coffee prices.

These researchers also observed another interesting phenomenon: owners of large holdings frequently sell portions of their property to investors coming from outside the rural community, mostly urban buyers. Before the sale, improvements are made (e.g., the construction of new fences or –often luxurious– homes) and, as a result, the parcel commands a price of up to twice the original value of the land. Apparently, some *latifundistas* had at one time contemplated breaking up their holdings to sell them to a number of peasant farmers. Eventually, though, they discarded the idea because they feared that insufficient profit margins would result from such an arrangement. One of the conclusions that can be drawn from this experience is that organizational hurdles and bureaucratic delays, plus the associated transaction costs, may prove to be prohibitive.

In the light of the above observations, the FAO report concludes that, in the regions studied, land markets were relatively active. However, transactions primarily took place in the form of "intra-strata" sales. Transfers of property rights through the existing market mechanisms have thus failed to shift land from one economic group to another.

3. Ecuador

An analysis of rural land markets in Ecuador, undertaken by FAO in 1992-1993 (FAO, 1995a), concludes that the country's agriculture has experienced drastic changes over the past three decades.

Until new legislation was passed in 1994 (Agrarian Development Act, 14 June, 1994), legal and bureaucratic hurdles were such that the vast majority of land transfers between private individuals took place outside the framework established by governmental regulations.

A study of the situation in Ecuador before the new law came into effect (Stringer, 1989) illustrates the effects land policies can have. It suggests that the administrative and legal structure of the country, together with the accompanying policy regulations, worked against more active land markets in several ways.

First, there were very specific rules governing land transactions, and the public Institute for Agrarian Reform and Colonization (IERAC, now INDA, the National Institute for Agricultural Development) played a crucial role in this respect. For example, the approval of the Institute had to be obtained for transfers of *minifundios* (note that the relevant law did not define the term "*minifundio*", either by area or by soil type), subdivisions of farmland, or sales with the intention of changing the category of land use from traditional farming to, say, cultivation of flowers or beekeeping.

Another stumbling block was the tax system: due to a combination of capital gains taxes, which were especially high because the rate set in the early 1970s had never been adjusted for inflation, plus a transfer tax, national defence tax, drinking-water tax, provincial tax and other fees, each land sale incurred a tax load of between 25% and 30% of the sale price. This led to illegal transfers, false price declarations and other problems.

Even if two contracting parties agreed to carry out a transaction, the process was immensely cumbersome. For example, for each sale an application had to be sent to IERAC requesting authorization. This application had to be accompanied by a map of the property, a copy of the title, a certificate from the land registry verifying that the property was clear of liens, a declaration by the contiguous property owners stating that they did not want the parcel, and the personal identification numbers of the buyer and seller. Then, the application had to go through various departments within IERAC, after which it was sent to the directorate in the capital. Finally, the parties to the transaction could begin drafting and notarizing the contract. It was not uncommon for the whole process to take up to six months. Furthermore, IERAC was never able to process more than 5% of the requested transactions. The new legislation did away with this process, and private land transactions do not now require authorization of any kind.

Today, through a combination of past agrarian reform, the settlement of new lands, and the stimulation of formal land markets the agrarian structure has been altered in such a way that the traditional *latifundio* no longer predominates. This is all the more remarkable if one considers how the situation stood in

1954 and 1974, when the last agricultural censuses were taken. In 1954, 2.2% of all holdings were over 100 hectares in size and covered 64% of the total land area. Smallholders operating on less than 5 hectares made up 73% of all holdings, but occupied only around 7% of the total area. In 1974, the ratios still stood at 2.1%/48% and 67%/6.8%, respectively. Today, by contrast, small and medium-sized producers which, together with agroindustry, use modern production techniques and are often geared towards export markets, have come into their own.

However, a different problem of polarization now exists. The modernization process has been accompanied by a substantial increase in *minifundios* and landless rural households. The 1991 survey of rural households shows that 39% are landless, while around 20% are smallholders operating on less than one hectare. At the same time the composition of the rural labour force has been altered. About 40% of the economically active rural population has entered the urban labour market or found other off-farm employment.

While, in the past, beneficiaries of agrarian reform often lost their land due to the overwhelming debt they had accumulated, today transactions in formal markets play a much more prominent role. The FAO study identifies market transfers as the predominant mechanism for the re-allocation of agricultural land over the last few years. On the supply side, peasant producers are the principal sellers, whereas demand largely stems from medium-sized and large agricultural enterprises that are further expanding their holdings. However, although this development often means that peasants –many of whom are former beneficiaries of agrarian reforms or of the distribution of colonized land– cease to be producers with their own holdings, the report highlights another very important aspect: the *campesinos* who have to give up their farms are usually the most "traditional" farmers who have failed to integrate into the modernization process. Thus the peasant sector splits into two parts:

"Sectors of the peasant population that have benefited from agrarian reforms and land settlement programmes, and that, over the years, have achieved a degree of accumulation, *have adopted entrepreneurial forms of behaviour*, have become a source of demand for land and are successfully expanding their land/production-unit base. However, those peasants who have maintained their position as on-farm landowners without changing their traditional behaviour have fallen into decline, since their production base has been reduced" (FAO, 1995a, p. 73, original emphasis).

The FAO study on Ecuador concludes that the country is undergoing a sustained transformation. Market arrangements have become the main mechanism for land transactions. While this has led to the modernization of agriculture in many cases, on the other hand a considerable number of the rural poor find themselves in a crisis situation. Many have been forced to give up their land or have become part of the process of agrarian fragmentation. While this process may in general be interpreted as a positive aspect of economic development, it also creates new problems in respect of those parts of the rural population that remain outside the modernization process.

4. Mexico

The Mexican case differs from others in many important respects because of the considerable influence which the revolution that took place at the beginning of this century has had on the country's institutions.

The agrarian land structure of Mexico is still marked by the provisions of the post-revolutionary Political Constitution of 1917. Article 27 of the Constitution established the *ejido* system. *Ejidos* are areas of communal ownership (primarily made up of previously expropriated land) which are farmed collectively. In other words, the *ejido* came into existence by decree and the way in which it operated was regulated by specific laws.

Currently, more than 54% of the nation's total land area falls under this system of "social ownership" (FAO, 1995b). *Ejido* farmers and members of other communal ownership schemes represent 67% of the total agricultural population. The fact that this structure was, in many cases, designed to be sub-optimal is demonstrated by the widespread practice of ignoring many legal restrictions.

Until the laws were changed in 1992, economic activity in agriculture had been extraordinarily restricted. Under article 27, the Federal Government was entitled to expropriate private landholdings in order to convert them into communal property. *Ejido* land could not be sold, rented out or otherwise transferred, nor could its use be obstructed ("*embargado*"). Therefore it was beyond the reach –at least legally– of market transactions. Furthermore, it was illegal for *ejido* farmers to hire paid labour, and corporate legal entities were not allowed to own real estate.

In 1992, realizing that these conditions entailed a high degree of uncertainty and obstructed development, the Administration passed a new agrarian law to provide legal security for economic transactions in rural Mexico. The main pillar of the new law is the reform of article 27, which makes significant changes in the governance of property rights and in the way transactions may be carried out.

The most important features of this reform are the abolition of the practice of granting land to peasant groups upon request; members of an *ejido* or a community (other land under common ownership, which was not established by, but was recognized under, the old law) may decide in their respective assemblies to dissolve their association and give individual property rights to their members, or to associate themselves with private corporations; such corporations are now allowed to own rural real estate. The aim of these measures is to generalize the institution of private property and thus to create an active rural land market.

According to the FAO study, the results so far have been more than disappointing. The report does little to shed any light on the reasons for this. A mechanism to carry out the privatization of former social property was set up through the establishment of the Programme for the Certification of *ejido* Rights and the Titling of Urban Plots, known by its Spanish acronym, PROCEDE (Programa de Certificación de Derechos Ejidales y Titulación de Solares Urbanos). The programme aims to control and legalize the process of titling land under communal ownership.

As of October 1993, PROCEDE had carried out negotiations with 17,731 peasant agencies representing *ejido* and other communal ownership interests. Of those, almost 9,700 (i.e., somewhat under 55%) had responded favourably to the privatization plan. The next step was the surveying of the land by the National Institute of Statistics, Geography and Informatics (INEGI). Then, the respective community assemblies were to convene to negotiate the final demarcation. Apparently, only around 200 *ejidos* (out of a total of almost 30 000), representing just over 1% of the total area under the social-ownership regime, had completed the procedure by the end of 1993.

This obviously falls short of the expectations of the policy-makers who drafted the new legislation. The FAO study concludes that this outcome demonstrates that "land for the peasant has a meaning other than simply that of a commodity" (FAO, 1995b, p. 207), and that the basic flaw of PROCEDE was to assume that "rural society yearned to bedeck itself with the trappings of private property in the 'modern' fashion" (FAO, 1995b, p. 207). The reasoning behind this conclusion is not easy to follow, considering that more than half of the communities under communal ownership agreed to privatize. Curiously, on the same page, the report states that during discussions on the merits of privatization, the peasants often cited the need to be clear about who owns what so that conflicts with neighbours and family can be avoided.

Keeping in mind that privatizing formerly socialized property is always a daunting task, the time that has elapsed since the reform of article 27 in 1992 seems too short to make a final judgement on how much legal security it provides. It is also not clear how formidable the bureaucratic hurdles and their associated transaction costs are. Another probably relevant consideration is the tendency of some social institutions that have been in existence as long as the Mexican *ejido* system to linger on even though they may be inefficient. It is therefore difficult to determine why land markets in Mexico are by and large still inactive.

VI

Conclusion

Solving the problem of the highly skewed structure of land tenure in Latin America is an inherently complicated task. Past reform efforts have been weighed down by a great deal of ideological baggage, misconceptions about the economic realities of the rural setting, and a lack of supporting measures. After unsatisfactory experiences with the institution of redistributive land reforms by decree, Governments are now looking to land-market reform as a solution.

Whether the analysis concentrates on sales or rental markets, one point should be clear. Markets, as mechanisms for transactions in property rights, cannot exist without the prior establishment of these rights. It is not suggested here that the institution of private property rights in the form of freehold ownership –the "right to use and abuse" (*jus utendi et abutendi*)–, is the first-best solution at all times and in all places. This will depend on the particular circumstances of a society or community and the stage of development they have reached. However, in a region where it is not unusual to find 50% of rural households operating on untitled land, and considering the external effects and associated inefficiencies of this state of affairs, the potential benefits of clearly defined property rights are obviously substantial. What seems crucial is that Governments provide the framework within which institutions may emerge and adapt according to the conditions of a changing economic environment.

It should be borne in mind, however, that the transaction-cost/institutional-economics approach presented here suggests that, depending on the circumstances, agricultural institutions of a non-market type may also make economic sense. In one particular environment, formalized markets for land may help shift resources to the peasant producer, while in others, non-market configurations will be the most suitable poverty-reduction mechanism.

The development of landownership patterns leading to a more efficient distribution of holdings thus depends on existing social institutions. These differ between countries, regional societies and rural communities. They result from and at the same time determine a society's history, culture and religious beliefs. In addition, climatic and geographical conditions play their role.

It should be obvious that the evolution of these institutions is a long-drawn-out process. They cannot be altered overnight by conscious endeavour. There is no such thing as "institutional engineering".

A slow, evolutionary transformation of land-tenure patterns does seem to have begun in Latin America, however. Not everywhere does the old *latifundio-minifundio* dichotomy still characterize rural relations. Thiesenhusen observes that: "... the most noteworthy change that has occurred in the land tenure system of the region in the last several decades is not redistributive land reform but the emergence of a growing (but still quite small when compared to farmland in *latifundio*) commercial and entrepreneurial sector made up primarily of well-managed and highly productive middle-sized and large farms" (quoted in Dorner, 1991, p. 62).

It has been pointed out that the State may frequently protect property-rights institutions which are socially inefficient in order to maintain its own support structures (Bardhan (ed.), 1989) but an enlightened administration can undoubtedly help in creating the conditions that (agrarian) institutions need in order to evolve and adapt.

Development is an evolutionary process. Public policies may stand in the way by, for example, prohibiting useful institutional devices such as sharecropping. An operational market system also depends on the surrounding social and legal infrastructure. It is here that an active role for the State can be found in helping societies to proceed through the stages of development up to a point where markets, including those for land, can perform their allocative and distributive functions.

(Original: English)

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Mexico: *the plan and the* current situation

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Two disequilibria are intertwined in the Mexican economy: incomplete modernization of institutions and production, and external imbalances that have made the country unable to service its external debt. In a context of liberalization, this combination has been conducive to sharp depreciations, as evidenced by recent events.The success of the adjustment exercise will depend on the progress of the retooling and expansion of production. This article analyses the main objectives of the National Development Plan for 1995-2000 and the policies that have been implemented to realize them, and shows that the current situation is a patchwork of progress and setbacks. Examples of progress are the restoration of a number of macroeconomic equilibria, an increase in exports, a tight monetary policy, the stock exchange's recovery and a revitalizing dynamic that prevents fiscal and monetary discipline from crumbling. Setbacks include the worst depression of the last 50 years, with concomitant falls in investment and savings; the undermining of the financial system, the doubling of open unemployment and a drop in real wages. After considering various socio-political factors in the analysis, the author concludes that the National Development Plan is a reflection of an appropriate long-term view, but that it is inadequately coordinated with short-term adjustment policies, so that it cannot be implemented until the post-devaluation situation has been resolved, which will entail the adoption of recessionary measures. The principal weakness of the chosen strategy may be its adoption of sequential formulas. What is needed is to devise integrative formulas capable of coping with the complexity of the economic modernization process.

I

Introduction

The Mexican economy continues to be profoundly affected by two disequilibria which, by feeding back into each other, have had a devastating effect on production and employment. The first is structural in nature: the modernization of the country's institutions and production facilities is still not complete, and this has hindered the formation of linkages with the international economy and made it more difficult to fully absorb the adjustments associated with the changing model of development. The second problem is one of liquidity: internal resources are not sufficient to deal with the vast accumulation of external debt maturities.

The vicious circles set in motion by these two imbalances are of a complexity that goes far beyond the economic sphere. Briefly, their direct interaction may be summarized as follows: the opening-up of the economy, in combination with the insufficient competitiveness of the bulk of Mexico's agricultural and industrial enterprises from 1988 onwards, produced growing deficits in the balance-of-payments current account which had to be funded, to a large extent, through short-term or extremely short-term external credits; side-effects of this situation included consumerism and a reduction in national savings.

Structural deficiencies eventually made it impossible to continue financing external payments, not so much because of capital flight, but because incoming flows –a monthly average of US$2.5 billion during 1993– began to dry up, foreign exchange reserves evaporated and the exchange rate depreciated sharply. This devaluation triggered the collapse of the entire existing structure of economic strategy, and the Government was therefore obliged to begin rebalancing the economy all over again, no matter what the cost. However, it was now a question not simply of easing inflationary pressures, but of making a concerted effort to narrow the gap between purchases and sales, servicing the debt and regaining much-needed international prestige.

In response to these two pressures, the Government has chosen a recessionary route to adjustment. This also accords with the wishes of external creditors. The social costs are exceedingly high, and industry and agriculture will emerge weaker overall. Like it or not, the demands of stabilization are hampering the retooling and expansion of production, on which the fate of the export strategy, employment and indeed the reestablishment of the capacity for growth itself will depend in the long term.

Nevertheless, the short-term strategy has been designed to produce a sharp, intense and inevitably painful recession; the hope is that the recession will be short-lived and will enable the country to re-embark on the road to prosperity and well-being under improved circumstances. To this end, a fiscal austerity policy has been introduced, along with a tight monetary policy and a floating exchange rate. [1]

[1] Trade liberalization, the abolition of capital controls, and other measures to open up the financial sector of the economy (such as the acquisition of public domestic debt paper by external agents) limited the autonomy of economic policy and hence its ability to absorb external shocks or changes in the behaviour of international financial markets. There is a clear incongruity between the structure of trade (a mere 100 companies account for over three quarters of export earnings) and the creation of a liberalized financial regime, particularly when the exchange rate is used as an instrument to maintain domestic price equilibrium.

II

The main features of the Plan

The National Development Plan [2] is a general programming document. It does not enter into detail on short-term policies, but rather delineates State action in broad terms.

This document, perhaps like no other before it, eschews the overly economistic approach of previous programmes in order to propose a set of goals which address the essence of Mexican civil society: the further development of national sovereignty and of the rule of law; democratic modernization; the reduction of distributive inequalities; and renewed access to steady, sustainable growth.

This updated reformulation of guiding principles takes on special importance in a rapidly changing world where new technologies are constantly being developed, national frontiers are fading away, new private actors –which overshadow the previously dominant influence wielded by Governments– are emerging and new links are being forged through the conclusion of treaties that oblige us to construct and abide by a new international order.

In the same way, the programmatic core for this institutional remodelling effort contains a number of innovative elements: it responds to demands voiced by the population and transmitted from the bottom up, it brings legislation into line with the economic regime which the country hopes to establish, and it is geared to protecting human rights and the environment. This society, faced with the threat of corruption, uncertainty, disorder and acts of impunity, and crying out for the reestablishment of, and respect for, a State based on the rule of law, yearns for a reaffirmation of individual and property rights, a guarantee of public safety and of the impartiality of justice, a reversal of the deterioration of the environment and ways of combatting drug trafficking.

The Plan embodies the idea of rapid advancement towards a modern democracy. Mexico aspires to be not only a State based on the rule of law, but also a democratic, multi-party State in which the transfer of power by electoral means no longer causes socio-political trauma or leads to a decline in standards of public administration.

Neither democratization nor a State based on the rule of law will be possible without a conscious effort to right a wrong that has deeply entrenched historical roots: the inequality of income distribution. Mexico has always been a land of contrasts, but in recent years its social polarization has become appallingly pronounced. The Plan's analysis of this situation is unusually candid, and it makes a number of novel proposals. For example, it explicitly recommends using active policies both to deal with demographic issues and to attack extreme poverty.

This may explain why the Plan comes back to the idea of development as fundamental to a systematic improvement of the welfare of the population.

Further, it proposes strengthening the federalist system in the political and economic domains. A review of the division of functions among the federation, states and municipalities will make it possible to come up with responses that are geared to the specificities and civic aspirations of each area.

III

The short term and the long term

Thus far we have dealt with the basic approaches which determine the lines of government action to be pursued in 1995-2000. As regards the instrumental links designed to bridge the gap between these broad lines of action and measures for dealing with the short-term crisis in order to form a coherent whole, the document is often on target, but does not deal fully with the question.

In the area of monetary and exchange-rate policy, the document proposes an initial, very important

[2] See Mexico, Poder Ejecutivo Federal (1995) and Grupo de Economistas Asociados (1995).

link with export strategy. The exchange rate will essentially be determined by market forces, and efforts will be made both to maintain its real parity in order to prevent productivity gains from leaching away to the exterior and to control excessive external borrowing.

Savings and its promotion –by means of fiscal and institutional instruments, among others– are an extremely high priority. The country and its companies need to recover the autonomy which comes from financing investment with predominantly domestic funds.

A third link between the long and the short term is forged by what are called sectoral policies. In the face of increasingly public demands on the part of the business community, the document only reluctantly acknowledges the need for industrial policies designed to facilitate the modernization of production, particularly in small and medium-sized industries.[3]

As regards the alarming imbalances in the country's labour markets, the Plan's proposals are cautious and indirect. As is to be expected, it calls for measures to enhance human capital –such as education, training and technical refresher courses– and to reduce payroll taxes, which keep wages artificially high and depress the demand for labour. In light of this and of rising unemployment, it is to be expected that labour laws will be revised with a view to making them more flexible. However, solving the problem of insufficient job creation is mainly considered as a by-product of investment and of the resulting recovery. Similarly, wage improvements are made dependent on productivity increases.

This approach is not carried through to its logical conclusion here, however; instead this is left up to a subsequent analysis of the factors which "affect the production sector's absorption of labour" (Mexico, Poder Ejecutivo Federal, 1995, p. 151). Perhaps it could not be otherwise, considering that the recessionary adjustment policy and the retooling of production capacity in those Mexican firms that have survived liberalization have costs that are reflected in unemployment.[4] Yet, in view of the stifling effects of this situation, it would be socially and politically justifiable to introduce active employment policies and expand the emergency programmes run by the Ministry of Social Development and other government departments, especially since the worldwide technological revolution and economic globalization have severed the organic links between growth and employment.

It is undoubtedly of prime importance to restore the country's major macroeconomic equilibria. There is an urgent need to promote actions and processes to eliminate the balance-of-payments deficit and price differentials. Equally pressing is the need to realign labour laws to reflect the realities of international competition in a country which is moving away from protectionism. However, under current circumstances, abandoning the labour market to its fate and wringing further concessions from a labour movement which is facing an erosion of real wages and employment could rend the social fabric and trigger an immediate and deeper depression of the domestic market.[5]

In the economic and social sphere it is often counterproductive to pursue isolated goals while neglecting others with which they are interconnected or, even worse, interdependent. Thus, at the beginning of the 1980s, there was an obsessive effort to achieve specified growth targets, with little thought for their inflationary repercussions, while, during the last Administration, the fixation was on reducing inflation to single-digit levels, regardless of such a policy's devastating effects on the balance of payments and companies' microeconomic variables. Neither of these very different structural reform strategies went far enough or was sufficiently thought through, and the country was therefore exposed to severely destabilizing processes.

[3] There are leftover traces of the model in vogue during the previous six years, which denied the virtues of any industrial policy whatsoever; it is still considered difficult to "pick winners" –however little doubt there may now be as to the desirability of promoting automotive-industry suppliers or the petrochemical industry, or of increasing the integration of the *maquila* industry– and it seems highly unlikely that the State will provide a deliberate boost for export activities (through subsidies, credit, capital inputs, marketing support, etc.) in the manner of the South-East Asian countries.

[4] Taking the period from 1980 to 1994 as a whole, industrial employment has come to a standstill, and the agricultural sector's ability to retain labour is declining, while the drop in the rate of population growth has not yet begun to slow the expansion of the labour force (Clavijo and Casar, 1994; Ibarra, 1995a; and Bank of Mexico, 1995a). Indeed phenomena ranging from the intensification of migration to the United States to the Chiapas disturbances seem to be related in some way to poverty resulting from imbalances in the labour market.

[5] The President's Report itself recognizes that the economic crisis is not over and that the most important task remains to be completed: "to create more productive, well-paid jobs through the structural transformation of industry" (Zedillo, 1995a and 1995b).

IV
Policies

It is thus appropriate to look more closely at economic trends during 1995.

Fiscal policy aimed to create a primary surplus of 4.4% of output and to pare down programmable spending by 9.8%. On the revenue side of the equation, the value added tax was raised by 50% and the prices and charges for goods and services provided by the public sector were increased (gasoline and diesel-oil by 35%, and electricity and natural gas by 20%). [6]

Monetary policy was designed to be extremely restrictive. The expansion of Central Bank credit was subject to a nominal ceiling five-sixths lower than that of the previous year (not exceeding 10 billion new pesos). At the same time, interest rates were allowed to rise so that they could accommodate the pace of inflation; at first this took the form of a lagged adjustment but later these rates began to move in line with expected inflation. The financial intermediation programmes of the development banking system were considerably curtailed in real terms. A large part of the financial package negotiated with the United States Department of the Treasury, the International Monetary Fund (IMF) and the Bank for International Settlements (BIS) was earmarked to redeem Tesobonos and other short-term public and private debt paper (IMF, 1995; ECLAC, 1995b). The parity of the peso ceased to be used as an anchor to restrain inflation and the exchange rate was allowed to float more or less freely, with the aim of holding its real value steady. As regards wage policy, real wages are to be permitted to decline further.

The Government also continues to promote reforms with a view to structural change and to attempt to supplement the fiscal budget with special funding. Despite the rising tide of criticism about many earlier moves towards privatization and nationalistic resistance to the dismantling of Petróleos Mexicanos (PEMEX) and the Federal Electricity Company, three port terminals were taken out of public-sector management at the end of June, and plans are proceeding apace to do the same with, *inter alia*, the railways, natural gas distribution facilities, petrochemical plants, airports and electrical power plants. Similarly, the Government is proceeding with its deregulation plans, which range from the simplification or abolition of paperwork to measures which will intensify competition in the domestic market, such as those anticipated under the new telephone regime.

V
The facts

Although it is too soon to attempt a rigorous evaluation, thus far the results of the economic emergency programme, the Agreement to Unite to Combat the Economic Emergency (AUSEE) and the Programme of Action to Reinforce the Agreement to Unite to Combat the Economic Emergency (PARAUSEE) have produced a patchwork of progress and setbacks (Valenzuela, 1995).

1. Progress

On the positive side, there has undeniably been steady progress in restoring some macroeconomic equilibria, in defusing the destabilizing effects of the bubble created by the build-up of external debt maturities and, in certain areas of economic activity, the consolidation of many companies' financial position and international competitiveness. In this last, more microeconomic area, a new export sector is emerging which has stronger linkages with transnational production and trade networks and access to foreign re-

[6] Information from the Ministry of Finance and Public Credit, the Senate, Mexweek (1995) and the Grupo Financiero Bancomer.

sources. [7] Some businesses –especially large ones– have retooled and have rationalized their costs. Major inroads have also been made in the exploitation of comparative advantages, as is attested to by the expansion of the *maquila* industry, motor vehicle exports and tourism.

The stabilization programme has also recorded successes, as seen in the reduction of post-devaluation inflation and the correction of external accounts. As regards inflation, while there were sharp rises in producer and consumer prices in the first half of 1995 (36.3% and 32.3% respectively), the rate of increase has slowed since April. [8]

In the first half of 1995 exports responded satisfactorily (up 32%) compared with the same period of the preceding year (in August the figure was 32.5%).[9] The export sector increased its share of output as a whole and took a leading role as a major driving force in the economy.

Imports contracted by nearly 7% (7.8% as of August), with a particularly steep drop being seen in imports of consumer goods [10] (40% in the first half-year, 42% as of August) and capital goods (30% in the first half-year, 32% as of August). Purchases of intermediate goods, which already accounted for more than three quarters of the total, continued to rise (4% in the first half-year, 3.4% as of August), albeit at a much lower rate than in previous years.

As a result, there was a turnaround in the balance of trade from a deficit of over US$8.8 billion in the first half of 1994 to a surplus of nearly US$2.9 billion in the same period of 1995. [11]

Monetary policy has maintained an unwaveringly restrictive course. During the first half of 1995, credit from the Bank of Mexico was reduced by over 40 billion new pesos (71 billion new pesos as of September), the monetary base shrank by 18% and the money supply by 20%,[12] while interest rates rose in real terms in the wake of the stronger inflationary impact of April's devaluation. [13] The sum of government domestic debt securities in private hands went down by 21%, or 33 billion new pesos.[14] A particularly noteworthy decrease was seen in the level of tesobonos, which accounted for US$29 billion in December but had been reduced by two thirds by the end of June and were expected to drop to between US$2 billion and US$3 billion by September.

The financial package put together by the United States Treasury and international institutions (US$47.75 billion) not only enabled Mexico to service its external debt normally –despite the huge accumulation of short-term maturities– but also made it possible for its international reserves to be gradually replenished. [15] The establishment of a market for peso

[7] Although only a small number of companies are sizeable exporters, they account for a considerable share of production and foreign exchange earnings, though not of employment (see footnote 1). The export sector now accounts for 25% of output and is the only segment that has not succumbed to the crisis. Imports to this sector have, accordingly, continued their robust growth (intermediate goods are up by 30% and capital goods by 36%), whereas imports by companies serving the domestic market have fallen by 28% and 46% respectively (information from INEGI (1995), Grupo Financiero Banamex-Accival, Grupo Financiero Bancomer, Bank of Mexico and Grupo Financiero Inverlat).

[8] The rise in the consumer price index in April 1995 was 8%, but fell to 2% in July-August. Not only did the economy absorb the effects of the devaluation, but also of the internal shocks caused by the rise in taxes (VAT), increases in the prices of a large number of public-sector goods and services, and the two wage adjustments. As of July, the consumer price index had climbed by 35.6%, producer prices by 39.3% and the basic shopping basket by 42.1%. In September, October and November, prices surged owing to seasonal factors and, in particular, to the interest rate rise (information from INEGI, Grupo Financiero Banamex-Accival, Grupo Financiero Bancomer, Bank of Mexico and Grupo Financiero Inverlat).

[9] Exports of agricultural products rose by 63%, minerals by 60% and manufactures, excluding *maquila* products, by 44% (notably textiles, iron and steel products, metal products and machinery, chemicals and paper).

[10] Domestic consumption of both imported and domestically-produced goods contracted owing to actual or expected declines in people's wealth or income. This was the reverse of what happened in 1988-1994, when the peso was rising and the economy was opening up.

[11] As of August there was a trade surplus of US$4.5 billion, as compared with a deficit of US$12.1 billion in 1994.

[12] According to information from the Bank of Mexico, current-account deposits fell by 41% (annualized), M1 dropped by nearly 34% and real M4 by 12.6% in real terms as of July. However, it may be that the replenishment of international reserves had the effect of lowering Central Bank credit statistics.

[13] Interest rates on deposits were negative for the first four months of 1995, but then reversed direction and reached high levels –between 8% and 9%– during the following few months. Nevertheless, in nominal terms these rates declined from 70% in March to somewhat over 30% in August.

[14] Part of this reduction was accounted for by the conversion of domestic debt into external debt (financing the redemption of Tesobonos and other instruments out of the loan capital provided in the financial package).

[15] A total of US$23.9 billion had been received as of August. The Bank of Mexico used around US$13.4 billion of this amount and the federal government the remainder (Zedillo, 1995b).

futures on the Chicago Mercantile Exchange was another extremely important step forward in the stabilization of the exchange system.

There was also a major recovery in the Mexican Stock Exchange. At the beginning of March 1995 the prices and quotations index was down nearly 40% from the end of the preceding year, and although by July the 1994 level had been exceeded (2 550 points on 9 August), at the end of September a further fall, associated with the instability of the relevant financial markets, was beginning to take shape.

Timidly, and despite high costs (and short terms of between three months and two years), Mexico is re-entering international capital markets, as is demonstrated by the recent issues floated by two credit institutions, Banco Nacional de Comercio Exterior and Nacional Financiera, at spreads of between 400 and 500 base points over LIBOR. Foreign investment in the stock exchange picked up slightly in May, only to fall back from September onwards.[16]

The way in which public finances have been managed has helped to make the Government's rigorous macroeconomic adjustment programme more effective. An effort is clearly being made to balance government accounts, in line with the aim of eliminating the inflationary effects of the devaluation, and this effort is succeeding. The first six months of 1995 saw a primary surplus of 2.9% of the product and a financial surplus of 1%;[17] programmable spending was cut by 14.3% in real terms (compared with the same period in 1994).[18] Spending levels are lower across the board, but the deepest cuts have been in capital expenditure (nearly 60%).[19] Meanwhile, revenue dropped slightly (2%); however, thanks to the rise in tax rates (50% on VAT) and higher charges for power and other public services, to the upswing in oil prices in the first months of the year and to other special operations, the effects of the downturn in tax receipts were all but offset.[20]

Lastly, the most encouraging aspect of the President's first report was the establishment of one of the most important links between the Government's short- and long-term strategies. A policy of economic revitalization was proposed that, despite a certain hesitancy as to its size and scope, is to rest on the following actions: giving freer rein to public investment expenditure, which had been constrained during the first half of the year (three quarters of the investment budget may be spent during the second half of the year); promoting a special housing programme which is expected to create 200 000 jobs; establishing an infrastructure investment fund of 1.6 billion new pesos, to be financed with public, private and credit resources; alleviating the problem of delinquent debtors in the banking system; promoting national saving; and giving incentives to foreign capital (Zedillo, 1995a and 1995b). The recent formation of the Alliance for Economic Recovery[21] reflects the intention to make development targets a higher priority and constitutes a first step towards the democratization of economic policy.[22] It was emphasized, however, that this revitalization will not entail any relaxation of fiscal and monetary discipline whatsoever.[23]

[16] From January to the beginning of August, Mexican share prices (ADRs and investment funds) marked up sizeable losses on United States stock exchanges. For example, ADRs issued by Vitro, Telmex and the Grupo Mexicano de Desarrollo had dropped by 31%, 17% and 50% respectively. Meanwhile, Fondo México, the Emerging Mexican Fund and Mexico Equity & Income were down by 18%, 30% and 26% respectively (Grupo Financiero Inverlat, various issues).

[17] The targets agreed upon with the International Monetary Fund were a 4.4% primary deficit and a 1.6% financial deficit (IMF, 1995; Ministry of Finance and Public Credit, various issues, and 1995).

[18] The target for cuts had been set at the more modest level of 9%.

[19] Programmable spending and investment spending needed to be curtailed, in part, to allow payment of the interest charges on the public debt, which soared by 53% in the first half of 1995 (Zedillo, 1995b).

[20] Domestic public debt fell by 15% (to 8.5% of GDP) as the main result of the redemption of tesobonos; by contrast, external government debt rose 10% to almost US$94 billion, and this figure does not even include the loans on the Bank of Mexico's accounts (Zedillo, 1995b; Ministry of Finance and Public Credit, 1995).

[21] See Grupo de Economistas Asociados (1995) and Ministry of Finance and Public Credit (various issues and 1995).

[22] The task of the Alliance is to attain a growth rate of 3% and inflation of 20% in 1996. To that end it is envisaged that, among other measures, tax credits will be granted for productive investment and employment, taxes on the assets of small businesses and on new automobiles will be abolished, the minimum wage will be raised and energy prices will rise.

[23] A loosening of restrictions on public spending could force the Bank of Mexico to tighten up on monetary policy. In fact, the difficulty of reconciling the revitalization of the economy with the Government's anti-inflationary targets can only be eased by continued high rates of idle production capacity.

2. Problems

As is to be expected, the main cost of the Government's post-devaluation policy has been an excessive contraction of the economy. Output fell nearly 5.8% in the first half of 1995 and almost 10.5% in the second half, thereby throwing the country into the worst depression of the last 50 years (Bank of Mexico, 1995).

The inevitable transitional effects of the structural reform process undermined the Government's claim to legitimacy based on its performance in terms of growth and income distribution.

The recession affected both companies and aggregated variables such as investment and savings. Gross fixed investment dropped by 35% and, within that aggregate, public capital formation fell even further (over 60%). Consumption slumped by 14%.

This compounded the already endemic decline in savings and capital formation. In fact, despite the elimination of the public-sector deficit, national saving has declined steadily (by 6-8 points of GDP in total) since the 1980s, and the average growth rate of investment has gone down considerably, with the exception of the period 1992-1994. [24]

Public debt, which had fallen from 79% to 23% of GDP between 1986 and 1992, rose once more, reaching 47% in the first half of 1995. This was basically due to the devaluation, since external debt grew by some US$11 billion and domestic debt by 3 billion new pesos.

Technological modernization and the recession accentuated the imbalances in the labour market. The open unemployment rate more than doubled between December 1994 and May 1995, reaching the record figure of 7.3% in September. If part-time workers are included (under 35 hours per week), this figure goes up to 25% of the economically active population. The number of persons registered with the Mexican Social Security Institute fell by more than 775 000 (7.5%) and, as of August, the decrease amounted to more than 842 000 (Ibarra, 1995a). The end results of this situation included an explosive surge in the informal segments of the economy, the intensification of migratory pressures, the spread of poverty and a deterioration in the financial standing of the country's social security institutions.

In addition, pressure is being exerted by the business community to make labour legislation more flexible and to cut the taxes, social security payments and contributions to the National Fund for Workers' Housing (INFONAVIT) that keep labour costs artificially high and thus make Mexican industry less competitive. It should come as no surprise, then, that real wages are declining and will continue to do so; this erosion of wage levels will almost certainly total no less than 10%-20% in 1995 and will thus compound the effect of the other factors that are causing the domestic market to shrink. [25]

On the real side of the economy, the recession has had across-the-board effects, hitting nearly all production activities and sectors. Manufactures dropped 5.5% in the first half of the year (6% as of July). The industrial sector as a whole [26] contracted by more than 6% (7% as of July) and the services sector by 5%. Agriculture, after a fairly favourable first quarter (2% growth), went sharply into reverse and posted a half-year average of -9.8% due to the overwhelming impact of a drought, lack of access to credit and high interest rates. [27]

There were spectacular downturns in construction (16%; 18% as of July), the textile and clothing sectors (19%) and metal products and machinery and equipment (12%); within this last sector, production in the automotive industry tumbled by over 20%. In the services sector, commerce was down by 13%.

[24] Had it not been for the financial package, flows of external saving would have been severely restricted. In the first half of the year, the capital account yielded net income of little more than US$3 billion, compared with US$10 billion in the same period the year before. Foreign direct investment and portfolio investment, taken together, dropped by US$9.5 billion. By contrast, loans rose to over US$13 billion. By March, credits and foreign investment in domestic debt paper would have fallen by nearly US$8 billion, had they not been offset by these special inflows.

[25] The average reported wage of workers covered by the social security system fell 9.6% in the first six months of the year while, according to INEGI, between January and May annualized real wages dropped by 6.3% in manufacturing and by 8.6% in commerce. Taking 1978 as a base year, real minimum wages, although less representative than before, had lost more than two thirds of their purchasing power as of June 1995 (see also Grupo Financiero Banamex-Accival, 1993).

[26] According to the Chairman of the Entrepreneurial Coordinating Council, Héctor Larios Santillán, "industry is functioning at 30%-50% of capacity" (*El Economista*, Mexico City, 3 August), thereby reducing competitiveness and putting inflationary pressure on costs.

[27] Grain production declined nearly 27% in the first six months of 1995.

Like it or not, the short-term financial stabilization process is weakening the microeconomic foundations of the national system of production. The recent depreciation of the currency and the upturn in interest rates have dealt further blows to Mexican companies. In the recent past, this situation became an intolerable source of trade and external-payment imbalances (Ibarra, 1995b; Centro Tepoztlán, 1995; Servitje, 1995). Today, it translates into equally intolerable misalignments in the labour market, a failure to take advantage of the opportunities for growth being opened up by the liberalization of the economy, and damage to the national financial system.

3. The problem of bank claims

The accumulation of overdue portfolios is nothing new. Between 1988 and 1994 these obligations had steadily mounted up, reflecting the turbulence caused by the adjustment to an open, competitive regime, the absence of industrial policies to make the process easier, and the use of high interest rates as an instrument to achieve external equilibrium. However, it was the combination of these factors with the devaluation [28] and depression of 1995 that exacerbated borrowers' insolvency problems to such an extent that the stability of the national financial system, and thus the very progress of the adjustment programme, was jeopardized.

According to information from the Bank of Mexico, by the end of 1994 medium- and high-risk credits made up 8% of the commercial banking sector's portfolio and 14% of that of the development banking sector (i.e., nearly three and four times more, respectively, than international standards). Moreover, the first of these figures doubled during the first half of 1995 to around 16% (100 billion new pesos).

Financial institutions have been forced to increase their loan-loss provisions –thereby reducing profits– and to make greater efforts to build up their capital at a time when the market value of their shares has been dropping sharply.[29] At the same time, assets and liquidity have risen as delinquent clients' collateral has been called in.

For their part, the financial authorities and the Bank of Mexico have also attempted to alleviate the problem. By June 1995, 21.5 billion new pesos and more than US$1.5 billion had been channelled through the Bank Savings Protection Fund (FOBAPROA) in order to help improve the banking system's capital position. The Temporary Capitalization Programme (PROCAPTE) also transferred nearly US$3.5 billion, [30] and nearly US$1.75 billion has been committed by the World Bank and the Inter-American Development Bank (IDB) to finance support programmes for the banking system. [31]

In 1995, with State assistance, three bank debt restructuring programmes were drawn up which covered a total of nearly 150 billion new pesos. The first, for 76 billion new pesos, benefits small and medium-sized enterprises. [32] Similar schemes have been developed to help restructure mortgage loans (33 billion new pesos) and loans in foreign currency (US$6 billion).

Lastly, the federal government and the Mexican Bankers' Association have drawn up an Agreement for Immediate Debtor Assistance (ADE), which contains a complex set of measures geared towards alleviating the problem of the accumulation of overdue portfolios (Grupo de Economistas Asociados, 1995). More specifically, this agreement lowers interest rates for certain groups of debtors for a period of one year, provides incentives for them to fulfil the terms of their contracts, facilitates adoption of the UDIs regime and strongly promotes loan restructuring agreements. Furthermore, it is designed to assist small and medium-sized debtors as a group, as negotiation on a case-by-case basis is neither practical nor

[28] Many companies with obligations in foreign currency saw their liabilities, and their corresponding debt service payments, soar.

[29] Under current regulations, banks must maintain capital reserves equivalent to no less than 8% of their exposure.

[30] This aid does not involve real transfers of resources, but is effected through the exchange of securities between the banks concerned and the Central Bank.

[31] Out of a total of US$2.763 billion in credits from the World Bank and IDB, 63% was allocated to the banking system.

[32] Overdue portfolios are to be transferred (with a maximum per bank equivalent to 20% of each institution's loan portfolio) net of reserves. In return, the banks will receive an equivalent amount of Government zero-coupon bonds which will pay interest at the same rate as 28-day treasury certificates (CETES). This will allow corporate debt to be restructured and expressed in Investment Units (UDIs) with a real interest rate of up to 12%, a maximum term of 12 years and a grace period of up to seven years. The trust funds will be financed through an issue of UDIs with a spread of four points, which is to be covered by the federal government.

viable. [33] The cost of the programme is by no means negligible: before interest rates began to rise in October 1995, it was estimated at 17 billion new pesos. This cost is to be borne by the Government and the banking system and does not include the 13 billion new pesos to be provided by the Government as backing for the UDIs regime. [34]

Furthermore, the myriad support programmes now being drawn up to help get the banking system back into shape are clear evidence of the huge direct and indirect costs –both monetary and in terms of the deterioration of national production facilities– of waiting until problems become really critical before attempting to find solutions. In such situations, policies are reactive –and at times contradict the broad lines of government strategy– rather than giving a clear indication of the course to be followed. The direct or indirect socialization of these costs gives rise to external diseconomies or adds to the burden to be shouldered by a population and a business community already overwhelmed by economic depression.

The problem of overdue loan portfolios has had, and continues to have, damaging consequences for the national economy. In the first place, it gives rise to flaws and breakdowns in the process of financial intermediation and makes it more likely that a tight monetary policy will trigger a recession, since the banking sector will prefer to invest its meagre deposits in State securities, rather than meeting the needs of private companies. [35]

Second, this situation splits the business community and works against ethical business practices. Tensions accumulate between creditors and debtors and between debtors and the Government. [36] Each group struggles to gain influence and to offload onto the others the burden of existing or future losses.

As long as a large number of bank customers are insolvent, the problem of the accumulation of unpaid debts is bound to recur in an increasingly virulent form. It is thus essential to relax the country's rigorous adjustment strategy somewhat and stimulate a cautious, general revival of Mexico's production activity.

As can readily be understood, since the privatization of banking services, there has been a lack not only of effective risk-reduction policies but also of fundamental strategic thinking as to the most suitable direction to take in carrying forward the structural modernization of such services. In the banks' defence, mention should be made of the unforeseeable effects of an unexpectedly severe crisis and the damaging consequences of the misalignment between macroeconomic and microeconomic strategies.

4. Other problems

The portfolio problems of the banking institutions are mirrored in magnified form among other financial intermediaries. Credit unions and cooperatives, leasing companies and independent factors –i.e., companies which are not members of financial groups– are in an even more difficult situation since they suffer from similar problems of delinquency while their

[33] More concretely, the programme will last for one year (until September 1996), except for the agricultural sector, where it will continue until February 1997. Non-delinquent debtors and delinquent debtors who agree to restructure their debts will automatically be eligible for ADE benefits; in addition, the latter will be exempt from penalty interest payments. Credit card interest rates, which normally hover around 70%, will be cut to 38.5% for the first 5 000 new pesos; the rate on consumer credit and personal loans will be set at 34% for the first 30 000 new pesos (the market rate is usually over 50%); for the first 200 000 new pesos of corporate debts, the rate will be 25%; and for housing mortgages, it will be 6.5% in UDIs on the first 200 000 new pesos owed, for the 12 months following signature of the restructuring contract, subject to the availability of UDIs. Lastly, a three-month debt holiday has been declared by the courts for delinquent debtors. This may be extended for up to one year upon signature of letters of intent to restructure.

[34] Before the recent rise in interest rates, the fiscal cost for 1995 was estimated at 2.5 billion new pesos, to be financed by expenditure cuts (20%) and from the surplus already generated (80%). The costs to be borne by the banking sector are somewhat theoretical, since they are based on income streams which are going to dry up and which would in any case have been uncertain because they would be derived from overdue portfolios.

[35] It is not only a question of legal restrictions on the expansion of bank credit (capital reserve requirements) but also of a preference for bolstering financial accounts and results by purchasing government securities instead of financing production activity. According to information from the Bank of Mexico, between the end of 1994 and July 1995 the commercial banking sector's portfolio of government securities grew fivefold (from 6 billion to 32 billion new pesos); since December 1993 it has increased by a factor of 11. As of mid-1995, commercial bank holdings accounted for around 20% of all the government bonds in circulation.

[36] Populist movements, such as the Barzón movement, are becoming widespread, as is the practice of suspending payment (in some instances for no justifiable reason) as part of a so-called "no-pay culture", while banks resort to draconian measures to recoup their loans, even going so far as to refuse all financial services to delinquent companies or individuals.

sources of financing are becoming increasingly expensive and scarce.[37]

These are not the only major financial problems that the federal government will have to face in the immediate future. A serious imbalance in social security institutions' accounts is already in the making;[38] and the toll-roads system, which originally served as a basis for the award of private concessions for building and operating roads, is now the object of a bail-out operation.

External debt pressures have not been entirely resolved. Public- and private-sector loans amount to around US$150 billion, and in the three-year period 1996-1998, annual payments on loan principal will fall due which, when added to the country's interest payments, will require very substantial outlays; a major portion of these maturities will have to be refinanced through sophisticated operations in the international capital market. Dealing with these emerging demands will solve major problems which have been brewing for some time, but will restrict the State's manoeuvring room for revitalizing the economy in the short term without relinquishing its aim of stabilization.

The breakdown of the financial conduit for bank credit, which has ceased to fulfil its function as a source of corporate finance, is compounded by a further, equally dangerous state of affairs. As a result of the instability of the exchange rate, or, to put it another way, the limited reserves of the Central Bank, exporters are recycling less of their proceeds in the domestic market. While this is a legitimate procedure in a context of free trade and free movement of capital, it weakens the peso, and the Government lacks the instruments to prevent this by any other means than raising interest rates, which are already at levels that are intolerable for both producers and debtors. This reinforces regressive biases in distribution which can lead to huge shifts in income towards speculators and exporters, to the detriment of the rest of the population, and makes it impossible to put off a fundamental restructuring of the financial sector's institutions and of its linkages with the national economy at the microeconomic and macroeconomic levels.

Moreover, these failings, together with the uncertainty associated with the economic depression, could set off further dangerous fluctuations in financial markets.[39] The recent movement in the exchange rate and the abrupt rise in interest rates have stymied the Government's stabilization efforts and forebode a prolongation of the economic recession and the possibility of a further period of hyperinflation. Neglect of the microeconomic situation and of disequilibria in certain markets (such as the financial and labour markets) seems to have created the need once again to dampen the upward, redistributive pressure on prices.

To summarize, a thorough reconstruction of the country's main financial circuits is a task that can no longer be put off. Piecemeal measures to cope with this or that specific problem once it has reached critical proportions are no longer sufficient. The main breakdowns have occurred, as pointed out above, in the following areas: i) the banking system has ceased to fulfil its basic function of intermediation, i.e., financing production activity; ii) the export sector is dynamic, but reluctant to bring back into the country a large part of the net foreign exchange it obtains abroad, and this, combined with the low level of value added to these exports, exerts pressure on the foreign exchange market which is very difficult for the Government to counter with the instruments at its disposal, except by tightening its recessionary monetary policies (Ibarra, 1995b); and iii) the timetable for external debt payments is still oriented to the short term and the amount of incoming foreign savings is limited, rather than being the abundant inflow on which many of the hopes of economic revival rest. These constitute formidable obstacles to the revitalization of production activity, in the absence of which the symptoms of social discontent and ungovernability could go beyond reasonable levels.

[37] In July 1995, factors' overdue portfolios averaged 25%.

[38] In the first half of the year payments to the Social Security Institute itself contracted by 14% and those to the Social Security and Social Service Institute for State Workers by 24% (Zedillo, 1995b).

[39] For these and other reasons, the interbank exchange rate went up from 6.26 new pesos to 6.83 new pesos to the dollar, while December contracts climbed from 6.7 new pesos to 7.0 new pesos (on the Chicago exchange). More recently, prices have exceeded 8 new pesos to the dollar. Meanwhile, interest rates (28-day CETES) surged from 33.5% in mid-September to 42% in the second half of October and 54% in November.

VI
Epilogue

The ideological erosion of the Mexican revolutionary movement makes it necessary to build new political consensuses, which, however, will not entirely replace neoliberal doctrine. What is more, the impoverishment of national values and popular objectives in the institutional reforms of recent years demands some form of legitimization in order to render the increasing imbalance in the distribution of income and wealth politically tolerable while the political modernization of the country moves forward.

Paradoxically, the problems of adjustment experienced by a highly protectionist, Statist system in making the transition to an open, market-based economic scheme have, for the moment, slowed the pace of development, while accentuating the country's distributive problems and undermining the bases of national production.

The National Development Plan is a reflection of an appropriate long-term view of the processes of economic and democratic modernization and of the further development of a State based on the rule of law. However, it is inadequately coordinated with short-term adjustment policies, and therefore cannot be implemented until the post-devaluation situation has been resolved, which will entail the adoption of recessionary measures.

When radical reform is undertaken –as now– it would be a miracle if major, albeit temporary, upheavals did not take place in the economy and in income distribution as new forms of growth establish themselves. With the consolidation of a competition-based system that is open to the outside world, it is natural that a number of companies and individuals should become redundant. In other words, stabilization and structural adjustment programmes normally slow the momentum of growth owing to the accommodations and sectoral reallocation of resources they inevitably bring about. [40]

Social life involves complex relations of interdependence which make it essential to achieve overall dynamic equilibria if change is to be assimilated and progress is to be compatible with sustainable systems for promoting social equity. Moreover, *a posteriori* solutions to problems that have previously been ignored usually occasion exponentially higher costs.

Mexico runs the risk of exacerbating systemic or structural misalignments between the microeconomy and the macroeconomy and between its economic and its social or political policies.

There is a danger of triggering a financial disaster which, fortunately, the country has so far been able to avert through support measures for credit intermediaries. Nevertheless, as long as production capacity remains impaired, the national banking system will be in poor health and the costs of financial intermediation will be high.

By the same token, the emergency ought not to lead to a delay in implementing measures to alleviate social polarization and stem the spread of poverty. Here, too, there are hazards that are beginning to make themselves felt in an upsurge of conflicts and ungovernability and in abrupt swings of electoral mood which, while in themselves reflecting democratic progress, also express voters' dissatisfaction with the way federal or local governments are being run, regardless of their ideological hue.

The principal weakness of the National Development Plan may lie in its adoption of sequential formulas for action. The first step is stabilization of the rate of inflation and of foreign exchange markets, or divestiture of assets, and only then will there be an attempt to resume growth, create jobs, promote retooling or correct social inequities.

Unfortunately, the organic interweaving of elements of social life is rarely amenable to solutions of this type, where priorities are set and actions selected in a temporal sequence. One of the most discussed,

[40] See IMF, 1995. Note that between 1940 and 1980 real output grew at an average annual rate of 6.4% and per capita income at a rate of 3.1%. By contrast, between 1980 and 1994 these rates were a scant 1.9% and -0.2% respectively. Labour productivity also fell. Comparing the periods 1970-1981 and 1981-1991, it can be seen that the annual growth rate of the level of value added in the manufacturing sector dropped from 2.95% to 1.98%. Had the historic growth rate been maintained, total GDP in 1994 would have been 80% higher than it was, and per capita GDP would have been 50% higher. To a certain extent, this lost income is part of the cost of the changes in Mexico's institutional structure and pattern of development that began to be discernible at the beginning of the 1980s.

and least clear, of all socio-economic policy issues is the optimum sequence of actions and reforms and how to combine them at each stage (Bruno and Pleskovic, 1994). The need for reconciliation and coherence always makes it necessary to move forward on several different fronts, even though progress on each one may be limited.

Without underestimating the depth of the devaluation crisis, nor external contingencies, this concept of policy hinges on the assumption that the national production base and a marginalized labour force have retained not just their discipline and some reserves of strength, but also the ability, later on, to fuel a rapid recovery; it also assumes that external debt, concentrated in the short term, can easily be refinanced in the future. If it should prove otherwise, the proposals put forward in the National Development Plan will be overshadowed by the fallout from the emergencies which will inevitably continue to arise in the immediate future.

The task ahead is by no means simple, but it may still be feasible. The inertia inherent in current problem-solving methods will need to be overcome, national priorities will have to be integrated in a more balanced way, and fresh socio-political consensuses must be reached. However, the National Development Plan –the content of which is virtually unassailable– could end up as just another of the myriad "approaches" which have lost touch with reality to such an extent that their true features are obscured.

At the same time, international understandings will have to be reached in which finding solutions to the backwardness of the Third World is perceived not as the art of imposing standardized models that are essentially restricted to an economic focus but as the art of devising integrative formulas that address the true complexity of the phenomenon of economic modernization. The timely rescue operation by which Mexico was bailed out of its financial crisis made it possible to limit, to a very large extent, the danger of international repercussions in other markets. The lesson must now be learned, and work must begin on perfecting joint –and, in so far as possible, depoliticized– international strategies. Given the current situation in Mexico, it would be advisable to make the conditions attaching to these financial packages more flexible, undertake to rollover or renegotiate the debt, and allow first priority to be given to the pressing issues of unemployment and the deterioration of production capacity and of the banking system. Unfortunately, the economic management of Mexico is more than ever hamstrung by the vagaries of United States internal party politics.

The achievement of a reasonable and realistic accommodation seems important not only from the standpoint of the soundness of the Mexican economy, but also in terms of the development of the regional and global economic system. Mexico's problems have called into question the value of the so-called Washington Consensus regarding the economic reforms that have been implemented in virtually the whole of Latin America since the 1980s (Williamson, 1990; Hurt, 1995; *The Economist*, 1995). The crises in Venezuela, Argentina and Nicaragua, or the one which may be approaching in Brazil, with all their similarities and differences, bear witness to strategic weak points which need to be remedied or reinforced before the socio-economic regression of this hemisphere spreads further and takes root.

(Original: Spanish)

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Foreign trade and the *environment: experiences* in three Chilean *export sectors*

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This article presents the findings of research into the environmental adaptability of Chilean export enterprises in a number of sectors: wood, woodpulp, furniture manufacture, and salmon and oyster farming. The study was prompted by the ecological product and process requirements set by Germany and Europe in general, which are exerting pressure on those sectors to adapt. After examining the context offered by Chile for this adjustment process (section I), the article looks at these requirements and their status in the multilateral GATT regime (section II). The article then sets out the management and adjustment requirements which environmental reforms impose on the economic, political and social agents at the various levels at which they operate. These considerations form the analytical background to the study, in as much as the exposition of the problem calls for the adoption of a systemic competitiveness approach as a heuristic framework in order to define more precisely the demands placed on operators at the macro, meso and micro levels (section III). It then analyses in greater detail the environmental adaptability of enterprises in the sectors surveyed (section IV), and finally presents the conclusions of the study (section V). At the enterprise (micro) level, the pursuit of international competitiveness standards is encouraging major technological and organizational innovation and learning processes, while at the meso and macro levels (enterprise support structure and State regulatory activity), there are deficiencies that restrict enterprises' adjustment capability, thus hindering the effective economic exploitation of the dynamic comparative advantages connected with the sustainable management of Chile's natural resources.

I

Introduction

Export-oriented enterprises in developing countries are faced with an ever increasing number of environmental requirements concerning their products and production methods (Scholz, 1993; Wiemann *et al.*, 1994). These new requirements are causing enterprises to engage in complex learning processes in the areas of environmental management, technology and organization, which may entail simple or very complicated adjustments in product lines and production process stages. The experiences of the OECD countries indicate that the success of these learning processes depends not only on the presence of innovative enterprises but also on a macro-economic, political, legal and administrative context that provides incentives for making production and products increasingly environmentally compatible, and on an enterprise support structure whose institutions (basic and further training, research and technology, funding, and commercial and environmental policy) contribute to the search for appropriate solutions.

Chile is one of the most suitable countries for an analysis of environmental adaptation processes viewed within this conceptual framework. There are four reasons for this:

(i) In 1973, the import substitution strategy was replaced by an economic model which, with its clear focus on competitiveness and the global market, provided the impetus for the development of a strong and dynamic export sector that today accounts for about one quarter of GNP. [1] In the key areas of the export sector, the free trade regime has given rise to the emergence of an entrepreneurial sector trained to explore the product and process requirements of the global market and skilled in adapting the way its enterprises are organized to meet those requirements.

(ii) To a large extent, the international competitiveness of Chilean export enterprises continues to depend on static advantages of location, that is to say low labour costs, favourable climatic conditions and abundant natural resources. However, the phase of extensive exploitation of this source of competitiveness is beginning to reach its limits. One limit is set by the demand for wage increases for the broad mass of the labour force, a demand that has been growing since the return of democracy in 1990 and whose fulfilment would appear to be feasible given the country's sustained economic growth. The other limit relates to the environmental costs connected with the success of the new development strategy: the accelerated growth and dynamic development of the new, natural-resource-based export sectors –primarily fisheries, forestry and market gardening– carry the risk of depletion of certain natural resources and of high levels of pollution of the air, water and soil. [2]

(iii) A forward-looking economic policy must aim to fulfil two purposes: firstly, it must in the long term ensure the international competitiveness of the Chilean economy by extending social growth projections; secondly, it must reduce the environmental impact of production patterns. It will therefore be necessary to increase the creation of added value, boost productivity and develop more sophisticated and less natural-resource-dependent sectors. If these two purposes are pursued, outward-oriented industrialization supported by dynamic raw-material-based export sectors (the "second stage" of the export model) [3] could provide

□ The study on which this article is based was conducted by a working group of the German Development Institute, Berlin, composed of the author and Karola Block, Karen Feil, Martin Krause, Karolin Nakonz and Christoph Oberle. The group was greatly assisted by ProChile, the State export promotion agency. For an exhaustive report on the research and its findings in each of the sectors surveyed, see Scholz, Block, Feil, Krause, Nakonz and Oberle (1994).

[1] In 1993, GNP was US$43,700 million and exports totalled US$9,400 million (bfai, 1995).

[2] Given the regional distribution of the new export sectors, all the environmental problems –with the exception of overfishing of inshore waters– have a marked regional dimension: the degradation and felling of native forests, which endanger bio-diversity, are concentrated in the south of the country; pollution of the soil and water resources by single-crop farming mainly affects the regions that specialize in tree, vegetable or fruit growing; Santiago and other urban centres have serious air pollution, traffic, transport and waste disposal problems (Sanhueza, 1992). Concerning the regional distribution of the new economic sectors and their environmental impact, see Dockendorff *et al.* (1990), quoted by Maggi (1994).

[3] See Madrid and Ominami (1989), Mármora and Messner (1992), and also Messner (1993) on developing competitiveness potential in the Chilean wood export sector.

leeway for wage increases and keep Chile on its technological development course. The prospects for reforming the Chilean economy in an environmentally favourable manner lie in the synergistic effects that can be achieved by coupling measures to promote productivity and efficiency with protection of the environment and natural resources at both the enterprise and the sectoral levels.[4]

(iv) Since 1990, when the military regime came to an end, the first elements of environmental controls at the State level have been emerging.[5] Public debate on this issue indicates relatively broad environmental awareness. However, the reforms are at the same time hindered by three factors characteristic of developing countries that have abandoned the import substitution strategy with its high level of State intervention. Firstly, predominant neo-liberal thinking makes State intervention seem inefficient in comparison with market forces and obscures the positive functions of government management. However, State action is not in fact limited to establishing and strengthening an institutional framework conducive to the free development of the individuals and subsystems comprising a society; rather, among other things, it coordinates different or divergent interests for the common good and gives consistency to the different sectoral policies. Secondly, the trimming of the State apparatus has led to a reduction in management, planning and monitoring capacities. Thirdly, this situation has increased the influence of powerful interest groups in the formulation, implementation or blocking of parliamentary initiatives, with the result that the solving of environmental problems is obstructed by private economic interests.[6]

Chile therefore has need of entrepreneurial, sectoral and politico-administrative reforms in a context which, despite the limitations mentioned earlier, is politically and economically favourable.

II

Environmental requirements for products and processes

Ecological product requirements are assuming increasing importance in Germany and other European countries. There are three reasons for this phenomenon: firstly, consumers are now better informed of the pollutant or harmful properties of commodities and are thus guided by environmental criteria when making purchase decisions; secondly, this more vigilant attitude on the part of the consumer increases the pressure on the legislature to avert the potential dangers which toxic substances represent for the environment and human health; thirdly, industry and commerce have detected this change in consumer at-

[4] More efficient use of raw materials and energy helps to reduce enterprise costs and makes it possible to manage resources with greater care, thus facilitating, among other things, their regeneration and reducing energy consumption and consequent emissions. No answer has yet been found to the problem of limiting the outright consumption of natural and environmental resources that goes hand in hand with industrialization and the spread of Western consumption patterns in developing countries (sufficiency as opposed to efficiency).

[5] In 1990, the National Environmental Commission (CONAMA) was established with responsibility for coordinating and designing environmental policy. The development, implementation and monitoring of environmental policy at the sectoral level continues to be the responsibility of the ministries concerned. The first sectoral environmental law was the Fisheries Act, passed in 1991, which established a quota system for the exploitation and regeneration of fishery resources. The Basic Law on the Environment, adopted in 1994, serves as a basis for other laws, decrees and regulations on protection which are still pending, and also regulates the introduction of mechanisms such as environmental impact assessment, liability for environmental damage, and taxes, levies and licences. The laws and other statutory measures are guided by the principle of prevention and the "polluter pays" principle (Chile, 1994). In CIPMA (1992), a general idea is given of the debate in Chile on the regulatory models, instruments and fields of action that make up environmental policy.

[6] Gómez-Lobo and Jiles (1993, pp. 352-357) describe the negotiations concerning the Fisheries Act and examine the powerful lobby of the major fisheries enterprises in support of the establishment of regional boards to fix catch limits, rather than having that task carried out by the official agencies in the sector. These boards are an instrument through which enterprises can obstruct the establishment of a system of individual marketable quotas capable of regulating the extraction of fishery resources and greatly limit the freedom of action of official agencies to promote the efficient management of those resources.

titude, and are gradually adapting their production and input purchasing. These adjustment measures vary greatly in scope, ranging from merely using environmental marketing opportunities to examining the environmental impact and damage due to production with a view to ultimately eliminating them. This latter option is the one chosen by pioneering enterprises that have recognized the competitive advantages of a higher environmental profile and wish to exploit them.

Ecological requirements relating to products take a number of forms. [7] The mandatory legal requirements regarding maximum values, regulations concerning use or, as applicable, prohibitions on dangerous substances provide safeguards for the consumer and in the area of health and safety at work and also serve to protect the air, soil and water from environmental poisons.

At the same time, increasing use is being made of optional instruments to encourage enterprises to manufacture products with a lower environmental impact. These instruments include industrial standards that are agreed between manufacturers and users on the basis of technical criteria and which are now beginning to incorporate some environmental features. Other voluntary instruments are the marketing of products with an ecological seal of approval (OECD, 1991; Jha, Vossenaar and Zarrilli, 1993) and voluntary undertakings by industry not to use or produce dangerous substances.

Ecological product requirements also have an impact on how goods are manufactured. This is important because enterprises that are obliged to make short-term environmental adjustments in order to be competitive cannot avoid the need for wide-ranging structural changes in the medium and long terms. The environmental assessment of a product is usually based on an analysis of its complete life cycle (UBA, 1992). This includes not only manufacturing methods but also the stages preceding and subsequent to production (inputs, transport, use and disposal). Thus, in order to reduce the environmental impact of a product's properties it may be essential to restructure the entire value-added chain and not merely make the necessary adjustments to production processes and methods. The environmental policy for the business sector is reinforcing this trend with a set of incentives to encourage enterprises to undertake environmental stewardship themselves by increasing their technological and organizational capacity to solve related problems. This arsenal includes process regulations to prevent environmental pollution loads, optional instruments such as environmental impact surveys and participation in environmental management schemes and environmental audits. [8] This has unavoidable repercussions for input suppliers: enterprises that have environmental surveys or audits carried out are increasingly insistent that their subcontractors comply with ecological process requirements. Enterprises that lead the way in ecological matters are concerned with the environmental performance of a new product and the different stages in its manufacture from the moment they begin to develop it, and this in turn generates new requirements in redefining product functionality, quality and durability.

III

Pressure for environmental adjustment and systemic competitiveness

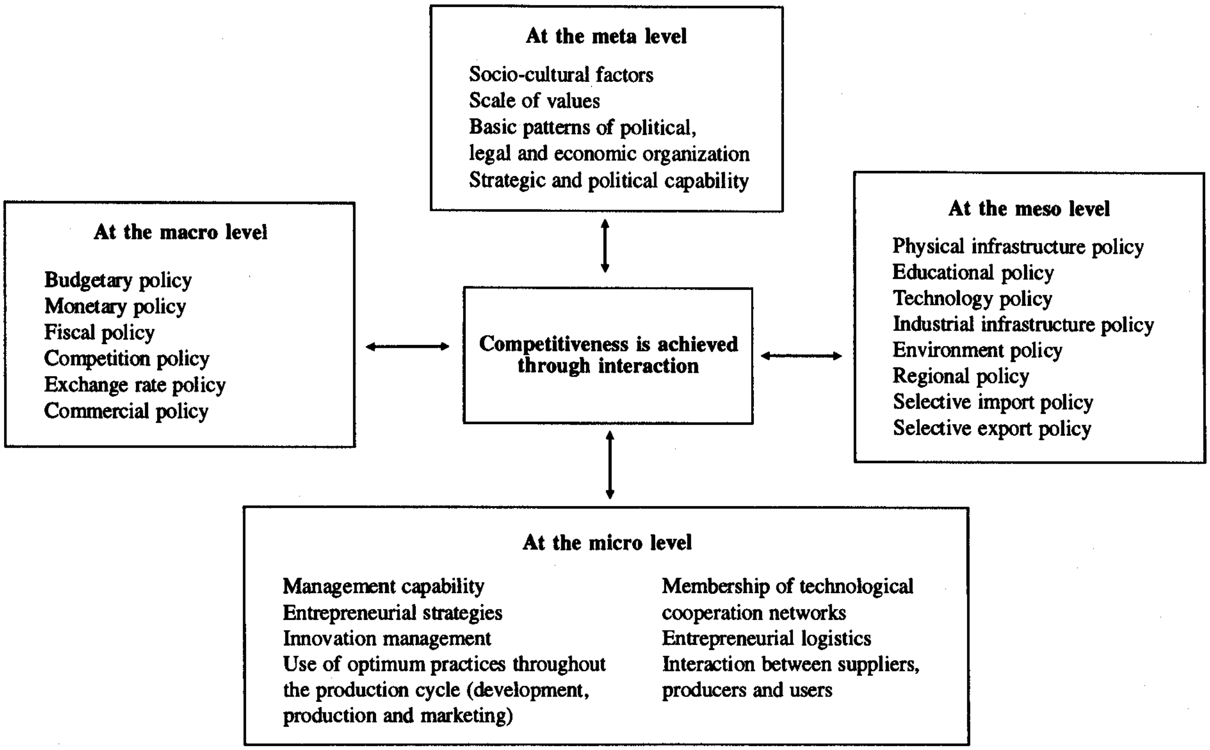
Improving the private sector's environmental adaptability is a considerable challenge to the technological and organizational learning capacity of exporting enterprises in developing countries. Added to this is the fact that the global economic context and, consequently, the factors that determine international competitiveness have undergone structural changes and become more complex. The concept of systemic competitiveness (Esser, Hillebrand, Messner and Meyer-Stamer, 1994; Hurtienne and Messner, 1994)

[7] Bennett and Verhoeve (1994) give a detailed description of environmental requirements in the European Union, the United States and Japan.

[8] Karl (1993) and Hunt and Johnson (1993) review the European Union directive on environmental audits (see European Commission, 1993). Welford (1993) referred to the limits of such environmental management systems at the enterprise level.

FIGURE 1

Factors that determine systemic competitiveness



makes it possible to distinguish between the levels at which systematic and coordinated efforts must be made and also to identify the social agency groups involved (figure 1). This concept highlights the urgent need to establish coordinated and interlinked structures between the different levels of action and between the social agency groups.

If the international competitiveness of the economy is to be kept within the limits of its ecological sustainability, operators must take up the challenge of an increased need for interaction and coordination at the micro, meso and macro levels, by generating new management tools and a new institutional fabric that can direct the learning and decision-making processes towards a common goal. It is therefore clear that both the environmental requirements of competitiveness and the model, albeit rather schematic, set out here to achieve competitiveness are extremely exacting, entail a number of premises and may thus give rise to quite a few difficulties. In a context that is dominated by competition, the problem is not only one of developing coordinated and interlinked structures. The negotiations that have to be undertaken on development priorities and objectives and the way in which the hoped-for benefits of economic prosperity will be distributed are a major challenge in countries whose weak institutional fabric hampers the full participation and protection of the interests of all sectors of the population.

Like the new demands that maintaining competitiveness places on the organizational and learning capacity of operators at the different levels of action, the strategy for environmentally sustainable industrial development inevitably entails complex processes of learning and adjustment in social, technological and institutional terms. The macro level assumes an important role when general conditions are being created to make economic development environmentally compatible (environmental legislation and optional and economic instruments). The State agencies must develop the necessary environmental instruments and establish the legal premises for a forward-looking environmental policy, for its objectives and for the necessary government intervention, all of which requires preliminary dialogue with the social agencies (enterprise associations, trade unions, scientific institutions and environmental organizations) in order to ensure the validity of these measures. This is an important pre-condition for mobilizing the professionalism and creativity of enterprises and applied research centres in the search for solutions that are both practical and environmentally sound. The application of economic instruments that use the mechanism of prices to change behaviour and improve efficiency also requires wide-ranging agreement between the social, political and economic agents on the extent of the objectives to be achieved using such measures.

At the micro level, the aim is to increase the readiness and capacity of enterprises to develop active strategies to boost their environmental efficiency that go beyond the minimum levels of environmental and natural resource protection. Eco-efficient enterprises are working to reduce the consumption of energy and natural resources in their production methods, replace pollutant inputs or materials, introduce clean products and technologies and recycle raw materials or products (Schmidheiny and Business Council for Sustainable Development, 1992).[9]

The importance of the meso level is further accentuated by the demands that structural environmental reforms place on the organizational and learning capacity of government institutions and civic bodies. This relates not only to the formulation of sectoral policies but also to the active role that institutions at this level can play in establishing and strengthening technological capability.[10]

In the design of sectoral policies and the search for specific solutions at the meso level, it is advisable to agree upon environmental measures and programmes with the social sectors and groups involved in order to give them greater validity and make them more easily acceptable, thus helping the pursuit of policies and solutions. Even though it seems trivial to say so, this step is an important one, both for the legislator –whose obligation is to learn to negotiate with the relevant interested groups inside and outside parliament and to justify interventions– and for the competent government institutions.[11] Against this background it would be reasonable to encourage decentralization efforts in order to strengthen regional or local problem-solving capabilities. This is particularly important in the developing countries, where the monitoring agencies are not strong enough to guarantee the effectiveness of legal instruments in practice and where the democratic structures are often too weak to enable those involved to play a full part in formulating the necessary instruments and measures.

The strengthening of enterprises' technological capability is a key requirement for improved control of the environmental impact of production processes and products. Consequently, technological institutions and the education system must be in a position to offer the necessary skills, techniques and guidance to enterprises wishing to introduce environmental innovations when export markets or the legislature so require. Institutions involved in the development of small- and medium-scale industry, technology transfer and export promotion must include the environmental dimension in their consultancy and promotional activities from the outset.

IV

Environmental adaptability of certain Chilean export sectors

Chilean exporters too have to cope with environmental requirements imposed on their products and production methods by markets, particularly in Europe. In order to evaluate the environmental adaptability of the sectors in question, it is useful to classify them into two categories: natural-resource-based sectors, whose international competitiveness depends increasingly on their ability to apply sustainable management methods, and manufacturing sectors, whose task is to improve the environmental compatibility of

[9] North (1992) gives us a general outline of the possibilities for incorporating environmental criteria in enterprise management.

[10] For a definition of technology and technological capability, see Hillebrand, Messner and Meyer-Stamer, 1994, pp. 3-8.

[11] The fact that the adoption of the Native Forests Act in Chile is already five years behind schedule indicates how hard this task can be in a situation dominated, on the one hand, by the newly regained scope for democratic action and, on the other, by neoliberal and anti-interventionist ideas.

their production methods and their products in an effort to achieve levels comparable with those in the industrialized countries.

1. Natural-resource-based sectors

Enterprises in these sectors have a high adjustment capability. The product and process requirements are relatively achievable and easy to satisfy owing to their low level of technical complexity.

a) *Salmon and oyster farming*

In this sector, both the European Union and the United States impose rigorous hygiene and health standards on enterprises and products [12] and they also demand high standards of breeding water quality. Compliance with these requirements has to be supervised and certified by official agencies recognized by the European or United States authorities. The high adaptability of enterprises in this new sector stems from four key factors: (i) they were established from the outset to supply export markets, so that their survival has always depended on compliance with external requirements; (ii) the enterprises have resources to meet the costs of environmental adjustment since they are solvent, have reserve assets and achieve large profits owing to their high growth rates and accelerated expansion in foreign markets; (iii) the requirements relating to water quality can be met without any prior efforts on the part of the enterprises, since Chile has abundant expanses of inland and coastal waters that are free from pollution of human origin; and (iv) in the employment market, the enterprises can supply their needs for trained and specialized workers as well as for cheap, unskilled labour.

There is, however, a fifth key factor to account for the high adjustment capability at the macro level: the strategy adopted to develop this sector included from the beginning the creation of an institutional framework to promote cooperation between enterprises in the sector and applied-research, information, technology-transfer and quality-control institutions that would help them survive in the export markets. [13] In other words, since the time of their establishment, these enterprises have had positive experiences with organizational methods that have enabled them to learn jointly and combine their efforts to enhance the general level of quality and performance in the sector. [14]

It is therefore to be hoped that this sector will be able to respond appropriately to the increasing pressure (external or internal, as the case may be) to remedy the environmental damage caused by aquaculture where measures can be taken at the enterprise level. This damage is due primarily to water pollution from increasingly intensive farming and from the harvesting waste, and it also has an adverse impact on local or regional fauna. None the less, the sector will be unable to solve the problems caused by effluents and other sources of harmful substances (such as sewage, agriculture and waste tips) that may affect its production. To keep breeding water pure, enterprises will have to rely on the promulgation of sectoral regulations and on the effectiveness of regional or local authorities that are responsible for monitoring compliance and are in a position to coordinate the action of the bodies involved in a given region.

b) *Forestry sector*

European wood importers are inquiring with increasing insistence into the methods by which the forests or plantations that produce this natural resource are managed. Consequently, the main environ-

[12] Interviews were conducted with 10 medium-sized modern enterprises, all of them exporters and most of them with a foreign holding. In virtually all cases, enterprises in this sector are split into two sections: the farming centre and the processing plant. The processing of salmon involves only harvesting, cleaning, sometimes filletting, packaging and freezing or refrigeration. Oysters only need to be packed for refrigerated transport. The relatively uniform structure of the enterprises in the sector made the survey fairly representative. Interviews were also conducted with all the major institutions at the meso level, including Fundación Chile, the National Fisheries Service (SERNAP), the Fisheries Development Institute (IFOP) and the sectoral associations.

[13] Fundación Chile played an important role in this process (Schmidheiny and Business Council for Sustainable Development, 1992, pp. 326 *et seq.*).

[14] The salmon industry association awards a quality seal of approval, which covers all export market requirements and is recognized by importers.

mental challenge facing the forestry sector in Chile is to introduce sustainable management methods in order to reduce the environmental impact of the plantations and to preserve the native forest. [15]

The pace of growth in the forestry sector began to quicken dramatically in 1974 with the promulgation of decree-law 701, the result being that Chile now has the world's largest expanse of pine plantations. [16] The key measure was to re-privatize the forests and to offer a guarantee of ownership that would open up secure prospects of a forestry industry necessarily oriented towards long-term profits. Also, subsidies and tax rebates were granted in respect of 75 per cent of reafforestation and forestry management costs (Vincent and Binkley, 1992, p. 113). These specific incentive measures have helped to turn Chile' s comparative natural advantages in this sector into sources of competitiveness. [17]

As a result of these incentive measures, 90 per cent of forestry production now comes from plantations and only 10 per cent from native forests. The plantations are single-species, cover vast areas (85 per cent pine and the rest eucalyptus) and are generally of a very high density. They produce the typical environmental effects of monoculture: unilateral nutrient consumption, reduction in soil fertility with the consequent danger of excessive fertilizer use; and plantations highly vulnerable to pests and diseases, with the risks inherent in the use of pesticides that pollute water resources. One positive contribution made by plantations is to help combat erosion, [18] which generally affects previously wooded areas that have undergone desertification as a result of overfarming. [19]

Large-scale enterprises in the sector have been introducing modern forestry management methods since the 1980s. This modernization has helped to improve enterprises' technological and organizational capability and also to create the conditions enabling them to perceive environmental problems in the sector and gradually adapt their management methods to meet environmental criteria. The first step on the modernization path was to increase productivity by establishing extensive plantations, using synthetic fertilizers and herbicides, enhancing species genetically and improving wood quality by the use of techniques such as pruning and thinning. In this way Chilean enterprises quickly mastered the best international forestry practices; thus there only remains a short step to the incremental innovations linking productivity increases to conservation of the environmental functions of the forest ecosystems.

In order to improve wood quality, pioneering enterprises are now designing new low-density plantations in the form of parks that permit considerably greater biodiversity; herbicides and fertilizers can be applied less extravagantly and in a manner appropriate to local conditions; biological pest control methods can be tested; lightweight harvesting machinery that is less detrimental to the soil can be used; smaller areas can be harvested; the soil does not have to be burnt after the trees have been felled to obtain more biomass, as the branches and roots are left to decay; and reafforestation can be undertaken without loss of time in order to prevent erosion. Underlying these changes is the fact that environmentally sustainable forestry management methods have a posi-

[15] The interviews in this sector were conducted with the two largest enterprises with plantations of *Pinus radiata* and eucalyptus, forestry enterprises in Region XII (*Nothofagus*), two wood chip producers and owners of small areas of native forest in Region IX. At the meso level, interviews were held in Santiago with the National Forestry Corporation (CONAF), the Forestry Institute (INFOR), the Chilean Wood Corporation (CORMA), CODEFF (a non-governmental organization) and forestry experts from the main universities and consultancy firms. In Regions VIII, IX and XII, the working group visited the regional forestry management offices for small and medium-sized entrepreneurs, as well as the university forestry departments.

[16] In order to halt the country's deforestation, which had been worsening rapidly since the mid-nineteenth century owing to the colonization of the south of Chile, reafforestation has qualified for tax allowances or subsidies since 1931. More than one million hectares are currently planted with *Pinus radiata*, a conifer originating in North America. Estimates indicate that this area may increase two- or even threefold in the future.

[17] The natural cost advantages include a favourable climate and a fertile soil, which greatly boost plantation yield compared with the northern hemisphere, as well as the short distances to the export ports.

[18] Between 70 and 80 per cent of plantations are reforested sites on degraded soil; the rest are native forest areas that have been replaced illegally. In contrast to the serious ecological damage caused by eucalyptus plantations in other regions of the world, this species seems to be relatively compatible with the Chilean environment. The plantations contain underbrush, the abundant rainfall is very well suited to the high water consumption of the trees, and Chile offers the eucalyptus a habitat that is similar to Australia, its country of origin.

[19] Hajek, 1991, gives information on damage caused by overfarming and deforestation, particularly since the mid-nineteenth century.

tive impact on costs and help to improve wood quality. The adjustment measures were facilitated because the stability of the markets and the profitability of the plantations generated the necessary financial resources for investing in applied research, improving equipment and trying out new machinery, and because well-trained forestry engineers were available. Willingness to adjust at the micro level was also stimulated by enterprises with an international shareholding that place emphasis on specific aspects of environmental protection and safety at work. [20]

Also, enterprise-to-enterprise cooperation (particularly in applied research) and cooperation between enterprises and university forestry engineering departments are creating conditions for the relatively easy assimilation of the technical and organizational skills which environmental adjustment requires. Within the sector, imitative learning processes are being engaged in by owners of small- and medium-scale forest plantations who can attest to the success of process innovations introduced by large-scale enterprises. This dissemination of information is being encouraged both by the universities that carry out applied research and by enterprise associations.

In the forestry sector, adjustment at the enterprise level is hindered by the lack of a sectoral framework law to regulate the use of natural resources (water, soil and native forests) and by the absence of regional initiatives to prompt all the agencies involved to cooperate in halting the plundering of those resources and in reducing the pollution of other environmental assets (here the monitoring and environmental bodies, community representatives, the representatives of the different sectors, such as forestry, farming and tourism, environmentalists' associations and the representatives of small-scale farmers and of the rural municipalities could play a role). It is true that the Basic Law on the Environment establishes structures that should bring about this regional coordination: the regional environment commissions (COREMA) have advisory boards made up of representatives of the private, trade-union and scientific sectors, as well as the environmentalist groups. However, it is also true that the establishment of these structures entails difficulties in practice since, apart from the problem of regional and local underfunding, the burden of the former system of centralization continues to hinder the mobilization of political and social management and organizational potential in the different regions. Furthermore, the level of organizational capability of the different social sectors is uneven; these advisory boards are thus unlikely in many cases to achieve a balanced consensus of interest.

With regard to the management of native forests, the lack of sectoral regulations and of effective and well-equipped institutional structures (environmental and forestry authorities) is one of the basic causes of the gradual degradation of such forests, since the short-term interests of profit and exploitation predominate with relative ease. [21] The introduction of sustainable management methods has been held back by three factors: (i) the delay in adoption of the initial draft of the Native Forests Act (Jiles, 1992; Villarroel, 1992), which provides for protection and appropriate management of forests of this type; (ii) the little dissemination of information concerning efficient and environmentally appropriate processing and management of native woodlands; and (iii) the low level of development of the markets for native wood products with higher value-added. Consequently, the prevailing situation in regions populated by native forests is one of disordered and destructive firewood extraction and tree-felling to obtain trunks for use in chip manufacture [22] and subsequent replacement of the degraded forests by plantations. This type of lumbering is not sustainable in forestry terms or rational in economic terms since the value-added component remains low, the potential value of the timber is not realized and the regional or local impact as regards creating of new centres of dynamic economic growth or new sources of income is highly uncertain.

[20] This is an area in which the pressure of public opinion in countries with higher environmental and social standards makes itself felt: environmentalist groups now monitor the practices of transnational enterprises, not only in the country of origin, but also at other locations. Enterprises in sectors that have had to halt activities for environmental reasons in the glare of public attention can no longer gain any comparative advantage by moving to countries with lower environmental protection standards.

[21] It cannot be said that the profit motive predominates totally unchecked since the Forestry Act currently in force requires forest owners to submit their forest management plans to CONAF for approval. CONAF's monitoring capacity is limited; one significant admonishment was its imposition of large fines in 1994 on a number of South-East Asian enterprises for failure to comply with the requirements of the Chilean forestry management plans.

[22] Chips are a necessary input in woodpulp production. Chile exports them predominantly to Japan. Japanese importers request chips from native wood species in order to produce short-fibre pulp (which they also produce from eucalyptus chips), which is the basis for high-quality paper manufacture.

The so far unutilized development potential in most native forest areas strikes one in comparison with the wood sector in the extreme south of Chile, which has developed through careful management of the *Nothofagus* forests. [23] There are four reasons why attempts have been made for some years to manage this tree species in accordance with environmental criteria:

(i) The extreme climatic conditions make it hard to achieve the short maturing cycles that are typical of the pine and eucalyptus plantations in Regions VIII, IX and X. As a result, maintaining plantations with exotic species is no more profitable than developing the slow-growing native *Nothofagus*, and thus there is no incentive to replace this species.

(ii) *Nothofagus* yields a fine wood that is used to manufacture parts and items of furniture for sale in the United States and Europe. The lower-grade wood obtained from thinning to increase the proportion of high-quality wood is converted into chips and exported to Japan, where it is used to produce woodpulp. In this way, chip manufacture helps to finance sustainable forest management. The attraction of obtaining high-quality wood for furniture production, which is more lucrative, reduces the danger of large-scale felling for chip manufacture.

(iii) The similarity of interests of wood-based enterprises, which are obliged to cooperate in order to satisfy external demand and therefore do not indulge in prejudicial competition, and the fact that the wood-processing industry in this region is very young and fast-expanding have encouraged the development of close cooperation within the sector as well as between enterprises and research centres. As a result of its joint basic and further training programmes, this sector currently possesses a relatively high and uniform level of technological capability and a marked desire to constantly improve it with a view to meeting international quality standards.

(iv) These efforts are supported at the enterprise level by an efficient institutional framework: there is close cooperation between CORMA Austral and the University of Chile, a centre of excellence for the development of sustainable management methods for native forests, primarily *Nothofagus*. In conjunction with the regional offices of the State export promotion agency (ProChile) and the State production development agency (CORFO), strategies and programmes are being designed to promote the wood-processing industry, including ideas for reducing the environmental impact, marketing the timber and developing the enterprises' physical infrastructure and technological capability.

2. Manufacturing sectors

Environmental requirements relating to product properties and the restructuring, enhanced efficiency and rationalization of production processes in the manufacturing sectors are in general more complex than in the natural-resource-based sectors. Compliance with them therefore entails a high level of technological capability, particularly in the export sectors. The technological institutional framework surrounding Chile's industrial sectors is poorly developed; there are no training courses for skilled workers, and the existing applied-research and basic and further training institutions are poorly interrelated. In the sectors examined, these structural weaknesses affect enterprises' innovative capability in a variety of ways according to their level of operational independence (global industries in the woodpulp sector) or dependence (nationally based industries in the case of the wood sector) *vis-à-vis* their surrounding structure.

a) *The woodpulp sector*

The export-oriented woodpulp sector is an example of a global industry faced with stringent environmental requirements world-wide. This explains the high adaptability of enterprises in the sector in the areas of technology and organization. [24] As in the

[23] To date no scientific analyses or descriptions have been made of the forestry or wood sector in Region XII. The only exception is an environmental impact assessment conducted by the Forestry Institute (INFOR) with a view to a project in Tierra del Fuego. The brief analysis given here is based on discussions held in Region XII in March 1994 with CORMA Austral, Trillium Corp., experts and consultants, representatives of CONAF and CORFO (development of small and medium-sized enterprises) and ProChile (export promotion).

[24] In-depth discussions took place with four enterprises in the sector and two plants were visited. At the meso level, interviews were conducted with CORMA (the sectoral association), ATCP (the engineers' association), a number of independent experts, university research laboratories and institutes, ProChile and Fundación Chile.

case of aquaculture, this sector, whose production is aimed primarily at the world market, is obliged to pursue international levels of efficiency, quality and environmental protection. Environmental protection standards at the enterprise level are therefore very high and in some cases far exceed current regulations in Chile. The ecological requirements for woodpulp relate principally to normal bleaching methods (without chlorine), effluent pollution, water and energy consumption and sustainable management of pine and eucalyptus plantations, from which the wood for pulp manufacture is extracted.[25]

Enterprises' high adjustment capability can be explained by the technology used (equipment, machinery, processes, organization and know-how), which is standardized world-wide. Since they have sufficient available capital, the technology can be acquired independently of the local surroundings. Chilean enterprises belong to international technology networks in which experiences and scientific and technological expertise are exchanged. Also, within these cooperation networks, the organizational methods and concepts needed to apply the know-how and adapt the processes are developed.[26] The informal exchange of experience and practical knowledge concerning new technologies with enterprises and applied-research institutions in other countries is supported in Chile by the research institutes, whose standards are on a par with the best international practices and whose funding is shared by the national woodpulp enterprises. The Woodpulp and Paper Association (ATCP) also assists in this endeavour by organizing seminars and workshops. Chile's engineering faculties, which produce very well trained graduates, also contribute. At the enterprise level, basic and further training courses make up deficiencies in workers' technical skills.

Because of their sound financial footing and through their membership of international technology networks, woodpulp-producing firms are thus able to make up for the structural inadequacies of the institutional environment and ensure their international competitiveness. However, owing to its low level of interlinkage with national industries and to its export orientation, this sector generates little learning stimulus in the Chilean economy regarding environmental protection at the industrial or enterprise level. Viewed in this way, the enterprises in the woodpulp export sector may be termed "islands of ecological efficiency" that perform no pioneering role in promoting environmental protection in Chile's industrial sector. On the contrary, this very cautious attitude on the part of the enterprises is consistent with the defensive strategy of CORMA, the sectoral association, which rejects controls with the basic argument that State intervention in the private domain is illegal. Taken to its extremes, this sector could be regarded as an example of halfway environmental modernization because, although it is capable of making technological progress in the interests of competitiveness, it restricts its motivations to the logic of the market, so that its positive environmental impact is predominantly collateral and haphazard.

b) *The wood sector*

The present situation in the woodpulp sector differs from that in the wood sector, whose current adaptability is limited.[27] This is because of the complexity of the requirements and the not infrequently high level of technological difficulty involved in the necessary adjustment measures. The sector also has a large proportion of small and medium-sized enterprises that are short of both funds and staff. It is here

[25] In response to environmental groups' information campaigns and existing awareness about paper recycling (Greenpeace International, 1991 and 1993), the European pulp and paper industry has made considerable efforts to improve its environmental profile. Consequently, in recent years there has been an enormous increase in the demand for non-chlorine bleached pulp, basic to the European market, which subjects supplies to detailed testing for low production pollution levels. This trend is becoming widespread and strengthened as a result of the various ecological seals of approval granted for paper products by Scandinavia and the European Union (see the requirements relating to ecological seals of approval for toilet paper and kitchen towels in European Commission, 1994a and 1994b). The German ecological seal of approval is awarded only to products made entirely from recycled paper.

[26] The woodpulp sector became attractive to foreign investment in the course of privatization of public enterprises and the opening up of the global market. The three new plants that began operating in 1991 and 1992 were funded by multinational investors. For information on the development of the sector in Chile, see Stumpo (1994) and DICELPA (1992).

[27] Interviews were conducted with 12 enterprises of different sizes that produce doors, furniture components and items of furniture, as well as one paint manufacturer, one certification enterprise and 12 meso level institutions concerned with the development of small and medium-sized enterprises, technology transfer, and basic and further training.

that the deficiencies in the industrial technology support framework make themselves felt, namely the lack of skilled and well-trained workers and the shortage of structures for the transfer and adaptation of new manufacturing methods. The situation is also affected by general structural deficiencies, such as the absence of a public infrastructure for the disposal of effluents and solid waste or the impossibility of obtaining loans to finance investment.

The different environmental requirements currently focus on toxic substances (ban on PCFCs, limits on formaldehyde emissions, harmfulness of paints and varnishes) and packaging materials; the sustainability of forest management methods is an important factor for European import markets where native wood products are concerned. If the standards of environmental protection in the European furniture industry continue to rise, the environmental impact of finishing techniques (e.g. painting) used by third country producers that export to Europe may cut off access to the markets in that continent. [28]

The adaptability of enterprises in the wood-processing sector varies greatly because of the heterogeneous nature of the sector. [29] Since the enterprises' level of competitiveness is still relatively low, the proportion of high-quality exports to markets where ecological requirements are imposed continues to be small. Consequently, there is no incentive to meet foreign environmental demands or undertake adjustment measures, since such requirements do not exist in the market segments that these enterprises supply, for example the United States. In the medium and long terms, however, the sector's development will depend on the enterprises' incorporation of environmental protection features into their modernization strategies at the technological and organizational levels.

The weak cooperation and coordination links between enterprises also hinder the sector's endeavours to enhance its technological capability and its ability to respond to complex environmental requirements. A particular problem in this area is the supply of environmentally sound inputs, such as sawn wood that has not been chemically treated and paints and varnishes that are ecologically safe.

Other important areas in which environmental protection has yet to have an impact are quality control and certification (including inputs and intermediate products), standardization, technology consultancy, training of forestry experts and technicians and applied research into wood processing. At the meso level, a number of institutions are now working in these areas, such as INFOR in wood quality certification, the Wood Industrialists' Association (ASIMAD) in end-product certification and quality control, and SERCOTEC and CORFO in technological advice to small and medium-sized enterprises. However, it is primarily these institutions that would need to improve their mutual cooperation in order to promote the necessary coordination and to pool efforts. This is particularly important if the applied research efforts of the universities is to be of benefit to small and medium-sized enterprises, whose limited resources do not permit them to bear the cost of research or acquire available technical solutions.

The fact that environmental issues are undervalued in the work schedules of applied-research, technology consultancy and vocational training institutions is because enterprises and the official environmental protection agencies generate little demand for solutions of this kind. It would thus be advisable to organize awareness and in-service training programmes for staff members of those organizations so that they are able to deal with the new requirements that enterprises will have to face.

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[28] Concerning the indicators for measuring and evaluating the environmental impact of the furniture industry, see Lehmann, 1993.

[29] As regards the sawmills and the manufacturing industry, which generate more than 26 per cent of wood product exports, small, medium-sized and large enterprises accounted for one third of total production in each case. There are enormous differences between them in terms of productivity and efficiency. The veneer and board industry is made up of 14 medium-sized enterprises; production of doors and mouldings is in the hands of eight small, ten medium-sized and two large enterprises; the two subsectors between them account for about 4 per cent of total exports. No definite information is available on the number of plants operating in the furniture industry; in the three size categories there is a vast number of factories producing exclusively for the domestic market or for export or endeavouring to place part of their production abroad. The industrial development of this sector has so far been characterized by the gradual combination of the forestry enterprises and sawmills. None the less, these amalgamated enterprises discontinued the production of furniture for export after a few attempts that generated heavy losses. In the area of furniture production for export, the most prosperous enterprises are a few medium-sized businesses employing between 80 and 140 workers, most of them originally designed as furniture factories, that have found market niches by dint of intensive searching. About 50 per cent of their production finds outlets in the European markets (Scholz, Block, Feil, Krause, Nakonz and Oberle, 1994, pp. 58 *et seq.*).

V

Conclusions and challenges

In order to correlate the factors that inhibit or favour environmental adjustment measures in the export sectors, the findings of the survey on which this article is based have been classified by social agent groups and by action plan within the framework of the concept of systemic competitiveness. In this way, an attempt will also be made to explain some aspects of the interaction generated by global trade as a driving force between the environmental reform processes in the industrialized countries and the adjustment processes in the developing countries.

1. Micro level

The research took as its starting point the environmental adjustment processes at the enterprise level. From the examination made of successful cases (aquaculture, the forestry sector, woodpulp and furniture manufacture in Region XII), a number of points can be put forward regarding enterprises' needs in order to facilitate their adjustment to product and process requirements. They are as follows:

(i) An organizational structure conducive to innovation; if possible the existence of an environment department that collaborates closely with the applied-research, personnel and sales areas in developing proposals for improving production processes and products (in their range of benefits and properties), taking account of employees' innovation suggestions;

(ii) An enterprise management that is aware of the need for continuous innovation in production processes and increased efficiency;

(iii) The existence of well-trained specialists (engineers) who have the necessary expertise to implement environmental innovations;

(iv) Ongoing basic and further training for staff, particularly skilled workers and technicians;

(v) The establishment of enterprise networks at the sectoral level (or national or international level, as appropriate) for joint activities in the areas of applied research, training, sales and marketing;

(vi) The creation of a capacity to assimilate external quality and efficiency standards and encourage appropriate adjustment action within the framework of enterprises' general export orientation.

2. Meso level

An efficient enterprise support structure is a basic requirement for assisting and facilitating adjustment measures adopted at the enterprise level as environmental aspects are incorporated into the business management (technological guidance institutions and the educational sector). The intermediary organizations (enterprise associations and sectoral development and consultancy institutions) can at the same time play an important linkage role between the macro and micro levels with a view to establishing agreed environmental objectives, creating the means to pursue them and increasing the prospects of achieving them. The cases examined indicate that, in order to bring about appropriate adjustment at the enterprise level, the institutional framework must meet the following needs:

(i) Technological institutions to conduct research for practical application purposes and offer appropriate services to innovation-minded enterprises so that they can broaden their areas of activity with an environmental component and assimilate specific know-how. In the forestry sector, this relates to sustainable management of pine and eucalyptus plantations, biological pest control, genetic enhancement of species and the management of native forests; in the wood-processing industry, the development of non-polluting methods of conserving and treating wood, including native timber; and in the woodpulp sector, chlorine-free bleaching methods, testing and certification of pulp quality, as well as measuring, testing and certification of the industrial impact on the environment;

(ii) Seminars, workshops and working groups in the sectoral associations to promote imitative learning and enable enterprises to operate uniformly with regard to quality and environmental protection (aquaculture, the forestry sector and furniture manufacture in Region XII);

(iii) Study programmes of vocational education institutions and training courses that take account of the new enterprise requirements;

(iv) Possibility of close interlinkage of the activities of the sectoral associations and applied-research and basic and further training institutions. [30]

If the enterprise support structure is able to undertake these functions, there will be considerable prospects for responding appropriately to external requirements, even if such requirements are complex and technology-intensive, and for ensuring that enterprises are not over-stretched and edged out of the market.

Large enterprises that are members of international cooperation networks can overcome the inadequacies of a weakly structured and poorly linked institutional framework and remain strongly competitive (woodpulp sector). However, small and medium sized enterprises depend, for their environmental adjustment, on the services provided by their surrounding structure (forestry management, furniture industry); what they need is not only technological assistance but also physical infrastructure (for example, joint systems for the treatment and disposal of industrial effluents and waste).

3. Macro level

There are two essential factors in promoting the adoption of environmental adjustment measures by enterprises:

(i) If the activity is dependent on the existence of natural resources, that can prevent the over-exploitation of these resources if there is no satisfactory way to replace them (furniture industry based on *Nothofagus* timber);

(ii) The focus of the economic model on competitiveness and the global market obliges enterprises to adopt ongoing measures in order to boost competitiveness and efficiency or to comply with international quality and efficiency standards; since the best technological practices are generally more efficient than the older technologies in terms of energy and raw material consumption, the assimilation of the former will at least have a positive collateral impact on the environment (woodpulp sector, forestry sector).

If there is no independent environmental policy to determine adjustment and protection objectives at the sectoral level, enterprises will persist in maintaining a defensive and reactionary strategy instead of mobilizing and optimizing their potential to solve the problems affecting them. As far as the new natural-resource-dependent export sectors are concerned, this suggests that environment controls promoting more efficient management of such resources can accelerate the switch from extensive to intensive raw material use, with the consequent development of manufacturing sectors with a higher value-added component (the Forestry Act explicitly pursues this dual objective). [31] An active environmental policy can thus help to create new competitive advantages.

4. International level

The statutory or market ecological requirements which relate to products or processes or to the pre-production and post-production stages and which are transmitted through trade with countries whose environmental standards are more rigorous can give rise to and promote technological and organizational learning and innovation processes for the benefit of the environment. An important requirement in strengthening this interaction is an open market: exporting enterprises will respect environmental regulations if these are implemented in the import markets. However, enterprises' readiness to invest in modernization for ecological purposes diminishes when there are reasons to doubt the seriousness of environmental requirements (disguised protectionism) or if potential import markets are virtually inaccessible to products which are more sophisticated from the viewpoint of environmental protection. If protectionist regulations increase, they may cancel out the positive effects of ecological demands imposed on third-country producers and cause them to divert their trade to countries that do not lay down so many product requirements.

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[30] The last two requirements have still not become a reality in Chile, but those interviewed described them as deficiencies. Presentation of the findings revealed lively interest in this topic among the representatives of the basic and further training institutes. During the discussions, all the meso-level institutions (applied research, technology transfer, development of small and medium-sized enterprises and sectoral bodies) stressed the need for improved coordination and linkage of their activities.

[31] Intensive use, in contrast to extensive use, is based on the principles of efficiency (non-squandering of natural resources) and sustainability (exploitation of natural resources with an eye to their natural regeneration cycle and conservation of the functions of the ecosystem to which each natural resource belongs).

The counterproductive effects of protectionist practices on the attitudes of third-country enterprises are not the only argument against commercial measures of an environmental nature that a number of enterprise associations and industrial sectors in the industrialized countries are calling for in the debate in favour of the "greening of GATT". An environment-focused trading policy must also take account of the specific initial conditions –economic, technological, organizational and environmental– in which businesses operate. For instance, if some weak operators are obliged to cope with requirements which in the short term exceed their innovation and adjustment capability, the result may be that exports are diverted to markets that are less stringent in their ecological requirements. Environmental policy development may be held back if ecological requirements are identified with protectionist interests, thus obscuring the real underlying problems.

The confirmation that international trade can promote environmental learning processes in developing export countries like Chile highlights another important aspect: the progress achieved in environmental reform in the industrialized countries may also encourage the developing countries to develop the necessary political and economic scope for the establishment of more environmentally sound production patterns.

(Original: German)

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The competitive *challenge for* Brazilian industry

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This article defines the stages of development reached by industries that account for half of Brazil's total output and identifies the competitive challenges they face, including those associated with the country's industrial policy. Between 1980 and 1994, Brazilian industry experienced persistent macroeconomic instability as the country's trade liberalization efforts proceeded. By means of a series of adjustments, however, the sector did manage to adapt to this hostile environment; in fact, it not only survived but actually succeeded in maintaining its ability to help cover the existing deficit, meet domestic demand and aid the country in achieving balanced linkages with the external economy. Brazilian firms are striving to revitalize their competitive position and, to this end, are strengthening certain components of their "genetic code" by catering to the domestic market, building up their production capacity and internationalizing their trading activity and ownership structures. Today's new competitive environment calls for an industrial policy that will encourage efficiency and regulate unfair trading practices. This requires an active State which has trained human resources and appropriate policy-making capabilities at its disposal, all of which will pave the way for the negotiations involved in setting priorities and implementing measures designed to promote the country's competitive development.

I

Introduction

The manufacturing sector in Brazil, as in any other country, is not homogeneous. A number of its segments have already shown signs of being able to compete in the international marketplace, others need to overhaul their production structures, and still others are doomed to disappear. The preservation of efficient activities that create skilled jobs and help to raise national income requires not only the presence of suitable macroeconomic conditions but also appropriate corporate strategies and capacities, market development, cross-sectoral links, and regulatory and incentive systems for each industry.

This article will attempt to determine what stage of development has been reached by 25 different industries which account for one half of Brazil's total industrial output and to identify the competitive challenges they face, including those associated with the country's industrial policy. The ideas explored here are based on a study conducted by Ferraz, Kupfer and Haguenauer (1995) which, in its turn, draws upon research done by Coutinho and Ferraz (1994) in 1992 and 1993 as well as an evaluation of subsequent events undertaken by the authors of this article with the assistance of the Division of Development, Productivity and Management of ECLAC. The database that was used reflects the way in which business enterprises were perceived at the time the study was prepared, but the current analysis also incorporates the industrial outcomes observed in 1993 and 1994, when the sector underwent sweeping changes as a consequence of the implementation of the Real Plan. Following an examination of the pace of these changes, the discussion moves on to the unique opportunity which has presented itself to identify the probable future development path of Brazilian industry based on a schematic analysis of the sector.

The concepts of competitiveness and of patterns of competition are then examined and a framework for aggregating these 25 sectors into four industrial groups is outlined (section II). Next, the development of industry during the period 1980-1994 is considered in the light of a number of decisive macroeconomic factors (section III). The patterns of competition exhibited by the four groups are then used as a basis for evaluating the strategies, capacities and performance of these firms and for identifying the competitive challenges they face (section IV). Finally, a forward-looking assessment is presented as a means of exploring the question as to whether Brazilian industry's development process is changing course or continuing along its existing path and what implications this may have for industrial policy (section V).

II

Competitiveness and patterns of competition

A competitive business enterprise is capable of devising and implementing strategies for expanding or maintaining a sustainable market position. This type of market performance is the outcome of previous capacity-building efforts which, in turn, are an outcome of strategies based on the firm's prevailing perceptions of competition as a process and of the economic environment. Thus, competitiveness is related to a series of factors that make for success in the market, or, in other words, to a pattern of competition which acts as the frame of reference for decision-making processes. This perspective differs from conventional approaches to the subject in that the process of competition is what serves as the point of reference for the analysis (Kupfer, 1991).

□ The title of this article alludes to a series of recently published studies which highlight the manufacturing sector's contribution to the development process. The authors are grateful for the comments made by Michael Mortimore, Jorge Katz and Joe Ramos, although full responsibility for the contents of this article rests with the authors.

In addition to firms' business practices, the pattern of competition is also influenced by the structural and behavioural features of the market or economic system that forms their environment. In the case of the market, the relevant factors stem from the interdependence existing among firms; in the case of the economic system, they include the supply of infrastructure and human resources, industrial policy and laws, and other systemic attributes related to the macroeconomic environment and to the institutional framework. In order to understand the development process within each branch of industry, the various determinants need to be weighted according to their importance in terms of inter-firm competition. Competitiveness is, in the final analysis, a phenomenon that arises within the industrial sector, i.e., among a group of firms and in a market which is not regarded merely as a segment of demand that a firm needs to win over or maintain but as an arena for competition and *locus* of the capitalist dynamic.

Competitiveness is a function of how well each firm fits the prevailing pattern of competition. The best-off firms will be those that consistently apply strategies which are geared to the predominant model of competition, with international models serving as their frame of reference. Extrapolating from the level of individual firms, we can say that a given branch of industry is competitive if competitive firms produce the bulk of its output.

These points of reference were used as a basis for the formulation of a level of aggregation which will be referred to here as "industrial groups". These groups are made up of branches of industry in which the firms are subject to the same types of influence from relevant determinants and thus develop similar strategies. Four such groups have been defined: commodity or intermediate-goods industries, [1] durable-goods industries and their suppliers, traditional industries, and industries that help to disseminate technical progress, or high-technology industries. These categories were delimited on the basis of a combination of the criteria traditionally used for industrial classifications. On the demand side of the equation, use-based categories were employed (capital goods, intermediate goods, consumer durables and consumer non-durables). On the supply side, the groupings were based on Woodward's categories of technical production systems (1959) (unit or small-batch production, mass production, and continuous processes) and Pavitt's innovation generation and dissemination streams (1984, pp. 343-373) ("supplier-dominated firms", "scale-intensive firms", "specialized suppliers" and "science-based firms").

In order to provide a basis of comparison for the situation in Brazil, the best international practices for in-house factors, the market, industrial configurations and the system for promoting and regulating competition were defined for each group (see table 1).

This article analyses 25 of the 33 industries examined by Coutinho and Ferraz (1994); the groups to which these industries belong are shown in table 2. In 1992, these industries accounted for one half of the value of Brazil's industrial output. Their economic importance is even greater than this figure might suggest, however, because they include the Brazilian economy's major exporters, some of its main producers of equipment, and the industries having the greatest influence over final consumption.

A field study on a sample of the firms in these branches of industry was conducted between November 1992 and June 1993. The information gathered during this study dealt with determinants of success, strategies, capacity, and current and projected performance for the 1990s. Information on some research topics (e.g., capital sources) was gathered only for the larger firms. In all, 661 companies, including the leading firms in the sector, were interviewed, and 508 of those companies are analysed in this article. The selection of these firms was based on the consistency of their survey responses and on considerations of sectoral coverage. Their main features are outlined in table 3.

Although the information collected in the survey is not representative in a statistical sense, it does help to shed light on the main development trends to be observed in the industrial sector. In order to determine, in the case of a given branch of industry, whether or not "the bulk of its output" was produced by competitive firms, responses were weighted by invoiced sales. To this end, a three-step procedure was followed for each group.

[1] For the purposes of this article, the category of intermediate goods (which in Brazil are usually referred to as "commodities") also includes such other products as fruit juice, paper and vegetable oils because these industries have similar patterns of competition.

TABLE 1

Patterns of competition, by industrial group: determinants of successful competition

Groups	Intermediate goods	Durable goods	Traditional goods	High-technology goods
Sources of competitive advantages	Cost	Differentiation	Quality	Innovation
	Capital/output ratio	Product design and components	Management	R&D and design
Firms	State-of-the-art processes	Organization of production	Quality control	
		Flexibility	Productivity	Skill levels of human resources
	Standardization	Differentiation	Segmentation by income level and product type	Segmentation by technical requirements
Market	Price, technical conformity	Price, brand, technology content, technical service	Price, brand, delivery time, suitability for use	Fulfilment of customer specifications
	International trade	Regional and global trade	Local and international trade	Local and regional trade
	In-house economies of scale	Economies of scale and of scope	Economies of agglomeration	Economies of specialization
Configuration of the industry	Control over raw materials and transport logistics	Assembler-supplier linkages	Formation of horizontal and vertical networks	Interaction with users
	Specialized technical services	Accuracy, standardization Scientific and technological system	Accuracy, standardization, conformity, technological information	Scientific and technological system
	Exposure to international trade	Consumer credit	Protection from competition	Support for technological risk-taking
	Anti-dumping measures	Consumer protection	Consumer protection	Intellectual property
Regulatory and incentives regime [a]	Environmental protection	Fiscal incentives	Taxation	Selective protection
	Cost of capital Exchange rate Overland and port infrastructure		Anti-dumping measures	State purchasing power User and export credit

[a] The systemic factors having the most decisive impact on each industrial group's competitiveness are included under this heading.

TABLE 2

Industrial groups and their component activities

Groups	Activities
Intermediate goods	Aluminium
	Wood pulp
	Fertilizers
	Iron ore
	Vegetable oils
	Paper
	Petroleum
	Petrochemicals
	Iron and steel
	Fruit juices
Durable goods and their suppliers	Motor vehicles
	Motor vehicle parts
	Consumer electronics [a]
Traditional goods	Slaughtering
	Leather footwear
	Dairy products
	Wooden furniture
	Textiles [b]
	Wearing apparel
High-technology goods	Automation
	Computers
	Telecommunications equipment
	Electrical power equipment
	Machine-tools
	Agricultural machinery

[a] Television sets, radios and sound systems.
[b] Cotton yarns and fabrics.

The initial step was to define the groups' patterns of competition. This involved selecting the relevant determinants of success based on three criteria: first, out of the possible response options ("very important", "important", "not important" or "not applicable"), only the first option was counted; second, only those questions for which the answers displayed a statistical differential, based on contingency tables having levels equal to or less than 0.05, were considered; and third, up to three factors were selected for specific subject areas in cases where the corresponding responses represented at least 50% of the group's total sales. These patterns of competition served as the framework for the steps detailed below.

The next step was to try to determine whether the strategies that were being used were geared to the prevailing patterns of competition. Two criteria were used in identifying the main strategies: first, only those questions were considered for which the responses differed statistically from group to group, using contingency tables at a level of 0.05 or less; and second, up to three strategies were chosen for each set of subjects provided that the responses represented at least 50% of the group's sales. These strategies were then compared against objective performance and capacity indicators. In addition to these indicators, documentation contained in the *Estudo da competitividade da indústria brasileira* (Coutinho

TABLE 3

Characteristics of firms in the sample: nationality of ownership, level of exports and size

	Intermediate goods	Durable goods	Traditional goods	High-technology goods	Average
Nationality of ownership					
(No. of firms)	104	27	80	67	278
Brazilian	89.4	48.1	96.3	74.6	83.8
Foreign	10.6	51.9	3.8	25.4	16.2
Exports					
(No. of firms)	111	54	258	85	508
Percentage of sales:					
Under 5%	37.8	46.3	67.4	52.9	56.3
5%-20%	20.7	31.5	13.2	29.4	19.5
Over 20%	41.5	22.2	19.3	17.7	24.2
Size					
(No. of firms)	111	54	258	85	508
Capital:					
Under US$ 10 million	10.8	24.1	57.0	51.8	42.5
US$10 million - US$100 million	36.9	50.0	34.9	37.6	37.4
Over US$ 100 million	52.3	25.9	8.1	10.6	20.1

Source: Compiled by the authors based on the survey conducted for *Estudo da competitividade da indústria brasileira*, Coutinho and Ferraz (1994).

and Ferraz, 1994) was used as a basis for an exploration of market conditions, the industry's configuration, and the regulatory and incentive scheme, with emphasis in each case on the relevant competitive factors for each group.

The final step was to identify the challenges facing these industries. This was accomplished by ranking the relevant obstacles and opportunities. Since a firm's competitiveness does not hinge entirely on how well it fits the prevailing pattern of competition but is instead primarily determined by its readiness to cope with change, a forward-looking assessment was also undertaken of existing strategies and capabilities in the light of projected changes.

III

Industrial development from 1980 to 1994: instability *cum* liberalization and business practices

As shown in table 4, in the late 1980s exports were the only area in which the firms covered by the survey were performing well (with a growth rate of 29.1%); this was a result of entrepreneurs' efforts to avoid the uncertainties existing in the domestic market. In 1992, exports accounted for 33.4% of sales for producers of *intermediate goods*, as compared to 26.2% in 1987-1989. Business enterprises were using effective marketing schemes which allowed them to focus on either domestic or external markets, in line with the demand trends of the moment, thereby making use of a natural advantage for large countries. Exports were also helped along by trends in domestic and external prices and in the exchange rate, which have moved in exports' favour for the last 20 years. In 1994, for example, the overvaluation of the country's exchange rate was counterbalanced by the rise in external prices and the buoyancy of domestic demand. Nevertheless, only 42% of the firms in this group –as opposed to 60% of the total sample– thought that their exports for 1996-1998 would surpass their 1993-1995 levels. These expectations suggest that this group's exports may be reaching a saturation point, which would impair the country's ability to build up its reserves if Brazil's international trade strategy were to rely primarily on these branches of industry.

The situation with respect to *durable goods* showed virtually no improvement throughout the "lost decade", as price and performance indicators remained below best-practice levels. Firms cut their payrolls and froze production, but at levels that were high enough to meet the demand generated by those consumers who were able to maintain their purchasing power despite the economy's instability. Thus, even though demand weakened, prices did not fall; on the contrary, since imports did not take up the slack created by the sluggishness of the Brazilian market, firms actually raised their prices to ensure a sufficient mark-up to finance their operations. As was to be expected, the producers of durable goods were among the larger firms, and by the end of the decade their performance levels were roughly on a par with the industry average. Between the end of the 1980s and 1992, exports jumped by 20.3%, employment fell by 13.7% and capacity use rates dropped 18%.

The firms in the *traditional-products* group are one-third the size of the average industrial enterprise but are none the less major employers; in fact, the group accounts for almost half of all the jobs provided by the companies in the survey (362 000); it should be noted, however, that small firms are over-represented in the study due to the sampling criteria used. Even so, these firms provided a total of 19.4 production jobs for every US$ 1 000 in sales, as compared to an industry-wide average of 7.9 jobs. Indeed, this group is the largest source of direct job creation in the manufacturing sector, and its ability to respond to competitive challenges therefore has important social implications. In addition, these firms' sales mounted at a time when the domestic market was shrinking, and their superior performance in this respect may be associated,

TABLE 4

Economic performance of industrial groups: trends in mean values

	Intermediate goods		Durable goods		Traditional goods		High-technology goods		All industries	
	1992	1992/ 1987-1989	1992	1992/ 1987-1989	1992	1992/ 1987-1989	1992	1992/ 1987-1989	1992	1992/ 1987-1989
Sales (millions of dollars)	185.5	-3.2	240.4	-2.1	31.4	5.3	52.6	21.2	90.9	-1.0
Exports/sales (%)	33.4	26.2	19.4	20.3	13.5	27.0	12.3	75.1	24.2	29.1
Use of capacity (%)	80.6	-2.5	64.6	-18.0	72.5	-8.0	61.6	-22.3	71.5	-10.5
Employment in production activities (No. of jobs)	1 036	-17.4	1 383	-13.7	626	-12.6	266	-26.7	736	-16.3

Source: Compiled by the authors based on the survey conducted for *Estudo da competitividade da indústria brasileira*, Coutinho and Ferraz (1994).

to a large extent, with the income-inelasticity of the goods they produce. Even so, their rate of expansion was not fast enough to absorb all of the sector's new workers, since the firms in this group, too, adjusted their production processes to some degree.

Meanwhile, the group of *high-technology firms* reported a 21.2% increase in sales between the end of the 1980s and 1992, which constituted an exception to the rule during these recession years. However, this upswing was concentrated in electronics (where sales averaged US$ 86 million at the end of the 1980s and US$ 124 million in 1992) and especially in computers, and was attributable to the demand generated by the country's modernization process, in which computers constitute the most functional and generic application. In fact, this segment's sales had been climbing sharply throughout the decade and at some points exceeded the growth rate recorded during the above-mentioned period.

This group also marked up a 75.1% growth rate for its exports, although they made up only 12.3% of its total sales. The expansion of external sales, which were concentrated in electrical machinery (with an average of US$ 1.5 million in exports in the late 1980s and US$ 4.6 million in 1992), was a response to the sharp downturn in local demand. Imports were just one-tenth of total sales, but were 36.6% higher than in 1987-1989, thus foreshadowing the strong growth trend seen in the 1990s. In all, 47 of the 58 responding companies expected both their exports and their imports to expand. Employment and capacity use rates were below the industry-wide average, however, due to the insufficient level of investment in the country. In some branches of industry, the situation reached critical proportions. In 1992, idle capacity amounted to 52.7% in the machine-tool industry, 37% among manufacturers of electrical power generating equipment and 41.3% for farm machinery. The slump in employment was also quite steep throughout this group, with a 30% drop in the number of jobs in the manufacture of electrical equipment and a 25% reduction in engineering jobs.

This overview does not, however, provide a long-term picture that would help us to identify the characteristic traits of recent industrial development trends. Table 5 gives information on the sector's stages of development based on the major types of changes now under way. Each stage is associated with a number of general approaches which are first adopted by the leading firms and are then taken up with increasing alacrity by the rest; eventually, once it has been embraced by all the firms in an industry, each such approach is seen to have run its course and is abandoned for another. The duration of these stages varies and, at any given point in time, different companies may be developing at differing rates and following different approaches, even though the sector as a whole has basically followed the same development path.

In the early 1980s, Brazilian industry had a complex yet inefficient production matrix; this was the end result of a long period of growth based on a system of incentives for the nationalization of production and of anti-import regulatory provisions. Be-

TABLE 5

Industrial trends, 1980-1994: instability associated with liberalization and business practices

Starting date	Type of adjustment	General orientation	Determinants
1981-1983	Financial	Debt reduction	Exchange crisis and recession
1987-1989	Production	Cost reduction through rationalization	Economic instability
1990-1992	Furtherance of adjustment in the production sector	Downsizing	Recession and trade liberalization
1993-1994	Expansionary	Optimization of installed capacity, increase in import content	Revitalization of demand and macroeconomic stability

Source: Prepared by the authors.

tween 1980 and 1994, business firms reacted defensively to a series of what were almost invariably adverse factors (Bielschowsky and Stumpo, 1994).

During the first stage, entrepreneurs focused their efforts on financial adjustments in an attempt to settle up previously-incurred debts and to ward off the effects of the exchange crisis which hit the country in the early 1980s. This was an asset-based adjustment which, once consolidated, enabled industrial enterprises to weather periods of flagging demand, inflation and high real interest rates. This approach gave rise to a preference for liquidity, or flexibility, according to Fanelli and Frenkel (1995), which over the years has become more and more deeply entrenched and which both fuels and is fuelled by inflation.

Persistent uncertainty prompted firms to try to rationalize their costs. The second stage, which began in the late 1980s, was marked by a series of reductions in employment, production cycle times and manufacturing-process waste. Then, during the third stage, which was influenced by the trade liberalization process, the adjustment of the production sector was broadened to include downsizing coupled with a shift in emphasis towards the services sector, the reversal of the move towards vertical integration and the specialization of production. These second- and third-stage adjustments were made viable by the appearance of widely available, low-cost generic innovations –industrial automation and, above all, new organizational techniques– which had already been tested out at the international level.

In 1993, business enterprises began to boost their production levels in an immediate response to signs of an upswing in demand that was sparked by the stabilization of the economy. In contrast to how they had behaved during the period leading up to the "Brazilian miracle" of the late 1960s, however, this time businesses not only made use of their idle capacity but also expanded their production capacity without benefit of any large-scale investments. This optimization process is largely attributable to prior changes and to an increase in import coefficients that ushered in significant gains in productivity. This expansionary adjustment –a unique event in the country's history– helped to dampen the first signs of investment demand and performed a functional role for firms that felt a great deal of uncertainty about the future course of the economy.

There is a close connection between a readiness to create additional production capacity and expectations of continuing economic stability and steadily rising demand. A number of expansion projects were begun in 1993, but only in isolated cases. Even as late as the end of 1994, firms representing a substantial share of sales in their respective sectors still had no specific investment plans in place. A continuing lack of confidence in the economy's performance over the long term, as reflected in low investment rates, has proved to be one of the most harmful legacies of the country's bout with stagflation. This problem has also turned out to be quite difficult to surmount, even under a regime designed to maintain price stability, as has been demonstrated by recent events in Mexico and Argentina. Indeed, overcoming this reluctance on the part of investors will be the chief task of public policy-makers in coming years.

In sum, between 1980 and 1994 industry was confronted with persistent macroeconomic instability and an increasingly liberalized trade regime. Despite Brazil's position as one of the world's 10 great industrial powers and even though its sectoral production structure is similar to those of its peers, Brazilian industry has not kept pace with the shift taking place at the international level towards more technology-intensive products and processes. Nevertheless, although its expectations of maintaining growth rates on a par with those of the "Asian tigers" have been thwarted, the industrial sector did succeed in adapting to its hostile environment by means of a series of adjustments and not only has managed to survive but has actually been able to preserve its ability to reduce the existing deficit, satisfy domestic demand and further the country's efforts to establish a balanced position in the external economy.

IV

Analysis of the competitiveness of four industrial groups

1. Intermediate goods: Product differentiation and corporate upsizing

a) *The pattern of competition*

Table 6 indicates that, to a great extent, a consensus of opinion exists as to the factors making for success and convergence in international practices.

Firms accounting for at least two thirds of total sales felt that the most important product features were price and technical conformity; the presence of these attributes, in turn, implies an ability to operate in large markets, the possession of an extensive production capacity and large-scale business operations. Furthermore, large-scale production requires inputs and equipment of a sort that will entail little operational waste. The subject on which these firms were most in agreement had to do with the rates charged for the use of port, shipping and overland transport infrastructures. The importance of such infrastructure is so great that the more competitive enterprises invest heavily in these facilities because such companies feel that they offer a natural vehicle for the expansion of their business operations.

The regulatory and promotional regime ties in with two different factors: the availability of investment credit and international market access. Prices are determined on international exchanges and fluctuate as dictated by the level of demand in the world's major economies and by world supply. Few firms manage to maintain large enough profit margins to fund their projects on their own, since such undertakings call for huge amounts of capital and have very long lead times. Since, on the whole, firms will be more competitive if they are able to anticipate the growth of demand, they are strongly affected by credit terms and conditions, while the degree of sensitivity to trade barriers depends on the protectionist practices of the main buyer countries.

TABLE 6

Pattern of competition in intermediate industries: most important determinants of success
(Share of total sales of respondent firms as a group)

Determinants of success	Intermediate goods	All industries
	(Percentage of sales)	
Market		
Technical conformity of product	79.0	60.7
Low product price	65.2	71.7
Large home market	52.4	39.7
Configuration of industry		
Size and integration of production		
Large production capacity	62.9	45.9
Large company	68.4	65.4
Inter-industrial relationships		
Technical conformity of inputs	70.4	76.2
Technical conformity of equipment	54.1	61.8
Infrastructure		
Low port charges	79.5	70.9
Low shipping costs (maritime)	78.3	68.0
Low road transport costs	74.2	72.6
Regulatory and incentive system		
Availability of long-term credit	80.8	60.8
Low tariffs in buyer market	55.0	65.0
Sales *(in billions of US$)*	20	41

Source: Compiled by the authors based on the survey conducted for *Estudo da competitividade da indústria brasileira*, Coutinho and Ferraz (1994).

TABLE 7

Intermediate industries: direction of competitive strategies
(Share of total sales of respondent firms as a group)

	Intermediate industries		All industries	
	Sales percentage	Sales *(billions of US$)*	Sales percentage	Sales *(billions of US$)*
The company's business strategy emphasizes:				
Market				
Sales for domestic and external markets	84.1	20.6	84.2	44.7
Technical conformity of products	62.5	19.7	39.7	43.6
Technical conformity of exported products	74.7	18.2	52.8	38.8
Production				
Reduction of raw material use	65.6	17.2	58.7	42.7
Expansion of capacity of existing line	56.4	20.3	61.5	41.1
Increased process standardization	50.0	16.1	31.8	38.2
Suppliers				
Use of small number of suppliers	52.5	15.3	65.3	37.5
Technical conformity of inputs	52.6	20.6	58.1	46.1
Maintenance of long-term supplier relations	71.7	16.2	78.2	38.5
Finance				
Use of public-sector credit	60.7	20.6	39.7	46.0
Use of external private-sector credit	54.0	20.6	38.7	46.0

Source: Compiled by the authors based on the survey conducted for *Estudo da competitividade da indústria brasileira*, Coutinho and Ferraz (1994).

b) *Strategies, capacity-building and performance*

Table 7 indicates that the strategies outlined by intermediate-goods producers fit in with the existing pattern of competition. Conformity with technical product specifications is the attribute which is emphasized the most, and companies accounting for more than 80% of the group's sales are active in both the domestic and external markets, with their sales on the latter being directed primarily towards European countries.

These firms seek cost advantages via economies of scale, process standardization and reductions in the use of raw materials, and in order to accomplish this, it is important for them to maintain stable commercial relationships with a limited number of suppliers. They are not entirely in step with the prevailing pattern of competition, however, since although companies representing 49% of total sales ranked strong environmental laws as being very important, only a fraction of those firms (15% of total sales) stated that they were actually using strategies designed to minimize the environmental impact of their operations.

Finally, unlike the other groups, the firms in these branches of industry expressed interest in seeking out various sources of funding for their investments. This strategy actually represents an improvement upon past practices, when the main contribution made by the prevailing system of incentives was to subsidize the cost of capital. During the 1970s and 1980s, this industrial group benefited, through credit and fiscal instruments, from policies aimed at cutting fixed costs as well as, in many cases, the firms' largest variable costs. Thus, the rates of return on investment were surely above their equilibrium levels. These policies outlived their usefulness, however, and contributed to a narrowing of mark-ups, which may have lessened this group of companies' propensity to invest, even in the presence of favourable international prices.

These firms remain competitive, however, thanks to their ample supply of natural (mineral, forestry and agricultural) resources. They have exceptionally strong cost advantages over their competitors, and their long-term prospects are good. They do suffer from inefficiencies, but on a localized basis and mainly in the area of agricultural yields. Environmental issues have

TABLE 8

Intermediate goods: intensiveness of microelectronic automation
(Share of total sales of respondent firms as a group)

	1987-1989	1992	1993-1995	1996-1998
Percentage of operations controlled by microelectronic means				
Intermediate-goods industries				
Sales *(billions of US$)*	19.0	19.2	18.8	18.7
0%-10%	42.4	31.6	20.0	17.5
11%-50%	41.3	41.7	30.2	24.8
Over 50%	16.3	26.7	49.8	57.7
All industries				
Sales *(billions of US$)*	35.4	42.0	38.3	37.5
0%-10%	52.6	36.1	15.9	12.7
11%-50%	37.0	46.9	51.9	44.4
Over 50%	10.4	17.0	32.2	42.9

Source: Compiled by the authors based on the survey conducted for *Estudo da competitividade da indústria brasileira*, Coutinho and Ferraz (1994).

not been economically significant, but their importance has been growing and is posing new challenges for these companies. In addition to their supply of raw materials, the better firms, as already noted, have always attributed special importance to investments in connection with the logistics of transporting inputs and products in such a way as to sidestep the inefficiencies associated with public-sector infrastructure. These investments have helped to hold down prices in destination markets and are in large part responsible for these enterprises' success.

Since the mid-1980s the firms in this group have been improving their technical efficiency thanks to price competition and to the continuous nature of the processes they use, in which the tolerances are small and production capacity must be utilized, regardless of the rate of increase in demand. As shown in table 8, intermediate-goods producers' degree of modernization is above the industry average. In fact, as of 1993-1995, firms accounting for nearly half of total sales anticipated using automation-intensive production processes.

In summary, a majority of intermediate goods in Brazil are produced by firms whose strategies, capabilities and operations are geared to the prevailing competitive pattern. Furthermore, it is a well-established fact that throughout its history the country has maintained an outstanding track record in commodity-related activities. Years of work went into building the foundations for this group's competitiveness based on participation in both the domestic and external markets within an environment marked by rising demand and ready access to raw materials, together with a sufficient level of efficiency and investment in the logistics of transporting output from one location to another and in the configuration of these industries; at the same time, these firms were benefiting from the subsidization of capital costs made possible by the existing incentives scheme.

c) *Challenges*

In the world of the future, business enterprises will no longer be able to rely on the same basic elements to maintain their positions as in the past. They will have to find a way to add value to their products and to open up new markets; to associate energy-source and environmental parameters with their use of natural resources; to strengthen size-related aspects of their businesses and internationalize their operations, and, finally, to re-engineer their financial structure through public/private ventures.

In terms of their production systems, Brazilian firms need to increase the currently small amount of value which they add to their products and overcome the increasing inefficiency that is to be observed as one moves further away from natural resources along the production chain. Efforts to promote technological advancement have also been quite limited: in 1992, 43% of the 82 companies surveyed made no investments in research and development (R&D), and the amount spent on R&D by another 46% amounted to only between 0.01% and 1% of sales. Rectifying this shortcoming is basically up to private decision-makers, and some leading firms are now moving in this direction.

A supply of goods containing a greater amount of value added could come from at least three different production structures. The first possible source is an increase in imports or new firms that are attracted to the Brazilian market. A second means of accomplishing this would be by upgrading firms located far back in the production chain, with the driving force for such an improvement coming from suppliers of basic inputs; these suppliers' interest in upgrading their customer base is as yet quite limited, and few firms have the capabilities needed to coordinate initiatives of this sort, however. The third possibility is forward vertical integration on the part of the more competitive firms. Movement in this direction would require the development of marketing channels and products, which would entail radical changes in these entrepreneurs' business practices. Few companies are willing to take on all the risks and uncertainties entailed by this kind of initiative, even though they may offer larger profit margins. The search for new markets for these industrial configurations involves making overseas investments, and only rarely have any firms in this group adopted the "internationalist" stance that is necessary in order for them to do so. The internationalization of this group will probably come about as a result of competition that leads these firms to merge with companies in neighbouring countries which are also able to compete in these activities.

It has also become quite clear that the market will punish "eco-criminal" behaviour. Since negative externalities in this respect are common, the best way of dealing with them is for polluting firms to work with providers of technological solutions. Given existing capabilities, the environment represents a source of opportunities for Brazilian companies. The development of procedural standards and new technologies can give them medium- and long-term advantages that their competitors would have difficulty overcoming.

In the realm of public infrastructure, the lowering of legal barriers to private-sector participation opens up wide-ranging opportunities for intermediate-goods producers. Provided that they are functional in terms of their business activities, transport and energy infrastructures will probably be most attractive to firms that have not yet fully explored these cost-reduction options.

All these various growth paths can be travelled more swiftly if firms band together to form conglomerates. In some sectors this process is fairly far advanced, while in others these structures are more unstable.

Technical efficiency, firm size and the degree of vertical integration of production activities are similar to those of the better international companies in the petroleum, iron-ore, steelworks, aluminium, orange juice and soybean industries. The future competitiveness of these industries will therefore hinge on their success in maintaining and strengthening these configurations.

However, in the petroleum and iron-ore industries, which are dominated by two world-class State enterprises, the ultimate international configuration will depend on the outcome of current deregulation and privatization efforts, which, because of the highly political nature of these processes, cannot be predicted. Pressure will be exerted in various directions, and the possible scenarios range from corporate upsizing, increased integration of production and greater freedom to grow in domestic and external markets, at one extreme, all the way to dismemberment and atomized privatization, at the other. In the first of these scenarios, the pressure that would be exerted would lead in the same direction as would the logic of competition. Firms having this type of profile have a better chance of growing and generating wealth, regardless of their ownership structure. In the second scenario, competitiveness is jeopardized by diseconomies of scale and of costs in the production chain.

In the paper and pulp and petrochemicals industries, ownership and production structures are less stable and may undergo modifications in the course of the decade. The extent of economic concentration in the paper and pulp industry will largely depend on how fast its markets grow. If firms in this industry seek to internationalize their operations or are faced with a downturn in demand, they will be more inclined to merge with other companies. The situation in the petrochemicals industry is similar except that, because of the fragility of its ownership structure, which is based on joint ventures, single-site facilities and single-product lines, mergers are more likely to occur, primarily in response to local demand trends. There has already been some –albeit hesitant– movement in this direction, and further efforts should take the path of least resistance by starting with companies that have similar product lines and moving on from there to firms offering technical or market-based complementarities.

2. Durable goods and their suppliers: Regionalization of production versus global sourcing

a) *The pattern of competition*

Table 9 shows that the relevant consensual factors diverge from the industry average and approach international levels.

Corroborating a well-established fact, over 90% of total sales are accounted for by firms which feel that the size of the Brazilian market is a factor that contributes to their success. Whereas intermediate-goods producers used the local market as a springboard for their attempts to contest the external market, most of the leading firms in the durables group are outside firms that were attracted by the size and growth prospects of the Brazilian market, which is large enough to permit the use of economies of scale.

Under the heading of markets, the companies in the sample mentioned low product prices and the efficiency of technical servicing. In keeping with the above, under the heading of "configuration of industry", control over distribution channels was an element that was taken into consideration along with the above factors. The importance attributed to prices attests to these industries' sensitivity to the effects of the recent trade liberalization programme, while the presence of a network of reputable distributors and wholesalers in the country is one of the advantages which local firms can use to help them compete against imports from outside companies.

Companies representing 51.8% of total sales were still of the opinion that vertical integration was a relevant determinant of success. Advocates of this view believe that a preference exists for types of supplier-producer relationships other than the pyramid-based relationships that became widespread at the international level after their introduction by the Japanese. This difference of opinion points to a belief that local suppliers are incapable of producing their goods efficiently. In regard to labour resources, the quest for technical efficiency underscores the importance of having literate personnel along with a training infrastructure capable of producing a labour force that is skilled in the application of new production practices.

With regard to the regulatory system, the views of companies accounting for three fourths of total sales concerning the importance of the role played by the civil liability of producers bears a relationship to the significance they attribute to technical assistance and servicing; this perspective is mirrored in the country's legal code, which is considered to be highly advanced by international standards. The importance assigned to industrial property by firms representing 89.6% of total sales is the logical counterpart to the importance they attribute to the importation of technology, which plays a functional role in highly dynamic activities; these activities are, however, dominated by foreign enterprises.

In respect of financial matters, firms accounting for 88.5% of total sales felt that fiscal incentives

TABLE 9

Pattern of competition in durable-goods industries: most important determinants of success

(Share of total sales of respondent firms as a group)

Determinants of success	Durable goods	All industries
	(Percentage of sales)	
Market		
Low product price	94.8	71.7
Highly efficient technical service	91.4	50.3
Large domestic market	90.8	68.1
Configuration of industry		
Size and integration of production		
Control over distribution system	69.2	43.3
Backward vertical integration	51.8	35.2
Company size	86.9	65.4
Inter-industrial relationships		
Speedy delivery of inputs	95.2	60.7
Durability of equipment	85.1	65.0
Access to overseas technologies	95.7	76.9
Infrastructure		
Reliable electrical power supply	93.0	68.7
Availability of training services	89.7	63.5
Availability of literate human resources	95.3	65.0
Regulatory and incentive system		
Recognition of civil liability	73.8	40.4
Recognition of industrial property rights	89.6	54.9
Fiscal incentives for fixed capital investment	88.5	63.8
Sales *(in billions of US$)*	12	41

Source: Compiled by the authors based on the survey conducted for *Estudo da competitividade da indústria brasileira*, Coutinho and Ferraz (1994).

TABLE 10

Durable-goods industries: direction of competitive strategies
(Share of total sales of respondent firms as a group)

	Durable-goods industries		All industries	
	Sales percentage	Sales *(billions of US$)*	Sales percentage	Sales *(billions of US$)*
The company's business strategy emphasizes:				
Market				
Sales for domestic and external markets	93.3	20.5	84.2	44.7
Low prices	66.6	12.9	30.3	43.6
Quality technical service	62.3	12.9	29.2	43.6
Production				
Concentric diversification	76.8	12.3	61.1	41.1
Reduction of inventory costs	81.0	20.5	54.9	44.7
Increased flexibility in production	83.8	12.3	66.3	38.1
Suppliers				
Technical conformity of inputs	75.8	12.9	58.1	46.1
Use of small number of suppliers	93.0	12.3	65.3	37.5
Use of reputable suppliers	97.1	12.3	64.8	38.5
Training				
Structured in-house programmes	98.1	12.9	87.4	46.1
Utilization of external institutions	62.8	12.9	56.7	46.1

Source: Compiled by the authors based on the survey conducted for *Estudo da competitividade da indústria brasileira*, Coutinho and Ferraz (1994).

were very important. Since most of these companies are world leaders and have, accordingly, always been financially self-sustaining, the State has not needed to provide them with the credit subsidies that have been of such key importance for intermediate-goods producers. However, in conjunction with the import barriers that have been in place ever since Brazil began to produce durable goods, fiscal instruments have been used in an extremely flexible manner and have been adapted to the economic needs of business enterprises. Thus, tax exemptions have been provided for investments during the start-up phase, for the siting of operations in new geographical areas as a means of promoting the decentralization of industrial production activities and, finally, for the opening up of new markets –for exports or for specific models of products– during times of slack local demand. There is nothing to suggest that this situation will change in the future, while the actual support needs of these types of firms have yet to be determined.

b) *Strategies, capacity-building and performance*

Table 10 indicates that the relevant strategies are consensual and fit the existing pattern of competition. These firms want to use prices and technical service to penetrate the domestic and external markets, especially the Common Market of the South (MERCOSUR). Their concentric diversification reveals their intention to seek out economies of scope, which may be facilitated by flexible, low-inventory production processes. Should these strategies prove to be successful, supplier relationships and training modalities would be very different from those observed under the preceding system. This information indicates, first and foremost, that a majority of these enterprises have access to relevant data for their system of competition and know how to select the information they need. Firms' competitive positions will be more vulnerable, however, if their strategies are not aligned with their operations and capacity-building efforts.

Table 11 presents indicators of the extent to which these industries use automation, numerical process control and just-in-time supply systems. In the early 1990s, the modernization of production facilities and processes picked up speed, and a growing number of companies began to operate at efficiency levels similar to those of the world's most competitive production plants. The intensity of such changes varies sharply among these three branches of industry, however. The consumer electronics industry has

TABLE 11

Durable goods: Innovation-intensiveness of production systems
(Numbers given in parentheses indicate respondents' share of relevant industry's sales)

Branch of industry	1987-1989		1992		1993-1995		1996-1998	
Motor vehicles								
Percentage of automated operations	Low [a]	(100)	Low	(100)	Medium [b]	(76)	Medium	(76)
Percentage of operators with NPC [c]	Low	(100)	Low	(65.1)	Low	(65.1)	Low	(65.1)
Percentage of suppliers using JIT [d]	Low	(100)	Low	(65.1)	Low	(65.1)	Low	(65.1)
Motor vehicle parts								
Percentage of automated operations	Low	(69.5)	Medium	(54.9)	Medium	(55.1)	High [e]	(60.7)
Percentage of operators with NPC	Low	(56.1)	Medium	(49.6)	High	(70.2)	High	(91.1)
Percentage of suppliers using JIT	Low	(84.6)	Low	(63.1)	Medium	(47.0)	High	(55.7)
Consumer electronics								
Percentage of automated operations	Medium	(97.9)	High	(57.4)	High	(57.4)	High	(63.7)
Percentage of operators with NPC	Low	(50.2)	Medium	(68.1)	High	(58.5)	High	(92.0)
Percentage of suppliers using JIT	Low	(98.3)	Low	(81.6)	Medium	(63.7)	High	(51.9)

Source: Compiled by the authors based on the survey conducted for *Estudo da competitividade da indústria brasileira*, Coutinho and Ferraz (1994).
[a] Low level of intensiveness: 10% or less.
[b] Medium level of intensiveness: 11%-50%.
[c] Numerical process control.
[d] Just-in-time systems.
[e] High level of intensiveness: over 50%.

forged ahead at the fastest pace, with the motor vehicle parts industry following close upon its heels. The motor vehicle assembly industry has been slower to act.

In 1988, when tariff reforms entered into effect, imports of consumer electronics were the first to start climbing. External producers offering a wider range of more technologically sophisticated products began to stake out positions in the Brazilian market. Consequently, the level of idle capacity began to mount. In the consumer electronics industry, the capacity use rate tumbled from 80% to 54% between the end of the 1980s and 1992. Brazilian firms responded by revamping their products and increasing their level of specialization by investing in automation, importing product components, cutting payrolls –employment was reduced by 50% between 1992 and 1994– and lowering prices. [2] Even though the volume of output has registered a 100% increase during the same period due to the wealth effect of the Real Plan, productivity has risen so much that a return to pre-1992 employment levels is highly unlikely.

In the motor vehicle parts industry, efficiency levels still vary sharply despite the industry's efforts to modernize, because the firms in this sector are structurally more heterogenous. Since the mid-1980s, the economic crisis has caused marginal firms to drop out of the market while those companies having a greater response capacity have sought out external markets. In the 1990s, their survival will depend on the global sourcing and training policies developed by each firm, especially if assembly industries pressure them to lower their prices. The most probable scenario is that the existing trend towards the elimination of the weaker enterprises will continue.

Between late 1989 and early 1990, the motor vehicle industry was the only one that succeeded in averting any adjustment in employment levels, thanks to the agreements reached by labour, management and the Government within the framework of a sectoral association which serves as a forum for the negotiation of tax rates, wages and profit margins that safeguard production and employment levels. When imports began to pose a threat, these firms' first reaction was to revamp the models in their product line; the second was to start importing on their own. Firms also strove to put their operations on a footing comparable to those of the other MERCOSUR

[2] As a result of automation, production processes are currently undergoing a number of modifications which include the elimination of certain stages.

countries as their Governments moved to promote economic integration. This segment is lagging behind the others in terms of output, but the production adjustment process must follow a certain sequence. For now, firms are approaching the limits of production-capacity optimization, and during the second half of the decade they will have to decide whether or not to invest in new plants.

Cross-sectoral links are moving in two apparently contradictory directions, since closer ties are being formed with local suppliers at the same time as imports are on the rise. The consumer electronics industry has increased its imports more than it has its efforts to alter existing relationships with suppliers. Few component producers benefited from the growth trend of the early 1990s, with the most important exception being local producers of cathode-ray oscillographs. In the motor vehicle industry, it is more common to see a supplier-assembler integration process directed towards the joint development of components, just-in-time delivery systems, etc. This trend is just beginning to take shape, however, since initiatives of this sort are time-consuming, complicated and costly. The few companies that have made investments aiming in this direction have made major inroads, however, and this therefore provides some idea of the path that this industry will take in coming years.

This trend is countered, however, by the import capacity of firms in the industry, which gives them an advantage over competitors having a more limited import capacity or less influence with local suppliers. The level of purchasing in the country (or region) will probably bear a direct relationship to two parameters: the volume of demand and the relevant components' degree of specificity. The higher these parameters are, the better off local suppliers will be, since their proximity to assembly industries provides certain economic advantages to both.

c) *Challenges*

A large contingent of the world's leading firms are active in Brazil, along with local companies capable of holding their own against international competition; they are accompanied by a vast group of small and medium-scale organizations that exist along the fringes of the production chain. For the remainder of the 1990s, the international outlook and the intentions of the leading firms indicate that the greatest challenges will be to build up ties with external markets and to boost technical efficiency levels.

So long as demand expands more swiftly than output, imports will not have a detrimental effect on installed capacity. If this situation changes or if the costs of bringing imports into the country approaches local production costs, however, then these narrower markets will be more hotly contested and the weaker firms will be crowded out, thus giving rise to a more highly concentrated industrial structure.

Competition from imports is mainly a threat for companies whose production capacity is wholly local. International companies have flexibility in deciding whether to produce locally or to import goods without affecting their aggregate economic performance or their market share. This is a positive factor from the standpoint of both the firms and consumers, but it is a negative one in terms of employment, activities with linkages to the production of inputs, tax revenues and the trade balance. This is not likely to result in either total de-industrialization or in a situation of complete self-reliance as regards supply; the firms in this branch of industry will have to use strategies that combine the regionalization of production with the importation of components and final products. Strategies of this sort are already in evidence in Argentina, even though its industrial sector is smaller (Kosacoff, 1994).

The major enterprises in this group have fairly ambitious investment plans and, during the next few years, will be deciding which investment projects they are actually going to pursue; this means that they will be engaging in complex negotiations with Brazilian authorities. In this respect, MERCOSUR has not only increased the size of these firms' potential market but has also augmented their bargaining power, since they can now choose from among a much larger number of locations willing to offer investment incentives. Given the region's investment shortfall, it is highly likely that these investments will be bitterly disputed, which will once again work to the benefit of this group of enterprises by enabling them to obtain significant reductions in start-up and operating costs.

3. Traditional goods: An uneven adjustment of production

a) *The pattern of competition*

Table 12 shows that this group exhibits less of a consensus than the other groups and diverges further than they do from international practice.

TABLE 12
Pattern of competition in traditional industries: most important determinants of success
(Share of total sales of respondent firms as a group)

Determinants of success	Traditional industries	All industries
	(Percentage of sales)	
Market		
Brand	72.3	42.7
Large domestic market	67.7	68.1
Delivery speed	61.5	48.0
Configuration of industry		
Inter-industrial relationships		
Low tariffs on imports of equipment	75.9	70.1
Long-term relationship with suppliers	75.4	71.1
Infrastructure		
Reliable transport services (trucking)	75.2	69.8
Availability of literate human resources	61.9	65.0
Inexpensive electrical power	59.3	55.5
Regulatory and incentive system		
Export credit	69.4	48.0
Fiscal incentives for investment	70.3	63.8
Consumer protection code	63.8	29.8
Sales *(in billions of US$)*	5.5	41

Source: Compiled by the authors based on the survey conducted for *Estudo da competitividade da indústria brasileira*, Coutinho and Ferraz (1994).

Firms in this group do conform to international marketing practices to some extent, since they ranked brand names and delivery times as being the most important factors, but technical standardization, or meeting customer specifications, was regarded as important by firms representing only 39% of total sales. Thus, in Brazil, product differentiation is perceived as a way of boosting sales by developing a certain type of corporate image rather than as a process that necessarily entails developing products for market segments defined by customer specifications.

The saturation of consumer markets observed in industrialized countries is not evident in Brazil, however. On the contrary, the country's per capita consumption indexes for most kinds of products are extremely low. Accordingly, rising income levels open up opportunities for the expansion of these sectors. This may also be the reason why a core group of firms accounting for two thirds of total sales considers the size of the Brazilian market to be an important factor.

This group's cross-sectoral relations are more in line with international practices, with companies that represent three fourths of total sales attributing importance to low customs duties on equipment imports and to long-term relationships with input suppliers, which facilitates the adoption of innovations originating in other sectors. Imports provide more choices as regards technological sophistication, price and payment terms, and induce firms to champion their suppliers' interests by advocating a liberal regulatory scheme for external trade. The desire to stabilize the supply of inputs probably reflects these firms' reaction to years of price instability, during which disputes arose all along the production chain.

The relevant infrastructures –rapid overland transport services, low electricity rates and a literate workforce– constitute generic externalities that are required by all industrial enterprises. There are also some unique aspects, however. The road system, for example, is the most suitable type of transport infrastructure for serving geographically scattered sales outlets, which is one of the characteristic features of this group's activities.

Finally, in connection with the regulatory and incentive regime, the importance assigned to consumer protection laws implies a great deal of sensitivity to sanctions against unfair competition. The emphasis on export credit and tax incentives for investment point to a heavy reliance on third-party resources for sales transactions and expansion projects. The leading firms in this group use sophisticated financial strategies which are on a par with the best practices in the country; these strategies are based on a mixture of public funds, external resources, equity issues and the firms' own funds.

b) *Strategies, capacity-building and performance*

As indicated in table 13, the importance placed on capital from outside sources implies the use of financial strategies which emphasize public credit at the expense of market-based solutions. Since there is usually no demand for complex, large-volume operations requiring long lead times, a preference for private sources was to be expected. Actually, the preference for public credit suggests a lack of confidence in the private financial system as well as reflecting the disadvantages faced by smaller firms that are unable to provide sufficient loan collateral.

TABLE 13

Traditional industries: direction of competitive strategies
(Share of total sales of respondent firms as a group)

	Traditional industries		All industries	
	Sales percentage	Sales *(billions of US$)*	Sales percentage	Sales *(billions of US$)*
The company's business strategy emphasizes:				
Market				
Brand development	71.0	7.9	41.0	43.6
Sales to most desirable customers	50.0	2.5	41.2	3.5
Production				
Expansion of capacity of existing line	68.3	5.2	61.5	41.1
Concentric diversification	62.8	5.5	61.1	41.1
Increased flexibility in production	63.7	5.4	66.3	38.1
Suppliers				
Maintenance of long-term relationships	67.9	5.4	78.2	38.5
Purchase of lowest-cost inputs	67.6	8.1	69.3	46.1
Finance				
Use of public credit	50.0	8.1	39.7	46.0

Source: Compiled by the authors based on the survey conducted for *Estudo da competitividade da indústria brasileira*, Coutinho and Ferraz (1994).

Production strategies approach best-practice levels. The companies that make a majority of the industry's sales said they intended to expand the capacity of their existing lines by introducing more flexible production techniques that would also promote diversification in new segments. The preference for long-term relationships with suppliers is in keeping with the existing pattern of competition, but the level of consensus regarding this factor is below the industry average. In the other strategy, which stresses lower input prices, such factors as conformance to specifications or delivery speeds (which could increase the reliability of cross-sectoral relationships) are treated as no more than secondary considerations.

This partial fit with the prevailing pattern of competition is also evident in this group's product strategies. On the one hand, in keeping with this model, the majority of sales are made by companies that are striving to strengthen brand-name recognition among consumers. On the other hand, delivery times, which are regarded as playing an important role in terms of competitiveness, are not given the same emphasis in these strategies. Furthermore, only a minority (12% of sales) feel that technical conformity and meeting customer specifications are significant considerations, although these factors are closely associated with best practice. Companies accounting for one half of invoiced sales also depart from the prevailing competitive pattern in that they follow opportunistic sales strategies that focus on whichever customers offer the greatest advantages at any given point in time. This dissociation is not an across-the-board phenomenon, however, since the leading firms in the various industries do exhibit customer loyalty. In 1994, for example, the firms in this minority group maintained their export contracts even though they lost money on them when domestic demand heated up and the currency appreciated.

These intra-group behavioural differences stand out clearly when the responses are broken down by firm size (see table 14). When this is done, it becomes evident that the larger the company, the greater the concentration of strategy preferences for a given attribute. For example, the preferred strategy among large enterprises is brand-name recognition. It is disquieting to note that fulfilment of technical specifications was mentioned more often only in the categories having over 100 employees. Among the smaller firms (1-20 employees), strategies varied widely and were spread out over prices, delivery times, brand names, durability and conformity to customer specifications.

Table 15, which deals with the production equipment possessed by these companies, also shows up the differences that exist between small and large firms. The largest enterprises have the most modern equipment, while many smaller companies were unable to evaluate how technologically up-to-date their equipment is.

TABLE 14

Traditional goods: product strategies, by company size
(Percentages of respondent firms)

Company size [a]	1-20 employees	21-100 employees	101-500 employees	Over 500 employees	Group average
The company's business strategy emphasizes:					
Low price	22.2	46.0	28.7	26.6	31.5
Strong brand-name recognition	22.2	36.5	53.2	60.9	46.7
Short delivery times	25.0	15.9	27.7	35.9	26.5
Technical conformity	2.8	3.2	7.4	20.3	8.9
Durability	27.8	25.4	11.7	3.1	15.2
Meeting customer specifications	22.2	23.8	22.6	14.1	20.7
No explicit strategy	19.4	9.5	9.7	9.4	10.9
Number of companies	36	63	94	64	257

Source: Compiled by the authors based on the survey conducted for *Estudo da competitividade da indústria brasileira*, Coutinho and Ferraz (1994).
[a] Firms with 100 employees or less are under-represented due to the sampling techniques used.

TABLE 15

Traditional industries: age of main equipment, by company size
(Percentages of respondent firms)

Generation \ Company size	1-20 employees	21-100 employees	101-500 employees	Over 500 employees	Group average
Latest	2.5	5.3	10.6	21.7	10.8
Next-to-latest	15.0	14.7	32.7	42.0	27.8
Prior	20.0	26.7	29.8	21.7	25.7
Undetermined	22.5	14.7	12.5	10.1	13.9
Do not know	40.0	38.7	14.4	4.3	21.9
Number of companies	40	75	104	69	288

Source: Compiled by the authors based on the survey conducted for *Estudo da competitividade da indústria brasileira*, Coutinho and Ferraz (1994).

Investment and the search for dynamic markets present more difficulties for small firms, and this sets up a vicious circle of competitive disadvantages. The pressure exerted by the largest companies and, increasingly, by imports, in combination with the absence of horizontal or vertical networks, hinders the dissemination of modern management practices among such firms and drives them to resort to uncompetitive survival strategies. During the early 1990s, informal economic activity increased, as did tax evasion, at the same time that working conditions deteriorated, and all these factors have an adverse effect on product quality. These predatory forms of competition discourage investment in product development, production processes and training, and therefore end up doing harm to the industrial sector as a whole.

Competitive success, as manifested in growth rates and product-differentiation capabilities, is largely a result of effective and efficient management. Most of the firms that have little managerial expertise and use strategies which diverge from the prevailing pattern of competition are small, domestic enterprises that do not export any of their output.

Thus, this group of industries reflects Brazilian industry's heterogeneity in terms of competitiveness; this may be accounted for by income disparities, since different levels of earnings are associated with differing levels of demand. Consequently, a wide range of variation is to be observed in the efficiency of production, prices and product complexity. A more detailed sectoral analysis would show that firms that are approaching the level of competitiveness attained by best-practice companies account for a large share of the country's output of indigo, cotton fabric, household linens and knitted goods and of slaughterhouses for poultry and pork. Competitive firms are also found in the dairy industry and in the production of leather footwear, although their shares of these markets are smaller, while they also play a fairly limited role in such areas as the processing of beef and the production of wooden furniture and other textiles.

c) *Challenges*

Uncompetitive firms will survive so long as there are sectors of the market with a low level of buying power in which product-rejection parameters are quite modest and so long as the authorities remain powerless to sanction businesses for misconduct. The truth of the matter is that these shortcomings can only be overcome in the long run through a combination of sustained economic growth and greater social equity, together with an effective system for regulating competition. This is because consumers tend to become more demanding at higher levels of economic and social development, thereby reducing marginal companies' chances of survival.

Aside from demand trends, these companies may also be crowded out by pressure from more efficient firms and from imports. First, many competitive firms want to win over new market positions and limit the growth of their counterparts. For example, in response to the trend towards greater consumer sophistication, in recent years some international food producers have launched expansion strategies based on the acquisition of local firms that possess some sort of competitive asset, such as a particular brand name or access to raw materials. The second source of pressure, which began to attract greater attention in 1994, is developing-country exports, particularly in the textile and footwear industries. Argentina's and Mexico's experiences with trade liberalization suggest that these activities were the last of all to feel the negative impact of imports and had the least response capacity.

Even though the level of imports is not yet significant in Brazil, some sectors' market positions in other countries have already been affected, as in the case of the footwear industry. Footwear exports from the southern region of the country, which had been successful in the past, lost ground in 1994 due to the entry of producers with lower costs and to the currency's overvaluation. These kinds of episodes have pointed up two of the industry's weak points –the inefficiency of its production processes and its dependence on other makers' brand names– which have paved the way for substitution by other suppliers. The threat of competition from companies located in areas with overwhelming advantages in terms of labour costs had never been encountered before in the country, but will now be a factor in coming years.

There are, however, three basic determinants that will continue to work to the benefit of local producers: first, the segmentation of demand is conducive to supplier diversity; second, local conditions are such that they require consumer-producer proximity; and third, the fragmentation of distribution networks facilitates the participation of domestic firms.

The prospects are better, however, for firms that have already developed dynamic capabilities. Just as the intermediate-goods industries have had to cope with new challenges, in the coming years the core group of traditional industries will also be confronted with threats and opportunities associated with these firms' dual market affiliation. Drawing on the advantages they have already acquired through the use of economies of scale and/or scope, these firms should maintain their current market positions while at the same time moving into segments that incorporate more value added.

Movement in two types of directions can be expected within these industrial configurations: a search for new markets and corporate mergers.

The most likely courses of action involve taking over market positions currently occupied by informal enterprises and expanding into MERCOSUR markets. The more competitive firms in neighbouring countries will also be moving into the Brazilian market, thereby adding to the competition. In order to cover this regional demand fully, production bases in other countries will be needed, and in order to form them, companies will have to take the lead in introducing more sophisticated financing arrangements, adapting to new management practices, developing input-supply logistics, making an effort to adapt products and packaging to new needs, marketing, etc.

The mode of concentration differs depending on a company's nationality. As noted earlier, foreign firms tend to acquire local companies, whereas Brazilian enterprises tend to merge or mount joint ventures with local competitors or to form partnerships with companies that have not yet set up operations in the country. Mergers increase the relevant firms' market share and make them large enough to contest positions in external markets, while partnerships with foreign firms reduce the cost of gaining access to new segments in which the amount of value added is generally greater. Such partners give local firms access to new products and well-known brand names. For foreign firms, the advantages of such arrangements are lower fixed and distribution costs. If the existing trend towards corporate mergers persists, the degree of concentration of most of the country's traditional industries will increase.

4. The dissemination of technical progress: import substitution

a) *The pattern of competition*

As shown in table 16, *high-technology* industries in Brazil diverge from international practices and exhibit a pattern of competition similar to the pattern that prevails in the group of durable-goods industries as a consequence of their weak propensity to invest and the increasing liberalization of trade. The data suggest that the majority of companies in this group, in terms of sales, share an orientation towards the maintenance of production capacity and place little emphasis on technological capacity-building.

Of the three product features about which the respondents were most in agreement –technical service, technical conformity and low prices– two have to do with reliability and with increasing the lifespan of equipment, both of which enable users to postpone investments, thus serving a useful function in Brazil's uncertainty-ridden business environment. The importance attributed to price levels reflects the increasing degree to which businesses are vying for clients in a shrinking market whose import barriers have been lowered. In contrast, the companies that ranked the type of technological sophistication associated with high product-performance standards as important represented only 38% of this group's sales. In view of the sustained downturn in investment observed between 1980 and 1993, it is somewhat surprising that some enterprises are still aware of the importance of this more advanced form of competition.

Given this pattern of competition, tie-ins with scientific and technological infrastructure are of fundamental importance, but there is no consensus regarding this point in Brazil. None the less, this group's rating of this factor is conspicuously higher than the industry average, with the reliability of research services being rated as important by firms accounting for 43.1% of sales, versus an industry-wide figure of 17%. When this finding is considered in conjunction with the importance placed on access to overseas technology (86.8%), however, it provides an indication of just how interested such firms are in reducing investments in local technological capacity to a minimum. In reviewing this evaluation, the fact should be borne in mind that Brazil is in step with international trends and that access to innovations developed in other countries is crucial, although this does not preclude a certain minimum of local adaptation. At the same time, the limited size and instability of the Brazilian economy may not justify investment in technology, and firms may instead opt for the safer route of using production equipment based on proven technologies.

TABLE 16

Pattern of competition in high-technology industries: most important determinants of success

(Share of total sales of respondent firms as a group)

Determinants of success	High-technology industries	All industries
	(Percentage of sales)	
Market		
Low product prices	55.3	71.7
Highly efficient technical service	65.2	50.3
Technical conformity of products	52.8	60.7
Configuration of industry		
Size and integration of production		
Advanced stage of de-verticalization	50.0	33.3
Inter-industrial relationships		
Conformity with input specifications	80.1	76.2
Technical sophistication of equipment	62.5	42.2
Access to overseas technologies	86.8	76.9
Infrastructure		
Availability of literate human resources	58.0	65.0
Availability of training services	63.5	63.5
Reliable telecommunications services	71.3	59.8
Regulatory and incentive system		
Availability of long-term credit	76.6	60.8
Recognition of industrial property rights	57.2	54.9
Sales *(in billions of US$)*	3.0	41.2

Source: Compiled by the authors based on the survey conducted for *Estudo da competitividade da indústria brasileira*, Coutinho and Ferraz (1994).

Within this industrial configuration, the importance placed on the reversal of vertical integration by companies accounting for half of total sales attests to their concern about one of the most serious weaknesses of high-technology industries. Until recently, the country's industrial network was incapable of providing equipment manufacturers with suitable inputs, but there were also institutional barriers to imports of such components. These constraints led companies to produce their inputs themselves, which put them at a cost disadvantage *vis-à-vis* their competitors. This view of the situation was confirmed by companies representing 87.1% of total sales, which mentioned the importance of the technical conformity of components acquired from outside suppliers. On the other hand, the emphasis placed on the technical conformity of products accounts for the degree of importance attributed to technologically sophisticated equipment.

The relevant infrastructure –literate human resources, training capabilities and reliable telecommunications services– is also functional for firms striving to maintain their production capacity. A supply of the more highly skilled personnel required for R&D work was regarded as being less important than having personnel with a basic education, provided that such education was then supplemented by vocational or technical training. The priority assigned to reliable telecommunications services is attributable to the information-intensive nature of these activities.

Finally, in keeping with the prevailing pattern of competition, two elements of regulatory and incentive schemes were underscored by the respondents: investment credit and recognition of industrial property rights.

Most of the firms stressed credit terms and conditions for two reasons. The first is that the terms and conditions of investment credit directly influence demand; indeed, local products are often passed over in favour of equipment that can be imported on more advantageous terms. The second reason is that these firms' production processes require expensive, high-technology equipment, and this fact, coupled with their long production cycles, makes it more difficult for them to fund their investments with their own resources. It is enlightening to note, however, that these firms did not assign importance to assistance in covering technology-related risk or to the availability of credit for high-risk loans, since this attests to their low propensity for investments involving a high degree of uncertainty.

In relation to regulatory matters, the recognition of industrial property rights is also a functional element for a technology-dependent structure. In the 1970s, the belief was that Brazilian companies preferred to have a legal code which withheld recognition from industrial property rights and thereby provided easy access to product and process technologies and proprietary rights thereto. The acquisition of technology continues to be a fundamental factor in the 1990s, but there is now an explicit interest in guaranteeing the appropriation of the benefits to be derived from innovations. This position may be viewed as a defense of market-based solutions that do not block access to relevant technologies regardless of how much or how little bargaining power is held by the parties concerned. The general orientation of the country's new industrial property code reflects, in large measure, the demands of Brazilian firms.

b) *Strategies, capacity-building and performance*

The strategies used by manufacturers of electronic goods and electrical machinery are outlined in table 17.

Two market-related factors are of interest here: the realm in which companies operate, and product features.

First, the companies' responses cited the complementarity of the domestic and external markets as a factor and reflected a strong preference for Latin America as a destination for their exports. Thus, these firms regard the entire continent –rather than MERCOSUR only, as is the case with durable goods industries– as their sphere of activity. In addition to the similarities that exist in terms of the level of sophistication of demand, these firms' interest in Latin America as a trading area is associated with the trade liberalization processes under way in the region, which have prompted many firms, especially the multinationals, to centralize their Latin American operations at a single location in the region.

Second, the product features which play an important role in the pattern of competition differ from those emphasized in the firms' strategies. The quest for technological sophistication emerges as the main component of such strategies, whereas technical service –an important element in the pattern of competition– is mentioned only by companies accounting for a mere 10% of sales. Another two features regarded as being important –price and technical conformity– appear only in these companies' export strategies.

TABLE 17

High-technology industries: direction of competitive strategies
(Share of total sales of respondent firms as a group)

	High-technology industries		All industries	
	Sales percentage	Sales *(billions of US$)*	Sales percentage	Sales *(billions of US$)*
The company's business strategy emphasizes:				
Market				
Sales to Latin America	75.1	2.7	33.8	38.8
Technological sophistication	51.6	3.1	22.4	43.6
Low export prices	51.5	2.7	33.0	38.8
Technical conformity of exported products	51.3	2.7	52.8	38.8
Production				
Increased flexibility in production	80.1	4.3	66.3	38.1
De-verticalization	76.4	4.3	35.2	41.9
Reduction of inventory costs	77.2	4.4	54.9	44.7
Suppliers				
Cooperation in product development	82.2	4.4	64.8	38.5
Purchase from reputable suppliers	82.6	4.4	64.8	38.5
Purchase of lowest-cost inputs	89.7	4.5	69.3	46.1
Training				
Structured in-house programmes	86.2	4.5	87.4	46.1

Source: Compiled by the authors based on the survey conducted for *Estudo da competitividade da indústria brasileira*, Coutinho and Ferraz (1994).

For domestic sales, these features are only included in the strategies of enterprises responsible for one third of total sales. These dichotomies are partly accounted for by sectoral differences within this group. Given the downward trend of the prices of electronic equipment on international markets and the deregulation of Brazilian industry, keeping prices low was an objective for firms generating 48.2% of this segment's sales, but was a goal for only 12.7% of the equipment producers. Furthermore, technical service was not listed as a priority by any of the electronics firms.

The firms' strategies regarding production and their dealings with suppliers showed a stronger correlation with determinants of success. High-technology firms displayed an above-average degree of consensus regarding the importance of streamlining production processes, reversing vertical integration and reducing inventory costs. The implementation of these strategies would build up the firms' assembly capacity –an advisable step given the prevailing pattern of competition, the existing level of uncertainty and the mounting threat posed by the entry of imports. In order to make it feasible to roll back their level of vertical integration, these firms' stated strategies also include the establishment of closer links with suppliers. The vast majority prefer inexpensive inputs, but they also want them to be produced by firms having comparable quality standards; in addition, their plans call for them to mount cooperative input-development efforts with a very limited number of suppliers. Their strategies also provide for in-house training services; this suggests that these firms are not fully confident in the effectiveness of training institutions, which are identified as playing a very important role in the pattern of competition.

With regard to capacity-building and performance, the country's industrial legacy is one of both strength and weakness. Strength, because manufacturers have managed to survive 15 years of flagging demand while maintaining some level of value-added capacity in the country; weakness, because these firms' competitiveness is not founded upon the key determinant of success for this group, i.e., the development of the capacity to generate and disseminate innovations for their customers.

The fact that so few companies disappeared during this period is accounted for by the nature of their product and production strategies and the institutional environment of the time. In the face of unstable demand and barriers to imports, most firms opted for vertical integration as a means of locking in their supply of inputs and diversified their product line in order to broaden their sales opportunities. This course of action was of the greatest benefit to companies that were linked either by ownership or technology (or both) with foreign firms having a proven level of efficiency. The expansion of their activities ensured that their production capacity would be used, but it also diluted the technological efforts necessary to sustain their competitive position over the long term. Hence, the very strategies which ensured these firms' survival in the past are now cutting into their growth potential and making their future performance dependent upon their ability to continue to access the necessary innovations.

The differences between the electronics and machinery segments of this group require greater clarification.

For Brazil, the worldwide dissemination of microelectronics during the 1980s had the effect of generating sufficient demand to permit the establishment and expansion of manufacturing activities despite (or thanks to) the conditions created by the effort to stake out the information technologies market and by the purchasing policies applied in the telecommunications industry. For these industries, aside from the difficulty of importing equipment that was not to be found in the country, rigid conditions were imposed and legal obstacles were erected against the operation of companies in which a majority interest was held by foreigners. As time went by, the performance/price ratio of Brazilian equipment began to improve, but at a slower pace than in the case of equipment produced by other countries. This performance level proved inadequate, and the pressure brought to bear by local users and external producers, with the support of their Governments, ultimately resulted in the failure of the effort to create a core group of locally-owned enterprises in technologically dynamic segments of the market. The decision to block entry into the information technologies market was Brazil's most sophisticated and radical import-substitution measure, and its abandonment in the early 1990s marked the end of this industrialization strategy for Brazil.

Restrictions on the establishment of foreign companies in the electrical machinery industry were less rigorous because a number of leading international firms had already been operating in the country for several decades, and some leeway existed for imports if it could be shown that they were not similar to locally-produced items. Nevertheless, the slump in demand during the 1980s was much more severe than in any other branch of industry. Uncertainty in the local market spurred exports, primarily to Latin America, of product lines for which demand in Brazil had been strong enough to permit the formation of a core group of manufacturers having a very substantial production capacity.

Even so, in both the electronics and electrical machinery industries, the removal of entry barriers led to the substitution of imports for Brazilian goods, thereby making it more difficult for companies to maintain diversified product lines and high levels of vertical integration. In response, most of these firms established closer external links and took steps that were diametrically opposed to their earlier course of action, rolling back the vertical integration of their production processes, increasing the specialization of the range of equipment assembled in the country and boosting their imports of components and final products. Given the electronics industry's weak response capacity in relation to the liberalization process, partnerships with foreign firms were inevitable, and the industry's ownership structure rapidly became de-nationalized.

Companies also tried to hold down their capacity-building activities to the minimum necessary for survival. Between the late 1980s and 1992, the electronics industry cut its budgets for R&D, training and technical service while raising its outlays for engineering services by 26.5% to the equivalent of 4.3% of total sales. Companies in the electrical machinery industry, meanwhile, focused on technical service (a 25% increase), froze spending on engineering services at 2.4% and made a small increase in their R&D expenditures. For the electronics industry, the growth of investment in engineering services is in keeping with the effort to rationalize production, while the electrical machinery industry's increased spending on technical service is necessary in order to ensure customer loyalty and thereby reinforce the advantages afforded by its proximity to users.

The adjustment of employment levels in R&D and engineering services was disproportionately large, however. In the group of high-technology industries, R&D staffing dropped 35% and employment in engineering services plummeted by nearly 60%, which was far steeper than the decrease in production (27%). The negative correlation between spending and employment may be a sign of far-reaching changes in business strategies that entail the abandonment of efforts to devise local adaptations and to copy imported designs, together with the establishment of closer links with external technology providers. If this is the case, the firms in this industry may be reaffirming their desire to use their resources to acquire technology while at the same time demobilizing their technical teams.

In point of fact, the group of high-technology industries exhibits an above-average propensity to purchase foreign technologies. As shown in table 18, firms representing 38.1% of sales turned to overseas markets for the acquisition of basic product designs and 42.2% did so for detail engineering. In contrast, firms purchasing basic blueprints in the country accounted for a mere 2.9% of sales, while firms seeking conformity certification services represented 48.8% of sales. Thus, the less sophisticated the service in question, the greater the role played by local suppliers.

c) *Challenges*

These firms modified their product and supply strategies in order to protect the cost advantages they hold over outside competitors, thereby improving their products' price/performance ratios. However, in order to do this it was necessary to cut back on the industrial and technological activities conducted in the country. As a result, the substitution of imports for local products has become a hallmark of this group.

Specialization strategies will probably bring about major changes in the range and intensity of technological investments as well as altering the profile of R&D teams. In the past, manufacturers secured licenses for the use of given technologies (or, in the case of subsidiaries, obtained them from the parent company) and then adapted them to domestic demand and locally available components. Consequently, technical teams were oriented towards product and process adaptation and imitation; the progressive liberalization of imports made this approach obsolete, however. Nevertheless, even though these firms have maintained close relations with their foreign partners, building up their capacity for innovation will continue to be a decisive factor. In order to be competitive, companies will have to invest in product development, and in order to do so, they will have to reactivate their R&D teams, although it may well be that their efforts should be focused on a limited number of core capabilities.

The opportunities for developing a competitive position are greater in segments with a potential domestic demand and a background of technological capacity-building in which customer-proximity advantages are significant. Expanding market segments and users requiring special types of equipment hold out the best prospects for local supply. Using state-of-the-art technologies, manufacturers of automatic bank teller machines, industrial process automation equipment, electrical power generators, equipment for combatting industrial pollution and agricultural machinery, among others, will probably play a significant role in covering domestic and even regional demand. In the other segments, however, reverse import substitution will be the mainstream tendency during the next few years. Accordingly, it is very likely that, as a group, high-technology industries will move towards more internationalized and specialized ownership and production structures in the future.

TABLE 18

High-technology industries: acquisition of technology, 1992
(Share of total sales of respondent firms as a group)

Type of technology	High-technology industries		All industries	
	Domestic	Foreign	Domestic	Foreign
Basic plans	2.9	38.1	27.8	30.1
Detail plans	5.5	42.2	28.3	26.7
Tests and trials	18.8	36.1	48.1	30.8
Conformity certification	48.8	33.4	35.0	26.0
Sales *(billions of US$)*	4.5	4.5	46.2	46.2

Source: Compiled by the authors based on the survey conducted for *Estudo da competitividade da indústria brasileira*, Coutinho and Ferraz (1994).

V
Prospects

1. Industrial development: Will it change direction or hold to its present course?

The changes taking place in Brazil's industrial sector raise a very basic question: Are these changes laying the foundations for a new style of industrial development or do they represent an additional component that reinforces the pre-existing structure?

As we have seen in this article, all the different categories of industrial enterprises are beginning to make changes as they search within themselves for the elements that will allow them to survive in a more competitive environment. Their present actions do not represent a change in course but rather an intensification of a trend that had been cut short by the macroeconomic crisis, and their movement in this direction is bolstering and increasing the visibility of certain "rationalities" –to use the term employed by A. Hirschman– which were already present in their "genetic code": the tradition of catering to the domestic market, a build-up of production capacity and the internationalization of commercial activity and ownership structures. If applied, these rationalities may play a functional role in meeting competitive challenges by opening up spheres of activity for Brazilian firms in the international economy and opportunities for sustainable growth in the future.

There are two special considerations in this regard. First, as the country continues to experience problems associated with the politically-influenced management of public assets, State enterprises are beginning to disappear from the scene.[3] It should be noted that, as of late 1994, the majority of privatized firms belonged to the group of intermediate-goods industries and had been acquired by local companies. In the past, one of the arguments that was frequently advanced as a justification for public investment in this group was precisely that the Brazilian business community lacked the necessary interest and ability to mobilize enough capital for such investment projects. During the 1990s, the situation has apparently been just the opposite: the State has exhausted its resources while the national business community has shown itself able, so far, to respond to offers for the transfer of ownership. It remains to be seen whether this fund-raising ability will stand up to the effects of an expansion process.

Second, from the standpoint of business practices, an effort has clearly been made to increase the efficiency of corporate production systems through downsizing, total quality management and the use of just-in-time systems. The modernization process is further advanced in export companies, which are bigger and have linkages with producers of intermediate goods and durables and, to a lesser degree, with high-technology companies. In companies serving the domestic market, which tend to be smaller traditional industries, this process has only just begun. The dissemination of this process is more intense in the case of simple techniques, but has run into greater difficulties in the case of more sophisticated techniques or ones that affect a larger number of partners. The modernization process may as yet be neither extensive nor intensive, but the important point is that new behavioural parameters have been introduced into the Brazilian economy. There is an enormous difference between being concerned about nationalization indexes and being concerned about profit-and-loss indexes, and it is to be hoped that the economy continues to move in this direction.

It is, however, disquieting that there has not been the slightest sign of any willingness on the part of Brazilian firms to develop new products and processes, which could herald the beginning of a genuine transformation of the foundations underpinning their competitive positions. This more advanced stage of industrial activity –or, more accurately, of some sectors of industrial activity– has not yet even appeared on Brazil's horizon. On the contrary, the available information indicates that Brazilian indus-

[3] If the extent to which these firms' senior executives have stayed on in their posts after privatization provides any indication of management quality, then the technical/entrepreneurial aspects of the way in which State enterprises have been managed has not been a problem.

try is specializing in products that fit a set pattern, has cut expenditure on R&D and, even more alarmingly, has sharply downsized its research teams and facilities. The manufacturing sector is therefore being dragged down by a great deal of inertia in terms of investment in technology which will surely hinder its progress towards greater competitiveness.

From a sectoral viewpoint, there has been no change in the ranking of the various groups of industries in Brazil in terms of their ability to compete; producers of intermediate and of durable goods are still stronger than traditional industries and high-technology sectors. [4] The main structural traits of these industries stand out more clearly than before, however.

Intermediate goods. Brazil has always been successful in these areas of activity. During the 1990s, these industries have sought to increase their vertical integration and to form stronger linkages within the international trade matrix. This is not a new venture, however, but rather a step forward along a well-established development path. What would, on the other hand, represent an actual change in course would be for these industries to diversify towards higher unit values and to internationalize their production capital, rather than simply offering stock on foreign exchanges. Apparently, few companies are going to take advantage of these opportunities, however.

Durable goods. The global strategies of the transnational corporations in this group are of fundamental importance. These industries were the standard-bearer for import substitution and will probably continue to occupy centre-stage when a different industrial development strategy takes hold in the country. In the past, sectors such as the automotive industry were regarded as the engines of economic growth because of the direct and indirect effects they had on other economic activities. In the 1990s, durable-goods industries will continue to drive the rest of the economy forward for the reasons discussed earlier and because these enterprises' actions plot out directions of growth and investment opportunities for an economy that is lacking in long-term confidence. The most recent developments –the regionalization of production and the expansion of imports– cannot be regarded as actual changes in course, since all they are actually doing is prompting Brazilian subsidiaries to reinforce practices that are already routine procedures for transnational corporations.

Traditional industries. The changes under way in this group of industries are of a more comprehensive nature because they have to do with corporate ownership and production structures. In the food industry, increasing consumer sophistication will lead to more imports as well as prompting a disproportionate expansion of foreign enterprises' market shares in Brazil through continued purchases of local assets or the formation of partnerships between local companies and new market entrants. In the rest of the country's traditional industries, local market leaders are expanding into external markets via joint ventures or independent investments while, for the first time ever, Brazil's imports from developing countries are also on the rise.

Finally, in the case of *high-technology industries*, the significance of Brazilian industry's specialization and its reversal of vertical integration initiatives notwithstanding, these processes are deepening rather than changing the country's basic structural dependence on imports of equipment, technology or both. It is likely that the diversity of this sector's local manufactures may narrow while its import levels, which have always been quite high, will rise even further.

2. Industrial policy

If the above trends are firmly entrenched and are being manifested in the virtual absence of explicit public-sector intervention, then why do we need an industrial policy?

The analysis undertaken in this article shows up the flawed assumptions underlying the question as to whether an active industrial policy is needed or whether the Government should confine its attention to the issue of how to achieve macroeconomic management with greater social equity. Any action affecting the socio-economic environment will inevitably affect the competitive position and growth rate of the country's business enterprises. At the same time, the country's industrial development process may or may

[4] This hierarchy is mirrored to some extent in recent events in other Latin American countries (Katz, 1994). The identification of production-based and technological externalities in intermediate-goods industries thus constitutes an important topic of research.

not create favourable macroeconomic conditions, especially as regards stabilization programmes, and may either smooth out or heighten social inequalities.

Above and beyond the more general sorts of political or economic considerations which also underlie industrial policies in the main member countries of the Organization for Economic Cooperation and Development (OECD, 1994), this article demonstrates that the approach taken to competition also influences government action, even when it is focused on certain corporate sectors or groups. If we define a competitive firm as one that implements strategies, works to build up its capabilities and acts in accordance with the requirements for success in its market, then its performance will also hinge upon the effectiveness of the regulatory and incentive scheme, which is specific to each individual pattern of competition. Thus, a country's industrial policy requires sectoral orientations so that the objectives of incentive programmes, the types of instruments and the intensiveness of their use will be feasible and will generate more and better products and jobs.

The stages of development and the challenges characterizing the various groups of industry in Brazil clearly illustrate how, within a context of macroeconomic stability, policy objectives and tools may differ depending on the pattern of competition in effect.

Intermediate goods. Given the mature stage of competitiveness already reached by these industries, they no longer need the types of incentives that were provided in the past (i.e., the subsidization of capital costs). Projects coordinated by public agencies and the private (primarily international) financial system will probably be seen more frequently. Investment plans and operations increasingly require sophisticated financial engineering services, and this will reduce the relative importance of credit from government banking agencies such as the National Economic and Social Development Bank (BNDES) in cofinancing arrangements, loan guarantees, securitization operations, etc. In terms of the regulatory system, the probable increase in economic concentration will make it necessary for the Government to use policy tools in the areas of competition, environmental issues, consumer affairs and foreign trade in order to ensure that firms will employ competitive strategies.

Durable goods. The competitive challenges faced by these industries are to differentiate their products and increase their production scales so that they can compete with imports, including those coming from the parent companies of Brazilian subsidiaries. Since trade liberalization is expected to result in greater economic efficiency, the success of the firms in this group will not be measured in terms of profits and losses but rather by their rate of capital-deepening investment and by the regionalization –read MERCOSUR– of their products. Industrial promotion policies –regulations affecting imports of inputs and final products, conditions for the entry of new producers, and fiscal incentives for investment, production and exports– will help to shape the profile of the durable-goods group. At the same time, decisions regarding the siting of corporate enterprises are likely to be the subject of heated disputes, since their investments are a very attractive lure for host regions.

Traditional products. Only a small number of firms within this group of industries are competitive, and these enterprises, most of which are quite large, will be the main beneficiaries of any increase in demand. The same recommendations as were made for intermediate-goods industries apply to these firms as well. For the rest of the companies in this group, the challenge will be to boost their level of competitiveness, and in order to do so they will have to outpace the leading traditional enterprises. This will by no means be an easy task, given the latter's formidable response capacity. It will be up to government agencies to backstop this effort while deterring any activities that fall below a certain minimum in terms of quality and/or efficiency. Measures designed to foster competition should draw upon market forces to set the bounds of acceptable corporate behaviour and should include tax reforms, consumer protection measures, safety and environmental standards, trademark registration, measures aimed at curtailing tax evasion and improvements in oversight systems. Exposing local producers to international competition will also help to make the domestic market more open and thus curb abusive practices in the areas of pricing and product quality. If this is to be done, however, special care must be taken to prevent foreign companies from engaging in non-competitive practices, and the State will therefore need to be armed with very strong regulatory powers over foreign trade operations.

By breaking away from past adaptive and imitative practices and beginning to move in the direction of increased imports and specialization, *high-*

technology industries are giving rise to new challenges in the realm of government action. An examination of international practices reveals a number of approaches that could be emulated, including easy credit terms for users, support mechanisms for innovation, credit insurance, the equalization of interest rates for export activity, and tax breaks for capital goods. Another mechanism upon which all the developed countries rely quite heavily is the use of the State's purchasing power to promote quality and innovation. In addition, an important regulatory means of facilitating access to innovations is to protect property rights associated with investments in technology. In order to expand local supply capacity, an effort should be made to attract new firms and to streamline the administrative procedures involved in their establishment.

Government agencies have been quite timid in their attempts to deal with the competitive challenges confronting the various branches of Brazil's manufacturing sector. Now, however, instead of trying to foster local ownership by staking out the market for national enterprises, they are gradually fashioning a system designed to encourage efficiency and regulate deviations from competitive forms of behaviour.

This new incentive scheme should use the same principal policy tools as the old system –credit and tax incentives– but should alter their orientation and form of implementation. From the standpoint of the reciprocity which business enterprises should offer, the focus is shifting towards international price levels, quality standards and technological modernity and away from the local ownership of production capacity.

In the area of regulation, increased competitive pressure should crowd out the weaker firms, thereby leading to more concentrated industrial structures. Accordingly, in the relations among the various agents –including consumers and the State– the ability to define and implement rules of conduct will become differentiated. This will generate greater pressure for the establishment of a regulatory system that minimizes direct forms of intervention in corporate decision-making and maximizes the sanctions imposed on non-competitive practices. The ability to regulate competition as it relates, *inter alia*, to foreign trade, consumer affairs, environmental issues and industrial property stands out as the major challenge facing the Brazilian State in the 1990s.

In conclusion, the main challenge for Brazilian firms will be to consolidate and revitalize their ability to compete. Within the framework of a new system for promoting and regulating competition, the pillars of this revitalization will be the regionalization of demand, competition with imports, the internationalization of production and ownership structures, the enhancement of technical efficiency and investment in technological capacity. In order to ensure that Brazilian firms will be competitive, the State will have to play an active role (Ramos, 1993) and this, in turn, calls for the development of new policy-making capabilities. The availability of a skilled team of technical experts serving in agencies equipped with suitable mechanisms and instruments would surely smooth the way for the political negotiations which are inevitably involved in setting priorities and implementing measures to promote a competitive form of development.

(Original: Portuguese)

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Indicators of fiscal *policy: design and* applications for Chile

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Latin America's economies are prone to continual shocks, of both external and internal origin, giving rise to a marked variability in their growth rates. In order to reduce this volatility, it is necessary therefore to establish stabilization mechanisms, including in particular the instruments of fiscal policy. The economies' increasing variability is prompting the development of fiscal norms that incorporate anti-cyclical features. Such rules are based on the setting of medium-term public spending goals that are consistent with the economy's growth trend and level of public debt but are independent of the cyclical component of the level of activity. In such a system, tax revenues would perform the traditional function of stabilizers of economic fluctuations. Since fiscal policy is faced with an iniquitous combination of unpredictable income and rigid expenditure, it is desirable to devise indicators that distinguish between the transitory factors and the permanent factors which affect the public accounts. In this connection, fiscal discretionality indicators help to pinpoint medium-term fiscal problems and, when applied in the case of Chile, allow a more accurate measure of recent years' fiscal policy. The latter has been structured around the economy's growth trend path, avoiding cyclical adjustments of magnitude. The analysis shows that, after correction of the fiscal balance for the main exogenous changes in government revenues and expenditures, there emerges a fairly restrictive fiscal policy stance, aimed at controlling aggregate demand in the recent years of expansion of the level of activity.

I

Introduction

Recent episodes have served as a further reminder of the extreme vulnerability of the Latin American countries' economies. These economies are prone to continual shocks, of both external and internal origin, causing considerable variations in their growth rates. Historically, terms of trade cycles, volatility of foreign capital flow and unsustainable expansions of public and private spending have generated a marked instability in the economic development process. Moreover, the structural reforms carried out in the 1980s by most countries of the region, such as the opening up of the market in goods, the liberalization and globalization of financial markets and the reforms of the labour market, are likely to accentuate the variations in growth and employment.

This variability of the economy is undesirable when accompanied by maladjustments that are difficult to offset. Falling investment, rising unemployment and enterprise bankruptcies often have persistent effects on the development of productive capacities or the ability to generate productive employment. If one accepts the theory of a certain hysteresis or irreversibility in capital or labour markets, it is necessary to develop mechanisms and instruments aimed at reducing the volatility referred to. Paradoxically, economic liberalization imposes major challenges on macroeconomic intervention and management capability in the spheres of monetary and foreign exchange policy as well as fiscal policy. One important task in the coming years will be to implement effective intervention mechanisms that will ensure a minimum degree of stability in the economy and in public and private operators' decision-making on consumption and saving.

In particular, the economy's increasing variability affirms the need to formulate fiscal rules with anti-cyclical features in order to smooth out such fluctuations. Fiscal policy norms are based, on the one hand, on setting medium-term public spending goals that are consistent with the economy's potential growth trend and with the level of public debt but are independent of the cyclical component of growth, and, on the other hand, on the assigned function of tax revenues to stabilize economic fluctuations. Within the region, one of the main difficulties facing the authorities in fiscal policy management is the contrast between the vulnerability of their revenues and the inflexibility of their expenditures. One way of dealing with this situation is to devise instruments that will enable permanent fiscal decisions to be separated from the transitory factors which affect the public accounts. The most important of the short-term factors are fluctuations in the price of raw materials, inflation and the economic cycles.

How then are budgetary and taxation operations to be separated into a discretionary component that will reflect the arbitrary dimension of government action and an automatic component that will describe the effects of current trends on the budget? By establishing discretionality indicators to allow the exogenous or endogenous origin of the budget balance to be distinguished. The construction of fiscal discretionality indicators can be very useful in budgetary policy design. In providing a fiscal deficit measure that is independent of the economic cycle and of the terms of trade cycle, it makes it possible to identify the fiscal authority's decisions more clearly and to calculate the magnitude of the deficit to be corrected by discretionary action. In this respect, discretionality indicators can help to pinpoint medium-term fiscal problems, to promote informed debate on budgetary policy and to strengthen fiscal discipline in periods of prosperity.

The following sections of this article comprise an examination of the advisability of establishing public spending norms to deal with and reduce fluctuations, thereby fostering stable rules of the game in the medium and long terms and ensuring the effectiveness of government action (section II); a description of the methods of constructing the main fiscal discretionality indicators, essentially related to the work of the Organization for Economic Cooperation and Development and the International Monetary Fund (section III); a presentation of the estimations made in the case of Chile in order to obtain the tax elasticities and output trend path which will enable the discretionality indicators to be applied (section IV); an analysis of the results obtained, separating the trend, cyclical and discretionary components of public finances in Chile (section V); and finally a summary and conclusions (section VI).

II

What public spending norm?

In general, the effects of fiscal policy are evaluated directly on the basis of the budget balance, so that if the fiscal deficit (or surplus) increases or decreases, the fiscal stance is understood to have been either expansionary or contractionary. Such an interpretation is an oversimplification since the fiscal position is determined not only by government decisions but also by factors not directly under government control. The budget balance is an ambiguous indicator of fiscal policy because it reflects the impact of discretionary government action and at the same time the influence of current economic trends on the budget.

In periods of expansion, government revenues increase rapidly and expenditures relating to unemployment benefits or grants to economic sectors tend to diminish. Both factors produce a compressive effect on the deficit. Conversely, in times of recession, the low level of activity is highly detrimental to the budget balance, particularly if there is widespread unemployment. Government revenues and expenditures whose changes are linked to the economic cycle are known as automatic stabilizers. The extent of such stabilizers varies from country to country, reflecting the size of the public sector, the progressiveness of the system of taxation, the sensitivity of tax bases to fluctuations in economic activity, the generosity of unemployment benefit schemes and the sensitivity of unemployment to changes in output.

For example, in 1993, cyclical factors caused almost one half of the fiscal deficits of the OECD countries (OECD, 1993). The recessionary climate in these countries and their worsening fiscal problems have given rise to the reappearance of studies aimed at differentiating the cyclical component of the budget. [1] In the case of some Latin American countries, the exceptional fiscal revival in the last few years most probably contains a substantial cyclical component, bearing in mind the upswing in economic activity and the disinflationary trends recorded in recent years. [2] It is no less important therefore to formulate indicators that will provide a medium-term view of the public accounts position in periods of prosperity.

Moreover, in recent publications, emphasis is being placed on the concept of sustainable deficit (Chouraqui, Jones and Montador, 1986; Blanchard, Chouraqui, Hagemann and Sartor, 1990; Buiter, 1988), which is defined as the primary deficit that ensures the stabilization (or reduction) of the public debt as a percentage of GDP. This primary balance is proportional to the previous debt and to the differential between the real interest rate and the growth rate of the economy. Blanchard, Chouraqui, Hagemann and Sartor (1990) propose fiscal sustainability indicators based on changes in the differential between the interest rate and the growth rate.[3] These indicators need to have a medium-term dimension, since cyclical movements in GDP and transitory fluctuations in interest rates, even when leading to a temporary rise in the public debt, do not mean either excessive deficits or unsustainable fiscal policies. It is consequently difficult to judge fiscal sustainability over very short periods. Finally, some authors single out, for policy-setting purposes, the deficit regulation component (Creel and Sterdyiniak, 1995). Under certain circumstances, public sector involvement may go beyond the spontaneous action of automatic stabilizers to the pursuit of discretionary policies, stimulating growth through increases in public spending or tax reductions that are not offset within a recessionary climate, or, conversely, curbing the expansion of the level of activity through adjustment policies.

[1] With regard to Spain, for example, see Fernández, Nadal and Sanz (1993) and Molinas (1994).

[2] Since 1992-1993, the public finances of most countries in Latin America have shown relatively controlled situations (ECLAC, 1994).

[3] For an application of these indicators to the case of Mexico, see Martner, 1995.

This breakdown of fiscal indicators highlights, on the one hand, the multiplicity of the fiscal authorities' conflicting goals and, on the other hand, the difficulty of evaluating the public accounts position using a mechanical approach. In this regard, there is no optimum approach to fiscal policy; any such policy should be guided by medium-term macroeconomic goals and not by accounting goals. In the quest for macroeconomic efficiency in fiscal policy, the following two questions have to be answered: What is the desirable level of output bearing in mind the external equilibrium, inflation and enterprises' financial situation? To achieve that level, should the public sector pursue an expansionary or a restrictive policy?

In highly variable economies such as those of the region, with periodic financing restrictions and difficulties in establishing active fiscal policies, it is desirable to set explicit public spending norms *throughout the cycle* so as to enable growth to be sustained when the economy is at the bottom of the cycle and the public debt to be reduced when the economy is at the top of the cycle. The notion of a fiscal norm can foster more stable rules of the game, to which the State is committed in the medium and long terms and which help to ensure the effectiveness of government action. Indeed, on the basis of such rules, economic agents have greater possibilities for realizing their consumption and investment expectations beyond the short-term fluctuations in the level of activity. The annual norm should refer not just to the fiscal balance, but primarily to the level of spending. In addition to the markedly procyclical nature of a balance norm –when an economy goes into recession, revenues and the fiscal balance are impaired– the spending norm can stabilize private transactors' expectations, since it makes the development of the economy more predictable, tends to minimize the distortions generated by government intervention and is closer to the factors that determine private transactors' profits. In other words, a public spending norm that is sustainable over time can help to reduce the volatility of the level of activity if monetary and exchange rate policies pointing in the same direction exist.

However, strict observance of a restrictive expenditure norm is easier when large deficits exist and is politically more difficult in the case of a surplus or of a small deficit, i.e., at the top of the cycle: in order to manage a shortage, it is first necessary to administer an abundance. Consequently, the clear identification, within deficits and surpluses, of the cyclical component (which is linked primarily to the automatic stabilizers and to the terms of trade cycle) and of the structural component (which affects the level of long-term debt) can help to increase the transparency of budgetary decisions.

Although the definition of a medium-term public spending norm that will cover the duration of the cycle constitutes a sound rule for fiscal management, the modalities for formulating such a norm are not simple. Indeed, the reference to a cycle presupposes a knowledge of its duration and its upper and lower limits. Indicators of this kind are not free from disagreement. As stated by Blanchard, Chouraqui, Hagemann and Sartor (1990), the persistence and nature of cycles are the subject of controversy; therefore, the cyclical adjustment of the deficit only makes sense if the economy returns to its growth trend path within a relatively short period of time. For example, in the European countries, unemployment stabilized in the 1980s at far higher levels than earlier, and it is consequently not certain that economic recovery reduces unemployment –and its attendant deficit– to previous levels.

A question which is thus crucial in methodologies of this kind, and one which is not devoid of difficulties, is the appropriate identification of the economic cycle and also of the cycle phase at which the economy finds itself, since perfect symmetry does not exist between the top and bottom of the cycle.

A second difficulty relates to the definition of the norm. It is clear that objective rules concerning spending do not exist. Three criteria would nevertheless merit consideration:

(a) The public spending norm must be consistent with the desired fiscal development over the period of the cycle. In particular, there must be consistency within this period between anticipated revenues that are dependent on the growth trend throughout the cycle and government expenditures of a permanent nature. This requires an ability to determine the trend rate of growth, which is a very complex exercise in the region, owing to the high variability of its growth rates. In this connection, a realistic evaluation of the economy's growth trend will prevent the public sector from becoming a sounding board for fluctuations in the economy and the terms of trade cycles.

(b) The public spending norm is not independent of the level of public sector borrowing. In particular, it is necessary to ensure that in the period of the cycle the level of borrowing leads to a development of the debt which is sustainable in the medium and long terms. Calculations are usually made on the basis of the debt as a proportion of GDP; it might be preferred to adopt a criterion closer to that used by financial intermediaries for analysing the solvency of their debtors, such as the ratio between the burden of interest and government revenues. This indicator helps to show the relative size of the debt according to the level of interest rates. It also makes it possible to determine more precisely the impact of reductions in revenue on the sustainability of fiscal policy.

(c) The third –and not the least important– criterion avoids an overly technocratic view of the problem. The norm has to be justifiable to the public and parliament, since it is in fact of a political nature. One should not therefore be afraid of adopting general norms, such as the parallel development of expenditure and nominal GDP or simple index-linking of prices in a context of a falling share of public spending in the economy.

In addition to defining a satisfactory norm which would thus be independent of the economic cycle, the nature of government expenditures does not readily lend itself to such an exercise.[4] The dynamics of interest payments, for example, is dependent on the level of debt and changes in interest rates. Furthermore, there is within government expenditures a hard core which does not lend itself to simple reductions when called for. These expenditures are inflexible since they are based on often very widespread eligibility criteria that lead to problems of uncontrolled growth and to permanent expenditure, making a downward trend impossible in the event of an improved economic climate. The establishment of multi-annual programming can facilitate the imposition of restrictions within a more flexible framework than the budget year (Martin y Núñez del Prado, 1993; and Marcel, 1993). A spending norm is of course only possible on the basis of an explicit definition of the expected income throughout the cycle.

III

Fiscal policy indicators: methodological aspects

Variations in public-sector income or expenditure are automatic in nature when they respond to factors endogenous to the economic model and exogenous to the public sector, i.e. when they are changes in components of the budget that are sensitive to the influence of economic aggregates. Conversely, variations that respond to government decisions are discretionary in nature. An initial breakdown of the actual deficit thus distinguishes the automatic deficit and the discretionary deficit. This differentiation is not unimportant since all government revenues and expenditures are discretionary in origin, being in response to public policy decisions. Consequently, the concept of discretionality is necessarily relative, has a time dimension and is presented as a counterfactual exercise. The aim is thus to separate the component that responds to decisions which are controllable by the authority from the rest of the budget within the observed variations in items of government revenue and expenditure. In view of the adjustment possibilities that exist, the criterion of fiscal discretionality or neutrality is necessarily arbitrary, since it depends on the investigator's definitions.

In a restricted definition, it is a question of obtaining fiscal policy indicators that are independent of the economic cycle. The OECD indicator (Gramlich, 1990; OECD, 1993) separates the deficit into a cyclical component and a structural component. The behaviour of revenues and expenditures is expressed in a model when the economy departs from the growth trend path (box 1). The variation in public revenue or expenditure is cyclical in nature when it is caused by the difference between the actual output and the output trend. That is to say, the cyclical position of the economy gives rise to fluctuations that are reflected in the budget, particularly in tax receipts

[4] Marcel (1993) calculates that, in Chile, over 70 per cent of programmed public spending is predetermined by law, which demonstrates the degree of inflexibility of the budget.

Box 1
THE OECD STRUCTURAL INDICATOR

To obtain the cyclical deficit, OECD breaks down the budget into tax revenue, other revenues, expenditures on unemployment benefits and other expenditure. The cyclical component of tax revenue is obtained from its elasticity in relation to GDP and from the difference between actual GDP Y and trend GDP Y^* in year t:

$$\text{Cyclical revenues} = T_j \cdot \varepsilon_j \cdot \frac{Y - Y^*}{Y^*}$$

where T_j is actual tax revenue observed in t, corresponding to category j, which breaks down into personal taxes, corporate taxes, indirect taxes linked to production and imports and social security contributions, and ε_j is income elasticity in relation to GDP for the different tax categories j. Therefore, to estimate the cyclical revenues, it is necessary to estimate the income elasticities and output trend. On the expenditure side, in both the OECD indicator and the IMF indicator, only unemployment benefit expenditure is regarded as having a cyclical component. The formalization of the model is based on the assumption that the ratio between cyclical unemployment expenditure and total unemployment expenditure and the ratio between the cyclical unemployment rate and the total unemployment rate are equal:

$$\frac{\text{Cyclical unemployment expenditure}}{\text{Total unemployment expenditure}} = \frac{\text{Cyclical unemployment rate}}{\text{Total unemployment rate}}$$

The expression of cyclical unemployment expenditure is as follows: $\frac{\text{Cyclical unemployment rate}}{\text{Total unemployment rate}}$

Cyclical unemployment expenditure = (Total unemployment expenditure)

As regards the cyclical unemployment rate, this is obtained from the difference between actual GDP and trend GDP.

and in unemployment benefit expenditure. The same exercise can be carried out for the primary deficit, with the exogenous component corresponding to payment of interest on the external and internal debt being deducted.

As pointed out by Molinas (1994), this indicator has two advantages in relation to the actual budget balance: first, by providing a fiscal deficit measure that is independent of the economic cycle, it makes it possible to assess the fiscal policy stance adopted by the economic authorities in previous years; secondly, since the structural deficit is not automatically corrected when the growth trend path is resumed after a period of recession, the indicator makes it possible to identify the magnitude of the deficit to be corrected by discretionary action.

The IMF indicator emphasizes the concept of fiscal neutrality, which is defined as the sum of the cyclical deficit and the trend deficit. The trend deficit is linked to changes in income and expenditure in relation to the trend GDP (box 2).

The sum of the cyclical deficit and the trend deficit is what IMF refers to as the neutral budget deficit. The IMF indicator (Heller, Haas and Mansur, 1986; Chand, 1992) is thus obtained as the difference between the actual deficit and the neutral budget deficit, which is also defined as the "fiscal impulse". The IMF indicator elects to separate the cyclical and trend deficits –i.e., the two components of the neutral or automatic budget deficit– in order indirectly to obtain the fiscal impulse as the difference in relation to the actual deficit.

Box 2
THE IMF FISCAL IMPULSE INDICATOR

The IMF indicator elects to formalize the cyclical and trend deficits, the discretionary deficit or fiscal impulse being obtained as the difference in relation to the actual balance. Thus the main difference compared with the previous indicator is that this time the trend components of the deficit are model-based. For the modelling of the trend and cyclical deficits, a base year is chosen in which actual GDP is considered to coincide with trend GDP, so that a positive fiscal impulse is interpreted as expansionary with regard to the base year. It is assumed that trend revenues increase with unitary elasticity in relation to trend GDP, so that they represent in year t the same proportion of trend GDP as in the base year, where t_0 is the base-year tax ratio:

$$\text{Trend revenues} = t_0 \,.\, Y^*_t$$

As regards the trend expenditures, excluding unemployment benefits, these are defined in the same way, so that they represent the same proportion of trend GDP as in the base year:

$$\text{Trend expenditures} = g_0 \,.\, Y^*_t$$

where g_0 represents the base-year ratio of government expenditure to GDP, excluding unemployment expenditures.

The remaining government expenditure is regarded as having only trend and discretionary components. Unemployment benefits are separated into a cyclical component and a trend component. The latter component is defined with the assumption that the average benefit per recipient is maintained in real terms and that the number of recipients increases as the labour force increases. The cyclical unemployment expenditures are also determined in relation to the base year on the basis of the cyclical unemployment.

Finally the cyclical revenues are obtained from the difference between actual GDP and trend GDP, with the ratio between revenues and GDP for the base year being maintained:

$$\text{Cyclical revenues} = t_0 \,.\, [Y_t - Y^*_t]$$

This definition implies a unitary elasticity of cyclical revenues in relation to actual GDP, which facilitates the calculations in comparison with the previous indicator. The IMF fiscal neutrality criterion includes revenues which, by reference to the base year, increase with unitary elasticity in relation to GDP and expenditures which increase with unitary elasticity in relation to trend GDP, again by reference to the base year. Thus, a revenue is regarded as neutral if its growth rate coincides with the rate of growth of actual GDP, and an expenditure is regarded as neutral if its increase is equal to that of trend GDP.

However, a fiscal policy indicator can also separate all the automatic components of the deficit which are beyond the authority's control. This definition is far broader inasmuch as it includes, for example, the effect of inflation on tax receipts, the impact of the price of raw materials on public enterprise profits and the rise in paid interest resulting from increases in interest rates or devaluation of the local currency. For example, in the OECD and IMF indicators just described, the effects of inflation on tax receipts or variations in interest rates or fluctuations in the price of raw materials produced by public enterprises are regarded as discretionary changes in the deficit. This is no doubt due to the lesser relative significance of such mechanisms in the developed countries. As pointed out by Marcel (1993), the extent of the exogenous component and particularly of the external sector in the public finances of the Latin American countries makes it difficult to identify precisely the discretionary component of the budget. At the same time, the diversity of exogenous flows in the public accounts limits the application of fiscal policy indicators such as those of IMF or OECD. In the following section, fiscal policy indicators are calculated in the case of Chile, excluding the major exogenous external component in the country's public revenues: copper exports.

IV

Estimates in the case of Chile

The mechanical application of the fiscal indicators described above to the countries of Latin America can lead to results of little usefulness in countries which have different institutions and problems. As stated by Marcel (1993), the main requirements to enable indicators of this type to constitute an appropriate fiscal policy measure are the following: (i) substantial tax receipts so that the cyclical component of government revenues will be of some significance; (ii) a unified fiscal authority having some degree of control over a sizeable proportion of public spending; (iii) relatively limited exogenous sources of movements in public finances; and (iv) a certain degree of development of the financial market, so that fiscal policy can be distinguished from monetary policy.

In the case of Chile, the centralization of the fiscal authority, the limitations on municipal authorities' borrowing, the surpluses registered by public enterprises and the elimination of quasi-fiscal operations in recent years make it possible to evaluate fiscal policy on the basis of central government accounting. Moreover, owing to the existence of the Copper Equalization Fund (FCC), it is possible to separate from the public accounts the effects of unforeseen movements in the price of this metal.

Owing to the exceptional reduction in Chile's public debt in recent years and the relatively small difference between the real interest rate and the growth rate of the economy, the reference to public debt sustainability indicators is not of major significance in the present context. The fiscal policy has clearly been sustainable in recent years and, what is more, the public sector has prepaid substantial amounts of its external debt when it has had what are regarded as transitory revenues.

Moreover, the impact of inflation on real fiscal receipts is very limited, since most taxes are index-linked monthly to price changes. Inflation does not therefore represent a major source of distortion of tax revenues. [5] From the summarized characteristics of the public sector in Chile, it may be assumed that discretionality indicators represent an adequate fiscal policy measure. The empirical construction of such indicators calls for the use of econometrics to estimate the tax elasticities and trend output (box 3). Estimating tax elasticity is subject to continuous changes in the tax structure. In Chile, the main tax reform dates from 1975: it laid down the basic features of the level and composition of the tax burden (Carcioli, Barris and Cetrángolo, 1994), introduced value added tax (VAT), which was to become the central element of the system, and eliminated a large number of taxes. The subsequent reform of 1984 reduced income tax by removing progressivity from the system of personal taxes and by decreasing taxes on enterprise profits. In 1988, the VAT rate fell from 20 to 16 per cent and the rate applied to profits was again reduced. In 1990, the VAT rate rose to 18 per cent and the progressivity of the system was intensified by shortening the income brackets and increasing the rates on accumulated profits. Finally, the 1993 reform provided for gradual reductions in the rate of VAT and changes in the income brackets.

[5] Conversely, inflation does have an impact on real public spending in the short term, primarily owing to the annual system of indexing salaries and pensions paid by the public sector. Thus, when inflation increases, a short-term fiscal surplus is generated, which constitutes a major mechanism of fiscal stabilization (Marcel, 1991).

Box 3

CHILE: ESTIMATION OF THE TAX FUNCTION AND TREND OUTPUT

To calculate the fiscal discretionality indicators it is necessary to estimate econometrically the income elasticity of tax revenue and the potential output.

Estimation of an aggregate tax function

Annual tax revenue T is estimated as a function of GDP (y) and of its own lagged values for the period 1976-1993. The lower-case letters denote logarithms, and the values in brackets are Student's T values. Two dummy variables are also introduced; these modify the value of the constant for the periods 1984-1987 and 1988-1990:

$$\begin{array}{llllll} t = -5.82 & + 1.11\, y & + 0.25\, t_1 & + 0.067\, D84\text{-}87 & - 0.10\, D88\text{-}90 \\ -(14.7) & (16.0) & (4.77) & (5.01) & (-6.56) \end{array}$$

$R^2 = 0.99$, $\sigma = 0.022$, $DW = 2.15$, $N(\chi^2) = 0.16$, AR 1-2 $F(1,11) = 1.55$, $ARCH$ $F(1,11) = 0.53$, $RESET$ $F(1,13) = 0.03$.

The estimation has adequate statistical properties: no autocorrelation of errors is detected (D-W and AR 1-2 tests), there is normality (the result of the $N(\chi^2)$ test is close to zero) and homoscedasticity (ARCH test) in the residuals, and there are no functional specification problems (RESET test). The short-term income elasticity is 1.11 and the long-term income elasticity is 1.49. This means that tax receipts fluctuate with GDP in a more-than-proportional manner. The average lag of the equation is 1.5 years, which reflects the tax collection period.

Estimation of trend output

The calculation of the GDP trend path is based on the OECD truncated trend methodology (Gramlich, 1990). This consists simply of estimating different trend growth coefficients for different periods. The method enables the trend and cyclical components of output to be easily separated. The regression of GDP against different trends over the period 1976-1993 produces the following results:

$$\begin{array}{llllll} y = 11.2 & + 0.0618\, Trend & + 0.0149\, Trend_{76\text{-}81} & + 0.1\, D82 & + 0.03\, D83 \\ (240.1) & (39.2) & (16.58) & (4.89) & (1.58) \end{array}$$

$R^2 = 0.99$, $\sigma = 0.017$, $DW = 1.97$, $N(\chi^2) = 0.82$, AR 1-2 $F(2,11) = 1.53$, $ARCH$ $F(1,30) = 1.19$, $RESET$ $F(1,12) = 0.29$.

The variable $Trend_{76\text{-}81}$ takes the value of the trend between 1976 and 1981 and 0 in the rest of the sample; variables $D82$ and $D83$ take the value 1 in 1982 and 1983 respectively and 0 in the remaining periods. A trend rate of growth of 6.2 per cent is obtained between 1984 and 1993, which value rises to over 7.5 per cent for the years 1976-1981. The statistical tests display an adequate estimation, with no autocorrelation and with normality in the residuals.

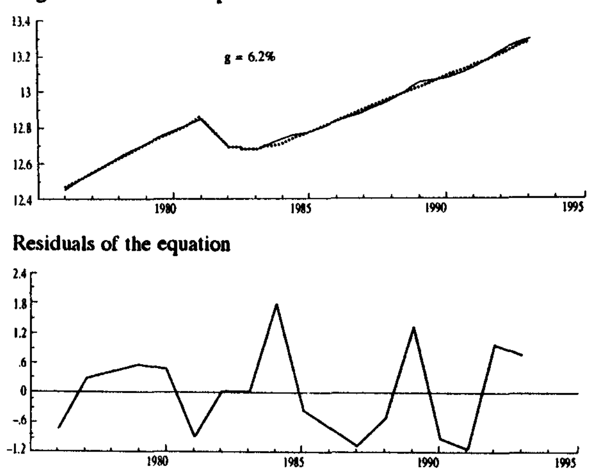
Moreover, one major source of fiscal revenue is that of taxes on specific products, in particular fuels, whose rates have behaved in a procyclical manner, increasing in periods of recession to cover reductions in VAT revenue, and decreasing in periods of expansion. Finally, successive trade reforms have reduced and standardized tariff rates, lessening the relative weight of these duties in the tax structure.

The main difficulty in estimating tax functions is constituted by the frequent changes in tax policy with regard not only to rates and bases but also to the progressivity of the system. One way of dealing with this problem is to estimate variable coefficients using the Kalman filter method. The method employed here is different, since it makes use of dummy variables in order to allow for the changes brought about by the tax reforms (box 3). The estimations show that the recent tax reforms have affected primarily the level of fiscal revenue (which is reflected in the changes in the intercept of the equation), but not so much the progressivity of the system (measured by the income elasticity) or the tax collection periods (Martner, 1995). The tax elasticity obtained in the short term is greater than one, which shows that fiscal revenue is highly sensitive to economic cycles.

In estimating the trend output, an annual mean growth rate of 6.2 per cent between 1984 and 1993 is obtained. The sustainability of such a high trend rate of growth is debatable, although it corresponds to the movement of the Chilean economy over the last 10 years. This implies that growth rates which differ from this mean are regarded as cyclical and affect the calculation of automatic revenues and expenditures.

FIGURE 1

Chile: Trend output and actual output



Source: Own calculations.

For example, a growth rate of less than 6 per cent indicates negative cyclical income.

The residuals of the estimated equation (figure 1) show the development of the cycle around the trend, or the difference between actual output and the trend output. It can be seen that GDP remained below its trend value in the years 1990 and 1991 as a result of the 1990 adjustment, and rose above it during the last two years as a consequence of the strong growth in 1992. In 1994, growth was 4 per cent, which suggests that the difference between the two output levels was negative for that year. We now have the coefficients required to estimate the cyclical tax revenue.

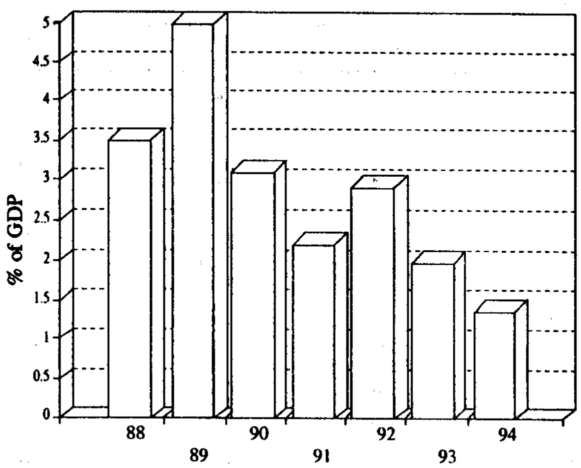
V

Trend, cyclical and discretionary components of public finances in Chile

Between the late 1970s and late 1980s, the Chilean public sector's relative size was reduced substantially, from approximately 40 per cent to less than 30 per cent of GDP. Public enterprise and social security privatizations and public spending controls made it possible to confront the crisis of the 1980s with relatively moderate deficits. Between 1988 and the present date, sizeable surpluses have been achieved in the public accounts (figure 2); the fiscal policy, despite its low relative significance, has made major contributions to the generation of domestic savings and to the economic stabilization processes.

The exceptional reduction in the public sector surplus observed in recent years might suggest that the fiscal policy has been less strict and more permissive since the establishment of democracy in

FIGURE 2
Chile: Overall central government balance



Source: Table 1.

1990. However, the following analysis shows that, after correction of this result by the removal of the main exogenous variations in government revenues and expenditures, a clearly restrictive fiscal policy stance emerges.

Table 1 shows the development of the Chilean central government accounts for 1989 to 1993. In this table, the overall surplus is calculated without including contributions to the FCC, a mechanism which offsets fluctuations between the anticipated price of copper for the budget year and the actual price.[6] For example, in 1989, the boom in this metal brought the public sector almost four GDP points; this income was entered in the FCC accounts and did not form part of the regular budget. The existence of this fund significantly reduces the volatility of the revenues and balance of the public accounts. It is the main exogenous source of public sector income which is not linked to the internal economic cycle. Consequently, the calculation of the surplus excluding contributions to this fund allows a more accurate approximation of its cyclical and discretionary components.

As regards the remaining public sector income, taxes are directly linked to the economic cycle, and operating income is itself dependent on public rate-fixing policies. Current transfers and social security taxes are subject to the prevailing legislation and are not directly dependent on the level of economic activity. Income from sales of copper is determined by fluctuations in the price of the metal abroad and by the difference between the price provided for under the budget law and the actual annual mean price. With the exception of tax revenue, the remaining income does not have a clear linkage to the internal economic cycle, even though the items relating to operating income, social security taxes and other income are to some extent sensitive to economic activity.

On the expenditure side, no major linkage between the cycle of activity and public spending in Chile can be assumed, inasmuch as unemployment benefits are low.[7] Although the remaining public expenditures may have a fairly cyclical development (in the sense that falls in the level of activity and in taxes generally give rise to adjustments in expenditure items that are more flexible in the short term, such as the purchase of goods and services or real investment), this linkage is not automatic, since it is dependent on discretionary government decisions.

Therefore, to calculate the OECD structural indicator for Chile, it is necessary only to estimate the elasticity of tax revenue as a ratio to GDP, in so far as this is the only cyclical income. In view of the absence of expenditures linked to the economic cycle, the magnitude of the cyclical deficit in Chile, and probably in most countries of the region, is somewhat smaller than for OECD, owing to the low significance of unemployment benefits.

The calculation of cyclical revenues for the years 1989-1993 (box 1) takes into account the dynamic structure of the estimated tax function, which means different elasticities for each year. Thus, in the first period, the elasticity corresponds to the short-term elasticity; in the second year, the effect of the variation in the difference between actual output and the output trend in the previous period is added to this elasticity. This structure describes the lagged effects which cyclical variations in output have on tax revenue. Since no other revenues or expenditures with cyclical components have been identified, the cyclical surplus is exactly equal to the cyclical revenues (table 2).

[6] The actual surplus is thus the overall surplus plus the accrued deposits in the FCC.

[7] Such a linkage did, however, exist in the past; during the phase of widespread unemployment in the early 1980s, emergency employment programmes were pursued, but these were discontinued as the unemployment rate fell.

TABLE 1

Chile (central government): Economic classification
(Percentages of gross domestic product)

	1989	1990	1991	1992	1993
I. Total income	***23.6***	***22.1***	***23.7***	***24.4***	***24.6***
1. Current revenues					
Operating income	21.3	20.7	22.6	23.2	23.6
Social security taxes	1.7	1.5	1.7	1.6	1.6
Net tax receipts	1.7	1.7	1.6	1.6	1.6
Copper net of FCC	14.8	14.6	16.9	17.5	18.4
Transfers	1.9	1.6	1.1	1.3	0.7
Other income	0.2	0.2	0.1	0.1	0.2
2. Capital revenues	2.4	1.5	1.2	1.1	1.0
Sale of assets	1.8	0.9	0.6	0.6	0.4
Physical assets	0.2	0.2	0.2	0.1	0.1
Financial assets	1.6	0.8	0.4	0.5	0.4
Loan recovery	0.6	0.6	0.6	0.5	0.6
II. Total expenditure	***21.8***	***21.3***	***22.2***	***22.1***	***22.6***
1. Current expenditures	18.2	18.2	18.8	18.1	18.5
Personnel	3.6	3.7	3.8	3.8	4.0
Goods and services	1.9	1.9	2.0	2.0	2.0
Social security benefits	6.2	6.3	6.2	6.1	6.3
Interest on the public debt	1.7	1.9	2.2	1.4	1.3
Internal debt	0.5	0.6	0.9	0.4	0.4
External debt	1.2	1.4	1.3	1.0	0.9
Transfers	4.7	4.2	4.5	4.7	4.8
Other	0.1	0.1	0.1	0.1	0.2
2. Capital expenditures	3.6	3.1	3.3	4.0	4.1
Real investment	2.1	2.0	2.3	2.6	3.0
Financial investment	0.9	0.8	0.8	1.0	0.8
Capital transfers	0.6	0.3	0.2	0.3	0.2
Current account surplus (I.1-II.1)	**3.0**	**2.5**	**3.7**	**5.1**	**5.0**
Overall surplus (I-II)	**1.8**	**0.8**	**1.6**	**2.3**	**2.0**
Memorandum items					
Accrued deposits in the FCC [a]	3.8	2.3	0.7	0.3	-0.2
Use of the FEPP [b]	-	-	0.2	-	-0.1
Public debt repayment	6.8	2.4	2.1	1.7	2.1

Source: Chile, Government (1989, 1990, 1991, 1992 and 1993).
[a] FCC: Copper Equalization Fund.
[b] FEPP: Petroleum Price Stabilization Fund.

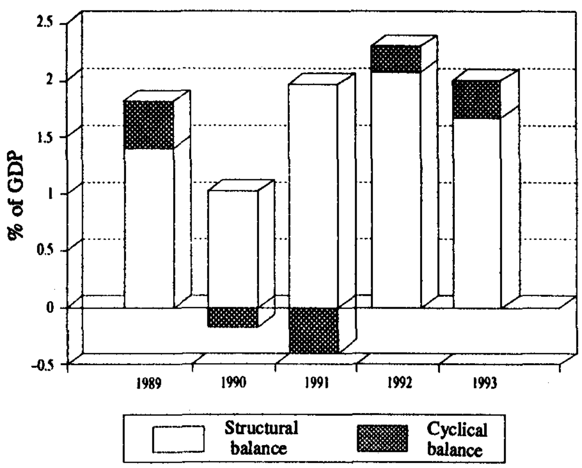
TABLE 2

Chile: Cyclical surplus and structural surplus
(Percentages of GDP)

	1989	1990	1991	1992	1993
Cyclical tax revenues	0.40	-0.17	-0.41	0.22	0.34
Structural tax revenues	14.43	14.77	17.36	17.32	18.07
Actual surplus	1.80	0.84	1.55	2.29	1.99
Variations		-0.96	0.71	0.74	-0.30
Cyclical surplus	0.40	-0.17	-0.41	0.22	0.34
Variations		-0.57	-0.24	0.63	0.12
Percentage of actual surplus	22.22	20.24	26.45	9.61	17.09
Structural surplus	1.41	1.01	1.96	2.06	1.65
Variations		-0.40	0.95	0.10	-0.41

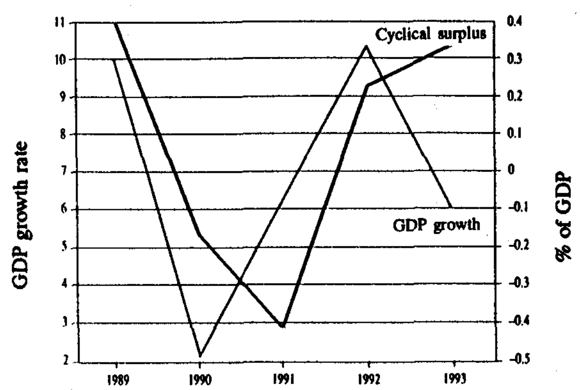
Source: Own calculations on the basis of table 1.

FIGURE 3
Chile: Cyclical and structural components of the fiscal surplus



Source: Table 2.

FIGURE 4
Chile: Economic cycle and budgetary cycle



Source: Table 2.

The exercise clearly shows the extent of the cyclical component of the surplus, which in some years amounts to more than 20 per cent of the actual balance (figure 3). The cycles of the economy have had major effects on the public finances; in the years of strong growth, transitory tax income constituted up to a maximum of 0.4 GDP points. Conversely, the 1990 adjustment meant a fall in fiscal revenue in relation to its trend during two consecutive periods.

The structural surplus indicator, or more precisely the variations in this surplus, make it possible to characterize the fiscal policy stance. The variations in the structural surplus are relatively small, having not amounted to one GDP point during the period analysed. Indeed, between 1989 and 1993 the Chilean economy did not have any major adjustment episodes or growth rates exceeding the trend path for more than one year. At the bottom of the cycle (1990) the structural balance tended to decrease, while at the top (1992-1993) the structural surplus tended to increase. These fluctuations reflect the anti-cyclical nature of recent years' fiscal policy (Marcel, 1993). Although this pattern can also be seen in the actual balance, the magnitudes are very different (table 1). Thus, whereas the fiscal balance was higher in 1992, the structural indicator showed a lower progression. This trend also manifested itself in 1993, when the reduction in the structural surplus was greater than the fall in the actual deficit, showing that the favourable position in the cycle concealed a slight deterioration in the public finances in that year. It is important to point out the time-lag existing between the economic cycle and the variations in government revenues (figure 4). The fluctuations in the level of activity were more forcefully felt in the following budget year, owing to the time-lag in tax collection periods. Thus, for example, the negative impact of the 1990 adjustment was greater in 1991, when the potential growth path was resumed. Also, the high growth rate of 1992 had more favourable effects on the surplus in 1993.

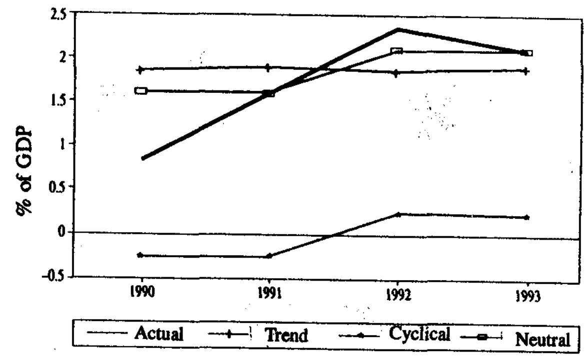
The exercise in this way identifies the fiscal policy stance with greater accuracy. In general, it is possible to observe an anti-cyclical trend in budget management, with substantial improvements in the structural surplus in the recent periods of expansion of the level of activity. However, it is also useful to break down this structural surplus into its trend and discretionary components, for which purpose the fiscal impulse indicator is calculated using the IMF methodology. In order to show the results of this exercise in the case of Chile (table 3), again disregarding cyclical components in government expenditures, 1989 was taken as the base year since it is the starting period for the analysis, although it does not adequately represent a neutral period in fiscal terms owing to the high growth recorded during it.

According to the IMF approach, revenues are regarded as neutral if their growth rate is the same as that of the level of activity. On the basis of this definition, discretionary revenues increased in Chile by one GDP point in 1992 and 1993. If we compare these results with those provided by the structural indicator, we will see that the cyclical revenues were lower, since they are now being calculated on the basis of a unitary elasticity. As a corollary, there was an increase in the discretionary revenues. Also, owing to the favourable position in the cycle in 1992-1993, trend GDP increased less than actual GDP, resulting in a compression of the trend revenues and expenditures and an increase in the discretionary revenues and expenditures, when the latter are calculated as a ratio to actual GDP. According to this breakdown, the effects of recent years' fiscal policy have, with the exception of 1990, been neutral; indeed, the fiscal impulse indicator was nil in 1990 and 1993 (figure 5).

The breakdown of the structural surplus into its trend and discretionary components shows that a large share of this surplus is linked to trend determinants. According to these calculations, recent years' fiscal policy has not in general entailed any discretionary intervention, and the public sector has therefore not been a source of disturbance of the macroeconomic equilibria. This tends to show a fiscal management which seeks to avoid procyclical adjustments of the public finances and to ensure a sustainable public spending trend path. Fiscal programming has been structured around the potential growth of the economy rather than as a function of its cyclical fluctuations.

FIGURE 5

Chile: Breakdown of the actual surplus



Source: Table 2.

TABLE 3

Chile: Fiscal impulse indicator

	1989	1990	1991	1992	1993
Total revenues	23.63	22.14	23.74	24.38	24.58
Total trend revenues	23.63	24.03	24.09	23.23	23.32
Cyclical revenues	-	-0.25	-0.29	0.25	0.20
Neutral revenues	23.63	23.78	23.80	23.48	23.52
Discretionary revenues	-	-1.64	-0.06	0.90	1.06
Total expenditures	21.82	21.30	22.19	22.10	22.59
Trend expenditures	21.82	22.19	22.25	21.45	21.53
Discretionary expenditures	-	0.89	0.06	0.65	1.06
Actual surplus	1.80	0.84	1.55	2.29	1.99
Trend surplus	1.80	1.84	1.85	1.78	1.79
Cyclical surplus	-	-0.25	-0.29	0.25	0.20
Neutral surplus	1.80	1.59	1.56	2.03	1.99
Fiscal impulse	-	-0.75	-	0.26	-

Source: Own calculations on the basis of table 1.

VI

Summary and conclusions

Given the budget's vulnerability to variations in the macroeconomic environment, fiscal management requires an appropriate evaluation of potential resources in the medium term. For this purpose, it is necessary to identify the transitory phenomena that affect the government budget. Fiscal discretionality indicators in conjunction with other instruments make it possible to separate the transitory and permanent components of the public accounts, and thereby assist in removing the exogenous sources of budget movements from the macroeconomic analysis of fiscal policy and from income and expenditure decisions. The indicators used in this case enable the cyclical and structural components of the public accounts balance to be separated.

In this context it is desirable to advocate the establishment of a medium-term public spending norm that will make it possible to formulate clear rules of the game to which the State is committed and which will ensure the effectiveness of government action; such a norm should be consistent with the desired course of fiscal development throughout the cycle. This encourages the establishment of multi-annual programming mechanisms which are compatible with the economies' structural restrictions and will at the same time ensure a certain continuity in government action.

In the case of Chile, centralization of the fiscal authority means that fiscal policy can be evaluated on the basis of central government accounting. Also, the existence of the FCC, which separates in the public accounts the effects of unforeseen movements in the price of copper, and the tying of taxes to inflation make it possible to construct indicators that adequately measure the fiscal policy stance.

The application of fiscal discretionality indicators to the case of Chile has enabled the country's fiscal policy in recent years to be measured more accurately. In general, it is possible to observe an anti-cyclical tendency in budget management, with reductions in the structural component in years of lower growth and with substantial improvements in the structural surplus in the recent periods of expansion of the level of activity. This stems from the application of fiscal programming which is structured around the growth trend path of the economy and which avoids adjustments of magnitude in line with cyclical swings. The course of development of the fiscal balance has in fact been neutral in recent years, the growth rates of government revenues and expenditures having coincided with the increase in trend GDP.

(Original: Spanish)

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ECLAC *and the sociology* of development

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The principal sphere in which ECLAC's theses are situated is that of economics. However, as befits an integrated approach to development, the theories it has propounded also include sociological and political aspects. The social aspects of development have been a focus of attention at ECLAC since its creation, and in this area too it has endeavoured to avoid the mechanical transposition of existing theories to the region. Through an interchange of ideas with specialists from other institutions, it has sought to identify the specifically regional dimension of the problems dealt with and to determine the precise social and political conditions conducive to economic development. It has investigated the role of the State in development strategy, together with the part that consumers and diverse social groups might potentially play in the development process. It has also given its attention, within the context of the integration process, to the subject of the region's sociocultural identity. The combination of political will and proposals for development have been examined in detail in the planning experiments conducted. The investigations have closely monitored the adjustments tried out by society in the region. The development of the educational system, along with marginality and poverty, have also been important subjects, together with the situation of women and young people. At a time when new development strategies are taking shape, ECLAC has been studying the social costs of the adjustment, the role of education and the conditions for civic participation amidst the new conditions of social development, this last element being the central component of its approach advocating changing production patterns with social equity.

I

The theoretical aspects

Development issues, whether we are talking about economic or social development, or even political or cultural development, have long been a focus of attention within the different disciplines which intersect at these subjects: attention motivated both by purely theoretical considerations and also by the practical concerns of government policy. It can be asserted, however, that as far back as the end of the Second World War the subject of development started to acquire particular prominence. The various United Nations agencies played no small part in its promotion, and the goal of development began to assume the dimensions of an international project. ECLAC, with its sphere of competence embracing the Latin American countries featured in its name, was of course involved actively in this task, which it accomplished with great originality of thought. As regards the "social aspects of development", such matters as population trends, living conditions, health care, housing and education were accommodated in the interstices between more strictly economic subjects, and the social structure of countries in the region thus at an early stage –in the first half of the 1950s, in fact– came within ECLAC's field of vision.

But there is one point that needs to be stressed from the outset: the problems of development which it was aimed to tackle were at the same time a challenge to the theoretical assumptions at the basis of the various disciplines involved. Here, the value acquired by ECLAC's so-called "theoretical heterodoxy" deserves recognition. In its economic hypotheses and analyses, it endeavoured to make use of the ideas generated by different schools of thought in an enriching and innovative way, a practice it also applied to the different existing sociological approaches. It viewed development at that time as a subject of interest not only to academics and politicians but also to the public at large, believing that theoretical problems should cease to be merely the subject of polemical debate among groups or schools but become a genuine spur to the advancement of the social sciences, and of sociology in particular.

This is why in one form or another different strands of sociological thought were not only present at various stages in the evolution of ECLAC's analysis but actually tended to converge in many instances so that in some of the studies a perspective is discernible that is somewhat characteristic of what is termed "critical sociology", in which the nature of society is assessed on the basis of a particular conception of the world or ideology. The aim of such critical sociology is to propose a form of transformation of society consistent with the principles underpinning it. While those evaluative tendencies were indeed present –and there is no reason to hide the fact that they often provoked a good deal of criticism– they coexisted with more functional aims of sociological analysis directed towards providing precise guidelines for practical action. This is not to claim that sociological analysis necessarily leads to the total reform or transformation of the social structure, but it can have a real impact on some of its components by taking up objectives already pre-established in some form or other.

But a predominant feature of ECLAC's sociology has perhaps been the aim of understanding a particular social situation in its historical context. In the case of Latin America, the objective was to point out the peculiarities of its structure and the dynamic forces inherent in its particular situation with a view to highlighting the various potentialities contained within it. The diagnostic goal was uppermost in this approach and, while the task of pointing out the foreseeable results of choosing between alternatives was not shirked, it was none the less kept in mind that such a choice was influenced by different points of view and ultimately belonged to the agent responsible for taking action.

The extremely broad stances referred to here, which have coexisted to some degree –even to the extent of being interwoven– in the sociological analyses performed by ECLAC, also lead to a definition of the role of the sociologist in development tasks, which, it should be remembered, were primarily defined –to begin with at least– as being tasks proper to economic development. Thus it was that ECLAC's sociologists saw their functions as alternating between collaboration in tasks belonging more properly to the economist's domain (determining and defining a specific sphere of research and theoretical inquiry) and performance of their own critical role of contributing to formulating the broad lines of economic development, including its political aspects.

Although the sociologists had no shortage of theories at hand to guide them as they navigated their course through the world around them, most of the hypotheses derived from these theories, taken to be valid for the most part, sprang from the abstraction of a historical experience corresponding to social environments quite distinct from those of Latin America. The ambition to influence reality in a rational manner was based on having appropriate scientific knowledge. But the problem was knowing up to what point such knowledge was appropriate or inappropriate to Latin America, given that the theories had essentially been conceived in Europe and the United States. What was required, therefore, was a programme of empirical research which, in addition to adding to the sum of factual knowledge, would also make it possible either to confirm or discard the fashionable hypotheses and –why not?– propose new ones. In short, sociology shared the orientation characteristic of ECLAC's economic thinking, namely avoidance of the mechanical transposition of existing theories.

As a number of authors have observed, in their endeavour to promote rational social practice through development issues, the social sciences played a unique role. If we accept Max Weber's interpretation of the character of the modern Western world, whereby the entire complex of social relationships has been permeated by rationalism, then science has presumably found its place in this general process of rationalization and there will consequently be a correlation between scientific practice and the rationality of social practice. In Latin America rationality was, to some extent at least, introduced by science. It was held that the answer to the challenge of development was to be found primarily in science, which was perceived as a value in itself. On analysis, however, reality was found to be inconsistent with rational principles. Without anyone perhaps being fully aware of what was happening, science was becoming ideology.

To some extent, the contrast between theory and reality led to a desire to identify characteristics specific to Latin America. Various hypotheses put forward as valid by the different theories of development failed to find confirmation in these countries: for example, the assumption of a linear correspondence between urbanization and industrialization; the existence of a rigid traditional-modern duality; and the existence of an industrial bourgeoisie that might take on responsibility for national development plans. These first findings obtained against the expectations of theory made it possible to say what Latin America was not, but it was still difficult to identify precisely what it was.

ECLAC's sociological researchers were not, of course, alone in setting themselves the task of defining Latin America's distinctive character; this same objective was pursued by the majority, arguably, of Latin American sociologists, who, it should be acknowledged, were following in the footsteps of historians, intellectuals, writers and other academics. The subject of development, however, added a certain urgency to the search for answers. It was necessary to establish the distinctive behavioural patterns of the various social groups (the bourgeoisie, the middle classes and the lower classes), the special nature of the problem of marginality and the social position of the indigenous or coloured population, and also to identify the special characteristics of its social institutions, the State, the armed forces, and so forth.

In the quest to match sociological theory to the problems of Latin American economic development, the work carried out at ECLAC by José Medina Echavarría deserves special mention not only for its pioneering character but also its abiding influence. His mentor was Max Weber who, by establishing a distinction between, on the one hand, economic institutions (or communities) engaged in the pursuit of some kind of benefit or the satisfaction of needs and, on the other, "economically significant" institutions (or communities), whose activities were not economic in themselves but could represent a "causal moment" in the course of an economic activity, made it possible to establish the link between strictly economic and sociological analysis. The problem consisted in determining the degree of correspondence or non-correspondence –"elective affinity", in the words of Weber– between these various types of activities. Weber's distinction was in fact taken up by sociological development theory –in vogue at the time– which differentiated between "primary requirements" corresponding to strictly economic institutions such as property, the labour force and market relationships, and "secondary requirements" (economically significant institutions), in particular the political regime, science and technology, and forms of stratification.

Acceptance of Weber's formulation, distinguishing between the economic and sociological while establishing the connections between the two, none the less presented some considerable theoretical challenges. The analysis made by Weber of capitalist development at a particular historical juncture and even for a specific cultural context had become a paradigm of the pattern of development in general, whereas the historical situation had in fact changed and capitalism was developing in conditions far removed from those that had given rise to Weber's theoretical model. Moreover, the "Soviet model" was already in existence and fully functioning, with its own distinct premises or foundations in terms of both the patterns of thought of its agents and the social and political conditions that shaped its organization.

From the theoretical point of view, the challenge to be met was considerable, nothing less in fact than constructing a new "model" to take account of the social conditions which would permit economic development in the current circumstances. The absence of perfect competition and hence of total market freedom was identified as being among the new conditions shaping capitalist development. Other conditions observed were changes in labour relations, with the free contract tending to be replaced by the powers of collective organizations to take action and negotiate and also, to some extent, to control jobs; and a major change in the functions of the State, which ceased to be neutral and started to intervene by regulating economic activity or participating in it directly.

These changes were not only apparent in the "central countries" but also in many Latin American countries or constituted a part at least of the new model to which they aspired. Of particular importance for Latin America was the confirmation of the profound social transformation taking place, evidenced by the presence of new, strongly upwardly mobile social strata, a feature that was especially conspicuous in the middle classes and organized proletariat. New groups began demanding political conditions permitting their full involvement in national affairs, which frequently led to conflicts between these groups and those whose position was already established.

How influential were these new conditions in shaping the behavioural impulses put forward as being necessary for achieving sustained economic development? In more practical terms, how could working habits characteristic of activity at the entrepreneurial or at the or shop-floor level be cultivated? Modern economic life presupposes the existence of psychological traits conducive to rational attitudes and a certain measure of discipline, but what precisely were the conditions in which such traits might be encouraged? What other processes of rationality does "economic rationality" relate to? In Europe, modern rational capitalism encountered showcase social conditions in that it coincided with a certain brand of legal and administrative rationality whose origins were not in the strictly economic realm but more of a political, professional or ideological nature. The type of rationality underlying the legal system and bureaucracy was what is known as "formal rationality" –based strictly on standards or regulations– but it was this that made it possible to perform the calculations necessary for any economic activity. It was precisely in this sphere that a radical change had taken place: the State, having ceased to be "neutral", was directing both the law and bureaucracy in terms of a "functional rationality", dedicated to the pursuit of goals at the expense of pure formal rationality.

Various problems arose in the case of Latin America with regard to the patterns of economic behaviour of the population and their correspondence to the goal of economic development pursued. A characteristic feature of a collective development drive is that it aspires to a better standard of living or consumption; but a certain sense of responsibility, both individual and collective, is also essential. The two elements do not necessarily coincide and may even conflict; the desire for a better standard of living is not necessarily accompanied by the impulse to make the necessary effort to achieve it, while an individual's ambition to possess or acquire may not be contained by a sense of collective responsibility. Since the necessary correspondence between the two elements was not guaranteed, it seemed necessary to foster it consciously, a role that could be assumed by institutions which were not strictly economic, such as the education system, the media, the State, the political parties and the trade unions, to name but a few. But an almost crucial factor identified was that the groups in charge of leading a country should provide a model of behaviour worthy of imitation, the disorientation or apathy of the masses often being attributable to a lack of exemplary conduct on the part of the leading élites, whether economic or political.

Likewise, the initial propositions put forward by ECLAC in its "development sociology" showed an awareness of the problems of the relationship between politics and economic development, although that concern was certainly not confined to "ECLAC sociology". Many of Latin America's political approaches seemed to be incompatible with the economic rationality required; a large proportion of the parties or governments lacked rationally based ideologies or political machinery. An interest in economic growth may well have been present, but in many cases was not necessarily guided by rational impulses. In addition to this, however, it has to be recognized that both political and economic rationality have their own objectives and that when the State intervenes, either through its regulatory powers or directly, in the workings of the economy, it is necessary to establish connections between the two types of rationality –economic and political– and to acknowledge that the accommodation attainable between the two can only be ephemeral. The problem posited with regard to the relationship between political and economic rationality came into focus far more clearly when ECLAC embarked on the subject of planning.

A further element that characterized the social conditions in which economic development could be brought about in Latin America and which needed therefore to be introduced into the debate was that of the almost inevitable politico-social conflict. Development itself –especially at times when it picked up greater speed– entailed imbalances in the social structure, creating conflict situations. It could be foreseen that there would be an accelerated uprooting of large numbers of people, many of them from rural areas, who would be incapable of adapting readily to the new conditions precisely because of the speed with which the changes were taking place. It was also predictable that extreme imbalances –a source of conflict– would be produced between different sectors of national life: serious inequalities between regions or disparities within economic activities with regard to the degree of modernization and development achieved. Moreover, the ever-increasing expectations of the "consumer societies", modelled on the most advanced countries, continued to be a source of concern since the conditions required for meeting those expectations were not fulfilled in the Latin American countries. In brief, it had to be taken into account that socio-economic conflict was an almost inevitable part of the very process of economic development.

The importance ascribed to the political system should be stressed, since development was conceived as the product of a clearly formulated programme whose full realization depended on an appropriate political framework, so that the differences between the Latin American countries were often thought to be not so much a function of economics as of social infrastructure and the political processes permitted by that infrastructure. In this there was full concord with the general approach taken by ECLAC from its very foundation. The State should not only intervene in the process of development through policies to protect fledgling industries and stimulate the modernization of the primary exporting sector, but should also be regarded as having the function of promoting processes rather than merely correcting faults and inefficiencies. These ideas chimed with the propositions formulated by Myrdal, for whom the primary functions of State intervention in modern industrialized countries were those of arbitration and levelling, and in the less developed countries guiding and planning. The historical situation, moreover, obliged the State to assume new functions or to play a more active role than it had done traditionally; the international economic situation was presenting ever more serious and complex problems, while domestic processes of transformation were generating tensions and conflicts, in addition to which urgent social programmes were needed, since the traditional structure of society was undergoing a process of profound change and readjustment.

Not everything, of course, could be reduced to the State's capacity to take action; changes were also needed in the behavioural approaches of certain social groups of crucial importance for the success of economic development. There was an awareness, for example, that the "commercial entrepreneur" in Latin America prevailed over the "industrial entrepreneur"; that frequently business executives acted by reacting to the immediate economic situation rather than planning ahead for the medium and long terms, or tried to function within the protective confines of certain defined options. An attempt was then made to inculcate new attitudes, both public and private, to be adopted by the entrepreneur in his capacity as manager and economic innovator. Likewise, with respect to the labour force, the need was pointed out for a work ethos, a capacity for technical adaptation and an awareness of social responsibility closely associated with the individual's awareness of his function within the overall context of society. This could be achieved only by expanding the meagre involvement of these groups at the national level, where workers' organizations often encountered obstacles preventing their proper functioning.

It should not be forgotten that in this endeavour to chart a course for the region's development, ECLAC grappled with the subject of integration right from the start. Integration was seen as a need arising from the process of industrialization, since it was necessary to establish markets making for economies of scale and also to concert and coordinate efforts aimed at modernization. The goal of integration, however, demanded a better understanding of the region's sociocultural identity and presented some very specific challenges. In Latin America the process of national integration has generally been extremely slow and in most of the countries did not even get off the ground until the twentieth century. The question arising was how to achieve the supranational integration of newly emergent nationalities.

The development objective which ECLAC tried to formulate implied the pursuit of modernization –which was a new departure– but at the same time it was argued that such a goal could be pursued consciously in both the economic and social realms, that tensions could be foreseen and worked upon and that this capacity for action could be transformed into a special dynamic intrinsic to the societies in question. In the same way as in the economic sphere, "structural reforms" were also proposed in the social realm. For example, an educational reform was promoted with a view to encouraging social mobility and the assimilation of new values and patterns of behaviour, an agrarian reform was introduced to modify land ownership with a view to engendering new forms of social relationships, and a reform of the State and political system was instituted to bring them into line with the needs of systematic, planned development. The matrix of relationships connecting economic development, social development, national autonomy and political democratization was a leitmotif running through the debate.

II

Problems in practice

ECLAC's work of theoretical postulation, of course, required the practical confirmation that its hypotheses were indeed borne out by reality. From the mid-1960s or thereabouts, the development process ran into serious difficulty in various major countries in the region, and there were even signs in some cases of a total breakdown of the process. The assumption that the political decisions with the greatest impact on the direction of development were processed at the national level was called into question by the increasing importance of external decision-making centres; moreover, the institutional political systems did not appear to be open to wider participation. The premises of the development option put forward seemed, in practice, to be extremely fragile.

In the economic sphere, ECLAC had placed particular emphasis on the undesirable repercussions for the countries of the region of the classic model of a relationship between central and peripheral countries which would give rise to an international division of labour impeding Latin American development choices. The sociological studies undertaken attempted to show that it was not enough to explore the subject purely in terms of "external obstacles" to development, a notion in which the idea was embedded that the problem originated in the relationships between strong and other, weaker societies by virtue of their unequal economic power. The problem was more complex than that, and it could be demonstrated that in cases where there had been an expansion of the industrial economy this had led to an increased intermeshing of local interests and foreign monopolistic interests. Moreover, the presence of foreign political interests was increasingly evident in the structure of the State.

The "problem of dependence" –the term used most commonly in tackling these subjects– prompted analysis of the conditions for the existence and operation of the economic and political systems, analysis which cast light on the type of connections between the two both within each country and externally. The main proposition put forward was that the mode of integration of national economies within the international market implied patterns of interrelationship among social groups within each country and between those groups and groups abroad. The dependence relationship was not a simple matter of exploitation and coercion; there was actually a community of interests between dominant local and foreign groups. In other words, dependence did not mean that the entire interests of one society were aligned with those of another society. Interdependence was a fact of life which linked the developed and underdeveloped societies and also made for a sharing of interests between the dominant groups of both types of society. While this context presented an opportunity for change, the dynamic of that change lay in transformation of the structure of classes, sectors and social groups and the restructuring of the system of power relationships, goals for which collective action and firm political will were needed.

A better context perhaps for observing the difficulties of combining political will with development plans is the Latin American planning experiment to which ECLAC and the Latin American Institute for Economic and Social Planning (ILPES) became so firmly committed. As indicated by ECLAC's authors themselves, planning entered the stage in Latin America when foreign trade lost its dynamism as the driving force behind economic activity. This led to a recognition of the need for government intervention to direct the economic process and to the adoption of particular types of policy to compensate for the loss. An endeavour was indeed made to steer reform in the direction of a new model of development to replace the previous one, which had outlived its useful life. However, the political authorities –whose task it was to set the process in train– showed a certain ambivalence: it was recognized that planning could be a valuable tool and that there were direct precedents in Western Europe to justify it, but at the same time the goals of transformation and change contained within it aroused fear.

As regards ECLAC more specifically, it was the United Nations that backed the idea of development planning, whose underlying values were taken to be those already established by the Universal Declaration of Human Rights, the International Development Strategy and other resolutions that had gained the support of almost all the countries represented. In United Nations texts particular emphasis was laid on social development; in framing policies an effort was made to give equal weight to the "social" and the "economic", the aim being to elaborate a methodology for social planning as a counterpart to economic planning and thus to achieve a unified approach to development analysis and planning. In this way it was hoped to formulate a more satisfactory response to human needs than had been the case previously. These aims were based on the assumption of a consensus on the values of human well-being and social justice. Given those premises, the problem was to decide who should be the recipient of the recommendations and advice.

There were expectations that society itself (and those most directly concerned in particular) would rally its efforts to achieve its objectives, for which purpose it was necessary to open up channels for wider involvement. The greatest hopes, however, were pinned on the capacity for action and commitment of those performing direct political functions. In fact, in many Latin American countries the plans formulated were directed towards goals that entailed drastic measures in areas such as farming land ownership, as well as monetary and credit reforms, or the restructuring of the tax system for the purpose of financing social or other policies. More often than not, these measures could not be implemented because of the strong pressures exerted on governments (from the injured parties). In some cases, the goals set reflected the desires of the planners more than the convictions of the politicians or heads of public agencies. In addition, politicians were far more responsive to the symptoms of situations, to which they endeavoured to provide direct solutions, whereas planners tended to put forward a set of interrelated solutions based on a structural conception of development and accordingly expressed in more medium- and long-term language.

The problems of reconciling short-term demands with medium- and long-term policy were exacerbated by the political instability of most of the region's governments. The rapid turnover in the ranks of those responsible for directing public affairs and the consequent shifts in political direction rendered the notions of the medium and long terms virtually meaningless. Moreover, the political support base often tended to be unstable, and governments directed their manoeuvring tactics towards winning the support of the main pressure groups, with political instruments –both economic and social– being used frequently to obtain the support that would make for a basic minimum level of stability. Finally, commitment to the means and ends of planning began to look like weakness; it was felt that keeping more or less strictly to what had been programmed represented a constraint on the decision-making powers of the political authority.

As regards society's ability to mobilize its own efforts in pursuit of economic and social development objectives, difficulties arose here too. The groups possessing a larger share of economic and social power tended to identify with the status quo and deployed the tactics of pressure groups to influence the system of decision-making and protect the positions they had already achieved, while also trying, in many cases, to secure new privileges. Those in a less privileged position resorted, when they could, to showing their disagreement through various forms of protest. The latter, however, were seldom in a position to take systematic action, and their de facto dependence on the State was a more influential factor than had been supposed. The expectations of "public participation" involving the capacity for creation, something that had been considered an essential part of achieving a development goal meeting the needs of human welfare and social justice, were not fulfilled since such participation turned out to be meagre and transitory.

Practice showed that the actual economic processes and social relationships formed fell a long way short of the aim of appreciably enhancing human well-being. The aspirations to devise and apply alternative development styles, emphasizing independence and originality and focused on the human dimension, were shown up as utopic reverie when confronted with reality, so that a certain degree of frustration was virtually unavoidable. At times, in fact, the concept of "development" –almost invariably referred to in terms of its most directly economic aspects– was seen as being in conflict with that of participation. Worse still, doubt was cast on its compatibility with democratic institutions and processes. Technocratic and frequently authoritarian solutions began to emerge in the guise of a new panacea to the problems of development.

In short, the experience of planning in Latin America undoubtedly yielded a number of successes, and the real advances made in the social sphere in extending the embrace of services such as education, health and housing should not be overlooked. No less important were the analyses performed that allowed a better understanding of the situation and greater awareness of the political and social repercussions of economic decisions. However, the hopes pinned on planning as an effective tool of practical action were certainly disappointed. To be fair though, the blame could not be laid entirely at the door of "planning errors and mistakes". The sheer magnitude of the obstacles encountered, obstacles of all kinds, has to be taken into account.

III

An era of change and conflicting processes

If one casts one's gaze back over the years from the end of the Second World War to the present time one cannot fail to note the complexity of the processes of change occurring during this time. Positive or negative evaluations are not a mere function of the observer's point of view but derive from the situation itself, in which the positive and the negative are interwoven. The expansion of domestic markets, for example, is an indisputable fact, and in most of the countries there was significant industrial development. Nevertheless, despite the initial hopes vested in industrialization, it was not generally able to perform the function of stimulating the economy as a whole and generating a sufficiently broad demand for productive employment. Only in a very few instances did it have any substantial impact on overall export levels.

Consequently, the involvement of the Latin American countries in international trade during most of the period continued to be based on primary commodities, and foreign trade was continually prey to the vagaries of international demand for such goods and the constant fluctuations in their prices. In the case of manufacturing exports, these were largely based on natural resources and their prices were therefore, unfortunately, often subject to the same conditions as affected the markets for primary commodities. One could carry on in this vein pointing out a whole series of transformations of a different type that were undoubtedly extremely significant in their impact not only in the economic sense but also –and sometimes predominantly– in the social sense, such as the transformation of the agricultural sector. The fact is, however, that the changes occurring which affected social structures and gave rise to large-scale movements of the population also triggered fresh inequalities, with disparities in income distribution, for instance, tending to remain the same or even to widen. If a number of basic indicators of living conditions are included in this panoramic survey of the post-war period, noteworthy improvements may indeed be observed, but at the same time large segments of the population continued to live in conditions of abject poverty.

Patterns of distribution, in fact, provide a clearer picture of the real characteristics of the type of development achieved. The actual form of development that has emerged shows pronounced structural heterogeneity, and modernization –which often involves intensive use of capital assets– has not succeeded in absorbing the entire labour supply since the structure of skills available does not correspond to the new demand. Technical progress is concentrated in a number of individual sectors and does not filter through to the broader strata characterized by low productivity.

It is undeniable, then, that the major changes resulting from the processes of urbanization, industrialization and what might be termed "dependent modernization " have produced paradoxical effects: large sectors of the population, and perhaps the majority in one or two countries, have fully identified with the lifestyles and expectations of modern consumer societies. An important role in establishing these new ways of life and levels of aspiration is played by multinational companies and the mass media with their standardized messages. These have been assimilated, however, not only by those strata of society in a position to achieve such ambitions but also by many groups who set their sights on material betterment whether or not they possess the wherewithal to achieve it. Regrettably, what is at issue is not a mere, harmless "imitative mania"; the pattern of "imitative consumption" that has been generated entails high costs in terms of domestic resources. The countries in question are experiencing continual growth in consumption, largely as a result of the affluence of 30 per cent or even 40 per cent or more of the population. These groups require an ever higher level of income to enable them to pay for the types of goods they desire. Furthermore, production of such goods requires the mobilization of resources –capital, technology, labour and even natural resources– which, for the most part, are not those that the countries of the region actually possess.

It is worthwhile recalling the frequency of the cycles of peaks and troughs in economic performance that have contributed to rendering the already bewildering course of Latin American development in the post-war era even more perplexing. Not only have times of change coincided with booms, but radical structural transformations have also taken place at times of crisis and, in some cases, were possibly even because of those crises. The 1980s, for example, were a decade of profound change, but at the end of 1989 the per capita GDP in the region was 8 per cent less than that recorded in 1980 and in fact equivalent to the 1977 figure. This decline had a marked regressive dimension: for both the middle and the working classes the 1980s were a time of deep recession. In general terms, it was estimated that in 1980 some 112 million people –35 per cent of households in the region– were living under the poverty line, a figure which increased in 1986 to 164 million (approximately 38 per cent of households).

The confused economic and social picture sketched above is further muddied by complexities in the political sphere. The immediate post-war years saw a succession of different, abruptly alternating regimes, and in the 1970s and much of the 1980s the hopes pinned on the solid installation of democratic regimes did not appear to be well-founded in the region as a whole. The sociological studies undertaken by ECLAC were mainly directed towards analysis of the changes that had occurred, especially those linked to the profound transformation of the social structure. In demographic terms, the sheer growth of the population raised considerable problems in itself; the ratio of the rural to the urban population shifted so that the region could be defined as essentially urban both in the present and in the immediate short term, which meant that the predominant pattern of social organization had changed and had become that of an urban secular system, with the corresponding changes in social relationships.

As for the changes in the economic structure with a marked impact on social relationships, it was evident that a "national market" had formed in almost all of the countries. The ways in which this market came into being, however, were seriously distorted by the trend towards concentration, which led in turn to regional disparities and engendered exclusion and marginality. A further phenomenon observed, as already mentioned, was the industrialized production of goods and its ever stronger linkage with other sectors of the economy, such as agriculture and the services sector, modifying the types of organization and social relationships typical of these sectors in the past. As far as employment was concerned, jobs in industry and in the tertiary sector increased. In fact, the size being attained by the low-productivity services or tertiary sector was a cause of considerable concern, although the significance being acquired by the so-called "modern tertiary" sector was far from negligible. ECLAC pointed out that, in addition to the serious problems of disparity in the economic and social structure, the newly emergent "modern economy" was making new demands as regards both the education and training of the workforce at all levels and new forms of social organization (system of labour relations, role of the trade unions, intermediary organizations and other forms of participation).

Naturally, the structure of social power was also affected by the changes described above. The masses were indisputably a force to be reckoned with, and the use of coercive exclusion –employed on many occasions, needless to say– did not get to the root of the problem. What was actually at stake were forms of participation and representation, and, more specifically, the role of the political parties. ECLAC's studies were mainly oriented towards analysis of the changes in social stratification, which could cast light on the new conditions in which the power relationships and the entire matrix of social relationships were in operation, affecting both actual and potential patterns of socio-economic development.

These studies indicated that the social stratification had turned out to be even more complex and that in most of the countries the proportion of persons occupying "middle-level" or "higher" positions had risen, although the actual content of those positions was far from uniform. The predominant features of the lower strata had changed as a result of urbanization, increased geographical mobility, the partial disintegration of traditional structures of rural power and access to information media. However, as already mentioned, not only was there no appreciable decrease in the polarization between these strata and the fully modernized sectors, but the gap had actually increased.

In the sphere of business enterprise, the points of interest were the connections established between different economic activities. On the one hand, a modern rural business community evolved in many countries and had an impact on exports and agro-industry, while, on the other, close relationships were established throughout the entire business sector between the financial, financial-commercial and industrial branches. Their links with foreign companies continued to develop both through direct partnership and through the use of patents, trade marks and technologies. It is interesting to note in them the presence of ideologies fashionable in world centres which reinforced their group identity and their sense of playing a key role in society.

At the same time it was noted that technical and scientific personnel were beginning to adopt the intellectual frame of reference of their peers in developed countries and to take over those countries' attitudes with regard to efficiency, specialization of functions, the imperatives of rational organization, the conception of the State, and so forth. Many of the professionals took up managerial positions in enterprises and adopted international outlooks, lifestyles and consumer expectations. Conversely, technical and administrative professional staff in the public sector suffered drops in income in many cases, along with worsening working conditions.

The salaried middle classes remained, as before, a heterogeneous mix of groups linked with the administrative functions of the State or its welfare services, such as health care and education, but a significant group emerging at this time were salaried staff involved in the development of private financial or other services and the expansion of commercial services to meet the demands of increasing urban consumption. These salaried middle classes were badly affected during the periods of crisis –particularly, the passive sector– and the insecurity of their situation became more or less permanent. There was a quite considerable gap between reality and their modern consumerist expectations; in some cases, the upward mobility that had favoured these classes in the past no longer functioned.

The studies undertaken by ECLAC showed that, especially in the 1980s, workers in industry and related sectors underwent far worse upheavals than the salaried staff of the middle classes. They suffered drastic salary decreases in real terms, and the numbers of industrial workers in some countries dropped in proportion to the constantly growing urban workforce. Furthermore, in many countries the power of the trade unions to protect the interests of their members diminished, and their scope for influencing national politics became extremely limited.

It was also found that the peasantry had become diversified as a result of changes in the agrarian structure and the emergence of different forms of farming units as alternatives to the traditional large estates and smallholdings. Farming enterprises were formed that gave rise to sizeable groups of salaried workers, albeit only temporary workers in many cases. At the same time, smallholdings and tenant farms did not dwindle in number. The emergence of agricultural enterprises and of a considerable number of salaried workers entailed a change in the peasant's relationship with the land, the nature of his demands and the consequent mobility of the rural population. The growth of agro-industry also influenced the activities of medium- and small-scale landowners, who in many cases formed connections with it. There was no decline, however, in the significance of the "peasant economy" associated with this type of landowner, its most salient feature, as ever, being the strategy of survival of the family group.

Naturally enough, marginality and poverty were major concerns for ECLAC, and although these two aspects are not strictly equivalent, their correlation should not be underestimated. ECLAC's studies were focused on analysing these phenomena and on establishing the interrelationships between them and the characteristics of the current development model; the impact of social policy was evaluated with reference to these issues and strategies for tackling them were formulated. What was most interesting, however, was the finding that poverty and marginality appeared to be closely linked with the exclusive character and concentrating effects of the current development style and that in order to eliminate these structural traits they had to be tackled head on.

Lastly, with the aim of giving a comprehensive account of the new social situation, ECLAC set about analysing two categories of exceptional importance: women and young people. With regard to women, it showed that the effects of the changes that had taken place were not confined to the economic and social spheres, but extended to cultural behaviour. The numbers of women joining the workforce had increased extremely rapidly and at a much faster rate than in the case of men, although this did not mean, of course, that they had attained a greater share in economic activity than men, who continued to hold sway. Women were mainly joining the service sectors, in many cases the so-called "personal services", but in most of the countries clerical and secretarial positions accounted for the second most common form of female employment.

The increase in female participation in the labour force was seen to be associated with urbanization, modernization, the education process and changed attitudes to work. Thus, it was evident that women were gaining increasing access to education, although improved equality of opportunities was a phenomenon limited to the higher social levels, the less advantaged groups continuing to be prey to discrimination. Women's involvement in public life was found to be low in terms of the traditional forms of participation such as membership of political parties, trade unions and other common forms of organization, but a different picture emerged when account was taken of social movements linked to specific community needs such as housing, education, health care and improved living standards. It is a fact, for example, that at the grass-roots level such movements claiming better conditions appear to be organized and led largely by women. The aforementioned changes had an impact on the traditional family by reshuffling the roles of family members. In addition, a major role was played in these structural changes and in the role of the family by the spread of mass education and the impact of the media, which competed with the family as a socializing influence.

The world of young people was a subject of interest to ECLAC for a number of reasons. For one thing, in the Latin American region, the relative numerical importance of this age bracket of 15 to 24 years was one of the highest in the world (approximately 20 per cent of the population), and in fact, one third of the workforce was under the age of 25. However, in times of crisis as in the 1980s, the absorption of young people into the labour force was extremely slow; in some countries they accounted for almost half the unemployed. Young people were therefore well aware of their precarious situation and also very anxious about their future. It had been taken for granted that the expansion of the education system would enable young people to enter the workforce at a favourable level, but it began to be clear that the abilities of the most highly educated were being underutilized. Although, as a social group, young people seemed far better educated than previous generations, their employment opportunities in a working world of changing rules and slow growth did not come up to general expectations.

A further point of relevance was the finding that the young people of the region formed a heterogeneous social group. Children from poor families tended to remain trapped in their marginal situation. As for the others, paradoxically, the very organization and nature of the education system served to accentuate the social differentiation through the contrasting standards of education imparted –irrespective of formal equivalence– by the different types of educational institution. Thus, the differences between urban and rural institutions and between private and public institutions were particularly notable. A further development noted was the emergence of university systems ranging from centres of excellence to institutions with little more to commend them than their paper credentials, where the level of teaching was hardly distinguishable from that provided by secondary schools. A further matter of concern was the question of how young people would succeed in establishing a sense of identity, a subject which was regarded as a serious cultural challenge, especially in view of the proliferation of images of consumer habits abroad and other aspects of foreign lifestyles propagated by the media.

IV

The search for a new approach

It has become almost a platitude to define the 1980s as the "lost decade". While this is an accurate description from the point of view of low economic performance and deteriorating social conditions, the crisis of the 1980s was nevertheless a turning-point in the development approach adopted until then. The previous dynamism, driven by an export sector dependent on basic commodities, an industrialization process mainly reliant on domestic demand and investment concentrated in the public sector, was tending to run out of momentum and to give way to new approaches. Here a point of cardinal importance was the ideological change taking place, especially –as far as development was concerned– in the conception of the State, which was beginning to be perceived as subsidiary. In other words, the philosophy emerging was that the public sector should only fulfil those essential functions that the private sector could not or did not wish to fulfil. This new ideology began to take shape in almost all the governments of the region.

Furthermore, in most of the region's countries certain sectors began to emerge whose chief defining characteristic was a more modern approach to production. Many of these sectors were devoted to the export of non-traditional goods, although the financial, services and commercial sectors were also undergoing extensive modernization. However, the patterns of distribution characteristic of Latin American development did not change and even, in some cases, assumed more regressive characteristics than before. And the productive structure, linked to a concentrated domestic market in which the distribution of income is extremely unequal, has reproduced those inequalities.

The trend at the present time is towards an emphasis on the growth of the more modern sectors in the trust that it will generate sufficient forward momentum to pull along with it the sectors and social groups straggling behind. The idea of reliance on the most modern sectors is lent further force by the world-wide technological revolution that we are witnessing today, an evolution which will render former production methods irredeemably obsolete. Moreover, it is thought that increased industrial exports might contribute to rectifying the perennial external imbalance of most of the region's economies.

None the less, the new development approaches which have begun to take shape retain as a point of discussion the question of the type of relationship between economic development –understood as the expansion of per capita product and income and their distribution– and social development, conceived as the improvement of the population's living standards.

ECLAC, as might be expected, is involved in this debate and has shown a particular interest in the social aspects of development, especially in view of the high social cost of the crisis of the 1980s (high levels of unemployment and underemployment, the decline in real salary levels, increased poverty and the deep erosion of the social welfare services). In the process of identifying the factors affecting social development, the search has not been limited to analysis of the efficiency of the social welfare services. Although important, they are not in themselves the root of overall social inequality. As highlighted by innumerable ECLAC studies, the real problems are to be found in the nature of the relationships between economic, social and political structures.

ECLAC has advanced an approach which has gained currency under the motto "changing production patterns with social equity". In this approach, social aspects not only form a whole but also constitute a substantial part of the approach itself. The problem of education ranks high among the social factors considered, in view of the pre-eminent importance ascribed in the context of the current technological revolution to the production and use of know-how in the process of innovation. Furthermore, new technologies (computer and communications systems) also have an undeniable impact on the actual process of production and dissemination of know-how. Through its own studies and those of other United Nations agencies (especially UNESCO) and also research undertaken nationally, ECLAC has sought to show the challenges faced in the region in order to achieve an optimum balance between education, development and social equity.

The expansion of the education system since the Second World War and especially in the last three decades is indisputable. However, especially in recent years, this expansion has largely been at the cost of declining overall standards of teaching, and inefficient use has been made of the system's capacities. This has been particularly evident in primary education, which has begun to pull down the secondary and tertiary levels and to yield high rates of late school entry, grade-repeating, truancy and early school-leaving. Expansion of the education system has been accompanied by increased access to secondary education which, although initially conceived as a level preparatory to higher education, has declined in practice to the level of mass education, performing a function previously assumed to be that of primary education. The content of the education provided at this level has remained the same, however, and a large proportion of the students emerging are not equipped to join the workforce. The standard of higher education is also questionable, and few universities can boast sufficiently qualified and stable full-time teaching and research staff. Part-time teaching staff are increasingly common, as are research staff engaged in projects that are not always contained within university research policy.

The studies also demonstrate, however, that the education system has been subject to severe segmentation, a process that has exacerbated existing social inequality. Low performance, truancy and repetition of grades are problems generally concentrated in the marginal urban population groups and in rural areas. In addition, there has been a dramatic decline in the State's capacity to take action in the educational sphere, which has led to a chronic shortage of material and human resources. For those who have no other choices, the primary and secondary education offered by the State often has little more than symbolic value. The more privileged groups tend to create their own academic circuit with higher standards of quality, a circuit entered at an early age through private and selective pre-schools or primary schools. Thus, part of the private sector holds itself apart from the State sector and tends to form segmented educational circuits divided according to income group.

An important element of the thesis propounded by ECLAC is its orientation towards a model of development conducive to social cohesion and the strengthening of democratic political processes in the region. The particular concern of ECLAC with the problem of civic participation leads on to the subject of the political forms implied by this option and the model of democracy adopted.

In ECLAC's new approach, democracy and participation are issues arising inevitably from the dynamic of the transformation process. In this sense, sociological analysis seeks to permit a better understanding of current ideological structures and their possible orientations, the role of organizations and cultural attitudes, and the part played by the media. And the aspect of greatest relevance in all this is the understanding of the new relationship established by society with the State, given that a new State-society relationship is a key factor in achieving the more equitable society set forth by ECLAC in its approach.

(Original: Spanish)

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