

# CEPAL

## REVIEW

NUMBER 63  
DECEMBER 1997  
SANTIAGO, CHILE

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UNITED NATIONS

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

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(...)	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.

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

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# The public sector's role *in Latin American* development

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The public sector's role in the development of the Latin American countries is undergoing a big change. The system of State action and intervention which arose after the Second World War came to an end in the early 1980s, when the debt crisis forced the end of a cycle and the beginning of a process of adaptation to new circumstances. This article seeks to outline the main changes that have taken place in the State's role and to analyse the causes giving rise to the public sector's new operating model. The availability and reactions of the financial markets were of decisive importance both in the external adjustment process and in the phase that followed it, when the region regained its access to credit. The conduct of investors and suppliers of funds –both domestic and external– has helped to delineate the space open for the formulation of policies which, after various attempts and in manners which vary from one country to another, have considerably changed the mechanisms of the public economy. The author concludes that the basic attributes of the new system are as follows: the private sector is now the main factor in the mobilization of saving and investment, while the provision of social services –albeit under different forms of management and financing– remains the responsibility of the public sector, but with increasing decentralization of taxation and public expenditure and with different assumptions regarding the design of the tax system. The configuration which is thus emerging has not yet taken on its definitive form, but the parts that make it up include some elements that seem likely to endure in the medium and long term. There has undoubtedly been a profound change in the type of public economy with which the world was familiar up to the 1980s.

# I

## The need to take a backward look

The functions and role played by the public sector in the development of the Latin American countries, particularly from the end of the Second World War to the early 1980s, are currently undergoing far-reaching changes. These are easy to see and are reflected almost every day in the issues and news items that keep alive the ongoing discussion on public policies in the various countries. The fact that the changes are so great and obvious does not mean that we do not need to try to interpret the phenomenon which is under way, however. A phenomenon like this, which goes beyond

the globalization of economic trends and tends to eliminate the intrinsic elements and special features of countries, is reflected in a particular way in the case of Latin America.

In order to appreciate the nature of the current changes in the role of the public economy in the region, it would seem desirable to begin with a backward look, not in order to make a historical retrospect, but simply to clarify the differences and also try to determine what has caused the changes in the functions of the public sector in the Latin American economies.

# II

## The public sector: the mobilization of saving and investment and its effects on growth

For a start, and as a point of reference for our analysis, it is worth recalling Musgrave's classification of the functions of the public sector: allocation, distribution and stabilization. These three categories are usually used to justify from the economic standpoint the way resources are absorbed and their subsequent application through public expenditure. In analysing these three dimensions, the question arises as to which of them seems to have predominated in inspiring the guidelines and policies which shaped the public sectors of the region from the end of the Second World War onwards. The hypothesis put forward in this article is that none of the three provides a satisfactory explanation. Indeed, it could be asserted that the scheme underlying Musgrave's classification is

not the most suitable one when analysed in retrospect.

The concept that gradually shaped the actions and dimensions of the Latin American public sectors actually had quite a different starting point: the challenge faced was invariably the pursuit of development and the speeding-up of the processes of growth and industrialization. The weak point in the efforts to attain these objectives was the external fragility of the economies, which became the dominant concern in the economic policy of the region from the 1930s onward. There were many factors influencing this external dependence: financing cycles, the fluctuations in prices and demand affecting exports of natural resources, the backwardness of agriculture—where the land tenure structure encouraged rent-seeking—and the draining-off of resources through the transfer of profits abroad. Within this general context, the public sector gradually acquired an increasingly important role in the mobilization of saving for, on the one hand, the formation of basic capital in those economies and, on the other, the broader provision of pub-

□ The views expressed in this article are of a personal nature and do not necessarily reflect those of the institution for which the author works.

erably broader and were seen in more dynamic terms. Fiscal policy instruments, which were used in different ways and to different extents, went beyond the mere correction of market flaws or the desire to correct inequalities in income distribution through the supply of socially desirable goods or through taxes and transfer payments. As already noted, the backdrop to the vigorous growth of the Latin American public sector was the challenge of promoting growth in spite of markets whose flaws derived not so much from the traditionally accepted reasons as from the inherent features of underdevelopment.

This public sector task of mobilizing saving and acting as the main motive force for investment was carried out through the use of various instruments. Thus, public sector surpluses were generated by using sources which had been found to be effective: collection of monopoly rents (generally channeled through State enterprises engaged in the exploitation of natural resources); use of the current saving generated by the production of those public services (electricity, rail transport, etc.) which could continue to take advantage of the initial investments made (generally foreign) and did not yet require major expansion or renewal; social security funds—pensions and health insurance—which benefited financially from horizontal expansion and the ongoing incorporation of new members; and the attraction of external saving in periods like the 1950s and 1960s, when the few resources available to the region came from official sources.

### III

#### Sources of tension: the constraints affecting the region

In addition to outlining the evolution described above, however, mention should be made of some features which, when judged with hindsight, are seen to be elements of growing tension which were to become critical constraints in the 1980s.

Firstly, little importance seems to have been given to the role of fiscal policy as an anti-cyclical instrument. The fiscal variables were not generally approached with the degree of flexibility and freedom of action needed to allow them to serve as a corrective to economic cycles. This is partly due to

The resources thus collected were put to different uses: significant expansion of various social programmes in such areas as health, housing and secondary and higher education; the establishment of enterprises in various sectors of industry, or majority equity participation in branches which—according to criteria which did not always agree with each other—were considered to be of key importance (iron and steel, petrochemicals, cement, etc.). In many cases, the new public enterprises or government agencies were also made directly responsible for promoting the development of whole regions and building up new infrastructure (communications, highways, energy generation, etc.). Public resources also served to assist private investment: directly, through industrial promotion systems, and indirectly (by way of relative prices), through the financial system and tariff protection.

If judged by its main objectives mentioned above and its performance from the post-war period up to the end of the 1970s, this strategy gave by no means insignificant results. The public sector eventually became an important factor in capital accumulation, aided industrial development, and promoted the establishment of a broad system of social services. The usual reservations are called for, of course, regarding the pronounced differences between the individual countries of the region. This description undoubtedly fits the larger Latin American economies better, where industrialization policies were applied to a fuller extent.

the circumstances and manner of generation of cycles: in most countries, these were associated with external shocks, which reduced the possibility of offsetting them through fiscal instruments. At all events, the role assigned to the public sector in the saving and investment process meant that the macroeconomic restrictions to which it had to adapt itself were frequently forgotten. The clear inflationary syndrome suffered by a number of Latin American economies in those years is partly associated with the laxity of fiscal policy. This laxity, in turn, arose from

the concurrent –and excessive– demands simultaneously weighing on the public sector. The impossibility of meeting all these demands, which led to heavy fiscal imbalances, was not a recurrent or uniform feature, however. It is no accident that fiscal deficits got worse in the mid-1970s. In the years before this, there was a certain degree of balance between the cost of dealing with the multifarious functions covered by the government budget and the availability of the various sources of State revenue. When this balance was broken on one side or the other, the public sector suffered from financial imbalances. In some countries these gave rise to severe difficulties in short-term macroeconomic policy, leading ultimately to episodes of inflation.

Secondly, little importance tended to be given to the distortions in resource allocation associated with the various forms of State intervention. There are any number of examples of this: the tax system pursued various contradictory objectives, often against a background of unsatisfactory tax administration (industrial promotion, incentives for the self-financing of enterprises, complex regulations of dubious effectiveness in taxes on consumption, etc.); there was misuse of cross-subsidies in connection with the prices and charges for public services, and financial resources which were supposed to form reserve funds to guarantee rights granted by the public sector itself simply evaporated (pensions systems are the clearest example of this).

Thirdly, the whole public intervention model was applied in a highly centralized manner, even in

countries with federal-type institutions. Here, too, various kinds of factors may be identified which help to explain these tendencies. The way the territory was occupied and the institutional legacy on which the State was built were undoubtedly important factors in this. Centralism was also favoured, however, by the recurrent presence of military governments which, because of their own political concepts and the circumstances in which they acted, tended to place obstacles in the way of local-level institutions and forms of democratic participation.

Finally –although the above list could be made considerably longer–, the accumulation of public capital and the various forms of intervention involved losses of productivity, mainly because of shortcomings in State management itself. These losses were not seen as costs that could be avoided, however, for the public sector was often the only actor and participant in many areas and sectors of production of goods and services. There was a lack of a private sector which could serve as a yardstick and comparison for the public sector economy and act as a source of competitiveness and efficiency. There was another reason for playing down the importance of possible losses of productivity, however: resources (savings) were effectively available and the limitations imposed by the overall public sector budget did not endanger the strategy as a whole. In short, although the progress made in expanding the area of State activities was accompanied by losses in terms of resource allocation, these did not represent a source of concern for economic policy.

## IV

### The 1982 crisis. The end of a cycle, and the need to adapt to new circumstances

Almost without exception, the model described above ceased to be applied in the region in 1982. It came to an abrupt end which was associated with the external payments crisis which began in Mexico and subsequently spread to the rest of the region. The exception, of course, was Chile, whose evolution was only partly affected by this situation. Like the rest of Latin America, Chile felt the real and financial impact of the debt crisis, but that country had already

begun its economic reforms –especially those concerning the role of the State– in the second half of the 1970s.<sup>1</sup>

<sup>1</sup> The experience of other Southern Cone countries in those years is not as important for the present analysis of the economic functions of the public sector, because although their reforms were concentrated on trade and financial aspects they did not alter the main lines of the public economy.

Although the events which took place from 1982 onward put a sudden full stop to the functions which the public sector had carried out up to then in the economic and social development process of the countries of the region, this change did not take place instantaneously. As we shall see below, the new elements making up the model have been taking shape gradually since then, at rates and in forms which differ from one country to another. Before dealing with this new configuration, it is worth emphasizing three aspects regarding the circumstances and factors fostering the change.

Firstly, it should be noted that, as in the earlier cycle of the 1930s, it was the impact of external shocks which set off the change. There is no counterfactual intention in this assertion. It is impossible to surmise how the model in force up to then would have reacted if the debt crisis had not occurred. As already noted, the public sector had been running into difficulties on the financial level, in the macroeconomic context, and in aspects of a sectoral nature in various countries of the region. It cannot be ruled out that these conflictive dimensions might have led to the application of corrective policies. However, this is a conjecture which is not open to analysis and the known facts indicate that what promoted the mobilization and change was not an awareness of the problems that had been building up in the public sector but a substantial change in external financial flows and the need to adapt rapidly to the new circumstances.

Secondly, it is noteworthy, at least in a first analysis, that the policies adopted by the Latin American countries after the debt crisis followed a more or less parallel course to the changes taking place in the developed world. In the first half of the 1980s, neoliberal type approaches had gained force, especially in the United States and Great Britain. Under these approaches, radical measures were formulated and applied in various spheres of economic management. The increased inflation, recession and unemployment that followed the two bouts of oil price rises in the 1970s shaped the basic context in which this revision of the model in force up to then took place. This broke a tendency which had been in effect since the postwar years and which consisted of the combination of Keynesian instruments for managing aggregate demand with the development of the Welfare State. The conception of expenditure and taxation adopted reflected this model in its macroeconomic and microeconomic design.

The change in course that took place in the developed countries was accompanied by a debate on the efficacy, economic cost and social consequences of the model which had been followed up to then. It is hardly surprising that in the new context, where the real facts did not readily fit in with the assumptions and results of economic analyses, a fundamental change was proposed in the role of the public sector. The debate invaded and enlivened academic circles, but it also went beyond them, entering strongly into the midst of the political discussions.

Because of the severity and magnitude of the crisis in Latin America, the sequence of events there was very different from that observed in the developed countries. The debate was more pragmatic and offered fewer incentives for a discussion in depth of the limitations of the path followed up to then and the new conceptual foundations of the changes which needed to be made. The fiscal accounts, which were already registering heavy imbalances in the early 1980s, suddenly came up against severe credit restrictions. The policies applied now had to cope with the new external financing conditions, and domestic spending and the domestic absorption of goods and services had to be adapted to the new situation. For this reason, the policies were dominated by the macroeconomic priorities associated with adjustment and stabilization, and their instruments were conceived and ordered as a function of those objectives. Analysis of the fundamental issues was more or less inhibited, because other criteria were being applied in the appraisal of the solutions in question. The Latin American countries sought to ride out the storm by trying to adapt their domestic economic conditions to the external financing conditions. For this reason, a number of the heterodox economic policy measures taken in the region in those years differed little, especially as regards the fiscal policy instruments used, from the traditional neoliberal proposals, since they coincided with them on the need to bring the fiscal imbalance down to a level in keeping with the rest of the aggregate budgetary restrictions. The differences observed lay in the intensity and speed at which the adjustment measures were to be applied, or were due to the possible social rejection of such a process.

Thirdly, the foregoing naturally has implications for the macroeconomic effects of the process. To the extent that the external debt was contracted by the public sector or incorporated in the public budgets, fiscal policies not only had to act as means of secur-

ing domestic balance and stabilization but were also a prime instrument for reducing aggregate expenditure, thus making it possible to increase the foreign trade surplus. Moreover, as well as fulfilling this function, fiscal instruments had to bring about the domestic transfer of income required by the adjustment process. Because of the large amounts involved (depending on the particular situations that the various economies faced at the beginning of the crisis), this redistribution of income and assets was a complex process which took on highly conflictive characteristics in a number of countries: high inflation, stagnation, destruction of the domestic financial markets, and a reigning climate of economic uncertainty.

As already noted, the duration and the severity of the crisis were not the same all over the region. There were countries like Costa Rica and Chile which received relatively more external finance in critical periods, and others which had not incurred excessive indebtedness, such as Colombia. Argentina, Brazil and Mexico, however, passed through more difficult circumstances. For these reasons, the adjustment process was marked by episodes of unequal duration. Apart from these disparities and the differing reactions of national policies to the new context, however, the public sectors of the region all showed, now quite explicitly, that they were in a phase of exhaustion. The symptoms were not only to be seen in sectoral aspects or in relatively limited areas of expenditure or tax policies. It is quite true that investment in public infrastructure, pension systems, social services and tax systems were shaken by the crisis and clearly showed their limitations, but the element which caused all the countries to react in a similar manner and has become an important factor of change, especially since the 1990s, was the loss of creditworthiness of the public sector.

This loss must be interpreted in the broad sense, because it was reflected both in very limited use of the capacity to collect the inflation tax and in the very limited access to credit markets. In this respect, we could speak of a certain symmetry between the point of origin and the subsequent continuation of the

process. The initial disturbance which upset the economic functions of the Latin American public sector was of a macroeconomic nature. In recent years, even though the external finance flows to the region have been restored, credit markets—both local and international—have shown that the pressures the public sector can exert on them have clear limits. This limitation, which is of an aggregate nature, has been the dominant factor in shaping and defining the leeway left open for tax and public expenditure policies.

Thus, public sectors are now not only obliged to maintain a fiscal balance or at least a modest imbalance. Even if they adopt financially prudent positions, fiscal policies must display structural ingredients which unmistakably show that they are aiming at a profound redefinition of the economic role of the State. It would therefore be wrong to suppose that these demands for change are only the result of new guidelines and conditions imposed by the international agencies, or, more vaguely, external factors in general. The element that lies at the heart of this process is the radical change that has taken place in the manner of operation of financial markets. In a way, the leeway of public policies in general, but very particularly those concerning the fiscal system, is delimited by the degree of willingness of the financial markets to accept the content of those policies. The markets have shown that they are willing to give credit to the private sector even if there is a risk of imbalance in the external trade accounts, but on the explicit condition that the countries undertake reforms in various fields, and especially those connected with the public sector. The indebtedness and investment behaviour of the domestic private sector have also been affected by similar considerations. Obviously, this manner of operation of the markets—including their reactions, the processing of the information they receive, etc.—has become increasingly prominent with the globalization of financial flows. It has also been favoured for some time past by the replacement of debt paper with equity as a result of the privatization process.

# V

## The elements making up the new model

As we saw in the previous section, during much of the 1980s the situation was dominated by the need to carry out the adjustment process; structural reforms of the wide range and variety now being applied in most of the countries of the region had to wait for better times. The favourable turnaround in the situation has been due to various elements. The changes in the institutional arrangements on the renegotiation of long-term debt represented important progress, aided by the support of the multilateral credit agencies. Another positive factor has been the restoration of the flow of capital to the region which began in 1990 and has been maintained up to the present, in spite of the episodes of late 1994 and 1995 which affected in particular the Mexican and Argentine economies. This massive access by Latin America to international credit has made possible economic recovery and growth, although it has once again highlighted the fragile situation of some of the economies of the region. From now on, national macroeconomic policies must adapt themselves to the new context with the instruments at their disposal. The availability of external financing and the possibility of partly reversing recent trends will necessarily condition economic performance in the immediate future.

Whatever the options offered by these new developments in the future, we consider that the interpretation outlined in the previous section continues to be valid and that, from this angle, there are no grounds for expecting a reversal of the path followed so far. The restrictions on public credit continue to prevail and have had some effects which will make themselves felt in the medium and long term. Structural reforms have already been applied in a number of areas of the public economy –privatization of public services and infrastructure, redesign of pension systems, reforms in tax systems, etc.– and represent an appreciable departure from past trends. Moreover, the new pieces in the scheme cannot easily be substituted in economic and political terms, so that it seems likely that the countries which have embarked on this process will continue to intensify it. Other countries, such as Brazil, whose reforms initially lagged behind

the rest of the region, are now showing signs of advancing in the same direction.

In short, in most of the countries of the region the public sector is witnessing a profound redefinition of its functions. The extent and diversity of the reforms under way, which are essentially connected with the execution of those functions, vary widely in the region. Although they all point in similar directions, these reforms show important instrumental differences which affect their economic and social effects. What we wish to highlight here, however, are the elements which strike a common note and therefore indicate that we are witnessing a change in the model that represents a veritable watershed with respect to the past. As we see it, the main features of the new model are those described below.

### 1. Redefinition of the public sector's role in the saving and investment process

After having been a central factor in the mobilization of saving and investment, the public sector is now witnessing the emergence of a new actor: the private sector. An appreciable part of the economic activities with the greatest profitability and growth potential have been transferred to private enterprise, so that these sources of income are now private property. Moreover, particularly in those countries where the changes in ownership have extended to important areas of infrastructure which were traditionally under State control –such as road and rail systems, ports, electricity generation, drinking water supply and sanitation, communications, etc.– the decisions and actions on investment in them are also in private hands. Natural resources have also been transferred in the same manner and systems have been introduced to permit heavy private investments in this field. The old mechanisms for the transfer of income which existed in their day through tariff protection, subsidized credit or the appropriation of financial surpluses are no longer available. A clear example of the latter is the appearance of pension funds as a result of the reform of social security systems: the use of these resources for long-term investments rep-

resents a new area for private decisions in a field where they had previously been prohibited.

The foregoing does not mean, of course, that because of these new sources of saving and new uses of resources there will no longer be any need for the public sector. The role of the latter has diametrically changed, however: direct management and decisions by it have now been replaced by responsibilities in terms of regulation and the application of indirect instruments. This calls for new State capacity for planning and administration, which is now beginning to be developed. The process is not instantaneous; it tends to advance through successive approximations and may be considered as the natural field for the design and execution of public policies in the new areas opened up by the reform of the public sector economy.

## **2. Increased concentration by the public sector on the provision of social services**

After having transferred to private hands the activities associated with the production of public goods and services and infrastructure, the public sector tends to concentrate much more on the provision of social services. The reforms in the machinery for the provision and financing of these services have not shown a comparable degree of dynamism, however, even bearing in mind that the problems which have built up in the countries of the region are long-standing and have been further aggravated by the impact of the recent changes, especially those associated with the restructuring of production activities and the labour market in economies which have increased their degree of openness.

Except in the case of pension systems, the forms of public sector intervention in these areas still take place in line with well-known patterns. This does not mean, of course, that there have not been any innovations at all. If we take a detailed look at the recent experience of the countries of the region, there is clear evidence of sectoral policies—in education, health, housing, programmes to combat poverty, etc.—which seek to correct some of the most obvious difficulties and make innovations in other aspects. The effective results of the public programmes connected with social reform seem to be slow in coming, however, partly because they run into more complex obstacles and the design of new means of action and financing requires changes in terms of organization,

administration and human resource structures within the public sector. This naturally implies that the changes will be slower.

## **3. The trend towards decentralization**

Another reason which we think explains the more limited progress registered in this area is the trend towards decentralization. Just as we noted earlier that a functional element of the previous public sector operating model was its marked centralism, so the present stage is marked by a tendency in the opposite direction. The decentralization of government activities and administration has a clear corollary in the division of powers within the national public financing structures. This process is marked by the transfer to local levels of government of greater responsibilities for the provision of public services, especially those of a social nature.

With regard to the tax and financial resources needed to support this new division of powers, the lines of action being taken by the countries of the region are not so clear. In some cases, they are promoting policies to strengthen local taxation powers, which are running into the well-known kinds of difficulties: in their economic aspects, there are problems due to the limited or very unequal tax bases of the regions, provinces or communes, and in their political and institutional dimension they run into resistance to assuming the political costs of imposing higher taxes or confrontations with local economic powers. Because of this, in most of the countries decentralization seems to be accompanied by a reformulation of the systems of financial transfers between the different levels of government. One way or another, however, the process of geographical re-deployment of the public sector is displaying, perhaps more so than in the past, a regional dimension in terms of the struggle for the distribution of public income and expenditure. Although the foregoing refers to the fiscal aspects associated with decentralization, it may be added that the dynamics of the decentralization process are very much dependent on factors whose logic and rate do not always coincide with those of that process. The main elements affecting this process are of a political and institutional nature and take different forms depending on the different national conditions. Therefore, although the general direction of the process is towards greater intervention by subnational levels of government, the

forms and instruments of that intervention cannot readily be generalized.

#### 4. The role of tax policy

In this field, the recent reforms applied in the countries of the region appear to reflect an appreciable change in objectives. Until recently, the prevailing tax systems in the region incorporated—at least in their normative design—ambitious income redistribution objectives combined with equally ambitious aims regarding the promotion of various production activities or regions. The new policies, however, have departed from these objectives. There is greater reluctance to grant special tax benefits, and more emphasis is placed on horizontal equity, together with

simpler and more universal rules for the taxation of consumption. On the one hand, these changes would seem to indicate some abandonment of the objectives of tax progressiveness and the generation of indirect incentives for increasing capital formation, but on the other hand it may also be considered that the traditionally discouraging distribution profile in Latin America can only be corrected to a marginal extent through more progressive income tax. There is also less propensity to apply tax exemptions, because of a more prudent assessment of the cost-benefit aspects of the mechanisms applied in the past. The current trends in tax policies in the region therefore seem to emphasize the objectives of more effective tax collection, simplification and horizontal equity, together with the expansion of the bases for taxes on consumption.

## VI

### By way of conclusion

Three essential arguments may be identified in the above interpretation. Firstly, we have noted that the operating model and role of the public sector underwent substantial changes after the debt crisis of the 1980s. Secondly, we noted that both during the external adjustment process and in the subsequent phase in which the region recovered its access to credit, the reception and reactions of the financial markets to the general lines and content of public sector reform policies were of decisive importance. The behaviour of suppliers of funds and investors—both domestic and external—helped to define the leeway open for policies which, after various efforts and in different ways in the different countries, have altered the mechanisms of the public economy. Thirdly, we stated that the basic features of the new scheme are the following: redefinition of the role of the State in

the saving and investment process, concentration by the public sector on the provision and financing of social goods and services, decentralization, and new bases for tax design.

The configuration emerging from these elements has not yet assumed its final shape: the process is not yet complete and is still underway. The individual elements have a degree of permanence in the medium and long term, however. It may therefore be assumed that future policies will be aimed mainly at solving shortcomings and making corrections in an established course of action which seems unlikely to be altered much in its essential aspects. It may therefore be asserted that the public economy model applied up to the 1980s has undergone profound and lasting changes.

(Original: Spanish)



## Equity in the *public budget*

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Economic and Social  
Planning (ILPES).*

This article aims to make a "walk-through" in the virtual reality of budgetary and fiscal matters in order to identify the possible leeway for achieving a higher level of convergence between the public discourse on equity and the real content of public policies aimed at that goal. To this end, the author explores possible answers to four questions: what is the current meaning of the concept of equity?; how much leeway is there in the field of taxation for expanding resources and improving vertical equity?; how can priority be given to the objective of equity in managing public expenditure?; and how could greater dynamic consistency be ensured between growth and equity? He concludes that it would be possible to make considerable progress in terms of social equity in the fiscal field, but this would call for top-level political will, backed up by active public policies in a serious, sustained and consistent effort. In order for that political will to go beyond the levels of mere declarations or clientage, it must be directed towards society at large, clearly setting forth the priorities involved, and in order to avoid it being frustrated, it must be based on operational methods that combine social participation with the creative and judicious use of public policy instruments.

# I

## Introduction

The question of equity in the public budget is very broad and admits of various different approaches. As it seems prudent to limit it somewhat, the analysis in this article will be centered on the leeway available within the area of public finances for tackling the need for advances in social equity.

This approach, although limited, is nevertheless important because fiscal policy –through its income, expenditure and financing components– has considerable effects on equity. We must not ignore the fact that fiscal action is not enough, however. Well-paid employment is undoubtedly the most effective means of promoting greater equity; at the same time, the amount and quality of employment are connected with elements belonging to other fields as well as that of fiscal matters. All these factors were integrated by ECLAC into its proposal for changing production patterns with social equity (ECLAC, 1990 and 1992).

In order to place the analysis in context, it should be recalled that many of us view the immediate past of the region in terms of two synthetic concepts: that of the lost decade, if the accent is placed on the economic and social results of the 1980s as compared with those of previous decades, and that of the years of painful learning, if the emphasis is placed on the lessons learned in order to face the future (Martin, 1994).

Both of these views of our immediate past are valid, but what is even more important is that they are complementary to each other. One of them reminds us of the problems which have still to be solved, subject of course to their different importance according to the conditions of each country and the position of the observer himself. The other –that of the painful learning process– sums up what we have learned. I think there are four lessons to be highlighted in this respect.

The first of these is that social compensation measures must interact and adapt themselves in time with programmes of investment in human capital. Compensatory measures are designed to attend to needs which cannot be put off any longer and come under the concept of a social safety net. Investment

in human capital, for its part, is designed to recover the lost ground in terms of social progress in the region in order to face more effectively the challenges imposed by the world of today.

The second lesson is that the result of a decade which has been very active in matters of tax reform has been a clear re-ordering –in a manner different from the past– of the elements making up the trinity of tax objectives: efficiency, simplicity and equity of the tax system. The question of equity has not only lost the leading place it had in the 1960s and 1970s but has also undergone a big change in emphasis.

The third lesson is that in situations of severe fiscal constraints, the concepts of the priorities, replacement and productivity of public expenditure become more important. We often know that we are spending our resources badly, but what is worse, sometimes we do not even know exactly what we are spending them on.

The fourth and last lesson is that fiscal matters have taken on great importance in the achievement and maintenance of the basic macroeconomic balances, which are nowadays considered as an indispensable intermediate objective for the attainment of sustainable growth. This brings us in turn to the need to harmonize the different components of fiscal policy –public income, expenditure and financing– and to coordinate their management over time more effectively.

Let us now see how to use these four lessons in analysing the social inequity which, although a very long-standing problem in the region, has got worse –and perhaps changed its nature– since the lost decade. We shall keep to a set of conceptual aspects which will help us to examine the policy options and trade-offs in this respect.

A warning is called for here: our starting point is the perception that the concern for equity is greater in the political discourse than in the actual content of public policies, so we propose to make a tour of the “virtual reality” of the budgetary and fiscal area in order to identify degrees of leeway which could make possible closer convergence between the political discourse and the actual reality.

## II

### Equity: a single undivided concept?

The incipient recovery in growth and the better fiscal situation of the early 1990s, contrasting with the visible signs of imbalance in the social distribution of the costs of the adjustment begun in the 1980s, have raised the question of equity once again. The present debate on this matter is more heated for two reasons connected with the expectations of the population in both the economic and political spheres. On the one hand, the substantial progress made in the macroeconomic field has not been accompanied by convincing progress in the social situation. On the other, the difficulty experienced by governments in putting together sufficiently powerful proposals to match the magnitude of the problem has meant that the political debate which is essential for making progress in this field has not been very fruitful.

Although most fiscal actions have repercussions on equity, the government discourse in this respect is focussed in particular on public policies aimed at the so-called social sectors. Thus, a new model of public action in the social field has begun to take shape in the region, whose instruments are usually grouped together under the titles of privatization, targeting and decentralization. The first two of these form the heart of the strategy: the aim is to introduce market mechanisms into the provision of social services as far as possible, and to limit the direct public supply of such services to the most vulnerable social groups, by the targeting of expenditure. Decentralization, as the third component of the model, strengthens the movement towards a more prominent role for social subgroups—in this case the local communities—in the systems for the provision of such services. Some brief comments are called for regarding these three components.

#### 1. Decentralization

Decentralization will very likely bring significant gains in efficiency and greater social control over the provision of services, provided that it facilitates community organization and participation and that the subnational levels of government show themselves to be open to it. This is a point which is difficult to

clarify in advance in any of the countries of the region.

At the same time, the responsibilities transferred from the central government to the subnational levels of government must be in keeping with the financial resources available. Consequently, in most cases it will be necessary to reach some kind of agreement on fiscal decentralization which will be consonant with the maintenance of this balance. The recent experience of the region shows serious imbalances in one direction or the other.

Finally, simultaneous decentralization to social subgroups which are defined on a territorial basis and are necessarily heterogeneous among themselves may give rise to cases of inequity between such subgroups as regards the quantity and quality of the services provided, because of differences in technical and administrative capacity, the resource endowment, the organizational potential of the community, and the openness of the government to citizen participation, among other factors.

These concerns should not be interpreted as arguments against decentralization, since this represents an important way of making public management more democratic and efficient. They do, however, represent arguments against some views which see decentralization as an end in itself or which support spontaneous mechanisms for the spread of decentralization which implicitly dilute responsibilities.

The change from a centralized to a decentralized system of provision of social services requires a strategy for the transition and also calls for effective regulation once the new system has been established. Otherwise, the expectations regarding its potential may be frustrated, or, even worse, decentralization may come to be discarded as a suitable direction for change.

It should perhaps be recognized, in this respect, that decentralization does in fact bring about a reordering of functions in the State machinery as a whole (Martin and Núñez del Prado, 1993). It is therefore not just a question of strengthening the technical and institutional capacity of the bodies to which responsibilities are decentralized, but also of redefining and

reorganizing the functions of the central and sectoral bodies in order to formulate policies with national coverage, defining regulations and monitoring their fulfillment, promptly exposing serious deviations of the quality of decentralized management from national standards, and providing the necessary means for applying corrective support measures.

## 2. Privatization and targeting

We will now return to the elements that lie at the heart of the new model proposed for public action in the social sectors: privatization and targeting. This model can make some significant contributions in respect of these two components, especially by suggesting a variety of instruments which have been little used so far.

Thus, with regard to privatization, as well as highlighting the advantages of the market in terms of resource allocation, it points out the importance of introducing systems for the total or partial recovery of costs, subsidizing demand, making supply more flexible by the incorporation of private suppliers, subcontracting the supply of inputs, and introducing incentives to increase the spirit of competition in public bodies.

With regard to targeting, the model gives a valuable reminder of the need to reduce poverty, since this is the worst manifestation of inequality that can exist in a society; thus, it emphasizes that priority must be given to the fight against poverty by directing various social programmes towards the establishment of an effective social safety net for the segment of the population with the most extreme unmet needs.

In both cases, however, the contributions usually form part of implicit policy recipes whose difficulty lies not so much in the partial nature of their aims as in their frequent omission of some items. We will highlight three of these through the following questions:

*Does the new public action model assign a subsidiary role to the State, or does it call for active public policies in the social sphere?* Particularly in the area of social policy, it is not desirable to present the market as a concept opposite to that of public intervention, contrasting the virtues of one with the shortcomings of the other; in this case in particular, experience shows that there are both market flaws and flaws in the actions of the government.

In reality, the important thing is to find ways of making better use of the great variety of instruments which are available for organizing novel mixed forms of supply of social services, with systems of incentives based on market criteria and modern forms of public regulation (Carciofi and Beccaria, 1995). It should also be remembered that neither the market nor public action operate in an abstract world, but in a complex set of concrete institutions. In this real world, the past history and dynamics of processes are important and make up a set of mutual conditioning factors which make necessary trade-offs between the objectives of equity and efficiency in social policy.

*Is the struggle against poverty merely a priority objective or is it the only objective of public intervention in the social field?* The traditional model of public action in the social field did not give special priority to poverty, but considered it rather as an extreme case of inequality of income distribution on which to center its attention; in contrast, the new model assigns absolute priority to public action against poverty. Both these positions are extreme ways of considering the relation between equity and poverty as grounds for public action.<sup>1</sup>

Both from the theoretical and from the practical point of view, public intervention is justified by considerations of equity with respect to society as a whole, and not just by the existence of large groups which are in a poverty situation, although these groups merit preferential attention from social policy. Because of the challenges of present-day development, it is also important to build up the store of human capital, and in order to do this it is necessary to promote the potential talents which exist in society by seeking to eliminate inequality of opportunities and discrimination throughout the whole of society.

*Is the important thing to ensure that social expenditure is properly targeted, or is the way its*

<sup>1</sup> The relation between poverty and equity is viewed in the light of four different schools of thought. One school consists of those who are only concerned with poverty, without concerning themselves at all with inequality above the poverty line. The second school consists of those who see the reduction of inequality as an important objective of public policy, but give higher priority to the elimination of poverty. The third school consists of those who are concerned with both equity and poverty and are willing to consider trade-offs between the two objectives. Finally, there are those who do not give special importance to poverty but merely consider it as a component of the broader cost of inequality (see Atkinson, 1989).

*financing is shared also important?* Advocates of the focusing of public expenditure on the poorest sectors of society consider that the amount of resources available, and especially the social groups in which the financing of that expenditure is generated, are given data. The question of who is to pay for the focusing is highly relevant, however, both from the point of view of those who actually contribute to the financing of public ex-

penditure and those who are excluded from the benefits of social policy.

Both these dimensions have important consequences for social equity in the broader sense mentioned earlier, of course. As we shall see in the following section, when we compare the Latin American and Caribbean region with others we see that there is a good deal of room for increasing the tax burden and spreading it more equitably.

### III

## Taxation and equity: has the vertical dimension been lost?

The 1980s was very rich in tax proposals, reforms and experiments; many of them came from the developed countries and reflected their conditions both in the instruments used and also the objectives pursued by the reforms (Gómez, 1991).

#### 1. The general lines of the reforms

These objectives shifted the central concern of the discussions from the equity of the tax system to its efficiency, within the context of a generalized reappraisal of the market mechanisms and the role of price systems. Within this approach, the concept of efficiency was equated with that of neutrality: hence, seeking a more efficient tax system means seeking a more neutral system, that is to say, one which has the least possible impact on economic decisions.

This leads to substantial changes in the basic components of any tax: tax rates and the taxable base. With regard to the first of these components, the tendency is to make substantial reductions in the marginal rates, while seeking to maintain the average rates, which determine the level of the tax burden. The central idea is that it is the marginal rates which affect the behaviour of the economic agents, so these rates must be reduced if neutrality is to be achieved.

With regard to the second component—the taxable base—the aim is to expand it, and this brings in the concept of horizontal equity: if two individuals are in a similar situation, then they should pay the same amount of taxes. This aim of horizontal equity, which has tended to displace the previous aim of

vertical equity, is achieved insofar as tax legislation treats equal persons equally. The expected result is the expansion of the taxable base. Together, reduction of the marginal tax rates and expansion of the taxable base maintain the average level of taxation needed to finance public expenditure.

This movement towards efficiency in the tax system is applied to all the components of the tax structure. In the value added tax, through its generalized application; in income tax, through expansion of the taxable base and reduction of marginal tax rates; and in import duties, through the unification of tariffs. As the whole debate moves in the same direction, the tax policy recommendations arising out of it are integrated and coherent with each other.

But why should these considerations seem important to us? In general, for two main reasons. The first of these reasons is because one way or another they form the collection of ideas on which the analysis of this question is based in our countries, even though their content is often distorted or they are used out of context, overlooking essential differences. The most important reason, however, is quite different and is connected with the processes of globalization and economic openness. In order to illustrate this idea, it might be useful to draw an analogy with the international technological frontier. In the case of taxation, the countries of the region are behind that frontier, but globalization and economic openness are pushing them towards it and at the same time preventing them from departing from its fundamental principles.

## 2. The reforms in Latin America

The 1980s were also a very active period as regards tax reforms in Latin America, too (Carciofi, Cetrángolo and Barris, 1994). These reforms took place, however, within a macroeconomic context dominated by the dynamics of the external adjustment and the internal stabilization programmes, so that they were aimed mainly at maximizing tax revenue in order to help achieve those two objectives. Nevertheless, the real tax burden remained more or less constant during this period, so that governments had to resort to other ways of covering the fiscal deficit.

In most cases, the main feature of the reforms was the generalized application of the value added tax, at a single rate or at a very small number of different rates. The design of income tax systems changed radically compared with the past, through the elimination of some tax incentives, better methods for indexing the taxable bases, and reductions in the marginal and average rates. Altogether, the changes were designed to simplify the system in order to facilitate tax administration and reduce evasion: objectives in keeping with the fundamental need to recover the tax collection capacity. The progress made by some countries of the region in this field is quite noteworthy.

The question of vertical equity, which had been the central objective in previous decades, no longer figures on the agenda of the recent reforms. On the basis of indirect indicators, it may be conjectured that even in the best cases the incidence of taxes has not become more progressive, and most probably its regressiveness has increased during this period.

The policy recipes currently prevailing in fiscal matters in the region recognize the need for greater progressiveness but also favour a special way of achieving this (Tanzi, 1992). This method gives priority to the tax collection objective of tax policy and to its neutrality. The task of giving fiscal policy greater progressiveness is left mainly to the reorientation of public expenditure, because it is considered that progressiveness stems from the net impact of government action as a whole on the different social groups, both on the income and the expenditure side.

This is not convincing, for two reasons. One is the distance separating the countries of the region from the international frontier of tax practices referred to earlier. The other is the enormous inequalities observed in the region with regard to the distribution of income and wealth. Both these factors

point to the need to do more with regard to the objective of vertical equity in the field of taxation.

It is therefore necessary to make a critical review of the way the region has tackled this task in the past and to avoid introducing distortions and conflicts with the other objectives of tax policy. The situation could be considerably improved by using a limited set of instruments acting both on indirect and direct taxes and, above all, by giving the necessary priority to soundly-based development of the tax administration system.<sup>2</sup>

With regard to indirect taxation, consideration should be given in each country to the objective of introducing a simple but not uniform structure of the value added tax, together with some special-purpose taxes on particular types of goods (Carciofi and Cetrángolo, 1994). Within such a scheme, the value added tax would provide a broad tax collection base, while the special purpose taxes would permit differentiated forms of taxation on a subgroup of goods which are not consumed in a uniform manner in the different social strata.

In order to make progress with regard to vertical equity, however, it is also necessary to take action on the very low yields of direct taxes; it is worth noting in this connection that the average yields in this respect for the countries of the region as a whole are 10 percentage points of GDP below those obtained in the member countries of the Organization for Economic Cooperation and Development (OECD), after discounting the differences between the social security systems of the two groups of countries.<sup>3</sup> Although there is some room for improvement with regard to local taxes, the main responsibility for this unsatisfactory performance must be borne by income tax.

<sup>2</sup> Improving the system of tax administration is essential in order to reduce tax evasion, which stands at a very high level in almost all the countries of the region. Otherwise, relatively low tax burdens can give rise to a high degree of tax pressure on those who actually fulfill their tax obligations.

<sup>3</sup> In seven OECD countries, the simple average of direct taxation as a percentage of GDP is 14%, with a maximum of 24% (Sweden) and a minimum of 8% (France). In thirteen Latin American countries, in contrast, the simple average for the same variable is only 3%, with a maximum of 5% (Mexico) and a minimum of 1% (Bolivia). The difference between the two groups of countries, although still considerable, is much smaller with regard to the respective total tax burdens, likewise as a percentage of GDP: a simple average of 27% in the OECD countries and an average of 14% in the Latin American countries. This is a clear indicator of the bias against direct taxation in Latin America (see ECLAC, 1992, table IV-3).

In past decades, redistribution through taxation was centered on excessive refinements in this tax. This strategy failed to work for various reasons: high and recurrent inflation, weakness of the tax administration system, and the pursuit of too many objectives through a single instrument, to name only a few. A simple design of income tax, following the patterns used in the developed countries, together with sustained progress in tax administration, would make

it possible to carry out this outstanding task successfully in the region.

The potential advances in equity that could be obtained through taxation do not, of course, remove the need to make considerable improvements in the allocation of expenditure: a question which will be dealt with in the following section. In reality, these two dimensions mutually condition and legitimize each other.

## IV

### Equity and public expenditure: how much room for action is there?

When the need to give priority to the objective of greater equity is mentioned, attention tends to be focused on public expenditure, for good reason. In most countries, there is a good deal of leeway in this field for improvements in priorities and in the replacement and productivity of expenditure. In order to take advantage of this leeway, it is necessary to link the objective of equity with the other objectives of public policy and the same time to give priority to the use of the resource allocation instruments already established institutionally.

The government's capacity to realize its objectives depends on the resources at its disposal, but also on the instruments available to it. One of the areas where most can be done to increase the efficacy, efficiency and economic rationality of government action is the system for the programming, budgeting and management of public resources. The hub of this system, because of its legal and institutional status, is the public budget, and a small digression is called for in this respect.

Unfortunately, the fiscal dimension of the external crisis of the 1980s led to the collapse—to a greater or lesser extent, depending on the countries—of the institutional capacity to operate such a system effectively (Martin and Guijarro, eds., 1989). In a number of cases, public budgets came to be the result of the prevailing circumstances rather than a programming exercise. In some cases, there was an almost total loss of budgetary culture and a breakdown in institutional relations, which was reflected in various dimensions: between global-level bodies and those

responsible for executing the expenditure; between the economic and the monetary authorities, and between the Executive and the Legislature.

#### 1. Changes in the system of financial administration

In recent years, a number of governments in the region have been making great efforts to reconstruct and modernize this system (Martin, 1992). In their initial stages, these efforts have been aimed at solving the shortcomings observed in the short term, controlling the financial dimension of expenditure, and restoring the full application of the budgetary cycle. Fulfillment of these stages is undoubtedly essential, and important achievements have been made in this respect in a number of cases.

One of the novel aspects of the reforms undertaken is the linking together of the phases of budget formulation, execution and control through new integrated systems of financial management which cover accounting aspects, treasury and public credit management, staff and supply management, budgetary operations and follow-up and control (ASIP/ILPES, 1994). These new systems, further enhanced through modern computational facilities, free staff from routine tasks and allow them to devote their attention to matters of a more analytical nature.

Mention may also be made of the very positive tendency to introduce budgetary classification systems which make possible objective-oriented management and the preparation of indicators and

systems for the physical and economic follow-up of the different expenditure programmes, together with relatively more highly developed controls over financial execution.

This trend should be consolidated and extended to the executing agencies themselves, which, on the basis of rules of a general nature and with the corresponding technical support, will bear primary responsibility for putting it into effect. The task is no less important from an institutional point of view: there is a great deal of inertia to overcome; it is necessary to define and establish means of dialogue and coordination, and above all, it is necessary to insure that information—which is not exactly a free good—flows properly throughout the management system.

In addition, it is necessary to improve the institutional capacity to define sectoral policies—and in some cases also multi-sectoral policies—as a framework for the formulation of technically sound programmes and projects, since the basic element for good global resource allocation is the technical quality of the expenditure proposals.

It seems obvious that if this is not done, the public budget can hardly be anything but a rigid instrument governed by inertia and by bureaucratic and political compromises, without any real foundation. Upward or downward adjustments can only lead to a final financial position which affects everyone equally, without being based on the priorities or merits of the different expenditure programmes, for the simple reason that they are not sufficiently known.

The challenge is therefore very considerable. The task extends to almost all the bodies in the public sector, but especially those responsible for social policy. The traditional weaknesses—heightened by the impact of the crisis of the 1980s on the State apparatus—are to be seen at various important levels, including the low level of capacity to formulate policy guidelines which are sufficiently soundly based and adapted to budgetary constraints, to design effective programmes, to suggest corrective action on the basis of assessments of the operations underway, and to provide timely and reliable information.

## **2. The budget as an instrument of government management**

When an effort is made to give priority to equity, or indeed to any other government objective, it is necessary to have a budget through which it is possible to

visualize the opportunities, exercise the available options, and have real alternatives for action. The possibility of redirecting expenditure is not always limited by the available resources; sometimes, the restriction is due to the lack of good programmes or to serious shortcomings in the implementation capacity of the executing agencies.

A system which does not provide for any kind of substantive assessment and which is unaware of the impact of government actions on the target population will undoubtedly lead, because of the existence of various kinds of leakages, to poor yields from the very substantial resources currently allocated to the social field. In a number of countries, there is growing concern over the fact that only a small part of each unit of account allocated to social expenditure actually reaches its direct target beneficiaries. In order to tackle this situation, some of the procedures already used in developed countries could be used, such as periodic external assessments of the performance of various areas of government, leading to revisions in their budgets.

So far, we have given priority to questions of a technical nature in our discussion of the relationship between the budget and equity. This does not mean, of course, that we are ignoring the fact that the budgetary process also involves a good deal of political and institutional negotiation. While it is true that the complex process through which political decisions are taken cannot be replaced by mere technical calculations, it should also be clearly understood that the necessary political decisions can gain greater efficiency and global rationality if they are taken in the light of a sound and transparent technical base.

This need for transparency should be given particular emphasis when assessing the public budget. The budget is one of the main instruments for action by the Executive, but it is subject to an interactive review in conjunction with the Parliament, that is to say, with the political representatives of the public at large, and sometimes it is also subject to other forms of public revision too. These processes will of course be of little use if the budget is unclear, its format is unfriendly to the potential user, and it is a real puzzle to decipher. Sometimes, it is not possible to obtain an answer to such elementary questions as how much is going to be allocated in a particular year to education, because it is necessary to pass first of all through a maze of budget appropriations. This conspires against the possibility of making the budget

into a means of clearly expressing the available options and ensuring that expenditure decisions support the real objectives of the government and of the political forces represented in Parliament.

Finally, it should be emphasized that budgetary reforms integrated with the rest of the State financial management subsystems, such as the introduction of objective-oriented management, with well-designed programmes, the development of economic and financial follow-up systems, the incorporation of mechanisms for assessment of results, and the classification of activities by major expenditure policies, in

order to increase transparency, are all necessary conditions for improving the budgetary process and thus taking advantage of the room available within the expenditure structure for achieving greater equity.

Unfortunately, although these conditions are very necessary they are not of themselves sufficient. It is also necessary to place the budgetary debate within a pluriannual framework of income and expenditure projections, in line with the evolution of the macroeconomic situation and development policies. These matters will be dealt with in the last section of this article.

## V

### Growth and equity: how can we ensure their dynamic consistency?

The current approaches to the correction of fiscal imbalances place the emphasis on ways of financing the public deficit—in the light of their different macroeconomic repercussions—and on the evolution of the public debt, recognizing the need for a fiscal policy which is sustainable in the medium and long term.

#### 1. The macroeconomic environment of the budget

It is worth recalling that the budget has two components. One is fiscal policy, which is expressed in the form of a certain combination of fiscal aggregates programmed on the basis of the macroeconomic goals that the government hopes to achieve with the aid of the public finances. The other component is of a conjunctural nature, since the budget is subject to exogenous influences which are reflected, at the stage of its formulation, in the adoption of assumptions and estimates regarding important events which are expected to take place during the year.

A central task in the preparation of the budget is the combination of these two components in such a way that the macroeconomic objectives fit in with the assumptions and estimates adopted. This consistency must stem from the mutual compatibility of the fiscal, monetary and exchange-rate programmes and from the correspondence between the income and expenditure projections of the various institutional sectors.

It very frequently happens that the effective behaviour of the economy and of the exogenous variables affecting it differ significantly from the assumptions used in preparing the budget. In this case, the dilemma facing the government is whether it should reformulate the budget components to make them fit in with the initial macroeconomic objectives or whether it should adjust the latter to take account of the problems which have arisen.

Annual budgetary cycles form an excessively restrictive strait-jacket for dealing with this dilemma. On the one hand, they provide little information about the viability and sustainability of particular forms of evolution of the fiscal aggregates, while on the other they make it more difficult to exercise policy options calling for the definition of lines of action within a medium-term horizon.

For this reason, governments increasingly tend to place their annual budgetary exercises within a pluriannual framework which makes it possible to analyse the projected evolution of the fiscal aggregates and their repercussions within the macroeconomic context. This is not aimed, of course, at conditioning future budgetary activity in a rigid manner, but at providing a flexible instrument which will make it possible to take account of medium-term objectives and pay special attention to the requirements of an economic situation which is constantly changing and is only partly under the control of the government.

In its microeconomic dimension, the budget displays a fundamental imbalance in its composition. Whereas on the income side it only contains an estimate based on assumptions regarding the behaviour of the tax base and public prices during the year, on the expenditure side it contains commitments which, even when not subject to legal obligations, are difficult to change in the course of the year. The adoption of a pluriannual programming framework also aims to handle this fundamental imbalance.

On the income side, the budget makes it possible to distinguish between transitory effects and the more or less permanent levels of each of its components. The deterioration of the budget as a fiscal policy instrument is not due to the fact that the *ex post* fiscal aggregates do not coincide with the assumptions made, which is only normal, since public income depends on tax bases and prices whose evolution is uncertain. The real problem arises when transitory factors lead to decisions which affect permanent aspects of the budget in a manner which has no relation with the medium-term macroeconomic prospects and objectives.

On the expenditure side, it is well known that in any budget year the expenditure committed in previous budgetary exercises amounts to at least 70% or 80% of current income. Consequently, the leeway for reallocating expenditure in an annual budgetary cycle is very limited and, what is worse, such reallocation may be costly for public management. In this case, the adoption of a pluriannual framework facilitates a gradual move from one expenditure programme to another, in response to changes in government priorities.

In short, the need to produce information on future developments which makes it desirable to establish a pluriannual framework favours the unity and inter-temporal coherence of the public decision-making process. In particular, it makes possible a form of fiscal management which tends to impart structural soundness to public income and to make the expenditure side of the budget more flexible, so that the public sector's financing needs are compatible with the real resources at its disposal.

Thus, it can make a decisive contribution to fiscal governance, understood as the government's capacity to carry out its fiscal policy in a manner which is both sustainable and credible and which involves the least possible costs in terms of the efficacy of public management (Marcel, 1993). The reason for

this is not exclusively technical: producing information on the future seeks to make the actors involved in the budgetary process aware of the dilemmas of public financial administration. This can significantly help in generating a favourable climate for fiscal discipline and the achievement of specific political agreements for carrying out a sustainable fiscal policy, by reducing the shortsightedness caused by the conjunctural factors affecting the budget and the fiscal aggregates.

With these elements it is possible to give a positive answer to the question posed in the title of this section: placing the budget within a pluriannual fiscal programming framework is a suitable means for permitting the consistent evolution of growth and equity: that is to say, facilitating its dynamic consistency.

## 2. Growth and distribution: a thorny dilemma

As everyone knows, while a growing economy makes possible greater advances in terms of social equity, these are by no means automatic. Indeed, in some countries of the region there have been periods of growth which have been accompanied by a deterioration in social equity. The usual answer given to explain this inconsistency is that a period of sustained growth is needed before distribution can improve. This assertion is repeatedly made as an *ex ante* argument, but it is hardly ever explained afterwards why this expected consequence did not take place.

Likewise, there have also been cases in the region where the opposite has taken place: that is to say, policies aimed at producing immediate effects in terms of distribution have resulted, sooner rather than later, in setbacks in this respect, in the midst of serious macroeconomic imbalances and rapid exhaustion of reactivating growth.<sup>4</sup>

In the first case, the stabilization and recovery of growth achieved are not sufficient to induce a process of saving and investment which will make sustained growth viable; moreover, the passivity with which the question of distribution is viewed means that it is always put off for another time. In the second case,

<sup>4</sup> It is generally assumed that the inflation tax has regressive distributive effects. In the case of Argentina, the estimates available for the 1980-1990 period confirm this assumption: the average burden borne in that period by the poorest quintile (8.6% of their income) was almost three times greater than that borne by the richest quintile (3.0%). See Argentina, Ministerio de Economía y Obras y Servicios Públicos, 1992, table 5, p. 14.

advantage is taken of a favourable economic and financial conjuncture to apply policies which are not sustainable except under the exceptional conditions of a succession of favourable events, which of course is inevitably interrupted sooner or later.

How can fiscal policy help to overcome this thorny dilemma in which the economies of the region seem to be trapped? First of all, it is necessary to adopt active fiscal policies on both the income and the expenditure side, focussed through public inter-

vention in the social sectors, as noted in previous sections. Secondly, fiscal policy must be prevented from becoming a mere passive sounding box for the economic cycle and external disturbances. In both cases, pluriannual budgeting exercises, backed up by other available instruments (Martner, 1996), can help to promote a succession of non-traumatic public decisions in this respect, while providing greater assurance that the set of actions in question is sustainable in the medium and long term.

## VI

### Final comments

By way of conclusion, we may recall the questions on which this article was based, after which we will make some brief final comments. Those questions were the following: what is the real meaning of the concept of equity? Is there room in the field of taxation for the expansion of resources and the improvement of vertical equity? What means should be used for giving priority in public expenditure management to the objective of equity? Can there be dynamic consistency between growth and equity?

The comments we wish to make are the following: first, the redistributive function of fiscal policy must be made compatible with the functions of allocation and stabilization, since they interact to a significant degree in the areas of both public income and expenditure. This means that they must be considered simultaneously.

Second, it is essential to restore a medium-term horizon in public finances, since in this way it is possible to find room to accommodate social needs and to link together the government action to satisfy them, while expressly taking account of the need for sustainability.

Third, giving priority to the aim of social equity is a political decision of the greatest magnitude whose achievement must be actively pursued through specific measures, in a serious, sustainable and coherent effort. In order for this decision to be more than just empty words or to avoid degenerating into clientage, it must be applied to the social sphere as a whole, while explicitly establishing the relevant priorities. And in order to avoid the danger of it being frustrated, it must be based on operational procedures which combine social participation with the creative and judicious use of public policy instruments.

(Original: Spanish.)

### Bibliography

- Argentina, Ministerio de Economía y Obras y Servicios Públicos (1992): *Argentina en crecimiento*, Buenos Aires.
- ASIP (Asociación Interamericana e Ibérica de Presupuesto Público)/ILPES (Latin American and Caribbean Institute for Economic and Social Planning) (1994): *Informe de relatoría. Taller sobre sistemas integrados de administración financiera*, LC/IP/R. 152, Santiago, Chile, ILPES/ECLAC, Consejo Regional de Planificación, 24 November.
- Atkinson, A.B. (1989): Poverty, J. Eatwell, M. Milgate and P. Newman (eds.), *Social Economics. The New Palgrave*, London, Macmillan Press.
- Carciofi, R. and L. A. Beccaria (1995): *Provisión y regulación pública en los sectores sociales: lecciones de la experiencia latinoamericana en la década del ochenta*, Santafé de Bogotá, UNICEF Libros.
- Carciofi, R. and O. Cetrángolo (1994): *Tax Reforms and Equity in Latin America: A Review of the 1980's and Proposals for the 1990's*, Innocenti Occasional

- Papers. Economic Policy Series, No. 39, Florence, Italy, United Nations Children's Fund (UNICEF), International Child Development Centre.
- Carciofi, R., O. Cetrángolo and G. Barris (1994): *Reformas tributarias en América Latina: análisis de experiencias durante la década de los años ochenta*, Santiago, Chile, Economic Commission for Latin America and the Caribbean (ECLAC)/S.R.V. Impresos.
- ECLAC (1990): *Changing Production Patterns with Social Equity*, LC/G.1601-P, Santiago, Chile. United Nations publication, Sales No. E.90.II.G.6.
- (1992): *Social Equity and Changing Production Patterns: An Integrated Approach*, LC/G.1701/Rev.1-P, Santiago, Chile, August. United Nations publication, Sales No. E.92.II.G.5.
- Gómez, J. C (1991): Orientaciones en materia de reforma tributaria, *Colección conferencias*, Buenos Aires, Fundación Omega Seguros, December.
- Marcel, M. (1993): *Gobernabilidad fiscal, presupuestos y finanzas públicas: un estudio a partir de la experiencia chilena*, Washington, D. C., Inter-American Development Bank (IDB), mimeo.
- Martin, J. (1992): *Los nuevos retos en la programación del sector público*, LC/IP/L.052, Santiago, Chile, ILPES.
- (1994): *La política económica en la poscrisis y el proceso de reforma del Estado*, LC/IP/R.150, Santiago, Chile, ILPES.
- Martin, J. and A. Núñez del Prado (1993): Strategic management, planning and budgets, *CEPAL Review*, No. 49, LC/G.1757-P, Santiago, Chile, ECLAC.
- Martin, J. and M. Guijarro (eds.) (1989): Introducción general de los compiladores, *Finanzas públicas y desarrollo. Coloquio Franco-Latinoamericano*, Buenos Aires, Grupo Editor Latinoamericano.
- Martner, R. (1996): Indicators of fiscal policy: Design and applications for Chile, *CEPAL Review*, No. 58, LC/G.1916-P, Santiago, Chile, ECLAC.
- Tanzi, V. (1992): Fiscal policy and economic reconstruction in Latin America, *World Development*, vol. 20, No. 5, Oxford, U. K., Pergamon Press.

# Pension system reforms, *the capital market* and saving

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Pension system reforms seek to combine and reconcile both economic and social functions. On the basis of both conceptual aspects and the actual experience of Chile, this article illustrates the difficulties encountered in trying to make reforms fulfill both types of functions. These difficulties stem from two factors: i) the need to consider the reform of the pension system as a whole, where, parallel with the capitalization component, it is necessary to develop another unfunded component to finance the costs of the transition from one pension system to another, minimum pensions, and social welfare pensions; and ii) the need to distinguish between financial saving and real saving (or national saving in the national accounts sense) and to study the financial sector's capacity to intermediate financial saving towards real investment. The Chilean experience confirms this view. The fiscal resources needed to finance the cost of the transition and the other items of the unfunded component represent flows which exceed those coming from workers' contributions, thus affecting the size and composition of the net flows of savings generated by the reforms. Furthermore, the relatively incipient nature of the capital markets and the regulation needed to ensure protection of the workers' pension funds in an investment portfolio approach make it more difficult to turn this financial saving into real investment. In the final analysis, although both types of functions include objectives which are desirable from the point of view of public policies, the mere reform of pension systems to change them from predominantly unfunded systems to others with substantial capitalization components does not guarantee that such objectives will be achieved.

# I

## Introduction

Two types of functions are usually assigned to pension systems: those of a social nature and those of an economic and financial nature (box 1). The functions of a social nature aim to provide contributors to the system with a good old age or disability pension,<sup>1</sup> or, in the event of death, a good survivor's pension for the corresponding dependent, and seek to establish financing mechanisms to assist those who could not save up for their old age (minimum social welfare pensions); within these functions, it is necessary to distinguish between social security responsibilities proper, which can be financed through the effort of the pension fund contributors themselves, and responsibilities connected with income redistribution, which may be financed from other general taxes in the fiscal budget. The aim of the functions of an economic and financial nature is to contribute to national

saving without taking the place of other forms of voluntary saving and to supplement the development of the financial sector through the design of instruments which facilitate the financial intermediation of the accumulated funds, as well as the development of institutions for the prudential regulation of the sector (box 1).

From the beginning, pension systems have been organized primarily on the basis of the pay-as-you-go or unfunded system. They represent social contracts for compulsory intratemporal and intergenerational transfers from active workers to pensioners, backed up by an implicit commitment by the government to the cohorts of contributing workers that, when they reach retirement age, they in turn will benefit from the contributions of future generations of workers. Such schemes are balanced from the financial point of view when the amounts of pensions paid out correspond exactly to the contributions received. Unfunded systems need to be actuarially adjusted because at the beginning (when they are "young systems") they register surpluses which should be invested in the form of reserve funds to be used for the payment of pensions when the system begins to suf-

<sup>1</sup> The idea of what is a good pension is a relative concept. A good pension may be considered as one which provides, in real terms and in cases of disability, old age or death, a significant proportion of the average income on the basis of which the pension system member made contributions during his working life.

<b>Box 1</b>	
<b>THE SOCIAL AND THE ECONOMIC FUNCTIONS OF PENSION SYSTEMS</b>	
<b>Social functions</b>	<b>Economic functions</b>
<p>1. To ensure the saving needed to finance satisfactory levels of consumption through old age, disability or survivor's pensions, under the following assumptions:</p> <p>a) Individuals do not save voluntarily to cover such risks ("short-sightedness")</p> <p>b) Individuals do save to cover such risks (various theories).</p> <p>2. To contribute to equity through solidarity with those who are not in a position to save for their old age</p> <p>a) Through the pension system itself (common fund), paid for from the payroll</p> <p>b) Through fiscal policy (subsidies), paid for out of general taxes.</p>	<p>1. To contribute to national saving</p> <p>a) The system does not take the place of other forms of saving</p> <p>b) The system does take their place.</p> <p>2. To contribute to financial saving and the development of capital markets</p> <p>a) The funds are intermediated on the domestic capital market</p> <p>b) Pension funds are protected from political pressures.</p>

TABLE 1

Estimated yield of two different pension systems <sup>a</sup>

Pension system	Amount of contributions or saving in period 1 (1)	Amount of participant's pension in period 2 (2)	Yield for the participant (3) = 1 -(2)/(1)
Pay-as-you-go (unfunded)	$c_1 * w_1$	$(c_2 * w_2 * T_2) / T_1$	$1 - (c_2 * w_2 * T_2) / (T_1 * (c_1 * w_1))$  $r_c + r_w + r_T$
Individual capitalization (funded)	$c_1 * w_1$	$c_1 * w_1 * (1+r)$	$1 - c_1 * w_1 * (1+r) / (c_1 * w_1) = r$

Source: Uthoff, 1995, table 4.

<sup>a</sup>  $c_i$  = rate of contribution, period  $i$  ( $i = 1, 2$ )

$w_i$  = real average wage, period  $i$

$T_i$  = number of workers, period  $i$

$r_c$  = growth rate of contributions

$r_w$  = growth rate of real average wage

$r_T$  = growth rate of number of workers

$r$  = rate of return in capital market.

fer from losses (as it moves towards maturity). These actuarial calculations make it necessary to keep a close watch on the ratio between the number of persons of retirement age and the number of contributors (the demographic dependency ratio). Increases in this ratio lead to losses by the system unless contributions and/or pension benefits are corrected to take account of these increases. When the surpluses or deficits of unfunded systems are absorbed by the government budget it is not possible to maintain the proper inter-generational financial management of the reserve fund.

The regional indicators on the ratio between potential workers (persons between 15 and 64 years of age) and persons of retirement age (those over 65) and on the structure of the labour market and real wage levels display substantial demographic and labour force changes which make it necessary to correct contributions in order to fulfill the established benefits of an unfunded system.<sup>2</sup>

Unfunded systems only reach a state of equilibrium in ideal conditions: constant population growth and a balanced financing scheme. In this situation, each pensioner (at the individual level) will receive on average, as the yield on his contributions, a rate equal to the growth rate of the real wage mass of the

contributors (table 1). There are two reasons why this yield may be unfair to an individual worker from a strictly actuarial point of view. First, the growth rate of the real wage mass of the contributors is usually lower than the yield on the capital (this is a characteristic of dynamically efficient economies). Second, the yield obtained by each individual worker is different from the average yield for each worker in the system, because of a component which, without being related to the contributions, transfers resources between cohorts. In theory, this distributive component should favour low-income workers, but in practice, however, it has favoured those groups of workers who are in a position to obtain more generous pensions because of their influence on the political leadership.

The above description highlights the inherent problems of unfunded systems, which have been described in various ECLAC publications.<sup>3</sup> These problems may be summarized as: i) the coexistence of several different schemes, so that workers have access to different benefits depending on the scheme they belong to; ii) the low level of generation of productive employment and the decline in the ratio of contributors to beneficiaries; iii) evasion and delays in the payment of contributions; iv) the absorption of

<sup>2</sup> These estimates show that both the initial value of these rates and the rate at which they go down over time vary from one country to another. The differences are connected with the particular features of the demographic transition in each country.

<sup>3</sup> See Uthoff (1995), which is a study based on the following publications of the "Financial Policies for Development" project: Uthoff and Szalachmann, eds. (1992, 1993 and 1994); Iglesias and Acuña (1991) for Chile; Schulthess and Demarco (1993) for Argentina, and Ayala (1992) for Colombia.

pension system surpluses in the fiscal budget, which means that their investments will have a low yield because of the historical difficulty of insuring the surpluses against inflation; v) the low degree of coverage of the population; vi) the low ratio between the contributions that a worker makes in the course of his working life and the pension he finally receives, and vii) inefficient and excessively costly administration (see Uthoff (1995) table 5).

An alternative compulsory financing scheme is that which has wrongly been called, since the Chilean pension system reforms, the "privatization of pension systems".<sup>4</sup> This system is based on the complete financing of benefits from funds related to the contributors' income; it converts retirement pension contributions into a savings flow at the level of each individual, estimated as a proportion of his earnings in each period of his working life (this is also known as the individual capitalization scheme). The average yield of the funds accumulated by each worker depends on interest rates (domestic and international) and on the yield of investments in the capital markets. In principle, this system can also include schemes for solidarity among groups of workers of the same generation (distributive schemes), which would weaken the connection that should exist between the remunerations on which the workers contributions are based, the yield obtained by the workers' funds in the financial markets, and the benefits they receive in the form of pensions. If we leave out these solidarity schemes, then the pensions under this system are actuarially fair for each individual, since they relate his savings and their corresponding yield with the pension benefit he receives (table 2).

The arguments in favour of the privatization of the present pension schemes claim that by making this change at least three weaknesses of unfunded schemes are overcome because: i) the links between the contributions made by each worker and the bene-

TABLE 2

Table of possible subsystems

Benefits:	Contributory scheme		Non-contributory scheme
	Compulsory contributions	Voluntary contributions	
Defined in advance	Different unfunded systems		Basic pensions paid for out of the fiscal budget
Not defined in advance	Individual capitalization system	Savings systems	Ex-gratia pensions

fits he can receive are strengthened; ii) part of the implicit debt owed to contributors under the unfunded system is made explicit, and iii) the distributive function of the old system is made separate and assigned directly to the fiscal budget rather than to the new pension system. The most important motive for making the change, however, is that the new scheme is supposed to isolate the social security system from possible losses and impacts on the fiscal budget caused by increases in the demographic dependency ratio and in the maturity of the system. Although increased national saving is one of the aspirations of the reforms, it is not a guaranteed result of them.

In the present article, the arguments put forward in order to highlight the importance of the individual capitalization system for the development of capital markets and, ultimately, national saving are reviewed, and an analysis is made of some of the preliminary results of the experience of Chile, where an unfunded system is being replaced with an individual capitalization system. The article concludes with some words of caution with regard to the relevance of the arguments usually put forward to encourage countries to carry out pension system reforms of the same type as those applied in Chile.

<sup>4</sup> In practice, although the scheme is financed by the workers and the funds are managed by private enterprises, the State intervenes at four levels: i) it regulates demand (by obliging workers to contribute); ii) it regulates supply (by supervising the role of the pension fund management companies); iii) it finances

pensions (in the case of minimum social welfare and supplementary pensions), and iv) it manages and finances the old social security system and will continue to do so until that system comes to an end.

## II

### Pension funds, the capital market and saving

In order to highlight the contribution that pension funds can make to the financial market and saving, three arguments are usually put forward: i) that the accumulation of private funds is a source of long-term saving and ultimately of the provision of capital for enterprises and the development of the securities market; ii) that the competition for the intermediation of these funds helps economic growth by reducing the cost of such resources and allocating capital to the most efficient uses, and iii) that the compulsory contributions by workers do not take the place of other forms of saving.

#### 1. Effects of the accumulation of pension funds

It is argued that a private pension fund is a source of capital for enterprises and support for the securities market, because it has a long-term saving structure and, unlike individual investments, offers the possibility of investing not only in assets such as shares and bonds but also in the financing of housing and infrastructural projects.

This is indeed true in schemes organized under the system of individual capitalization and in the "young" stages of unfunded systems which include the accumulation of reserve funds. In these cases, the social security contributions (or part of them, in the unfunded systems) are a potential source of long-term financial saving. With the exception of saving to cover possible disability or death (for which additional insurance is taken out), the contributions for old age pensions are built up during a long period. In the case of individual capitalization, if working life begins at the age of around 20 and ends at the age 65, without interruptions, each individual has 45 years to build up a stock of capital.

In this respect, two observations may be made in connection with the characteristics of the labour market and the stage of maturity of the system. Firstly, the introduction of private pension funds may in fact give rise to heavy current fiscal expenditure to aid those who do not manage to contribute during the whole of their working life. Although the average working life may last 45 years, there is no certainty that every person will be continuously employed dur-

ing the whole of that time. Either because of family circumstances (especially in the case of married women with household responsibilities) or labour market conditions (unemployment, underemployment, informal activity), there is no guarantee of continuity of employment. Consequently, if the State undertakes to give such persons minimum pensions, this obligation may come to be a substantial burden for the authorities.

Secondly, although in the accumulation of a fund the individually capitalized portion is insulated from demographic pressures, this does not guarantee that individual capitalization will be any better than the unfunded system for increasing private saving in the long term. It is necessary to consider what will happen with regard to this accumulation when the system matures, that is to say, when a large number of the participants are reaching retirement age. As long as the majority are still in the accumulation phase, and if no account is taken of the liabilities assigned to the government or other changes in the saving of the economic agents, then total saving could be greater. Subsequently, however, workers' saving will be offset by a growing number of pensioners who dissave, and demographic effects will recover their importance (Barr, 1993).

#### 2. Effects of competition for the intermediation of the funds

It is argued that competition for the intermediation of pension funds aids economic growth by reducing the cost of capital resources and allocating them to the most efficient uses.

It is also argued that pension funds aid economic growth through the diversification of financial intermediaries, more efficient allocation of capital and improvements in productivity. The funds act as financial intermediaries between individuals and their future pension benefits, and if they do so in a competitive and transparent manner this will help their capital to be allocated to the most profitable investment opportunities. As they handle large amounts of money, their transaction and information costs are low, and if the regulations permit this they can invest in a broader range of assets (for

example in high-yield risk capital and innovative high-technology industries).

In order to achieve these objectives, individual capitalization calls for the (public or private) administration of the investment portfolio. This administration may be limited solely to investments in government securities, or it can also include private assets. The relative shares of government debt and private instruments in the fund will depend on the degree of development of the capital market.

In their present state, Latin American financial markets have two characteristics which militate against competitiveness: the first of these is the limited supply of risk-rated financial instruments in emerging markets, with the predominance of State securities, and the second is the economies of scale of the pension fund administration industry.

a) *Lack of financial development*

The Latin American markets have not yet developed the conditions needed to ensure that long-term financial saving (associated with pension funds) is intermediated to real investment projects which are reflected in private enterprise capital formation. The very limited development of suitable institutions is the main factor restricting the possibility that the financing needs of real long-term investment projects may be financed by pension funds. The low degree of diversification of the instruments, their low initial rating and the lack of the regulations needed to guarantee a suitable combination of risk and yield tend to give rise to yields which are due to the capital gains deriving from the excessive demand for certain instruments rather than the generation of wealth (or capital). The yields thus generated may quickly be reversed when the demand for those instruments dies down.

The dilemma lies in the fact that the portfolio approach applied to the investment of the funds does not ensure that the instruments available on the market are in keeping with the real investment needs of the country. The need to rate instruments according to their risk level in order to protect institutional investors contributes to this situation. The credit risk ratings associated with certain bonds issued by emerging enterprises or banks, as well as the risk ratings associated with enterprises in emerging markets which issue securities, leave large segments of business outside the reach of the pension funds.

The absence of institutions such as "second-tier banks" and the lack of mechanisms for the granting of concessions and the charging of suitable tariffs for infrastructural services, to give only two examples, prevents small businessmen from gaining access to such funds and hinders the private sector from contributing to investment in infrastructure. These big gaps in the markets for the intermediation of long-term resources result in a supply of financial instruments which are predominantly of a short-term nature.<sup>5</sup> In these circumstances, the mere establishment of private pension funds is no guarantee of investment in capital.

b) *The conditions of competition in pension fund administration*

Both the management of the information on members and the intermediation of the funds are subject to growing economies of scale. Thus, in small economies (like most of the Latin American countries) the intermediation of pension funds is not carried out in conditions of real competition. This results in a concentrated industry, with imperfect competition, highly regulated, and with heavy management costs (largely for the marketing of the products they are trying to sell).

**3. Social security saving compared with other forms of saving**

The way the retirement fund is financed in the different pension systems of the region largely determines the contribution of the latter to national saving. Mention is often made of the negative effect that the fiscal deficit is supposed to have on private saving, in order to support the claim that such saving is higher in countries where pensions are financed with a private insurance scheme rather than by a State social security system, especially if the latter is unfunded. This argument calls for at least three comments (Barr, 1993). First, it is only during the period of accumulation of the fund that saving could be greater, since subsequently workers would only save

<sup>5</sup> This tendency is strengthened by the fact that the pension fund administration companies (AFPs) have to comply with strict regulations when deciding on their investments (in order to ensure a suitable mix between risk and yield) and have to compete for members who are not educated to take decisions on the basis of long-term yields.

the same amount that pensioners dissave.<sup>6</sup> Second, even when the fund is still in the accumulation stage, the compulsory saving may be taking the place of voluntary saving which would have been generated in any case: a matter on which there is considerable controversy (Feldstein, 1974 and 1979; Aarón, 1982; Barro, 1974 and 1978; Leimer and Lesnoy, 1982; Auerbach and Kotlikoff, 1990). And third, there is no certainty that this financial saving will be effectively reflected in productive investment and will thus represent an increase in saving as measured in the national accounts (Held, 1994; Held and Uthoff, 1995).

In the final analysis, the link between the provision of income for old age and capital accumulation has at least two different facets when studying the transition between two schemes of pension financing (Diamond, 1995). One is the amount of resources that must be transferred to the generations which were already retired when the system begins. The other is the response of private saving and the government budget to the particular design of the system.

The important point is comparison with the saving behaviour of families before the new method of financing was put into effect. A generous system which gives retired persons high levels of benefits compared with the contributions they made discourages voluntary saving and results in less capital than another scheme which does not do this.<sup>7</sup> Conversely, a capitalization system which builds up a fund results in greater capital than one which does not do so. This does not mean that an unfunded system does not have any impact at all on capital accumulation, especially if it is compared with a situation in which a compulsory system does not exist. If workers do not save voluntarily, neither the taxes paid nor the promises of future benefits can alter saving; consumption will be transferred from the young generations to the old ones. In contrast, if workers act rationally and make voluntary savings for their old age, there will be a reduction in current saving in response to greater expected benefits and to any gain or loss of wealth in

the course of life. As both types of workers exist at the same time in reality, the response of saving to the design of the system is difficult to determine.

Likewise, the impact on government saving will depend on the adjustment of other taxes and government expenditure in line with the existence of a given system of retirement contributions. In particular, if the capitalization system serves to finance and ultimately increase government consumption, then it will not contribute to capital accumulation. If the transition requires the social security debt to be made explicit and financed, however, it can significantly modify government saving and, depending on the type of financing, can also affect private saving.

Individual capitalization will require some form of administration (public or private) of the corresponding portfolio of investments. This may be restricted solely to public debt instruments, or it may be invested in private assets, which will influence government expenditure. The relative shares of public securities and private instruments in the fund will depend on the degree of development of the capital market. This composition will be a more important issue in small and segmented capital markets, since in large flexible markets the difference between the aggregates resulting from the selection of instruments will only be small and is explained by small changes in the corresponding yields. A drop in the yield of private instruments and a rise in that of public debt securities will affect government investment and expenditure. The long-term aggregate effect of an "open market operation" which changes the mix of the investment portfolio between public debt and private instruments will not be very significant. In small and segmented capital markets, in contrast, investments have little mobility, which makes it more difficult to estimate the yield of the workers' funds implicit in a given system of retirement contributions.

Three observations may be made on the way of measuring the impact on saving in the light of the foregoing considerations. First, the effect of a compulsory individual capitalization scheme on saving (and the yield on capital) cannot be evaluated without taking into account both the capitalization component and the redistributive component. Both of these must be taken into consideration when comparing that effect with the effect produced on saving (and the yield of capital) by a single redistributive system. This phenomenon is particularly important when changing from one system to another; the financing needed to

<sup>6</sup> Indeed, the Chilean case shows that changing from a (mature) unfunded system to an (incipient) individual capitalization system causes the fiscal deficit associated with the payment of the pensions of retired persons and recognition bonds in respect of the past contributions of those who changed to the new system to be greater than the saving of the workers in the new system (Arrau, 1996).

<sup>7</sup> This should not invalidate the purpose of providing good pensions through these transfers, however, since they raise the consumption of those receiving them.

cover the rights acquired under the old system will have to come one way or another from future contributors and must be taken into account in the calculations on saving (and on the yield on capital).<sup>8</sup>

Second, the net effect that the change in the system will have on workers' saving must be evaluated. The replacement of voluntary saving by compulsory saving when moving from one system of retirement pension financing to another raises questions which are difficult to answer. It is not possible to attribute the transfer of contributions to savings accounts as a net contribution to workers' saving without first analysing the changes in the saving behaviour of families, enterprises and the government caused by such measures.

Third, it should be borne in mind that if the reform promotes investment in private instruments

it can make an important contribution to the promotion of saving through the development of the capital market. That development and its effects on saving depend on a number of factors, however, and not exclusively on the reform of the pension financing system. Changes in the financial sector which include different types of regulation form part of the process of liberalization of various markets and also of the process of privatization of many activities which were originally in the hands of the public sector. The benefits resulting from pension system reform in each country will depend on the degree of development of its capital market before the reform and also on inherent difficulties in its markets which will not respond solely to improvements in the regulatory framework.

### III

## Examples from the Chilean experience

### 1. The cost of the transition

It has been asserted that the costs of transition from an unfunded system to an individual capitalization system are long-term commitments which can affect the long-term saving flow.

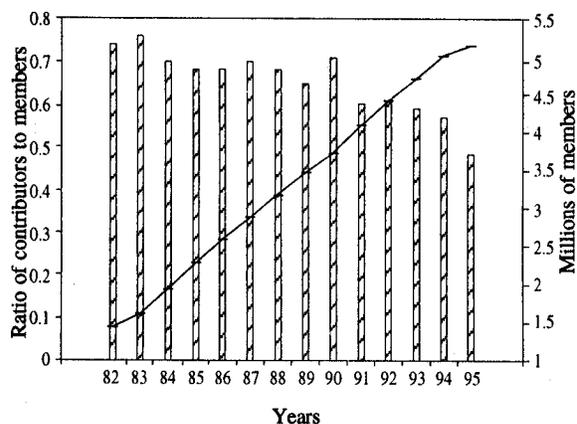
The Chilean experience indicates that the social security commitments inherited from the previous system and the current commitments with those who do not have stable employment may become a serious problem.

Figure 1 analyses the problem associated with the Chilean labour market structure. It is noted that during the period 1981-1995, although the number of

members of the system increased, the proportion of them making contributions went down. Thus, while the number of members has come to represent 100% of the labour force, those who actually make contributions under the system only amount to 56%. This problem is associated with delays in the payment of contributions and employment instability. The information presented shows that these phenomena appear to be most marked in segments of the population

FIGURE 1

Chile: Number of members and ratio of contributors to members, 1982-1995

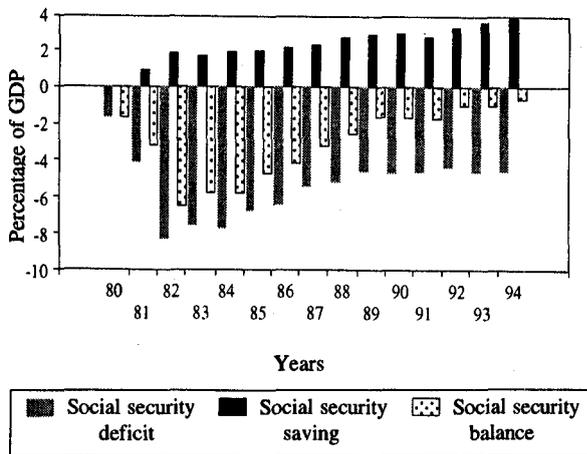


Source: Klevens (1996), on the basis of official data.

<sup>8</sup> When changing from defined benefits to defined contributions, there are two alternatives for financing the benefits inherited from the system in force before the reform; both of them have substantial consequences for economic policy in the transitional period, since they identify those who must pay the cost of the transfer. The first alternative is financing through current taxes; in this case, the transfers to previous generations are made by the generations actively employed during the transition, who may not be in the most suitable position to bear such a tax burden. The second alternative is financing through indebtedness, converting the implicit debt into explicit debt. Such conversion affects the growth of the debt and may have indirect consequences, probably on the determination of who is to pay for the transfers which have been made, on other government taxes and expenditure, or simply on the perceptions prevailing in the bond market (Diamond, 1995).

FIGURE 2

Chile: Saving and dissaving flows directly associated with pension system reform, 1980-1993



Source: Arrau (1996), on the basis of data from the Social Security Normalization Bureau (INP).

which accumulate little (possibly the lower-income segments) and/or are engaged in own-account activities. These persons are granted a minimum pension (when they comply with certain minimum requirements).<sup>9</sup> This minimum pension is fixed in the national budget, and although it has come to represent an increasingly small proportion of the minimum wage, it may have a substantial incidence on the fiscal budget, thus affecting government saving.

Figure 2 analyses the possible impact of the social security commitments associated with the maturity of the old system. It shows that in the Chilean case the saving associated with the individual capitalization system (which is in course of formation), together with the fiscal commitments<sup>10</sup> associated with the unfunded system (already mature), give a consistently negative balance (Arrau, 1996). With small variations, and in view of the fact that the debt owed to those who moved from the old system is paid in the form of bonds, the flow can correspond to the withdrawal of funds that will take place in the individual capitalization system when it is mature.

<sup>9</sup> A minimum pension is guaranteed to all those pensioners who, while having contributed to the new and/or old system for a cumulative total of 20 years in the course of their active life, have not accumulated sufficient funds to obtain the minimum benefit.

<sup>10</sup> These consist of the payment of pensions to retired persons and recognition bonds in respect of the past contributions of those who move to the new system.

## 2. Intermediation of the funds

### a) Absence of financial development

The figures for Chile also confirm the importance of the degree of development of the financial market for the individual capitalization system. In 1996, after 15 years of operation of the system, the pension funds still put over 60% of their total investment in instruments which do not represent investments in real capital (figure 3). Furthermore, the Chilean pension funds have their investments highly concentrated in State instruments, especially Central Bank promissory notes (figure 4), and when they increase their investment in shares the real level of the selective or general share index rises significantly (figure 5).

FIGURE 3

Chile: Proportions of instruments other than bonds, shares and mortgage bills in the pension fund management companies' portfolios, 1981-1995

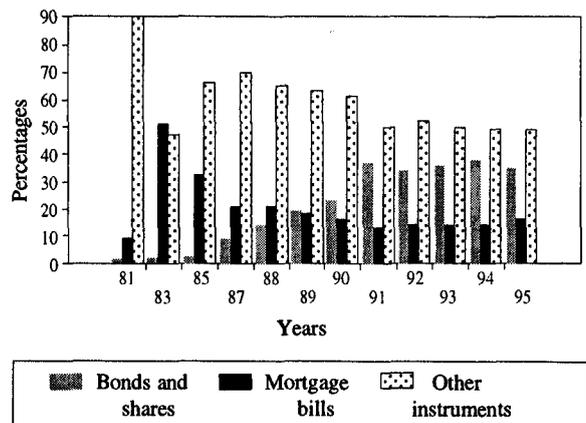


FIGURE 4

Chile: Proportion of State instruments in pension fund management companies' portfolios, 1981-1995

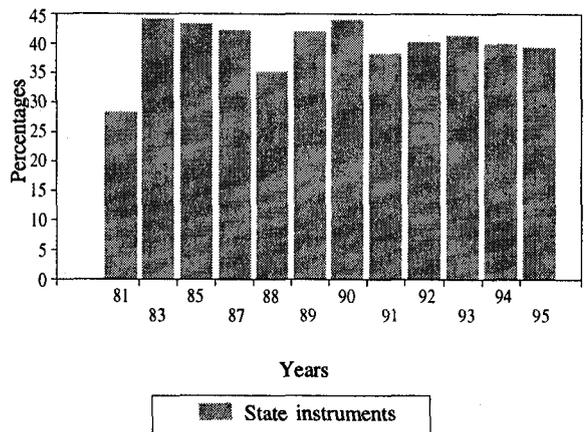
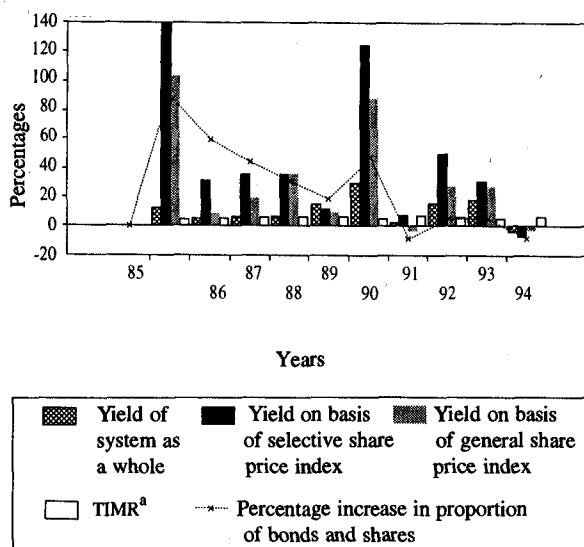


FIGURE 5

**Chile: Real yield of shares and demand for shares by the pension fund companies**  
(Twelve-month averages, per cent)



<sup>a</sup> TIMR = Average Domestic Rate of Return (of fixed-income instruments on the domestic market).

The difficulty of channeling these funds directly into real investment is clear from the figures. In 1995, after nearly 15 years of operation, 40% of the pension funds were still invested in Central Bank promissory notes whose counterpart is the accumulation of international reserves but not the direct generation of real capital, while a further 10% were in time deposits and other financial instruments whose results in terms of capital formation are neither certain nor direct.

In more direct support for real investment, 16% have been channeled into housing finance through the acquisition of mortgage bills of the banks providing housing loans. Only 5% have been used for the acquisition of bonds issued by private companies, and 30% for the purchase of shares. Moreover, the latter are shares which already existed on the stock exchange and do not necessarily correspond to increases in capital. The funds have benefited from increases in share prices due largely to their own demand, which does not have any direct effect on capital accumulation.

The composition of the current investment portfolio of the funds does not give any guarantee that the whole of the long-term saving has been allocated to capital formation, and this is manifested in various ways. The profitability associated with the increase in share prices is subject to the volatility of those

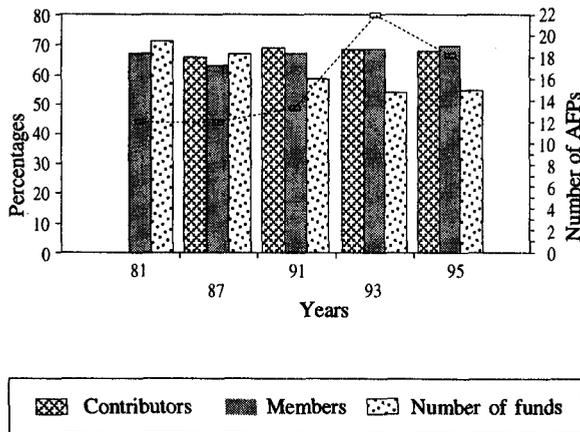
prices, and furthermore it may be assumed that the Central Bank is not likely to continue to accumulate international reserves at the rate of previous years. This situation was already clearly visible in 1995, when the pension funds registered negative profit margins. It is important to recall, in this respect, that the profits on members' funds which have not yet been withdrawn are due but not actually paid, and are subject to regulations imposed by the government authorities, who are concerned to strike a fair balance between risk and yield. Thus, for example, between 1986 and 1995 the real annual yield due on the pension funds has been 10.8%, whereas an individual investor who invested in 1986 in a package of shares included in the selective share price index (IPSA) or the general share price index (IGPA) and sold those shares in 1995 would have obtained real annual yields of 39.9% and 27.3%, respectively. If he had invested his money in fixed-income instruments, the yield would have been 6.4%. A pension fund member can only obtain the real yield of his funds when he retires, and by then it is possible that the shares may have gone down in price and that there are no other shares to make up for those declines. This, together with the fact that workers can only use their funds to accumulate capital to finance their pensions (for example, they cannot use them as collateral for other needs during their working life), sheds some doubt on the assumption that workers who are members of this system are more ready to view the relations between capital and labour in a new light.

In the final analysis, the system needs two changes. On the one hand, it needs a process of institutional development in the financial market which will facilitate the increasing assignment of resources to real investment projects, and on the other hand, from the point of view of the pensioners, there should be facilities enabling the pension fund management companies to manage alternative funds designed to ensure that those who are close to retirement age receive the yields due up to that moment (especially if they have been high). This means insulating the fund from possible disturbances in the financial markets.

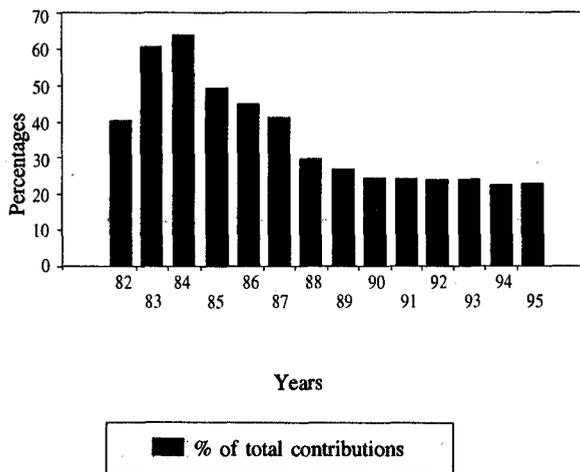
b) *Concentration and inefficiency of the pension fund management industry*

Figures 6 and 7 show two features of Chilean pension funds: the fact that their management is concentrated in the three largest pension fund management companies, and the fact that their financial

**FIGURE 6**  
**Chile: Total number of pension fund management companies (AFPs) and market shares of the three biggest companies, 1981-1995**



**FIGURE 7**  
**Chile: Average management costs of pension fund companies, 1982-1995**  
*(As a percentage of total contributions)*



management costs (including the contracting of insurance policies in respect of disability, old age and death benefits), although they have gone down, are still high when expressed as a percentage of the total contributions.

The big accumulation of resources belonging to third parties and their concentration in a few pension fund management companies operating in a non-competitive market give rise, *inter alia*, to three serious market flaws which affect the efficient allocation of resources. First, the problem of the implicit insur-

ance already observed in the case of the banks has been extended to the insurance companies providing pensions. Second, the lack of information on complex aspects of the product demanded (the administration of third-party funds and lifetime benefits) is passed on to members, which means that attention should be given to protection of users and to the competitive bases of the system. Third, the product has to be differentiated through aggressive marketing, with heavy administration costs for each individual account. Thus, for example, in the case of Chile the explosive growth of the sales force for attracting members by emphasizing secondary aspects has prevented the management costs from continuing to go down and has opened up many opportunities for abuse of information which must be avoided (Arrau, 1994).

In short, the intermediation of the funds of third parties in Chile is far from taking place in a competitive market, so that there is an urgent need to regulate the capital market and the pension system in order that the capital resources may be allocated efficiently. This means in turn that new financial enterprises must be set up. In small markets like those of Latin America, serious measures will be needed for the regulation of financial conglomerates in order to ensure efficient allocation of the funds of third parties.

### 3. Social security saving competes with other forms of saving

In Chile, national saving has grown by 17 percentage points of GDP since the initiation of the pension system reform. It is not clear how much of this result is due exclusively to that reform. There are important mutual relations between compulsory and voluntary forms of saving, as well as between the variables through which the different economic reforms and the macroeconomic context could influence the saving of the economic agents. In order to take account of the simultaneous action of all these variables and the complex relationships between them, highly sophisticated models will be needed to isolate the effect that the change in the manner of financing pensions would have on saving.

Nor is the necessary information available for specifying the factors determining the saving effected by the different economic agents and their interrelations. Two different forms of accounting will give rise to two different interpretations of the same source of information (Arrau, 1996). The two sources

TABLE 3

**Chile: Gross national saving and external saving, 1970-1994**  
(As a percentage of GDP, at current prices)

Year	Base 1977 <sup>a</sup>			Base 1986 <sup>b</sup>		
	Gross national saving	External saving	Total gross saving	Gross national saving	External saving	Total gross saving
1970	15.2	1.2	16.4	...	...	...
1971	12.4	2.1	14.5	...	...	...
1972	8.3	3.9	12.2	...	...	...
1973	5.2	2.7	7.9	...	...	...
1974	20.7	0.4	21.3	...	...	...
1975	7.9	5.2	13.1	...	...	...
1976	14.5	-1.7	12.8	...	...	...
1977	10.7	3.7	14.4	...	...	...
1978	12.6	5.2	17.8	...	...	...
1979	12.4	5.4	17.8	...	...	...
1980	13.9	7.1	21.0	...	...	...
1981	8.2	14.5	22.7	...	...	...
1982	2.1	9.2	11.3	...	...	...
1983	4.4	5.4	9.8	...	...	...
1984	2.9	10.7	13.6	...	...	...
1985	5.4	8.3	13.7	7.8	9.4	17.2
1986	7.7	6.9	14.6	11.5	7.3	18.9
1987	12.6	4.3	16.9	17.3	5.0	22.2
1988	16.3	0.7	17.0	22.3	0.5	22.8
1989	17.2	3.1	20.3	23.7	1.9	25.5
1990	17.5	2.8	20.3	24.2	2.0	26.3
1991	19.0	-0.2	18.8	24.1	0.4	24.5
1992	19.6	1.7	21.3	24.8	2.0	26.8
1993	...	...	...	23.9	4.8	28.8
1994	...	...	...	25.4	1.4	26.8
Average 1970-1979	12.0	2.8	14.8	...	...	...
Average 1980-1984	6.3	9.4	15.7	...	...	...
Average 1985-1992	14.4	3.5	17.9	19.5	3.6	23.0

Source: Arrau (1996) and the sources indicated below.

<sup>a</sup> Up to 1988, Banco Central de Chile (1989). From 1989 on, Banco Central de Chile (1993b).

<sup>b</sup> Up to 1989, Banco Central de Chile (1993a). From 1990 on, Banco Central de Chile (1995).

available are, on the one hand, the national accounts, which provide series on national public and private saving (table 3)<sup>11</sup> and, on the other hand, the series on the social security deficit, which make the prior debt

explicit, and on the social security saving assigned to workers who are members of the new pension system, which is the same as the contribution to the individual accounts (table 4).<sup>12</sup>

<sup>11</sup> Table 3 shows the changes in the series on national and external saving resulting from the new methodology used for estimating the national accounts from 1986 on. The gap in the national accounts series is still substantial, even though it has been reduced from 45% to 27%. The main changes which affect the measurements of the product, income and saving at current prices are: i) the manner of taking account of VAT in the valuation of intermediate purchases, final purchases, imports and sales; ii) the manner of including bank imputations in order to avoid differentials with negative rates; iii) the manner of imputing investment to provide greater coverage of industrial goods of domestic origin and the construction sector, and the reclassification of certain imported goods from the category of inputs to that of capital goods (Central Bank, 1993a). At constant prices, the change in base also influences the results by affecting the relative prices used in making the calculations.

<sup>12</sup> Table 4 shows two series relating to the transition from the unfunded system to the individual capitalization system. On the one hand there is the social security deficit caused because the government continues to be responsible for the commitments acquired under the old system in two different ways: i) by paying the pensions of those beneficiaries of the old system who were already receiving disability, survival or retirement benefits in 1981 (the operating deficit), and ii) by recognizing the contributions made under the old system in the past by those active workers who decided in 1981 to change to the new system (recognition bond). On the other hand, there is the compulsory saving represented by the compulsory contributions that workers have to make under the new system in the form of their contributions to their individual retirement accounts.

TABLE 4  
Chile: Social security deficit and saving  
in the transition, 1980-1994

Year	Government <sup>a</sup>	Families <sup>b</sup>
	Total social security deficit	Social security saving
1980	1.7	-
1981	4.1	0.9
1982	8.3	1.8
1983	7.5	1.7
1984	7.7	1.9
1985	6.7	2.0
1986	6.3	2.2
1987	5.4	2.3
1988	5.2	2.7
1989	4.5	2.9
1990	4.6	3.0
1991	4.5	2.8
1992	4.3	3.3
1993	4.5	3.6
1994	4.5	3.9
Average 1980-1984	5.9	1.6
Average 1985-1989	5.6	2.4
Average 1990-1994	4.5	3.3

Source: Arrau (1996) and the publications mentioned below.

<sup>a</sup>1980-1984: Arrau (1992). 1985-1988: Arrau (1992), adjusting the figures by GDP, base 1986. 1989 on: Chile, Ministerio de Hacienda, Dirección de Presupuesto (1995).

<sup>b</sup> Private saving less saving by enterprises.

The breakdown of national saving into public and private saving is carried out here on the basis of the general government income and expenditure performance accounts, which do not include the results of public enterprises or the cash situation of the Central Bank (table 5). Both these are consolidated in the balance, together with the saving of private enterprises.<sup>13</sup> The estimates of public saving also include the deposits in the Copper Stabilization Fund (FEC), which do not form part of the definition of current general government surplus or saving.

#### a) *The first form of accounting*

Under this form, private personal saving is increased by the amount of social security saving, and the social security deficit has to be financed from the current budget of the government.

Public saving, estimated as the sum of the current account surplus plus the FEC, includes the social security deficit as a government outlay whose financ-

<sup>13</sup> For the purposes of this calculation, it is assumed that the total saving of public enterprises will be cancelled out by the Central Bank cash deficit (Arrau, 1996).

ing is reflected in the budget. The deficit appears implicitly in the current account result. Under this form, the compulsory social security saving of workers is considered as personal saving.<sup>14</sup> The financing of the social security deficit by the government involves an adjustment in its current accounts.

In this option (and using these assumptions), the direct effects of pension system reform on national saving are only small. There is an increase in personal saving equal to the net contributions by workers to their individual accounts (this figure increased from 0.5% in 1980-1981 to 3.6% in 1992-1994) and an adjustment in the government accounts to finance the cost of the transition which is substantial but is not sufficient to maintain the current surplus (as a percentage of GDP) registered before the crisis (the surplus went down from 7.2% of GDP in 1980-1981 to 4.9% in 1992-1994).<sup>15</sup> In net terms, it could be said that the reform only directly increased national saving by 0.8 percentage points of GDP, since personal saving increased by 3.1 points of GDP between the two periods, while the current surplus component of public saving went down by 2.3 points of GDP because of the impossibility of adjusting the government accounts by the total amount of the social security deficit. Under this form of accounting, the bulk of the increase in national saving came from an increase in non-social security private saving, and the reform only has an indirect effect on this saving.

#### b) *The second form of accounting*

In this form, the social security deficit has to be added to the current surplus in order to estimate the public saving effort, while it must be deducted from compulsory private saving.

In order to highlight the public sector saving effort that must be made to bring about the transition

<sup>14</sup> This form assumes that families compensate for every other form of saving. In particular, it is assumed that saving in the form of social security contributions and payments of mortgage debts by some persons is offset by the dissaving of other persons who receive benefits from the social security and housing programmes. Rather than being the result of empirical observations, this is a simplifying assumption to facilitate the calculations in view of the lack of reliable information on these variables and their interactions.

<sup>15</sup> In making this comparison, it must be borne in mind that the current surplus of the government has not only been affected by the need to finance the social security deficit, but also by the recession and the fiscal costs of the period of adjustment to the external debt crisis.

TABLE 5

**Chile: Breakdown of national saving, without inclusion of social security deficit, 1980-1994**  
(As a percentage of GDP, at current values)

Year	Gross national saving <sup>a</sup>	Government saving			Private saving		
		Current surplus <sup>b</sup>	Copper Stabilization Fund (FEC) <sup>b</sup>	Total	Social security <sup>c</sup>	Non-social security <sup>d</sup>	Total <sup>e</sup>
1980	13.9	8.5	-	8.5	-	5.4	5.4
1981	8.2	5.8	-	5.8	0.9	1.5	2.4
1982	2.1	-2.9	-	-2.9	1.8	3.2	5.0
1983	4.4	-2.3	-	-2.3	1.7	5.0	6.7
1984	2.9	-1.2	-	-1.2	1.9	2.0	4.1
1985	7.8	0.4	-	0.4	2.0	5.4	7.4
1986	11.5	1.3	-	1.3	2.2	8.0	10.2
1987	17.3	3.0	0.5	3.5	2.3	11.5	13.8
1988	22.3	3.0	3.0	6.0	2.7	13.6	16.3
1989	23.7	3.0	3.7	6.7	2.9	14.1	17.0
1990	24.2	2.5	2.3	4.8	3.0	16.4	19.4
1991	24.1	3.7	0.7	4.4	2.8	16.9	19.7
1992	24.8	4.9	0.3	5.2	3.3	16.3	19.6
1993	23.9	4.8	-0.2	4.6	3.6	15.7	19.3
1994	25.4	4.9	0.2	5.1	3.9	16.4	20.3
Average 1980-1984	6.3	1.6	-	1.6	1.6	3.5	4.7
Average 1985-1989	16.5	2.1	2.4	3.6	2.4	10.5	12.9
Average 1990-1994	24.5	4.2	0.7	4.8	3.3	16.3	19.7

Source: Arrau (1996) and the publications mentioned below.

<sup>a</sup> Up to 1984, data with base 1977. Since 1985, data with base 1986.

<sup>b</sup> Up to 1988, Vial and Marfán (1995). Since 1989, Chile, Ministerio de Hacienda, Dirección de Presupuesto (1995).

<sup>c</sup> Up to 1988, AFP Hábitat (1992). Since 1989, Superintendencia de Administradoras de Fondos de Pensiones (1994).

<sup>d</sup> Private saving less personal saving.

<sup>e</sup> Gross national saving less public saving.

from an unfunded system to an individual capitalization system, there is an alternative form of calculation based on a different interpretation of the original unfunded system. In this form of calculation, the benefits provided by the previous system are considered old debt that the government cannot refinance with new debt because the new system prevents it from collecting contributions. As both types of debt appear in the current accounts of the government authorities, it is argued that the social security deficit should be excluded from the current surplus of government in order to reflect the true saving effort that the latter must make to pay the old debt without being able to obtain new debt through the social security system itself. In this case, it is necessary to offset private saving by the amount of the social security deficit, which is done by deducting that deficit from personal saving. This adjustment is justified on the grounds that persons receive capital transfers (payment of the old debt in the form of benefits) in an amount which is larger than the compulsory deductions for the new system (social security saving).

In this form of calculation (and using these assumptions) the reform will continue to have small direct effects on national saving, but only with a significant saving effort on the part of the government (table 6). In this case there is a reduction in the dissaving of individuals (which went down from -2.5 % in 1980-1981 to -0.6 % in 1992-1994) corresponding to the changes in their net transfers of capital with the authorities (benefits from the old debt and contributions to the individual capitalization system). There is also a major saving effort on the part of the public sector, in spite of the recession due to the crisis of the 1980s. Thus, saving barely went down at all, from 10.1% of GDP in 1980-1981 to 9.3% in 1992-1994 (not including the FEC). The net direct effect on saving is the same as in the previous exercise, but is due to a reduction in the dissaving of persons and a slight fall in public saving in its components corresponding to financing of the social security deficit and current account surplus. The bulk of the increase in national saving is the result of increased non-social security private saving.

TABLE 6

**Chile: Breakdown of national saving, including the social security deficit, 1980-1994**  
(As a percentage of GDP, at current values)

Year	Gross national saving <sup>a</sup>	Government saving				Private saving		
		Total social security deficit <sup>b</sup>	Current surplus <sup>c</sup>	Copper Stabilization Fund (FEC) <sup>c</sup>	Total	Social security saving <sup>d</sup>	Non-social security saving	Total <sup>e</sup>
1980	13.9	1.7	8.5	...	10.2	-1.7	5.4	3.7
1981	8.2	4.1	5.8	...	9.9	-3.2	1.5	-1.7
1982	2.1	8.3	-2.9	...	5.4	-6.5	3.2	-3.3
1983	4.4	7.5	-2.3	...	5.2	-5.8	5.0	-0.8
1984	2.9	7.7	-1.2	...	6.5	-5.8	2.2	-3.6
1985	7.8	6.7	0.4	...	7.1	-4.7	5.4	0.7
1986	11.5	6.3	1.3	...	7.6	-4.1	8.0	3.9
1987	17.3	5.4	3.0	0.5	8.9	-3.1	11.5	8.4
1988	22.3	5.2	3.0	3.0	11.2	-2.5	13.6	11.1
1989	23.7	4.5	3.0	3.7	11.2	-1.6	14.1	12.5
1990	24.2	4.6	2.5	2.3	9.4	-1.6	16.4	14.8
1991	24.1	4.5	3.7	0.7	8.9	-1.7	16.9	15.2
1992	24.8	4.3	4.9	0.3	9.5	-1.0	16.3	15.3
1993	23.9	4.5	4.8	-0.2	9.0	-0.9	15.7	14.9
1994	25.4	4.5	4.9	0.2	9.6	-0.6	16.4	15.8
Average 1980-1984	6.3	5.9	1.6	-	7.4	-4.6	3.5	-1.1
Average 1985-1989	16.5	5.6	2.1	2.4	9.2	-3.2	10.5	7.3
Average 1990-1994	24.5	4.5	4.2	0.7	9.3	-1.1	16.3	

Source: Arrau (1996) and the publications mentioned below.

<sup>a</sup> Up to 1984, data with base 1977. Since 1985, data with base 1986.

<sup>b</sup> 1980-1984: Arrau (1992). 1985-1988: Arrau (1992), adjusting the figures by the GDP with base 1986. Since 1989: Chile, Ministerio de Hacienda, Dirección de Presupuesto (1995).

<sup>c</sup> Up to 1988: Vial and Marfán (1995). Since 1989: Chile, Ministerio de Hacienda, Dirección de Presupuesto (1995).

<sup>d</sup> Private saving less personal saving.

<sup>e</sup> Gross national saving less public saving.

c) *Supporting a climate favourable to saving and investment through development of the capital market*

The big increase in non-social security private saving may be interpreted as the result of the indirect effects of the pension system reform on national saving: after the entry into force of the social security reform this saving increased from 8.0% of GDP in 1986 to 16.4% in 1994. This result was also considerably influenced by an average GDP growth rate of over 6% and rapid financial development. The indirect effects of the reform would appear to be due to the fact that it contributed to a deliberate, systematic policy of developing the securities and insurance markets, together with firm regulation and prudential supervision of the pension funds (Held, 1994).

The rapid growth which has taken place in the funds, and which is projected to continue in the future,<sup>16</sup> has raised the challenge of providing the capital market with a solid set of institutions which will allow these funds to be channeled towards profitable

uses with limited risks. The development of these institutions has been considered a decisive factor in the accumulation of funds—which had a real average yield of around 13% per year between 1981 and 1994—and their consolidation in time (Arrau, 1994).

The institutional development of the securities and insurance market has taken place gradually since the end of 1980. From that time on, regulations were adopted for the pension funds, their respective management companies, and the Office of the Superintendent responsible for their regulation and supervision. The authorities of the financial system are making a continuing effort to update and perfect the regulations on open limited companies, the issue and trading of securities on public sale, the transpar-

<sup>16</sup> By the end of 1994, the new pension system had accumulated funds with a value at market prices of US\$ 22.3 billion (44% of GDP). By around the year 2015 the pension funds could be equivalent to the entire GDP.

## Box 2

## CHILE: DEVELOPMENT OF INSTITUTIONAL AND REGULATORY FRAMEWORK FOR PENSION FUND MANAGEMENT COMPANIES AND THE SECURITIES MARKET

November 1980	(Decree-Law) D.L. No. 3.500	Set up private pension systems, including Pension Fund Management Companies (AFPs) and the Office of the Superintendent of Pension Fund Management Companies (SAFP)
December 1980	D.L. No. 3.538	Organic Law for the Office of the Superintendent of Securities and Insurance (SVS)
October 1981	Law No. 18.045	Law on the Securities Market
October 1981	Law No. 18.056	Law on Joint Stock Companies
December 1985	Circular No. 574 of the SVS	Defines "related persons"
January 1986	Circular No. 585 of the SVS	Makes it obligatory to report share transactions effected by majority shareholders, directors and executives
March 1986	Circular No. 601 of the SVS	Makes it obligatory to report any event which could significantly affect the activities of open joint stock companies
October 1987	Law No. 18.660	Makes it obligatory to classify publicly offered securities by risk categories on an ongoing basis
July 1989	Law No. 18.815	Law on Investment Funds. Allows pension fund management companies to invest in real estate, transferable securities and risk capital.
December 1989	Law No. 18.876	Regulates the establishment and operation of private establishments for the safe-keeping of securities
May 1992	Agreement of the Risk Classification Commission	Authorizes pension fund management companies (AFPs) to invest in projects without a prior history
May 1993	Circular No. 776 of the SAFF	Makes it obligatory to provide standardized information on the rate of return of individual pension accounts, by income brackets of members
1993	Bill	Proposes substantial changes in the laws on the securities market: Establishes security analysis companies Makes improvements in the risk classification industry Defines the responsibilities of stockbrokers dealing in bonds Establishes funds for investments in business development (FIDEs) Strengthens the regulations on the solvency of insurance companies Establishes more flexible limits on the investments of AFPs Regulates the risk factors for foreign investments by AFPs

Source: Arrau (1994).

ency of the market, the rating of securities by risk categories, the gradual expansion of the investment options open to the pension funds, adjustments in the investment limits per instrument and issuer, ongoing improvement of the life insurance industry, redefinition of the role of the regulatory bodies, and other aspects demanded by a capital market which is rapidly expanding (box 2).

Since the compulsory savings of workers will be their main source of income after they retire, the prudential regulation includes the following rules: pension funds can only invest in financial instruments

authorized by law; the equity of the pension fund management companies must be completely separate from the pension funds themselves, and they must guarantee a certain minimum yield in managing the latter; all securities must pass through rigorous risk evaluation procedures and must be rated in low-risk categories; and the portfolio of assets must maintain broad diversification in terms of instruments and issuers and must be subject to continuous valuation at market prices, while the securities making up the portfolio must be held in the Central Bank for safe-keeping (Iglesias and Acuña, 1991).

In the evolution of the Chilean capital market, not enough links have been established with the long-term financing of real investments, for which pension fund resources are particularly suitable.<sup>17</sup> <sup>18</sup> They have, however, helped to create a context of stability, ensuring depth and stability in the financial sector, which has helped to strengthen a favourable environment for saving and investment (boxes 3 and 4).

At present, there are signs that point to the likelihood of an increase in the channeling of pension funds to real investments. The extraordinary rise in the prices of shares between 1986, when the pension funds were first authorized to invest, and 1994 <sup>19</sup> now gives companies strong incentives to procure resources by issuing shares. The proportions of pension funds invested in business development investment funds and real estate investment funds are registering a rapid increase (albeit from low levels). In the near future, the financing of investments in infrastructure will also provide the pension funds with new investment options.

Nevertheless, it is not possible to attribute the increase in non-social security private saving exclusively to the development of capital markets resulting from pension system reform. There are various other factors at the economic and financial level which have contributed to saving and investment: i) for over ten years inflation has been kept under control and has shown a gradual downward trend, while mechanisms have been developed for the indexing of financial instruments; ii) interest rates in the financial system have been positive in real terms, but also moderate and in keeping with the productivity of capital; iii) the real exchange rate has been realistic

and credible; iv) economic activity has expanded at rates of over 5% for a number of years; v) the financial situation of the public sector has been strengthened through the solvency and autonomy of the Central Bank, the elimination or reduction of quasi-fiscal burdens and the financing of the social security deficit, and vi) the banking system has been reformed, strengthening the solvency of banks and debtors and promoting prudential regulation and control of guarantees and deposit insurance, together with regulation of banking system organization (table 7).

A particularly important element in this context has been the promotion of investment through tax incentives designed to encourage the reinvestment of profits by retaining family income in the form of saving in enterprises. Thus, the 1984 Chilean tax reform was aimed explicitly at providing tax incentives for the reinvestment of profits, since it significantly reduced the marginal rate of tax on the retained profits of companies, compared with the tax on distributed profits. This reform gave the same tax treatment to both joint stock companies and limited companies, eliminating the extra tax on the former; made retained profits subject only to the Category I tax of 10%; eliminated retained profits from the taxable income of limited companies, and made tax credit for the Category I tax the same for all types of entrepreneurs (table 8). This reform came into effect in 1987 with the gradual reduction of tax rates and made "in-house" saving an extremely advantageous option for businessmen. For the first time in the tax history of the country, the marginal rate of personal taxes was very different from the rate on retained profits.<sup>20</sup>

<sup>17</sup> At the end of 1994, the following instruments accounted for 90 % of the investment portfolios of the pension funds: Central Bank securities, 38.5%; shares in open limited companies, 31.7%; mortgage bills, 13.7%, and bonds, 6.3%. Neither the Central Bank securities nor the shares are directly related with real investments, since in the latter case the shares in question are acquired on the secondary market (although there have undoubtedly been some favourable indirect effects which have spread throughout the capital and credit markets through the broader availability of funds and growing macroeconomic stability).

<sup>18</sup> An important exception in this respect is the development of housing finance. Mortgage bills are issued by the banks and acquired by the pension funds in order to provide housing finance, including housing for middle and high income groups,

which is also subject to a requirement for prior saving. These bills represent a considerably smaller percentage of the portfolios of the funds than the securities mentioned earlier, but they do form part of a complete capital formation chain. This has been a decisive factor in the dynamism shown by investment in housing over the last ten years. There is a similar situation in the case of bonds, which have also been linked with the provision of finance for the investment projects of large companies.

<sup>19</sup> The real price index of shares rose from 100 in 1985 to 2719 in 1993.

<sup>20</sup> In 1990, the rate of the Category I tax was raised from 10% to 15%, but the difference with the personal income tax rate continues to exist, since the latter rate was also increased in that year.

**Box 3****CHILE: ENVIRONMENT OF THE PENSION SYSTEM BASED ON INDIVIDUAL CAPITALIZATION OF FUNDS****A. Macroeconomic environment****1. Low and controlled inflation (or an indexed financial system)**

Long time horizon for the individual capitalization system

Extension of the time horizon for economic agents' decisions

- Medium- and long-term financial instruments
- Investment projects

Elimination of risk associated with price system fluctuations

**2. Positive but moderate real interest rates**

Efficiency in real and financial resource allocation  
Solvency of financial institutions and debtors  
Attractiveness of national-currency financial instruments

**3. Realistic and credible exchange rate**

Attractiveness of profitable projects in production sectors with competitive advantages  
Prevention of speculative capital movements between the country and the exterior

**B. Financial environment****1. Strengthening of the public sector's financial situation**

Financing of the social security deficit  
Solvency and autonomy of the Central Bank  
Elimination or reduction of quasi-fiscal burdens on the financial system

**2. Reform of the banking system**

Solvency of banks and debtors  
Reform of prudential regulation  
Guarantees or insurance on deposits  
Mechanisms to keep a check on solvency

Organizational reforms

- Multi-purpose banking
- Financial complementation of banking system

**3. Development of securities and insurance markets**

Attractiveness of the Stock Exchange

Conditions for gaining access to the Stock Exchange

Legal requirements for open limited companies

Requirements for clear and reliable information

Prudential regulation of institutional investors (AFPs, insurance companies)

Diversification of portfolios and limitation of risks

Establishment of reserves

Minimum capital requirements

Classification of financial instruments by level of risk

Safe-keeping of securities

Expansion of the market

Incentives for new open companies

Incentives for new financial intermediaries

Incentives for the issue of new securities

## Box 4

## CHILE: PRUDENTIAL REGULATION REQUIREMENTS FOR PENSION FUND MANAGEMENT COMPANIES

## A. Management companies

1. Management company's assets must be completely separate from those of the fund itself
2. Each management company can manage only one fund
3. Management companies must guarantee a certain minimum rate of return of the fund, drawing if necessary on a compulsory reserve fund maintained by the company in the Central Bank

## B. Investment portfolios of the funds

1. Pension funds can only invest in securities or financial instruments authorized by law.
2. All securities or instruments in which the funds invest must first have been favourably rated by the Risk Classification Commission.
3. Strict rules are applied with regard to the diversification of the portfolios by types of financial instruments and issuers, in order to ensure a low risk profile for the funds.
4. As a general rule, all securities and financial instruments must be traded on Stock Exchanges or other established secondary markets.
5. The investment portfolios must be valued daily in a standardized manner on the basis of prices supplied by the Office of the Superintendent of Pension Fund Management Companies.  
At least 85% of the portfolio must be valued at market prices.
6. At least 90% of the securities and other instruments making up a pension fund company's investment portfolio must be deposited with the Central Bank for safe-keeping.

TABLE 7

## Chile: Indicators of the macro-financial environment, 1987-1994

Year	Inflation <sup>a</sup>	Indexed value				Real interest rate <sup>f</sup>		Real exchange rate <sup>g</sup>	Annual GDP growth rate	Current account deficit <sup>h</sup>
		"Unidad de fomento" <sup>b</sup>	"Unidad tributaria" <sup>c</sup>	"Unidad reajutable" <sup>d</sup>	"Cuota de ahorro" <sup>e</sup>	Deposits	Loans			
1987	21.5	22.3	22.1	20.1	22.9	4.3	7.3	91.3	6.1	3.1
1988	12.7	10.9	10.9	11.1	13.3	4.6	7.6	102.0	7.0	0.9
1989	21.4	21.2	21.3	18.8	20.1	6.8	9.4	96.4	9.7	2.4
1990	27.3	30.1	30.4	26.1	26.1	9.5	13.3	100.0	3.3	2.0
1991	18.7	17.7	17.6	18.5	22.7	5.4	8.5	98.9	6.8	0.7
1992	12.7	13.5	13.3	12.9	16.8	5.3	8.1	95.3	10.6	2.4
1993	12.2	13.3	13.8	11.0	16.2	6.4	9.2	96.6	5.9	5.0
1994	8.9	8.4	8.2	8.9	11.9	6.4	9.3	95.5	4.1	2.0

Source: Data provided by the Central Bank of Chile.

<sup>a</sup> As measured by the December-December variation in the Consumer Price Index.

<sup>b</sup> December-December variation in the value of the "Unidad de Fomento Reajutable" (UF) (readjustable unit of account).

<sup>c</sup> December-December variation in the value of the "Unidad Tributaria" readjustable unit of account.

<sup>d</sup> December-December variation in the value of the "Unidad Reajutable" readjustable unit of account.

<sup>e</sup> December-December variation in the value of the CORVI (Housing Corporation) readjustable savings unit.

<sup>f</sup> Average readjustable interest rate in the financial system (deposits and loans).

<sup>g</sup> Real effective exchange rate, as estimated by ECLAC.

<sup>h</sup> Current account deficit, as a percentage of GDP at current prices.

TABLE 8

**Chile: Tax rates before and after the 1984 tax reform**  
(Per cent)

Tax	Joint stock companies		Limited companies	
	Before reform	After reform	Before reform	After reform
On retained profits	46	10.0	31.5	10.0
On distributed profits	43.3	31.5	31.5	31.5

*Source:* Arrau (1996), on the basis of Marfán (1984, table 3). A marginal tax rate of 35% on the personal income of entrepreneurs has been assumed.

## IV

### Conclusions

This article has explored the relation between national saving and possible reforms to pension systems which involve an individual capitalization component, illustrating this with some results relating to Chile, which is in the course of transition from an unfunded system with defined benefits to an individual capitalization system with defined contributions.

We have assumed that in all cases the participation of workers in the pension system is compulsory and that the reforms involve a transition from an original unfunded system to another system with some individual capitalization component. In order to analyse the effect of this transition on saving it is therefore necessary to consider at least two fundamental aspects of the reformed system which may affect the original saving situation. The first aspect is that of the measures a government must take to fulfill its obligations under the previous system; this demands a considerable adjustment in the government's current accounts, or else a major saving effort. The choice of one or the other of these options will affect the distribution of saving between individual persons and the government. At all events, what is essential is to make both the social security debt and its financing explicit.

The second aspect is the recognition that the nature of the contributions has changed, since instead of being a social security tax for the acquisition of a defined benefit they become a form of compulsory saving for generating a stock of assets with which to

finance future social security benefits. What is affected by this is personal saving. If it is considered that contributions to an unfunded pension system are current expenditure of the government and it is assumed that families do not save voluntarily for their old age, the effect is an increase in net personal saving. If it is considered, however, that contributions under an unfunded system correspond to a debt owed by the government to members of the system, then the effect is a gradual reduction in the dissaving of individuals.

The Chilean case brings out the difficulty of determining the net effect of social security reforms on saving. A highly sophisticated model and disaggregated information are needed in order to study the multiple effects which make themselves felt on the different forms of saving. An exercise of a purely accounting nature shows the vulnerability of the results to the assumptions made in the calculations. It is noted that the direct effect of the social security reform on saving is very small, but its indirect effect is much greater, because it helps to create a suitable environment for saving and investment, through the strengthening of the public sector financial situation and the development of securities and insurance markets. The contribution of social security reform might not be reflected in greater saving, however, unless reforms are made in other areas of the economy, including in particular measures designed to restore realistic and credible macroeconomic prices, to

guarantee macroeconomic (and political) stability, to resume growth, to privatize public enterprises not quoted on the stock exchange, to regulate and super-

vise the solvency of the financial sector, and to create tax incentives for the reinvestment of profits.

(Original: Spanish)

### Bibliography

- Aarón, H. J. (1982): *Economic Effects of Social Security*, Washington, D. C., The Brookings Institution.
- AFP Habitat (1992): *10 años de historia del sistema de AFP*, Santiago, Chile.
- Arrau, P. (1992): El nuevo régimen previsional chileno, *Regímenes pensionales*, Seminario Internacional de Reforma al Régimen Pensional, Santafé de Bogotá, Fundación Friedrich Ebert de Colombia (FESCOL)/FAUS/International Development Research Centre (IDRC).
- (1994): *Fondos de pensiones y desarrollo del mercado de capitales en Chile: 1980-1993*, "Financiamiento del Desarrollo" series, No. 19, Santiago, Chile, Economic Commission for Latin America and the Caribbean (ECLAC)
- (1996): *Nota sobre el aumento del ahorro nacional en Chile, 1980-1994*, "Financiamiento del Desarrollo" series, No. 39, LC/L.984, Santiago, Chile, ECLAC.
- Auerbach, A. J. and L. J. Kotlikoff (1990): Demographics, fiscal policy and U.S. saving in the 1980s and beyond, L. H. Summers (ed.), *Tax Policy and the Economy*, vol. 4, Cambridge, MA, The MIT Press.
- Ayala, U. (1992): Un sistema pensional de capitalización individual para Colombia, A. Uthoff and R. Szalachmann (eds.), *Sistemas de pensiones en América Latina. Diagnóstico y alternativas de reforma: Bolivia, Brasil, Colombia, Guatemala, México*, vol. 2, Santiago, Chile, S. R. V. Impresos.
- Barr, N. (1993): *The Economics of the Welfare State*, Stanford, CA, Stanford University Press.
- Barro, R. J. (1974): Are government bonds net wealth?, *Journal of Political Economy*, vol. 84, Chicago, IL, The University of Chicago Press.
- (1978): *The Impact of Social Security on Private Saving: Evidence from the U.S. Time Series*, Washington, D. C., American Enterprise Institute.
- Chile, Ministerio de Hacienda, Dirección de Presupuesto (1995): *Estadísticas de las finanzas públicas 1989-1994*, Santiago, Chile.
- Central Bank of Chile (1989): *Indicadores Económicos y Sociales 1960-1989*, Santiago, Chile.
- (1993a): *Cuentas nacionales de Chile 1985-1992 (síntesis anticipada)*, Santiago, Chile.
- (1993b): *Boletín mensual*, No. 782, Santiago, Chile.
- (1995): *Boletín mensual*, No. 808, Santiago, Chile.
- Diamond, P. (1995): Economic support in old age, *Proceedings of the World Bank Annual Conference on Development Economics*, Washington, D. C., World Bank.
- ECLAC (1992): *Social Equity and Changing Production Patterns: An Integrated Approach*, LC/G.1701/Rev.1-P, Santiago, Chile, August. United Nations publication, Sales No. E.92.II.G.5.
- Feldstein, M. S. (1974): Social security, induced retirement and aggregate capital accumulation, *Journal of Political Economy*, vol. 82, No. 5, Chicago, IL, The University of Chicago Press.
- Held, G. (1994): ¿Liberalization or financial development?, *CEPAL Review*, No. 54, LC/G.1845-P, Santiago, Chile, ECLAC.
- Held, G. and A. Uthoff (1995): *Indicators and Determinants of Savings for Latin America and the Caribbean*, Working Paper No. 25, Santiago, Chile, ECLAC, April.
- Iglesias, A. and R. Acuña (1991): *Sistemas de pensiones en América Latina. Chile: experiencia con un régimen de capitalización 1981-1991*, Santiago, Chile, S.R.V. Impresos.
- Klevens, J. (1996): Poor treatment: Low income workers in the Chilean pension system, Princeton, NJ, Princeton University, Bachelor of Arts Thesis.
- Leimer, D. R. and S. D. Lesnoy (1982): Social security and private saving: New time-series evidence, *Journal of Political Economy*, vol. 90, No. 3, Chicago, IL, The University of Chicago Press.
- Marfán, M. (1984): Una evaluación de la nueva reforma tributaria, *Colección estudios CIEPLAN*, No. 13, Santiago, Chile, Economic Research Corporation for Latin America (CIEPLAN).
- Ramos, J. (1994): Síntesis del planteamiento de la CEPAL sobre la equidad y transformación productiva, *Desarrollo Productivo*, No. 17, Santiago, Chile, ECLAC.
- Schulthess, W. and G. Demarco (1993): *Sistemas de pensiones en América Latina. Argentina: evolución del Sistema Nacional de Previsión Social y propuesta de reforma*, Santiago, Chile, S. R. V. Impresos.
- Superintendencia de Administradoras de Fondos de Pensiones (1994): *El sistema chileno de pensiones*, Santiago, Chile.

- Uthoff, A. (1995): Pension system reform in Latin America, *CEPAL Review*, No. 56, LC/G.1874-P, Santiago, Chile, ECLAC.
- Uthoff, A. and R. Szalachmann (eds.) (1992): *Sistemas de pensiones en América Latina. Diagnóstico y alternativas de reforma: Costa Rica, Ecuador, Uruguay, Venezuela*, vol. 1, Santiago, Chile, S.R.V. Impresos.
- (1993): *Sistemas de pensiones en América Latina. Diagnóstico y alternativas de reforma: Bolivia, Brasil, Colombia, Guatemala, México*, vol. 2, Santiago, Chile, S. R. V. Impresos.
- (1994): *Sistemas de pensiones en América Latina. Diagnóstico y alternativas de reforma: El Salvador, Honduras, Jamaica, Paraguay, Trinidad y Tabago*, vol. 3, Santiago de Chile, S.R.V. Impresos.
- Vial, J. and M. Marfán (1995): Políticas para el crecimiento económico en los 90: el caso de Chile, *Notas técnicas de CIEPLAN*, No. 157, Santiago, Chile, CIEPLAN.

# Public institutions *and explicit and implicit* environmental policies

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In recent years the question of the environment has been increasingly prominent in studies and proposals on the development of the Latin American and Caribbean countries. The serious processes of ecological imbalance in the world, together with numerous disasters and the ongoing loss of natural resources, have given rise to increasing concern over these matters. To a greater or lesser extent, all the governments of the region have tried to strengthen their environmental policies through various legal, technical, institutional and economic measures. Much still needs to be done, however, to correct the existing deficits and ensure that the new measures applied are really efficient and effective. The problems underlying the ineffectiveness observed with regard to environmental issues are much more complex than such factors as the level of political will or the degree of administrative efficiency of the environmental arrangements adopted. This article seeks to analyse the complex process of generation and application of environmental policies in the countries of the region, beginning by examining the evolution of the corresponding structures of public institutions and going on to make some recommendations aimed at promoting more novel and efficient ways of setting about the formulation of new environmental policies and shaping a system of public environmental institutions which will help to generate such policies.

# I

## The evolution of the institutions responsible for environmental policies

### 1. From the end of the Second World War to the end of the 1970s

Environmental problems have always been present in the history of the region (Gligo and Morello, 1982, pp. 112-148). Environmental analysis proper only began to be applied a few decades ago, however. Previously, examination of the environment was divided between studies of the quality of life of the population and studies of the natural resources situation, and was timidly included in some references to the deterioration of resources due to development processes.

Concern for natural resources, especially those of a renewable nature, goes back to colonial times. Various historical accounts of the time quote Governors, naturalists and members of the clergy who referred to the disastrous consequences of the conquest of America for the natural resources of the region.

At the beginning of the present century, over-exploitation of some natural resources, soil erosion, deforestation and water pollution were repeatedly denounced for their negative effects. Even then, it was already being asserted that the natural resources of the region were not unlimited.

It was after the end of the Second World War, however, that a more systemic conception of development began to take root and the question of the environment began to be a source of concern for the population and, hence, for political circles and governments too. The organization of the World Conference on the Human Environment, held in Stockholm in 1972, and the agreements subsequently adopted led to the question of the environment being dealt with and handled at the global level.

After that conference, there was a kind of burst of environmental activism in government institutions which gave rise to policies, laws and institutions dealing with the environment. The pioneering example of the establishment of the Ministry of the Environment and Renewable Natural Resources (MARNR) in Venezuela was a landmark for the countries of the region, and for a number of years it served not so

much as a model but rather as an argument and positive example cited by groups and sectors in the public institutions of other countries.

Despite the efforts to give the environment an integral form of treatment—as was attempted through the holistic approach taken in a broad-ranging study entitled “The environmental systems of Venezuela” (Venezuela, Ministerio del Ambiente y de los Recursos Naturales Renovables, 1982)—in most countries environmental issues were tackled as part of the planning process, or in a sectoral manner, or else in connection with the study of natural resources.

The approaches based on planning were applied by units or offices forming part of some planning body, at a time when planning was still in vogue in the region. Thus, this approach was applied by the National Development Council (CONADE) in Ecuador and by the Technical Secretariat for Planning of the Office of the President of the Republic in Paraguay. In some countries such as Colombia and Mexico, although environmental functions were entrusted to sectoral bodies, planning bodies helped to define certain environmental policies, especially those concerning regions within the country, on the basis of resource allocation planning.

Most of the countries centered their environment policies in sectoral bodies. The connection between spatial policies and urban development bodies led some countries to locate their environmental bodies within the ministry concerned with housing and urban development. In Mexico, for example, the national environmental body is the Ecology Department of the Ministry of Urban Development and Ecology (SEDUE).

In other countries, responsibilities for the environment were assigned to the health sector. This was so in Argentina, for example, where an Environmental Planning Department was set up within the Ministry of Health and the Environment. The fact that territorial planning considerations predominated, while there was little concern with environment-linked health aspects, meant that this department

operated with a high degree of autonomy within the Ministry.

A number of countries opted to strengthen or establish units in the agriculture and forestry sector. In Colombia, the National Institute of Natural Resources and the Environment (INDERENA) comes under the Ministry of Agriculture but has a high degree of autonomy. Chile assigned important environmental functions to the National Forestry Corporation (CONAF), which likewise comes under the Ministry of Agriculture. In Uruguay, responsibility for the environment was assigned to the Ministry of Agriculture and Fisheries, mainly through the Department of Soils and Fertilizers. In Guatemala, El Salvador and Honduras, environmental responsibilities were also concentrated in this area of government. In Nicaragua, although the Institute of Natural Resources and the Environment (IRENA) was described as a non-sectoral organization, its actions were centered almost exclusively on agriculture.

Approaches based on research into natural resources were applied in two countries: in Peru, through the pioneering work of the National Office for the Evaluation of Natural Resources (ONERN), and in Chile through the Institute for Natural Resources Research (IREN). Both these institutions have promoted integrated studies of resources on a markedly ecosystemic basis. In Bolivia, environmental studies were also centered on research at this stage and were carried out by the National Council for Scientific and Technological Research.

The complexity of Brazil makes it very difficult to define the approach taken in terms of institutional design. In that country, there was a combination between a centralized body (the Special Department for the Environment (SEMA)) and subnational bodies located in different spheres of the public administration machinery of each state. There were also some federal bodies which helped to promote the explicit incorporation of environmental aspects, such as the Brazilian Forestry Development Institute (IBDF), the National Council for Scientific and Technological Research (CNPq) and, in particular, the National Institute for Research on Amazonia (INPA).

In Latin America, very important contributions were made by some internationally supported projects for research on the environment, development planning, or the study of some particular process of deterioration. These projects, many of which were also carried out in the 1980s, helped to shed more

light on the environmental situation. The Regionalization Programme in Ecuador (ORSTOM-PROMARG); the ERTS programme carried out by GEOBOL in Bolivia; the UNDP/FAO/IBDF forestry research and development programme in Brazil, which assessed the deforestation of Amazonia, and the ILPES/CDG project for the development of the River Guayas basin in Ecuador are clear examples of activities which stimulated the incorporation of environmental issues in various countries of the region.

In addition to these projects, mention should be made of the studies carried out by the Organization of American States (OAS) through its Department of Regional Development and the Environment (especially the studies on the River Plate basin); the projects for protected areas promoted by the United Nations Food and Agriculture Organization (FAO), and the studies on development and the environment carried out by ECLAC through its Joint ECLAC/UNEP Environment and Development Unit.

## 2. The lost decade

While the 1980s represented a lost decade for Latin America and Caribbean in economic terms, it was also a very negative decade with regard to the environment.

The adjustments due to the economic crisis affecting the region had a heavy impact on the environmental institutions, which at that time were still only incipient, were still weak, and lacked financial resources commensurate with their responsibilities. The low political status of these new structures meant that they were treated exactly as might be expected in view of their inability to press for favourable treatment.

Budgetary constraints and consequent reductions in government spending affected the forms of institutional expenditure which the national authorities considered to be of low economic priority (Brzovic, 1989). Almost without exception, the authorities of the countries of the region placed environmental expenditure among the items of low priority.

The environmental effects resulting from these expenditure reduction measures were many and varied, so that it is very difficult to determine causal relations. The direct effects on public environmental institutions were easily identifiable, however, and were uniformly negative.

The restrictions on the current spending of the environmental units responsible for investment in the

sector limited their capacity to carry out or commission environmental impact studies or to negotiate and follow-up preinvestment studies or studies connected with the execution of projects with environmental implications.

All these reductions in spending affected the capacity of the existing environmental institutions. What is particularly difficult to measure, however, is their negative effect on the rate of expansion of those institutions, which was seen as an urgent need because of the growing importance of environmental issues. There can be no doubt that non-governmental environmental bodies, environmentally committed public opinion, and the environmental sectors of the public administration in each of the countries of the region were hoping for considerable expansion in such aspects as the strengthening of institutions, new legislation, more staff, more financial resources, etc. Not only did this expansion not take place, but in most cases there were actually reductions. Consequently, the effects of the "lost decade" still persist today, since because of the current budgetary restrictions it has been very difficult for the countries to make up for this lag.

In addition to these problems, there are the effects of an adjustment policy which explicitly or implicitly laid down in the countries of the region that the environment must not hinder achievement of the objectives pursued. Thus, the environmental institutions which existed at that time came to be seen as trouble-makers which needed to be silenced as far as possible. In many countries, environmental responsibilities were diluted to the point where there was no single clear authority; in others, although such an authority existed, it was constantly overridden by the parallel actions of economics ministries or sectors of production. In the late 1980s and early 1990s, however, the severity of the processes of deterioration, and the preparation of country reports for the United Nations Conference on Environment and Development (Rio de Janeiro, 1992) helped to bring about a change in the prevailing policies and gave a fresh impetus to environmental policies and the bodies responsible for implementing them.

### 3. The new impulse of the 1990s

The growing national and world-level awareness of the importance of the environment led to the reshaping of national approaches to this issue. At the same

time, the gradual globalization of the economy gave rise to new forms of international trade in which environmental considerations began to assume a previously unsuspected degree of importance.

The preparations for the Rio de Janeiro Conference had various effects in the countries of the region. Firstly, within the various sectors and circles in each country, they gave rise to an in-depth discussion of the problems of the environment and natural resources. Particularly noteworthy was the galaxy of scientists, academics, public figures, non-governmental organizations and other groups that was mobilized by Brazil for the preparation of its country report. Such integral discussion did not take place in all countries: in some of them, their country reports merely consisted of a contribution by the central environmental body.

Secondly, the preparations for the conference served to create a clearer conception of the differences between North and South. The Latin American and Caribbean countries as a whole, together with other developing nations, were able to establish a common front to make it clearly understood that the solution of environmental problems was partly dependent, without any doubt, on the eradication of poverty (ECLAC, 1991; IDB/UNDP, 1990).

The new trade relations between the Northern countries and those of the South have been one of the most decisive factors in the reaction of some countries of the region to environmental issues. The case of Chile is enlightening in this respect. There can be no doubt that the form of development previously adopted by that country did not give priority to the environmental dimension. The broad process of opening up of its economy, however, has given rise to frequent environmental demands which have proved to have much more weight than possible internal pressures from various segments of Chilean society. And there can be no doubt that Chile's association with the MERCOSUR countries and the free trade agreement signed with Canada will further increase these demands.

The North American Free Trade Agreement and its parallel agreement on environmental co-operation commit Mexico to the observance of high levels of environmental protection. One of the most important consequences of this treaty was the establishment of the North American Environmental Co-operation Commission, the Council of which is responsible for giving its verdict on the compatibility of environ-

mental standards. The parallel agreement also involved the establishment of the Border Ecological Co-operation Commission (Mexico, Poder Ejecutivo Federal, 1996). The treaty has helped to ensure fuller incorporation of environmental issues and has had some influence on the establishment of a stronger central environmental body, but it has not been the only positive factor for the environmental dimension in Mexico, for that country's commitments with the Organization for Economic Co-operation and Development with respect to the environment also include a considerable number of decisions which will have to be applied.

In Central America, the Central American co-operation agreements increased concern with the environment in the 1990s. The activities of the Central American Commission on the Environment and Development were intensified, and protocols were signed on sustainable development.

In the implementation of MERCOSUR, priority has been given to the trade aspect. There has, however, been some progress in the area of the environment which is perhaps most visible in the effects of the new physical integration infrastructures. The assessment of the environmental impact of the River Plate Basin waterway has resulted in substantial progress in the integrated knowledge of that basin and the effects of changes in it.

The Amazon Pact has continued with its traditional emphasis on securing better knowledge of the Amazonian ecosystem, its integration, and the effects of changes in it.

Special mention should be made of the developments in connection with Agenda 21, adopted at the Rio de Janeiro Conference. When the progress made in its implementation is reviewed, it is noted that the countries take little or no account of it. If a country has to assess the follow-up of this Agenda, what happens is that it simply collects information on the developments in the environmental field since the Rio de Janeiro Conference, including activities which would have been carried out with or without Agenda 21. The only exceptions are some international agreements forming part of the Agenda which, because of their greater weight, have resulted in some actions in line with the commitments entered into. Among these are the agreements on the ozone layer and climate change and the progress made in the Special Intergovernmental Group on Forests, of the United Nations Commission on Sustainable Development.

#### 4. The new environmental institutions

The changes which have taken place within the countries and in the situation at the world level have led to major changes in the public environmental institutions, which have been strengthened not only in countries which established or strengthened ministries of the environment but also in those which preferred to assign maximum environmental authority to collegiate bodies such as commissions or councils.<sup>1</sup> In some countries, a "system of environmental institutions" has been set up, covering the various authorities, levels and units, but this has only been a structure established on paper, since environmental issues continue to be approached through centralized institutions and also, in the case of federal countries, through state or provincial institutions.

Traditionally, the highest status that can be assigned to an area of activity in the countries of the region is that of a ministry. Consequently, efforts have been aimed at the establishment of ministries to be responsible for questions of sustainable development. Generally speaking, these issues have not been seen as a national responsibility shared by all areas of government; the prevailing approach has been to entrust them to environmental bodies.

Of the new ministries set up, some deal not only with environmental problems but also with the natural resources situation. Almost all of them deal in broad terms with problems of pollution, but with regard to natural resources they give priority to renewable resources. This is so, for example, in the case of the Ministry of the Environment and Renewable Natural Resources (MARNR) of Venezuela. Similar cases are those of the Ministry of the Environment and Energy in Costa Rica; the Ministry of the Environment and Natural Resources in El Salvador; the Office of the Secretary for Natural Resources and the Environment in Honduras, and the Ministry of the Environment and Natural Resources (MARENA) in Nicaragua.

Two years ago, Mexico set up the Ministry of the Environment, Natural Resources and Fisheries, which not only has responsibility for traditional environmental issues but also covers sectors of production and associated sectors through its National Water

<sup>1</sup> For more details, see UNEP, 1996.

Resources Commission and its Fisheries Department, and forestry production programmes through its Natural Resources Department.

Other countries which have given ministerial rank to their environmental authorities have adopted similar solutions, but with some variations. Thus, Brazil set up a Ministry of the Environment and Amazonia which, as well as dealing with the environmental problems of the country, gives special attention to the territories in the Amazon region, which include the states grouped together in the official Amazonia region.

In setting up its Ministry of the Environment, Colombia took advantage of the existing structures of the autonomous regional development corporations and converted them into environmental corporations. The Ministry also took advantage of the experience of the Institute of Renewable Natural Resources and the Environment (INDERENA), which has made pioneering contributions to environmental matters in Latin America and the Caribbean.

Some countries of the region have entrusted these matters to a ministry associated with an existing traditional activity: thus, the various English-speaking Caribbean countries have established ministries associated with health or tourism, and in Central America Belize has a Ministry of Tourism and the Environment.

Uruguay has followed an old tradition in relating environmental issues with urban and territorial planning: thus, it has set up a Ministry of Housing, Territorial Planning and the Environment. In Cuba, environmental matters have been linked with science and technology through the establishment of the Ministry of Science, Technology and the Environment.

Two countries have tried to make institutional changes in order to cover the complex question of sustainable development. Bolivia was a pioneer in

this respect in establishing a Ministry of Sustainable Development and the Environment, while in 1997 Argentina changed its Ministry of Natural Resources and the Human Environment into the Ministry of Natural Resources and Sustainable Development.

The countries which have opted for commissions or councils have given more priority to coordination functions than to those of an executive nature. Thus, for example, Ecuador, Guatemala and Chile have national commissions on the environment, while Peru has a national council on the environment. Panama has centered its environmental functions mainly in the Institute of Renewable Natural Resources (INRENARE).

The strengthening of the public institutional structure for the environment has not been reflected in greater efficiency, however. In a number of countries of the region, the environmental contradictions typical of the prevailing form of development, which is expanding, have been reflected in a lack of political will to promote these issues. Sometimes, raising the responsible bodies to the levels of ministries or national commissions has been a purely cosmetic operation. For a number of governments, the environment is merely a stumbling block: an uninvited guest at the feast of economic growth with whom it is necessary to reluctantly share resources and whom it is necessary to isolate or edge into a corner in the most elegant manner possible: one of these manners being to establish a ministry which has to operate under ineffective and inefficient laws or which has very few resources at its disposal.

Nevertheless, there are some governments where the environmental dimension is beginning to occupy an important place and where the decisions of their environmental bodies are beginning to have the force needed to bring about serious changes in national environmental policy.

## II

### Explicit environmental policies, and those which are implicit within economic policies

#### 1. The contradictions in the strengthening of institutions

If we analyse the various measures which have been taken in recent years with regard to the environment and natural resources, especially those connected with the strengthening of the institutions responsible for environmental matters in the public machinery, it may be concluded that progress has been made in the incorporation of the environmental dimension into the countries' activities. In addition to the noteworthy changes in the public structures described earlier, there are also such measures as new laws and regulations, more controls and standards, plans for the rehabilitation of the environment, expansion of protected areas and improved management arrangements for them, programmes to reduce the impact of big projects, environmental training and education programmes, and international environmental commitments.

However, there are no indicators or statistics which show that the environmental situation in the region has improved. Indeed, all the statistics show that the deterioration has continued (Gligo, 1995, pp. 107-122; UNEP, 1997, pp. 80-95).

Everything seems to indicate that the many efforts made in the region to reverse negative trends have merely served to slow down some processes of deterioration, without reversing them.

This situation is usually attributed to the inefficiency of the public bureaucracy, the lack of commitment on the part of business sectors, or, more generally, the insufficient environmental awareness of the population.

However, the causes are much more complex: the interaction of various factors such as the environmental contradictions of the prevailing economic model—especially as regards planning horizons—and the conflicts between social and private goods; the different rationales of the various social actors, especially those in the production sectors; the simultaneous existence of different degrees and types of environmental awareness in the population (from rather vague to highly critical attitudes); and the

tardy political maturity of the traditional sectors of the legislative authorities.

There is a key aspect which should serve in one way or another to integrate and prioritize factors that could lead to a form of action capable of bringing about a reversal in the processes of environmental deterioration: namely, the way public environmental policies are generated through the application of the current legislation and government programmes. So far, not enough importance has been attached to this factor for promoting the incorporation of environmental issues.

Explicit environmental policy originates in the central environmental bodies of the public administration: ministries of the environment or commissions or councils for the environment. There are also *implicit* environmental policies, however, which originate from other ministries or the central authorities and which are almost always connected with economic growth. The importance of these implicit policies has not so far been duly taken into account. Economic growth policies and social policies are those which carry most weight in the countries, and as they usually give priority to the short rather than the long term, they give rise to implicit environmental policies of a negative nature.

The environmental policies which are implicit in development policies should not be confused with the environmental impact of the latter. When we speak of implicit environmental policies it is understood that these are more or less known in advance and call for prior decisions of a political or technical nature deriving from the development policies.

#### 2. Explicit environmental policies

Explicit environmental policies generally represent a reaction to other factors. They seek to reduce the negative effects generated in production processes and consumption as a result of the prevailing form of development.

Almost all the public environmental bodies of the countries of the region take this reactive approach

in their environmental policies. They react to the urgent needs which are mainly due to the pollution caused by urban and industrial expansion, deforestation, soil erosion, deterioration of marine resources and pollution through mining activity.

There are underlying forces which extend far beyond the political will of the governing authorities, their ideology, or the environmental conscience of the population, for reasons that go back for centuries.

One of the most important of these underlying factors is population increase. Although the region is in a stage defined as one of "demographic transition", the increase in the population nevertheless has an influence on the increase in economic and social demands, with their consequent environmental impact.

The other major underlying factor is the long-standing persistence of inequity and poverty. The persistence of poverty creates a survival mentality, and this in turn gives rise to an extremely short-term rationale which does not foster a will to invest for the benefit of future generations.

The most novel initiatives in explicit environmental policies are those having to do with the systems of assessment of environmental impact which almost all the countries have put into effect. Although the assessment of environmental impact might seem to be a non-reactive approach, the way it is applied is clearly of a reactive nature. Normally, it is not policies and programmes which are assessed, but projects which have already been decided upon in some sector of the economy that cannot be defined as environmental. These assessments merely seek to reduce the impacts of these projects; it is rare for them to manage to secure substantial changes in a project, and still less to reject it altogether.

Other explicit environmental policies are connected with the conservation of renewable natural resources. These are clearly of a reactive nature. A classic example is that of policies designed to reduce deforestation, which have had little or no success in the region. Almost all the countries have legislation and institutions for the protection of forests, and these should define explicit environmental policies, but the factors which enter into deforestation are beyond the control of those policies. Thus, processes of expansion of the agricultural frontier give rise to the use of systems of clearcutting and slash and burn practices which have an extremely high ecological cost. Moreover, energy price policies result to a greater or lesser extent in pressure to produce firewood from native forests.

Soil conservation policies have also failed, since erosion, depletion of nutrients and salinization are present in all the countries of the region.

Policies for the conservation of marine resources stem from threats of social crisis due to reductions in fishery activity and from the warnings of scientists who study those resources. As it is difficult for public opinion to become actively conscious of the problems raised by the decline in these resources, these policies tend to be somewhat less reactive than in the other cases.

Explicit environmental policies concerning the quality of life of the population, especially those relating to health (such as pollution), stem from the everyday problems faced by the population in their consumption and work. They are possibly the most reactive of all, because of the pressure exerted by the population; unfortunately, there is still a long way to go before the population demands more carefully planned preventive policies.

In general terms, explicit environmental policies have clearly had little success. Despite the institutional strengthening of the public sector environmental bodies, which were conceived as reactive environmental agencies, they have almost all had a difficult time, and most of them have run into serious conflicts with other areas of the State bureaucracy, as well as with society at large, especially business groups and non-governmental environmental organizations.

The functions allotted to these governmental structures have been clearly limited and have not managed to penetrate into the sectors of the economy connected with production activity.

### **3. The environmental policies implicit in public policies**

The scant success of the environmental policies generated in the central environmental bodies has thus been due to their reactive approach to forms of development with high environmental costs.

The environmental bodies of the countries of the region show concern when the gross domestic product grows rapidly, because a high growth rate means more motor vehicles, more industrial activity and more wastes. It is not only the increase in consumption which worries them, however, but also the forms of production used. Thus, a high rate of investment may become a threat to marine resources, native forests or water resources.

Decisions taken in other areas of public policy or in the production sectors can obviously involve measures that will lead to environmental change, and they thus constitute implicit environmental policies. Unfortunately, however, so far little consideration has been given to this type of policies.

The economic crisis of the 1980s and the adjustment measures to which it gave rise led to a kind of implicit environmental policy which, in global terms, tries to play down environmental problems. If we analyse the application of the shock treatments used in various countries of the region, we see that the more stringent they have been, the less the importance attached to the environment in them. For governments applying anti-crisis recipes, the question of the environment is a nuisance, and it is only incorporated into the debates when it is a negotiating factor in a bilateral or multilateral trade agreement or when it interferes with the marketing of some product.

We referred earlier to the effects of economic policies aimed at reallocating expenditure and cutting the aggregate demand of public environmental institutions. It is now necessary to analyse the environmental policies implicit in those economic policies.

#### a) *Macroeconomic policies*

Macroeconomic policies affect the environmental situation by maintaining or extending a form of development which is openly harmful to the environment. There are no in-depth analyses of the environmental policies deriving from them. In general terms, there are three types of policies which countries tend to promote.

i) *Export promotion policies*. So far, no concern for the conservation of natural resources has been observed in this field. On the contrary, in view of the growing globalization of the economy, the countries of the region try to promote their exports at all costs, with incentive measures and support from export promotion agencies. If there are any environmental considerations at all, these are due to the demands of importing countries.

ii) *Policies for securing foreign investment*. In order to seek foreign capital, almost all the countries try to give an image of economic stability and stress the cheapness of their natural resources. This apparent cheapness is usually due to the fact that environmental costs are not included in the calculations and also, sometimes, to offers of tax exemptions. There are countries which, when publicizing the facilities offered to foreign investment, give considerable

prominence among them to the scantiness of environmental controls. In some cases, their publicity has even promised more than could be offered in line with the existing legal restrictions, thus giving rise to serious conflicts once the investments have been made.

iii) *Policies to promote the occupation of geographical space*. Many areas in Latin America are considered to be underoccupied and suitable for economic activities. A number of countries have deliberately promoted the massive occupation of their territory, for economic or geopolitical reasons. The incentives offered have often been of an economic nature: tax exemptions for production activities such as stock raising; establishment of industrial development areas with fiscal advantages; construction of transport infrastructure to facilitate the economic incorporation of parts of the territory, etc. All the implicit environmental policies deriving from these incentives have had a severe negative impact.

#### b) *Sectoral economic policies*

These policies give rise to implicit environmental policies of the greatest importance. The productive sectors of the economy condition investment, economic growth and environmental change. These sectors are responsible for the generation of wastes in their production activities or in the consumption of their products.

i) *Industrial development policies*, which have various degrees of effectiveness in the region, give rise to a set of implicit environmental policies deriving from various factors (inputs used, production processes, generation of wastes, final use of the products, etc.), which are in many cases of a negative nature. There are undoubtedly serious shortcomings in environmental policy with regard to industry, in such matters as the biodegradability of products, their useful life and their recycling.

ii) *Energy development policies* have incorporated the environmental dimension to some extent. The early appearance of the environmental problems deriving from energy sources, such as the global effects of energy consumption on the atmosphere, have led the countries of the region to incorporate the environmental dimension to some degree in the planning and management of their energy production. For some decades past, studies have been made of the environmental impact of big hydroelectric projects and explicit environmental policies have been formulated (as for example in the cases of Salto Grande, Itaipú and Yaciretá-Apipé, where it proved possible

to implement some palliative measures). Unfortunately, the decisions to include environmental aspects are usually taken after already deciding on the place of construction, the installed capacity and the macro design, thereby giving rise to high ecological costs that could have been avoided. Moreover, it is necessary to take account not only of the traditional concerns over the impact of energy sources such as biomass, hydroelectric power and nuclear energy but also of questions of energy efficiency and consumption patterns.

iii) *Agricultural policies* are of great environmental importance because agriculture changes living ecosystems. The expansion of the agricultural frontier (a process actively supported by a number of countries through such measures as tax exemptions, opening up of roads and agricultural credits) and the encouragement of land clearance by some countries, through subsidies for the use of machinery or credits in return for which the government demands a percentage of the cleared land, implicitly involve high ecological costs in terms of deforestation, loss of biodiversity, impoverishment of the soil, erosion and silting-up of watercourses and lakes. Agricultural modernization, in the sense of the application of technologies which involve a high degree of artificial modification of the ecosystem, also includes implicit environmental policies. Modernization policies tend to be of a short-term nature, since they create agrosystems with a low degree of natural stability. The objective of achieving high productivity in a short period of time raises environmental contradictions which are very difficult to solve. The environmental policies implicit in a substantial percentage of agricultural development plans and programmes are of a negative nature, since they involve the externalization of the ecological costs of the main processes of deterioration affecting agriculture, such as erosion and the depletion and salinization of soil.

iv) *Reforestation and forestry development policies*, promoted through credits, subsidies or other means, give rise to negative implicit environmental policies even though there may be a requirement that they must be sustainable, through explicit environmental regulation and control policies. The most illustrative case is that of reforestation policies, which lead to the replacement of native forests with artificial plantations. Native forests have various functions—as regulators of water resources, habitats for biodiversity, elements limiting soil erosion, improvements to the landscape—which are almost completely lost

because artificial plantations only provide a minimal part of these benefits.

v) *Public works policies* also involve important implicit environmental policies. Roads, bridges, dams, irrigation canals, docks and ports result in significant changes in the environment, and even though environmental impact studies are made in respect of them in many cases, these studies are only of a corrective nature. When engineering works change the environment, an effort is made to ensure that the changes are beneficial and sustainable in time. This is usually achieved, but in some cases the artificial effects produced are of a negative nature. Thus, there are often losses of infrastructure, especially of roads and associated works, as a result of expansion policies containing implicit environmental policies which are of a negative nature because they give little weight to climatic factors, seismic movements, etc.

vi) Special mention must be made of *scientific and technological research and development policies*. On the one hand, scientific research in our region lags seriously behind, especially with regard to biodiversity. On the other hand, technological research relating to the environment tends to concern only the development of clean technologies, without exploring in depth the environmental impact of the technologies which are in routine use. Furthermore, the analysis of new types of technologies which permit increasing harvests of natural resources has been neglected.

vii) *Urban development policies* show the complexity of an issue in respect of which there are serious lags in the region. These policies combine policies on town planning, housing, transport, industry, recreational centres, services and consumption, and parks and gardens. All these have environmental implications, and their application has marked repercussions on the environment. The regulatory policies adopted by cities give rise to implicit environmental policies which link up to varying degrees with the explicit urban environmental policies. In some cases the linkages are positive, but in others there are open contradictions (for example, between the policy of expropriating parks to expand road systems, the construction of housing developments, and the policy for the establishment and improvement of parks and gardens). As the evolution of the big cities is closely linked with the processes of industrial development, the implicit environmental policy deriving from industrial location should be duly appraised as a func-

tion of the environmental planning of the territory. Unfortunately, environmental location policies in the region are usually only a by-product of the regulatory plans of the cities and take little account of environmental considerations except as regards the availability of certain natural resources such as water, and in environmental location plans priority is usually given to transport costs, availability of services, access to skilled labour, etc. Moreover, cities assemble human goods in an existing natural environment. The com-

plexity of structures and of the flows of materials, energy and information often cause the importance of the environment to be minimized, giving rise to implicit urban policies of high environmental cost. Thus, many urban expansion policies in the region do not respond to environmental criteria but to pressures for the availability of cheap land and speculation with urban land; likewise, the construction of freeways instead of roads designed to give priority to public transport gives rise to congestion and pollution.

### III

## Towards effective environmental policies

The fact that emphasis is placed in this article on the importance of the environmental policies implicit in economic policies and in development policies in general does not mean that these policies are alternatives to explicit environmental policies generated by the environmental authorities. On the contrary, the two types of policies are complementary.

It must be assumed from the start that the policies generated in environmental bodies are of a reactive nature, prompted by the high environmental cost of the forms of development prevailing in the region. For an ideal solution, it would be necessary to change these forms of development and make them sustainable, but as this utopia is still quite far off, we must make a pragmatic effort to progress as far as possible with intermediate solutions for modifying the present trends.

Ideally, the environmental policies implicit in public policies should all be of a positive nature and should thus contribute to an environmentally sustainable form of development. This goal, which seems utopian today, should be the essential condition for organizing the environmental system of the country on the basis of commissions or councils of a purely coordinative nature. Its absence explains the failures and difficulties of various national commissions. For this reason, it is recommended that realistic solutions should be sought which mutually combine explicit and implicit policies, seeking their complementarity and a system of public sector institutions in keeping with such combination.

We shall therefore examine below the aspects which it is most important to strengthen in the matrix

resulting from the intersection of implicit and explicit policies.

#### 1. Combining implicit and explicit environmental policies

In this matrix, the box which is almost empty in most of the countries of the region is that where territorial environmental planning (explicit policy) intersects with regional development (implicit policy). The spatial expression of the target image of each country's territory and its consequent quantification make possible a disaggregated projection of social and environmental changes and facilitates the treatment of social and environmental conflicts. In addition, in order to configure this target image, territorial environmental planning must not only intersect with regional development but also, for greater effectiveness, with all the production sectors too.

Another intersection which it is necessary to establish is that between export promotion policy (implicit policy) and the assessment of environmental impact (explicit policy), in view of the pressures on certain resources (especially renewable resources) in an economy which gives priority to exports.

The processes which take place in rural areas are of basic importance for the conservation of renewable natural resources. For this reason, the environmental policies which are implicit in rural development policies should be given higher priority. Particularly important among them is the expansion of the agricultural frontier, which must intersect with various explicit policies, namely, policies to combat deforestation,

erosion and desertification and those for the conservation of biodiversity.

With regard to the economic sectors, the importance of their implicit policies and the need to incorporate the environmental dimension more fully into them must be emphasized once again. It is essential that the various sectors of the economy should be incorporated into efforts at territorial environmental planning and that, as well as increasing the coverage of environmental impact assessments (in most cases only big projects are analysed), the impacts of programmes and action guidelines should also be considered.

Apart from these general considerations, the search for solutions to environmental problems should be a country-level activity. Although there are features which are shared by all the countries, there are also differences not only in the degree of maturity of environmental issues in them but also their diversity of economic structures and the special features of their ecosystems.

## **2. Reorganization of public institutions to make environmental policies more effective**

Appraisal of the types of public institutional systems existing with regard to environmental matters reveals that the long-standing dilemma between sectoral institutions (ministries) and cross-sectional institutions (commissions or councils) now belongs to the past. Indeed, in practice this debate has been wrongly presented, because a number of commissions have been turned into sectoral bodies which differ from ministries only because they do not have the political weight of the latter.

The discussion must be centered, then, on how to adapt the institutions so that they will fit in with a set of duly ordered policies and so that the environmental policies implicit in economic policies will be modified by their intersection with the explicit environmental policies. In other words, it is necessary to find a way of modifying the institutions so as to minimize the negative environmental impact of certain policies and thus reduce the reactive nature of explicit environmental policies by coordinating them with the implicit ones.

In order for such an institutional solution to make an efficient contribution to the incorporation of the environmental dimension, political will is called for on the part of the Legislature and, in particular, the Executive. And since it is necessary to be pragmatic with regard to environmental policies, the institutional response must also be pragmatic.

There are three basic aspects which arise when an effort is made to modify the structures relating to public sector environmental policies. The first of these is connected with the need for a more complex approach, because it is necessary to take account of some of the implicit environmental policies, especially those connected with economic growth; this is the fundamental challenge for the coming years. The growing complexity of environmental issues and the danger that these will become the Achilles' heel of the economies of the region make it essential to go beyond the stage of public institutions which simply react to the problems of the moment, that is to say, institutions which are merely of a reactive nature. It is necessary to enrich the debate on the functions of the environmental institutions responsible for coordination, on the one hand, and those responsible for execution on the other, and to tackle seriously the question of the intersection of the environmental policies implicit in development policies (especially economic policies) with the explicit environmental policies.

The second aspect refers to processes influenced by exogenous factors which may "oblige" the authorities to take measures, even though they may not have the political will to do so. These exogenous factors include those associated with international trade and some international commitments assumed by each country. The environmental dimension of large-scale mining in the region is being increasingly regulated by the demands of international trade, and something similar is taking place with regard to some industrial imports and is beginning to be observed in the forestry sector too, in connection with the exploitation of native forests.

The third aspect is that of public awareness and the pressures of society. The growing pollution of water resources, the atmosphere and the soil has created an awareness of its harmful effects on well-being, which is reflected in growing pressure by the population for a solution to such problems. For this reason, urban and industrial development processes are subject to growing environmental demands. This is not so much the case with rural and marine areas, where the processes are more widely spread and some of them are hard to detect because they take place over a very long period of time. These processes should be given priority attention, both through suitable policies and through special environmental institutions.

Notwithstanding the foregoing, so far almost all the countries of the region have opted to establish central multifunction environmental bodies in response to the need to strengthen their environmental agencies. Normally, such bodies have to generate policies and strategies and also deal with routine technical problems: i.e., they must carry out political duties and also execute strictly technical activities. Experience has shown that in these cases they do not carry out either of these duties really well. The political functions cause the authorities of these bodies to propose negotiated solutions which are not necessarily justified by technical considerations, so that in some bodies the technical reports are merely background data placed at the disposal of the political environmental authority, which takes its decisions on the basis of obviously political parameters. Consequently, a clear division of responsibilities could help to secure the incorporation of environmental aspects at the highest levels.

Both territorial planning policies and those connected with exports and similar concerns are very difficult to generate in a central environmental body like those adopted in most of the countries. It would therefore be desirable that they should stem from a strategy-formulating body located at the highest possible level, whose aim is to incorporate the environmental dimension and make it an intrinsic part of the form of development that the country wishes to promote. It is also desirable that this body should not waste its time on long discussions about sustainable development, since this broad and flexible concept, accepted by all sectors of society, often becomes a trap which leads to mere immobility.

The generation of approaches which secure the interaction of implicit and explicit policies would be favoured by a system of institutions which includes i) a body of the highest level for dealing with integral development policies and environmental policies;

ii) a technical body independent of the political authorities and private interest groups, and iii) an environmental body which includes part of the production sectors connected with renewable natural resources.

An illustrative case in this respect is that of the public environmental institutions of Mexico which were referred to earlier. In Mexico, the Ministry of the Environment, Natural Resources and Fisheries has units connected with various aspects of production activities, such as the Department of Fisheries, the National Water Resources Commission, and the various forestry development programmes. It also has a Planning Department, which is responsible for inter- and intra-sectoral coordination, the National Ecology Institute, and the Office of Legal Affairs for the Environment.

The experience of Mexico is undoubtedly a valuable contribution to the debate on the effectiveness of environmental policies. The fact that authority for the management of forests and lines of production development has been assigned to the Department of Natural Resources makes it possible to support and promote truly sustainable programmes and projects. In spite of the progress made, however, more time is needed for imparting a real environmental sense to technicians who have in many cases acted for a long time with a short-term production-oriented attitude. The outstanding task of the Department in question in Mexico is to spread environmental ideas to the highest levels of the traditional sectors of the economy, and progress has already been made in this respect in the execution of the Mexican environmental programme for the period 1995-2000. It may therefore be concluded that solutions like those adopted in Mexico, which do not fit into any of the traditional moulds, represent interesting examples of progress towards the viability of environmental policies with real possibilities for the future.

(Original: Spanish)

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*Bibliography*

- Brzovic, F. J. (1989): *Economic Crisis and Environment in Latin America and the Caribbean*, LC/R.818, Santiago, Chile, Economic Commission for Latin America and the Caribbean (ECLAC).
- ECLAC (1991): *Sustainable Development: Changing Production Patterns, Social Equity and the Environment*, LC/G.1648(CONF.80/2)/Rev.1, Santiago, Chile.
- Gligo, N. (1995): The present state and future prospects of the environment in Latin America and the Caribbean, *CEPAL Review*, No.55, LC/G.1858-P, Santiago, Chile, ECLAC.
- Gligo, N. and J. Morello (1982): Notas sobre la historia ecológica de América Latina, *Estudios internacionales*, vol. XIII, No. 49, Santiago, Chile, University of Chile, Institute of International Studies.
- IDB (Inter-American Development Bank)/UNDP (United Nations Development Programme) (1990): *Our Own Agenda*, Washington, D.C.
- Mexico, Poder Ejecutivo Federal (1996): *Programa de medio ambiente 1995-2000*, Mexico City, Talleres Gráficos de México.
- UNEP (United Nations Environment Programme) (1996): *Comparative Study of the Institutional Designs for Environmental Management in the Countries of Latin America and the Caribbean*, Nairobi, 7 October.
- (1997): *Global Environment Outlook*, Nairobi.
- Venezuela, Ministry of the Environment and Renewable Natural Resources (1982): *Sistemas ambientales venezolanos. Informe final*, Project VEN/79/001, Caracas.

# Non-market valuation of *natural and environmental* resources in Central *America and the Caribbean*

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An inventory and assessment was made of 15 non-market valuation studies in Central American and Caribbean countries. Most utilized the contingent valuation method to determine willingness to pay for drinking water or protected areas. The method used suffered from a reliance on open-ended bidding, information framing and contingent scenarios lacking detail, limited population samples, and possible cultural-strategic biases associated with surveying local residents. Problems observed with respect to the single travel cost method study reviewed were a reliance on poor quality census data rather than visitor survey data, and unrealistic assumptions regarding transportation cost estimates, single-destination visitors, and consumer surplus levels of international visitors. The two hedonic valuation method studies reviewed suffered from the existence of heterogeneous neighbourhood market segments and the inability to obtain reliable property values. In conclusion, various strategies and a research agenda to improve non-market valuation studies in Central American and Caribbean countries are suggested.

# I

## Introduction

Non-market valuation methodologies are commonly used to place monetary values on various natural resources and environmental amenities in developed countries. The contingent valuation method (CVM) uses surveys to determine people's willingness to pay for hypothetical improvements in different types of natural resources or environmental services which do not have market prices. The travel cost method (TCM) estimates demand curves for recreational resources based on observed travel and other expenditures in order to determine the underlying economic value of those resources. The hedonic valuation method (HVM) measures the value of environmental goods by quantifying the effect that their provision or absence has on the actual market prices of related goods such as housing or property values.

There is considerable interest in applying non-market valuation methodologies in developing countries also, in spite of the fact that the economic valuation of many environmental goods and services which do not have market prices, even in developed countries, is not without errors and potential problems. The interest in the use of non-market valuation studies in Central America, the Caribbean, and other developing countries is due to the fact that many of these countries are now experiencing significant environmental impacts and degradation of natural resources associated with development efforts (Dasgupta and Mäler, 1996). There is therefore a critical need to be able to quantify the value of environmental goods and services and environmental impacts in these countries within the context of policy-based cost-benefit analyses.

In spite of the thousands of non-market valuation studies that have been conducted throughout the world (over 1600 CVM studies alone), a 1993 literature review found only 25 cited (published and unpublished) non-market valuation studies in developing countries (Ekbom, 1993). Less than 40% of these studies were published in refereed journals or edited books and most were focused on the valuation of water supplies or protected areas. The majority (13) were CVM studies, while there were eight TCM and four HVM studies. This closely follows the relative distribution of non-market valuation studies in developed countries.

A great deal of the published non-market valuation literature in developed countries has focused on methodological issues associated with the appropriateness, validity, and reliability of these methodologies. It has generally been concluded that in spite of both theoretical and practical limitations, the CVM, TCM and HVM methods are generally valid and appropriate for valuing many types of different environmental goods and services in those countries. However, very few similar methodologically focused non-market valuation studies have been undertaken in developing countries. In other words, it seems to have been implicitly assumed that non-market valuation methods pioneered and tested in the United States and Western Europe can be directly applied and used in Central America, the Caribbean, and other developing regions.

Exceptions to this are the books by Dixon, Scura, Carpenter and Sherman (1994) and Georgiou, Whittington, Pearce and Moran (1997) which, on the basis of summarized case studies, explore the potential uses, advantages and problems associated with a variety of non-market valuation techniques that have been used in a variety of developing countries throughout the world. Several other published studies have discussed the methodological issues associated with the use of the CVM method in developing countries, including Whittington, Smith and others (1992), the World Bank Water Research Team (1993), Shyamsundar and Kramer (1996), and Hardner (1996). Similarly, the advantages and difficulties in using the TCM method in developing countries have been discussed in at least two cases by Edwards (1991), and Navrud and Mungatana (1994). However, no known research has yet been conducted on the applicability and reliability of the HVM method in developing countries.

The few existing developing country non-market valuation case studies with a methodological focus have almost always been confined to a few individual countries or locations, while making the implicit, or in some cases the explicit, assumption that their results are applicable to other developing countries, regardless of site-specific socioeconomic, cultural, and resource degradation characteristics. Since it has not

yet been established whether the conditions, applicability, and usefulness of non-market valuations are similar in all of the developing countries of the world, it is proposed that cross-country or regional evaluations and assessments of non-market valuation methods should be undertaken.

The objective of the present study is to make an inventory and a critical assessment of the non-market valuation method studies or, more specifically, of the contingent, travel cost and hedonic valuation method studies that have been conducted in different Central

American and Caribbean countries. This geographical focus of the assessment is limited to this region rather than covering all the developing countries of the world, because these countries of Middle America share similar cultures and languages (Spanish and English), as well as many similar development strategies and environmental degradation problems. To the best of the author's knowledge, no previous inventories or assessments of non-market valuation methods have yet been made for the countries of Central America and the Caribbean.

## II

### Non-market valuation studies

The inventory of non-market valuation studies in the countries of Central America and the Caribbean was made through an extensive review of the available books, journals, research theses and consulting studies and is summarized in table 1. While this inventory is considered comprehensive up until 1997, it should be realized that additional non-market valuation studies in these same countries, especially those in the "gray literature", and those conducted in the last year may possibly not have been accounted for in this inventory.

CVM studies are by far the most frequent type of non-market studies that have been conducted in the

countries of Central America and Caribbean, and in fact only one TCM and two HVM studies have been conducted in those countries. Almost all of these non-market studies have taken place in Costa Rica, for two specific reasons. First, Costa Rica is the host country of the only two educational centres in the region that offer graduate degrees in the field of environmental economics and also of many of the region's international development organizations. Second, Costa Rica has in the last decade been at the forefront of many conservation and sustainable development programmes in Central America.

## III

### Contingent Valuation Method studies in Central American and Caribbean countries

The contingent valuation method (CVM) is the most common of the non-market valuation methods. It attempts, through the use of a survey, to measure individuals' willingness to pay for hypothetical improvements in various natural resources and other public goods, including the preservation of ecosystems, air and water quality, and a long list of other natural resources and environmental goods and services. Years of CVM research covering a wide spectrum of methodological issues involving a variety of different environmental amenities have resulted in wide acceptance of this

method as a reliable valuation technique, even though it is recognized that there is a risk that it may be poorly applied or misused (Mitchell and Carson, 1995).

Almost all 12 of the CVM studies conducted in Central American and Caribbean countries were focused on the valuation of either the supply of drinking water or the establishment and conservation of protected areas. Only three of these studies are to be published as journal articles or book chapters, and only two (Whittington, Briscoe, Mu and Barron,

TABLE 1

**Central American and Caribbean countries:  
Inventory of non-market valuation studies**

Study/Topic	Year	Location(s)	Author(s) <sup>a</sup>	Type of publication
<i>CVM Studies</i>				
WTP (Willingness to Pay) for a sewer system	1988	Barbados	McConnel and Ducci, 1989	Paper
Estimating WTP for water services in developing countries: A case study in southern Haiti	1990	Laurent, Haiti	Whittington, Smith and others, 1992	<i>Economic Development and Cultural Change</i> , 38(2) 293-311.
User fees at protected areas in Costa Rica	1991	Poas, Manuel Antonio and Cahuita Parks, Costa Rica	Baldares and Laarman, 1991	<i>Valuing Environment Benefits in Developing Countries</i>
Nature tourism and its development in Guatemala: assessing current trends and future potential	1992	Tikal, Guatemala	Barry, 1992	Master Thesis
Ecology and economics of Bonaire Marine Park	1993	Bonaire Marine Park, Bonaire Island	Scura and van 't Hof, 1993	World Bank publication
National park entrance fees in Costa Rica	1995	Poas, Manuel Antonio and Irazú parks, Costa Rica	Chase, 1995	Master Thesis, Cornell University
Valuation of non-priced amenities provided by the biological resources of a preserve	1995	Monteverde Preserve, Costa Rica	Echeverría, Hanrahan and Solórzano, 1995	<i>Ecological Economics</i> 13, 1995
WTP for improved communal water services	1995	Limon and Guanacaste Costa Rica	Aguilar and Sterner, 1995	Working Paper 1995:8, Environmental Economics Unit, University of Gothenburg, Sweden
Economic valuation of water supplies from La Tigra National Park	1996	Tegucigalpa, Honduras	Salgado, 1996	Master Thesis, Research and Training Center for Tropical Agronomy (CATIE), Costa Rica
WTP to enter Costa Rica's National Parks	1996	Poas, Manuel Antonio, Costa Rica	Pinazzo, 1995; Shultz, Pinazzo and Cifuentes (forthcoming)	Master Thesis, CATIE, Costa Rica
Economic valuation of water in poor neighbourhoods of El Salvador	1997	Apopa, San Marcos and Ilopango, El Salvador	Mendoza, 1996	Master Thesis in progress, National University, Costa Rica
Economic benefits of maintaining ecological integrity of the River Mameyes	1997	Puerto Rico	González-Caban and Loomis, 1997	<i>Ecological Economics</i> , 20(4)
<i>TCM Studies</i>				
Valuing ecotourism in a rain-forest preserve	1991	Monteverde, Costa Rica	Tobias and Mendelsohn, 1991	<i>Ambio</i> , 20(2), 1991
<i>HVM Studies</i>				
Economic values of sewage and flooding risks associated with Turrialba rivers	1994	Turrialba, Costa Rica	Shultz, 1994	Study
Resource characteristics and farm values in a multiple-use pristine tropical watershed	1996	Pacuare River, Costa Rica	Shultz, Sáenz and Hyman, 1996	<i>IUCN Global Bio-Diversity Forum</i>

<sup>a</sup> For more details, see Bibliography at the end of this article.

1990, and Echeverría, Hanrahan and Solárzano, 1995) include methodologically based validation focuses within their study designs.

Most of these studies utilized open-ended bidding question formats, contained limited information framing and contingent scenarios, were based on limited sample populations, and were potentially exposed to cultural-strategic biases associated with the use of personal surveys of local residents. These problems were found most often in the CVM studies conducted by graduate students or professionals (both national and international) working permanently in the countries in question. However, it should be noted that the few studies conducted by experts from outside the region that did not display any detectable structural problems were either focused only on international visitors or were conducted with levels of financial resources significantly higher than those generally available in Central America, the Caribbean, and other developing countries. A more detailed analysis of the specific problems found in these CVM studies is presented below.

Open-ended bidding formats were used in almost half of the CVM studies, rather than discrete or iterative bidding formats. While being relatively simple to design and administer, such open-ended formats can often appear very hypothetical and dissimilar to many real world market transactions, and may be subject to strategic biases associated with free-riders who intentionally over or understate their true willingness to pay. In contrast, discrete bidding (also known as dichotomous choice or referendum bidding) has become the most widely accepted and used CVM bidding format, as the yes/no question format closely matches the way consumers make choices in the marketplace. This format has also been shown to minimize both hypothetical and strategic biases, and to be consistent with utility maximization theory, which facilitates the estimation of statistically robust mean willingness-to-pay values (Cummings, Brookshire and Schulze, 1986, and Mitchell and Carson, 1995.).

There are two specific reasons why the problematic open-ended bidding format has been used so extensively in these CVM studies in Central America and the Caribbean. First, it is likely that there is a lack of knowledge in these countries regarding recent CVM literature and state-of-the-art methodologies. Second, and closely related to this, there is a general scarcity of trained economists and statisticians specializing in environmental economics working in the

region who are capable of estimating and interpreting the relatively more complex non-linear willingness-to-pay regression equations associated with discrete and iterative bidding formats. Hopefully, both of these constraints will be removed in the coming years with the continuation of recently initiated campaigns to train environmental economists in these countries. Specifically, both the National University of Costa Rica (UNCR) and the Research and Training Centre for Tropical Agronomy (CATIE), which is located in Costa Rica but serves the entire region, are actively working to this end. Both these institutions have recently begun to offer regional master's level graduate programmes, in ecological economics and environmental economics respectively (Shultz, 1996). In addition, the Swedish International Development Agency (SIDA), through its Environmental Economics Programme administered by the Environmental Economics Unit of the University of Gothenburg, in conjunction with CATIE, has been actively promoting capacity-building in environmental economics in Central America and in certain Caribbean countries through a variety of educational and training programmes that include non-market valuation workshops and training seminars.

Limited information framing and/or contingent scenarios were noted in almost all of the CVM studies reviewed, even though there are many explicit references and warnings in the literature regarding the need to provide detailed information on the actual situation surrounding the natural resource being valued (this is known as "information framing"), as well as an explicit description of the proposed change in the resource (known as "contingent scenarios") (Mitchell and Carson, 1989 and 1995).

With regard to the CVM studies on drinking water supply, one (Salgado, 1996) simply asked respondents, without giving any description of the current or proposed future water system, the following question: "If your water system was permanently improved, what would you be willing to pay for this service?" Another study (Mendoza, 1996) included slightly more specific information by presenting respondents with the question: "Assume that you will be offered a better service, which means good quality water with no scarcity of water. You can trust in the new system to provide good drinking water at all times of the day and year ... What is your willingness to pay?". Again, no specific information was provided to respondents regarding the details of the existing or proposed water systems. At the other end of the spectrum, however, one

of the CVM studies (Whittington, Briscoe, Mu and Barron, 1990), which was conducted in rural Haiti, contained detailed information framing and even went as far as to show survey participants photographs of proposed water supply systems before asking about their willingness to pay.

Regarding the studies on protected areas, one (Chase, 1995) simply asked respondents: "In your opinion, what is a fair price for this park?" and, "If the entrance fee for only this park were increased, what would be the daily per-person price for which you would decide not to visit this park?". Another study (Pinazzo, 1995) offered slightly more specific information to respondents with the question: "If the infrastructure and services in this park are greatly improved, would you be willing to pay \$(BID) for the entrance fee in a future visit?". However this CVM question still lacked specific information regarding exactly what the improvements to park infrastructure and services would be. Two justifications put forward for this lack of detailed information framing were that the willingness-to-pay question was intentionally non-site-specific in order to evaluate the use of the CVM to value different types of parks (in this case a volcano and a beach park with very different characteristics and needed improvements) and second, that because the surveyed respondents had just visited the park in question, they were therefore expected to have a fairly good idea of the quantity and quality of existing park infrastructure and services (Shultz, Pinazzo and Cifuentes (forthcoming)).

The protected-area-related CVM survey with the most complete information framing and contingent scenarios was conducted by Echeverria, Hanrahan and Solórzano (1995) and included the following question: "On your trip up to the Monteverde Cloud Forest Preserve, you may have noticed large deforested areas visible from the road that are now grass cattle pastures that are being used for agriculture or plain unused eroded hills. In earlier times, these areas were covered with tropical forests similar to the Monteverde forest you have just visited. Monteverde itself is regularly threatened by colonists and settlers, who seek to remove the forest and convert it to cattle pastures or other agricultural uses. Imagine no organization presently exists to prevent such conversion ... Would you be willing to make payment of \$ X per year from your own income to support a non-private organization which will protect the preserve and guarantee its continued existence?".

While this study provided more detailed information than the other studies, this contingent scenario still did not specifically mention how the proposed organization would protect the preserve, nor did it suggest a viable means whereby respondents could make payments.

There are two possible reasons why many CVM studies in Central American and Caribbean countries have not incorporated sufficiently detailed information framing and contingent scenarios. First, as stated earlier, it is likely that many economists in these countries may be lacking knowledge and information about CVM literature and state-of-the-art methodologies. Hopefully, in the near future these limitations will be remedied as a result of the previously described educational and training efforts in the region in the field of environmental economics. A second possible reason for lack of specific information framing in the CVM questions is that they try to keep willingness-to-pay scenarios as short and simple as possible in order not to confuse respondents or possibly, as mentioned in one of the Costa Rican CVM protected areas studies (Shultz, Pinazzo and Cifuentes (forthcoming)), to facilitate comparison of willingness-to-pay values among different study sites with different characteristics. It is recommended that further research be conducted to evaluate the potential magnitude of different types of information bias when estimating willingness-to-pay values for different types of natural resources in different locations. In the meantime, it is strongly advised that researchers working in Central American and Caribbean countries try to include more detailed information framing and contingent scenarios in their CVM surveys.

The use of limited population samples was noted in all of the reviewed CVM studies associated with the valuation of protected areas. Specifically, only actual visitors to the various protected areas were surveyed, through on-site entrance or exit surveys. This is acceptable if the intention of the studies was only to determine willingness-to-pay values for future return visits to these protected areas. However, if the intention of the studies was to determine the willingness to pay of all possible visitors (both actual and potential) to a particular protected area (and hence the total consumer surplus value of the protected area, which is usually what economists will be interested in estimating), then a biased sampling frame is being used. A possible solution which would avoid sampling the

complete (actual and potential) population of international visitors to protected areas would be to carry out spot surveys of international tourists at random points throughout the country or, better still, when leaving the country at the international airport(s). The task of randomly sampling and surveying a complete population of residents of a particular Central American or Caribbean country is much more problematic and potentially expensive, however, because many of the residents of these countries do not have mailing addresses and/or use well-defined street addresses, thus voiding the potential use of population lists and/or telephone directories as sampling frames. Furthermore, most residents do not have telephones in their homes and telephone surveys themselves are not widely used or accepted. Finally, a large percentage of residents in these and other developing countries live in rural areas that are difficult to access, so that the administration of personal (face to face) household surveys, even if based on stratified survey designs, is likely to be a time-consuming and expensive activity. It is therefore proposed that further research be conducted in these countries regarding the validity and cost effectiveness of surveying national residents.

Finally, the existence of possible cultural-strategic biases associated with personal surveys of resident populations was noted in two of the reviewed CVM studies (Echeverría, Hanrahan and Solórzano, 1995, and Shultz, Pinazzo and Cifuentes (forthcoming)), and it is suspected that this could be a potential problem with other CVM studies in Central America, the Caribbean and other developing countries. In the CVM literature, incidences of strategic bias have been noted in the form of respondents intentionally reporting false willingness-to-pay values in order to influence the valuation process (Cummings, Brookshire and Schulze, 1986). The two CVM case studies assessed here, however, are suspected of suffering from cultural strategic bias, which is believed to be different from traditionally defined strategic bias. Specifically, it is suspected that resident respondents in the above two CVM studies of protected areas in Costa Rica may have falsely reported their willingness-to-pay values not in order to intentionally manipulate the valuation of a resource, but rather as a result of their unfamiliarity with personal surveys and the process of providing candid and truthful responses to interviewers. In the United States and other developed countries where CVM survey work was pioneered, most people are very familiar with

answering a wide range of personal, mail, and telephone surveys on a wide range of subjects. Generally speaking, it is believed that these developed country respondents, who have more experience with surveys, are less likely to feel embarrassed about answering negatively to a willingness-to-pay question than are local residents of Costa Rica and possibly other Central American, Caribbean and developing countries who are not as accustomed and/or familiar with survey questionnaires, and in particular personal surveys and their intended non-personal, truth-seeking and confidential nature. The first of these suspected occurrences of cultural strategic bias is in the Monteverde forest preserve CVM study by Echeverría, Hanrahan and Solórzano (1995), where Costa Rican visitors were found to value the protected area 13% higher than foreign visitors (a statistically significant difference), in spite of the fact that their incomes were about 345% lower than those of the foreign visitors. Similarly, in a second Costa Rican CVM protected area study by Shultz, Pinazzo and Cifuentes (forthcoming), it was noted that the willingness-to-pay values among residents (US\$11 and US\$13) were almost 600% higher than the actual entrance fees of US\$2, while foreigners' willingness-to-pay values were on average only 250% higher than the existing entrance fees.

In Central American and Caribbean countries, the existence of strategic bias has been tested for *a priori* in only one case, in southern Haiti, where two groups of respondents were offered different willingness-to-pay scenarios, each with a different likelihood of actually having to pay (Whittington, Briscoe, Mu and Barron, 1990). In this particular case, however, strategic bias was not found to be statistically significant. It is suggested that the previously described educational efforts in the region in the field of environmental economics be continued or expanded in order to help improve the levels of understanding of CVM literature and methodologies. Likewise, it is suggested that CVM research efforts be undertaken in Central America, the Caribbean and other developing countries to carefully evaluate the existence of cultural strategic biases among local residents and, more specifically, to determine whether willingness-to-pay responses vary with different survey and question formats, and particularly if there exist differences in willingness-to-pay values as between face to face personal interviews versus survey formats that allow respondents to state their willingness-to-pay in a more private and confidential manner.

## IV

### Travel Cost Method studies in Central American and Caribbean countries

The travel cost method (TCM) is the second most frequently used non-market valuation method in developed countries. It is based on the estimation of a demand curve and corresponding levels of consumer surplus for a recreation site by assuming that the price of consuming recreation at that site varies directly with the distance visitors travel to the site and their related travel costs (Clawson and Knetsch, 1966). The TCM is a particularly important valuation method because many public parks and protected areas are free or have very low and/or subsidized entrance fees, meaning that their existence and protection is likely to be associated with high levels of consumer surplus. Specific applications of the TCM method include determining the net economic values of existing, modified, or proposed recreation sites, predicting travel behaviour and visiting patterns for individual sites or groups of related recreation sites, and forecasting changes in the visiting of recreation sites resulting from changing site conditions or changing tastes and income levels of visitors (Ward and Loomis, 1986).

The only known TCM study that has been conducted in a Central American or Caribbean country is the study by Tobías and Mendelsohn (1991), which estimated that the consumer surplus of the Monteverde tropical rain-forest preserve in Costa Rica, for both national and foreign visitors, was between US\$400,000 and US\$500,000 annually, corresponding to a per-person value of US\$35 and a per-hectare value of US\$1250.

The study was based on a zonal variant of the TCM method that involved collecting the addresses of national visitors to the preserve to determine their home districts (cantons) of origin. Average visitation for each district was then calculated by dividing observed visitation by the population of each district based on census data, while the travel costs of visiting the preserve from each of the home districts was calculated through a composite average of distance travelled and out-of-pocket costs. Demand functions relating visitation rates to travel costs and district-

level population density and illiteracy rates were then estimated for each district in order to calculate levels of consumer surplus or, more specifically, the difference between what visitors actually paid and what their demand curves indicated they were willing to pay as measured by their total travel costs. Finally, consumer surplus values were aggregated across districts and extrapolated to foreign visitors.

It was noted in a previous review (Georgiou, Whittington, Pearce and Moran, 1997) that this Monteverde TCM study calls for several caveats and displays various potential flaws, including assumptions that the cost of travel time was equal for all visitors, that visits were not part of multiple-destination trips, and that foreigners valued the reserve the same way as local residents. The single-destination assumption is particularly doubtful, because there are many other natural resource and recreation sites in this same region of the country, meaning that visits to the preserve are likely to have been part of a multiple-destination trip for many visitors. To ensure that this assumption was correct, it would have been necessary to actually survey visitors to the preserve.

There are two additional methodological flaws in this study, both of which are suspected also to be problems with the use of the TCM method in other developing countries. First, census data in Costa Rica is very limited in terms of quantity and quality and is a poor substitute for personally surveying visitors in order to determine their characteristics and tastes, which is necessary for estimating demand curves. Specifically, the only explanatory variables included in the Monteverde travel demand model were illiteracy rates and population densities. In line with this, the demand model estimated by the study had a very low adjusted  $R^2$  value of .156 and only one significant variable (price).

The second serious problem with the study is that it is doubtful that the districts (cantons) used to represent visitors' zone of origin accurately represent different travel costs to the site, because most of Costa Rica's population (over 60%), live in the Cen-

tral Valley in cantons within, or closely surrounding, the capital city of San José. In fact, the real travel time and costs associated with visiting the Monteverde preserve are mostly a function of the last 30 kilometers of travel to the preserve on a very rough, unpaved mountain road that is often only accessible with a four-wheel-drive vehicle. Therefore, travel costs to the site are not a simple linear distance-based relationship from the park to the zones of origin as the authors have assumed, and it is unlikely that small differences in distances between visitors' home districts would significantly affect their travel costs. Also, the authors have not distinguished between visitors who travelled to the preserve via public,

group or private transport, each of which have significantly different cost structures.

From the observations concerning this single case study, it is recommended that future TCM studies in Central American and Caribbean countries utilize direct surveys of visitors rather than secondary data sources, in order to collect a wider range of explanatory socioeconomic variables representing their travel patterns and costs, and especially to determine whether they are single- or multiple-destination visitors. It is also recommended that more research be undertaken regarding the relative levels of consumer surplus of both foreign and local visitors visiting specific types of recreation sites before making assumptions that they are equal.

## V

### Hedonic Valuation Method studies in Central American and Caribbean countries

The hedonic valuation method (HVM) is the least commonly used of the three non-market valuation methods. As applied to the valuation of natural resources and environmental amenities, it is based on indirect valuation of resources without market prices by quantifying the statistical relationship between a market good with a known price (usually housing or property values) with a range of attributes or characteristics (including the provision of natural resources and environmental amenities) that are known to influence the price of the marketed good. Typically, a hedonic price function is modelled using a multivariate statistical model where housing or property value is the dependent variable, and the various characteristics of housing or properties (including house size, age, location, etc., as well as natural resources and environmental services) are the explanatory variables. Characteristics representing natural resources and environmental amenities (hereafter referred to simply as resources) may be either positive (such as a scenic view) or negative (such as proximity to a garbage dump). They are usually represented by the distance from a house or property to a particular resource, or through some other ordinal measure of resource quantity and/or quality such as noise, smell or visibility levels. The partial differentiation of the estimated hedonic price function with respect to the

resource in question results in a marginal implicit price function which can then be used to calculate the marginal value of the resource by using the mean values of the quantity of the resource present, the quantities of other resources, and the price of the market good (Freeman, 1979).

The HVM method has been used in developed countries to measure the indirect values of water and air pollution, recreational sites and other environmental amenities, but the method has been attempted in Central American and Caribbean countries in only two known cases, both of which were unsuccessful and therefore have not been published. The first study, in the city of Turrialba, Costa Rica, attempted to estimate the relationship between housing values and proximity to the Rio Colorado river, which was assumed to be a negative environmental amenity because of the discharge of untreated sewage into the river and frequent flooding damage (Shultz, 1994). Housing values based on owners' self-assessments, along with structural housing characteristics and distances to the river, were collected for 102 randomly selected homes in the city. The resulting hedonic price model was of very poor quality, with a low  $R^2$  of 0.35 and an insignificant joint F-test, and only one of eight independent variables were statistically significant. There are two suspected reasons for the fail-

ure of this HVM model. The first is the existence of highly heterogeneous (non-zoned) market segments in the community, which is a situation common in many small to medium-sized towns and cities in Central America and the Caribbean, where residential, commercial and/or industrial zoning ordinances have historically not been implemented or strictly enforced, often resulting in highly heterogeneous housing and commercial structures along with widely varying and mixed land uses within individual neighbourhoods. In the HVM literature, it is seen as necessary to identify and incorporate homogenous neighbourhood characteristics within distinct market segments in order to account for many omitted variables which can influence property values (Freeman, 1979).

The second problem was that most of the surveyed homeowners had a very difficult time self-assessing the market value of their homes, because most had either built their homes themselves, often over a period of many years, or had inherited them. Since housing values are the key dependent variable in hedonic models, it is not surprising that the resulting hedonic model was of such poor quality.

This lack of reliable housing values was also the suspected reason for the failure of a second HVM study in Costa Rica which attempted to estimate the relationship between farm property values and the natural resource characteristics of the Pacuare River watershed of Costa Rica (Shultz, Sáenz and Hyman, 1996). Farm characteristics such as size, topography, land uses and soil conditions, as well as distances to roads and a nearby river, scenic views, quantity and quality of primary forests, and owner-assessed farm property values, were collected for 43 farms in the eastern half of the watershed. The two specific questions used in asking farmers about their farm values were: "*If you were to buy a nearby farm very similar to your present farm today, how much would*

*you be willing to pay?*" and "*What is the minimum you would be willing to sell your farm for, today?*". However, in most cases farmers were unable or unwilling to reveal the value of their farms either because of the lack of a local real estate market in the area or their lack of experience in buying and selling farms. A third possible reason for the inaccurate reporting of farm values is that some of the farmers may have strategically concealed the true values of their properties in order to avoid property taxes or to influence potential sale prices in the future.

These problems related to unreliable housing and farm value data are endemic to all Central American and Caribbean countries, but are most evident in rural areas and small to medium-sized urban areas that do not have active and developed property markets. It is therefore recommended that research efforts be carried out in these countries to develop strategies and models for predicting housing and property values more accurately. This is currently being done with respect to the Pacuare River case study described above, through the estimation of a multivariate regression model where the dependent variable (farm value) is a weighted average of the owner-assessed value, sales (tax) transaction data, and an independently assessed value made by a knowledgeable local real estate agent or banker. The corresponding explanatory variables in the model will be factors known to influence local property values such as farm size, physical characteristics (topography, soils), farm location and accessibility, levels of infrastructure (water, electricity, telephones, stores), the possession of legal ownership documents, and land use production values. Such a model is in fact the reverse of a traditional HVM model, but if successful it could be used to help determine actual housing and/or farm values which in turn would be useful for the estimation of various types of HVM models in the future.

## VI

### Summary and conclusions

This article has inventoried and assessed the known non-market valuation (CVM, TCM, and HVM) studies carried out in Central American and Caribbean countries in order to illustrate the potential opportunities and advantages, as well as the constraints and limita-

tions, of these methods for use in these countries. Many of the problems associated with these non-market valuation methods are related to the specific socioeconomic, cultural and natural resource development conditions of individual Central American and

Caribbean countries, and most of these issues have not been explicitly considered in the non-market valuation literature based on case studies conducted in other parts of the world.

The majority of non-market valuation studies in Central American and Caribbean countries have been conducted in Costa Rica, and most of these focused on the valuation of drinking water supply and protected areas. Specific problems associated with many of these studies included a reliance on simplified yet problematic open-ended bidding formats, a lack of detail in information framing and contingent scenarios, problems in defining and surveying population samples, and the danger of possible cultural-strategic biases associated with the use of personal surveys of local residents.

Problems with the single TCM study evaluated included its reliance on poor-quality secondary census data, unrealistic travel cost estimates based on overly simple linear travel distance estimates, and the unfounded assumption that domestic visitors to the site were single-destination visitors with levels of consumer surplus less than or equal to those of international visitors.

Finally, problems with the two failed and unpublished HVM studies were a lack of well-developed property markets, which resulted in unreliable housing and property values, and the existence of highly heterogeneous, non-zoned, neighbourhood market segments.

It is obvious that both environmental economists and development professionals in Central America, the Caribbean and other developing countries will have an increasingly strong interest in the coming years in using non-market valuation methods in order to place monetary values on many key natural resources and environmental amenities so that they may be included in cost-benefit analyses of various development projects. From the lessons learned from the application of non-market valuation methods in developed countries, and from the results of this present assessment of 15 non-market valuation studies in Central America and the Caribbean, it is clear that caution should be used in adapting and applying these valuation methods in such countries.

Generally speaking, in order to improve the quality of non-market valuation studies in Central America and the Caribbean it is proposed that the existing educational and training activities in the region in the field of environmental economics, including those of CATIE, the University of Gothenburg and SIDA, be continued or, if possible, expanded. It is also suggested that further non-market valuation research with a strong methodological focus be conducted in order to further evaluate the feasibility, reliability and improvement of non-market valuation studies in these and other countries and regions of the developing world.

(Original: English)

### Bibliography

- Aguilar, M. and T. Sterner (1995): *Willingness to Pay for Improved Communal Water Services*, Working paper No. 1995:8, Sweden, University of Gothenburg, Environmental Economics Unit.
- Baldares, M.J. and J.G. Laarman (1991): User fees at protected areas in Costa Rica, in J. R. Vincent (ed), *Valuing Environmental Benefits in Developing Economies*, East Lansing, MI, Michigan State University.
- Barry, C. C. (1992): *Nature tourism and its development in Guatemala: Assessing current trends and future potential*, Chapel Hill, NC, University of North Carolina, Master Thesis.
- Chase, L. (1995): *National park entrance fees in Costa Rica*, Ithaca, NY, Cornell University, Department of Agricultural and Resource Economics, Master Thesis.
- Clawson, M. and J. L. Knetsch (1966): *Economics of Outdoor Recreation*, Baltimore, MD, The Johns Hopkins University Press.
- Cummings, R. G., D. S. Brookshire and W. D. Schulze (1986): *Valuing Environmental Goods: An Assessment of the Contingent Valuation Method*, Totowa, NJ, Rowman and Allanheld.
- Dasgupta, P. and K. G. Mäler (1996): Environmental economics in poor countries: The current state and a programme for improvement, *Environment and Development Economics*, vol. 1, No. 1, Cambridge, U.K., Cambridge University Press.
- Dixon, J., L. Scura, R. Carpenter and P. Sherman (1994): *Economic Analysis of Environmental Impacts*, London, Earthscan.
- Echeverría, J., M. Hanrahan and R. Solórzano (1995): Valuation of non-priced amenities provided by the biological resources within the Monteverde Cloud Forest Preserve, Costa Rica, *Ecological Economics*, vol. 13, No. 1, Amsterdam, Elsevier Science B. V.

- Edwards, S.F. (1991): The demand for Galapagos vacations: Estimation and application to wilderness preservation, *Coastal Management*, No. 19.
- Ekbom, A. (1993): *75 Case Studies on Environmental Economic Evaluation in Developing Countries*, Working paper No. 1993:8, Gothenburg, Sweden, University of Gothenburg, Environmental Economics Unit.
- Freeman, A.M. (1979): Hedonic prices, property values and measuring environmental benefits: A survey of the issues, *Scandinavian Journal of Economics*, vol. 81, No. 2, Oxford, U. K., Blackwell Publishers.
- Georgiou, S., D. Whittington, D. Pearce and D. Moran (1997): *Economic Values and the Environment in the Developing World*, Nairobi, United Nations Environment Programme (UNEP).
- González-Caban, A. and J. Loomis (1997): Economic benefits of maintaining ecological integrity of Río Mameyes in Puerto Rico, *Ecological Economics*, vol. 20, No. 4, Amsterdam, Elsevier Science B. V.
- Hardner, J. (1996): Measuring the value of potable water in partially marginalized economies, *Water Resources Bulletin*, 32(6), pp. 1361-1366, Herndon, VA, American Water Resources Association (AWRA).
- McConnel, K.E. and J.H. Ducci (1989): *Valuing environmental quality in developing countries: Two case studies*, paper presented at the Allied Social Science Association Meetings, Atlanta, GA, December.
- Mendoza, G. (1996): Economic valuation of drinking water in poor neighborhoods of El Salvador, Heredia, Costa Rica, National University, forthcoming MSc thesis.
- Mitchell, R. C. and R. T. Carson (1989): *Using Surveys To Value Public Goods: The Contingent Valuation Method*, Washington, D. C., Resources for the Future.
- (1995): A current assessment of the CVM, in P. O. Johansson, B. Kristom and K. G. Mäler (eds.), *Current Issues in Environmental Economics*, Manchester, U. K., Manchester University Press.
- Navrud, S. and E. D. Mungatana (1994): Environmental valuation in developing countries: The recreational value of wildlife viewing, *Ecological Economics*, vol. 11, No. 2, Amsterdam, Elsevier Publishers B. V.
- Pinazzo, J. (1995): Factors that affect the demand for public protected areas, Turrialba, Costa Rica, Research and Training Center for Tropical Agronomy, Master Thesis.
- Salgado, L. (1996): Economic valuation of water supplies from La Tigra National Park, Turrialba, Costa Rica, Research and Training Center for Tropical Agronomy, MSc. Thesis.
- Scura, L. F. and T. Van't Hof (1993): *The Ecology and Economics of Bonaire Marine Park*, Divisional Paper No. 1993:44, Washington, D. C., World Bank, Environment Department.
- Shultz, S. (1994): The economic value of sewage and flooding risk: An application of the HVM in Turrialba, Turrialba, Costa Rica, Research and Training Center for Tropical Agronomy (CATIE), Watershed Management Area.
- (1996): *An assessment of institutional capacities in environmental economics training in Central America*, paper presented at the CATIE-EEU-SIDA Agreement to Support Research and Capacity Building in Environmental Economics in Central America, Turrialba, Costa Rica, CATIE, Department of Environmental Economics.
- Shultz, S., F. Sáenz. and G. Hyman (1996): *Linking people to watershed and protected area planning with a GIS: A case study of the Río Pacuare*, Costa Rica, IUCN Global Bio-Diversity Forum, Montreal, Canada, September.
- Shultz, S., J. Pinazzo and M. Cifuentes (forthcoming): Opportunities and limitations of contingent valuation surveys to determine national park entrance fees: Evidence from Costa Rica, *Environment and Development Economics*, Cambridge, U. K., Cambridge University Press.
- Shyamsundar, P. and R. A. Kramer (1996): Tropical forest protection: An empirical analysis of the costs borne by local people, *Journal of Environmental Economics and Management*, vol. 31, No. 2, New York, Academic Press Inc.
- Tobias, D. and R. Mendelsohn (1991): Valuing ecotourism in a tropical rain-forest reserve, *Ambio*, vol. 20, No. 2, New York, Allen Press.
- Ward, F.A. and J. B. Loomis (1986): The travel cost demand model as an environmental policy assessment tool: A review of the literature, *Western Journal of Agricultural Economics*, vol. 11, No. 2, Western Agricultural Economics Association.
- Whittington, D., J. Briscoe, X. Mu and W. Barron (1990): Estimating the willingness to pay for water services in developing countries: A case study of the use of contingent valuation surveys in southern Haiti, *Economic Development and Cultural Change*, vol. 38, No. 2, Chicago, IL, The University of Chicago.
- Whittington, D., V. K. Smith, A. Okorafor, A. Okore, J. L. Liu and A. McPhail (1992): Giving respondents time to think in contingent valuation studies: A developing country application, *Journal of Environmental Economics and Management*, vol. 22, No. 1, New York, Academic Press Inc.
- World Bank, World Bank Water Demand Research Team (1993): *How reliable are contingent valuation studies in developing countries? Evidence from a multi-country study*, Washington, D. C., World Bank, Infrastructure and Urban Development Department.

# An integrated *macro-model for the* Caribbean subregion

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The objective of this paper is to calculate a simple integrated macro-model for the Caribbean subregion. Using a homogeneous data set that runs from 1980 to 1991 for a sample of 12 countries in the subregion and a fairly simple model with non-controversial specifications for the structural relationships, we generate a representative and consistent group of estimates for a given set of parameters in pooled and individual country estimations.

# I

## Introduction

The research area of macroeconomic modelling<sup>1</sup> for developing countries, in spite of all the recent developments, still lacks harmony and consistency, both at the methodological and the empirical levels. On the methodological side, the assumptions used vary widely, even regarding some basic elements like the determination of aggregate supply and demand, the features of the trade and exchange rate regimes, the degree of capital and labour mobility and real wage flexibility, plus some of the more traditional controversies in macro modelling, like the adequate modelling of the agents' expectations. On the empirical side, dissent rages about the general specification of models and the representative values of parameters.

In the Caribbean subregion, these general problems are compounded by the scarcity both of available data and of modelling attempts, not just for the subregion as a whole, but even for its individual countries. Only some of the major countries have

made any meaningful efforts in the area of macro modelling.<sup>2</sup>

The objective of this paper is to begin to fill this gap. Using a homogeneous data set for a sample of countries in the subregion and a fairly simple model with non-controversial specifications for the structural relationships (Haque, Lahiri and Montiel, 1990), we will try to generate a representative and consistent group of simultaneous estimates for a given set of joint parameters for the sample of countries as a whole and forecast the short-term values of these parameters.

A fairly simple model could provide both national governments and national and regional agencies with a powerful tool for reliably forecasting the short-term values of some key macroeconomic variables, therefore providing an essential information set that facilitates basic policy decisions, such as the choice of suitable economic policies for the short term.

# II

## The data set and the model

### 1. The data set

The 12 countries selected for the pooled model were: Bahamas, Barbados\*, Belize\*, Dominica\*\*, Dominican Republic, Grenada\*\*, Guyana\*, Jamaica\*, St. Kitts and Nevis\*\*, St. Vincent and the Grenadines\*\*,

Suriname\* and Trinidad and Tobago\*.<sup>3</sup> The period covered by our data goes from 1980 to 1991. The basic criterion used in this selection was data availability, and the main data source used was the 1995 edition of the IMF's *International Financial Statistics Yearbook*, complemented with data from several national institutions and international organizations, including Central Bank reports and statistical digests from the Bahamas, Barbados, Jamaica, the Netherlands Antilles and Trinidad and Tobago, plus data from the Eastern Caribbean Central Bank (ECCB) and the Economic Commission for Latin America and the Caribbean (ECLAC).

<sup>1</sup> A comprehensive description of the state of the art in the economic growth modelling area may be found in Barro and Sala-i-Martin (1995), while a very good discussion of the most recent controversies is to be found in Clements and Hendry (1995).

<sup>2</sup> See Hilaire, Nicholls and Henry; 1990; Ganga, 1990; Worrel and Holder, 1987; Boamah, 1982; ECLAC, 1991, and Joefield-Napier, 1979. Special mention should be made of some recent attempts by the World Bank (see World Bank, 1994a and 1994b), because of their scope and dimension, and of the book by Nicholls, Leon and Watson, 1996, which was published after the completion of this work and provides a very updated and comprehensive description of the subject.

<sup>3</sup> Countries marked \* are CARICOM (Caribbean Common Market) member countries, while those marked \*\* are members of the OECS (Organization of Eastern Caribbean Countries).

## 2. The model<sup>4</sup>

The model used is a variant of the classical Mundell-Fleming formulation, with one domestically produced good consumed both at home and abroad and one exported commodity.<sup>5</sup> The home country is a price-taker in terms of its demand for imports, which takes place under external constraints, but it holds a degree of monopoly power on its export output. Investment, domestic interest rates and the current account position are set endogenously in the model. Dynamics are generated by partial adjustment processes and by forward-looking expectations. The set of reduced behavioural log-linear equations used in our estimations were:

$$(1) \log C_t = \alpha_0 + \alpha_1 r_t + \alpha_2 \log C_{t-1} + \alpha_3 \log Y_t^d + \alpha_4 \log Y_{t-1}^d$$

$$(2) \log (Y/L) = \theta_0 + \theta_1 (K_t^I - \log L_t) + \theta_2 t + \theta_3 (Y/L)_{t-1}$$

$$(3) I_t = \kappa_1 (r_t - r_{t-1}) + \kappa_2 (Y_t - Y_{t-1}) + \kappa_3 I_{t-1}$$

$$(4) \log X_t = \nu_0 + \nu_1 \log \varepsilon_t P_t^*/P_t + \nu_2 \log Y_t^* + \nu_3 \log X_{t-1}$$

$$(5) \log Z_t = \delta_0 + \delta_1 \log \varepsilon_t P_t^*/P_t + \delta_2 \log Y_t + \delta_3 \log R_{t-1}/P_{t-1}^* Z_{t-1} + \delta_4 \log Z_{t-1}$$

$$(6) \log (M_t/P_t) = \beta_0 + \beta_1 i_t + \beta_2 \log Y_t + \beta_3 \log Y_{t-1} + \beta_4 \log (M_{t-1}/P_{t-1})$$

The first equation represents the aggregate consumption function<sup>6</sup>, where  $C_t$  is real private consumption expenditure,  $r_t$  represents the real domestic interest rates<sup>7</sup> and  $Y_t^d$  is the real disposable income (defined as GDP plus earnings on net assets held abroad, minus interest paid on domestic debt and taxes). Coefficient  $\alpha_1$  is a test for the short-run interest elasticity of consumption, coefficient  $\alpha_2$  is a test for the permanent income hypotheses with no liquidity constraints, coefficient  $\alpha_3$  is a test for the hypothe-

ses of liquidity constraints among some households in a developing subregion like the Caribbean, and coefficient  $\alpha_4$  is a test for the length of the time horizons of non-liquidity-constrained households.

The second equation represents the aggregate supply function, and is based on a classical Cobb-Douglas specification with complete wage-price flexibility.<sup>8</sup> Data on capital stock are extremely scarce in the Caribbean –indeed, they are virtually non-existent for most countries– so the capital stock series – $K_t^I$ – is actually a proxy based on gross investment flows (gross fixed capital formation) according to the following equation:

$$K_t^I = \log 2 + 1/2 \sum_{i=0}^{t-1} (1-\rho)^i I_t^I + t/2 \log (1-\rho)$$

$\rho$ , which represents the rate of depreciation, was set at 0.1 (10%). Imposing constant returns to scale, we get

$$\log (Y/L) = \theta_0 + \theta_1 (K_t^I - \log L_t)$$

The other two terms in this equation represent technological progress (expressed by the time trend  $gt$ ) and a lagged adjustment process.

The third function is a standard investment equation, first differentiated to eliminate the capital stock variable. The remaining terms are the real interest rate and the real output.

The fourth function is the exports equation, also with a standard specification:<sup>9</sup> the first term represents the real exchange rate, the second the external demand (an index of world output) and the last one a lagged adjustment process.

Similarly, the fifth function is the imports equation (Goldstein and Khan, 1985), also with a standard specification: the first term represents the real exchange rate, the second the real domestic demand, the third represents the external constraint faced by many developing economies –expressed as a reserves/imports ratio– and the last one a lagged adjustment process.

The sixth and last function represents the real money demand equation, with a variable for real domestic demand and a lagged adjustment process and with  $i_t$  –the domestic interest rate– set exogenously to the model.<sup>10</sup>

<sup>4</sup> This section follows closely Haque, Lahiri and Montiel, 1990.

<sup>5</sup> Data limitations prevent the use of a more disaggregated specification.

<sup>6</sup> This specification was based on Blinder and Deaton, 1985.

<sup>7</sup> Forecasts had to be made for Suriname and the Dominican Republic for part of this series, based on the following specification:  $i_t = \alpha_1 + \alpha_2 Y_t + \alpha_3 P_t + \alpha_4 i_{t-1}$ , where  $Y$  is the GDP,  $P$  is the consumer price index and  $i$  is the lagged domestic interest rate.

<sup>8</sup> See Solow, 1957.

<sup>9</sup> See Goldstein and Khan, 1985.

<sup>10</sup> This formulation deliberately avoids the modelling of the essential question concerning the degree and role of capital mobility in the Caribbean economies. This decision was taken due to data difficulties –the absence of series on future values of exchange rates– and theoretical questions –the lack of consensus on the right assumptions about the parameters– and aims to simplify the structure of the model.

# III

## Estimation of the model

### 1. Method of estimation

The use of a pooled estimation model always implies the question of country heterogeneity. The approach used to deal with this question was to estimate three different types of pooled estimations:

- a pooled one, which assumes that the sample has a single intercept and a single set of slopes, given by  $(\gamma_{it} = \chi_{it} \beta + \alpha + \mu_{it})$ ;
- a fixed effects one, which assumes that the sample has a single set of slopes but that each data unit has its own intercept, i.e., the intercept captures the country heterogeneity, given by  $(\gamma_{it} = \chi_{it} \beta + \alpha_i + \mu_{it})$ . This is the usual approach in most estimations of this kind, either through the use of the intercept or through the use of a country dummy;
- a random effects one, which assumes that the sample has a single set of slopes and that each data unit has its intercept drawn from a common distribution with a mean  $\alpha$  and a variance  $\sigma^2_{\alpha}$ . In this estimation, the intercept captures part of the country heterogeneity, and the remainder is expressed in the error term, which has the specification:  $\mu_{it} = \mu_i + \mu_t + n_{it}$ , where  $\mu_i$  is the individual effect,  $\mu_t$  is the time effect and  $n_{it}$  is the purely random effect. The estimates for this GLS (Generalized Least Squares) model are consistent and asymptotically efficient, if the individual intercept of each data unit is not correlated with its independent variables.

We also estimated a model in which both intercepts and slopes vary among data units, which amounts to a single individual estimation for every country, given by  $\gamma_{it} = \chi_{it} \beta_i + \alpha_i + \mu_{it}$ , and then used the results of this estimation in an F-test of restriction of equality of coefficients (slopes and intercepts) of this model against the pooled and the fixed effects models' coefficients. We also estimated the same F-test between the fixed and random effects models.<sup>11</sup>

<sup>11</sup> This amounted to the testing of a set of  $J$  linear restrictions upon the coefficients, given by  $g^{\wedge} = (R\beta^{\wedge} - r)' (RCR')^{-1} (R\beta^{\wedge} - r)^d \rightarrow \chi^2_{(J)}$ , that has as null and alternative hypotheses, respectively,  $H_0: R\beta = r$ ;  $H_1: R\beta \neq 0$ , with the null hypotheses being rejected for values of  $g$  greater than the critical value of the distribution  $\chi^2_{(J)}$  for a pre-chosen significance level (0.05%).

### List of Variables

#### Aggregate demand equation

C	Constant
IR	Real domestic interest rate
LTCL	Real private consumption expenditure
LYD	Real disposable income
LYDL	Real disposable income lagged

#### Aggregate supply equation

KS	Capital stock
TIME	Time trend
LYLL	Aggregate supply lagged

#### Investment equation

IRD	Real domestic interest rate
GDPD	Real output lagged
IL	Investment lagged

#### Exports equation

LXR	Real exchange rate
LYX	External demand
LXL	Exports lagged

#### Imports equation,

LXR	Real exchange rate
LGDP	Real domestic demand
LRL	Reserves level
LML	Imports lagged

#### Money demand

IR	Domestic interest rate
LGDP	Real domestic demand
LGDPD	Real domestic demand lagged
LMOL	Money supply lagged

### 2. Results of estimations

As we may see from the results of our estimations (table 1), all the equations have high  $R^2$  and most of the variables are significant and have the expected signs.

In the case of the Aggregated Consumption Equation, the variable for the interest rate elasticity of consumption is significant but positive in all the models, albeit with a small coefficient, except for the fixed effects model. This may be explained by an interest rate administratively set and negative in real terms, as was the rule in most of the subregion during the period in question. The variable for the perma-

TABLE 1

## Results of estimations

Aggregate Demand Equation					Exports Equation				
Variable	Expected sign	Pooled estimation	Fixed effects	Random effects	Variable	Expected sign	Pooled estimation	Fixed effects	Random effects
R <sup>2</sup>		0.99	0.9	0.99	R <sup>2</sup>		0.98	0.79	0.97
C		.005		-.07	C		1.21		1.25
		0.09		-.93			1.3		1.4
IR	-	.002	24	.003	LXR	+	.23	.3	.23
		2.2*	2*	2.9*			6.72*	5.8*	6.2*
LTCL	+	.96	.85	.95	LYX	+	-.26	-.35	-.26
		102*	14.7*	65.4*			-1.3	-1.7	-1.3
LYD	+	.36	.43	.37	LXL	+	.96	.79	1
		5.9*	7*	6.5*			80.8*	13.7*	64.6*
LYDL	+	-.31	-.12	-.31					
		-4.9	-1.6	-5.1					
Aggregate Supply Equation					Imports Equation				
R <sup>2</sup>		0.99	0.86	0.98	R <sup>2</sup>		0.98	0.86	0.94
C		.064		-.02	C		-.11		-.08
		.9		-.17			-1.3		-.5
KS	+	.3	.07	.04	LXR	-	.2	.12	.19
		1.8*	.75	1.14			5.7*	2.5*	5.5*
TIME	+	-.0003	.015	.0001	LGDP	+	.01	1	.13
		-.69	2.95*	.1			.28	5.7*	2.1*
LYLL	+	.98	1.13	.99	LRL	+	-.02	.004	-.01
		167.9*	21.2*	86.7*			-1	.17	-.3
					LML	+	1	.7	.9
							57.2*	12*	-.5
Investment Equation					Money Demand				
R <sup>2</sup>		0.99	0.98	0.99	R <sup>2</sup>		0.99	0.88	0.99
C		-.9		-6.1	C		.06		.08
		-.05		-.27			1		.8
IRD	-	3.78	4.3	3.9	IR	-	-.003	.00001	.002
		2.54*	2.82*	2.8*			-2.4	.07	-1.3
GDPD	+	.32	.29	.32	LGDP	+	1.9	1.9	1.7
		34.7*	18*	30.9*			7.5*	4.6*	6*
IL	+	1	1.1	1	LGDPPL	+	-1.9	-1.6	-1.7
		41.9*	20*	35*			-7.3	-3.4	-5.8
					LMOL	+	1	.8	1
							119.2*	14.3*	84.8*

\* = significant at the 5% level.

ment income hypotheses is strongly significant and has the right sign for all models, as is the variable for disposable income. The variable for lagged disposable income is not significant and has the wrong sign in all models. This also supports the hypotheses that the average household in the subregion is liquidity-constrained and has a very short time horizon in financial terms.

In the aggregate supply function, the proxy for capital stock –KS– was significant only for the pooled

estimation. The others –albeit of the right sign– are non-significant and have very small coefficients. The proxy for technological progress is significant only in the fixed effects model, and with a relatively small coefficient, although it has the right sign in all of them. This indicates the lack of a clear, sustained trend of technological upgrading in the subregion. The only variable systematically significant was the lagged investment variable. That indicates that this specific endogenous variable could probably be ade-

quately forecast in the short run by a simple ARIMA specification.

As reasons for these results, we may consider the fact that most of the countries in the subregion rely heavily on foreign direct investment and official flows for their gross capital formation—in some cases, by over 50% (Vinhas de Souza, 1996)—and that the majority have their productive structures dominated by sectors (the primary and tertiary sectors) which are not particularly capital-intensive.

In the case of the investment equation, the variable for the interest rate is significant for all of the models, but has the wrong sign and its coefficient is suspiciously high. The “investment lagged” and “real output” variables are also generally strongly significant, and have the right sign.

Some of the possible explanations for these features have been already listed for the aggregate supply and demand equations. Investment in the subregion is heavily dependent on external flows, both private and official, which are not affected by the domestic interest rate. We may add that most of the Caribbean economies were until recently almost textbook cases of financial repression:<sup>12</sup> several of their domestic financial systems allocated credit on an administrative basis and at heavily negative real interest rates, while the ownership structure in their economies—especially in the primary and tertiary sectors—is a mix of “traditional” and “modern” firms, in which the access of the “traditional” companies to market financing is limited, leading them to rely heavily on non-market forms of financing, which is another indication of financial repression.

In the case of the exports equation, the variable for the exchange rate is significant and has the right sign in all the models, but the estimated coefficient for the world demand proxy is not significant in all the models, and all have the wrong sign. The variable for lagged exports is significant in all the models and has the right sign. These results may be due to the fact that the subregion’s exports are dominated by preferential trade schemes such as the Lomé Agreement, the Caribbean Basin Initiative, or the U.S. Sugar Quotas, and specific quotas are actually administratively set for some major primary products (sugar, bananas).

The results for the imports equation show that the exchange rate variable is significant in all the models, but has the wrong sign in all of them; the variable for real domestic demand has the right sign in all the models but is not significant for the pooled estimation model; none of the models have a significant reserve constraints variable and two of them have the wrong sign; and the lagged imports variable is significant for two of the models, but has the right sign for all of them.

Some of the reasons for these results are the same as for the previous equation. The existence of preferential trade flows, which allows for a certain degree of stability of the hard currency flows generated by exports, especially with the help of the Lomé Agreement stabilization funds (STABEX and STAMIN), plus the importance of foreign inflows, both private and official, have reduced the importance of the reserves constraints for these economies. Also, administratively set and differentiated exchange rates, which existed in some countries in the subregion during the period, may partially explain the results for the exchange rate.

In the case of the money demand equation, the previous results for the domestic real interest rate reappear, which indicates the need for complete financial liberalization: the variable for the domestic interest rate is not significant in all the models and has the wrong sign in two of them, and the coefficients are very small. The variable for current real domestic demand has the right sign in all of the models and is significant in all of them, but the variable for lagged real domestic demand is not significant and has the wrong sign in all the models, which again lends support to the notion of liquidity-constrained households. The lagged money demand variable is strongly significant and has the expected sign for all the models.

Generally speaking, the results were very satisfactory. The models generated a set of consistent, asymptotically efficient and representative estimates. Most of the coefficients were significant, had the expected signs, and the explanatory power of the regressions—the  $R^2$ —was very high.

Nevertheless, we must also note that all the F tests indicate the rejection of the null hypotheses, i.e., of the equality of the coefficients between the individual estimations and the pooled and fixed models, and between the fixed and random effects models. These results may indicate that the random effects

<sup>12</sup> For a definition of financial repression, see Gurley and Shawn, 1983.

model is the one that most adequately represents the results of individual country estimations, which is in accordance with the theory. To verify this, a Hausman test<sup>13</sup> of random versus fixed effects on panel

data was made. The results of this test indicate, once again, that the random effects model is probably the most suitable aggregate modelling alternative for the individual country regressions.<sup>14</sup>

## IV

### Conclusions

The general results of our estimations were mostly satisfactory, and we may assume that the estimators thus generated are representative for the countries in our sample. The reliability of the model was tested by "backward forecasting", which generated values for the endogenous variables within  $\pm 0.01$  and  $\pm 0.02$  from the real variables, as indicated by the  $R^2$  of the equations. Nevertheless, some specific features of the Caribbean economies are not adequately represented in the standard specifications of growth models,<sup>15</sup> which is compounded by the usual problem of lack of reliable and updated data. The modelling of the specific regulatory hindrances, especially financial, still present in most Caribbean economies and of the preferential trade and investment schemes prevalent among these countries is essential for an adequate representation of their economic structures.

On the other hand, some of the previous results may also indicate that, not surprisingly, the natural diversity of the countries of the subregion –oil ex-

porters and oil importers, relatively large continental countries and small island States, colonies and independent countries, mainly industrial economies alongside primary and tertiary ones, different degrees of financial, trade and investment liberalization, and different types of institutional relationships with different sets of developed countries– means that a joint modelling effort of the Caribbean as a single economic area not only has its limitations, but may even be a completely inappropriate assumption. Specific country modelling, or the modelling of more homogeneous groupings –for example, the OECS members, but not the CARICOM member countries– would naturally provide a more precise picture.<sup>16</sup> Nevertheless, it must be acknowledged that this fairly simple model provides both national and regional agencies with a powerful tool for reliably forecasting the short-term values of some key macroeconomic variables, thus making available an essential information set that will facilitate basic policy decisions.

(Original: English)

<sup>13</sup> A Hausman test verifies the equality of two sets of estimations,  $\beta_1^*$  and  $\beta_2^*$ , in which  $\beta_1^*$ , the most efficient estimator, is compared with the less efficient one  $\beta_2^*$ . If the model specification is correct,  $\beta_1^* - \beta_2^*$  will tend to zero.

<sup>14</sup> The only exception was the investment equation, which was also the only equation that failed to reject the null hypothesis of equality between the pooled and fixed effects estimations. In this case, a specification with common slopes could be an adequate modelling alternative, perhaps because of the subregion's reliance on external capital flows and the possibly similar perceptions and constraints of investors toward this fact.

<sup>15</sup> It should be noted that most of these "specificities" actually represent temporary deviations from market allocation, such as regulated banking and exchange rate systems, preferential trade schemes, etc., and are a measure of the amount of liberalization still needed.

<sup>16</sup> An initial attempt at country-specific modelling gave results which were much less satisfactory than those for the joint estimation, but they nevertheless give a very interesting idea of the importance of country specificities. Also, it should be noted that Watson (1995) even rejects the use of a perceived homogeneous group such as the OECS for modelling attempts, on the grounds that such a group does not justify a meaningful joint estimation. This means that he also rejects them as true economic regions.

## Bibliography

- Barro, R. and Sala-i-Martin (1995): *Economic Growth*, McGraw-Hill, New York.
- Blinder, A. and A. Deaton (1985): The time series consumption function revisited, *Brookings Papers on Economic Activity*, No. 2, Washington, D. C., The Brookings Institution.
- Boamah, D. (1982): *Proposed Specifications for an Econometric Model of the Barbadian Economy*, Bridgetown, Barbados, Central Bank of Barbados.
- Central Bank of the Bahamas (several issues): *Quarterly Statistical Digest*, Nassau, Bahamas.
- Central Bank of Barbados (several issues): *Annual Statistical Digest*, Bridgetown, Barbados.
- Central Bank of Trinidad and Tobago (several issues): *Quarterly Statistical Digest*, Port of Spain, Trinidad and Tobago.
- Clements, M. P. and D.F. Hendry (1995): Macroeconomic forecasting and modelling, *The Economic Journal*, vol. 105, No. 431, Oxford, U. K., The Royal Economic Society, July.
- Eastern Caribbean Central Bank (several issues): *Annual Report and Statement of Accounts*, Basseterre, St. Kitts.
- ECLAC (Economic Commission for Latin America and the Caribbean) (1991): *Macro-Economic Model of Jamaica*, LC/IP/L.038, Santiago, Chile, Latin American and Caribbean Institute for Economic and Social Planning (ILPES).
- (1996): *Statistical Yearbook for Latin America and the Caribbean. 1995 Edition*, LC/G.1908-P, Santiago, Chile. United Nations publication, Sales No. E.96.II.G.1.
- Ganga, G. N. (1990): A macro-economic model of the Guyanese economy, *Social and Economic Studies*, vol. 39, No. 3, St. Augustine, Trinidad and Tobago, University of the West Indies (UWI).
- Goldstein, M. and M. Khan (1985): Income and price effects in foreign trade, *Handbook of International Economics*, vol. 2, Amsterdam, Netherlands, North-Holland.
- Gurley, J. G. and E. S. Shawn (1983): Financial structure and economic development, in J. D. Von Pischke, D. W. Adams and G. Donald, *Rural Financial Markets in Developing Countries*, Washington, D. C., World Bank.
- Haque, N., S. Lahiri and P. Montiel (1990): *A Macroeconomic Model for Developing Countries*, Staff Papers, vol. 37, No. 3, Washington, D. C., IMF, September.
- Hilaire, A., S. Nicholls and A. Henry (1990): Forecasting and policy evaluation in a macroeconomic model of the Trinidad and Tobago economy, *Economic and Social Studies*, vol. 39, Mona, Jamaica, UWI.
- IMF (International Monetary Fund) (1995): *International Financial Statistics Yearbook*, Washington, D. C.
- Joefield-Napier, W. (1979): *A Quarterly Model of the Trinidad and Tobago Economy*, St. Augustine, Trinidad and Tobago.
- Nicholls, S., G. Leon and P. Watson (1996): *Problems and Challenges in Modelling and Forecasting Caribbean Economies*, Trinidad and Tobago, Caribbean Centre for Monetary Studies.
- Solow, R. M. (1957): Technical change and the aggregate production function, *The Review of Economics and Statistics*, vol. 39, No. 3, Cambridge, MA, Harvard University Press, August.
- Vinhas de Souza, L. (1996): *Foreign Direct Investment in The Caribbean Subregion: A Survey with Policy Suggestions*, Port of Spain, Trinidad and Tobago, ECLAC.
- Watson, P. (1995): Estimation of the savings functions for the OECS, in R. Ramsaran (ed.), *The Savings/Investment Environment in the Caribbean: Emerging Imperatives*, Trinidad and Tobago, Caribbean Centre for Monetary Studies.
- World Bank (1994a): *Coping With Changes in The External Environment*, Report No. 12821-LAC, Washington, D. C.
- (1994b): *Economic Policies for Transition in the Organization of Eastern Caribbean States*, Report No. 12758-LAC, Washington, D. C.
- Worrel, D. and C. Holder (1987): A model for economic forecasting in the Caribbean, in D. Worrel (ed.), *Small Island Economies — Structure and Performance in the English-Speaking Caribbean since 1970*, New York, Praeger Publishers.

## Swerves and skids by *the Venezuelan economy*

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Now that the neoliberal economic model, under whose sway Latin America is seeing out the present millennium, has been in force for several years, this is a particularly good time to take stock of the experience accumulated so far. Economists normally set about this task by breaking down and analysing the characteristics and components of the programmes applied in the various countries. An aspect which is often neglected in these assessments, however, is that of the social and political viability of the measures adopted, which does not only depend on their technical merits. The acceptance of these measures by the various sectors of the population has come to be equally important in this respect, especially since the replacement of military regimes by democratic systems which are under the obligation to take more account of popular opinion. This is what might be called the "social" factor (or even perhaps the "psychosocial" factor) of the reforms. A better understanding of the variables affecting popular reactions to the economic policy measures applied would facilitate the prior evaluation of their possibilities of success. A stock of experience is already available for this purpose in respect of various countries. One of the most interesting experiences is perhaps that provided by the repeated application of the model in Venezuela. The different reactions of that country's population to the two neoliberal-style programmes applied in 1989 and 1996 could well be due to the different performances of the real values of the economy (growth of the product and employment), despite the similarity of the macroeconomic imbalances in both cases.

# I

## Resistance to change

In recent years there have been important economic, social and political changes in Latin America. Beginning with the Southern Cone countries in the 1970s, governments have gradually been abandoning economic policies based on import substitution and development models based on the domestic market and have instead applied reforms and embarked on policies inspired by neoliberal economic doctrines, whose influence has been growing all over the world. The countries acted in this way in response both to domestic circumstances (especially the limitations of the strategies applied in the past) and to the external situation, because of the opportunities and demands presented by more rapid growth in world trade and investment flows. The debt crisis of the 1980s was an important catalyst in this process.

The term neoliberalism is used here to refer to the economic doctrine which is based essentially on the assumption that the functioning of the market and the power of the State are inversely related to each other and therefore advocates less intervention by the latter in order to boost the virtues of the former. In this respect, it fits in perfectly with its 19th-century forerunner.<sup>1</sup> In its current version, the neoliberal philosophy is well represented by the so-called Washington Consensus,<sup>2</sup> which is endorsed by many of the institutions (both public and private) based in that

city (especially the International Monetary Fund, the World Bank, and the United States government and agencies). This Consensus groups together established "orthodox" economic policy recipes around the key principles of macroeconomic stabilization, deregulation of markets, reduction of external trade barriers, and privatization of State assets.

In current neoliberalism, as in its forerunner, distributive aspects are very far from the centre of its concerns and studies.<sup>3</sup> This failing has often been a crucial factor in limiting the applicability of this model, since it divorces it from a reality in which such aspects are unavoidable. It is true that the initial version of the Washington Consensus included some elements with a certain social sense, such as giving priority to public expenditure in the areas of health and education, and also that in recent years there has been growing agreement on the need for a second generation of reforms (or "Washington Consensus Mark II")<sup>4</sup> which would take more account of social aspects and the distribution of the benefits of reforms in order to increase their political stability, as well as on the need to strengthen State institutions.<sup>5</sup> Valuable though they may be, however, these considerations have to do with the medium and long term and not necessarily with the immediate social cost of the policies applied, which may prevent the necessary

<sup>1</sup> An interesting difference between old liberalism and modern neoliberalism is that the first-named met with opposition in the developing world at the time, namely, in the 13 young states of North America which had just won their independence from Great Britain, whereas neoliberalism—whose champions are now those same North American states which have become the leading world power—is now also accepted by the countries on the periphery too. See in this respect the classic study by Clairmont (1996), which gives a thought-provoking description of the historical development of liberalism. For those who interpret the economy within its historical context linked with the real world of the forces of production, this difference is undoubtedly connected with the demands of the greater globalization characteristic of the present time. Arguments in favor of this explanation are set forth, for example, in Vacs (1994).

<sup>2</sup> See Williamson (1990) and Williamson, ed. (1994).

<sup>3</sup> Perhaps we could also apply to present-day neoliberalism the criticisms which Keynes made of the old brand of liberalism when he said, referring to Ricardian doctrine, "That its teaching, translated into practice, was austere and often unpalatable, lent it virtue. That it was adapted to carry a vast and consistent logical superstructure, gave it beauty. That it could explain much social injustice and apparent cruelty as an inevitable incident in the scheme of progress, and the attempt to change such things as likely to more harm than good, commended it to authority" (Keynes, 1936, p. 33).

<sup>4</sup> The Economist Intelligence Unit (1997).

<sup>5</sup> A notable influence on this evolution of attitudes has probably been exerted by ECLAC, which has repeatedly stressed that the emphasis placed by the economic liberalization process on growth of the product and reduction of inflation is not enough, since growth alone cannot guarantee better distributive effects: a fact which explains the discouraging social picture observed in Latin America and may adversely affect the sustainability of the development process (ECLAC, 1997).

stabilization of an economy, no matter how correct those policies may be from a longer time perspective.<sup>6</sup>

The present article does not aim to make a normative assessment of neoliberal economic policies in general, but to explore one aspect of the tension that may arise between the fulfillment of their basic purpose, especially with regard to the objective functioning of markets, and the real conditions of their application, which are linked with the social context in which they are applied, when popular reaction to the policies becomes decisive in determining their viability.

### 1. Popular reaction to the reforms

Neoliberal policies involved radical changes in the balance of economic interests between the different strata of society. The man in the street could not remain indifferent to these changes, which affected him directly in his multiple roles as consumer, wage-earner, employer, investor, saver, etc. and which therefore had a direct impact on his living conditions. Generally speaking, however, the change in the economic environment did not immediately give rise to strong resistance on the part of those sectors of the population adversely affected by this new balance.

It is true that the first cases of these reforms (in Chile and Argentina) took place under authoritarian military regimes which made it difficult if not impossible for those who were adversely affected to express their discontent. In Chile—the first country to persist with the application of neoliberal structural reforms—the prevailing lack of freedom prevented the social cost borne by large sectors of the community from being reflected in any decisive political form. After the return of the Latin American countries to formally democratic political systems, how-

ever, governments continued to apply the reforms without giving rise to active and generalized opposition from their citizens.<sup>7</sup> Mexico, Bolivia, Colombia, Peru and Brazil all followed this path without running into serious trouble on the way. It was only later, when there was a resurgence of social tensions, that dissident voices were raised on behalf of those adversely affected by the reforms. In Mexico, Honduras, Bolivia and Argentina, these voices have gradually become louder. More recently, there have been mass meetings (in Chiapas and Montevideo) which have openly rejected the neoliberal paradigm in its various Latin American forms.

From the northernmost to the southernmost limits of the region, these expressions of rejection have included a wide variety of formally organized and informal sectors and bodies directly or indirectly representing the popular strata. Thus, for example, the Thirty-ninth Conference of the Latin American Confederation of Ministers of Religion, held in November 1996 in Tegucigalpa, denounced the neoliberal economic model as one of the causes of the poverty affecting the region. Various Central American bishops and archbishops (for example, those of El Salvador and Honduras) have made pronouncements in the same sense.<sup>8</sup> At the other end of the continent, trade union organizations of the MERCOSUR countries have identified neoliberalism as the cause of the deterioration in workers' living conditions.<sup>9</sup> With regard to privatizations in particular, which are one of the basic ingredients of the neoliberal recipe, the people of Uruguay (in a 1992 plebiscite) and of Ecuador (in a similar vote in 1995) rejected the transfer to the private sector of the telephone company and the social security system, respectively. At a meeting held prior to the annual assembly of the Inter-American Development Bank, held in Barcelona in March 1997, a number of mayors of Latin American cities questioned the process of privatization of public services.

**There has thus been a growing current of opinion which holds that the application of neoliberal policies has resulted in an increase in inequality and even poverty, a consequent resurgence of criminality in the**

<sup>6</sup> Other authors have made the same point. Bresser, Maravall and Przeworski (1994, p. 182), for example, note that "Stabilization attempts ..... generate social costs that make the continuation of reforms politically unpalatable under democratic conditions. Moreover, the technocratic style in which these policies are often formulated and implemented tends to undermine the consolidation of democratic institutions." This general assertion may be tempered in the light of the distinction made by Haggard and Kaufman (1995) between two phases of reforms: their initiation and their consolidation.

<sup>7</sup> The phenomenon of the adoption of reforms of this type under democratic regimes has given rise to various theoretical explanations for what Navarro (1995) considers as the "anomaly" of popular toleration of the economic adjustment processes. These explanations are analysed in the present article.

<sup>8</sup> In Honduras, declarations against the social effects of neoliberalism have been made not only by the Catholic Church but also by such representative institutions as the trade unions and the College of Economists.

<sup>9</sup> The trade unions of the four member-countries of this trade bloc held a coordinated day of protest in this respect in December 1996.

big cities, and even an increase in the political violence suffered by some countries where there are guerrilla movements (such as Peru, Colombia and Mexico).

In an era of new democratic regimes, this perception held by the population is an element of crucial importance which must be taken into account when applying economic policy reforms. Within this context, the social factor has acquired undoubted political weight. It has been argued that the adoption of these policies has become more difficult in the absence of the previous authoritarian governments and that this has brought with it a tendency towards what might be considered a certain autocratic type of behaviour on the part of the new democratic regimes.<sup>10</sup> The granting of extraordinary powers to the Presidents of Argentina and Brazil by the respective Parliaments and the dissolution of Congress by the President of Peru may be interpreted in this sense. In other countries, this social factor may have worked against Presidents in a weaker position; examples in this respect include the removal of the Presidents of Guatemala and, more recently, of Ecuador, as well as of the President of Venezuela, which will be referred to later. The President of Honduras, who began to apply a neoliberal economic scheme in 1994, stated in April 1997 that he had not signed a letter of intent with the International Monetary Fund because of the harshness of the measures that he would have had to apply.

These developments make it necessary to take account of the social circumstances of the countries in the design and application of economic policies if these are to be politically viable.<sup>11</sup> In particular, the reaction of the population, or the social factor, is of decisive importance. It seems reasonable, for exam-

<sup>10</sup> This is the line taken by, for example, Haggard and Kaufman (1995, p. 360), who also note that in Mexico the corporative-type system of representation of interests also played an important role, but likewise within an authoritarian institutional context. See also Heredia (1994) and Kaufman, Bazdresch and Heredia (1993) on Mexico, as well as Cavarozzi (1994) on the relationship between reforms and authoritarian regimes. In view of these situations, some authors have questioned whether the Latin American democracies can really be considered as "consolidated" (see, for example, Gamarra (1994) and Acuña and Smith (1994)).

<sup>11</sup> This need has been pointed out by various authors. Rodrik (1996), for example, states in this respect that most economists have already realized that a good economic recipe requires an understanding of the political economy of the situation in question (p. 38). De Janvry, Fargeix and Sadoulet (1991) have even prepared an index of the "political feasibility" of economic policy results.

ple, to believe that the removal of the President of Ecuador by his country's Congress was due largely to the rapidity with which he tried to apply a drastic reform programme for which the population was not prepared.

In seeking to explain the reaction of the population to reform programmes, reference is often made to the importance of the prevailing economic context;<sup>12</sup> one aspect of the latter concerns the performance of the economy before the adoption of the measures in question, especially in situations of economic crisis. Gamarra (1994), for example, is not the only author who emphasizes this factor when he notes that the experience of Bolivia and Argentina—which did not managed to stabilize their economies in the early 1980s—suggests that stringent austerity measures only work when the economy has sunk to an all-time low.<sup>13</sup> In the same line of thought, it may be assumed that the acceptance of similar programmes in Argentina (a decade later), Brazil and Peru was due to the population's strong rejection of the previous situation of hyperinflation, which was absent in the case of Ecuador<sup>14</sup> and also in that of Venezuela. In this respect, the experience of the latter country, where neoliberal policies have been applied on two occasions, with different reactions by the population, could be very enlightening.

## 2. A special case: Venezuela

In 1989, the first exception to the peaceful acceptance of the neoliberal model in Latin America took place: in Venezuela, the announcement of a package of drastic measures of this type was received by the population with violent disturbances which are among the worst that ever happened in that country's history. Venezuela was the country with the longest background of formal democracy in the whole region: the last authoritarian military government went back to the 1950s, and three decades later most Venezuelans had grown up in a system of political parties and free elections where there was freedom of expression.

Yet it was these same Venezuelans who reacted violently and massively in February 1989 to the announcement of the economic measures adopted by

<sup>12</sup> The relation between economic performance and sociopolitical tensions has been explored by Acuña and Smith (1994).

<sup>13</sup> Gamarra, 1994, p. 4.

<sup>14</sup> See *Latin American Weekly Report*, 1997a.

the government of recently elected President Carlos Andrés Pérez: a set of measures presented under the title of "The Great Turning-Point of the Venezuelan Economy". Although there are discrepancies about the actual material cost of the disturbances in the streets, there is consensus on their seriousness: they resulted in hundreds of dead and extensive damage to property. From one moment to the next, the enormous popularity of the President, who had been elected two months earlier with the biggest popular majority in 25 years, was turned into one of the biggest rejections ever suffered by a President of that country. This situation paved the way for two attempted coups d'état three years later and finally for the removal of Carlos Andrés Pérez from office in 1993 on charges of corruption.

The political fate of the President also sealed the economic fate of the reform programme. Although some important components such as trade liberalization would continue, others, such as certain fiscal reforms, either did not survive the need for approval by Congress, or else their application was cut off half way. In 1994, President Rafael Caldera, elected on a platform based on rejection of his predecessor's economic programme, reacted to a sudden crisis in the financial system by imposing price and exchange-rate controls in the best pre-1989 tradition.

Fifteen months later, in April 1996, after the financial crisis had been largely solved but serious imbalances in the economy persisted, the same President announced to his country his decision to return to orthodox neoliberal measures through an

adjustment programme entitled "Agenda Venezuela", which, like the previous programme, enjoyed the endorsement and financial support of the International Monetary Fund. This time, however, the much-feared social explosion did not take place. Something had changed in Venezuelan society.

It is easy to explain this change on the basis of what might be called the social psychology of the country. Such a psychological mutation does not have any roots in economic reality, however. Parallel observation of the circumstances preceding the announcement of the two reform programmes could shed some light on what Moisés Naim, a former Minister of Industry of President Pérez, calls the political aspect of economic change.<sup>15</sup>

Such observation, which is summed up in the following pages, fits in with the explanations of the influence of economic crises on popular acceptance of the austerity which accompanies reforms and stabilization programmes. Venezuela's experience makes it possible to overcome a certain ambiguity which is inherent in these explanations<sup>16</sup> and shows in particular that, out of the various components of the economic mosaic, it is the existence of macroeconomic imbalances (pressures on prices and the external accounts) that leads the authorities to take corrective measures, but it is the performance of the real variables (the product, employment and the purchasing power of the population) which conditions the population's acceptance of such measures. When the pressures on these two sides take temporarily divergent directions, the social fabric is in danger of being torn apart.

## II

### A tale of two adjustments: the economic context

In Venezuela, the periods just before 1989 and 1996 were marked by serious macroeconomic imbalances; in both cases, an attempt was made to bring the economy back into balance by applying voluntaristic measures which ran counter to the functioning of the markets. The imbalances showed themselves in the fiscal, monetary and external areas. Albeit with substantial differences, in both periods substantial fiscal and balance of payments deficits, overvalued exchange rates, inflationary pressures that were hard to

contain and negative real interest rates all existed side-by-side. These coincidences concealed rather different situations of the "real" economy, however; in particular, the short-term changes in the product and employment were more obviously unfavourable

<sup>15</sup> For a very clear description of the 1989 adjustment programme and its historical context, see Naim (1993).

<sup>16</sup> This ambiguity was pointed out by Rodrik (1996).

in the months before 1996.<sup>17</sup> The greater incidence of these latter variables in the population's perception of the economic situation of the country may explain its different reactions to the two adjustment programmes, together with other factors such as the awareness of the inability of heterodox measures to solve the growing crisis of a country used to oil bonanzas.

### 1. Macroeconomic imbalances

In both 1988 and 1995, the imbalances that the Venezuelan economy had been suffering for some time past made it urgently necessary to adopt suitable adjustment measures. Albeit in different contexts and with different backgrounds, on both occasions the loss of international reserves had become unmanageable in spite of the prevailing exchange controls, while inflationary pressures, further increased by the deficit in the public accounts, had escaped from the grasp of the price control policy.

#### a) *The drain on the international reserves*

It seems appropriate to begin to unravel the Venezuelan macroeconomic tangle by starting with the external sector. In Venezuela, the country's place in the world economy, which, as in other countries, has increasingly conditioned its economic policy options, is of a special nature because of the dependence on oil. This dependence has had a decisive influence on the country's economic structure and, ultimately, on its social fabric.

In 1988, Venezuela's income from oil exports accounted for over 80% of the total value of the country's external sales, and this was not even a particularly favourable year in the volatile trajectory displayed by crude oil prices since 1973. The central government obtained around 60% of its current resources from the State operation of the oilfields. In 1995, the weight of oil in exports of goods remained as high as ever, and in spite of the recent diversification of the sources of fiscal revenue, oil still provided half the government's budgeted income (figure 1).

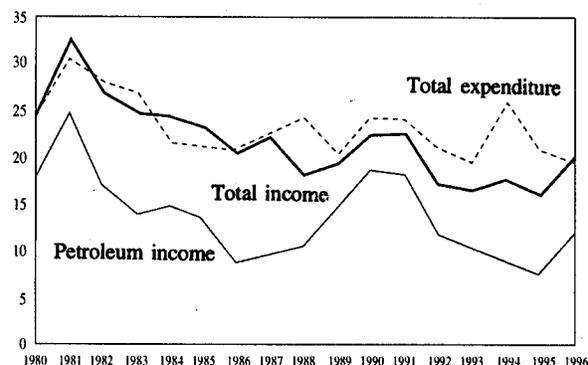
The importance of this foreign currency income for the financing of the State means that fiscal policy is very closely linked with exchange policy. Variations in the exchange rate of the bolívar are immediately reflected in the availability of State resources

<sup>17</sup> See ECLAC, *Economic Survey of Latin America and the Caribbean* (various issues).

FIGURE 1

### Venezuela: Petroleum and the public finances, 1980-1996

(Fiscal income and expenditure, as percentages of GDP)



for financing local currency expenditure. The evolution of the external sector thus conditions the achievement of the domestic balances even more than in other countries.

Both in 1988 and in 1995, the balance of payments was running a deficit and the Central Bank of Venezuela (BCV) had to cope with a constant loss of international reserves. In 1988, these losses were occurring for the third year running and came close to the enormous amount of US\$ 4 billion, or 30% of the existing reserves. In 1995, the drain on the reserves came to US\$ 1.9 billion, likewise after three years of negative figures. The position with regard to foreign assets in the hands of the Central Bank was more critical in 1988. In both years, the authorities were unable to avoid running into arrears on their external debt service.

These situations marked the final failure of the policy adopted with the aim of preserving the country's external payments capacity: exchange controls at the officially fixed exchange rate. The restrictions on the free availability of foreign exchange helped to keep external capital away and encouraged the flight of domestic capital. Thus, capital inflows were unable to offset the unfavourable evolution of current transactions. In 1988, the situation was made worse by the fall in oil prices on international markets, unlike the position in 1995, when the evolution of those markets favoured export income and helped to achieve a trade and current account surplus. In contrast, in 1988 the current account had registered an enormous deficit equivalent to 10% of GDP, fostered by a merchandise trade balance that was negative for the first time in 10 years.

The other factor common to both periods which had an adverse effect on the external accounts was the boost given to imports by the unsustainable maintenance of the official exchange rate, which resulted in the speculative accumulation of stocks due to expectations of devaluation. In 1988, the value of external purchases shot up by 24% and in 1995 by 30%, despite the sluggishness of economic activity in the latter year.

The exchange-rate system in force in 1988 was based on a multiple system of official exchange rates whose average levels at the end of the year were only half that prevailing on the parallel market. At the end of 1995, there was a single official exchange rate (devalued in December), after the authorities had experimented for a short time with a different exchange rate for travel, deriving from the virtual free market implicit in the transactions of Brady bonds, whose trading had been authorized on the Caracas stock exchange. The ratio between the official rate and the rate on this free market reflected an overvaluation of more than 50% for the former, which went down to 18% after the devaluation.

#### b) *The fiscal imbalance*

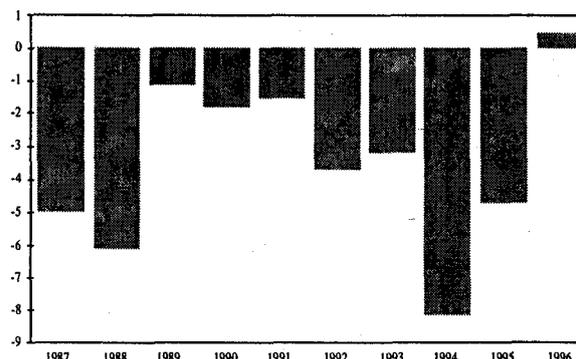
Despite the enormous resources generated for the State by oil sales, the government's difficulties in financing its expenditure and achieving balanced accounts has emerged as one of the main factors of macroeconomic imbalance in Venezuela. In contrast with the rigidity of expenditure, the variability and uncertainty of its income, which depends on the volatile international oil markets, has often faced the government with the need to contract debts in order to close the gap between the two. In 1988, it proved impossible to finance the expansion in expenditure with ordinary resources because of the unfavourable evolution of oil income in dollars and the maintenance of an overvalued exchange rate, even though the 1987 devaluation had led to a substantial increase in revenue in bolívares. As a result, after two years of slight deficits on the accounts, the fiscal deficit increased considerably to 5% of GDP: a level which had not been registered since 1982 (figure 2).

The fiscal situation was even more alarming in 1995. The acute crisis in the banking system which had broken out at the end of 1993 had obliged the State to intervene in a number of financial establishments while also providing huge amounts of financial aid to avoid the collapse of the banking system. Some two million million bolívares had to be

FIGURE 2

**Venezuela: The central government in the red, 1987-1996**

(Financial position, as percentages of GDP)



paid out to settle the financial emergency. In 1994, this aid was equivalent to 13% of GDP, and although smaller in 1995 it still represented a heavy burden on the budget in that year. Despite the efforts to obtain additional fiscal resources and the rise in the value of oil sales, the government still registered deficits equivalent to 8% and 5% of GDP in 1994 and 1995, respectively. The public sector deficit as a whole amounted to 14% and 6% of GDP in those two years.

Because of the serious difficulties in gaining access to international credit markets mentioned earlier and the limitation of the resources available on the domestic market, these deficits could only be financed through the sale of public securities. It was necessary to make very extensive use of credit from the Central Bank of Venezuela. In 1988, most of the deficit was financed by using the Treasury reserves, which went down by almost 50% and by the end of the year stood at their lowest level for the past four years. Central Bank credit to the public sector also played a prominent role in financing the deficits in 1994 and 1995. The expansion in the money supply resulting from this form of financing was only partly offset by the contraction in the international reserves, so that often the monetary authorities had to make costly interventions in order to absorb the liquidity injected into the system. Finally, this further increased pressure on prices.

#### c) *The increase in inflationary pressures*

The expansionary financing of the fiscal deficits gave rise to pressures on prices which put an end to the long period of low inflation in Venezuela: a country which had been free of the hyperinflationary ex-

cesses typical of other Latin American countries. In 1987, the increase in consumer prices reached the unprecedented level of 40%, which only went down by five percentage points in the following year, when the rate of inflation was twice the average for the 1970s. The situation prior to 1996 was still worse. The year before, the increase in inflation had amounted to 57%, after the 71% increase registered in 1994, while in April 1996 the rate of inflation for the previous 12 months came to 86%.

Although these figures are extremely unfavourable against the historical background of Venezuela, they still do not reflect the seriousness of the pressures on prices, since the authorities had opted for a system of official price controls. This policy came up against the difficult task of concealing the tensions created by the abundant liquidity and, from time to time, by maxi-devaluations or expectations of devaluation of the currency which resulted in a decline in the demand for money.

The magnitude of these underlying pressures was made clear by the evolution of prices after controls were lifted, which was also furthered by the respective devaluations of the bolívar. In May 1989, the twelve-month cumulative increase in prices reached three digits for the first time in the history of Venezuela, and inflation at the end of the year stood at 81%. This story was repeated in 1996; in September, five months after the initiation of the adjustment programme, the 12-month inflation reached a new peak of 115%. On both occasions, the authorities were facing an inflationary spiral that was increasingly difficult to control without causing fatal distortions in the functioning of the economy.

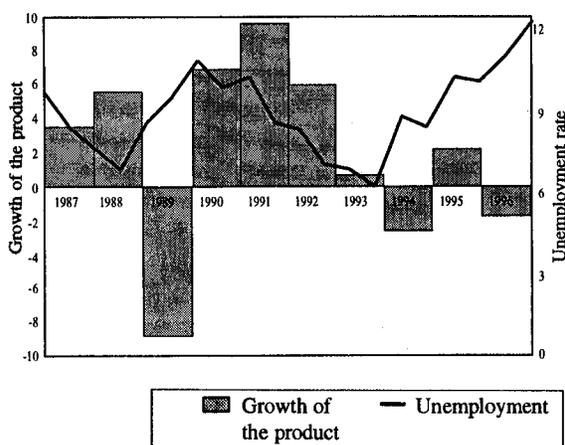
The evolution of the general price level also affected other key relative prices of the economy, such as interest rates, which had negative real values in both periods, thus discouraging private saving and making the financial establishments' work of intermediation more difficult. In the last quarter of 1988, real interest rates on loans and deposits, which had been going down since 1986, were close to -40%. In 1996 the situation was similar, although the spread between interest rates on loans and deposits had increased to approximately ten percentage points.

## 2. The "real" economy

Although there were clear similarities between the periods before 1988 and 1996 as regards the macro-economic imbalances and the policies applied, the two situations also displayed significant differences as regards the performance of the real variables of

FIGURE 3

**Venezuela: Ups and downs of the economy, 1987-1996**  
(Growth of the product and unemployment rate, %)



the economy: the product and employment. This performance was notably worse in the second period than in the first (figure 3). It would not be unreasonable to suppose that, outside the circles of economists and the government, those variables had much more influence than the balance sheets of the Central Bank and the Ministry of Finance on the Venezuelan population's general perception of the situation.

### a) The evolution of economic activity

Economic growth had different characteristics, both quantitatively and qualitatively, in the months preceding the adoption of the two adjustment programmes. Quantitatively, growth was higher in 1988, when the product grew by almost 6% in spite of the fragile nature of the bases for that growth which was already referred to.<sup>18</sup> This followed three consecutive years of growth after the crisis of the early 1980s, so that in 1987 the GDP had recovered its pre-crisis level, and the growth registered in 1988 made possible a 3% increase in the per capita product. In 1994, in contrast, economic activity fell by 2.5% and barely recovered the lost ground in the following year, so that the per capita GDP deteriorated.

Even more significant are the qualitative differences regarding the composition and forms of economic growth. Presidential elections were held in

<sup>18</sup> The figures on the growth of the gross domestic product were prepared by ECLAC on the basis of official figures of the country. The latter may differ somewhat from those given in this article because the weighting used had a different base year.

December 1988. In the previous months, the authorities continued and even increased the expansionary line they had taken in economic policies since 1986. Fiscal expenditure, especially that devoted to investment, was considerably increased, and monetary policy was gradually eased. As a result, domestic demand (both public and private) became the main factor in the growth of economic activity; private demand was partly due to the accumulation of stocks in the light of the uncertainty generated by the exchange policy.

This led to a generalized and increasingly rapid expansion of domestic activity, except for oil and gas extraction, which were affected by severe external restrictions, and, to a lesser extent, agriculture and transport. Except for the non-petroleum mining sector, whose strong growth was due to the surge in external demand, the other branches of production of goods were propelled by domestic consumption and investment. Public expenditure on infrastructure made up for the contraction in private housing construction, giving rise to growth of 6% in the construction sector as a whole. Manufacturing activity recovered by 5% after the poor results of the previous year, especially in the case of industries producing consumer goods. The financial sector showed great dynamism, as in the previous year, thanks to the diversification of banking services in response to the stagnation of the traditional credit market. The expansion in purchases of goods was a powerful stimulus for commercial activity. The community and personal services sectors also grew, although not so strongly.

However, over half the increase in domestic demand was satisfied with imported goods, so that the volume of external purchases increased by 20% to account for one-fifth of total supply: the highest proportion since 1982. This in turn increased the balance of payments imbalance already referred to.

The situation was radically different in 1994 and 1995. Against a background of domestic sluggishness, it was external demand which was the driving force in the economy and allowed the product to grow (although only slightly) in 1995. The petroleum sector, in particular, grew steadily at a rate of nearly 6% per year. In contrast, although the oil industry's investments in the country stimulated the activity of some domestic industries, the non-petroleum sector as a whole contracted significantly in 1994 and barely grew at all (less than 1%) in 1995, suffering from the stagnation or decline in consumption (especially by the public sector) and the marked fall

in public and private investment. The group of non-tradeable sectors as a whole went into a recession, with the worst result being that of the construction sector, which contracted for the third year running in 1995 (by 11%). Activity also slackened in commerce, restaurants and hotels, and motor vehicle manufacture.

These differences in the economic growth pattern between the two periods directly affected the living conditions of the population, which, as we shall see below, markedly deteriorated in the years before 1996, in contrast with what had happened in 1988.

#### *b) Employment and wages*

In 1988, the increased production activity, together with the concentration of growth in sectors which generated large amounts of jobs (construction, commerce, etc.), caused employment to grow by 6%, thus making a total increase of nearly 20% in three years. Employment grew in all sectors except agriculture and basic services. As a result, the rate of open unemployment continued its downward trend and went down to 7.3% –its lowest level since 1982 and only half the level registered four years earlier. The reduction was particularly marked in the metropolitan area of Caracas and in Guyana, due in the case of the latter region to the investments in mining and electrical infrastructural works.

Within the framework of the usual collective negotiations, wages increased on average by 15% in the cities and 18% in rural areas. An 8% increase in the minimum wage was also decreed. These increases made up to some extent for the generalized rise in prices, but even so the purchasing power of workers went down for the second year running (by 11% in the case of urban workers and 10% in the case of rural workers), although the more plentiful employment opportunities meant that the deterioration in real family incomes was not so severe.

In 1995, in contrast, the expansion of the petroleum sector was not sufficient to absorb the nearly 600,000 workers entering the labour market, many of them induced to do so by the deterioration in real wages and living conditions in general. Thus, although the level of employment increased somewhat, so did the rate of open unemployment, whose upward trend culminated in a level of 11% for the country as a whole (12% in the cities) at the beginning of 1996 (figure 3).

In 1995, too, efforts were made to make up for the deterioration in the living conditions of the popu-

lation through wage adjustments and specific government measures, which included special allowances for the lowest-paid private sector workers, increases in public sector wages by 30% in accordance with the labour regulations, and readjustment of the urban

minimum wage from 21,000 to 31,000 bolívares. Because of the higher rate of inflation in this period, however, these measures were not able to prevent real wages in the cities from going down (by 14%) more than in 1988.

### III

## From the "Great Turning Point" to the "Agenda Venezuela"

These macroeconomic imbalances, which were similar in both periods, led the respective governments to apply measures of the same orthodox type in order to stabilize the economy,<sup>19</sup> as a necessary prerequisite for returning to a situation of sustained growth. The results corresponded both to the measures adopted and to the reaction that these provoked in Venezuelan society: a reaction which was also influenced, as already noted, by the evolution of the real variables: the product and, above all, employment.

#### 1. Same ills, same remedies ....

The cornerstone of the two adjustment programmes was liberalization of the economy: elimination of controls on prices (except for some staple goods), on the exchange rate (allowing the currency to float freely) and on interest rates. The 1989 programme also provided for the liberalization of foreign trade, with reduction of tariffs and elimination of controls and subsidies; against this background, Venezuela entered GATT in September 1990. Since this situation was not subsequently reversed, the 1996 programme did not include measures of this type and the policy of openness was continued.

Fiscal reforms, aimed at balancing the public accounts, were also a basic component of the two programmes, and were undoubtedly the element which had the greatest immediate impact on the living conditions of the population and their reaction. The measures to increase fiscal income included in particular the raising of the subsidized gasoline prices,

which were among the lowest in the world and which represented a particularly sensitive issue for the population of Venezuela and hence a question of high political voltage. These prices were doubled in February 1989, whereas in April 1996 they were increased almost fivefold, with future readjustments scheduled in both cases. In 1989, a start was made on the gradual introduction of a value added tax, the rate of which was raised from 12.5% to 16.5% under the 1996 programme. It was decided to increase the charges for such public services as electricity, water and garbage collection (by between 30% and 40% in 1989 and by between 35% and 65% in 1996). The privatization of public enterprises and State assets was promoted. Reforms were announced in the public sector, especially with regard to the system of pensions and benefits (in 1996) and the regulation of the financial system (in 1989), and in 1996 a capitalization fund was set up for the banking system in order to help rehabilitate the private financial establishments with funds lent by the World Bank and other agencies.

In addition to their fiscal objectives, both programmes included guidelines for the application of a restrictive monetary policy designed to further the objective of drastically reducing inflation after the freeing of prices, in line with the goals agreed on both occasions with the International Monetary Fund.

An important new feature of the 1996 programme was the greater emphasis placed on social expenditure, with the aim of reducing the unfavourable impact of the measures on the poorer sectors, thus reflecting a greater awareness of the importance of the "social factor" for the viability of the economic measures. Among other measures, it was planned to double the existing food subsidy, to provide a system of scholarships for the vocational train-

<sup>19</sup> For a synoptic comparison of the two adjustment programmes, see Bottome (1996).

ing of young people who failed to continue their studies, to double the pensions provided by the Venezuelan Social Security Institute, and to introduce a strategic food programme under which poor families would be provided with certain staple foods at only 60% of their market prices. In addition, because of the increase in fuel prices, a subsidy was provided for public passenger transport in order to prevent that rise from affecting fares. It was envisaged that altogether social expenditure would increase from the equivalent of 0.45% of GDP to 2%. Many of the measures were to receive financial support from the World Bank and the Inter-American Development Bank.

## 2. ... but different results?

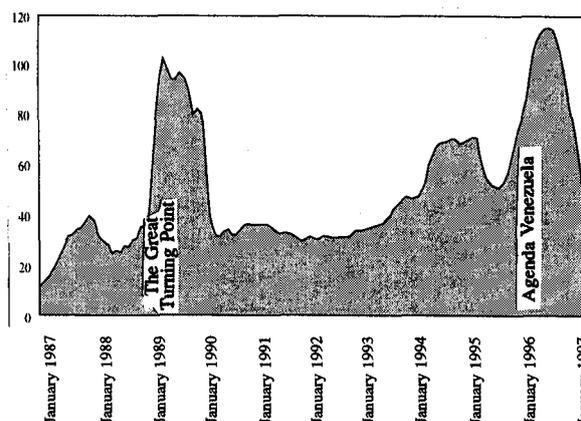
Initially, both programmes gave rise to an increase in inflation and a contraction in domestic demand which adversely affected the growth of the product. The increase in inflation (figure 4) took place immediately after the announcement of the measures. After the first shock, however, the monthly rate of inflation began to go down. In 1989, it went down from a maximum of 21.3% in March to 1.7% in December, while in 1996 it went down from 12.6% in May of that year to 1.6% in March 1997.

The adjustment in the product in 1989 was extremely abrupt. Thus, the gross domestic product registered an unprecedented drop of nearly 9% due to the contraction in domestic demand and above all the collapse of investment, which went down by 40%. Almost all sectors suffered the impact of the increase in the cost of inputs, mostly imported, the elimination or reduction of subsidies, and the rise in interest rates. The only exceptions were the petroleum industry, electricity production and community and personal services, which remained more or less unchanged. The first of these sectors was benefited by its orientation towards external markets, as also occurred with some manufacturing sectors, including certain foodstuffs and textiles. Manufacturing as a whole contracted by 10%, however, with the most seriously affected sector being the motor industry, which suffered a decline of 80% in domestic sales and an acute shortage of liquidity due to the exchange losses suffered in connection with letters of credit taken out during the previous year to pay for imports. There was also a considerable decline in the production of machinery, consumer durables and inputs for the construction sector, in line with the 30%

FIGURE 4

### Venezuela's roller coaster ride: Inflationary outbursts, 1987-1997

(Twelve-month cumulative monthly variation in consumer price index)



contraction in construction, which was particularly hard hit by the rise in interest rates.

The decline in domestic activity was reflected in a reduction in employment, even though the government decreed a freeze on dismissals up to December and an emergency public employment plan was begun in the last quarter of the year. Many unemployed sought refuge in the informal sector of the economy, where employment grew by 7% in 1989 and over 9% in 1990. Open unemployment increased by two percentage points, affecting over 9% of the economically active population in 1989. The situation got worse in early 1990, when the decree prohibiting dismissals expired, and the unemployment rate rose to over 11%.

The recessionary adjustment in the economy was apparently smaller in 1996, first of all because non-oil economic activity was already showing a downward trend and secondly, because the petroleum sector kept up a strong growth rate thanks to the favourable external market conditions. It was thus possible to keep the drop in the total gross domestic product down to 1.6%, although the non-oil sector contracted by 3.6%. The already high rate of urban unemployment, which was close to 11%, rose to over 12% in the second half of 1996. Almost half the working population of Venezuela was subsisting in the informal sector of the economy, and living conditions were becoming more and more precarious.

On both occasions, once it had got over the first shock economic activity began to recover in the

course of 1990 and 1997, respectively. In 1990, the gross domestic product grew by 7%, although this partial recovery was due above all to a big increase in petroleum sector activity (14%) and public investment. The recovery in private consumption was much more timid, and private investment continued to be depressed. The recovery was confirmed in the following two years; in 1991 the product once again grew vigorously (by almost 10%), and in 1992 it increased by 6%. The unemployment rate began to go down as from the second half of 1990, and stood at less than 7% in 1993.

Popular opposition to the economic programme begun in 1989 was reflected in a climate of political instability, however, which ended up by spoiling the expectations on which private consumption and, above all, private investment were based. At the political level, the government's difficulties prevented the full and complete application of the set of measures. The new regulations governing the banking system came into force with a considerable delay, at the end of 1993, too late to avoid the crisis in the banking system which broke out in December of that year. The rise in gasoline prices and the privatization process were interrupted in February 1992. The projected value added tax never reached the retail level, and all attempts to reform the social security system failed.

In this unfavourable climate, the upward phase in oil prices came to an end. As a result, the economy ran out of steam in 1993, so that the product stagnated and all components of domestic expenditure turned in negative figures. Economic policy lost much of its leeway for action and could not prevent a substantial rise in interest rates. In this context, towards the end of the year a series of bankruptcies of banking establishments began which very seriously burdened the State budget in the following months. In view of this emergency, as from June 1994 the new government imposed controls on the key variables of the economy: prices, the exchange rate, and interest rates. This marked the end of the first attempt to apply neoliberal reforms in Venezuela.

Would the second attempt suffer the same fate? One year after the adoption of the "Agenda Venezuela", the application of this programme of measures continued in a situation of stoical resignation on the part of the population. The privatization programme entered on its final stage after having registered some notable achievements, especially the sale of the State's shares in the CANTV telecommunications company, and the sale of companies in the alu-

minium, iron ore and steel sectors was scheduled for the following months. The economic measures had aroused the confidence of foreign investors: heavy inflows of external capital had turned the Caracas stock exchange into the star of the Latin American securities markets and, together with the favourable trend in oil prices, had fostered a heavy accumulation of reserves (which reached an all-time high in August 1997) and shored up the level of the bolívar, which had appreciated in real terms. In these circumstances, it had not been necessary to disburse the last two tranches of the standby credit agreed with the International Monetary Fund, which nevertheless continued to endorse the policies applied by the government. Several months of negotiations between the government, the trade unions and the business sector culminated in March 1997 with an agreement to improve the social security system and establish new pension funds, which was reflected in June in a reform of the Basic Labour Law.

On the other hand, however, the high social cost endured by a resigned Venezuelan population kept social tensions alive. When the country was celebrating 39 years of democracy, in January 1997, the public universities were paralyzed by a strike of professors, and the doctors, who had already obtained an increase in their salaries, used the same expedient to demand more equipment for their hospitals. The government had had to give way to similar demands by public officials. Other professional sectors, including the employees of the CANTV company and the school teachers, were considering going on strike to demand higher wages. Two months later, the trade unions took to the streets of Caracas to demand higher wages and respect for human rights and to oppose the privatization of State enterprises. A survey carried out in June of that year revealed that public opinion was heavily unfavourable to the government and pessimistic about living conditions and their prospects.<sup>20</sup>

The wage readjustments granted in the first half of 1997, which were necessary in order to make up for part of the accumulated lag and to relieve the heavy cost borne by the population, continued to burden the public finances, which had been stabilized for the moment thanks to the new boom in the oil market. The allocation of part of the extraordinary

<sup>20</sup> *Latin American Weekly Report*, 1997b.

resources obtained from that source in order to finance the increase in current expenditure for the wage adjustments shed doubts on the long-term credibility of the fiscal adjustment. In the final analysis, it was still not clear whether Venezuelan society

could definitively leave behind the cyclical fluctuations which have characterized it since the 1970s in line with the variations in oil income, swinging from expansionary phases financed with that income to periods of painful adjustment.

## IV

### Conclusions

In Venezuela, the drastic reforms undertaken in 1989 affected a population which, because it attached less importance to the macroeconomic imbalances than to the actual conditions of daily life, was not prepared to bear the sacrifices demanded of it, for although those imbalances made the reforms necessary, the deterioration in living conditions was not yet as serious as it would be some years later, so that the shock imposed by the reforms seemed excessive and made the reform process politically inviable. In order to forestall this, it would have been necessary, not to maintain the status quo, but to conceive more imaginative solutions which took account of the social reaction and the balance of forces at the political level.

In 1996, the "opportunity cost" of the reforms was markedly lower, because the population had personally suffered the consequences of other types of policies in the form of inflation and unemployment. Moreover, leaving aside the absolute level of living conditions, the immediate deterioration in those conditions brought about by the reforms was not as drastic as on the previous occasion.

This observation serves to highlight a fact which is apparently obvious but is often neglected or simply ignored, even by the politicians and international financial agencies actually involved in seeking a solution: i.e., the fact that economic reforms do not take place in a vacuum or in a sterile laboratory but in a

concrete social and political context which interacts with the economic content of the measures and affects their viability just as much or even more so than the latter. This element cannot be left out when appraising the viability of economic policies. It makes it necessary to take into account both the objective circumstances being faced by the population of the country and their subjective perception of those circumstances. While this crucial task may not be the responsibility of the average economist, it certainly is the responsibility of a good politician, who is ultimately responsible for all proposed social changes.

Explicit consideration of the "social factor" has thus been assuming increasing importance now that a fuller analysis of the neoliberal experience is beginning to be made in the region. This is recognized in one way or another by multilateral agencies such as the Inter-American Development Bank and has been clearly stated by leading personalities in the region.<sup>21</sup> Political leaders who still ignore this fact do so at their own risk. In Venezuela, these considerations are of decisive importance for the achievement of a social consensus which will finally make it possible to stabilize the economy around a growth model from which nobody is excluded and which leaves behind forever the fluctuations associated with the oil market cycles.

(Original: Spanish)

### Bibliography

- Acuña, C. H. and W. C. Smith (1994): The political economy of structural adjustment: The logic of support and opposition to neoliberal reform, in W. C. Smith, C.H. Acuña and E.A. Gamarra (eds.), *Latin American Political Economy in the Age of Neoliberal Reform: Theoretical and Comparative Perspectives for the 1990's*, New Brunswick, NJ, Transaction Publishers.
- Bottome, R. (1996): ¿Nuevo comienzo?, *Veneconomía mensual*, vol. 13, No. 7, Caracas, April.

- Bresser, L. C., J. M. Maravall and A. Przeworski (1994): Economic reforms in new democracies: A social-democratic approach, in W. C. Smith, C.H. Acuña and E.A. Gamarra (eds.), *Latin American Political*

<sup>21</sup> Statements in this sense were made, for example, by the Minister of Finance of Chile when he chaired the October 1996 meetings of the International Monetary Fund and the World Bank.

- Economy in the Age of Neoliberal Reform: Theoretical and Comparative Perspectives for the 1990's*, New Brunswick, NJ, Transaction Publishers.
- Cavarozzi, M. (1994): Politics: A key for the long term in South America, in W. C. Smith, C.H. Acuña and E. A. Gamarra (eds.), *Latin American Political Economy in the Age of Neoliberal Reform: Theoretical and Comparative Perspectives for the 1990's*, New Brunswick, NJ, Transaction Publishers.
- Clairmont, F. F. (1996): *The Rise and Fall of Economic Liberalism*, Penang, Southbound and Third World Network.
- De Janvry, A., A. Fargeix and E. Sadoulet (1991): The political feasibility of rural poverty reduction, *Journal of Development Economics*, vol. 37, Nos. 1 and 2, Amsterdam, The Netherlands, Elsevier Science Publishers, B. V.
- ECLAC (Economic Commission for Latin America and the Caribbean) (1997): *The Equity Gap: Latin America, the Caribbean and the Social Summit*, LC/G.1954(CONF.86/3), Santiago, Chile, 18 March.
- (several years): *Economic Survey of Latin America and the Caribbean*, Santiago, Chile.
- Gamarra, E. A. (1994): Market-oriented reforms and democratization in Latin America: Challenges of the 1990s, in W.C. Smith, C.H. Acuña and E.A. Gamarra (eds.), *Latin American Political Economy in the Age of Neoliberal Reform: Theoretical and Comparative Perspectives for the 1990's*, New Brunswick, NJ, Transaction Publishers.
- Haggard, S. and R. Kaufman (1992): Institutions and economic adjustment, in S. Haggard and R. Kaufman (eds.), *The Politics of Economic Adjustment: International Constraints, Distributive Conflicts and the State*, Princeton, NJ, Princeton University Press.
- (1995): Estado y reforma económica: la iniciación y consolidación de las políticas de mercado, *Desarrollo Económico*, vol. 35, No. 139, Buenos Aires, Instituto de Desarrollo Económico y Social (IDES).
- Heredia, B. (1994): Making economic reform politically viable: The Mexican experience, *Democracy, Markets and Structural Reform in Latin America*, London, North-South Center.
- Kaufman, R. R., C. Bazdresch and B. Heredia (1993): *The Politics of Economic Reform in Mexico: The Solidarity Pact of 1987-1988*, Papers on Latin America, No. 28, New York, Columbia University, Institute of Latin American and Iberian Studies.
- Keynes, J. M. (1936): *The General Theory of Employment, Interest and Money*, New York, Harcourt, Brace and Company.
- Latin American Weekly Report (1997a)*: Is the "Fujimorazo" a dead duck?, London, Latin American Newsletters, 11 February.
- (1997b): London, Latin American Newsletters, 8 July.
- Naim, M. (1993): *Paper Tigers and Minotaurs. The Politics of Venezuela's Economic Reforms*, Washington, D.C., A Carnegie Endowment Book.
- Navarro, M. F. (1995): Democracia y reformas estructurales: explicaciones de la tolerancia popular al ajuste económico, *Desarrollo Económico*, vol. 35, No. 139, October-December.
- Nelson, J. M. (1992): Poverty, equity, and the politics of adjustment, in S. Haggard and R. Kaufman (eds.), *The Politics of Economic Adjustment: International Constraints, Distributive Conflicts and the State*, Princeton, NJ, Princeton University Press.
- Przeworski, A. (1993): *Democracy and the Market. Political and Economic Reforms in Eastern Europe and Latin America*, London, Cambridge University Press.
- Rodrik, D. (1995): Las reformas a la política comercial e industrial en los países en desarrollo: una revisión de las teorías y datos recientes, *Desarrollo Económico*, vol. 35, No. 138, Buenos Aires, IDES.
- (1996): Understanding economic policy reform, *Journal of Economic Literature*, vol. XXXIV, No. 1, Nashville, TN, American Economic Association.
- The Economist Intelligence Unit (1997): *Country Forecasts* (CD-Rom), Latin American Business Intelligence, Oxford, Knight Ridder, 2 May.
- Vacs, A. C. (1994): Convergence and dissension: Democracy, markets, and structural reform in world perspective, in W. C. Smith, C. H. Acuña and E. A. Gamarra (eds.), *Latin American Political Economy in the Age of Neoliberal Reform: Theoretical and Comparative Perspectives for the 1990's*, New Brunswick, NJ, Transaction Publishers.
- Williamson, J. (1990): What Washington means by policy reform, in J. Williamson (ed.), *Latin American Adjustment: How Much Has Happened?*, Washington, D. C., Institute for International Economics (IIE).
- Williamson, J. (ed.) (1994): *The Political Economy of Policy Reform*, Washington, D. C., IIE.

# How non-traditional are *non-traditional exports?* The experience of seven *countries of the* Caribbean Basin

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In the six Central American countries—Costa Rica, El Salvador, Guatemala, Honduras and Nicaragua, which make up the Central American Common Market, and Panama—non-traditional exports increased in the 1970s, went down between 1980 and 1986 because of macroeconomic imbalances, armed conflicts and the crisis in the Central American Common Market, but grew once again in the second half of the 1980s and the early 1990s. Except in Nicaragua and Honduras, the share of such exports in total exports increased, reflecting the general trend towards modernization of the export structure and reduction of the vulnerability of the balance of payments to fluctuations in the prices of traditional exports. The qualitative improvement in the export structure has been only limited, however. On the one hand, the role of non-traditional exports of agricultural origin has been maintained and in many cases has increased, while on the other hand, none of the countries have markedly increased the share of industrial exports that make intensive use of human capital or technology. Among the factors which have most influenced the performance of non-traditional exports are investment, the real exchange rate and, in the case of Costa Rica, fiscal incentives. Non-traditional exporters in Central America and the Dominican Republic have been more sensitive than their traditional counterparts to changes in relative prices. In order to promote exports, governments must maintain competitive real exchange rates and, since the size of the exportable supply is strongly dependent on investment, they must also maintain macroeconomic stability and apply policies that encourage domestic saving.

# I

## Introduction

The following section of this article (section II) contains a statistical analysis of the quantitative and qualitative changes in the non-traditional exports (NTE) of the five member countries of the Central American Common Market (CACM) and the Dominican Republic over the period 1970-1992, using a classification based on the extent to which they use the various factors of production (factor intensity). The evolution of NTE and of their composition indicates, on the one hand, an increase in the relative

importance of these exports, but on the other hand, the lack of any substantial progress towards the modernization of their structure. An econometric study is then presented on the main factors determining the evolution of NTE in the countries in question (section III), with emphasis on the role of investment and the real exchange rate. Finally, some brief conclusions are presented which sum up the main results and their possible economic policy implications (section IV).

# II

## Growth, composition and technology-intensiveness

### 1. Definition and classification of non-traditional exports

The evolution of the external sector in the Central American economies has been based historically on a very small number of traditional exports (cotton, sugar, coffee, bananas). Although these continue to have considerable relative weight, this has been going down over the last quarter-century and they now account for less than half of total exports of goods in most of the countries of the subregion.

Other primary export categories based on the exploitation of scarce and non-renewable natural resources, sometimes called "old non-traditional exports", now have a very stable presence in exports and –what is most important– their economic behav-

our is very similar to that of the four traditional export products.<sup>1</sup>

In view of the statistical and econometric objectives of this study, a uniform and relatively simple criterion, applicable to all the countries concerned, was adopted for the identification of old non-traditional exports. According to this criterion, which is based on the three-digit level of the Standard International Trade Classification (SITC), old non-traditional exports comprise cocoa, tobacco (unprocessed), spices, meat and live animals, shrimps and other seafood, wood, petroleum, leather, silver, lead and zinc. Along with bananas, coffee, cotton and sugar, these products make up the traditional exports group, while all other exports are non-traditional exports.<sup>2</sup> At this initial stage, no distinctions are made within the

□ This article is based on a study prepared as part of a research project, carried out in the ECLAC Subregional Headquarters in Mexico during 1995, on the degree of preparation of the small Central American and Caribbean countries for membership in a hemispheric integration treaty. The author wishes to thank a number of his colleagues for their comments and assistance, especially the critical advice given by Juan Alberto Fuentes, while making it clear that none of them bear any responsibility for any errors or shortcomings which may still exist in the text.

<sup>1</sup> The evolution of these industries is mostly affected by long-term trends and ecological links, and their production functions tend to be inelastic with respect to prices.

<sup>2</sup> For lack of homogeneous data based on the SITC, the series on the non-traditional exports of the Dominican Republic was reconstructed from statistical information taken from ECLAC studies. Although less rigorously comparable from the methodological point of view, this classification of non-traditional exports is conceptually similar to that used in the other countries studied.

group of non-traditional exports in terms of their geographical origin.<sup>3</sup>

In view of the limitations regarding the availability and comparability of historical data, this study has drawn its information on international trade flows from the Latin American and Caribbean External Trade Data Bank (BADECEL) developed by ECLAC. Because of the different methodologies used for collecting the information, the data on exports taken from BADECEL may differ from those given in country studies by ECLAC or other ECLAC databases. The main reason for using BADECEL is that it facilitates the breakdown of non-traditional exports into product groups at the SITC three-digit level, thus making it possible to identify the relative weight of non-traditional exports that make intensive use of technology and human capital.

Furthermore, the data for the Dominican Republic are different from those for the other countries because, since they come from BADECEL, they were obtained from different sources (including the *Economic Survey of Latin America and the Caribbean*, published by ECLAC).

## 2. Classification of non-traditional exports by sectors and factors

In this article, NTE were divided first of all into two main groups: agricultural and industrial. The first of these comprises vegetable and animal products without any form of processing (or, in some cases, with the basic processing typical of agroindustry),<sup>4</sup> while all the others are industrial.

Four categories of industrial NTE were then established on the basis of their intensity of use of: i) human capital, ii) technology, iii) unskilled labour and iv) natural resources.<sup>5</sup> This classification was originally proposed by Fukusaku (1992) in a study on trade among the Asian Pacific countries. Here, we are only interested in the first three groups in Fukusaku's classification, corresponding to manufac-

tures, for measuring the technology-intensiveness of NTE. Agricultural and agroindustrial products, which make up a substantial part of Central American NTE, are naturally excluded from this analysis of factor use. Moreover, Fukusaku's classification is based on the three-digit level of the SITC, so that it only permits a very partial approximation to the qualitative evolution of the subregion's exports, since it is not capable of identifying those forms of technical progress which do not involve a change from one category of product to another, but which have become increasingly important over the last two decades. In Central America, for example, the use of improved technology and the modernization of agricultural NTE have been very important phenomena.

With few exceptions –the most important of which is probably that of Chile in the 1990s– successful late-industrializing countries have sooner or later had to redirect their export structure towards increasingly sophisticated manufactures in order to keep up their market shares. Non-traditional exports which make intensive use of human capital and technology correspond to the most advanced and modern types of products, which tend to be in the fastest-growing segments of world markets. The evolution of their relative weight is therefore an indicator of the technology-intensiveness of such exports and makes it possible to predict a country's capacity to penetrate export markets.

However, manufactured NTE making intensive use of unskilled labour –essentially textiles and clothing– are usually those that grow fastest in countries like those covered by the present study, which so far only show a very modest level of industrial development.

## 3. Main similarities and differences

The growth of NTE as a whole between 1970 and 1992 was greatest in Panama and Costa Rica, only mediocre in El Salvador, Honduras and Guatemala, and lowest in Nicaragua (the only one of the countries studied where such exports, measured in current U.S. dollars, actually went down).<sup>6</sup>

The long-term performance of all the Central American countries was severely affected by the crisis of the 1980s: in the critical 1980-1986 sub-period (1978-1986 in the case of Nicaragua), NTE went

<sup>3</sup> In this respect, this study differs from most of the other studies on the non-traditional exports of the Central American countries because they do not generally consider exports to neighbouring countries as being non-traditional.

<sup>4</sup> According to the three-digit level of the SITC, these NTE correspond to groups 001 to 245 (excluding of course those classified as traditional), plus groups 291 and 292 (crude animal and vegetable materials).

<sup>5</sup> The total of these four groups is less than the global total for industrial NTE.

<sup>6</sup> The statistical trends referred to in this section are based on the figures in table 1.

TABLE 1

**Central America and the Dominican Republic: Growth, composition and technology-intensiveness of non-traditional exports (NTE)**  
(Percentages)

	Growth rate <sup>a</sup>		Share of NTE in total exports		Share of agricultural NTE in total NTE		Share of advanced manufactures in NTE		Share of subregional market in NTE		Share of United States market in NTE	
	1970 1992 (1)	1980 1986 (2)	1970 1992 (3)	1970 1992 (4)	1970 1992 (5)	1970 1992 (6)	1970 1992 (7)	1970 1992 (8)	1970 1992 (9)	1970 1992 (10)	1970 1992 (11)	1970 1992 (12)
Costa Rica	12.7	7.1	18.3	48.8	15.9	31.9	28.2	20.0	55.8	24.9	5.8	37.7
El Salvador	3.5	-11.2	48.5	58.8	6.0	20.7	16.8	14.2	36.3	71.6	5.8	10.8
Guatemala	7.0	-12.9	34.7	46.8	30.6	36.8	9.7	5.8	54.3	60.9	4.7	18.5
Honduras (1978-1986)	6.1	-17.5	26.5	25.9	21.7	36.0	5.6	6.8	33.7	21.6	24.0	46.9
Nicaragua	-1.2	-17.7 <sup>b</sup>	27.3	19.7	35.1	39.8	19.8	4.3	57.3	53.4	8.0	10.7
Panama	14.3 <sup>c</sup>	4.7	6.6	30.6	31.7	42.3	6.3	9.2	50.0	33.2	7.8	41.5
Dominican Republic	7.5 <sup>d</sup>	9.0	...	...	...	...	...	...	...	...	...	...

<sup>a</sup> Growth rate of NTE in current U.S. dollars (1970-1992).

<sup>b</sup> 1978-1986.

<sup>c</sup> 1970-1993.

<sup>d</sup> 1973-1993.

down in all the CACM countries, although the decline was not uniform, since it was especially serious in Nicaragua and Honduras but relatively milder in Costa Rica, while NTE continued to expand in Panama, albeit more slowly.

Between 1970 and 1992, the share of non-traditional exports in total exports increased in most of the countries studied. El Salvador continued to have the "least traditional" export structure: NTE formed almost half the total in 1970 and a little under 60% in 1992. The most striking change was in Costa Rica: there, the share of NTE in total exports, which was only 18% in 1970 (the lowest of the five CACM countries), rose by over 30 percentage points to stand at almost 50% in 1992. In Guatemala the increase was not so great. The relative weight of NTE in the exports of Panama, which was particularly low in 1970, rose rapidly and amounted to over 30% in 1992. In Honduras and Nicaragua, however, the share of NTE went down (see table 1, columns 3 and 4).

The data also reveal an interesting and unexpected fact: in all the countries studied (with the possible exception of the Dominican Republic)<sup>7</sup> the relative importance of agricultural NTE has been increasing. The figures reflect the different levels of success

achieved by the Central American countries in their efforts to modernize their respective export structures, but in all of them the development of NTE has shown a bias towards non-traditional agricultural products rather than growing specialization in manufactures. As already noted, this phenomenon was particularly marked in Costa Rica, where the share of agricultural products in total NTE doubled in the course of the period studied. At the end of the period, however, this share was even higher in Panama, Nicaragua, Guatemala and Honduras, although it had not grown so markedly as in Costa Rica. Even in El Salvador—the country with the export structure most oriented towards manufactures—the proportion of agricultural NTE in total NTE more than trebled over the period (see table 1, columns 5 and 6).

In all the countries studied, the growing specialization in agricultural NTE has not been accompanied by any clear qualitative improvement in the structure of manufactured exports. The values attained at the beginning and end of the period studied are given in table 1 (columns 7 and 8), through a simple indicator of qualitative industrial development: the proportion of "advanced" manufactured exports (those making intensive use of human capital and technology) in total NTE. In 1970, Costa Rica had the highest proportion, and it still retained this position at the end of the period, although a good deal less markedly. The relative weight of "advanced" manufactures went

<sup>7</sup> It was not possible to study the evolution of the Dominican Republic's NTE systematically, for lack of data.

down slightly in El Salvador and quite markedly in Nicaragua. In the other countries, where this indicator had begun the period at a very low level, it went down still further in Guatemala and rose only marginally in Honduras and Panama.

The relative importance of the subregional and United States markets for NTE evolved differently among the countries of the subregion over the period, even though all of them have increased the proportion of their exports sent to the United States in recent years. In 1970, the Central American countries sent all their NTE to other countries of the subregion, the only exception being Honduras, whose biggest market was the "rest of the world". At the end of the period, two countries (El Salvador and Guatemala) had increased their dependence on the CACM, while the others, especially Costa Rica and Panama, had reduced their dependence on the subregional market. The orientation of NTE towards the United States market was particularly marked in the case of Panama and Costa Rica, but not so pronounced in the case of El Salvador, Guatemala and Nicaragua (see table 1, columns 9-12).

Finally, the Dominican Republic's non-traditional export activities have been marked by the dominance of the free zones on the one hand and the United States market on the other. Other NTE have been on a relatively minor scale and have not yet recovered fully from the slump suffered in the early 1990s.

#### 4. Possible explanations of these similarities and differences

Among the countries studied, Costa Rica and Panama have been the most successful in expanding their NTE over the period. The long-term growth rate was slightly higher in Panama than in Costa Rica, but if we take into account the fact that Costa Rica suffered the impact of the Central American crisis and managed to modernize its export structure more than Panama, then its global performance was probably better. Although the fiscal costs of the Tax Credit Certificates (CAT) programme have been questioned, it is also true that Costa Rica's export promotion policy did succeed in achieving its main objective.

The other Central American countries suffered the impact of the armed conflicts and the collapse of the subregional market in the first half of the 1980s much more severely than Costa Rica. All of them have shown signs of recovery in more recent years,

but none of them have completely got over the effects of the crisis. According to their respective NTE performances in 1986-1992, the most promising prospects are in El Salvador and Guatemala, but the outlook is still very gloomy in Nicaragua.

Except for Nicaragua and Honduras, all the countries studied modernized their export structure during the period, at least in terms of becoming less dependent on traditional exports. The most successful in this respect was Costa Rica.<sup>8</sup> The "development model" for NTE, which is very similar in all the countries, has been marked by growing importance of agricultural NTE and the absence of any clear trend of manufactured exports towards technologically more advanced branches.

Since the second half of the 1980s, the importance of the United States as a market for the Central American countries' NTE has been increasing, especially as a result of the better access conditions provided by the Caribbean Basin Initiative (CBI) and other preferential trade openness measures taken by the U.S. Government. The subregional market continues to be most important for El Salvador, Guatemala and Nicaragua, however.

The pattern followed by the Dominican Republic has been different from that of the CACM countries, although in the latter, too, growing importance has been assumed by in-bond assembly activities ("maquila") on the one hand and the United States market on the other. The steady expansion of the assembly industry does not seem to have transmitted any major multiplier or anticyclical impulses to the rest of the Dominican economy, at least up to the early 1990s. In view of the modest performance of the domestically-owned NTE activities in recent years, there do not seem to have been any significant transfers of technology from the free zones to the rest of the economy. Consequently, the extremely dichotomous strategy of openness to the exterior applied by the Dominican Republic does not escape the criticisms traditionally levelled against this kind of development model.

<sup>8</sup> In 1992, El Salvador still had a bigger proportion of NTE in its total exports than Costa Rica, but the growth of that share over time and the growth of NTE as a whole were much less dynamic. Furthermore, El Salvador's continuing dependence on industrial exports to the rest of the subregion suggests a lower overall level of competitiveness than in the case of Costa Rica (which has successfully directed its exports to the United States market), unless the Central American integration process receives a big boost in the near future.

### III

## Decisive factors for non-traditional exports

### 1. Econometric studies on the exports of Central American and Latin American countries

Although no general econometric study has been made of the factors that most influence the evolution of the NTE of the Central American countries and the Dominican Republic, there are studies on individual countries, such as Costa Rica. There are also other analyses of the problems of intra-Central American trade and regional integration (Cáceres, 1994; ECLAC Subregional Headquarters in Mexico, 1995) which, although not directly aimed at estimating an export function for NTE, nevertheless contain interesting quantitative results which may usefully be compared with those given here.

Moguillansky (1995) refers to a number of econometric studies on the factors which determine the evolution of exports in various Latin American countries.<sup>9</sup> Although some of these studies make references to a theoretical framework in which two of the factors explaining export supply are production capacity and its level of utilization (see Moguillansky, 1995, equation on p. 96), no other study reviewed by Moguillansky directly considers investment as an explanatory variable in the equation, as is done in the present study.

Cáceres (1994) presents a study on the costs and benefits of Central American integration which forms part of an extensive tradition of studies on this matter.<sup>10</sup> Cáceres' analysis, which is based on various quantitative exercises, contains interesting observa-

tions on the respective roles of intra-regional and extra-regional exports and their interaction with other macroeconomic variables: extra-regional exports, in contrast to intra-regional ones, are a key factor in national saving in Guatemala, El Salvador, Honduras and Costa Rica;<sup>11</sup> the multiplier effect of integration through greater intra-regional exports is not homogeneous, since Guatemala and El Salvador are the main beneficiaries, while Costa Rica is relatively penalized by its peripheral geographical location; in spite of the modest level of industrial development of the Central American countries, the weight of intra-industry trade is substantial and growing; and intra-regional exports are positively correlated with extra-regional ones, and the former can serve as a learning phase for companies before embarking on the latter.

A global study on the present state and future prospects of Central American integration (ECLAC Subregional Headquarters in Mexico, 1995) presents the results of a gravity model which explores the determining factors in intra-CACM trade. The analysis of bilateral flows covers the periods 1978-1986 and 1987-1993. The existence of a subregional trade preference agreement favoured intra-regional imports and GDP growth<sup>12</sup> in both importing and exporting countries. In contrast, depreciation of the bilateral exchange rate and greater distance had a negative effect on trade. It is interesting to note that the coefficient of the variable representing the existence of a subregional trade agreement was smaller in the second period than in the first, which may indicate progressive erosion of regional preferences due to the process of general trade liberalization carried out in the CACM countries.

<sup>9</sup> Navajas (1993) on Argentina; Zini (1988) on Brazil; Villar (1992) on Colombia; Gaba and Araya (1993) on Costa Rica; Moguillansky and Titelman (1993) on Brazil, and Peñaloza (1988) on Mexico. The results of these studies (many of which have not been formally published) and of other econometric studies on Latin American exports were also commented upon in ECLAC, 1995, chapter IV.

<sup>10</sup> These studies include many documents and articles produced by the ECLAC Subregional Headquarters in Mexico and the Permanent Secretariat of the General Treaty on Central American Economic Integration (SIECA), as well as other publications cited by Cáceres, including Cáceres and Quintanilla (1990), Laumas (1982) and Webb and Feckler (1993), which refer more specifically to exports.

<sup>11</sup> This means that there must be a causal relation in both directions between extra-regional exports and saving, since the latter (through investment) is also a key factor in the level of exportable supply. This question is important and could well be addressed in future studies.

<sup>12</sup> In the early 1980s, the decline in per capita GDP caused by the Central American crisis had a strong negative impact on intra-regional trade.

## 2. Factors influencing the evolution of non-traditional exports

In theory, there are various factors which could have affected the evolution of NTE in Central America and the Dominican Republic. As we shall see below, however, only some of them can be represented in the structure of relatively simple econometric models.

### a) *Investment*

The behaviour of investment has a direct effect on the expansion of production capacity. Furthermore, non-traditional export-oriented activities are among the youngest sectors of the economy and are therefore linked with the most recent investments.

In general terms, governments can foster the animal spirits of the private agents in many different ways. Thus, they can increase public investment in infrastructure and services, attracting private productive investment, or else they can increase the country's saving and investment capacity through monetary and fiscal policies and specific measures designed to generate forced saving (by implementing compulsory retirement saving schemes, for example).

Alternatively, they can use exchange-rate, fiscal and trade policies to cause relative prices to evolve in a manner which does not adversely affect the profitability of production activities (especially those oriented towards exports); likewise, they can relax or tighten controls on capital movements to promote foreign direct investment or induce domestic capitalists to invest in production activities because of the risks associated with speculative operations, either at home or abroad.

Obviously, many of these policies can only be effectively applied by a strong, autonomous government which has a clear strategy and a competent public administration.

### b) *The exchange rate*

Leaving aside its influence on investment flows as a whole, the real exchange rate is the macroeconomic price which most directly affects the relative profitability of exports. Such profitability may also be increased by export subsidies, when they exist.<sup>13</sup>

<sup>13</sup> It is more difficult to express the effect of industrial and sectoral policies, because they have an indirect impact on exports. As the success of the recently industrialized Asian countries has shown, and—in the opposite sense—the many frustrated efforts made in the developing world as a whole, if industrial and incentive policies are to be effective they must be well managed, properly focussed on specific objectives, they must be of limited duration and must not be discriminatory, and they must be in keeping with the general line of macroeconomic policy.

### c) *Trade policies*

The trade policies applied by a country affect the availability and price of imported capital goods and inputs and, hence, the effective rate of protection of export-oriented activities. The trade policies of other countries naturally affect the access to and profitability of potential export markets. International trade agreements can significantly reduce the negative effects of protectionism.

### d) *The systemic determinants of competitiveness*

A number of institutional factors are of decisive importance for the long-term development of production activities that can compete on the international market and for economic modernization in general. They include the maintenance of macroeconomic order and stability;<sup>14</sup> the creation and development of systemic economies of scale in the fields of information, transport, marketing and credit; and the existence of a relatively competitive market structure. The availability of skilled labour, and of human capital in general, has also been acknowledged to be a decisive factor related in the long term with the educational and social policies of the government and, indirectly, with income distribution.

### e) *Exogenous factors*

Finally, exogenous factors of an economic nature (such as international crises) and of a non-economic nature (such as natural or man-made disasters) also affect exports, just like any other economic activity. Thus, civil war had a very severe impact in Nicaragua and El Salvador and also adversely affected Guatemala, Honduras and Costa Rica. In other words, all the Central American countries suffered a decline in subregional trade, partly because of the armed conflicts.

<sup>14</sup> It has been shown, for example, that uncertainty over the level of the real exchange rate has a negative effect on the exports of developing countries (see Caballero and Corbo, 1989; Alonso, 1993; Paredes, 1989). More specifically, a recent World Bank study has shown that the long-term instability of the real exchange rate has been markedly greater in the Central American countries than in most of the Asian countries. It goes on to argue that this factor helps to explain the very different economic performances of these two groups of economies (Leamer, Guerra, Kaufman and Segura, 1995, section VIII).

### 3. Econometric analysis

#### a) *Costa Rica*

In Costa Rica, which is the Central American country least affected by armed conflicts and which has also been free from extreme macroeconomic disturbances, the econometric analysis of NTE gave the most reliable and coherent results, in spite of the shortcomings in the database (table 2). Previous econometric studies (Araya, 1994; Hoffmaister, 1992) have shown that the coherent policy of incentives for non-traditional exports to markets outside the subregion applied by that country from the mid-1970s to the early 1990s did indeed have a substantial positive impact on NTE.

In order to measure the role of incentives, two different methodologies were applied in the present study which gave fairly similar results. The first method was to add to the right side of the equation a variable representing the logarithm of the ratio between the incentives paid to exporters of non-traditional products –tax credit certificates (CAT)– and the value of NTE in each year (Araya, 1994, table 1, p. 37). The second method was that used by Araya, which consists of incorporating the effect of such incentives in the measurement of the real exchange rate, assuming that their ultimate effect is to increase the profitability of exports. The resulting explanatory variable is the logarithm of the adjusted exchange rate (table 2). Since CATs were granted only for exports outside the subregion, it was considered appropriate to carry out regressions with this second method using only NTE to markets outside the subregion as a dependent variable. Tests were made with the first method using the same dependent variable, but also using total NTE.<sup>15</sup>

In order to measure the effects of the exchange rate, fixed investment and incentives, three basic regression models were chosen, using the least common squares method. In the first model, the logarithm of NTE to markets outside the subregion was

regressed on the three explanatory variables (also expressed as logarithms): the real exchange rate, fixed investment and incentives. The best results were obtained with a specification which includes the logarithm for the exchange rate lagged by one year and a two-year mobile average of the investment logarithm. All the coefficients of the explanatory variables are significant, and the equation complies with the standard econometric tests.

The elasticities with respect to the adjusted exchange rate and fixed investment are greater than 0.6, which reflects the notable impact of exchange rate policy and investment activity on the performance of NTE to markets outside the subregion. The elasticity of the incentives variable is 0.26, which indicates that an incentive of 1% (with respect to the total value exported) results approximately in an increase of 1/4 of 1 percent in exports to markets outside the subregion.

If we add the effect of the Caribbean Basin Initiative (CBI) with the alternative methodology, using the adjusted real exchange rate which takes into account the effect of the incentives, the reliability and coherence of the equation are greater and it is possible to identify the positive effect of the implementation of the CBI on the access of Costa Rican exporters to the United States market. NTE to markets outside the subregion were regressed on the two-year mobile average of the adjusted exchange rate, on fixed investment lagged by one year, and on the CBI dummy variable, whose value is 1 in 1984-1993 and 0 in earlier years. The coefficient of the adjusted exchange rate is greater than unity, indicating that exports to markets outside the subregion have been very elastic to the combined effect of the real exchange rate and incentive policies; the coefficient for investment is also high (0.9%), and the coefficient for the CBI is smaller but nevertheless significant, suggesting that the implementation of the CBI has had a noteworthy positive impact on the evolution of Costa Rica's NTE to markets outside the subregion.<sup>16</sup>

<sup>15</sup> A dynamic error correction model was also constructed, with the first difference of the dependent variable on the left side of the regression equation and its lagged value, together with the prime differences and the lagged values of the exogenous variables, on the right side, following the methodology used by Mognillansky and Titelman (1993) in their econometric study on Chile's copper exports. The T statistics of the variables of the dynamic model were not significant, however, and neither were the adjusted values of F and R<sup>2</sup> satisfactory. This negative result suggests that the impact of the explanatory variables on the evolution of NTE can only be measured in the short term.

<sup>16</sup> The dummy variable technique only indicates a change of level in the regression function over a certain period of time and then incorporates any other factor, other than the implementation of the CBI and other trade policy measures, which may have improved access to the United States market and affected the behaviour of the dependent variable. Among these factors, we should probably take into account the improvement in the Costa Rican economy as a whole after the mid-1980s.

TABLE 2

**Central American Common Market and Dominican Republic:  
Coefficients of the explanatory variables and statistical tests  
of the regressions resulting from the selected models<sup>ab</sup>**

	Real exchange rate (RER)	Fixed invest- ment	Central American GDP	CAT <sup>c</sup>	WAR <sup>d</sup>	CBI <sup>e</sup>	GDP	Adjusted R <sup>2</sup>	Durbin- Watson statistic	F statistic
Costa Rica (I)	0.61 (2.50)	0.64 (3.33)		0.26 (3.19)				0.76	2.37	21.60
Costa Rica (II)	-1.18 (-2.64)	0.90 (6.07)				0.37 (2.37)		0.84	1.97	38.33
Costa Rica (III)	-0.78 (-3.52)	0.53 (4.57)	0.69 (2.24)					0.84	2.19	36.25
El Salvador	0.80 (3.67)	0.45 (3.73)			-0.27 (-2.66)			0.83	2.06	35.47
Guatemala		0.67 (5.73)						0.60	2.12	32.82
Honduras	1.48 (3.36)	0.76 (2.66)						0.49	1.34	11.07
Nicaragua	-0.58 (-3.42)	-0.48 (-2.37)			-1.20 (-5.16)			0.78	1.22	24.58
Dominican Republic	0.63 (4.23)	0.99 (5.33)					-0.41 (-2.78)	0.65	1.90	13.18

<sup>a</sup> As noted in the text, the specification of the models is not completely uniform for all the equations. The main differences are the following:

- i) In models (I) and (II) for Costa Rica, the dependent variable is the value of NTE to markets outside the subregion. In the other models it is the value of total NTE.
- ii) In models (II) and (III) for Costa Rica, the RER variable corresponds to the adjusted real exchange rate, which incorporates the effect of incentives.
- iii) The RER variable was obtained by different methodologies in different equations because of the lack of homogeneity of the statistical information. For this reason, the coefficients are positive in some models and negative in others. The signs obtained are always in keeping with theory, however.
- iv) In the model for Nicaragua, the investment variable corresponds to private investment. In all the other models it corresponds to total fixed investment.
- v) In some models the real exchange rate and/or investment are given with a one-year lag and/or as two-year mobile averages.

<sup>b</sup> The figures in parentheses are T statistics.

<sup>c</sup> CAT = Incentives (as a proportion of value of NTE).

<sup>d</sup> WAR = Dummy variable with a value of 1 in periods of armed conflict.

<sup>e</sup> CBI = Dummy variable with a value of 1 during period of implementation of the CBI.

The partial elasticities of NTE to markets outside the subregion with respect to the real exchange rate and the incentives variable in the first model and with relation to the adjusted real exchange rate in the second, indicate that the economic agents actively

respond to the combined effect of the real exchange rate and export subsidies on the profitability of NTE. This result suggests that exchange rate and incentives policies which affect the price of exports in real terms can be very effective for promoting exports.<sup>17</sup>

<sup>17</sup> When taken separately, on the other hand, exchange rate and subsidies policies may be more or less efficient from a macroeconomic point of view. According to the results of the empirical analysis made by Hoffmeister (1992), the fiscal cost of export subsidies in Costa Rica has been high, and the same degree of promotion of NTE could have been obtained more efficiently from the macroeconomic point of view through more rapid de-

preciation of the nominal exchange rate. The results of the first model presented in this section corroborate this position to some extent, taking into account the fact that the half-elasticity of NTE to markets outside the subregion with respect to the real exchange rate is more than double the half-elasticity with relation to the incentives variable.

In order to take into account the effect of the subregional demand for imports, another model includes the logarithm of total NTE as a dependent variable, and on the right side it has the adjusted exchange rate and investment lagged by one year, plus an extra variable which serves as an approximation to the subregional demand for imports. This latter variable is the logarithm of the Central American GDP. The adjusted exchange rate and investment are significant variables, and their coefficients are lower than those of the model in which the dependent variable is the value of NTE to markets outside the subregion. In the case of the adjusted exchange rate, the result was to be expected, as the impact of incentive policies was felt only by a portion (NTE to markets outside the subregion) of total NTE. The lower investment coefficient suggests that most of the investments in the export sector went to create production capacity for exports to markets outside the subregion.

Finally, the significance of the subregional GDP variable and the fact that its coefficient is quite high (0.7) indicate that the subregional NTE are strongly dependent on the evolution of global demand from the Central American trading partners, at least in the case of Costa Rica. The fact that it was not possible to reproduce this result for the other countries studied may indicate that the structure of Costa Rica's NTE to the rest of the subregion is more "modern" and hence more elastic with respect to price and demand than that of its neighbours, where the level of NTE to markets outside the subregion corresponds essentially to the level of supply determined by domestic factors.

#### b) *El Salvador*

As in the case of Costa Rica, in El Salvador the econometric analysis of the factors determining the evolution of NTE gave the most significant results. The model chosen (estimated as usual using the least common squares method) is linear-logarithmic, with total NTE as an endogenous variable and the real exchange rate and fixed investment (both lagged by one year) as explanatory variables. A dummy variable for the war years 1981-1991 was also significant, indicating that the armed conflict substantially affected the export development of El Salvador. The adjusted  $R^2$  is high (0.83) and reflects the fact that most of the variability of the dependent variable is effectively explained by the model. The regression passes the standard econometric tests.<sup>18</sup>

The half-elasticity of NTE with respect to the real exchange rate is greater than in Costa Rica, indicating a high degree of sensitivity of the economic agents to changes in the profitability of export activities. This result suggests that policies aimed at maintaining a competitive real exchange rate can be very effective for promoting exports. The fixed investment coefficient is lower than in Costa Rica, which would appear to indicate that in El Salvador a relatively minor portion of investment is destined for export activities.

#### c) *Guatemala*

In the case of Guatemala's NTE, the real exchange rate did not display much explanatory value, possibly because most international transactions are effectively carried out at exchange rates other than the official rate.<sup>19</sup>

The best results were obtained through a linear-logarithmic model, with total NTE as an endogenous variable and fixed investment as the only explanatory variable. The regression passes the standard tests, but the adjusted  $R^2$  comes to only 0.60, indicating that the model explains less than two-thirds of the variability of NTE. Thus, although the investment coefficient is higher than in the case of El Salvador, this cannot be interpreted as an elasticity in the strict sense, since it probably incorporates the influence of missing variables. Nevertheless, the model indicates that the evolution of investment has a strong impact on the behaviour of NTE.

#### d) *Honduras*

The regression analysis gave particularly weak results for Honduras. The relatively most acceptable model was a linear-logarithmic model with total NTE on the left side of the equation and total fixed investment and the real exchange rate on the right side. The coefficients of the explanatory variables are significant, and the regression passes the standard econometric tests.

<sup>18</sup> In the case of El Salvador, too, neither the model with NTE to markets outside the subregion as an endogenous variable nor the error correction model gave significant results.

<sup>19</sup> In the case of the real exchange rate, the data may lead to the wrong conclusions because of the existence of transactions on the black market. Exporters would have gained by using this market to convert their foreign exchange instead of the official market. The diversion of foreign exchange to the black market may have taken place through under-valuation of exports or through three-way trading transactions within the CACM (Colindres, 1993).

The adjusted  $R^2$  is low, however (0.49). This indicates that NTE are linked with investment and the real exchange rate in the orthodox manner, but about half of the variability of NTE is attributable to other factors,<sup>20</sup> which could not be incorporated in the model.

e) *Nicaragua*

In the 1980s, the long civil war, accompanied by foreign intervention, led to the total collapse of the Nicaraguan economy, and no recovery was to be glimpsed even in the early 1990s. Naturally, NTE did not escape from the general deterioration in production activities.

For these reasons, it was only to be expected that the results of the regressions for Nicaragua could not reflect a stable model and were strongly affected by non-economic factors. The most reliable and coherent model was one in which the most significant explanatory variable, which also has the highest coefficient, is a dummy variable expressing the effect of the long armed conflict, with a value of 1 for the years 1979-1993 and 0 for all previous years. NTE are also negatively linked with the logarithm of the real exchange rate. Thus, the destruction caused by the conflicts and the distortions in relative prices reflected in the overvaluation of the córdoba (especially in the 1980s) go a long way towards explaining the unfavourable evolution of the Nicaraguan NTE.

More surprising is the fact that the logarithm of private investment is also significant and shows a negative, although small, coefficient. This result is probably due to the extraordinary distortions prevailing in the Nicaraguan economy during most of the period studied, which did not allow private investment to play a positive role in the promotion of exports.

f) *Dominican Republic*

The most reliable and coherent model for the Dominican Republic gives three interesting results. The investment coefficient (represented by the mo-

ble average of fixed investment lagged by one year) is very high and close to unity. The coefficient for the real exchange rate is high (0.63) and in line with the theory. The general level of activity (represented by the logarithm of GDP) is a significant explanatory variable (the only case among the countries studied) and its coefficient is negative.

Thus, on the one hand there is a very strong positive correlation between investment and NTE, which probably reflects a marked export orientation on the part of domestic and foreign investors. On the other hand, the negative correlation between NTE and GDP may reflect a kind of crowding-out between domestic and external demand. This phenomenon, which has been demonstrated in the case of such a large and highly industrialized country as Brazil,<sup>21</sup> seems very unusual in the case of this Caribbean island country, with its small economy and an export structure specializing in the production of goods mainly intended for external markets. The reliability and coherence of the equation is moderately satisfactory (adjusted  $R^2 = 0.65$ ).

g) *Panama*

Panama is the only one of the countries studied for which it was not possible to construct an acceptable regression model for explaining the evolution of NTE. This negative result may be due to the marginal role of NTE in the Panamanian economy, whose external sector is dominated by financial and service activities.

#### 4. Comparative analysis of the results obtained for Central America and the Dominican Republic

The basic interpretative hypothesis, according to which the level of investment and the relative profitability of export-oriented activities (represented, as a substitute variable, by the real exchange rate and, in the case of Costa Rica, by export incentives) are the main economic factors for explaining the evolution

<sup>20</sup> Some of these unknown factors were probably of a non-economic nature. An attempt was made to take in the negative effect of the armed conflicts of the 1980s through a dummy variable, but it was not possible to obtain significant results.

<sup>21</sup> According to the results of the econometric analysis made by Mougillansky (1993), Brazil's industrial exports are negatively linked with GDP, which suggests that the domestic and export markets are interchangeable and that production is transferred to export markets in periods of low domestic demand.

of NTE,<sup>22</sup> was confirmed in the countries studied. The corresponding variables were significant and had a sign in keeping with the theory in all the models except those for Guatemala and Nicaragua. In these two countries, the results are probably due to extra-economic factors, such as the scant practical relevance of the official exchange rate in the first-named country and the disorganization caused by the armed conflict in the second.

The coefficients of the real exchange rate were particularly high in the models for Honduras and El Salvador, indicating that in these two countries exchange rate policy could be particularly effective for promoting the expansion of NTE. Except in Honduras (where the most reliable and coherent model was not very robust) the half-elasticities of NTE with respect to the real exchange rate are less than unity, indicating that a competitive real exchange rate is a necessary but not of itself sufficient condition for the expansion of exports. This result is in keeping with those of other studies carried out in a number of Latin American countries, where exports were also found to be inelastic with respect to the real exchange rate. Both in the case of the present study and in that of the studies reviewed by Moguillansky (1995), there are basically two reasons explaining this inelasticity. First, NTE (or even more so, total exports, as may be seen in most of the studies referred to) consist of heterogeneous groups of goods in which those which are relatively "traditional", and hence rather inelastic with respect to price, have considerable weight.<sup>23</sup> Second, in Latin America there is a lack of many conditions other than

price which could promote a more elastic response by potential exporters to better conditions of profitability: these conditions mostly belong to the fields of credit, technology, human resources and infrastructure.<sup>24</sup>

In view of the basic coincidence between the present results and those of the studies examined by Moguillansky, some of the conclusions of the latter author on export promotion policies in Latin America are probably also applicable to the countries studied in the present article too. They include in particular the following: stability of the real exchange rate (and of incentives, if they exist) is a very important factor for stimulating exporters; tariff reduction policies definitely have a positive effect on the competitiveness of exports, but after the initial effect has been exhausted they cease to be an important factor in the evolution of exports, since the domestic and external markets may compete for the use of scarce inputs and investment goods, and finally, in contrast with the small-country hypothesis, in some cases external demand may become a limiting factor on the expansion of industrial exports (in the countries studied, the results obtained indicate that this might be true only for exports within the subregion).

With regard to investment, the highest coefficients were those of the Dominican Republic model and one of the models for Costa Rica. This could indicate that in these countries –the two countries which have been most successful in exporting non-traditional products to markets other than the CACM– a higher share of investment was made in that part of the export sector oriented towards world markets, and/or the investment was more efficient than in other countries.

<sup>22</sup> Through the saving they generate, the bigger exports also help in the growth of investment. Within the analytical framework used in the regression exercises, however, in almost all the models the variables representing investment are lagged, which means that there is only a one-way causality from investments to exports.

<sup>23</sup> According to the results of the studies on total exports, exports of manufactures are highly elastic and rapidly adjust to changes in the real exchange rate. The opposite is true, however, of agricultural exports. As the present study considers only NTE as a dependent variable, and the definition of NTE adopted only

includes the most "modern" branches of agricultural production, this result does not necessarily apply to the present analytical framework.

<sup>24</sup> See Moguillansky, 1995, p. 97. This author also notes that in econometric studies by Balassa and Williamson (1989) and Riedel (1986) on South Korea and Hong Kong –countries where, in general, the systemic conditions of competitiveness already referred are considered to be satisfied to a greater extent than in Latin American– high elasticities of exports with respect to the real exchange rate were found, considerably over unity.

## IV

### Conclusions

In most of the countries studied, NTE increased their share in total exports. On the one hand, however, the role of agricultural NTE has been maintained and in many cases strengthened, and on the other, industrial NTE have not evolved towards the branches making intensive use of human capital and technology. These tendencies indicate that the modernization of the export structure of the countries of the subregion has been only partially successful, since their place in the international division of labour continues to depend mainly on relatively vulnerable sectors of low dynamism.

The econometric analysis showed that the main quantifiable factors determining the performance of NTE were investment, the real exchange

rate and, in the case of Costa Rica, fiscal incentives. The sensitivity of non-traditional exporters to changes in relative prices confirms the importance traditionally attached to the maintenance of a competitive real exchange rate. At the same time, however, as the size of the exportable supply is strongly dependent on investment, it is also of fundamental importance that governments should maintain macroeconomic stability and promote policies which encourage domestic saving. With regard to the viability and desirability of selective-type industrial development or export promotion policies, the methodology used in this study did not allow any definitive conclusions to be reached.

(Original: Spanish)

## Appendix

### 1. Availability of data and non-significant tests

Because of the limitations of the database, many factors could not be suitably quantified for the econometric analysis. No long-term detailed data were available on the trade policies of the Central American countries. A test was made, however, by adding average tariff series as additional explanatory variables in the regression analysis. According to neoclassical theory, protection from imports should have unfavourable repercussions on the level of exports, since it would result in price distortions and, in particular, in more expensive and poorer-quality inputs for export activity. According to an alternative viewpoint, however, if the protection is applied selectively and is accompanied by suitable industrial policies, the net impact of these distortions on exports could actually be positive. As was to be expected, the results of the tests on both these theories were not significant.

Nor were significant results given by the tests carried out with: dummy variables designed to express the effect of different policy lines in different periods of time; variables representing external demand constructed on the basis of total United States imports and the GDP of the CACM countries; and a dummy variable for the period 1984-1992 designed to take account of the effect of the opening-up of the United States market after the implementation of the Caribbean Basin Initiative.

The attempts to establish specific relations between exports within the subregion and the Central American GDP or the trade policies of the CACM through dummy variables did not give significant results either, the only partial exception being in the case of Costa Rica.

With regard to export incentives, detailed data were only available for Costa Rica, which is the only country which has applied them continuously for a considerable length of time. The real exchange rate is of little relevance when transactions are carried out on the foreign currency black market and there is over- or under-valuation of external trade, as seems to have occurred in Guatemala.

Finally, it may be noted that the dummy variables introduced into the regression equations to take account of the impact of the war were significant in the cases of El Salvador (1981-1991) and Nicaragua (1979-1993).

### 2. Econometric variables, techniques and tests

Various variables were generated and tested in the econometric analysis. Only some of them proved to be significant, and are given in the results of the regression shown in table 2. First, series were calculated for all the countries, at constant U.S. dollar prices, for total non-traditional exports (TNX), fixed investment (FI), private investment (PI) and GDP. Other series of NTE to subregional markets (TNXCA) and to markets in the rest of the world (TNXRW) were calculated for the five CACM countries. The logarithms of the variables obtained in the regression analysis were then used. Thus,

LTNX =	logarithm of total non-traditional exports
LFI =	logarithm of fixed investment
LTNXCA =	logarithm of non-traditional exports to subregional markets
LPI =	logarithm of private investment
LTNXRW =	logarithm of non-traditional exports to markets outside the subregion (rest of the world)
LGDP =	logarithm of GDP.

In some cases, mobile two-year averages were also used for the variables representing investment:

AVLFI =	2-year mobile average of LFI
AVLPI =	2-year mobile average of LPI.

In most of the countries, the real exchange rate (RER) was calculated on the basis of the nominal exchange rate, expressed in units of national currency per U.S. dollar, divided by the national consumer price index and multiplied by the United States consumer price index.

According to economic theory, it could therefore be expected that the elasticity of exports with respect to the real exchange rate would be positive.

In the case of Nicaragua, because of the difficulties involved in calculating the real exchange rate with the above methodology, on account of the hyperinflation prevailing in the 1980s, a reordered series for the real effective exchange rate calculated by the International Monetary Fund (IMF) was used. Because of the methodology used by the Fund, an increase in this indicator reflects real appreciation of the national currency, in contrast with the real exchange rate calculated for the other countries. For this reason, in line with economic theory it is probable that the elasticity of Nicaragua's exports with respect to the real exchange rate as calculated on the basis of the IMF series will be negative.

In the case of Costa Rica, a different methodology was used to represent the effect of export subsidies or to incorporate them in the calculations of the real exchange rate. First, a variable was calculated for each year, representing the incentives, that is to say, the relation between the export subsidies (tax credit certificates -CAT) and the value of non-traditional exports:

$$\text{CATXOP} = \text{CAT}/\text{NTE}$$

CATXOP is used as an additional explanatory variable in one of the models. In an alternative model, following Araya (1994), the adjusted real exchange rate was constructed on the basis of a measurement of the real effective multilateral exchange rate (ITCER) calculated by the IMF. As in the case of Nicaragua, ITCER is expressed in the number of units of national currency per unit of foreign currency and thus, according to economic theory, exports should be negatively linked with this variable. ITCER was then adjusted to incorporate the effect of the incentives by dividing it by  $(1+\text{CATXOP})$ . This gave the adjusted real exchange rate ARER:

$$\text{ARER} = \text{ITCER} (1+\text{CATXOP})$$

It would naturally be expected, in line with economic theory, that ARER –like ITCER– would be negatively correlated with exports (higher values of CATXOP, corresponding to lower values of ARER, should lead to smaller exports).

As in the case of RER, transforms of ARER were also used in the regressions:

$$\text{LARER} = \text{logarithm of ARER}$$

$$\text{AVLARER} = \text{2-year mobile average of LARER}$$

Only a few of the dummy variables were significant. For Costa Rica, a variable corresponding to the period in which the CBI was in force (1984-1993) helps to explain the evolution of NTE to markets outside the subregion. Another dummy variable, WAR, was included in the respective equations to take account of the disturbing effects of the armed conflicts in El Salvador and Nicaragua. For El Salvador, WAR has a value of 1 in 1981-1991 and 0 in the other years. In Nicaragua, where the economic impact of the armed conflicts has still not been overcome, WAR has a value of 1 in 1979-1993 and 0 in 1970-1978.

All the regressions were estimated by the least common squares method with logarithmic specifications. Dynamic models were also tried, but they did not give significant results, which suggests that the effect of the explanatory variables on NTE can only be determined in the short term. All the regression models which were finally selected passed the following standard econometric tests: the DW test, the LM serial correlation test, the Jarque-Bera normality test, the RAMSET stability test, and the CUSUM parameter stability test.

## Bibliography

- Alonso, G. (1993): *Determinantes de la oferta de las exportaciones menores colombianas*, Santafé de Bogotá, Banco de la República (BRC), mimeo.
- Araya, R. (1994): Determinantes de las exportaciones no tradicionales de Costa Rica, *Comentarios sobre asuntos económicos*, No. 124, San José, Central Bank of Costa Rica, May.
- Balassa, B. and J. Williamson (1989): *Les réussites du Sud-est asiatique dans le commerce mondial: Corée, Hong Kong, Singapour, Taiwan*, Paris, Económica.
- Caballero, R. and V. Corbo (1989): The effect of real exchange uncertainty on exports: Empirical evidence, *The World Bank Economic Review*, vol. 3, No. 2, Washington, D. C., World Bank.
- Cáceres, L. (1994): Central American integration: Its costs and benefits, *CEPAL Review*, No. 54, LC/G.1845-P, Santiago, Chile, Economic Commission for Latin America and the Caribbean (ECLAC).
- Cáceres, L. and S. Quintanilla (1990): Sector externo y ahorro doméstico: el papel de las exportaciones intrarregionales en Centroamérica, *Cuadernos de economía y finanzas*, No. 11, Tegucigalpa, Central American Bank for Economic Integration (BCIE).
- Colindres, Ana María (1993): Non-traditional exports in Guatemala, in W. Pelupessy and J. Weeks (eds.), *Economic Maladjustment in Central America*, London, Macmillan.
- ECLAC (1995): *Latin America and the Caribbean: Policies to Improve Linkages with the Global Economy*, LC/G.1800/Rev.1-P, Santiago, Chile. United Nations publication, Sales No. E.95.II.G.6.
- ECLAC Subregional Headquarters in Mexico (1995): *El regionalismo abierto en América Central. Los desafíos de profundizar y ampliar la integración*, LC/MEX/L.261, Mexico City.
- Fukusaku, K. (1992): *Economic Regionalisation and Intra-Industry Trade: Pacific-Asian Perspectives*, Technical Papers, No. 53, Paris, Organization for Economic Cooperation and Development (OECD).
- Gaba, F. and R. Araya (1993): Determinantes de las exportaciones globales de Costa Rica, *Comentarios sobre asuntos económicos*, No. 111, San José, Central Bank of Costa Rica.
- Hoffmaister, A. (1992): The cost of export subsidies, *Staff Papers*, vol. 39, No. 1, Washington, D. C., International Monetary Fund (IMF).
- Laumas, P. (1982): Exports and the propensity to save, *Economic Development and Cultural Change*, vol. 30, No. 4, Chicago, IL, The University of Chicago.
- Leamer, E., A. Guerra, M. Kaufman and B. Segura (1995): *Central America and the North American Free Trade Agreement*, Washington, D. C., World Bank, mimeo.
- Moguillansky, G. (1993): *Factores determinantes de las exportaciones industriales brasileñas durante la década de 1980*, Documento de Trabajo No. 22, Santiago, Chile, ECLAC.
- (1995): The impact of exchange-rate and trade policy on export performance in the 1980s, *CEPAL Review*, No. 55, LC/G.1858-P, Santiago, Chile, ECLAC.
- Moguillansky, G. and D. Titelman (1993): *Análisis empírico del comportamiento de las exportaciones no cobre en Chile: 1963-1990*, Documento de Trabajo, No. 17, Santiago, Chile, ECLAC.
- Navajas, F. (1993): *Una estimación de la función agregada de las exportaciones. Argentina 1970-1992*, Buenos Aires, ECLAC Office in Buenos Aires, mimeo.
- Paredes, C. (1989): *Exchange Rate Regimes, The Real Exchange Rate and Export Performance in Latin America*, Brookings Discussion Papers on International Economics, No. 77, Washington, D. C., The Brookings Institution.
- Peñaloza, R. (1988): Elasticidad de la demanda de las exportaciones: la experiencia mexicana, *Comercio Exterior*, vol. 38, No. 5, Mexico City, Banco Nacional de Comercio Exterior, S.N.C (BANCOMEXT).
- Riedel, J. (1986): *Price and income elasticities of demand for LDC exports of manufactures re-examined*, Washington, D.C., Johns Hopkins University, School of Advanced International Studies, mimeo.
- Villar, L. (1992): *Política cambiaria y estrategia exportadora*, paper presented at the XIII Simposio sobre el Mercado de Capitales, Santafé de Bogotá, Asociación Bancaria de Colombia (ASOBANCARIA), mimeo.
- Webb, M. and J. Fackler (1993): Learning and the time interdependence of Costa Rican exports, *Journal of Development Economics*, vol. 40, No. 2, Amsterdam, North-Holland.
- Zini, A.A. (1988): Funções de exportação e de importação para o Brasil, *Pesquisa e planejamento econômico*, vol. 18, No. 3, Rio de Janeiro, Institute of Economic and Social Planning (IPEA).

# Trade openness and *structural change in the* Brazilian motor industry

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This article aims to classify and analyse the evidence of structural change in the Brazilian motor industry between 1990 and 1996, seeking to relate it with the economic policy measures which had most impact on the sector. The study begins by examining the explosive increase in domestic demand for motor vehicles, its determining factors, and its main implications, especially the achievement of efficient scales of production and the initiation of a wave of investments which has been further intensified in the last three years. It goes on to study the increase in the technological dynamism of the sector, which is partly the result of these new investments. A series of changes relating to the new international linkages of the Brazilian motor industry are then analysed, since as a result of greater trade openness there has been a significant increase in the coefficients of importation of parts and components or finished vehicles. Finally, an analysis is also made of some aspects of the Motor Industry Regime, whose adoption has had repercussions on the external linkages of the motor industry not only in the short term, by establishing import barriers, but also in the long term, by bringing it home to the big firms in the sector that they must make investments to expand local production and maintain higher levels of competitiveness.

# I

## Introduction

The motor vehicle industry, which comprises the segments involving the assembly of vehicles and the production of parts and components, is among those which most strikingly reflect the profound restructuring which has taken place in connection with the change in the Brazilian industrial policy and foreign trade regime. Since the process of trade openness began, there is increasing proof that this sector of the Brazilian economy is changing its place in international trade, increasing its already high previous level of internationalization and making far-reaching changes in its production base which have been reflected in higher productivity. Moreover, this is the only industrial sector which was the subject, in the phase following the initiation of greater openness, of a broad set of sectoral policies which culminated in the establishment of what has come to be called the Motor Industry Regime.

This represents the first concrete example of sectoral policies, equipped with powerful instruments, designed to cope with the "headaches" of the openness process. This article, which was motivated by these special features of the motor industry, seeks to arrange and analyse the evidence of the structural changes made in this sector between 1990 and 1996, seeking to link them with the economic policy measures that had the greatest impact on the sector.

We shall seek to organize our arguments around four aspects which correspond to the following sections in this study. First of all, we shall look at the explosive increase in domestic demand for motor vehicles and the factors responsible for it (section II).

The new dimension of the domestic market, especially from the regional point of view, has been linked with its specialization in smaller vehicles and has represented a qualitative change in this market, while at the same time smoothing the way for the achievement of efficient scales of production in all the assembly firms, for the first time in the history of the Brazilian motor industry. In our view, the new size of the market has been the main factor in the wave of investments which gained further impetus in 1994-1996 (section III), although it must be acknowledged that the greater trade openness and the Motor Industry Regime have also operated as catalysts for investment. The new investments have had two other important effects on the economy of the Brazilian motor industry: a change in the market structure with the entry of seven new competitors, and the narrowing of the technology gap with the plants located in more industrialized countries which had always marked the Brazilian subsidiaries. To a large extent, all these phenomena are related with what are beginning to take shape as the new international linkages of the Brazilian motor industry (section IV). The process has been a painful one, with many fits and starts in the way trade policy has been handled, and it has been conditioned by the globalization strategies of the vehicle manufacturers. The Motor Industry Regime, for its part, has been of decisive importance in indicating to these big transnational firms the acceptable (if not desirable) balance between local production and the importation of vehicles and parts.

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□ This article is based on the report prepared by the Study Group on Companies and Innovation of the Department of Science and Technology Policy of IG/UNICAMP for the Institute of Applied Economic Research (IPEA) as part of the project entitled "Indicators of Brazilian Industrial Productivity: Limits and Possibilities". The authors wish to express their gratitude

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for the support received from the following institutions: IPEA, the Foreign Trade Department of the Ministry of Industry, Trade and Tourism, and the National Motor Manufacturers' Association (ANFAVEA), especially from Mr. Sérgio Sawada. The text of the article is of course the exclusive responsibility of the authors.

## II

### Growth and specialization of the domestic motor vehicle market

The sudden increase in the size of the market and the trend towards specialization in small vehicles were the basis for the recovery in investment, the modernization of the companies and the achievement of economically viable scales of production. The regional integration furthered by MERCOSUR helped to strengthen these characteristics. We consider this to be one of the most important changes which took place in the motor industry in the 1990s, since the small size of domestic demand was for many years one of the main obstacles to growth and investment.

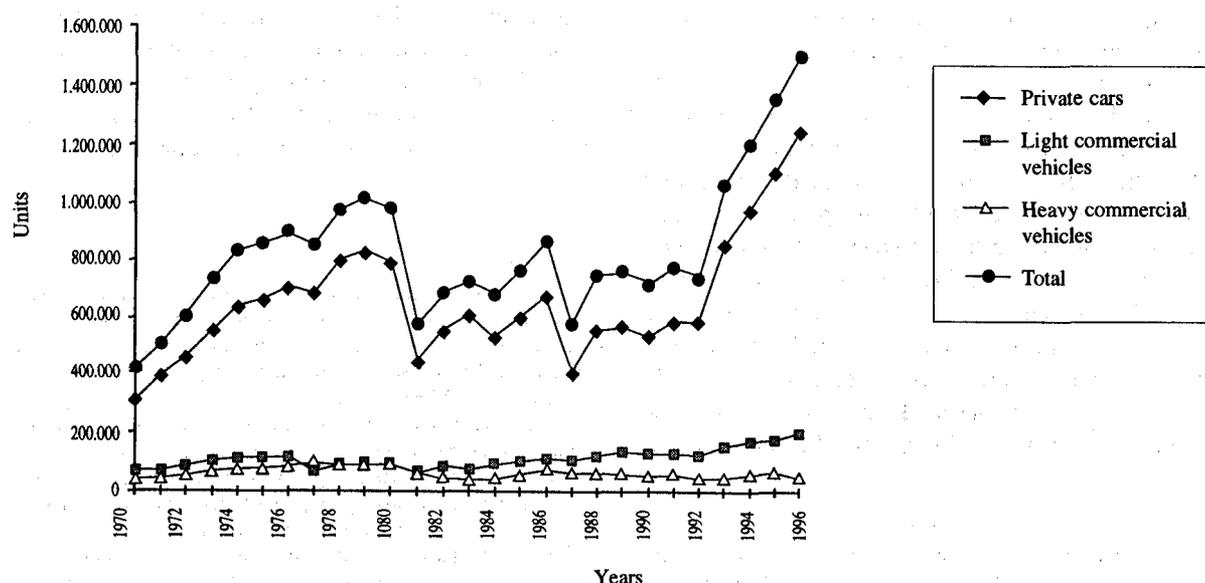
After twelve consecutive years of unstable behaviour, at a level of around 700,000 units per year, the Brazilian motor vehicle market began to grow again in 1993 (figure 1). The 20% average annual growth rate of domestic sales of motor vehicles (in terms of units) in the period 1993-1996 is only comparable with the most dynamic phase of expansion in demand in the early 1970s. The sales of 1.5 million

units in 1996 marked a new record in the marketing of vehicles produced in Brazil. In that year, total sales including imports exceeded 1.7 million units. It should be noted, however, that the heavy vehicle segment (trucks and buses) displays a different trend from the automobile and light commercial vehicle segments, since even in recent years demand has stagnated around 60,000 units per year.

The definition of domestic market must be expanded to include the establishment of MERCOSUR as a unified regional market. In this sense, adding together the numbers of licenses taken out for new vehicles in Brazil and Argentina reveals that in reality the "domestic" market already exceeded two million units in 1995, after having started the decade with less than 1 million units (table 1). There is a qualitative change which derives from this recent growth. The market for motor vehicles, considering MERCOSUR as a whole, has reached a volume comparable to

FIGURE 1

**Brazil: Domestic sales of locally produced motor vehicles, by type of vehicle, 1970-1996**



Source: National Motor Manufacturers' Association (ANFAVEA).

TABLE 1

**Selected developed and developing countries:  
Licenses taken out for new vehicles, 1990-1995**

Year/country	Brazil/Argentina	South Korea	France	United Kingdom	Italy
1990	805	957	2 756	2 231	2 483
1991	957	1 106	2 424	1 801	2 409
1992	1 113	1 270	2 466	1 795	2 573
1993	1 552	1 438	2 077	1 975	1 828
1994	1 905	1 560	2 299	2 139	1 789
1995	2 056	1 563	2 288	2 195	1 868

Source: National Motor Manufacturers' Association (ANFAVEA).

the markets of major industrialized European countries such as England and France, and in fact it actually exceeded the Italian market in 1994. This volume has opened up new prospects for attaining economies of scale in production and for the entry of new producers. The table also shows the extraordinary dynamism of the markets of recently industrialized countries, compared with the relative stability or actual decline of the markets of industrialized countries. This point needs to be emphasized in order to understand the reasons which have given rise to a new cycle of investments in the sector.<sup>1</sup>

What factors were responsible for the recovery of growth and the beginning of the realization of the potential of the Brazilian market? The main factors were the systematic adoption of policies to stimulate and sustain demand and, from 1994 on, the effects of the stabilization process. Between 1992 and 1994, the expansion in consumption was due above all to the reduction in prices, primarily as a result of the reduction in taxes on automobiles; this reduction was particularly significant in the case of the "popular" automobiles, since as soon as the measure came into effect they began to arrive on the market at around US\$ 7,500, which was an attractive price for the market conditions of the time. Between 1993 and 1994, according to data provided by ANFAVEA, sales of "popular" vehicles grew by 110%, becoming the spearhead of the growth in demand from then on. The reopening of the consortia also helped in this expansion, but the role of direct credit to the consumer was adversely affected by the high interest

rates prevailing at the time and the reluctance of families to contract debts at a time of high inflation. Already in the Plano Real phase, the factors affecting the continued growth of the domestic market reversed their order of importance. Stabilization made the existing mechanisms for direct consumer credit more effective and substantially expanded the access of new consumers. Thus, the consumption of automobiles (and of other durables) and family indebtedness grew side-by-side and became the characteristic feature of this phase.

The level of taxation on automobiles lost importance after the Plano Real because automobile prices rose once again, cancelling out the reduction in taxes granted by the government since 1992. The most notable rises were in the prices of the "popular" vehicles, some of which rose by between 53% and 65% between August 1994 and October 1996, whereas the wholesale price index only rose by 27% over the same period.<sup>2</sup> Everything seems to indicate that the assembly plants took advantage of the temporary additional protection granted under the Motor Industry Regime<sup>3</sup> to recover part of the profit margins per unit

<sup>1</sup> ANFAVEA does not publish statistics for the other MERCOSUR countries. It is estimated, however, that the annual consumption of vehicles is some 25,000 units in Uruguay and 15,000 units in Paraguay (*Folha de São Paulo*, 1995).

<sup>2</sup> The question of the rise in the domestic prices of motor vehicles finally became a point of conflict in the relations between the assembly plants on the one hand and the government and authorized dealers on the other, after the price rises announced in January and March 1997.

<sup>3</sup> "Motor Industry Regime" is used to designate the government policy for the motor vehicle sector, which, after the drastic rise in the proportions of automobile imports in February and March 1995, grants the companies registered under the Motor Industry Regime reductions in taxes on the importation of vehicles, machinery and equipment and inputs and, in return, demands the fulfillment of certain export targets and indexes of national production in their purchases of capital goods, raw materials and parts and components.

which they had forgone in the period of the Sectoral Chambers. The assembly plants claim, in their defence, that the increases are due to the incorporation of additional costs involved in the change in models which took place in this period.

Despite the recent increase in prices, sales of "popular" vehicles have continued to expand and to lead the growth in the domestic market. The share of such vehicles in the domestic market has grown steadily since they were launched and has now reached such a magnitude that it forms a special segment of the automobile market. This share came to 56.3% in 1996, and it was expected to rise to 60% in

1997. Behind this increase there are important structural aspects which have repercussions on investment and production. This change has brought the Brazilian motor vehicle market back towards a pattern in keeping with the country's income level: a high-volume market of small cars for the middle class. The assembly plants have reacted positively and furthered this tendency, bringing out updated "popular" models in the last two years. The specialization of the market has been the decisive factor in giving rise to the growth rates in question, as well as leading to product specialization which has helped to increase scales of production.

### III

## The recovery in investment and technological modernization

The recovery in the growth of the domestic market, the buoyant future growth prospects, and the specialization of this market have encouraged an increase in the rate of investment of the assembly firms. This tendency was further strengthened after the government indicated, through the adoption of the Motor Industry Regime, that it was not willing to absorb large and growing trade deficits in this sector. The behaviour of the investments reported by ANFAVEA shows two peaks in the level of investment between 1985 and 1995 (table 2).

TABLE 2  
Brazil: Total sales and investment of the motor vehicle assembly industry, 1985-1995  
(Millions of US dollars)

Year	Sales	Investment	Sales/ investment (%)
1985	16 282	674	4.1
1986	15 608	728	4.7
1987	16 777	773	4.6
1988	18 941	735	3.9
1989	17 562	737	4.2
1990	13 096	918	7.0
1991	13 462	981	7.3
1992	16 718	983	5.9
1993	19 369	939	4.8
1994	23 542	1 230	5.2
1995	24 476	1 694	6.9

Source: National Motor Manufacturers' Association (ANFAVEA).

Between 1985 and 1989, the average investment of the companies which are members of ANFAVEA was US\$ 730 million per year, which corresponds to an average of 4.3% of their total sales. Between 1990 and 1994 inclusive, average annual investment grew by nearly 40% to US\$ 1 billion, which equals an average of 6% of total sales. As we shall see below, the trade openness process hastened the assembly firms' plans for modernization of their production facilities and renovation of their line of products, which corresponded to the increase in the rate of investment. From 1994 on, there was a further increase in investment, which amounted to almost US\$ 1.7 billion in 1995 (6.9% of total sales), and the indicators suggest that it will continue to grow until the end of the 1990s.

The expansion of capacity in the first half of this decade was due above all to the investments made in the modernization of the existing plants. The launching of new models based on designs that were simpler to produce, the adoption of new manufacturing techniques, and the spread of organizational concepts and techniques inspired by the Japanese experience raised the productivity of the factories, thus increasing their capacity. In the second half of the 1990s, however, the increase in capacity will also be due to the entry into operation of the new plants currently under construction, belonging not only to assembly firms which are already in the market but also to

TABLE 3

**Brazil: Confirmed investments in new  
motor vehicle manufacturing plants, 1996-2000**

Company	Investment (millions of US dollars)	Location	Capacity (units)	Model	Entry into production
Fiat	150-200	Belo Horizonte (MG)	100 000	Light commercial vehicles	1999
General Motors	600	Gravatá (RS)	120 000	"Popular" cars, yet to be specified	1999
Mercedes	400	Juiz de Fora (MG)	70 000	"A" class	1999
Renault	750	S.J. dos Pinhais (PR)	100 000	Mégane	1999
Toyota	150	Indaiatuba (SP)	15 000	Corolla	1998
Honda	100	Sumaré (SP)	15 000	Civic	1997
Chrysler	315	Campo Largo (PR)	40 000	Dakota	1998
BMW	150		15 000	Defender	1998
Audi/Volkswagen	500	S.J. dos Pinhais (PR)	60 000	Audi A3 and VW Vento	1999
Asia	500	Camaçari (BA)	60 000	Topic and Towner	2000

Source: Files of *Folha de São Paulo* and *Gazeta Mercantil*.

TABLE 4

**Brazil: Scales of production of motor companies,  
by main car model families, 1990-1995**  
(Units)

Make and model	1990	1991	1992	1993	1994	1995
Uno family (Fiat)	131 372	136 640	134 131	183 999	251 952	266 501
Escort family (Ford)	79 928	86 138	63 391	138 152	157 080	152 215
Chevette/Corsa families (GM)	26 632	26 841	41 034	32 773	68 304	156 573
Gol family (VW)	138 029	147 167	186 254	205 304	225 911	304 457

Source: National Motor Manufacturers' Association (ANFAVEA).

those which came in later. Consequently, these investments must be added to those made in modernization. The investments announced and committed under the Motor Industry Regime by present and future competitors in respect of the installation of new plants amount to US\$ 3.6 billion, to be invested between 1996 and 2000 (table 3). These new factories will increase the production capacity of the Brazilian motor industry by some 600,000 vehicles. If this additional capacity is added to the present level of production, it gives a total volume of 2.4 million units per year for the year 2000.<sup>4</sup>

In line with the growth in sales, Brazil's output of motor vehicles also increased significantly from 1993 on, exceeding 1.8 million units in 1996 (i.e., it

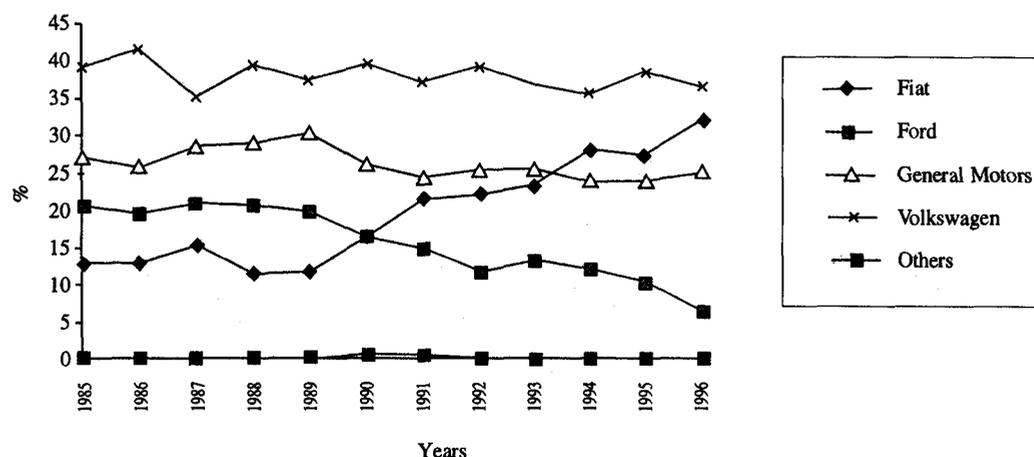
grew by almost 100% compared with the 1990 level). The increase in production by the Brazilian motor industry and its specialization in small vehicles made possible another significant structural change compared with the situation which had prevailed up to the early 1990s. For the first time, all the motor vehicle assembly companies reached optimum scales of production for their best-selling models. According to the assessment made by O'Brien and Karmakolias (1994, p. 21), the optimum scales of production of motor vehicles are between 100,000 and 200,000 units per year, depending on the type of vehicle. In the Brazilian motor manufacturing firms, the scales of production of small cars increased substantially from 1993 onwards, when the production and sale of "popular" vehicles began. By 1995, the scales of production already exceeded 150,000 units per year for the main model families: Gol, Uno, Corsa and Escort (table 4).

The continuation of such increases in scale may be threatened in the future, however, by the structural changes in the motor vehicle market caused by the

<sup>4</sup> In practice, this total should actually be exceeded, since the capacity and production of some of the present production lines are to be expanded in the coming years. This is so, for example, in the case of the manufacturing facilities for the Fiesta, Palio and Novo Gol models.

FIGURE 2

**Brazil: Share of the ANFAVEA member companies  
in domestic sales of locally produced cars, 1985-1996**



Source: ANFAVEA.

entry of new competitors. In the overview of the present structure of the motor vehicle market given in figure 2, there are two points which attract attention. The first is the relatively insignificant share of makes of vehicles other than those which have dominated automobile production in Brazil for over a decade: Volkswagen, General Motors, Ford and Fiat. The second is the notable increase in the market share of Fiat as from 1990, due to its wager on the success of "popular" cars, especially at the expense of Ford, which did not have so much faith in the Brazilian market.

In fact, Fiat's growth strategy and efforts to lead the market may be interpreted as the first important factor in destabilizing the oligopoly which had marked the sector for so long. A significant change which is taking place along with the appearance of the new plants is the entry of seven new competitors into the Brazilian motor vehicle market, of which two are Japanese (Toyota and Honda), two are German (BMW and Audi), one United States (Chrysler), one French (Renault), and one Korean (Asia).<sup>5</sup> In addition, there is the production of automobiles by Mercedes-Benz, which, although long established in the country, previously only manufactured trucks and buses in Brazil. There is therefore going to be a change

in the marginal positions of other makes compared with the Big Four of today. The reduction of the level of concentration in the motor industry may bring benefits in the form of cheaper and/or better quality products. The entry of new competitors helps to reduce the market power of the established firms, and the resulting competition can generate benefits for consumers. On the other hand, the new competitors will be increasing a level of production capacity which is already substantial. Excessive fragmentation of the market may endanger the benefits of scale provided by the recent growth, thus giving rise once again to the biggest obstacle faced by the developing countries in attaining optimum scales of production. Continued emphasis on specialization is important in order to minimize this risk.

Another important change in the Brazilian motor industry in the 1990s is its greater technological dynamism. In this decade, the investments made by the assembly plants have been directed towards the almost complete renewal of their product ranges and the adoption of new processes and new forms of management inspired by the Japanese experience, as well as the restructuring of relations with suppliers of parts, components and other inputs.

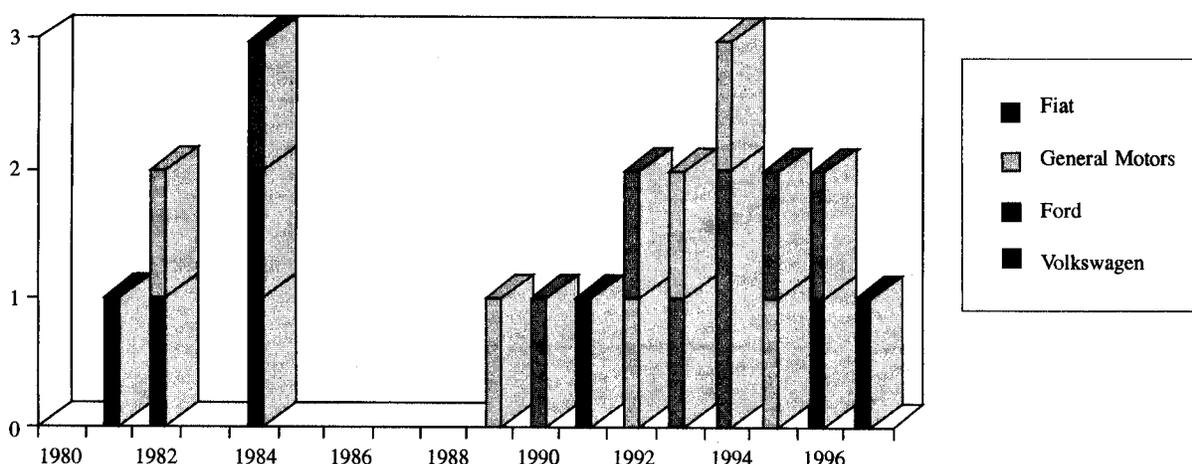
A summary evaluation of the way the launching of new basic models<sup>6</sup> by the motor manufacturers has

<sup>5</sup> In addition to the entry of these new competitors, who have made firm investment commitments, there have been rumours regarding the entry of Peugeot (France), Mitsubishi (Japan), and Daewoo and Hyundai (Korea).

<sup>6</sup> Only the launching of completely new models is considered here, excluding the launching of new models belonging to an existing model family.

FIGURE 3

## Brazil: New car model launches, in units per company, 1980-1997



Source: Files of *Folha de São Paulo* and *Gazeta Mercantil*.

evolved since 1990 shows a pronounced increase in such new launches in the decade, especially after 1992 (figure 3); thus, 14 new models have already been launched, compared with only seven in the 1980s. A noteworthy aspect in this renewal of models is the narrowing of the gap between the age of the products manufactured and marketed in Brazil and that of the models launched most recently by manufacturers in the more industrialized countries. Since 1992, almost all the launches have been of up-to-date "world cars", i.e., models produced simultaneously for all the most demanding markets. Models such as the Corsa, Palio and Fiesta are examples of this tendency, which is likely to become still more pronounced.

Together with the renovation of their products, the Brazilian motor manufacturers have also promoted a substantial modernization of their production methods and organizational and management practices, and they have changed their relations with their suppliers. The renovation of models was very soon followed by the incorporation of programmable automation in the Brazilian motor industry. A large number of robots were incorporated, especially on the high-volume production lines of the new small cars.<sup>7</sup> We estimate, on the basis of market sources,

<sup>7</sup> This was so, for example, in the case of the production lines for the Corsa, Nuevo Gol and Fiesta models.

that there are currently some 500 robots in Brazilian motor factories. Although this number is only small compared with the size of the industry,<sup>8</sup> the selective adoption of programmable automation has been speeding up. The spread of such technologies helps to ensure consistent quality of the products of this sector.

Another point worthy of note is the change in management concepts and techniques. The available information and publications suggest that new techniques for the organization of production and labour have spread more rapidly in Brazilian motor companies than programmable automation. We refer to new management principles and organizational techniques inspired by the Japanese, such as just-in-time production (propelled by demand), total quality, and the principle and techniques of *Kaizen* (continuous improvement). There are no exhaustive recent studies on the spread of these innovations in the motor industry as a whole, but the case studies which exist indi-

<sup>8</sup> More than any other programmable automation technologies, the spread of robots is determined largely by the cost of labour. This explains why there are still only limited numbers of them in Brazil. South Korea, in contrast, had 500 robots as far back as 1985.

cate that, albeit at different rates and with different approaches, most of the motor vehicle companies have made considerable progress in the incorporation of these techniques.<sup>9</sup>

The relations between the motor manufacturing companies and their suppliers of parts, components and other inputs are another important aspect. Generally speaking, the assembly plants are considerably changing their relations with their suppliers of parts and components. The basis for these changes has been an urgent demand for improved quality and lower costs. The raising of the demands with regard to quality and delivery dates and the increased pressure on the profit margins of the producers of parts and components is not a phenomenon which is limited only to Brazil. It became more marked with the spread of the practices known as global sourcing. The fact that this change is known as the "López effect" in industry jargon not only illustrates the importance of the ex-executive of General Motors and Volkswagen in setting off this process but also the global nature of the change. Perhaps the most innovative example in terms of relations with suppliers has been the adoption by Volkswagen of the so-called "modular consortium" system for the production of trucks at its Resende factory.

The modernization of products and processes has been reflected in an increase in productivity in the motor manufacturing industry. The Press has highlighted on innumerable occasions the fact that the physical production of vehicles per worker in the industry as a whole has more than doubled between 1990 and 1995, increasing from 7.8 to 15.6 vehicles/worker. This calculation seems somewhat biased to us, however, in view of the profound structural changes which we have analysed in the present study, since it does not take into account the fundamental changes in the structure of production. First, the share of small vehicles and above all of "popular" cars (vehicles of lower value) has increased within the total output of automobiles, so that physical production since 1993 cannot be compared with output

in the 1989–1992 period, unless some form of calculation of equivalent units is applied. Second, and even more important, the "outsourcing" movement, of which Fiat's policy of "outward-looking growth" is a typical example, has involved the transfer to the motor manufacturers' suppliers of a whole set of manufacturing activities which the assembly firms previously carried out themselves. Thus, the structure of production in the mid-1990s already looked quite different from the structure at the beginning of the decade. Consequently, there is every justification for the criticism that this "tertiarization" leads to a bias in the physical output calculations.

The index of sales per employee, discounting the effect of imports, registers much more modest growth: 36% between the 1994 and 1989 figures. This indicator also involves some problems, however, because in addition to maintaining the tertiarization bias it also introduces some additional distortions. In view of this, we carried out an exercise aimed at partly neutralizing the tertiarization effect of the index of sales or output per worker by deducting the consumption of parts and components produced or imported by the companies which are members of Sindipeças. If we use this indicator, the growth in productivity over the three-year period 1993–1995 was 35% compared with the previous three-year period. This is a significant growth rate, but much less than that given by the index of vehicles produced per employee.

In short, this analysis leads us to two main conclusions. First, since all the indicators point in the same direction, and also in the light of other efficiency indicators mentioned in this study, there is proof that the productivity of the motor manufacturing companies increased significantly during the period studied. This increase was less than the productivity growth reported to the public, however. Second, the information available at the sectoral level does not allow exact conclusions to be drawn about the size of that increase. This indicates that additional studies need to be carried out to obtain from the manufacturers the information needed to overcome the biases in question.

<sup>9</sup> With regard to recent organizational changes in General Motors and Volkswagen do Brasil, see Fleury and Salerno (1995). For a summary of the most important changes in Fiat do Brasil, see Quadros Carvalho and Bernardes (1997).

## IV

### The new external linkages of the motor industry

The third set of changes analysed in this article concern the international linkages of the Brazilian motor industry. These linkages were substantially changed, first of all by the trade openness process and subsequently by the adoption of the Motor Industry Regime. Brazil ceased to be one of the most tightly closed markets in the world for the importation of motor vehicles, and there was also a reduction in the average index of national content in the finished products (which was over 95% before the trade openness process). It soon became clear, however, that the Brazilian economy's capacity to absorb heavy deficits in the motor vehicle and parts and components trade was limited, and these limits led the government to adopt the Motor Industry Regime. The signals that this Regime sent out helped in turn to induce investments in specialized local production, possibly opening up new prospects for future exports. Against this background of readaptation of trade flows and volumes, a noteworthy feature has been the growth in trade with the MERCOSUR countries, especially Argentina, which reflects the consolidation of the regional market.

The trade openness process led, for the first time in the history of the Brazilian motor industry, to a substantial share of imported vehicles in domestic sales. The increase in this share from the very low levels at which it stood up to the early 1990s is of a structural rather than a transitory nature, and its decline from 21.3% to 12.9% between 1995 and 1996 was the result of the containment measures connected with the Motor Industry Regime and must not be interpreted as a return to the previous conditions. The growth in imports of parts and components has also been very important for the structure of the industry. Between 1991 and 1996, the value of such imports grew at an average annual rate of 30.2%, and their share in total Brazilian consumption of parts and components shot up from 5.6% in 1989 to almost 21% in 1996.

The use of imported parts and components was one of the strategies adopted by the motor manufacturers in order to make possible the short-term reno-

vation of their range of products and improvement of the quality of the vehicles produced.<sup>10</sup>

The specific tariff on imports of motor vehicles underwent various changes between 1990 and 1995. What were those changes, and how did manufacturers react to them? Between May 1990 and October 1992, the tariff was gradually reduced from 85% to 40%. With the recovery of the domestic market in 1993, the gradual elimination of tariffs showed its first significant result. In that year, imports of motor vehicles grew by more than 150%, which was much higher than the 43% growth in vehicle output. The tariff reduction process continued until September 1994, when the currency revaluation connected with the introduction of the Plano Real markedly stimulated imports. When the growing external imbalance generated in the motor industry sector became evident, the import tariff was raised again in February 1995 and more sharply in the following month, when it returned to a level of 70%, giving rise to the negotiations which culminated with the adoption of the Motor Industry Regime. Imports continued to grow more than local production in the two-year period 1994-1995, but slackened in 1996 because of the measures adopted the year before. The relevant trade balance figures (table 5) showed a rapid deterioration as from 1994, which got worse in 1995 but was partially reversed in 1996.

These fluctuations could hardly fail to have repercussions on the companies' investment plans. Within the context of an expanding market and growing trade openness, the companies sought to strike a balance between domestic production and imported supply. To begin with, there was a recovery in investment for expanding production and launching new models to compete with imported products. Later on, the manufacturers who were already installed in the

<sup>10</sup> For a more detailed appraisal of the effects of the openness process on the Brazilian parts and components industry, see Posthuma (1995).

TABLE 5

**Brazil: Trade balance for motor vehicles, parts and components, 1989-1996**  
(Millions of current US dollars, FOB)

Product	1989	1990	1991	1992	1993	1994	1995	1996 <sup>a</sup>
Buses	127	57	118	269	329	206	(14)	(7)
Private cars and light commercial vehicles	681	406	226	494	(78)	(935)	(2 584)	(821)
Trucks	693	437	331	538	301	302	(190)	112
Total, motor vehicles	1 501	900	675	1 300	553	(427)	(2 788)	(716)
Parts and components	1 308	1 185	1 260	1 536	1 511	1 282	713	437
<b>Total for sector</b>	<b>2 809</b>	<b>2 085</b>	<b>1 935</b>	<b>2 836</b>	<b>2 064</b>	<b>856</b>	<b>(2 075)</b>	<b>(279)</b>

Source: Prepared by the authors on the basis of the SECEX data bank.

<sup>a</sup> For the year 1996 the figures refer to exports from January through December and imports from January through October, multiplied by 1.2.

country became the main importers themselves, displacing the independent importers, and in a situation which markedly encouraged external purchases they postponed their most daring plans for the expansion of domestic production. Finally, when they were calmed down by the government's indications that it would not stand by idly and permit a deterioration in the external accounts of the motor industry, the companies resumed their investment programmes.

In the light of the above-mentioned structural changes which have been taking place in the industry, it may be wondered up to what point it is reasonable to expect an increase in competitiveness which will bring positive effects for the trade balance, and within what space of time. In our opinion, there are no grounds for expecting significant changes in the short term in the competitive position of the industry. It will be necessary to contain the trade deficit of this sector by imposing restrictions on imports and providing incentives for exports, as envisaged in the Motor Industry Regime. In the medium term, however, the growing specialization and investments which are underway will tend to favour exports. Within the context of an expanding local and regional market, and with the government closely watching over the behaviour of the external accounts, the strategies of most of the companies seem to envisage an increase in production and in the exports needed to offset the imports required to complement their own product lines. This does not mean that Brazil is going to be-

come an important export base for the world market—the primary motive of the investments continues to be production for the domestic and regional market—but it does give grounds for expecting more decided moves to participate in the external market on the basis of the new plants and the modernization of the old ones. This outlook is consistent with the results of a recent study (Reis, Branco and Bielschowsky, 1997) on Brazilian industry as a whole, which shows that the increase in the export coefficient depends above all on the investments motivated by a rapidly growing domestic market.

Finally, another important aspect of the new external linkages which are taking shape for the Brazilian motor industry is the role of MERCOSUR. The share of MERCOSUR in motor vehicle exports has grown considerably since 1991, and between 1992 and 1996 it has stood at a level of around 50%. Between 1995 and 1996, there was also a spectacular increase from 15% to 49% in imports from MERCOSUR (i.e., Argentina). These data reflect the process of regional market unification resulting from the sharing out between Brazil and Argentina of the investments made by the motor manufacturing firms. These firms seek to achieve some degree of equilibrium in intra-regional trade while at the same time attaining greater specialization and, hence, greater efficiency of their plants. The tendency to increase trade in finished products, parts and components among the countries of the region has become firmly established.

# V

## The role of the Motor Industry Regime

The question that seemed to be clearly facing the motor companies in the second half of 1994, after the acceleration of the tariff reduction schedule planned for MERCOSUR, was to define the best mix of domestic production and imports for taking advantage of that expanding market. The hesitations observed at that time, together with the announcements of expansion plans which were followed by retractions and the study of alternative solutions –the example of the third factory of General Motors is very enlightening in this respect– suggest that the companies are still looking for the right answer to this question.

There are two important elements which need to be emphasized in this respect. First, sales grew more than production during the period 1992-1995 and the share of imported vehicles increased considerably, putting excessive pressure on the sector's trade balance. Second, the companies already installed in the country reacted rapidly to the entry of independent importers, and already by 1993 they themselves were the main sellers of imported vehicles. The first of these events raises the possibility that the "equilibrium" mix of domestic production and exports sought by the companies involved a heavy trade deficit for the sector. The second shows the limits of trade openness as a mechanism capable of affecting the dominant positions of the leading companies, at least in the short term.

The Motor Industry Regime played a decisive role as a catalyst of the investment decisions taken by the companies from 1995 on. This was due not so much to the benefits provided for in the regime –which only last up to 1999– as to the fact that the government made it clear that it would not tolerate a high and permanent trade balance, which, in view of the weight of the motor industry sector, would end up by affecting the Brazilian balance of payments. Thus, the companies were made to understand that the "equilibrium" relation between domestic production and imports should be closer to a level which would also permit a better sectoral trade balance. This effect on investment was the most important result of the Motor Industry Regime. In 1995, the investments of the companies which were members of ANFAVEA shot

up to nearly US\$ 1.7 billion, compared with an average of approximately US\$ 1 billion per year in the previous five-year period. Moreover, there are already confirmed investment applications totalling over US\$ 3.6 billion, mostly from recently arrived companies, solely in respect of the establishment of new plants, which will increase production capacity by some 600,000 vehicles in the next three years. All these plans, whose execution has already begun, provide for the construction of modern plants and the manufacture of up-to-date models.

More rapid modernization of the motor industry may be expected as a result of these investments. The renovation of the industry's products which has taken place in the last five years has narrowed the gap between the age of the products manufactured and marketed in Brazil and that of the most recent models launched by the manufacturers abroad, and this tendency will become more marked. The same applies to innovations in production processes and relations with suppliers. The new Volkswagen truck factory at Resende (Rio de Janeiro) promises to make the so-called "modular consortium" a household word in the motor industry. Thus, General Motors has already announced its intention to establish a similar system, called "industrial condominium", in its new plant at Gravataí (Rio Grande do Sul). All this will give a clearer picture of the real increases in the productivity of the sector, which have been difficult to estimate and very probably less marked than has been claimed.

Thus, the advances promised by the new investments in processes and products should improve the competitiveness of the motor industry, which will be reflected in turn in an improved trade balance. As well as being more modern, the plants are increasingly specialized, thus making possible better use of economies of scale. The volume of production that the main manufacturers are already achieving thanks to the new investments will strengthen their external competitiveness. Within this overall picture, the Motor Industry Regime is helping to improve the external accounts by checking imports and expanding exports through short-term incentives and, in particu-

lar, through greater competitiveness in the medium term.

The role of the Motor Industry Regime in promoting more widespread industrial and technological development also needs to be stressed. It is well known that the motor industry has important linkage effects which multiply the benefits deriving from the investment decisions of the motor manufacturers and their closest associates in the parts and components sector. An example of this is the recently approved investment of US\$ 1 billion by Usiminas to cover the increase expected by 1999 in the demand for high-quality steel due to the entry of new motor vehicle manufacturers. In addition, these companies are establishing a complex pattern of production organization and technological development which will have repercussions on the other segments of the industrial sector.

Nevertheless, the Motor Industry Regime has also had some controversial aspects. The aspect most frequently referred to in this respect is the unequal treatment given to vehicle manufacturers compared with producers of parts and components. Thus, the levels of protection established for the motor industry are exceptionally high and have allowed the manufacturers to impose abusive price increases and increase their profit margins, which were already quite high before the Regime came into force. This situation is only transitory, however, not only because the protection is only temporary but also because the expansion in installed capacity planned for the coming years will oblige the companies to reduce their profit margins in order to expand the market. At all events, doubts remain about the right "calibre" of the levels of effective protection granted to manufacturers. It is a question of finding the right intermediate point between the 20% nominal tariff, which would lead to the reduction of much of the planned investment, and the level of 70%, which allows excessive profit margins that adversely affect consumers' interests. Alternatively, it would be necessary to find effective ways of defending competition in order to stop abuses by the vehicle manufacturers.

The parts and components industry, for its part, is in a situation of limited profit margins and a market threatened by imports. It should be noted that the restructuring process of this segment is different from that observed in the case of the vehicle manufacturers, since it has little to do with the Motor Industry Regime. The changes underway in the parts and com-

ponents industry have a global dimension which, together with the Brazilian economic openness process, is promoting a rapid process of concentration and disappearance of domestically owned firms. The factors behind this situation are: i) the growing demands of the vehicle manufacturers as regards prices, quality and delivery dates; ii) the tendency of the latter manufacturers to work with a small number of suppliers, and iii) also connected with the foregoing, the use of shared assembly practices, that is to say, the preference of the vehicle manufacturers for the supply of systems or sets of components which are already assembled, rather than individual components.

Although the intentions of the vehicle manufacturers to increase their imports of components have proved to be more of a threat than a reality, their demands have led to heavy competitive pressure on the supplier firms. Although the direction and scope of the changes which are just beginning to take place in the parts and components industry are not yet clear, it is already possible to know that some activities are tending to be eliminated, that technological and trade associations with leading world firms are taking on a strategic role, and that the attainment of international levels of quality and productivity has come to be a top priority. Studies in greater depth are needed to establish the exact nature and consequences of the restructuring of the parts and components sector.

It would be premature to try to draw up a balance sheet of the effects of the Motor Industry Regime at this point. The benefits already obtained have been made fairly clear in this article, however: in the short term, an increase in the trade deficit has been avoided, and in the medium term, the investments induced by this measure are speeding up the modernization of the motor industry and also strengthening its external competitiveness. The main problems involved have also been highlighted, especially the unequal treatment given to vehicle manufacturers on the one hand and manufacturers of parts and components on the other, and the increase in automobile prices, at least in the short term. For the moment, it is reasonable to conclude that a process as complex and painful as that of increasing trade openness makes it necessary to adopt pragmatic policies which will allow this transitional phase to be handled as effectively as possible.

(Original: Portuguese)

### Bibliography

- Fleury, A. and M. Salerno (1995): Hybridisation of industrial models in the Brazilian automobile industry, *Annales du Troisième Rencontre Internationale: Les nouveaux modèles industriels*, Paris, Gerpisa.
- Folha de São Paulo (1995): *Caderno especial*, São Paulo, 26 January.
- O'Brien, P. and Y. Karmakolias (1994): *Radical Reform in the Automobile Industry: Policies in Emerging Markets*, IFC Discussion Paper No. 21, Washington, D. C. World Bank.
- Posthuma, A. C. (1995): *Restructuring and Changing Market Conditions in the Brazilian Auto Components Industry*, LC/R.1484, Santiago, Chile, Economic Commission for Latin America and the Caribbean (ECLAC).
- Quadros Carvalho, R. and R. Bernardes (1997): *Mudando com a economia: estratégias de ajuste de empresas líderes brasileiras*, study prepared for the ECLAC Division of Production, Productivity and Management, mimeo.
- Reis, J., F. Branco and R. Bielschowsky (1997): *Investimentos na indústria brasileira 1995/1999*, Rio de Janeiro, Confederação Nacional da Indústria.

# The ongoing history *of a Chilean metal products and machinery firm*

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Processes of adjustment and restructuring of the production sectors to a new system of macroeconomic incentives are slow, costly and more inefficient than conventional microeconomic theory would lead one to suppose. In this article, the authors explore the process of the restructuring of production of a Chilean metal products and machinery company and the way it gradually modified its operations from the 1970s onwards, adapting them to new macroeconomic and mesoeconomic signals. As is well known, in the last two decades the system of incentives and the regulatory framework for production activities in Chile have undergone profound changes, gradually moving –with advances but also setbacks– towards an organizational model more open to external competition, more deregulated, and with less public sector participation in the field of production proper. In the case of the company studied here, in spite of the considerable length of time that the Chilean economy has been open to the exterior and the fact that the company has been notably successful in its global restructuring, the transition to international levels of productivity is still not complete and displays areas of fragmentation and weakness. Section I of the article describes the general background for the functioning of the Chilean economy in which the company's activities evolved; section II describes the evolution of the firm's manufacturing facilities, and the third and last section explores the links between microeconomic and macroeconomic aspects and sets forth some conclusions drawn from this study.

# I

## Introduction

Economists tend to prefer to make a macroeconomic interpretation of a given situation and hence to pay less attention to what happens to individual economic agents. This is partly because the conventional theory of prices is constructed on the basis of the stylized behaviour of a given "representative agent" who maximizes his profits in conditions of perfect information. In an analytical framework of this type, it may be assumed that in the long run the branches or sectors of production adapt to a new set of macroeconomic signals and that the adaptation path followed by a particular firm is irrelevant.

Observation of actual situations, however, shows us that the processes of adjustment and restructuring of a given sector of production to a new system of incentives are slow, costly, and more imperfect than conventional microeconomic theory would lead us to suppose. In the real market, there are entries and exits of firms, gradual processes of factory reorganization, and changes in the levels of vertical integration of the plants, the ownership of enterprises and the level of sectoral economic concentration, in the course of a complex and highly idiosyncratic episode of structural mutation. The interdependence between the macro, meso and micro dimensions is still essentially unknown, although, intuitively, we perceive that the adjustment process may well end up by irreversibly conditioning the structure and long-term behaviour of the branch of production or economy in question.

In the last two decades, the system of incentives and regulatory framework in which production activity takes place in Chile has undergone profound changes. It has gradually been moving towards a

form of organization of production which is more open to external competition, more deregulated, and with less public sector participation in the area of production proper.

The individual economic agents have slowly been adapting to these changes. We know little, however, of the way these complex processes of structural mutation have been metabolized at the microeconomic or sectoral level.

From this standpoint, we have considered it of interest to explore the production restructuring process of a Chilean metal products and machinery firm—the *Compañía Tecno Industrial (CTI)*—and to see how it gradually modified its operations over the last three decades in order to adapt to the new macroeconomic and mesoeconomic signals. It also seemed interesting to us to try to determine how far the evolution of the CTI reflects what has happened in the Chilean metal products and machinery industry as a whole.

We will show that in spite of the already longstanding external openness of the Chilean economy and the successful global restructuring of the firm in question, the transition to international levels of technology is still incomplete and shows areas of fragmentation and weakness. Only recently—with the initiation of talks on the possible entry of Chile into MERCOSUR—did the CTI begin to perceive that it would henceforth have to face stronger competition from big world producers and that it would have to take much more account of the organization of production and the rate of technological change displayed by this branch of industry in the developed world, if it is to preserve its independence in the long term.

□ This study was carried out with the collaboration of various executives of the *Compañía Tecno Industrial (CTI)* and has been published after express consultations with that firm, whose co-

operation and permission for publication are gratefully acknowledged. The views expressed in this article are of course the exclusive responsibility of the authors.

## II

### The global Chilean context, 1970-1994

The Chilean manufacturing sector has passed through various periods of crisis and recovery in the course of the last three decades (figure 1 and table 1). It was only towards 1992 that the industrial product recovered the level that it would theoretically have reached on the basis of a simple extrapolation of what happened in the 1970s. During this period of time, there was under-utilization and destruction of installed capacity which meant the closure of factories, unemployment and waste of the technical capacity accumulated by society. In the last few years covered by the figure, however –1991 to 1993– industry increased its rate of expansion.

Within this lengthy period, we shall highlight three clearly differentiated stages: 1974-1981, 1982-1986, and the stage of recovery and faster expansion in 1987-1994.

#### 1. The 1974-1981 stage

After the military coup of 1973 there began "... one of the most dramatic economic reforms ever recorded in the history of Chile" (Corbo and Sánchez, 1992). The aim of the changes was to propel the country towards a social organization model which was more deregulated, open to external competition, and basically guided by the market signals. This transition

took place in an atmosphere of economic recession and harsh social repression.

Various Chilean economists have sought to explore the economic consequences of this epoch-making change. Thus, Mizala (1992) shows that it was not only the opening-up of the economy to the exterior which affected the manufacturing sector, but also the drop in domestic demand, which was a decisive factor in reducing the level of industrial activity in the country in those years. Thus, in a context in which it was difficult to expand exports as a counter-cyclical measure, the drop in domestic demand is seen to be the main factor in the decline in Chilean manufacturing production. It was only later, between 1979 and 1981, that imports gave local firms a further reason for concern. This means that the replacement of locally produced goods by imported products did not take place immediately after the reduction of tariffs, as macroeconomic adjustment models sometimes suppose; instead, it took some time for imports to begin to act as an element disciplining local producers. In 1982, a recession and a drop in domestic demand adversely affected the sector once again.

V. Corbo classifies the structural reform policies of this period in five main groups: i) those aimed at eliminating price controls in merchandise markets, ii) those designed to liberalize the financial market,

FIGURE 1  
Chile: Evolution of industrial output, 1957-1993

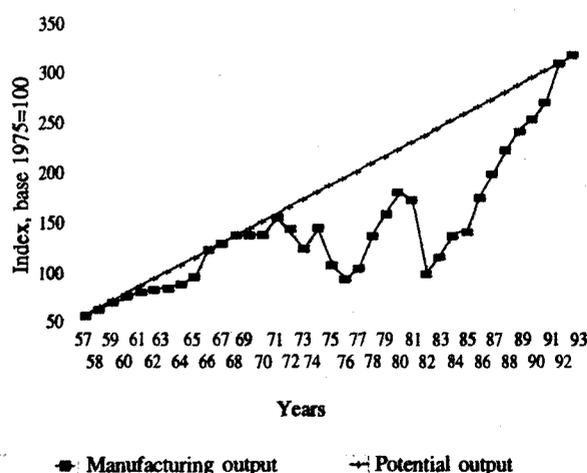


TABLE 1  
Chile: Average growth of industrial output  
in selected periods between 1958 and 1993  
(Percentages)

Period	Growth rate
1958-1993	4.27
1958-1973	4.40
1974-1992 Market phase	4.50
1973-1976 Crisis I	-11.52
1977-1981 Recovery from crisis 1	7.34
1982 Crisis 2	-33.74
1983-1992 Recovery from crisis 2	11.31
1989-1993 Recovery stage	11.77
1992-1993	17.32

Source: INE, various years.

iii) those intended to make labour markets more flexible, iv) those aimed at controlling and reducing the fiscal deficit, and v) those designed to reduce the State's participation as a producer of goods and services (Corbo and Sánchez, 1992).

The macroeconomic stabilization and structural reform efforts mentioned above affected the performance of the Chilean manufacturing sector in various ways:

i) industry as a whole lost approximately 20% of its share in GDP, which went down from 25.4% in 1970 to 21.5% in 1980 and 20% in 1982.

ii) the effective rate of protection fell sharply, reaching an average of 14% in 1979.<sup>1</sup>

iii) the general functioning of the labour market underwent a radical change with the prohibition of all forms of trade union activity.

iv) the number of industrial enterprises went down by 13% between 1967 and 1979 (Mizala, 1992), especially in the case of small and medium-sized family companies; there was a big increase in external competition, and industrial employment fell dramatically.

v) the industries most seriously affected by competition from imported products were those in divisions 32, 36 and 38 of the International Standard Industrial Classification (ISIC), corresponding to textiles, manufacture of non-metallic mineral products, except products of petroleum and coal, and manufacture of fabricated metal products, machinery and equipment. Moreover, "In terms of profitability, the enterprises competing with imports turned in the worst performance, which was only to be expected in view of the adverse conditions that those companies had to face during the entire period" (Mizala, 1992). The enterprises in the natural resources sector stood out from the rest, however, because they benefited from the greater trade openness.

In order to adapt to the new economic context,<sup>2</sup> enterprises adopted the following measures:

i) rationalizing their style of management and organization of work, reducing the variety of products manufactured and increasing the content of im-

ported inputs per unit of production, thus improving labour productivity and profits without having to make big investments in new equipment.<sup>3</sup>

ii) improving product quality by reducing the number of products manufactured locally and increasing the range offered on the market through the importation of those which were not produced. For the companies exporting industrial commodities, the change in production strategies was minimal.

iii) changing the composition of their assets by changing their physical assets into financial assets and preferring speculation rather than real investment in machinery and equipment. The level of indebtedness was increased, first in pesos and later in dollars, and stocks were reduced to a minimum. A. Mizala argues that it was the financial problem which most affected companies and that many of those which went bankrupt did so because they were not able to adapt on the financial side (ECLAC/CIID, 1995).

In short, the increased trade openness and macroeconomic stabilization policies caused companies to make an effort to rationalize their organization of work. The firms which survived tended to become assemblers of imported parts and components and to supplement their line of products with completely knocked down (CKD) products imported from abroad. The branches processing natural resources tended to gain ground in relative terms within the overall industrial structure, at the expense of the branches engaged in production for the domestic market.

## 2. The 1982-1986 stage

In Chile, as in the rest of Latin America, these were years of serious external imbalances caused by the increase in international interest rates, the drop in the terms of trade, and the absence of international financing after the Mexican moratorium of 1982. These factors gave rise to rapid expansion of the external debt and forced the various governments to seek financing domestically, with the consequent impact on inflation.

In these years, the Chilean economy was open to external competition and was very sensitive to disturbances coming from the exterior. The measures adopted by the economic authorities in order to face

<sup>1</sup> The relatively small increase in the CTI's exports was due to the initially low competitiveness of this firm compared with advanced international practices.

<sup>2</sup> It should be noted that we are referring to the sectoral average. Obviously, there are particular types of activities which behaved differently (see Agacino, Rivas and Román, 1992).

<sup>3</sup> Although there was only evidence of increases in efficiency between 1974 and 1979, since afterwards there was a decline up to 1986 (Marshall, 1992).

the problems of this period consisted basically of partly closing the economy and applying countercyclical expansionary policies. They sought to "manage the exchange rate as the main instrument for tackling the external imbalance, supplemented by increases in tariffs" (Meller, 1992). In addition, certain prices (those of agricultural products, for example) and interest rates were controlled once again, as was the growth of public expenditure.

The GDP went down by 14% in 1982 and 0.7% in 1983. In that same year, the unemployment rate rose to 28.5% and imports fell to less than half of their 1981 level. The recovery of the external sector of the economy was begun. In the manufacturing sector, the product went down by 21% in 1982 and employment fell by 27%. A period of severe disinvestment began which reached its peak in 1984 when investment was 45% below the 1979 level. The sector of small and medium-sized enterprises was the most sensitive to the changes, thus further increasing its lag with respect to the big firms. The change in exchange rate policy improved the profitability of the sector engaged in the processing and export of natural resources.

The protectionist measures taken improved the profitability of the branches of production devoted to the domestic market, although there was a general climate of uncertainty and discouragement with regard to investments in those sectors. The industrial commodities sector turned in a particularly buoyant performance, but loss of dynamism prevailed in the rest of the branches of production.

In short, this period was marked by a high degree of macroeconomic imbalance and turbulence. There were numerous bankruptcies of companies. The industries processing raw materials gained ground in relative terms, and there was an increase in the degree of economic concentration within the manufacturing sector, because of the relative failure of the small and medium-sized enterprises to adapt to the new conditions of the macroeconomic environment.

### 3. From 1987 to the present

In this period, the trade openness process was resumed with a reduction in tariffs, and the economy recovered and began to grow again. This took place against a background of change in the political regime. The need to take care of social objectives was raised once again, but subject to the need to respect the restrictions imposed by the macroeconomic bal-

ances. Taking this into account, it was decided to increase taxes in order to avoid financing social expenditure through money issue or public indebtedness. The idea that the market is a better means of allocating resources than the State authorities was still not questioned, but deregulation was not complete or universal, since it was not applied to financial activities, copper mining, etc. The Frei Ruiz-Tagle administration maintained essentially the same concept of social organization as its predecessor in power.

According to some authors, a quarter of the expansion achieved in this stage was due to the growth in domestic demand and almost two-thirds to export openness (Agacino, Rivas and Román, 1992). In these years, enterprises finally put their financial situation on a sound basis.

The global economic situation showed clear signs of improvement. Inflation continued to go down, the growth rate rose, investment increased, there was a growing inflow of external capital, the domestic saving rate increased, and real wages and exports rose. At the same time, a clear appreciation in the real exchange rate began to be observed.

In the manufacturing sector, there was an improvement in the level of employment. Investment increased, but in 1988 it had still only recovered the 1979 level, and in 1989 the 1981 level.

From 1988 on, manufacturing exports became more diversified and continued to expand, thus indicating that the sector's orientation towards the external market was increasing in spite of the appreciation in the real exchange rate.

Business strategies (Castillo, Maggi and Dini, 1994) concentrated on the following aspects:

i) *Management*. The professional level of management staff rose and there was an increase in the tendency to work in teams. The dominant trends were aimed at making the command structure smaller and more flexible and incorporating new functions associated with information technology.

ii) *Growth*. Here, there were at least three different strategies: expansion of existing plants, establishment of new plants, and the acquisition or takeover of existing companies. In most cases this has been done with the company's own funds, even though most firms consider that there are no obstacles to access to the financial market.

iii) *Human resources*. The trade unions continue to take very little part in modernization decisions. Companies are beginning to make use of fiscal incentives for training.

iv) *Technology*. Efforts to improve product designs are being accentuated in an effort to reach differentiated consumers and particular market niches. Changes in production are based on the purchase of machinery and the adaptation of technology acquired abroad to the scale of the Chilean market. There is not much concern for reducing lost time by carrying out time and motion studies.

v) *Marketing*. Efforts are being made to differentiate products and to gain better market positions through brand names, quality, and the development of customer service facilities and preferential distribution networks. Trade alliances are also being established and areas of business are being diversified. The degree of subcontracting is only low.

In short, since 1985 industry has grown through the incorporation of factors of production, especially labour, in contrast with what happened in the previous stage, where there was an effort to save labour in absolute terms. For this reason, labour productivity has not significantly increased. The last three years, however, seem to be witnessing a trend towards greater dynamism than in previous periods, which is reflected in the faster incorporation of numerical control equipment, CAD and CAD-CAM systems, automatic process control technology, some use of robots, etc. Although very recent, these developments would

appear to suggest some speeding up of manufacturing growth in Chile.

There are some aspects which are worthy of emphasis. There are indications that industrial exports are becoming more diversified and expanding to an extent commensurate with the recovery in industrial investment in recent years, and that subcontracting is also becoming more prevalent. Looking at the different branches of industry, it may be noted that it is the export sector which has developed most dynamism and attained the greatest relative weight in manufacturing production, but the sustained growth of the economy has also meant that industries producing for the domestic market have also improved their rate of expansion. Employment, however, has shown some tendency towards relative stagnation.

This shows that the process of recovery of industry in the 1980s was based on the reallocation of resources from branches serving the domestic market to others which make more intensive use of capital and produce industrial commodities for export. With regard to the morphology of the markets, two important facts may be noted: in the consumer goods segment, there has been an increase in competition at the local level, while in the industrial commodities markets the supply has come from a small core of big corporate groups strongly oriented towards exports.

### III

## The evolution of a metal products and machinery firm: the case of CTI

This section describes the evolution of a firm producing household appliances (refrigerators), in which three different stages may be distinguished in recent decades (figure 2).

The firm is currently an open limited company producing cookers, refrigerators, washing machines and heaters under the brand names Fensa, Mademsa and Ferriloza. It also markets a wide range of domestic electrical appliances which it does not produce itself.

The firm has relations with over 50 suppliers (many of which are located abroad: Belgium, Brazil, Italy and Japan). It employs some 1400 workers and operates basically as an assembly firm in which 70%

of the manufacturing cost corresponds to imports of parts and components.

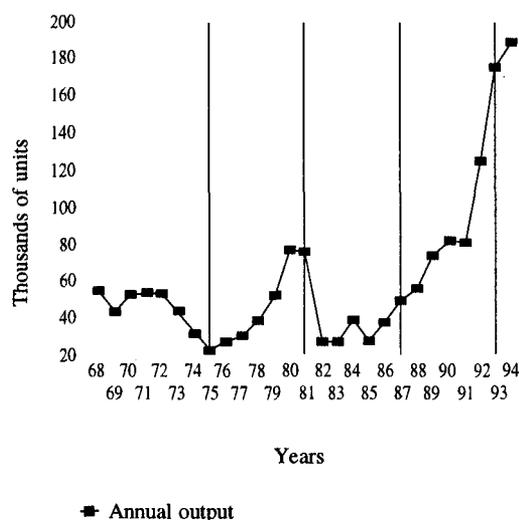
After this brief background information, let us now look at the way this firm has evolved.

#### 1. Expansion and production reorganization stage (1975-1981)

##### a) *Organization of production and process engineering*

After the firm was returned to private ownership, a restructuring process was begun with the aim of achieving economies of scale and specialization by progressing from batch production to continuous-flow production.

FIGURE 2

**Compañía Tecno Industrial (CTI):  
Refrigerator outputs, 1968-1994**

The merger between Fensa and Mademsa, which took place in 1975, gave rise to the present CTI—Compañía Tecno Industrial S.A.—and all production was concentrated at the Fensa plant located at Maipú.<sup>4</sup> The merger was carried out in order to face the trade openness process, which involved a probable increase in foreign competition. Before the merger, Mademsa was made up of four plants in three different locations, which employed some 2,000 persons at the beginning of 1975.

Fensa, in contrast, had only a single factory, at Maipú, which was organized in a more rational and orderly manner and employed approximately 1900 persons.

The merger led to staff reductions: 1500 workers took voluntary retirement in a climate of great worker/employer tension. Relations between the company and the trade unions passed through a very conflictive stage.

Perhaps the most interesting feature from the technical point of view was the rapid replacement of the batch production model with one based on continuous-flow methods. In Mademsa, the general manager negotiated with each worker an informal contract laying down the output expected from the latter and the agreed remuneration. This meant that

there was a multiplicity of contracts within the plant and each worker had a good deal of freedom to design his own production process, developing his own equipment and tools to carry out his job. Each of the workers was a metalworking craftsman skilled in a wide range of metalworking sub processes, such as stamping, soldering, turning, etc. There was no time and motion department, since it was the worker himself who was responsible for improving his production times and thus earning the benefits of his greater productivity.

In Fensa, the production organization model was very different and much more conventional. The production line system was used, and workers received bonuses for outputs higher than the basic levels expected. The workers did not have freedom to organize their own work, and they did not have to construct their own tools and dies; they were not responsible for the finished product, but only for a specific task in its production. They were subject to a rigid system of time and motion studies, and the planning of production was much more detailed and highly controlled, on the basis of Taylorist methods of organization.

Thus, the Fensa/Mademsa merger involved a confrontation between two different organizational models and two different business “cultures”. One of them had to dominate over the other, and in this case it was the Fensa model which won. Absorbing the differences naturally took time, and it was only towards 1979 that there was complete fusion of the system under the Fensa model. It was necessary to forbid the former Mademsa workers to make their own tools and dies, which meant the loss of the craftsmen’s training they had brought with them from their previous working experience.

Progress was made in the reorganization of production processes during the period 1973-1976. Even so, according to one report the factory organization was still not very rational in 1977, since the work stations were not clearly delimited, the tools were not standardized, there were assembly lines parallel to the central production line, a lot of time was spent on materials handling, and there were many points in the line which held up the production flow.

Efforts were also made to improve the organization of work in the administrative area, with the introduction of computers in 1977. This change took many months and led to the dismissal of nearly 60 administrative employees.

<sup>4</sup> Mademsa was absorbed by Fensa, probably because of its lower yields due to the fact that it produced its goods in small batches instead of in a continuous flow.

Like many other Chilean firms, CTI was faced with a big increase in domestic demand in 1979-1980. At that time, the firm reached the limits of its installed capacity and decided to deverticalize production and devote itself solely to the final assembly of refrigerators. As a result, the management had to organize a complex system for the purchase of parts and sub-assemblies on the international market, embarking on a new model of organization of work based on the assembly of imported components.

In 1980 and 1981, more efficient thermoforming equipment was purchased, resulting in a reduction of nearly 20 persons in the labour force. The company stopped producing evaporators, which it began to import from Japan, and also filters and condensers, which it began to bring in from Italy. The compressor plant was sold to Brazil and the production of electric heaters was transferred to Fabritel, grills to Lioy and Ferromat, motors to Somela, and so forth.

With this process of deverticalization, the firm concentrated on a smaller number of activities, retaining only the most profitable ones.

Up to the early 1980s, the engineers and technicians of the company did not specialize in particular lines of products. Each engineer worked on several different lines, thus losing economies of specialization. At the end of 1980, a more specialized form of organization was established, clearly oriented towards specific products, through the creation of four engineering departments: refrigerators, heaters, cookers and washing machines.

This restructuring made it possible to reduce the number of workers from 2500 in 1975 to 1300 in 1980.

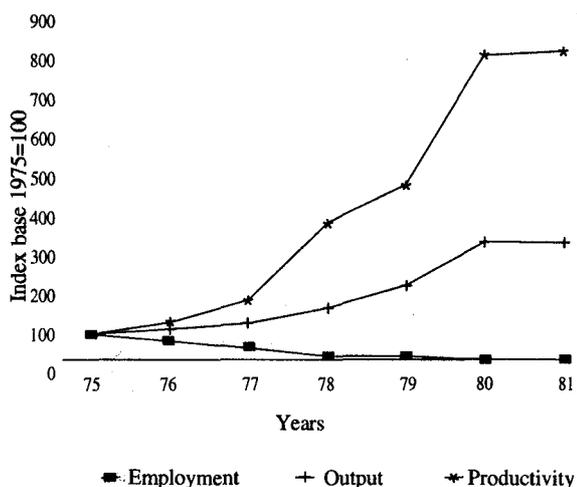
#### b) *Product design*

The company did little in the area of product design until well into the 1980s. In 1981 it still did not manufacture two-door refrigerators, so it tried to develop a product of this type for itself by copying an already elderly German model. From the original design concept up to the entry into production, this project took two years, so that the refrigerator first came into production in June 1982. The range of models manufactured was reduced from 9 to 4, the remainder of the lines marketed being imported.

In short, it can be said that in this first stage of its history of adaptation to the macroeconomic changes, the company sought economies of specialization by reducing the range of products manufac-

FIGURE 3

#### Compañía Tecno Industrial (CTI): Evolution of selected indicators, 1975-1981



ured, transferring all production to a single plant, organizing its installations into production lines, reducing the degree of vertical integration and in-house manufacture of parts and sub-assemblies, increasing the imported content, making more use of subcontractors, reorganizing work processes, and introducing computation into the administrative area. In addition, it reduced the number of workers employed by almost 50%, unified the system of remuneration, and eliminated the system of organization in work groups.

These changes had satisfactory results, as is shown by the corresponding indicators (figure 3). Production was doubled, and labour productivity increased. The company used its idle capacity and made organizational improvements, but did not make any big investments in capital goods. Its profitability improved, and since 1979 it has shown a profit.

## 2. The 1982-1986 crisis

### a) *Organization of work and process engineering*

The 1980-1981 period marked the end of an expansionary cycle. In 1982 the Chilean macro economy entered a phase of heavy turbulence. There was a big drop in the physical output of the firm, and this, together with bad business transactions with foreign firms and a high level of indebtedness, placed the company on the brink of bankruptcy in early 1983, when it passed into the hands of its creditor banks.

The following measures were taken in order to face up to this crisis: i) a new wave of mass dismiss-

als was begun, extending all the way from managers to factory hands; ii) the company began to produce goods to order for third parties, simply in order to keep the plant going, which led to a return to production in small batches, and iii) there was a return to the vertical integration of processes making intensive use of labour, in order to keep the staff occupied.

In 1985, the firm only had 300 employees.

At the end of that year, the company began to recover once again. Within a much smaller global market, its relative share marginally improved at the expense of its local competitor (Cimet/Sindelen) and of the many importers who massively withdrew from the local market.

#### b) *Product design*

In an effort to overcome the crisis, various modifications were made in product design. Thus, the number of models manufactured, which only amounted to 4 in 1980, rose to 13 in 1986. There were changes in design, refrigerator parts and components were replaced with others made of aluminium, designed and manufactured within the company, and a manually operated machine was constructed within the company for the in-house manufacture of aluminium cooling spirals, which had previously been imported.

In short, in this second stage the increase in interest rates and the devaluation of the peso resulted in a big drop in the physical output of the firm and led to a financial crisis. The company changed its owners, its production strategy and its markets.

It dismissed a large proportion of its labour force. It sought to diversify its production and began to work to order for third persons once again, in small batches. It resumed labour-intensive activities in order to take advantage of its installed capacity, which was heavily underutilized, and it made only marginal attempts to export its products as a countercyclical measure. The range of products manufactured rose from 4 to 18. In the final analysis, output and employment fell, the productivity of labour rose because of the big reduction in the number of workers, and the firm went through a stage of heavy turbulence and instability.

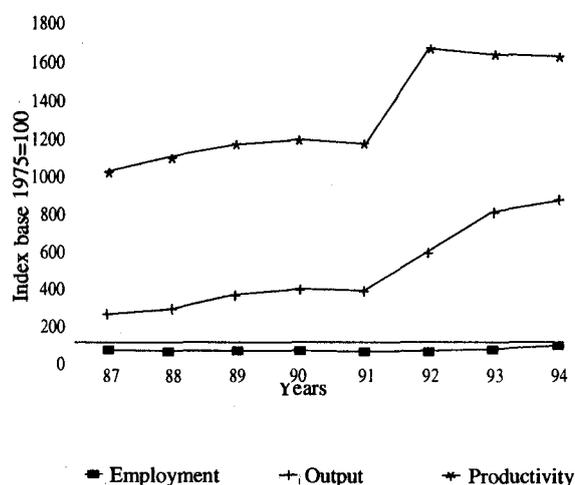
### 3. Expansion from 1987 on

#### a) *Organization of production and process engineering*

In 1987 CTI changed ownership once again. A little later it was decided to build a new refrigerator plant to produce 200,000 units per year. It was

FIGURE 4

**Compañía Tecno Industrial (CTI):  
Evolution of selected indicators, 1987-1994**



estimated that this would be the domestic demand towards the end of the century.

In 1989, preparations began to be made for the implementation of the expansion programme. The management structure of the company was changed and the departments of production, engineering and development were set up. In 1990, the new owners invested nearly US\$ 5 million in the construction of a new factory. Modern automated equipment was installed for phosphate coating and painting in order to overcome the main bottleneck on the production line. The volume of employment and output was doubled. The new plant, with a floor area of approximately 9,000 square metres, came into operation in April 1991.

The growth of demand greatly exceeded what had been expected, and the firm had to face unexpected organizational problems, which explains its somewhat disorderly growth during the last few years. Few of the sub-processes are automated as yet.

Since 1993, the company has tried to improve the average level of training of its staff through talks, workshops, etc.

#### b) *Product design*

In the second half of the 1980s, the firm made little progress with regard to product engineering. It continued to produce a hybrid two-door refrigerator, using the basic design and even the dies of "old" models. The number of models continue to increase, reaching the figure of 18 in 1989, but thereafter it began to go down and stood at 14 in 1991. In the latter year the firm began to use the CAD system in

the design of new products, but design times continue to be substantially longer than those achieved by leading international manufacturers.

By 1994, the new plant was working at full capacity with two shifts and even three in the case of certain sub-processes. Some of the sub-processes use advanced technology, but others use old-fashioned and sometimes almost artisanal techniques. The plastic sheets are cut with two machines: one of them a modern computer-aided machine with a very precise heating system, operating at high efficiency and speed, and the other an "old" machine with lower output, with 10 times more variation in the heating phase and lower cutting efficiency.

The plant may be viewed, then, as a set of islands of great modernity in a global sea in which there are still pieces of equipment, dies, organizational concepts and other elements which are typical of a factory of two or three decades ago.

In spite of the fact that the new factory has only recently been put into operation, questions are arising once again about the best growth strategy for the future. A recent visit to factories producing refrigerators in Southeast Asia showed that the international technological frontier with regard to process engineering now involves the elimination of painting operations and their replacement by the use of pre-painted steel sheets delivered to the factory ready for the assembly of the refrigerator. The painting section has once again become a bottleneck because of the rapid expansion of the volume of production, so that the dilemma has once again arisen as to whether

to deal with future expansion by increasing the size of the painting section or replacing it with technology based on the acquisition of pre-painted metal sheets. It was finally decided to import pre-painted steel sheets, which will make it necessary to acquire machines to work with this type of sheet.

The South Korean firm Samsung manages to produce nearly 120 refrigerators per hour, i.e., twice as many as the Chilean firm, in a smaller physical space. Its production is organized on the just-in-time system, with almost no lost time. The Chilean plant, in contrast, still has to ensure constant supply of the production line through an efficient system of material stocks. For this purpose, the imported materials are stored almost a month in advance.

If we compare the local firm with its external competitors, we see the following:

i) it still needs nearly two years to bring a new product design onto the market, and it has achieved relatively little improvement in this respect over time. It still works on the basis of the construction of prototypes and their subsequent experimental testing, although it already has a two-dimensional AUTOCAD system. In contrast, Japanese producers, for example, take less than a year to design a new product, work in three dimensions, and can design their products by simulation.

ii) the information obtained suggests that the Chilean firm is lagging well behind the Japanese plants. The lag is smaller with respect to the Korean factories, but they themselves are somewhat behind the best world technology.

## IV

### Microeconomic behaviour and the changes in the Chilean macro economy

In the preceding sections of this article we looked first at the historical evolution of the Chilean manufacturing sector and then at the successive restructuring processes of a refrigerator manufacturing plant which has had to adapt itself to the changes in the regulatory framework and system of incentives prevailing in the country. In this effort to adapt, the firm has acted in ways which in many respects reflect the more general behaviour observable in many other

Chilean firms. In this sense, the study of different cases acquires a broader descriptive value which goes beyond the individual cases in question. In this section we will try to link the case of the individual firm with the variables of the broader universe of firms in order to study the complex micro/macro links underlying the structural adjustment process of the Chilean economy. We will begin by using conventional price theory instruments and then proceed

to a somewhat broader interpretive framework which will allow us to incorporate recent Schumpeterian-based ideas on the theory of evolution.

### 1. Some central features of the case studied, viewed from the standpoint of conventional microeconomic theory

From the standpoint of conventional microeconomic theory, the present case study displays the following features:

i) translation and rotation of the demand curve as a function of the price and income effects deriving from changes in consumer preferences, in income distribution, in the degree of external competition faced by the company, etc.;

ii) translation and rotation of the cost curve in response to the drop in real wages, the fall in capital costs and the impact of disincorporated technological change and economies of scale.

For the effects of the analysis, it is important to remember that the firm changed its owners and strategies several times and that when each group of owners took over its management they brought with them their own view of the general situation of the Chilean economy and the role to be assigned to this firm within their economic group as a whole.

In one case, the firm was used as a means of procuring funds to be used mostly in other business activities. In another, the creditor banks which took over the firm after its commercial failure in 1982 sought to recover the capital invested in it. Finally, the group that took control of CTI in 1987 had objectives which were closer to the conventional idea of technical modernization and gradual improvement in technical efficiency normally expected from a firm in conditions of macroeconomic stability and proper functioning of the factor markets. In other words, it is only since 1987 that we can speak of a long-term strategy proper.

### 2. The macroeconomic situation and the behaviour of the firm from the standpoint of conventional economic theory

Using the conventional instruments of price theory, we can represent what happened in this case in the following manner (figure 5). The CTI acts as a large monopolistic firm, fixing prices within the range of increasing marginal costs, while its smaller competi-

tors (CH) operate as non-differentiated firms with constant marginal costs. The importers (OM) have constant costs. If the external tariff is very high, they simply remain outside the market. The initial situation before openness is seen as follows: the firm "sets" the market price at  $p_{cti}$  and produces  $Q_{cti}$ . The small firms produce  $Q_{ch}$ , taking the price set by the CTI. The total amount produced is  $Q_t$ .

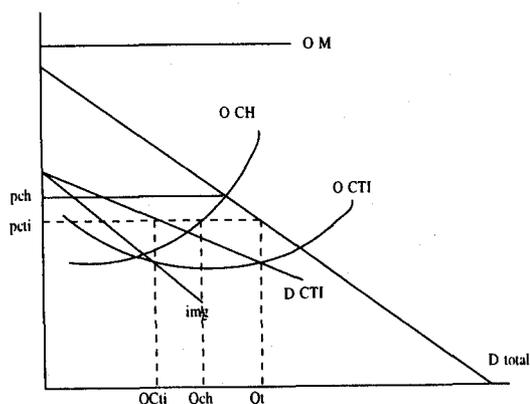
In 1975, when the firm was returned to private ownership, it sought to reorganize its operations after the conflictive period in which it was in the "area of social ownership", merging with another firm to obtain economies of scale and specialization; it rationalized its processes and the range of products manufactured and made some changes in production technology; it gave preference to speculative forms of behaviour, became indebted, and did not opt for long-term technological development; and it expanded its physical volume of production and improved its labour productivity, reducing the number of workers.

During the period 1975-1982, the firm suffered the impact of various disturbances coming from the macroeconomic environment: i) the global recession which affected the Chilean economy through the macroeconomic stabilization programme; ii) the trade openness process, with appreciation of the real exchange rate; iii) the increase in imports of replacement goods; iv) greater domestic demand from the high-income strata and the consequent change in consumer preferences, and v) the rise in interest rates. The effects of these disturbances were reflected, as we noted earlier, in the translation and rotation of the demand curve, variation of the cost curve, a drop in the real level of external protection, etc. (figure 6).

The importers' costs went down (from OM to OM2). The demand function was transferred to the exterior and rotated about its axis, becoming more elastic and reflecting the process of concentration of income. Thus, it went from  $D$  total to  $D$  total2. The demand facing each competitor was more elastic, since the variety of supply increased with the entry of the importers, who set the market price at  $P$ . The domestic firms rationalized their production, seeking to drive down their marginal cost curve. Several domestic competitors were eliminated from the market: i.e., the situation went from OCTI to OCTI2, but it was not possible to manufacture refrigerators at lower costs than those of the imports. The share of CTI went down to 30% of the market, while the importers came to cover 60% of the market. As the price of

FIGURE 5

**Compañía Tecno Industrial (CTI):  
Situation before trade openness**



imports was fixed below the cost curve of the domestic enterprises, it could be expected that all of the latter would leave the market. Some of them did so, but others did not, and some managed to maintain their presence through such factors as their brand names or their accumulated prestige.

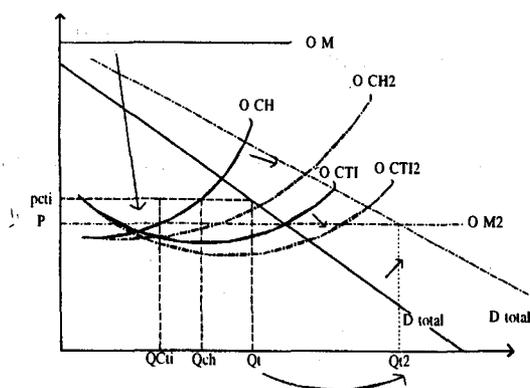
With the financial crisis of the early 1980s, there was a radical change in the strategy of the firm, which was in a heavily indebted position at that time because of the role of supplier of funds which it had had to fulfill as part of the global strategy of the group which controlled it.

At that moment—and with a domestic market which was markedly contracting, so that demand shifted from D total2 to D total3 (figure 7)—it was decided to dismantle the prevailing organizational structure and work in small batches as a subcontractor for third parties, seeking to keep on using the scant labour force which had been kept on and the existing physical installations. Activities and processes which had been eliminated a few years earlier were re-incorporated into the production plan. In view of the great prevailing uncertainty, the external competitors withdrew (OM2 to OM3) so that, paradoxically, the firm improved its relative position in the market even though domestic demand was much smaller. The CTI once again led supply and set prices on the domestic market, which the “small” domestic firms took as a market datum. The amounts produced fell from Qt2 to Qt3.

As the years passed, the Chilean economy began to stabilize and to progress towards recovery. Domestic demand grew once again with the increase in

FIGURE 6

**Compañía Tecno Industrial (CTI):  
Situation after trade openness, 1975-1981**



wages; taxes were reduced, interest rates went down, and the GDP continued its upward cycle.

The demand for refrigerators increased from D total3 to D total4 (figure 8). The financial situation of the firm improved, thus inducing the banks to sell it when they were able to recover their original investment. The external competitors began to return, but now the CTI did not lose relative market share, as in the previous openness cycle, but managed to keep a high share of global demand.

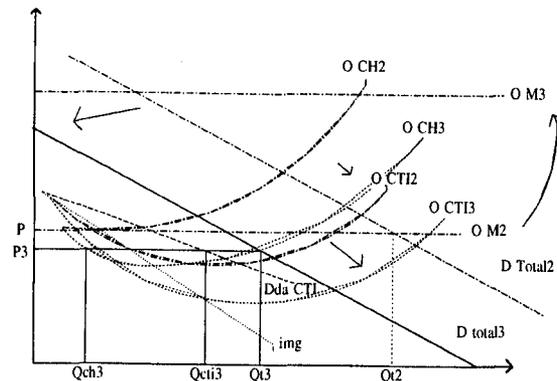
How was it that the firm was able to maintain its competitiveness in the long term, even though it had not made big changes or significantly modernized the technology of its products or its working methods? The answer to this question is to be found on both the macroeconomic and the microeconomic levels.

On the macro side, it is obvious that with the rapid overall growth of the Chilean economy the domestic market has expanded quite rapidly, providing a space for established local firms which, among other advantages, have reputations, brand names and after-sales service facilities which enable them to compete with the foreign supply.

On the micro side, it is clear that the firm has been building up its own technological capacity and a store of technical skills in product and process engineering which have enabled it to successfully withstand competition from abroad. This is what has happened now that the company has significantly reduced its level of vertical integration and its in-house manufacture of parts and components and has concentrated its operations on the assembly of parts and components largely imported at international prices.

FIGURE 7

**Compañía Tecno Industrial (CTI):  
Effects of the 1982 crisis**



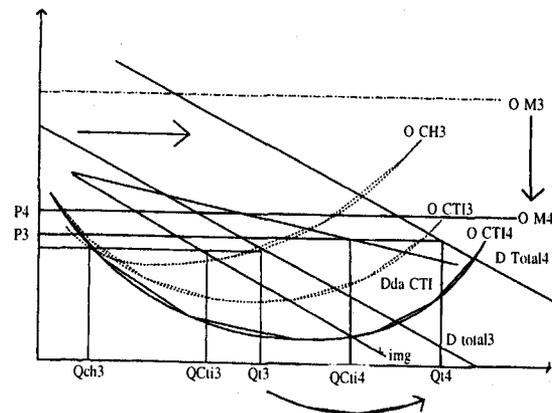
Since the late 1970s, the CTI has learned to buy and sell, differentiating markets, in crisis periods. It has also become more flexible in the organization and management of its labour force, so that it has managed to attain competitiveness without engaging in big technological modernization programmes or making heavy capital investments. The management operates austere and labour costs are only 10% of total costs –similar to the level of the competing foreign firms– thus giving it a good capacity to respond to external competition.

Its survival has also been helped by a third factor which we may call the “distance effect”. As Chile is a small market, relatively far from the big world markets, it enjoys a certain degree of natural protection: transport costs and the difficulty of establishing an efficient after-sales service help to protect local manufacturers from external competition. This was demonstrated in the 1980s, when external competitors withdrew from the local market without bothering much about the maintenance of the products they had already sold in the country. Consumers learned to take this risk into account and therefore attach importance to local producers with a commitment to after-sales technical assistance.

In 1990, the company returned to the idea of building a new plant: a project which had been left aside for 14 years and which might be seen as a major break with the past or a big technical leap forward. In reality it was not so, however. It did involve a significant increase in the installed production capacity, but still within the types of technology and organization of work which had prevailed in the

FIGURE 8

**Compañía Tecno Industrial (CTI):  
Effects of period of recovery, 1987-1994**



past. The new plans did not incorporate the most advanced international practices in its field. Efforts were made to reduce manufacturing times, but without adopting process automation, computerized stock management or computerized transport of parts and components in the plant.

The situation of macroeconomic stability encouraged the company to finally implement this investment programme which it had not managed to carry out for almost two decades. In doing so, however, it did not construct a completely new factory but simply modernized the existing installations.

The incorporation of modern machinery and automated sub-processes alongside the continued use of old machinery and dies made it possible to improve productivity, achieved economies of scale, and attained greater operational flexibility for small amounts of physical investment. These objectives were undoubtedly achieved, however, at the cost of not carrying out a complete modernization programme which would place the company on an equal technical footing with factories using world-level state-of-the-art practices in this field. Thus, in view of the constant bottlenecks in the painting area –the most recently modernized sub-process in the factory– the company began to consider the possibility of completely doing away with the process of painting the refrigerator bodies which it manufactured and replacing it with a manufacturing technique based on the purchase of pre-painted metal sheet, which is the most modern practice in this field. It is noteworthy that almost two decades after the initiation of the economic openness and trade liberalization process,

TABLE 2

**Changes in macroeconomic policies and in the behaviour of industry in general and the Compañía Tecno Industrial (CTI) in particular**

Policies	Nationwide	In industry in general	In the CTI	
	Reforms	Strategies	Production	Organization and processes
<b>1974-1981</b> (1974-1978) Strict control of government spending Exchange rate unification Active monetary policy (1979-1981) Fixed exchange rate and passive monetary policy	Liberalization of goods and capital markets Reforms in the areas of taxation, public administration, public enterprises, labour legislation and social security	Rationalization Restructuring Improvement of quality Changes in financial position Greater importance of exports and imports	Reduction in range of products Purchase of licences Projects for reducing costs	Reduction of degree of vertical integration and organization of mergers to face changes Changes in processes Reorganization to cope with growth requirements Change of ownership Initiation of investment projects
<b>1982-1986</b> Abandonment of fixed exchange rate De-indexing of wages Policies to activate the economy Policies to reduce fiscal expenditure Fine-tuning	Tax reform Reduction in openness of the economy Intervention in (agricultural) prices New privatization operations State intervention of banks	Outward orientation Creation of new products Reduction of manufacturing and organizational costs	End of imports Efforts to reduce costs Creation of new products and improvement of quality and processes End of investments Exports	Reversal of the organizational changes made in the previous period Efforts to reduce costs Reduction of labour force Return to labour-intensive in-house processes Return to batch production
<b>1987-1994</b> Increase, but subsequently strict control, of the money supply Reduction but later increase in VAT Management of interest rates	New trade openness process New laws governing the Central Bank and CORFO, and changes in labour legislation Tax reform Adoption of a basket of foreign currencies Greater liberalization of the capital market	New investments More flexible organizational structures Product differentiation and improvements in quality Increase in factor productivity	Reduction in range of products End of exports Adoption of CAD system	Structural reorganization Construction of new plant Reduction in labour force Partial renewal of machinery Efforts to introduce production-line methods

the company is still far behind the international state-of-the-art.

This leads us to doubt the validity of simplistic ideas which associate economic openness and de-regulation with the closure of inefficient plants, investments in new manufacturing plants, and rapid proximity to international technological levels. These transitions seem to take much longer than is supposed in conventional economic analyses.

Table 2 seeks to sum up this complex set of mutual relations between macroeconomic and microeconomic factors. The first two columns show the three stages into which the Chilean economic history of recent decades may be divided for analytical purposes and reflect the changes in the system of incentives and the regulatory framework which the government authorities made in each of the stages.

These measures brought about changes in business strategies, whose nature is examined in the other three columns.

So far, comparative static analysis has been used to try to understand the behaviour of the firm. It is clear, however, that this theoretical tool is not sufficient for gaining a fuller understanding of the dynamic evolution of the firm. We therefore need another methodology which will enable us to determine more precisely the way in which the technological capacity of the company has evolved.

The technological capacity of a firm may seem to be an abstract concept which is difficult to define, but as Lundvall (1994) notes, it basically involves the capacity to know what to do, how to do it, when to do it, and with whom to do it, at each moment in time. In addition, it involves the development of in-

creasing technological skills in product design, process engineering, organizational technology and production methods.

In line with this approach, we will assume that every firm tries to make improvements in its operating routines. For this purpose, it identifies the weak points in its everyday operations and designs corrective measures to solve these problems. In order to do this, it brings in new equipment and makes changes in organization and methods of work. The company may have its own technical departments responsible for improving product design, methods of work or other aspects, or, if it does not have such formal departments, it may locate these functions outside the company by acquiring services from third parties. At the present time, CTI externally subcontracts product design engineering services, for example.

This cumulative process of development of the technological capacity of the firm is influenced both by internal and external signals. The perception that something could be done better, and the views of the owners and directors of the firm on its long-term objectives, are among the internal factors conditioning the search for new technological know-how. The external factors, for their part, stem from the interaction of the firm with its environment, represented, among other things, by suppliers, clients and trade fairs.

It is important not only to learn by doing, as described by K. Arrow in 1962, but also to learn by interacting, as recently described by B. Lundvall. The firm's capacity to correctly interpret the information received from technical reviews, congresses and international fairs is of crucial importance in this respect.

In order to describe more accurately the CTI's behaviour as regards innovation, we shall now deal with the factors which facilitate or hinder these learning processes.

### 3. Towards a neo-Schumpeterian interpretation of the CTI's innovation process

#### a) *The agents or factors responsible for changes in the operating routines of this firm*

Changes in consumer preferences, the appearance of more attractive replacement products on the market, changes in the long-term "visions" and strategies of the owners of the firm, and changes in the macroeconomic incentives to which it must adapt itself are the most obvious source of signals giving rise to changes in the technological conduct of this

company. These changes are expressed through internal activities of the company aimed at modifying its operating routines, or through its links with suppliers, licensees, vendors of machinery and other people with whom it works. In each of these links, processes of interaction may be identified which involve various forms of learning and accumulation of experience.

The firm does not generally sign long-term contracts with its materials suppliers. The latter seem to be able to plan their deliveries sufficiently in advance, however, because of the CTI's stable pattern of purchases. Consequently, the firm has been able to increase its demands in terms of quality and delivery dates, thus improving its own level of internal efficiency. The relations between the CTI and its suppliers in terms of the exchange of technology have been very much influenced by the size and technical capacity of the latter, so that the two-way flow of know-how has been greater with the big suppliers. In the case of the smaller suppliers, in contrast, they have been provided with information and even sometimes equipment, but there does not seem to have been any technological feedback from them.

Another way of incorporating know-how and technology is through the purchase of machinery. In recent years, the prime objective of the firm has been to expand its production capacity. The new machinery it has acquired has been in line with the most advanced international standards. These machines not only mean new equipment on the production line but also make it necessary to generate new technical know-how about organization and methods of work, in order to facilitate their integration into the physical installations of the plant. This incorporation calls for the constant rethinking of the organization of work and production processes in the factory.

The relations which have been established with the suppliers of some inputs make it possible to obtain more information on the type of machines required by the firm, while at the same time improving efficiency in the purchase of inputs. Moreover, the machines are acquired in countries which are on the leading edge of international technology. Seventy per cent of the inputs are imported, which highlights the great importance for CTI of the links with its international suppliers of inputs and machinery.

With regard to distributors, CTI has not tried to develop its own marketing network; it has left the task of gathering know-how in this field to distributing enterprises and big marketing chains such as Falabella, Almacenes París, etc. When these firms try

to obtain discounts and preferential purchase conditions because of the size of their orders, the resulting business relationship is not devoid of tensions. Not much technical feedback is obtained from these links with the distributing chains.

There is another means of establishing direct relations with consumers and obtaining technological information which will allow the firm to guide the generation of new technical know-how, namely, the after-sales service network, which is an important source of information on faulty parts, operating systems which give rise to repeated difficulties in their use, etc. In this respect, the firm has developed a decentralized strategy by creating a subsidiary (CST) responsible for training small concessionaire firms to service the equipment sold. The CTI gives these subcontractors training and the same time tries to stop them providing maintenance services for other brands.

A final point to be noted is that there is little communication with the other local refrigerator manufacturers. Apparently these do not maintain contacts with each other either and do not interact in trade or business associations designed to further the common interests of the sector. This hinders the mutual exchange of technical information, which has become quite important in other fields of industrial activity.

b) *The human teams responsible for changes in the CTI's operating routines*

During the 1970s and 1980s, there were no significant changes in the CTI's organizational chart. The establishment in 1989 of the Department of Engineering and Development and the Department of Production marked the beginning of a new attitude to the generation and use of technical know-how. Subsequently, in 1993, these departments were changed into the Refrigerator and Cooker Division and the Washing Machine and Heater Division, while the strategy of the firm was oriented more towards process engineering than towards product design. In 1994, the Quality Control Division was set up in order to centralize the generation of databases and the follow-up of technical improvements. The other divisions of the firm—Marketing, Administration and Finance—have existed for a long time and built up extensive experience in their respective fields of action.

One of the areas which has been least developed is that concerning the training of human resources.

There is a vertical-type relation between the factory hands and the engineers and technicians, with a supervisor acting as intermediary. Little or nothing has been done in the firm to develop the possibility of collecting technical suggestions from the shop floor up, thus losing part of the process of feedback and learning.

Engineers and technicians are important vehicles for the development and introduction of new technical know-how. It is they who put the new routines into effect and develop engineering improvements which can make processes cheaper and raise quality, with the support of laboratories. If we look at the recent history of the firm, we see that there has indeed been a change in its technology strategy in recent years. The professionals engaged in process engineering have increased significantly, in conjunction with the opening of the new factory. In contrast, however, the technicians and professionals working on product design have lost ground, and the firm has decided to subcontract these activities out to third parties.

c) *External sources facilitating the technological learning process*

An important supplier of technical know-how is Ariston, an Italian firm which produces refrigerators and other domestic electrical appliances. The different conditions of the two countries with regard to markets and technological training, however, have often obliged the Chilean engineers to discard part of the technical information received from the Italian firm. This became clearly evident in connection with the design of the new plant recently brought into production.

The suppliers of equipment generally provide training along with the installation and commissioning of new machinery. Little on-the-job training is given, and there do not seem to be any stable arrangements in Chile for the transfer of technical know-how to the firm from technology institutes or industrial extension agents in the public technological innovation system.

In the opinion of the workers, they are capable of coping with the changes in product design and manufacturing processes which have been introduced, because the tasks are relatively simple and the new techniques do not involve very complex operations. Most of the technological training given in the firm is concentrated on its technicians and engineers.

In recent years, higher standards have been demanded in the hiring of new workers, basically in terms of formal education. Although this has made it more difficult to find suitable factory workers, these difficulties seem to be outweighed by the benefits because of the higher learning capacity of the new workers.

The company seems to have made very little use of the public training system (SENCE). Nor has it used the financing available in connection with programmes carried on by FONTEC, CORFO or other agencies of the country's technological innovation system.

The CTI has not constructed a stable and well-developed system of innovation within the firm, nor has it devoted a significant amount of resources to this purpose. Because of its vertical-type labour relations and the fact that it has made little attempt to

train its workers, there is little feedback from the shop floor up in terms of the generation and dissemination of new technical know-how, and the accumulation of technical capacity is fundamentally in the hands of the company's professionals. The company has never really managed to establish a climate of co-operation with its factory hands.

In recent years, the firm has begun to work more vigorously on its internationalization project, with a view to its future participation in MERCOSUR, and within this context it has begun to attach more importance to technological matters. In the light of past events, it is clear that the firm must make significant investments both in equipment and in the training of human resources if it wishes to expand to outside markets from a solid internal base which will enable it to keep its leading technological position as an economic group with international projections.

## V

### Conclusions

The foregoing allows us to gain a better understanding of the slow process of transformation of a Chilean metal products and machinery firm and its adaptation to the changing system of macroeconomic incentives which arose after the opening up and deregulation of the country's economy. We have seen how the firm has managed to survive in a highly competitive context, not only because of the existence of market flaws but also because of its own capacity to generate a relatively protected niche thanks to its brand names, the prestige of the firm, and its satisfactory after-sales service. Among the firms which arose in the period when industrialization was protected by tariff barriers, several disappeared during the process of opening up of the Chilean economy because, unlike the CTI, they were not able to successfully overcome the hurdles of adapting to a new system of macroeconomic incentives.

We have shown in this article that the behaviour of this firm fairly accurately reflects the general functioning of the Chilean metal products and machinery sector. The analysis has been supplemented with a systemic view of the technological learning process,

using techniques taken from conventional static comparison and price theory.

We have also tried to link the macroeconomic and microeconomic dimensions, seeking to shed light on the complex mutual relations between these two spheres of economic analysis. The results of the study indicate that the macroeconomic disturbances and the new regulatory and institutional context of the 1970s changed the long-term strategy of the CTI and the way it tackled growth issues.

It has also been confirmed that the transition to a new pattern of behaviour after the opening up and deregulation of the economy is a slow and complex process which cannot be considered as fully completed even now, almost two decades after the structural reform efforts were begun.

We have seen that even today the CTI is a complex mosaic of islands of modernity side by side with areas of technological backwardness, and that it was only very recently that it began to take into account the most modern technologies in its field of operations, with a view to its long-term strategy. It is still not a company of international scale, either in terms of physical investments or of development of its own

technological capacity. It has a long way to go before it can reach this position.

Efforts at internationalization have recently been begun, in the light of the signals coming from MERCOSUR, and these have brought with them new demands in terms of technology and organization that the firm must deal with gradually. The develop-

ment of in-house technological capacity and physical investments in new production facilities must be carried out side by side with the process of moving up to a scale of operations much higher than that reached so far.

(Original: Spanish)

### Bibliography

- Agacino, R., G. Rivas and E. Román (1992): *Apertura y eficiencia productiva: la experiencia chilena 1975-1989*, Documento de trabajo No. 92, Santiago, Chile, Programme on the Economics of Labour (PET).
- Castillo, M., C. Maggi and M. Dini (1994): *Reorganización industrial y estrategias competitivas en Chile*, LC/R.1467, Santiago, Chile, Economic Commission for Latin America and the Caribbean (ECLAC), Joint ECLAC/UNIDO Industrial and Technological Development Unit.
- Corbo, V. and J.M. Sánchez (1992): El ajuste de las empresas del sector industrial en Chile durante 1974-1982, *Colección estudios CIEPLAN*, No. 35, Santiago, Chile, Economic Research Corporation for Latin America (CIEPLAN).
- ECLAC/IDRC (International Development Research Centre) (1995): *La industria chilena entre 1970-1994: de la sustitución de importaciones a la segunda fase exportadora*, LC/R.1535, Santiago, Chile.
- INE (National Institute of Statistics) (several years): *Anuario estadístico*, Santiago, Chile.
- Lundvall, B. (1994): *National Systems of Innovation: Towards a Theory of Innovation and Interactive Learning*, London, Pinter.
- Marshall, I. (1992): Liberalización comercial en Chile y su impacto sobre la eficiencia técnica industrial: 1974-1986, *Colección estudios CIEPLAN*, No. 35, Santiago, Chile, CIEPLAN.
- Mizala, A. (1992): Las reformas económicas de los años setenta y la industria manufacturera chilena, *Colección estudios CIEPLAN*, No. 35, Santiago, Chile, CIEPLAN.
- Meller, P. (1992): La apertura comercial chilena: lecciones de política, *Colección estudios CIEPLAN*, No. 35, Santiago, Chile, CIEPLAN.
- Rosenberg, N. (1976): *Perspectives on Technology*, Cambridge, U. K., Cambridge University Press.

# The importance of local *production and small-scale* enterprises for *Latin American development*

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The generation of dynamic competitive advantages in Latin America and the Caribbean cannot be assumed to result automatically from the achievement of the necessary macroeconomic stability and the incorporation of part of the system of production into some dynamic segments (or niches) of the international economy. Recent empirical information on local economic development initiatives in the developed countries indicates that macroeconomic adjustment policies must be accompanied by other specific policies at the microeconomic and mesoeconomic levels. These policies must incorporate the various local public and private actors into the development strategy in order to ensure the introduction of organizational and technological innovations throughout the system of production and business, which is made up largely of small and medium-sized enterprises and microenterprises with few linkages to the globalized core of the world economy. It is therefore clear that it is necessary not only to promote endogenous development potential by giving due importance to the local dimension of technological policy and to small and medium-sized enterprises, but also to ensure that the production sectors have access to advanced services throughout the local area, to strengthen institutions and cooperation and complementation agreements in the area, and to include the question of environmental sustainability in local development management.

# I

## Introduction

In Latin America and the Caribbean, the increasing spread of concepts, studies and policy recommendations on globalization and competitiveness is usually accompanied by interpretations which hardly go beyond the sphere of circulation of the international markets. It should be clear, however, that in the present phase of post-Fordist transition the building of dynamic competitive advantages also depends to a substantial extent on organized efforts and specific actions aimed at ensuring the introduction of technological and organizational innovations into the existing production and business structure, which is made up mainly of small and medium-sized enterprises and micro-enterprises, which, because they do not have easy access to advanced production services, are considerably hindered in their progress towards the desirable technological frontier.

In other words, the challenges of competitiveness make it essential not only to take care of the segments of production which have linkages with the globalized dynamic core of the world economy, but also to accompany such export efforts with measures designed to ensure technological and organizational innovation in the various local production clusters.

The importance of these clusters is often overlooked, although, as the abundance of local economic development initiatives carried out in the developed countries confirms, specific policies are required for the construction or improvement of innovative local areas, in order to ensure the existence of the necessary components relating to innovation and human resources management in each such area.

We are not, of course, proposing the slavish imitation (which is always impossible) of relatively successful experiences in other contexts, such as the Italian industrial districts or the regional development agencies of the present Spanish State made up of autonomous communities. In this field, as in so many others, there are no ready-made recipes but there are fertile ideas for getting away from a conception of adjustment processes which is limited solely to the macroeconomic levels and international competitiveness. In the present heterogeneous Latin America and Caribbean situation, accompanying these policies with others of a local nature designed to ensure the concerted efforts of public and private actors for the construction of innovative environments for their production and business activity is not only possible but highly advisable.

# II

## The importance of local-level production

According to recent World Bank (1996) data, out of the total gross world production registered in the formal circuits of the economy, an average of only 20% is traded internationally. In other words, the great majority of production decisions take place in national or subnational, regional or local situations. In some countries, the percentage of national production traded internationally is greater, but in others, such as Japan, it amounts to as little as 9% (table 1): the strength of that economy, apart from its aggressive external trade, seems to be due essentially to its internal sectoral linkages and production efficiency.

Likewise (table 2), the average share of exports in the gross domestic product of 19 Latin America

and Caribbean countries in 1994 was 23%, which means that on average over 77% of the production of the Latin American and Caribbean countries in that year corresponded to the national or local level.

At the same time, the share of foreign direct investment in the gross domestic product of the Latin American and Caribbean countries, according to estimates by ECLAC (1996), was only 1.6% in 1996 (table 3), which also shows the importance of domestic production investment decisions in those countries, where average investment is close to 20% of GDP.

Similarly, as noted by Ffrench-Davis (1996a and 1996b), external investment only amounts to 5% of total world investment, while foreign direct invest-

TABLE 1  
World: Product and exports, 1994

	GDP (Billions of current dollars)	Share of exports in GDP (%)
World	25 102.6	19.7
Japan	4 321.1	9
United States	6 737.4	10
India	278.7	12
Australia	320.7	19
Spain	525.3	19
Turkey	149.0	21
Germany	2 075.5	22
Greece	80.2	22
France	1 355.0	23
United Kingdom	1 069.5	25
Indonesia	167.6	25
China	630.2	26
Portugal	92.1	26
Russian Federation	392.5	27
South Korea	366.5	28
Sweden	206.4	33
Denmark	145.4	34
Switzerland	265.0	36
Austria	197.5	38
Netherlands	338.1	51
Belgium	231.0	69
Hong Kong	126.3	139

Source: World Bank (1996); Ffrench-Davis (1996a and 1996b).

TABLE 2  
Latin America: Product, exports and investment, 1994

	GDP (Billions of current dollars)	Share in GDP (%)	
		Exports	Investment
Brazil	536.3	7	16
Argentina	275.6	7	20
Peru	44.1	9	22
Mexico	369.7	13	24
El Salvador	8.4	13	18
Bolivia	5.6	17	15
Colombia	58.9	17	24
Uruguay	14.7	18	16
Guatemala	12.2	19	17
Dominican Republic	10.1	24	20
Nicaragua	1.4	24	20
Ecuador	14.7	26	21
Paraguay	7.6	27	24
Chile	50.0	28	27
Venezuela	59.0	29	9
Panama	6.9	37	24
Costa Rica	7.8	40	28
Trinidad and Tobago	4.8	40	14
Honduras	3.2	41	26

Source: World Bank (1996); Ffrench-Davis (1996a and 1996b).

TABLE 3  
Latin America: Foreign direct investment  
and gross domestic product

	Net foreign direct investment (FDI) (Millions of dollars)	Ratio of FDI to GDP
	1996 <sup>a</sup>	1995-1996 <sup>b</sup>
Argentina	3 200	1.2
Bolivia	560	6.5
Brazil	8 000	0.8
Chile	2 800	2.8
Colombia	2 550	2.8
Costa Rica	120	2.5
Ecuador	320	2.2
Mexico	7 000	2.7
Nicaragua	95	3.9
Paraguay	220	2.2
Peru	3 400	4.4
Dominican Republic	430	2.6
Uruguay	190	0.9
Venezuela	1 350	1.3
Seven other countries	600	
Latin America and the Caribbean (total)	30 835	1.6

Source: ECLAC, on the basis of official figures and IMF data.

<sup>a</sup> Provisional estimates.

<sup>b</sup> Annual average. Preliminary estimates.

ment is only equivalent to 1% of world GDP. This means that the immense majority of production and business investment decisions are made by actors operating at the national or subnational levels. Consequently, as that author notes, we are not witnessing "the end of geography" or anything like that.

It is possible that, dazzled by the high rates of growth of international trade and the advance of globalization, we may tend to forget the size of domestic production, trade and investment and the crucial fact that the great majority of decisions in these activities are made at the national and local levels, which means that there is a great deal of room for the design of more specifically local economic policies, both at the microeconomic and the mesoeconomic level.

Thus, although it is true that identification of the best international practices and the search for market segments at that level are necessary actions for promoting innovation in production processes and business management, it must not be forgotten that this is not easy to achieve, because it requires specific policies at the microeconomic and mesoeconomic levels.

TABLE 4

**World: Population and gross domestic product of countries, classified by share of exports in GDP, 1994**

Exports/GDP	Number of countries	GDP (Billions of dollars)	Population (Millions)	Per capita GDP (Dollars)
Less than 10%	10	5 250	448	11 610
Between 10% and 24%	51	6 859	2 551	5 765
Over 24%	102	5 270	2 429	3 620
No data available	46	508	176	2 890

*Source:* Prepared on the basis of data from World Bank (1996).

Furthermore, the above statistics do not include other important circuits of activity, such as the subsistence or informal economies, which highlights still further the attention that should be given to local processes in addition to that given to the internationalized or globalized segments.

In the final analysis, what these statistics show is that even with the limitations that they involve because they do not include informal transactions and those which are more difficult to quantify, the generation and distribution of wealth in the national and subnational spaces depends to a large extent on the specific local policies and institutions that the various social actors manage to establish, on the basis of local initiatives, for the purpose of endogenous economic development in order to achieve suitable levels of production efficiency and thus aid in the spread of economic growth and the generation of employment and income.

In spite of this empirical evidence, however, the design of development policies seems to depend more on debates between ideologies, with the unfortunate result that it often ends up by inviting the authorities and a large part of the social actors of the developing countries to seek niches in the international market, as though their economic development depended on this, when what they really need is to have suitable national and local development strategies which will ensure the introduction and spread of technological and organizational innovations in the different national and local economic systems.

In other words, the strategies aimed at securing entry into dynamic segments of the international economy must be complemented with a deliberate policy of development of local production systems, in order to ensure that the latter can achieve the necessary technological and organizational innovation. Such a policy will also make it possible to maintain

the medium and long-term viability of the efforts devoted to the international segments.

According to data from the World Bank (1996), in the countries whose exports are less than 10% of total national production, the per capita GDP is more than double that of the group of economies where such exports are between 10% and 24% of the whole, and it is more than three times that of the group of countries where such exports are over 25% (table 4). These data suggest that we should view with caution the assertion that greater economic development depends on the degree of internationalization of the domestic production of the various economies.

Although it is almost always possible, with good selection and handling of statistics, to prove almost any argument under the sun, it must be acknowledged that the achievement of greater export capacity is obviously a reflection of production efficiency and business competitiveness and that international trade brings possibilities of progress and new know-how. Nevertheless—and this is of decisive importance—realizing such possibilities depends very much on the degree to which it is possible to ensure the spread of technological and organizational innovations through the domestic production and business system, which does not consist only of the companies that have managed to successfully enter dynamic areas of international trade.

In saying this we are not, of course, singing the praises of autarky, but rather making a perfectly sensible recommendation to strengthen the national and local economies and to avoid being taken in by the frequent invitations simply to seek international niches, as though this was the touchstone for achieving the desired economic development. Accepting the challenges of growing external openness and international competitiveness ultimately involves the need to introduce technological and organizational

innovations throughout the entire domestic production system of our economies, including the relevant institutions, and not just in the activities and enterprises linked with the most dynamic international segments.

Thus, in the present phase of globalization of the world economy, with growing demands for production efficiency and competitiveness, and in situations where the greater external openness of the various national and local economies is an unavoidable factor in the prevailing context, we should not forget that the main challenges lie in ensuring the introduction of innovations in the fields of management and production throughout the whole business system and the whole universe of public or private management bodies, in order to raise the efficiency of production and the flexibility (or capacity for adaptation) in changing and uncertain situations (Alburquerque, 1996a).

In other words, the phase of technological transition through which we are passing makes it essential to find a way of ensuring innovation in the fields of production and organization in every one of the enterprises of each country, and this cannot be achieved merely through the linkages of some economic segments or activities with the most dynamic areas of the world economy. Such external linkages do not always guarantee that technical progress will spread to all enterprises throughout the country: the linkages between the sectors operating in the dynamic areas and the local production systems may be very limited, so that the spread of technical progress, economic growth, employment and income would only be very limited.

Likewise, there are a large number of small enterprises in the local systems of production which, although less important than the big firms in terms of their contribution to national production, nevertheless have decisive weight in employment and the generation of income, as well as in promoting the more balanced local spread of economic growth. Despite this, in Latin America and the Caribbean such enterprises do not usually have an adequate local supply of basic infrastructure and advanced business services to facilitate their modernization process. Suitable institutional reforms are therefore needed in order to ensure that the decentralization process which is being carried out in much of the region contains elements designed to further both economic development and the strategic concertation of the

local social actors for the construction of innovative environments.

This does not mean indulging in the fantasy of copying "industrial districts" on the basis of the fertile recent experience of Italy or of some of the autonomous communities in Spain, to cite only two important examples in this field. It merely means that we should give due attention to the need to add suitable local development policies to sectoral policies and those aimed at the big firms, in order to ensure technological innovation in the local production systems as a whole and not just in those segments capable of taking part in dynamic external activities.

Having said this, it must also be stressed that the rapid cross-border mobility of financial investments and information on markets, products and technologies, the spreading of uniform consumption tastes and preferences through the mass media, and the ease with which segments or parts of production activities can be transferred from one place to another have seriously undermined the effectiveness of national economic policies when seeking to cope with the strategies of the transnational corporations. Likewise, the dictation of economic promotion policies from the central government level is neither suitable nor efficient for achieving the modernization of local systems of enterprises, which require a set of institutions much closer to their own problems, potential and specific characteristics.

The economic forces which are now promoting the change to more efficient forms of production and organization (both in private business and in the public administration) are consequently bringing into question the effectiveness of the central State as a suitable body for taking action on the complex realities of the economy and seeking to manage it. And since the nation-State is no longer the sole backbone of economic systems (which now have a greater degree of exposure, and hence of vulnerability, in the context of globalization and are subject to the tensions of different operating rationales, some oriented towards transnationalization and others towards local markets), in this process of economic and institutional readaptation it is necessary to take account of both national and local circumstances, in order to be aware of their differences and potential and to define the most suitable policy mix for the different levels of economic development: a task which is no longer the monopoly of the central State administration.

### III

## The different levels and policies of economic development

In view of the growing exposure of all economic systems to the exterior, it is essential –though not of itself sufficient– to ensure maximum stability at the macroeconomic level. Action must also be taken at the microeconomic level of the process of change in production and organizational patterns, and this means that it is also necessary to make the necessary adaptations in institutions which any process of radical technical and production change demands, in view of the alterations in the social, labour, productive and other relations among the different actors in society.

Thus, the demands of globalization not only concern activities with linkages to international markets, but also decisively affect the macroeconomic level, which must ensure the stability required by the accumulation system; the microeconomic level, at which it is necessary to tackle the technological changes in production and business management, and the mesoeconomic level, at which is necessary to create the institutions and intermediate organizations responsible for providing each local area with an innovative environment for local economic development.

In addition to these levels, there is also the meta level. This is pointed out by Esser, Hillebrand, Messner and Meyer-Stamer (1996), who consider that structural or systemic competitiveness is the result of the organizational and institutional level attained by the interaction of the whole of society and depends not only on the macro level (which is responsible for ensuring the stability needed to permit the reproduction of the accumulation system), but also on the capacity for social incentivation and strategic concertation of the local actors (the meta level), and the creation at the meso level of an innovative environment which is appropriate for the promotion of entrepreneurial activities and which effectively ensures technological and organizational innovation at the micro level of production and business activity in each local area.

It may therefore be appreciated from this standpoint that decentralized public management plays a decisive role, since the formulation of suitable policies for changes in production patterns and business

activities requires a detailed knowledge (not only at the aggregate national level) of the particular circumstances and profiles of the most important local economic clusters (Albuquerque, 1996b).

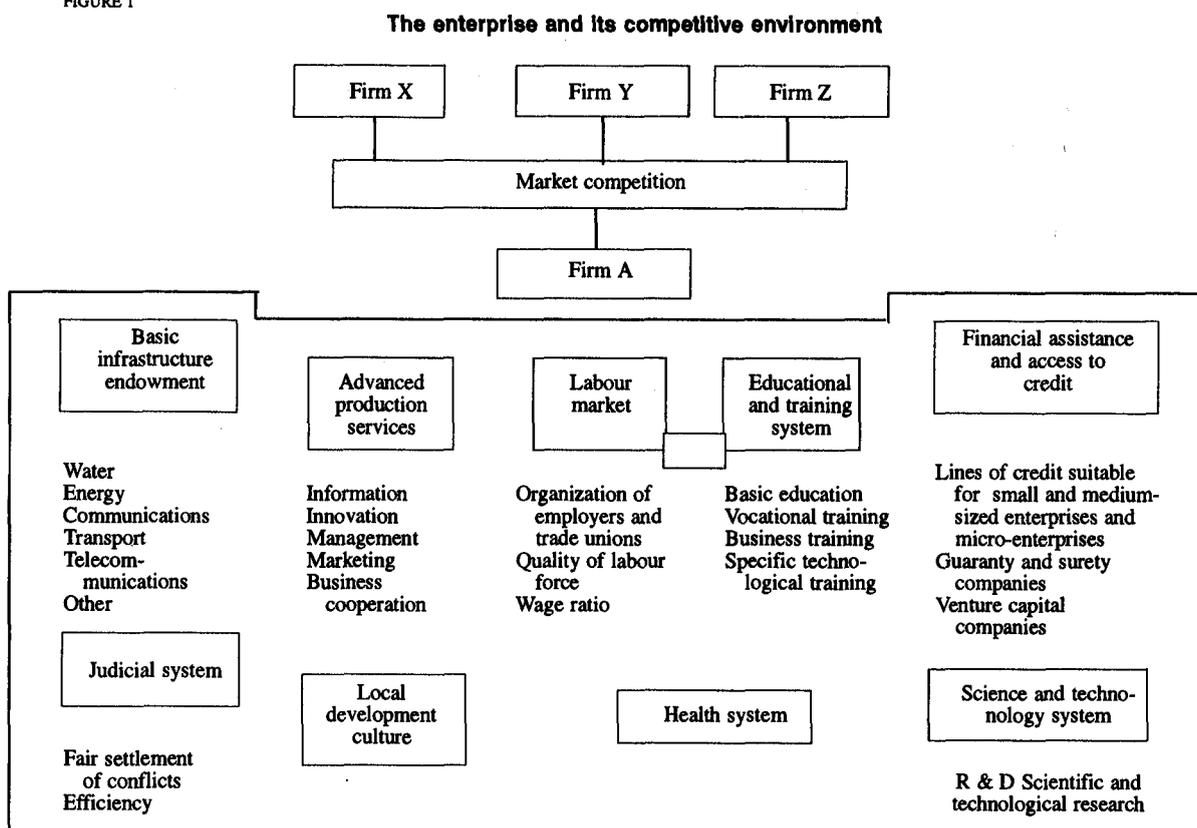
Thus, sectoral economic policies could be accompanied by this local component in order to ensure the necessary changes in production patterns and business organization at the micro level, to which end decentralized or localized planning facilitates a better understanding of the actual circumstances of the production base and the business system in each local area.

This is much more evident in the present phase of economic development, in which the decentralization and segmentation of the different phases of production activity, together with subcontracting, have shown the superior efficiency of flexible forms of organization and production which are capable of functioning in networks (Messner, 1996).

At all events, emphasis must be placed on the fact that companies do not act in a vacuum but in a given local environment which has a specific nature and specific interrelations which decisively influence the level of production efficiency and competitiveness of the firm. The endowment, quality and orientation of the basic infrastructure, the characteristics of the local educational and training system, the local labour market, the local health system, the availability of advanced production services, scientific and technological research, and the local culture in terms of development, among other things, are components which make it possible to promote from within the local area the production efficiency and competitiveness of the firms located there (figure 1). Thus, the over-simplification and frequent exaggeration of the so-called “business risks” appears to forget that behind the entrepreneurs there is the whole set of efforts organized –and paid for– by society as a whole, on which the achievement of competitiveness essentially depends.

Thus, local areas (regions, micro-regions or confederations of municipalities) whose public and private actors are capable of constructing innovative environments, on the basis of their own resources and

FIGURE 1



circumstances, to face the challenges posed both by the new forms of production and management and the growing internationalization of economies and

consumption patterns, are bound to be effective agents of their own technological and socio-economic change.

## IV

### Rediscovering the local dimension

Thus, globalization has helped us to rediscover the local dimension, since it has given rise to a general redistribution of activities over geographic space; at the same time, the local production activities and business systems now see more clearly the great demands for production efficiency and competitiveness that they are facing.

The variety of local environments which exist is only apparently at variance with the advance of globalization, since the latter phenomenon can take advantage of that local differentiation, provided that the macroeconomic adjustment policies are accompanied by microeconomic and mesoeconomic policies which

stimulate local-level forms of behaviour, environments and institutions which will serve to improve the efficiency and competitiveness of the local production and business systems.

As is generally known, in the present phase of the post-Fordist revolution knowledge is the decisive force in the reorganization of production and space and in the introduction of the best methods of management and organization of public or private enterprises.

The advances being made in the widespread communication of knowledge also stimulate globalization. And likewise, local diversity is itself based on the acquisition and adaptation of general and specific

knowledge, filtered and decanted by local practice, institutions and culture.

Thus, local areas are one of the contexts in which the division of cognitive labour takes place, that is to say, the division of labour in the area of the generation and use of knowledge; these contexts may be termed "contextual" when they occur in the local environment and are in one way or another specific to that area, or "codified" when they are of a global nature and are more easily transferable (Becattini and Rullani, 1996, p. 12).

According to the arguments of these authors, codified knowledge can only be used properly if it is re-contextualized in the specific or local production environments; similarly, it is necessary to codify some of the contextual knowledge if it is desired to make it transferable and thus attain sufficient economies of scale.

We thus see that the relations between the local and global levels are not necessarily at variance. In the words of Becattini and Rullani (1996, p. 12), there is a circular-type division of cognitive labour, because the local areas generate knowledge for global use, while the global environment provides the local circuits with knowledge from the rest of the world.

This does not, of course, alter the fact that the advance of globalization imposes greater demands on all the local economic systems, and some of them may not survive in the situations of greater competition that globalization brings with it, especially if they only react defensively to "modernity" or reject it out of hand instead of actively seeking opportunities to attain higher specialization, quality and diversity in their domestic production.

In order to achieve the latter, specific local development strategies and policies are needed, and not just general centralized guidelines which normally merely combine insufficient (although necessary) macroeconomic policies with other policies designed to favour entry into some dynamic international niches, as though this were enough to ensure technological and organizational innovation in all the production and business systems.

In the years after the Second World War, when Fordism was the leading form of organization of production in the central countries, the local dimension of development was gradually left aside. The predominance of big business and mass production, together with the gradual reduction in the cost of transport and communication, greatly aided in this. At the time, the spatial distribution of production was based essentially on a business rather than a local

rationale. In other words, it was the sectoral rationale and business planning, with the hierarchical components typical of the Fordist model of organization, which laid down the main guidelines for economic activity, with the local resources being "extracted" from their context for incorporation in the business rationale (Becattini and Rullani, 1996, p. 13).

As from the 1970s, however, the example of the Italian industrial districts and the greater development attained by Japan and the recently industrialized Asian countries began to show up the limited interpretive capacity of the previous theories. The crisis of Fordism is therefore also the crisis of the prevailing development theories, which had replaced local considerations by the abstract logic of macro-economic categories and economies of scale in production.

As the examples of Japan, the recently industrialized Asian countries and the Italian industrial districts show, however, local factors and institutional and cultural differences, together with the existence of national development strategies formulated by the different public and private social actors, significantly contribute to economic development, since they make it possible to achieve growing yields in terms of the acquisition of knowledge thanks to the economies of local clustering.

The transition to post-Fordism has been accompanied by a crucial phenomenon, namely, the possibility of making a trans-contextual transfer of knowledge by enterprises and local areas, which means that both sides must be familiar with the formal language of long-distance communication in order to be able to work in networks. This raises serious problems, especially for small and medium-sized enterprises, micro-enterprises and local production systems, if they lack a suitable and experienced environment. This is why it is so necessary to prepare the various local areas in this respect.

As we see, the local area is considered as a specific resource and a leading actor in economic development, rather than a space or framework for economic or social activities. In the opinion of Becattini and Rullani (1996, p. 15), the local area has certain effects on the local economy and offers it specific benefits. It provides production for local consumption with the benefit of "flexible integration" or, in other words, an environment capable of generating and maintaining competitive advantages and differential value.

The creation of this local "innovative environment" is not easy to reproduce, and it is precisely the

density and quality of the relations between the different local actors which give that local area its value as a specific circuit of interactions which promote business activities, innovation in production, quality of human resources and labour relations and foster the local development culture, all of which are crucial elements in competitiveness.

It must be emphasized once again that although the case of the Latin American and Caribbean region is different from that of other areas, such as the Italian industrial districts, it is always possible to work from the standpoint of endogenous regional development, thus complementing the macroeconomic adjustment policies implemented by the central State authorities.

## V

### The importance of small and medium-sized enterprises and micro-enterprises

In Latin America and the Caribbean, as in the developed world, small-scale production occupies a prominent place in the generation of employment and income for broad strata of the population and in the local spread of technical progress and economic growth. For this reason, the lack of specific policies to deal with the problems of this kind of enterprises

in the various local production systems severely hampers any economic development strategy. It would not be enough, however, merely to have a generic support programme for small and medium-sized enterprises and micro-enterprises administered by the central authorities. Instead, I think it would be necessary to identify the different local systems of

TABLE 5

Latin America: Importance of small and medium-sized firms<sup>a</sup>

	Size of firms, by number of employees	Number of firms (% of total)	Share of employment (% of total)
Colombia <sup>b</sup>	Micro (up to 9)	91.9	
	Small (10-49)	4.3	19.19 <sup>c</sup>
	Medium (50-199)	0.6	30.37 <sup>c</sup>
	Large (over 200)	0.2	50.44 <sup>c</sup>
Costa Rica <sup>d</sup>	Micro (1-4)	84.4	47.8
	Small and medium-sized (5-99)	10.8 <sup>e</sup>	45.7
	Large (over 200)		6.1
Chile <sup>f</sup>	Micro (up to 9)	82.8 <sup>g</sup>	43.3
	Small <sup>g</sup>	14.4 <sup>g</sup>	
	Medium-sized <sup>g</sup>	1.3	36.5 <sup>h</sup>
	Large (over 200) <sup>g</sup>	1.5	20.2
Mexico <sup>i</sup>	Small, medium-sized and micro-enterprises in the manufacturing sector	98.0	49% of total industrial employment

<sup>a</sup> The data refer only to the formal sector of the economy, which means that they underestimate the importance of small-scale production as a whole.

<sup>b</sup> National Economic Census, 1990. <sup>c</sup> Data on employment in manufacturing firms with over 10 employees.

<sup>d</sup> Economic Census, Ministry of the Economy, Industry and Trade, 1991; Costa Rican Social Security Service, Industrial Information Centre, 1994.

<sup>e</sup> This figure only refers to the number of firms with 5-19 employees.

<sup>f</sup> Friedrich Ebert Foundation /CORFO, Chile, 1994.

<sup>g</sup> These categories correspond to the following criteria: micro-enterprises (enterprises declaring sales of less than US\$ 60,000); small enterprises (sales between US\$ 60,000 and US\$ 625,000), medium-sized enterprises (sales between US\$ 625,000 and US\$ 1,250,000), and large enterprises (sales over US\$ 1,250,000).

<sup>h</sup> Corresponds to share of employment accounted for by firms with between 10 and 200 employees.

<sup>i</sup> I. Aguilar, *Revista Comercio Exterior*, Mexico City, June 1995.

TABLE 6

**Selected developed countries: Importance of small and medium-sized enterprises (SME)**

Country	Size of SME (by number of employees)	Number of firms (% of total)	Sales/GDP (% of total)	Employment (% of total)	Exports (% of total)	
Canada (1990)	Manufacturing (≤ 100 employees)	99	40% of GDP	52.3 (≤ 100 employees)	9.3	
	Services (≤ 50 employees)			43 (≤ 50 employees)		
Spain (1989)	≤ 250 employees	99.8	64.25% of sales	63.72	41.06	
Italy (1991)	≤ 200 employees	97.6	31.5% of GDP (≤ 100 employees)	54.7	22.6	
	Manufacturing (≤ 300 employees)					Sales: Manufacturing 51.7
	Wholesale trade: (≤ 100 employees)					Wholesale trade: 62.1
Japan (1991)	Retail trade and services (≤ 50 employees)		Retail trade: 78	79.2		

Source: Domínguez (1996), who cites the following as his original sources: Japan Small Business Corporation, 1995; Tacis Project, 1995; Canada, House of Commons, 1994; Lorenzo and Calvo, 1994.

enterprises and construct the most suitable innovative environments in each case, in a concerted manner with the different public and private actors in the area.

If we take a look at the information on the importance of formal-type small enterprises<sup>1</sup> in various Latin American countries (table 5), we see that micro-enterprises and small enterprises, taken together, form the vast majority of the total existing enterprises and employ a very high percentage of the total number of workers.

This situation is quite similar in the developed countries, where, for obvious reasons, the criteria used for the classification of enterprises by their size cover enterprises with a larger number of employees or higher volumes of sales. In Canada, Spain, Italy and Japan (Domínguez, 1996), small and medium-sized enterprises account for a prominent share of the total number of firms in the respective countries, as well as in total sales, employment and exports (table 6).

<sup>1</sup>It should be noted that the inclusion of enterprises from the informal sector would make these assertions even more pertinent.

According to data from the European Union (1994), in 1993 that community had 17 million small and medium-sized enterprises which provided 67 million jobs, of which nearly 30 million corresponded to firms with less than 10 employees.

In the opinion of Bianchi (1996), small and medium-sized enterprises thus play a crucial role not only in promoting employment but also in ensuring the dynamism of markets and the success of regional trade agreements and in strengthening the social stability of the countries. Consequently, a strategy aimed at stimulating the "specialization and complementarity" of small and medium-sized enterprises in local agreements and clusters is of decisive importance.

As Bianchi (1996, page 4) notes, the abundant and varied specialized literature shows that the success of small enterprises in Europe is based on clusters of firms with different specialities which work together and complement each other, so that the group forms a collective subject taking part in the competitive struggle.

In short, in open markets small enterprises can be competitive if: i) they progress in their specializa-

tion, that is to say, they concentrate their production know-how (both technological and commercial or organizational) on a specific range of problems, achieving advantages in terms of costs and innovative leadership; ii) they operate at the same time in a context of cooperation, that is to say, they accept the increased costs connected with specialization because they are sure that in the local cluster of enterprises there will be one with a complementary form of specialization, and iii) the positive externalities of all this help to give greater cohesion to the cluster of enterprises, so that they do not act behind the back of the rest of the group and there are no barriers to the entry of new initiatives and efficient and innovative enterprises (Bianchi, 1996, page 5).

In view of the importance and the greater fragility of small enterprises in the different local production systems, it is necessary to take steps to ensure the introduction of technological and organizational innovations in the local areas. Technological innovation policies should not only be formulated on a sectoral and centralized basis, but also in a decentralized or local-oriented manner, in order to take account of the specific conditions, problems and potential of each of the local areas, facilitate the strategic concertation of the local social actors, and encourage the creation of suitable institutions for local economic and business promotion.

For this purpose, processes of decentralization of the State must include substantive content in terms of economic development and ensure that the policies adopted include horizontal, selective and local-oriented components and are capable of promoting strategic concertation among the social actors (box 1).

The horizontal design of policies, in contrast with a vertical and centralized approach, seeks to create opportunities and a favourable environment for innovative undertakings. The selectivity of policies refers to the need to adapt them to the different production profiles and resource potentials of the local areas, in contrast with the traditional generalist design of policies, which ignores the local areas and considers only a homogeneous abstract space. Finally the local-oriented approach sees the national economy as a set of local economies and not just as a set of sectors in an abstract space.

At all events, the need to take account of this local dimension of the economy does not mean that continued attention must not be given to policies of a sectoral nature in those segments which can keep up their dynamism in the corresponding international segments. There is no question of antagonism here, but simply a lack of complementarity in the policies in question, which must be overcome in order to attain levels of economic growth and changes in production patterns more in keeping with the desired advances in terms of equity.

#### Box 1

##### COMPARISON OF DECENTRALIZED AND CENTRALIZED POLICIES

###### *Decentralized policy design*

###### *Horizontality*

Indirect integral support policies designed to create opportunities for innovative undertakings

###### *Selectivity*

Policies are defined in the light of the different production profiles of each local area

###### *Locally-oriented approach*

The national economy is seen as a set of local economies and not just as a set of economic sectors

###### *Concertation*

Policies are formulated jointly with the different social actors

###### *Centralized policy design*

###### *Verticality*

Policies are dictated from the central level of the State, usually with a sectoral approach, and are not usually the result of consensus-building among the different actors

###### *Generality*

Policies are assumed to be valid for every type of geographical area

###### *Functional/sectoral approach*

The national economy is seen as a set of economic sectors

## VI

### Conclusions: a more comprehensive local development proposal

If it is accepted that economic development is the result of the organized efforts of the whole of society and can no longer continue to be viewed merely as a planning exercise by the central government or as the result of the individual acts of enterprises, it seems clear that more pragmatic and less ideologically biased proposals are needed in this respect, in which the local areas and local development play a fundamental role side-by-side with macroeconomic and sectoral policies.

It is also vitally important to reinvent public management so as to incorporate an integral concept of technological innovation as a process of social, institutional and cultural change in which consensus and concerted action by the different social actors of the area takes the place of the fragmentary and piecemeal designs of the previous centralized planning, and to carry out selective actions which identify the corresponding local clusters of enterprises and include local economic development policies as a fundamental part of the national development strategy.

In this respect, a long-term view and consideration of the different levels (micro, meso, meta and macro) of development policies must be incorporated in public management, which is not the exclusive responsibility of the central authorities but also of the local public administrations and the whole set of local social actors.

The abandonment of passive, subsidiary approaches, and their replacement by the incorporation of a local culture of innovation, is an essential component of this new approach, together with the design of non-bureaucratic institutions endowed with operational flexibility and efficiency.

To sum up, then, the new local economic development proposal does not only emphasize the importance of big firms and participation in dynamic activities in the globalized core of the world economy, although these may have important effects in certain regions, but also the importance of ensuring the spread of technological and organizational innovations within the whole set of local production systems in order to promote their endogenous development.

In order to progress in this respect it will be necessary to:

i) orient activities towards the promotion of endogenous development potential and not just the procurement of foreign investment;

ii) place emphasis on the local dimension of technology policy, in order to facilitate promotion of the endogenous potential of each area;

iii) give priority attention to small and medium-sized enterprises and micro-enterprises, introducing criteria based on broad social profitability and generation of employment and income for the majority of the population, and not be guided only by narrow criteria of immediate financial gain;

iv) ensure access to advanced production services throughout the local area;

v) consolidate the local systems of institutions and actively promote cooperation and complementarity agreements in the construction of the appropriate innovative environment, and

vi) take due account of environmental sustainability when considering the different options with regard to development policies and projects.

This approach thus displays substantial differences from the traditional model of local development policies, both with regard to the design of the strategy and with regard to the determination of objectives and means of action, types of management and the agents who will participate in them (box 2).

Thus, whereas the traditional model is dominated by functional or sectoral views and a desire to secure polarized development, the new model emphasizes the importance of spreading economic growth and employment, taking a more local view of the development process, and with regard to innovation it stresses quality and flexibility as the criteria that should govern organizational and production actions. In contrast with the traditional approach, the new approach places more emphasis on quality than on mere quantitative growth and concentration on big projects.

Likewise, in the new approach the mobilization of endogenous potential and the use of both local and

**Box 2**  
TYPICAL LOCAL DEVELOPMENT POLICIES

	<i>Traditional approach</i>	<i>New approach</i>
Main strategy	Polarized development (functional view)	Widely disseminated development (locally-oriented view)
Objectives	Quantitative growth Big projects	Innovation, quality and flexibility Numerous smaller projects
Mechanisms	Redistribution and mobility of capital and labour	Mobilization of endogenous potential Use of both local and external resources
Organization	Centralized management Centralized administration of resources	Local management of development Consensus-based creation of intermediate organizations
Agents	Central State authorities Big companies	Local public administrations Central State authorities Small and medium-sized enterprises and micro-enterprises Local social actors Intermediate bodies Supranational economic integration bodies

external resources take the place of the traditional concern to attract outside investment and the assumption of mobility of the labour force (Vázquez Barquero, 1993).

Finally, with regard to the form of organization and the main agents, the new approach stresses local management of development and the concerted creation of organizations and institutions of an intermediate or mesoeconomic nature, instead of centralized management of resources, and it highlights the im-

portance of local public administrations, small and medium-sized enterprises and micro-enterprises, and the rest of local society, not just the central government and the big enterprises.

From this standpoint, it is held that the smaller components of the economy are not only important but should actually be the prime object of attention as a factor for the economic, social and local development of Latin America and the Caribbean.

(Original: Spanish)

### Bibliography

- Alburquerque, F. (1996a): *Desarrollo económico local y difusión del progreso técnico*, Santiago, Chile, Latin American and Caribbean Institute for Economic and Social Planning (ILPES).
- (1996b): *Globalización, competitividad y desarrollo económico local*, Santiago, Chile, ILPES.
- Becattini, G. and E. Rullani (1996): Sistemas productivos locales y mercado global, *Información comercial española*, No. 754, Madrid, Ministerio de Economía y Hacienda, June.
- Bianchi, P. (1996): *Nuevo enfoque en el diseño de políticas para las PYMES: aprendiendo de la experiencia europea*, Documento de trabajo No. 72, Buenos Aires, ECLAC Office in Buenos Aires.
- Domínguez, R. (1996): *Promoción y reestructuración de pequeñas y medianas empresas en Canadá, España, Italia y Japón. Temas para el debate en América Latina*, Washington, D. C., Inter-American Development Bank (IDB), Infrastructure and Financial Markets Division.
- ECLAC (Economic Commission for Latin America and the Caribbean) (1996): *Preliminary Overview of the Economy of Latin America and the Caribbean 1996*, LC/G.1947-P, Santiago, Chile. United Nations publication, Sales No. E.96.II.G.13.
- Esser, K., W. Hillebrand, D. Messner and J. Meyer-Stamer (1996): Systemic competitiveness: A new challenge for firms and for government, *CEPAL Review*, No. 59, LC/G.1931-P, Santiago, Chile, ECLAC.
- European Union (EU) (1994): *The European Observatory for SMEs. Second Annual Report*, Brussels.
- Ffrench-Davis, R. (1996a): *Políticas públicas y globalización económica*, Santiago, Chile, ECLAC, mimeo.
- (1996b): Efectos económicos de la globalización. Una visión latinoamericana, newspaper *La Epoca*, Santiago, Chile, 29 September.
- Messner, D. (1996): Dimensiones espaciales de la competitividad internacional, *Revista latinoamericana de estudios del trabajo*, Santiago, Chile, Latin American Faculty of Social Sciences (FLACSO)
- Vázquez Barquero, A. (1993): *Política económica local*, Madrid, Ed. Pirámide.
- World Bank (1996): *The World Bank Atlas*, Washington, D. C.



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## Recent ECLAC publications

**La apertura económica y el desarrollo agrícola en América Latina y el Caribe** (Economic openness and agricultural development in Latin America and the Caribbean), LC/G.1963-P, "Cuadernos de la CEPAL" series, No. 81, United Nations publication, Sales No. S.97.II.G.6, ECLAC, Santiago, Chile, July 1997, 122 pages.

This publication analyses the international financial flows of Latin America and the Caribbean in recent years and their repercussions on the evolution of the real economy and the agricultural sector; examines the effects of the interaction of the financial and macroeconomic dimensions on the competitiveness of agriculture and its sustainable development; reviews some macroeconomic and sectoral policy guidelines designed to counteract the negative effects of financial capital flows on the agricultural sector, and analyses various sectoral policy measures designed to promote the channeling of capital flows towards productive investment in the agricultural sector.

**A Dinâmica do Setor Saúde no Brasil. Transformações e Tendências nas Décadas de 80 a 90** (Dynamics of the health sector in Brazil. Changes and trends in the 1980s and 1990s), LC/G.1966-P, "Cuadernos de la CEPAL" series, No. 82, United Nations publication, Sales No. S.97.II.G.9, ECLAC, Santiago, Chile, July 1997, 219 pages.

This study has three main objectives. First, to give a description of the general features of the Brazilian health system, with particular attention to aspects relating to its administrative and institutional structure, human resources, and the forms of financing and expenditure used in that country. Second, to evaluate the process of decentralization of activities being carried out in the sector, with regard to its institutional framework, programmes, financial resources, operational instruments and the most important forms of resource transfers from the central to the local levels of government. Lastly, to evaluate proposals for reform of health systems, especially with regard to financing and the continuation of the decentralization process.

The study consists of three parts. Part I describes the main public and private health subsystems existing in the country, the structure of the labour market in the health area, and the financing mechanisms of the sector. Part II deals with the process of the decentralization of health services in Brazil; it analyses the background to this process and the main programmes carried out by the federal government, describes the progress made since the adoption of the 1988 Constitution and the consequent establishment of the Unified Health System, and assesses the effects of the latter with regard to health expenditure by the federal government, the states and the municipalities. Finally, part III describes and analyses proposals for changes in the system of financing the health sector and speculates about some of the tendencies in this field.

**Ciudadanía y derechos humanos desde la perspectiva de las políticas públicas** (Citizenship and human rights from the standpoint of public policies), LC/G.1936-P, "Cuadernos de la CEPAL" series, No. 79, United Nations publication, Sales No. S.97.II.G.5, ECLAC, Santiago, Chile, March 1997, 112 pages.

The authors maintain that although the State is not the master and director of the citizens, because it is they who set it up and qualify it, it nevertheless has certain constitutional tasks to fulfill, including in particular the universalization of basic education, which is considered to be the public policy with the greatest impact in the process of formation of popular citizenship, along with policies on culture and social communication, security and human rights, and measures aimed to benefit minors and adolescents. It is considered that citizenship is the fundamental term in this respect, because it expresses the historical ability to understand the economic and social situation and, above all, to intervene in it in an organized manner so that a welfare society and State may be established, while maintaining the proper relations between the means and the end, that is to say, between the market and equity. Human rights, for their part, represent a typical historical achievement, provided that proper citizenship also exists.

Particular attention is given to the situation of Brazil. Emphasis is placed on the urgent need to reorganize the various levels of government in such a way that all policies will adopt an integrated approach reflecting concern for citizenship and human rights. The lack of a proper human rights policy evidences the political poverty which still marks the society as a whole, as well as the extreme difficulty of using the market relations as the main or only means of promoting equity.



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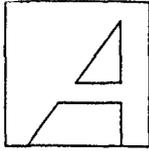
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Abril 1998

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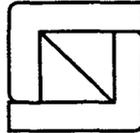
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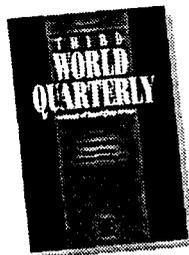


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