

CEPAL

REVIEW

NUMBER 61

APRIL 1997

SANTIAGO, CHILE

OSCAR ALTIMIR
Director of the Review

EUGENIO LAHERA
Technical Secretary



UNITED NATIONS

Notes and explanation of symbols

The following symbols are used in tables in the Review:

(...)	Three dots indicate that data are not available or are not separately reported.
-------	---

(—)	A dash indicates that the amount is nil or negligible.
-----	--

	A blank space in a table means that the item in question is not applicable.
--	---

(-)	A minus sign indicates a deficit or decrease, unless otherwise specified.
-----	---

(.)	A point is used to indicate decimals.
-----	---------------------------------------

(/)	A slash indicates a crop year or fiscal year, e.g., 1970/1971.
-----	--

(-)	Use of a hyphen between years, e.g., 1971-1973, indicates reference to the complete number of calendar years involved, including the beginning and end years.
-----	---

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

Guidelines for contributors to *CEPAL Review*

The editorial board of the Review are always interested in encouraging the publication of articles which analyse the economic and social development of Latin America and the Caribbean. With this in mind, and in order to facilitate the presentation, consideration and publication of papers, they have prepared the following information and suggestions to serve as a guide to future contributors.

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

—Papers should be submitted in Spanish, English, French or Portuguese. They will be translated into the appropriate language by ECLAC.

—Papers should not be longer than 10 000 words, including notes and bibliography, if applicable, but shorter articles will also be considered. The original text should preferably be submitted on diskette (Word Perfect format). Otherwise, two printed or typed copies should be provided.

—All contributions should be accompanied by a note clearly indicating the title of the paper, the name of the author, the institution he belongs to, and his address. Authors are also requested to send in a short summary of the article (no more than 300 words) giving a brief description of its subject matter and main conclusions.

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

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

—The editorial board of the *Review* reserve the right to make any necessary revision or editorial changes required by the articles.

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

C O N T E N T S

Three forms of social coordination	7
<i>Norbert Lechner</i>	
Social rifts in Colombia	19
<i>Juan Luis Londoño de la Cuesta</i>	
The United States to the rescue: financial assistance to Mexico in 1982 and 1995	41
<i>Nora Lustig</i>	
Convertibility and the banking system in Argentina	63
<i>Alfredo F. Calcagno</i>	
Manufactured exports from small Latin American economies: the challenges ahead	91
<i>Rudolf M. Buitelaar and Pitou van Dijck</i>	
Why doesn't investment in public transport reduce urban traffic congestion?	107
<i>Ian Thomson</i>	
Notes on the measurement of poverty by the income method	119
<i>Juan Carlos Feres</i>	
Fiscal policy and the economic cycle in Chile	135
<i>Carlos Budnevich and Guillermo Le Fort</i>	
An appraisal of capital goods policy in Argentina	149
<i>Pablo Sirlin</i>	
The restructuring of the Brazilian industrial groups between 1980 and 1993	167
<i>Ricardo M. Ruiz</i>	
Restructuring of production and territorial change: a second industrialization hub in Northern Mexico	187
<i>Tito Alegría, Jorge Carrillo, Jorge Alonso Estrada</i>	
Recent ECLAC publications	207

Three forms of *social coordination*

Norbert Lechner

*Professor-Researcher,
Latin American Faculty
of Social Sciences,
Mexico City Campus.*

Modernization brings with it a rapid process of differentiation which increases the dynamism of society but also aggravates the phenomena of disintegration and fragmentation. These opposing sides of the process give rise to uncertainty and a sense of defencelessness. The protective aura of the State fades away, while at the same time the very notion of society becomes empty and unsubstantial. There is a general feeling of uneasiness, in which all evils tend to be blamed on "bad government" and the imperfections of social life are seen as the direct consequence of political ineptitude. However, the natural concern to tackle the (very obvious) problems of governance may prevent us from seeing the real underlying conditions. We must ask ourselves: what is the structural context in which the question of the democratic governance of Latin American society is currently posed? Perhaps we should take one step back and ask ourselves how society ensures a certain degree of basic coordination among the different processes and actors (both individual and collective) that make it up. Put in this way, the question implies a very far-reaching reconstruction of all our theories. Basically, it is a question of forming a whole new conception of social coordination under the new conditions, but before we can do this it is necessary to place the problem of social coordination within the present context. The following notes are merely designed to sketch out a broad picture in which coordination is seen as a crucial problem in the current reorganization of Latin American societies.

I

Political coordination

In modern times, the preferred agency of social coordination has been the State. The classical idea of the State, which still prevails even today, is based on sovereignty. We may distinguish between the external sovereignty of the State (guaranteeing national unity with respect to the international system of States) and its internal sovereignty (ensuring cohesion within society). Leaving aside constitutional considerations, State sovereignty presupposes two fundamental features: i) a clear distinction between the State and society, and ii) the centralization of power in the hands of the State as the decisive agent of social order. The State represents a structure for legitimate domination in so far as it is recognized as the supreme authority having the exclusive right to take decisions which are binding on the entire population and, if necessary, to impose them by punitive measures. On the basis of its position as the hierarchical centre of society, the State links together the various aspects of social life through political coordination.

How does this political coordination work? It is based, of course, on the existence of a system of public administration and on the rule of law (both through the body of laws and the administration of justice), but it also works through economic policy and even through education (socialization through the transmission, in school, of shared rules, knowledge and habits). Through such mechanisms, the State links up and synthesizes the natural social diversity into a more or less coherent unified whole. In general terms, political coordination is distinguished by the fact that it is:

i) centralized: the State is the only guiding body, or, to put it another way, the apex of the pyramid of society, from which the whole set of social processes is ordered;

ii) hierarchical: decisions are taken and communicated by the legitimate political or administrative authorities through the established legal procedures;

iii) public: the foundation and target of political coordination is the citizenry and their actions in the field of public affairs;

iv) deliberate: coordination is effected in accordance with predetermined purposes and criteria.

Even today our conception of social coordination is marked by the specific form of political coordination. The State's power of legal regulation has never been the only form in this respect: money and knowledge also operate as coordination mechanisms, while other areas such as religion, ethics or culture also make indirect contributions. In so far as the State becomes the main agency of coordination, however, some dimensions of political coordination assume the character of general criteria. Thus, the commonly-held idea of coordination usually refers to three dimensions which are implicit in political coordination:

i) regulation, in that it legally orders the relations between different processes and actors and settles possible conflicts;

ii) representation, in that it reflects the prevailing ideas on social order and offers a symbolic image of the "unity" of social life through which the various actors feel that they all belong to the same society;

iii) leadership, in that it channels social differences into a shared view of the future.

As the State has been shaped, so too has its coordination function been delimited and made more specific. Concepts such as the Rule of Law and the Welfare State, together with theories on democracy and pluralism, shape and interpret the scope of political coordination. These brief references are enough to give an idea of its theoretical determination. In order to illustrate the practical scope of political coordination, I shall refer to its best-known institution:

□ This article incorporates elements of a paper presented at the meeting to commemorate the 35th anniversary of CENDES, Caracas, 9-11 October 1996; the text forms part of the project "Reform of the State: the new dynamics of social coordination" which I am carrying out in conjunction with René Millán and Francisco Valdés. I am indebted to Dirk Messner's excellent work *The Network Society*, the subtitle of which is "International Competitiveness and Economic Development as Problems of Societal Governance", which I consider to be extremely instructive both for those engaged in theoretical reflections on reform of the State and for those engaged in the formulation of specific second-generation reforms (see Messner, 1995). It goes without saying, however, that I bear full responsibility for the views expressed in this article.

planning. As a result of the 1929 crisis and the "war economy", even in societies with market economies it seemed feasible and desirable to adopt a form of "organized capitalism" in which State coordination could control the irrational features of the market. This rationalizing intervention of the State depends, however, on certain conditions. It presupposes a social situation of limited complexity (in order for abstract rules to be applicable); a simple and direct chain of causality (in order to be able to influence the target population); access to all the relevant information (in order to be able to presume that the instructions are correct), and finally, obedient execution of the measures applied (i.e., without requiring any personal initiative on the part of the executant or his identification with the objects pursued). We may speak of a "rational planning paradigm" based on three assumptions: i) unambiguous and clearly ranked goals, unambiguous and clearly assigned means, and a similarly unambiguous causality; ii) clear criteria—profitability, efficacy, efficiency—for determining and appraising the fulfillment of the established goals; and above all, iii) the assumption that a multiplicity of individual rational actions combine together, without cracks or gaps, to give a rational and optimal final result (Messner, 1995, p. 89).

In Latin America, political coordination has found its clearest expression in the developmentalist State of the 1960s. This form of State may be characterized as consisting of the linking-up of three pivotal elements: i) the State acting as the driving force of economic development by promoting a process of import substitution industrialization; ii) the assertion of the State as the representative of the nation, extending (political and social) citizenship to previously marginalized social sectors; and iii) rationalization of the State's active intervention on behalf of a modernization project. Within this framework, the Latin American countries create special planning instruments to coordinate the various aspects of economic and social development.

It is easier now, in retrospect, to see the merits and failures of the developmentalist State in Latin America. It was the right answer to the (national and international) conditions that prevailed after the Second World War, but its internal contradictions soon revealed themselves. The breakdown of democracy in Chile in 1973 was perhaps the most dramatic expression of its limitations, because it was at that moment that a whole set of problems exploded,

subsequently affecting the other countries of the region to a greater or lesser extent. To use the terms of Habermas, we may speak of:

i) a crisis of rationales: the recurring fiscal crisis (aggravated by the external debt crisis of the early 1980s) indicates that the dynamics of politics and economics are subject to their own specific types of logic, so that political management of economic variables is subject to limitations;

ii) a crisis of legitimacy: the ideological polarization of those years points to a profound division in society regarding the desired type of social order;

iii) a crisis of motivation: the political-ideological conflict weakens identification with the State and, hence, the willingness to obey its instructions.

The coordinating function of the State is not only in question in Latin America. In Europe, too, it is displaying more and more shortcomings. In the 1970s, the hopes placed in planning and the "invisible political hand" of pluralism suffered a decline. At the same time, however, a paradoxical situation arose: the growing demands for State intervention led to over-regulation of social life while burdening the State with an overload of demands.¹ The concept of the integral coordination or global planning of society has also collapsed, while doubts are being raised about democratic governance. Milder formulas such as neo-corporativism, based on recognition of the fact that the main organized interests (employers and unions) must collaborate in any effective attempt to coordinate the economic process, are also showing their limitations. Wherever we look, ordered coordination by the State is beginning to run into serious obstacles because of:

i) problems of implementation: the agencies and organs of the State no longer implement political programmes properly, either because the institutional structures are not suitable or because intermediate levels distort communication;

ii) problems of motivation: the target population refuse to obey, either because the social actors demand greater freedom of action or because there are organized interests with relative "power of veto";

iii) problems of knowledge: there is a lack of information about the contexts and dynamics it is sought to influence;

¹ Messner, 1995, p. 144. The initial diagnosis goes back to the well-known report of the Crozier/Huntington/Watanuki Trilateral Commission, 1975).

iv) problems of complexity: because of the growing differentiation and complexity of social conditions, the available political instruments are no longer efficient.²

The increasingly restricted scope of State intervention indicates a weakening of both the external and internal sovereignty of the State. Externally, the State's sovereignty is reduced by globalization, especially because of the great autonomy of international financial flows and the growing weight of supranational bodies. Internally, the central role of the State is under question because of the new complexity of

social life, the rise of many economic and social actors with the capacity to pressure and "colonialize" the intervention of the State, and also the spread of individualistic types of motivation which undermine community spirit: that is to say, the very ethical and normative resources on which political coordination used to be based (Messner, 1995, p. 121 *et seq.*). In the late 1970s, and above all after the financial collapse of 1982, it became clear that the "State-centered model" was exhausted. It was in this context that the neoliberal offensive was launched to propose and impose a new form of social coordination.

II

Social coordination through the market

The success of neoliberalism is due to the generalized disillusionment with political coordination. Since the late 1970s, the neoliberal strategy has been denouncing the paradoxical effects of State action –blocking social development instead of promoting it– while at the same time promoting a set of measures (market liberalization, deregulation, privatization, administrative decentralization) designed to strengthen the role of the market. In the light of the growing shortcomings of political coordination, neoliberalism aims (at least in its ideological pronouncements) to make the market the exclusive principle of social coordination. Underlying this "silent revolution" there is a different concept of order. Taking up once again the liberal inspiration that saw society as "the result of human action, but not the execution of some human design" (Ferguson, 1767), the neoliberal proposal sees social order as a self-organized and self-regulated type of order. Consequently, instead of seeking to offset the centrifugal tendencies of a differentiated society through central coordination, it seeks instead to do away with all political interference that distorts the "market laws", seen as an automatic mechanism for ensuring equilibrium.

Although the declared objective of the neoliberal discourse is to secure a radical reorganization of society, in actual fact its reforms operate primarily as

antidotes to State intervention. However, we should clearly distinguish between the two forms of coordination in order to appreciate the problems raised. Thus, unlike political coordination, coordination through the market is characterized by being:

i) decentralized: it is assumed that the differentiation of society means the elimination not only of a single centre but of all centres;

ii) private: coordination no longer refers to the citizenry, and hence to some idea of the "common good", but to the relations among individuals as private proprietors;

iii) horizontal: the weakening of the hierarchical structure is radicalized to the point of denial of any kind of relation of domination, and its place is taken by a succession of agreements among equals on exchanges among equivalents;

iv) non-deliberate: as the market is taken as a paradigm for the spontaneous balancing of interests, social coordination is seen as the automatic, non-deliberate result of social interaction.

The neoliberal strategy is a success in terms of the structural adjustment of the Latin American countries to the new national conditions (differentiation) and the international situation (globalization), but it is a failure in terms of its fundamental aim of reorganizing social coordination as a function of the market rationale. It is worth recalling once again the paradox of neoliberal ideas: in actual fact, a strategy devoted to the elimination of State intervention is only successful when it is backed up by strong political inter-

² Messner, 1995, p. 90 *et seq.*, citing research by Renate Mayntz.

vention. This was so, for example, in the cases not only of Chile under Pinochet, but also of Mexico under Salinas, Argentina under Menem or Peru under Fujimori. In all these cases, it is abundantly clear that economic modernization depends to a decisive extent on the leading role of the President. This new brand of "strong government" is not just a reflection of the presidential system. The Executive assumes this leading role because the horizontal coordination effected by the market is only partial. Indeed, proper functioning of the market is itself dependent on the existence of suitable social and political institutions.

In the space of a few years, the attempt to coordinate social life through the market has already left some important lessons. First, the Latin American countries are rapidly learning that the world market—the main referent of structural adjustment—operates according to the "systemic competitiveness" paradigm.³ This means that, for international competitiveness, the comparative advantage of one or another economic factor is not as important as a country's capacity for organization and management, in order to combine a wide range of economic and non-economic factors. "The world of production governed by the new paradigm is marked above all by the importance of technology, whose development and consequences are long-term phenomena. Within this context, maintaining efficiency depends on the establishment of strategies with a broad time horizon and collective mechanisms capable of reducing the corresponding high levels of uncertainty" (Pérez, 1996, p. 363). Thus, it requires the deliberate linking-up of very diverse actors around a "collective strategic consensus": that is to say, active intervention that goes beyond the private initiatives of the market.

Second, the Latin American experience shows that the market alone neither generates nor sustains a social order. The market (together with the administration) promotes a form of systemic integration based on a formal (technical) rationale, but it does not promote social integration. On the contrary, it accentuates social inequalities, promotes exclusion and generalizes tendencies towards disintegration. The globalization of markets is itself accompanied by strong segmentation within each society. The disaggregating dynamics of the market thus clearly show up its limitations as an agency of coordination.

³ See, among others, Bradford (1994) and Esser, Hillebrand, Messner and Meyer-Stamer (1996).

Third, we must question the neoliberal principle of "radical individualism" (including "public choice") as the only rational form of conduct (Messner, 1995, p. 176 *et seq.*). As we observed in the preceding paragraphs, there can be no social coordination unless individuals are guided by some kind of "common good". Social coordination presupposes that the various actors (both individual and collective) have a combination of instrumental rationality (in order to maximize their private benefits) and a community line of approach. The fact that there is no longer a single type of morality, binding on all, highlights the need for mutual recognition in social relations. In reality, individual freedom to form preferences and take decisions is tempered by the social and cultural environment and, in particular, by the various collective identities. The symbolic dimension of coordination is therefore extremely important. In contrast, the market offers neither a collective idea of the existing order nor a forward-looking horizon. In other words, coordination through the market does not include two typical dimensions of political coordination: representation and leadership.

In the early 1990s there are two basic lessons to be drawn from the modernization processes in Latin America. On the one hand, the prevailing strategy has given rise to an impressive expansion of the market-based society, which has generated an unusual degree of social dynamism in the region. Latin American society is taking on such a level of complexity that it is no longer possible to think in terms of a central social coordinating body. At the same time, however, that same advance of modernization and the consequent diversification of the actors (further heightened by globalization) increase the need for coordination. This shows how severely limited the coordinating function of the market is. Spontaneous horizontal coordination among the actors is important, but it is not sufficient to establish the fundamental rules of social coexistence, to generate collective forms of representation of the social order, and to offer forward-looking leadership to deal with future challenges.

Consequently, in little more than one decade Latin America has progressed from discovery of the market to rediscovery of the State. There is now no doubt that retrofitting of the economy is only viable (both economically and socially) if it is based on a set of new institutions specific to a market-based society, such as regulatory bodies, anti-monopoly com-

missions, regional development agencies, export promotion bodies, consumer protection agencies and, above all, social security systems. The development of such a set of institutions is all the more difficult because nowadays there is not only a much larger number of actors taking part, but these also have a much greater capacity for resistance and mobilization against measures that affect their own particular interests.⁴ Unlike the first phase, it is no longer possible to invoke "fear of chaos" in order to impose

certain reforms. In all the countries, to a greater or lesser extent, society at large is stronger and highly diversified. The situation is marked by growing social complexity which makes necessary slow and complicated processes of negotiation and consensus-building. Consequently, politics once again assumes a leading place as a means of formulating consensuses on basic rules and sectoral accords. It is in this context that a third form of social coordination is gaining force.

III

Social coordination through networks

The speed with which the "State-centered society" collapsed after having existed for so long in Latin America, and the even greater rapidity of the rise and fall of the neoliberal counteroffensive, make us feel as though we are caught up in an avalanche which is sweeping us away to a destination of which we have no inkling. While we devote ourselves every day to our laborious efforts to adapt to the surprises that life has in store for us, we lose sight of the structural changes that are taking place in our societies. Rather than an ideological debate ("The State versus The Market"), what we need is to reconstruct an interpretative framework for the new social conditions. We see, then, that our accustomed conceptual apparatus has become obsolete. The familiar notions of "the State" or "politics" now seem too crude to take account of phenomena which we sense to be much more complex. It is time to call a halt and have resort to the advances made in the social sciences. In order to gain a systemic picture of the problems which we have seen to be besetting social coordination, the theory of systems developed by Niklas Luhmann seems particularly promising. This theory places special emphasis on a tendency which has been increasingly present throughout the evolution of society and which has now assumed striking importance: the process of functional differentiation. This process, typical of modernization, causes certain areas of social life (economics, law, science, education, politics) to

develop specific rationales and dynamics and thus form relatively closed and self-referential "functional subsystems". These operate according to their functional codes and therefore only assimilate external "messages" to the extent that these can be translated into the internal "logic" of the subsystem. Luhmann extrapolates the conclusions of this tendency to highlight two consequences: the great self-sufficiency of each functional subsystem and, hence, the absence of any centre.⁵ Seen in these terms, politics is reduced to just another subsystem, without any capacity to influence the other subsystems.⁶

Luhmann's theory seems to exaggerate the tendencies implicit in functional differentiation. Rather than the elimination of all centres, we may assume the elimination of a single centre capable of ordering the whole of society, so that society will have to be conceived as a constellation with multiple centres. Nor will there be elimination of all influence of the political subsystem in other areas. Instead, its field of action will be limited by the need for compatibility with the internal logic of the other subsystems. Consequently, we may draw two conclusions which are of crucial importance for social coordination: first,

⁵ "No system of functions, not even the political, can take the place of hierarchy and its summit. We live in a society which cannot represent its unity in itself, as this would contradict the logic of functional differentiation. We live in a society without a summit and without a center. The unity of society no longer comes out in this society" (Luhmann, 1987, p. 105).

⁶ The same applies, of course, to economics: it cannot coordinate and legitimize the whole of society either. For a general presentation of the theory, see Luhmann and De Georgi, 1993.

⁴ With regard to institutional aspects of reform of the State in Latin America, see *inter alia* Nafm, 1994.

politics loses its central hierarchical position, and second, any political intervention in other subsystems will therefore be restricted.

Differentiation is not a new process; indeed, modernity is characterized by the tension between differentiation and integration. However, the new nature of this differentiation also affects the process of social integration. According to Luhmann (1992), the end of the meta-relations characteristic of post-modernity means putting an end to "second-level" coordination. In other words, all "higher authorities" capable of coordinating society would disappear and social coordination would therefore have to be internalized within each subsystem. The subsystems would coordinate with each other through internal adjustments which would assimilate external signals and upsets. Coordination would thus be incorporated into self-regulation. Such a form of mutual adaptation seems shaky, however, in view of the great interdependence of politics, economics, law and science. Major problems cannot be confined to a single area. Indeed, one of the most striking phenomena today is the way that the increase in the independence of each subsystem is simultaneously matched by the increase in their interdependence. While the self-referential dynamic of every functional subsystem inexorably increases, at the same time increasingly global contexts are taking shape which cut across different subsystems.

Luhmann's work has the merit of offering a theoretical framework for analysing the differentiation and consequent autonomy of specific functional logics. This makes it possible to understand the structural reasons underlying the difficulties encountered by political coordination in recent times. It has become clear that the restriction of the field of action of politics is not due to a "neoliberal plot" or to the incapacity of political leaders. What is happening is that we are witnessing a profound restructuring of our societies which undermines the previous "primacy of politics". However, the expansionary nature of politics has not disappeared: it still intervenes in the other subsystems to the extent that political decisions fit in with their specific logics. Luhmann's theory does not take account of this special feature of politics.⁷ Like

every theory of systems, it does not deal with the interactions among actors either, although this is a central aspect of any form of coordination. It does, however, help to gain an idea of the conditioning of actors in line with the "functional logic" of their field of action. In this sense, it helps to establish the new frame of reference within which we must analyse the problems of social coordination.

Dirk Messner (1995, p. 171 *et seq.*) sums up the new context in the following tendencies:

- i) the functional differentiation process highlighted by Luhmann leads to the growing sectoralization of society;
- ii) this means a drastic increase in the interests at stake and a much larger number of actors, leading to an over-abundance of participants in policy formulation;
- iii) the differentiation of the actors increases the demands for State intervention, so that there is an increase in the number of agencies and policies burdening the State;
- iv) this means that there is greater internal differentiation of the State apparatus: this apparatus was never a monolithic unit, but now its heterogeneity becomes its most outstanding feature;
- v) because of the differentiation of society and the overloading of the public administration, the State has to delegate functions; such delegation is itself a policy;
- vi) this reminds us of Luhmann's paradox: the relative autonomy of each functional subsystem increases, but so does their mutual interdependence;
- vii) the greater interaction of State agencies and social actors and the creation of mixed agencies help to dilute the borderline between public and private matters;
- viii) the need to link up and share resources (information, knowledge, etc.) belonging to different actors gives rise to systemic interaction which transcends both the market mechanisms and the means of hierarchical control;
- ix) this new complexity of social relations is further heightened by the globalization processes, which give it a transnational dimension.

In view of the change of context which has occurred in recent years, it seems obvious that centralized coordination by the State is no longer sufficient, while coordination entrusted entirely to the market laws is inappropriate. Nowadays, any approach to social coordination must take account of

⁷ For a critical analysis of Luhmann from the standpoint of political science, see Von Beyme (1994) and Messner (1995, p. 132 *et seq.*).

the following dimensions of the problem (Messner, 1995, p. 165):

i) the growing complexity of the process (from recognition of a problem to implementation of policies and evaluation of their effects);

ii) the increasing number of actors involved (State and private);

iii) the important role played by cooperation among the State, the market and social institutions (civil associations, universities, etc.);

iv) the existence and combination of different organizational structures (hierarchical State coordination, neo-corporative pacts, business agreements, etc.);

v) the wide range of coordination tasks (from collecting information to consensus-building);

vi) the differentiation of State functions (from the legal system to the execution of functions of arbitration, follow-up, guidance and supervision);

vii) the differentiation of the instruments used (from administrative decrees and public law contracts to less direct mechanisms such as financial incentives, formal and informal agreements, or mere "signals" issued through the distribution of information).

The recent vogue for coordination through networks comes under this context. In general terms, this means horizontal coordination among different actors interested in the same matter, with a view to negotiating and agreeing upon a solution. Messner (1995, p. 211 *et seq.*) defines a network as follows:

i) it is an institutional invention in line with the special features of a polycentric society;

ii) it combines vertical and horizontal communication, but it is a special kind of coordination, different from political coordination or coordination through the market;

iii) it links up different organizations and establishes interaction among their representatives (this does not refer to relations within a single organization);

iv) it is political when it links up State authorities (which may be different bodies that are in conflict with each other) and/or political parties with economic and social actors;

v) the relations within it tend to be informal rather than formal (it does not involve the formation of a new organization);

vi) there is mutual dependence among its participants (none of them, alone, has all the resources—information, financial resources, legal facilities—needed to solve the problem, and therefore depends on the cooperation of the others;

vii) its objective is to formulate and implement collective decisions on a given shared issue (i.e., the participants are responsible for duly executing the decisions taken and are therefore jointly responsible for the solution of the problem; when this is achieved the network is dissolved, as a tie which is limited in time);

viii) the starting point for the network is a conflict or division of interests which it settles through competitive cooperation (each actor defends his own interests while collaborating in the efforts to decide on a shared solution).

Different types of networks may be distinguished, depending on the number of participants, the strength or weakness of the links among them, the degree of stability of the network, its field of action, etc. At all events, every network obeys a certain functional logic,⁸ which is reflected in some minimum rules such as the fair sharing of costs and benefits among the participants; reciprocity (which goes beyond mere exchanges and includes confidence, fair play, and inter-subjective links which give the feeling of belonging to a community); the self-limitation of each actor, and respect for the legitimate interests of the other actors.

In Latin America, special attention should be paid to the need for a relationship based on mutual confidence: a relationship which is all the more risky, but at the same time all the more essential, in situations of uncertainty. Mutual confidence (beyond the field of everyday affairs) operates as a means of reducing complexity and thus acts as a powerful lubricant for cooperation. Wagering on confidence, in spite of the danger of being disappointed, is often a rational risk to take, precisely in confrontation situations. In the situations of impasse and deadlock which are so frequent in our countries, it is worth recalling Axelrod's studies.⁹ If the actors cannot avoid a relationship of mutual dependence, whether conflictive or cooperative, and if this situation may last indefinitely, so that the eventual costs and benefits cannot be calculated, then cooperative relations may arise even in a context of great distrust.

⁸ See Messner, 1995, p. 284 *et seq.* For some empirical studies of networks, see Marin and Mayntz, eds., 1991.

⁹ Messner cites Axelrod, 1984.

As we have seen, the vogue of networks in recent years is due to the growing differentiation of society. When social life is reflected in a heavy density of actors, social coordination can no longer be entrusted exclusively to the hierarchical order. On the contrary, networks only work satisfactorily when there are a considerable number of representatives of social interests and opinions. The strengthening of society at large, however, does not mean a zero-sum correlation to the detriment of the State. Cooperation among the economic and social actors requires the intervention of the State, because this possesses various resources that cannot be transferred (legal fulfillment of agreements, international accords) or additional means (financial resources, systematically classified information). Thus, a basic premise for coordination through networks is that there should be a certain degree of equilibrium between society and the State. The two tendencies —on the one hand, the diversity and strengthening of society at large, and on the other the redimensioning of State action— generate far-reaching changes in politics (see Lechner, 1996). There is thus a process of informalization of politics, which tends to go beyond the institutions of the political system and occupy new “grey areas” midway between politics and society. It is the combination of a strong society with a strong State which gives rise to political networks as a combination of hierarchical regulation and horizontal coordination.

What does this new form of coordination mean for the State? As another German social scientist (Renate Mayntz) notes: “the recent discussion on political sciences reveals that in actual fact we cannot speak of a meek and resigned withdrawal of the State. The traditional tasks of the State, which are no longer carried out by unitary nation-States but by a politico-administrative system with various levels, are now increasingly accompanied by the tasks of managing social interdependence. (...) “Leadership”, in the sense of deliberately influencing social processes, continues in principle to be the specific function of the politico-administrative system. What has changed is the way the State tries to carry out its tasks” (Mayntz, 1995, pp. 157 and 163). In other words, we are not witnessing a withdrawal, but a change in the State’s form of action.

As we have seen, a crucial problem is the interdependence of the different functional subsystems: the interdependence, for example, between politics and economics or between science and economics.

Solving this crux would appear to be a specific task for politics. According to Mayntz, “formulating the problem of interdependence makes it possible to define the content of the function of politics: the management of systemic interdependence. In effect, we have seen that, under the influence of the theory of modernization, the debate on the theory of the State is moving in the direction of coordination tasks” (Mayntz, 1995, p. 155).

In fact, various aspects of the new form of coordination inevitably fall to the lot of the State. Dirk Messner (1995, p. 343 *et seq.*) identifies some typical fields of State intervention:

- i) tasks of organization, coordination and moderation (e.g., establishing networks and bringing the corresponding actors together around the discussion table);
- ii) functions of mediation (for example, solving veto or deadlock situations);
- iii) tasks of control (for example, entrusting private institutions with the implementation of public services);
- iv) functions of taking the initiative or providing guidance (for example, asserting general interests or long-term considerations in the networks);
- v) corrective functions (for example, promoting the establishment of a representative actor or strengthening weak actors).

In an era of great uncertainty which, in the final analysis, can only be offset by inter-subject linkages, networks operate as a kind of “mutual insurance”: they discipline competition, obviating its destructive aspects and channelling mutual expectations in a positive manner. Networks can operate at various levels (national, regional, local) and can deal with very diverse problems. It is through networks that we are able to negotiate the privatization of technologically complex areas (energy, telecommunications), regional development plans or sectoral reforms such as those referring to the environment or the health or educational systems. In these cases, a network facilitates not only the linking up of different, often antagonistic, actors and their respective strategic resources, but also the effective execution of the decisions taken. This co-responsibility in the execution of agreed measures is particularly important in view of the weakening of the State’s regulatory capacity.

Much of the politics dealing with real situations now takes place in such networks. However, there should be no illusions about their importance in the

coordination of social processes. They are not a panacea that can solve every problem. Furthermore, coordination through networks is also subject to serious risks. Special mention may be made of three of these:¹⁰

First, blocking of the decision-making process, either because an actor has the power of veto or because of ties of confidence or even complicity among actors, may lead to a breakdown of the debate and the paralyzation of decision-making. Moreover, the internal coherence of the network tends to avoid conflicts and thus lead to the blocking of necessary innovations.

Second, there is the danger of the externalization of costs to third parties who do not form part of the network: every network is always tempted to shift the costs of its agreements to third parties. For example: a network for reforming the health system includes State authorities, medical associations and trade unions, but not the population, which, although it is the main party affected by the matter, does not have organized interests and is thus not an actor that will normally be represented in the network.

Third, there is the danger that the decisions taken may not be effectively binding: although a distinctive feature of networks is precisely that all the participants undertake to collaborate in the execution of the agreements reached, networks generally do not have any power to punish those who do not fulfill their undertakings. All the efforts made are in vain if, subsequently, one of the participants goes back on his word.

Coordination through networks does seem to provide a satisfactory solution to one of the problems mentioned at the beginning: that of regulation. In contrast, it seems less suitable for dealing with the other two requirements of social coordination: representativity and forward-looking leadership. The most notable weakness of coordination through networks lies in its "deficit of democracy". No matter how efficient, effective and efficacious this form of coordination may be, nothing ensures that it will be democratic. The non-organized population has no access to networks, and even though the State representatives on them should assert the "general

interests", there may not have been any prior democratic deliberation about that particular "common good". There is no intrinsic connection between coordination through networks and democratic institutions. On the contrary, functional representation through networks and the form of territorial representation typical of democratic institutions may come to be mere parallel channels, if not downright contradictory. Specifically, there are grounds for fearing a shift in the attitude of the political parties. In view of the precarious way parliaments operate in our countries, their legislative function could easily degenerate into mere rubber stamping of agreements reached in the shadowy ambit of the networks. In response to these risks, Messner (1995, p. 359 *et seq.*) proposes that coordination through networks should be made part of the Habermasian triangle formed by the communicational power (elections, parliament, public opinion), the social power (organized interests) and the administrative power (government, the courts of justice, the public administration).

Another query that is still outstanding is the integration of society. Messner himself notes that decentralized coordination through a "network of networks" is not the same thing as social integration. It is true that networks operate thanks to integrative resources such as confidence, respect, tolerance, reciprocity, moral sensitivity, community sense, etc., so that they presuppose –just like democracy– the existence of "social capital" (Putnam, 1993) or basic rules of social coexistence. It is not clear, however, what relation there is between the explicit and well-defined coordination through networks and the vague, workaday cohesion provided by the unwritten rules of civil behaviour.

I should like to end these notes inspired by Dirk Messner's book with a few final comments. Firstly, I must repeat that they are of a purely schematic nature. I think that the scheme presented here could be useful for highlighting how changes in social structures condition the forms of social coordination. In line with the changes that take place in society, coordination has operated mainly through the State, the market, or networks. It is not a question of a sequence in which the newest form eliminates the previous one, but rather a combination of the three mechanisms. It is within the framework of this combination that reform of the State should be located.

Secondly, this schematic treatment may represent a first step towards the formulation of an inter-

¹⁰ Messner, 1995, p. 214 *et seq.*; Mayntz, 1995, p. 164.

pretative framework for coordination in differentiated societies. A "map" would make it easier to analyse certain problems such as the greater contingency of social processes. If there is an increase in the number of situations which are neither necessary nor impossible, there will also be an increase in uncertainty; in contingent situations there is an increase in both the need to take decisions and the difficulty of making calculations. Difficulties of forecasting are also connected with simultaneity. If the future horizon draws back towards the present, making it impossible to put off decisions, all actions become tendentially simultaneous. Measures have to be taken, while at the same time a thousand other things are happening that affect the course of action. It is not a question of information, but of time: of the capacity of coordination to secure synchronization.

Finally, it may be wondered, in the light of what was said earlier, whether the current reforms of the

State—which have pretty well run out of steam—should not be reviewed from the standpoint of social coordination. Such an approach would allow us to get an overall view of State action, the market and networks, while the linking up of these three mechanisms would enable us to reformulate the ways in which current society could be coordinated. Seen in this way, State intervention provides an indispensable supplement to the forms of coordination carried out by the market and networks, especially as regards the representation of society as a whole and forward-looking leadership. The fact is that only the State seems to be in a position to ensure the representative dimension of coordination, as well as some capacity for political leadership. Both these aspects have to do with democracy. Might it not be true that the whole significance of a democratic State lies precisely in this function of coordination?

(Original: Spanish)

Bibliography

- Axelrod, R. (1984): *The Evolution of Cooperation*, New York, Basic Books, Inc.
- Bradford, C. I., Jr. (1994): *The New Paradigm of Systemic Competitiveness: Toward More Integrated Policies in Latin America*, Paris, Organization for Economic Co-operation and Development (OECD), OECD Development Centre.
- Crozier/Huntington/Watanuki Trilateral Commission (1975): *The Crisis of Democracy*, New York, New York University Press.
- 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, Economic Commission for Latin America and the Caribbean (ECLAC).
- Ferguson, A. (1767): An essay on the history of civic society, Edinburgh, cited by C. Meier, *Die Entstehung des Politischen* (1995), Suhrkamp, Frankfurt.
- Lechner, N. (1996): Las transformaciones de la política, *Revista mexicana de sociología*, vol. 58, No. 1, Mexico City, National Autonomous University of Mexico (UNAM), Instituto de Investigaciones Sociales, January-March.
- Luhmann, N. (1987): The representation of society within society, *Current Sociology*, vol. 35, No. 2, London, U. K., International Sociological Association (ISA).
- (1992): *Beobachtungen der Moderne*, Opladen, Westdeutscher Verlag.
- Luhmann, N. and R. De Georgi (1993): *Teoría de la sociedad*, Universidad de Guadalajara, Universidad Iberoamericana, Instituto Tecnológico y de Estudios Superiores de Occidente, Mexico City.
- Marin, B. and R. Mayntz (eds.) (1991): *Policy Networks*, Frankfurt, Campus-Westview Press.
- Mayntz, R. (1995): Politische Steuerung, *Politische Vierteljahresschrift*, No. 26 (special issue), Opladen, Westdeutscher Verlag.
- Messner, D. (1995): *The Network Society - International Competitiveness and Economic Development as Problems of Societal Governance*, London, 1997, Frank Cass.
- Naím, M. (1994): Instituciones: el eslabón perdido en las reformas económicas de América Latina, *Este país*, No. 45, Mexico City, December.
- Pérez, C. (1996): La modernización industrial en América Latina y la herencia de la sustitución de importaciones, *Comercio exterior*, vol. 46, No. 5, Mexico City, Banco Nacional de Comercio Exterior, S.N.C.
- Putnam, R. (1993): *Making Democracy Work: Civic Traditions in Modern Italy*, Princeton, New Jersey, Princeton University Press.
- Von Beyme, K. (1994): *Teoría política del siglo XX*, Madrid, Alianza Universidad.

Social rifts *in Colombia*

Juan Luis Londoño de la Cuesta

*Ph. D., University of Harvard.
Former Minister of Health
of Colombia.*

*Office of the Chief Economist,
Inter-American
Development Bank (IDB).*

This article analyses the levels and evolution of social inequalities in Colombia over the last 25 years, describing the main recent trends in Colombian social development, comparing them with past periods, and contrasting them with those of other countries. First of all, a recent estimate of income distribution and the rest of the social indicators is given. Next, trends in the distribution of monetary income over the period 1938-1993 are analysed, the impact of social expenditure on secondary income distribution is examined, and on this basis trends in the distribution of income effectively received by individuals are evaluated. The evolution of poverty and other indicators of well-being is then described and compared. Finally, some reflections are presented on social prospects in Colombia. It is concluded that while the country has undergone enormous changes in distribution and well-being which have gradually reduced inequality and poverty, there has been a shift in the dominant social problems of the country, since shortcomings and inequalities in the field of education and the deterioration in young people's life expectancy have begun to play a leading role.

I

Introduction

Colombia is a country of paradoxes. Its economic growth rate over the last 50 years has been the most stable of the whole Latin American continent. It has the most long-standing democracy in the entire region. Its production structure has changed twice as fast as most of the Latin American countries. Its economy has avoided the outbreaks of inflation which have marked almost all the other countries of the region at some time or other. Yet Colombians and analysts of Colombia abroad clearly perceive that this is a country with enormous social tensions whose most evident manifestation is violence. In every one of the recent years there have been some 25,000 homicides in Colombia: much more than the 15,000 in the whole of Europe or the 23,000 in the United States (United Nations, 1995). The Colombian guerrilla movement is the oldest in the continent, and the people's anxiety about their society is enormous.

The widespread upsurge of violence is often interpreted in analyses of the country as an expression of deterioration in social conditions. In the 1960s, Colombia had one of the worst income distribution patterns in the world (Urrutia and Berry, 1975), and even today many international analysts still see the country as being a structurally unequal society.¹ Since the late 1980s, Colombia has made adjustments in its economic model in order to promote increased openness and competitiveness of the economy (Colombia, National Planning Department, 1991), and some Colombian analysts,² as well as quite a

number of experts in international academic circles,³ have expressed the view that these economic policies—simplistically termed “neoliberal”—contributed to a process of serious social deterioration.

Unfortunately, most of the recent debates on the effect of economic policies on income distribution or the social situation have had pretty weak empirical bases. The arguments are not always based on convincing evidence that permits these variables to be checked over time and compared with those of other nations. The lags in the processing of the information prevent satisfactory identification of trends, and every new government—with the aim of boosting the novelty of its policies in the eyes of the public—interprets the social progress made in previous periods in a manner which is not always complete.

This brief essay, describing the levels and evolution of social inequalities in Colombia over the last 25 years, leads to two conclusions.

Thus, it may be concluded from the article that unequal income distribution and absolute poverty are gradually ceasing to be the dominant social problems in Colombia. The progress made in these respects over the last 25 years has been well-nigh spectacular. The dizzy pace of economic growth has given rise to enormous changes in income distribution and well-being, reducing inequality and poverty, and the higher level of social expenditure on the poorest sectors of the population generated by the Constitution of 1991 has further strengthened this progress in terms of distribution, which has been further accelerated in the 1990s.

The recent evolution of indicators of well-being probably reflects a new scale of priorities in the leading social problems of the country, however, with inequalities in the field of education and the deterioration in young people's life expectancy now occupying a leading place. The dynamics of income distribution in the most recent period indicate that the shortage of human capital in Colombia is beginning

□ I should like to express my thanks for the valuable collaboration of Hernando Moreno Guerrero, Olga Lucía Jaramillo, Alejandro Mateus, María Cristina Peñaloza and Martha Sánchez of the National Planning Department (DNP), and for that of Jairo Urdaneta of the National Department of Statistics (DANE) in the processing and interpretation of the information used.

¹ See Berry (1995a), Cardoso and Helwege (1992) and Palacios (1995). The last-named author, for example, asserts: “Colombia presents one of the worst pictures in terms of income distribution in Latin America and hence in the whole world” (p. 289).

² Especially E. Sarmiento (1993 and 1995) and L. Sarmiento (1993 and 1995).

³ For example, Berry (1995b).

to manifest itself with unprecedented force in the light of the demands of a rapidly growing economy and an international context in which educational levels are constantly rising, while the spiralling

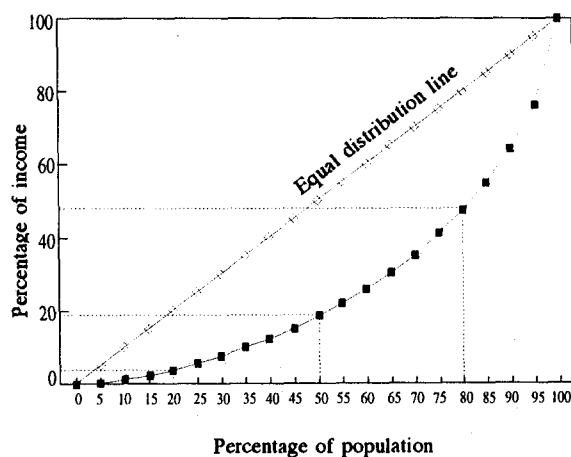
violence of the last decade means that young people in Colombia now have the lowest life expectancy of all Latin America, which causes anguish and uncertainty and saps the country's social capital.

II

The current social situation

In the mid-1990s, Colombia is still a country with a great deal of inequality and poverty, and the disparity in income distribution is very marked. The simplest way of illustrating this is through the Lorenz curve for income distribution in 1993 (figure 1). In that year, the poorest quintile of the population received 4% of national income, the poorest half received 18.7%, but the richest quintile received 52.5%. Thus, the richest 20% of the population received 13 times more income than the poorest 20%. The lowest average incomes were those of peasants and agricultural day-labourers, and 60% of the poorest quintile was made up of peasant families and own-account workers (table 1).⁴

FIGURE 1
Colombia: Lorenz curve, 1993



⁴ For more details, see Annex 1. For comparable data, see also Londoño (1995b), Statistical Annex.

⁵ According to ECLAC (1991), these basic family needs are decent housing (not overcrowded), basic drinking water supply, basic education for the children, and employment for at least one of the adult members of the household.

At present, nine and a half million Colombians are living in poverty, whatever the definition used to identify this. Some 27% of the population have a daily income which puts them below internationally accepted poverty lines or are unable to satisfy at least one of their basic needs⁵ (table 2). Overall life expect-

TABLE 1
Colombia: Income distribution, 1993

Aggregate indicators		
Gini coefficient	0.47207	
Theil's coefficient	0.39303	
Atkinson's index	0.55977	
Logarithmic variation	0.9950	
Disaggregated indicators		
	Gini coefficient	Average income (US\$ per year)
Labourers	0.3037	1 616
Peasants	0.5283	1 370
Rentiers	0.5334	4 721
Wage-earners	0.3827	2 963
Own-account workers	0.5465	2 636
Capitalists	0.4737	7 561
Total	0.472	12 781

TABLE 2
Colombia: Social indicators, 1993-1995^a

Inequality	
Gini coefficient	0.472
Share of poorest 20%	4.0
Share of poorest 40%	12.6
Share of richest 20%	52.5
Poverty	
In terms of insufficient income (1993)	27.2%
In terms of unmet basic needs (1994)	27.1%
Human development	
Human Development Index	0.836
Years of schooling (1994)	5.9
Life expectancy (1995)	69.1
Child mortality (1993)	20
Lack of health coverage	25%
Lack of basic educational coverage	5%

^a These indicators are the most recent ones available.

tancy is 69.1 years, but this figure conceals big differences among social groups. Twenty-five per cent of the poorest members of the population have no access to health services if they fall sick, while 21% of all children are born without any assistance from health personnel, 13% suffer from malnutrition and 2% die before the age of 5. The average schooling of the labour force is 5.9 years, and this too conceals big social differences. Although 95% of children begin basic education, only 83% of all children between 6 and 11 attend school, and the 44% poorest of the child population do not complete their fifth year of primary education.

These indicators are well known and generally accepted among Colombian analysts, and rightly provide arguments for critics of Colombian society and its economic and social policies. What is surprising is

that these same figures have also been used by the last four governments to back up their claims that their respective development plans had a social orientation: "Development with Equity" (Betancur, 1982-1986), "A Plan to Combat Absolute Poverty" (Barco, 1986-1990), "The Peaceful Revolution" (Gaviria, 1990-1994) and "A Social Leap Forward" (Samper, 1994-1996).

The real significance of the present indicators may be appreciated much better, however, when they are analysed dynamically –with regard to their previous evolution in the country– and comparatively, with respect to other countries in similar development conditions. This is what we shall see in the following sections, where we shall look at the changes in income distribution, poverty and the main human development indicators.

III

Primary income distribution trends, 1938-1993

Income distribution among families may be visualized as taking place in two rounds (Okun, 1975). In the first round, the income flows from production activities to the factors participating in them, in the form of payment for work, returns on capital, and rents: this is the primary income distribution, which we will be examining in this section. In the second round, the external sector and the State intervene to redistribute the income generated among the various agents: this is the secondary income distribution through social expenditure, which will be analysed in section IV.

In most countries, comparison of income indicators over time usually presents enormous methodological difficulties. Household surveys almost always display differences in coverage and definitions, and interpretations based on them are almost always hotly disputed.⁶ The present study follows a line of research which takes the greatest care to try to construct indicators on income distribution and poverty which are comparable over time and between countries. The essence of the methodology is to ensure that the information on employ-

ment and on the population-specific dispersion of the various types of income (such as wages, rents and profits) provided by the household surveys is compatible with the factoral distribution of household income provided by the national accounts,⁷ after deduction of capital consumption.

⁶ In Colombia, the biggest debates on changes in distribution have taken place in the 1970s and 1990s. In the mid-1970s, many authors believed that there had been a serious deterioration in income distribution (a good summary of the arguments put forward may be found in Samper, 1976 and Eastman, 1979), while others held that there was evidence indicating the contrary (see in particular Urrutia, 1985; Londoño, 1989; Carrisoza and Urdinola, 1990). The 1990s have also been a period of extensive debate: E. Sarmiento (1993 and 1995) and L. Sarmiento (1993 and 1995) claimed that there had been serious deterioration, while Urrutia and Ramírez (1993) and Urrutia, Misas, Ramírez and Rodríguez (1994) presented evidence to the contrary.

⁷ This methodology was designed by the author for his Ph.D. thesis at the University of Harvard. It is fully explained in the Statistical Annex to Londoño (1995b) and in chapter 1 of DANE (1994b).

1. The factoral distribution of national income

The most notable development in income distribution in Colombia during the twentieth century has been the changing share of labour in national income (net of depreciation). Leaving aside some cyclical fluctuations, the share of labour over the long term has formed a clear U-shaped curve (figure 2): after having represented more than 60% of national income in the late 1930s, it went down to 50% by the end of the 1950s but then rose over the next 35 years to amount to 70% of national income in the mid-1990s.

Income distribution may be broken down still further among its various factors. Income from labour is made up of remuneration for pure labour and remuneration for human capital. Non-labour income, for its part, consists of profits on capital invested in urban activities and land rents from agriculture and mining⁸ (for the evolution of the share of each of these factors in national income between 1938 and 1993, see figure 3).

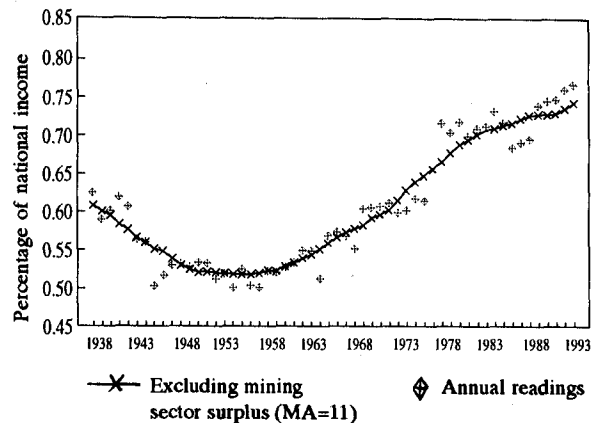
The changing share of labour in national income is clearly the result of three overlapping trends. Firstly, the contribution of pure agricultural labour has gone down steadily: after representing 30% of income in the 1930s, its share went down with increasing rapidity in the 1960s and sank to only 10% in the 1990s.⁹ Secondly, the share of remuneration for non-agricultural labour in national income rose from 30% in the 1930s to 55% in the 1990s, as a result of the process of migration and the trend towards increasingly urban production activities. Finally, within remuneration for urban labour, the share of human capital steadily increased, rising particularly fast with the progress in education in the 1960s.

⁸ The remuneration for pure labour is determined by assigning to all those declaring themselves as having a job the basic wages declared by workers without education. Human capital is the difference between the average income from labour (wage-earning and self-employed) and the remuneration for pure labour. Urban earnings are determined by deducting income from labour and capital depreciation from non-primary added value. Land rents are obtained by deducting wages and capital remuneration from the agricultural and mining added value.

⁹ The present national accounts, which concentrate on wage labour in agriculture and incorporate very little information on the employment dynamics observed in household surveys, are not capable of reflecting the evolution described here.

FIGURE 2

Colombia: Share of labour in national income, 1938-1993

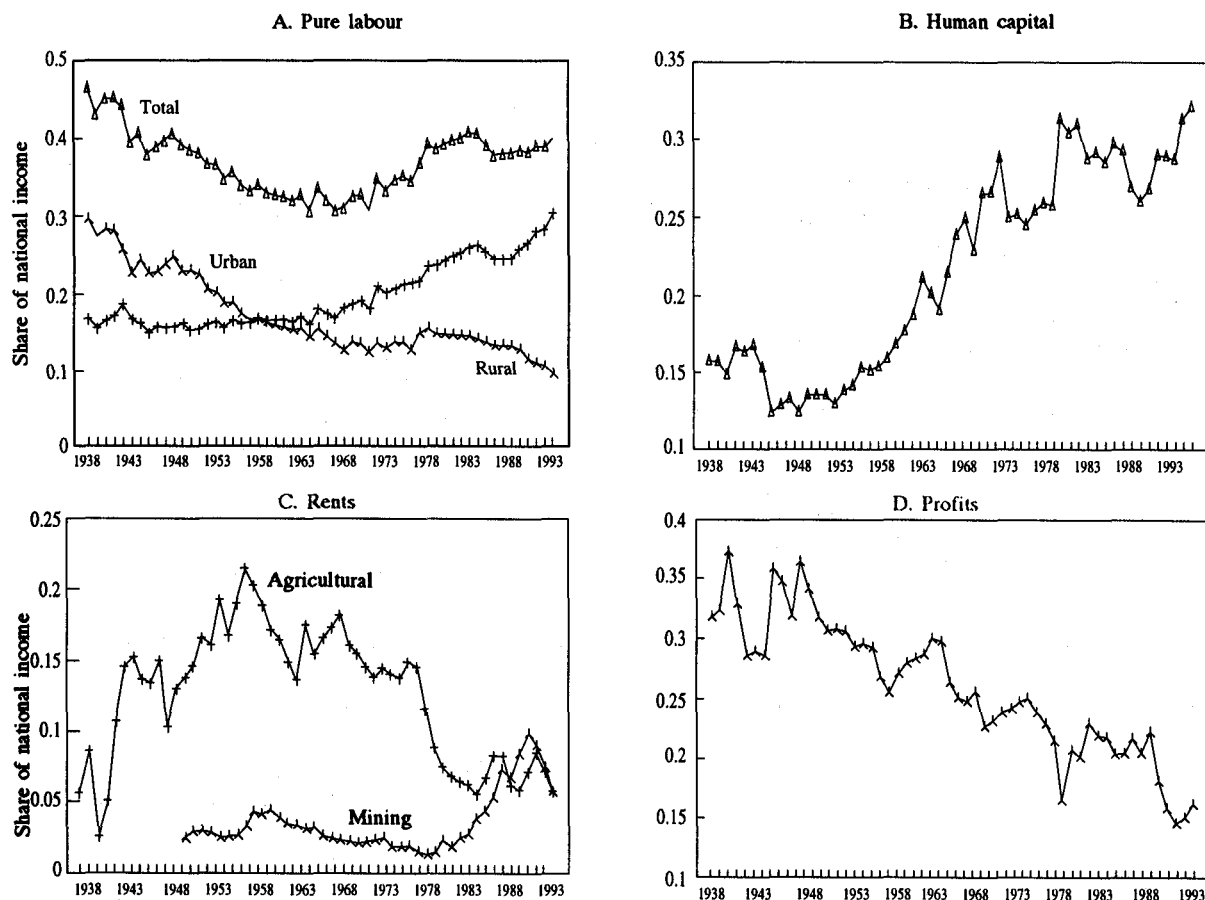


Non-labour income, for its part, has three components. Profits from urban enterprises (after deduction of depreciation) have accounted for a steadily smaller share of national income throughout this century, because the returns on capital have gone down faster than the GDP-capital ratio. The share of rents from agricultural land in GDP increased from the 1930s to the late 1950s—largely because of the coffee boom—but have gone down since then at a rate which became particularly rapid at the end of the 1970s. Finally, rents from mining activities, which went down steadily from the 1950s until the late 1970s (dropping to only 1.2% of total income), have risen enormously since the mid-1980s, thanks to coal mining and petroleum, and have accounted for 8.0% of national income in the first half of the 1990s.

Colombia thus clearly displays a long-term cycle as regards the factoral distribution of income, in which the shares of human capital and pure urban labour in national income have increased, while those of urban profits and pure agricultural labour have gone down. As Londoño (1995b) shows, this may be explained by shifts in capital accumulation—between urban and rural activities, between physical and human capital—and changes in the spatial location of the labour force. In addition to the long-term cycle in Colombia, there are also medium-term cycles due to the rise in rents from agricultural land in the decades just after the war and the increase in mining surpluses since the mid-1980s, both caused largely by changes in land use prompted by international price movements.

FIGURE 3

Colombia: Evolution of functional breakdown of national income, 1938-1993



Source: DANE, prepared with the methodology of Londoño (1995b).

2 Distribution of family income

In order to understand the distribution of family income, two other empirical procedures must be carried out. First, the global income of families must be reconstructed, for which purpose it is necessary to deduct from net national income the proportion of the surplus which never reaches households because it stays in the enterprises.¹⁰ Second, this global income of families must be allocated among six different groups of income recipients: agricultural wage labourers, peasants, urban wage-earners, urban own-account workers, recipients of agricultural rents, and

¹⁰ In 1970-1993, an average of 43.5% of the total surplus generated was retained in the enterprises.

urban capitalists. The "households" account of the national accounts serves as a consistency framework for analysing the factoral distribution of family income in the years for which household surveys make it possible to identify the income recipients.¹¹

Thus, households have reflected the long-term changes in national income distribution referred to earlier: there has been an increase in the proportion of family income coming from labour income (a pro-

¹¹ Table 31 of the national accounts prepared by DANE (1994a) requires some adjustments for this purpose. First, it is necessary to deduct from the surplus accounts the depreciation funds corresponding to households and the income of own-account workers in all sectors. Second, the agricultural added value must be redistributed among remunerations for capital, rents, remunerations for own-account work, and wages, in line with the information from the labour market.

portion which reached its lowest level (56%) in 1951 and its highest level (85%) during the present decade), while there has been a decrease, especially since the 1950s, in the proportion coming from urban profits and land rents (figure 4). Not all changes in the distribution of national income are reflected in the household accounts, however. Households did not share in the boom in rents from mining activities in the 1980s, so that their faster growth continued to be due to labour income. In agriculture, it was the peasants who suffered the biggest loss of income, because they suffered bigger fluctuations in their wages and employment. Urban own-account workers, for their part, have continued to increase their share in total income ever since the 1960s, although as from the mid-1980s informal sector employment has accounted for a steadily smaller share of the labour market (Caro and Rodríguez, 1993; López, 1995).

3. Income distribution among individuals

The information on family income obtained from the national accounts and reconciled with information from household surveys on employment and dispersion of income among the various recipients permits us to obtain estimates of income distribution among individuals that are comparable over time.¹²

The two indicators most often used to represent the inequality of income distribution are Theil's entropy coefficient and Gini's coefficient (figure 5). Both these indicators are consistent for identifying the different phases in the evolution of Colombian income distribution during the present century.

¹² For the period 1938-1988, the sources and methodology are to be found in Londoño, 1995b. The analysis for 1993 is based on the CASEM survey carried out by the National Planning Department on a sample of 25,000 households with 130,000 reporting members (June 1993). Other authors have selected the household surveys carried out by DANE over that period (especially survey EH77 of 1992), which, as noted by E. Sarmiento (1993) truncated the coding of the highest incomes, so that they tend to underestimate inequality. Urrutia, Misas, Ramírez and Rodríguez (1994) and E. Sarmiento (1995) tried to correct this skew in the primary information with statistical methods which assumed functional forms and distribution parameters. Both these procedures, which -because they concentrate on household income distribution- ignore information on individuals which is truncated or not declared, continue to be very imperfect solutions to the weaknesses in the primary information. Consequently, I have preferred to use a survey such as CASEM, which does not suffer from this problem and thus obviates this serious and well-known controversy.

FIGURE 4
Colombia: Household income distribution, 1938-1993

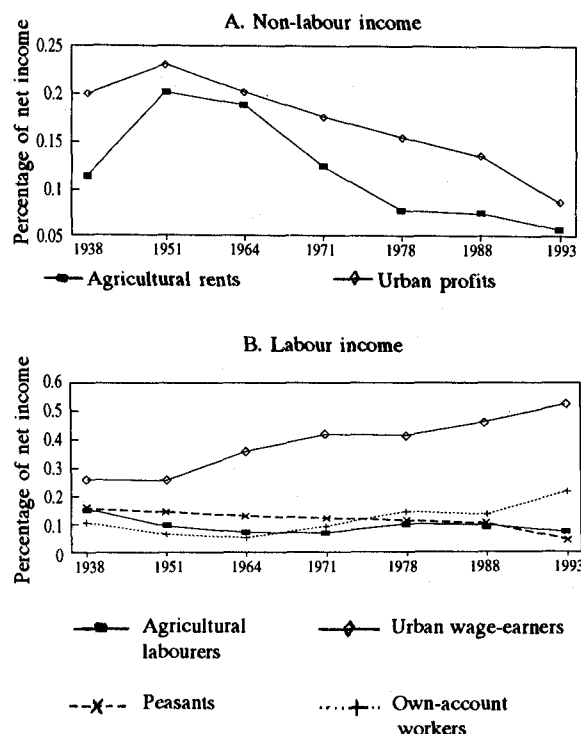
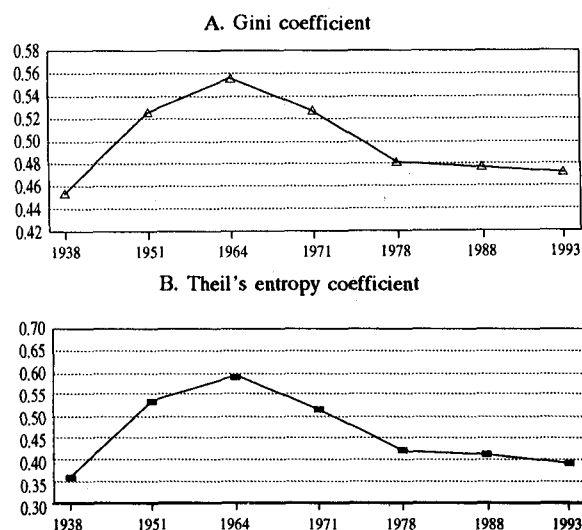


FIGURE 5
Colombia: Evolution of income distribution, 1938-1993



Between the 1930s and the 1960s, income distribution in Colombia suffered a serious deterioration. The Gini coefficient increased by more than 10 points, while Theil's coefficient rose by nearly 25 points. According to Londoño (1995b),¹³ this result is explained by the combination of forms of capital accumulation and labour mobility. It is considered that the rapid accumulation of urban capital, together with the slow expansion of education up to the late 1950s, gave rise to growing inequality in the structure of urban remunerations, with very high returns from education. At the same time, the slow modernization of agriculture, together with the feebleness of the exodus of workers to the cities, led to the stagnation of rural wages, raising land-based rents and heightening the inequalities in agriculture-derived income.

Between the late 1960s and the early 1980s, there was rapid progress in distribution. The Gini coefficient went down by 8 points and Theil's coefficient fell by 18 points, thus almost offsetting the deterioration in distribution registered in the previous phase. Here, too, variations in the forms of accumulation and in the mobility of labour were the main causes of the change in distribution. The rapid increase in the accumulation of human capital, while the capital-GDP ratio in urban areas remained stable, compressed the wage structure and the returns on education. At the same time, the simultaneous increase in agricultural capitalization—especially in land improvement—and in migration to the cities seems to have made it possible to eliminate the excess of rural labour, so that there was a considerable increase in the remuneration of agricultural workers, land-based rents went down, and there was a substantial improvement in the distribution of rural income.

From the 1980s up to the mid-1990s, there has been a phase of slow but positive progress in distribution: especially slow in comparison with the previous phase. The Gini coefficient went down by a little less than one point and the Theil entropy coefficient by a little less than three points over these fifteen years. This slowing-down of progress in terms of distribution had two components, one long-term and the other short-term.

¹³ Through cliometric exercises using general equilibrium computer models for the historical analysis, Londoño (1995b) was able to carry out counterfactual exercises which allow the validity of these explanatory hypotheses to be tested.

Among the long-term trends, the increase in the share of urban wages and own-account income in total national income continued to take place at the expense of a decline in the relative shares of agricultural workers, urban profits and agriculture-based rents. However, the accumulation dynamics of the 1960s, which gave rise to the subsequent changes in distribution, weakened considerably in the 1980s. The expansion in education slowed down very considerably, and the number of years of schooling of the labour force began to reflect this fact. Likewise, the capitalization of agriculture lost the buoyancy it had displayed in the 1960s and 1970s, and these two factors together reduced the pressures both for reducing labour inequality through the wage structure and bringing down the returns on education, and for reducing the demand for labour in rural areas.¹⁴

Within the context of these long-term dynamics, some conjunctural phenomena and policy actions which have occurred since the late 1980s have affected the labour market and non-labour rents.

The events which most affected the labour market were the enormous exodus of agricultural workers and the reforms in labour legislation. The available information¹⁵ suggests that over the period 1988-1993 almost 400,000 peasants lost their employment. According to the household surveys, these people did not stay in rural areas or remain unemployed, but found employment in urban activities. Over this period, urban employment registered an unprecedented boom, and the rate of creation of new jobs was double that observed in the 1980s. Notwithstanding the constant increase in rates of participation in the labour force, urban unemployment went down markedly between 1986 and 1994 (from 16% to 8%), eliminating the whole of the cyclical compo-

¹⁴ On the other hand, the possibility of a different interpretation of the fluctuations in the rate of change of income distribution in the 1970s and 1980s cannot be ruled out either. It is possible that the rapid progress in distribution observed in the second half of the 1970s may have had a large conjunctural component which could not be kept up over time. The increase in rural wages due to the coffee boom and the recovery in urban wages due to the 1978 deflation could have caused the Gini coefficient to go down by over one point more than might have been expected from the long-term trends. This conjunctural evolution might have caused the figures for the period 1971-1978 to show greater progress under the influence of the long-term trends.

¹⁵ From the household surveys analysed (EH 73, EH 77, EH 81 and the CASEM survey) and Reyes, 1995.

ment of unemployment generated in the first half of the 1980s (López, 1995).

The prolonged boom in construction, the buoyancy of exports of manufactures and retail trade in imports, and the reforms in labour legislation to make it more flexible,¹⁶ are estimated to have shifted the curve of labour demand for the urban sector as a whole, producing more jobs without reducing wages. As a result, urban wages tended to rise faster than inflation, especially in the period 1992-1994. The biggest changes were in the market for skilled workers. Because of the increasing scarcity of human capital, due mainly to the sluggish expansion of secondary education since the late 1970s, this greater demand seems to have raised the returns on education and made possible a substantial rise in wages. The response of supply to the changes in demand seems to have been brisker in the unskilled labour market. Examination of the available information suggests that there was a considerable inflow of rural migrants into urban centres in the early 1990s, when there were 500,000 workers without any education and 1,600,000 workers with incomplete primary education in the cities.¹⁷ Since this is precisely the kind of educational background that agricultural workers have, the arrival of 400,000 such workers in the cities assuredly gave rise to an abundance of unskilled labour, which would make it possible to continue with the expansion in employment without putting upward pressure on wages. In the cities, the combination of a shortage of skilled labour and an abundance of poorly educated labour was reflected in an apparent increase in the returns on education.¹⁸ There was therefore an unexpected setback in the reduction in labour inequality that the Colombian economy had been displaying ever since the late 1960s.¹⁹

¹⁶ According to Lora and Henao (1995), the labour reforms gave rise to a structural change, shifting demand for labour to manufacturing so much that this sector is estimated to have generated 30% more jobs than under the old legislation.

¹⁷ Household survey EH 73 of September 1991.

¹⁸ As noted by Tenjo (1993), Berry and Tenjo (1995) and Robbins (1995).

¹⁹ This growing inequality in urban labour income has been identified by Tenjo (1993), Berry (1995a), Altimir (1996) and Sánchez (1996), among others.

The capital markets also underwent enormous changes in the 1990s. The downward trend in the return on capital which had been observed ever since the post-war period became even more marked with the inflows of foreign capital, while monopoly rents from the markets for agricultural products and manufactures were reduced by the growing competition from foreign goods resulting from the greater economic openness. According to the available information, these events appear to have speeded up the reduction of the inequality in the earnings of urban families observed in recent decades, and they also appear to have reversed the upward trend in the inequality of agriculture-based rents²⁰ observed throughout the previous two decades. Paradoxically, the agricultural crisis of the early 1990s, which occurred in a context of factor mobility, meant that the smaller growth of nominal income mainly affected landowners, so that there was an improvement in the distribution of agricultural income.²¹

Structural trends and some conjunctural events gave rise to opposing tensions in income distribution: the factorial income of families was distributed in the direction of labour, and the dispersion went down for non-labour income but increased for labour income, with the first two effects being quantitatively greater than the third one. As a result, income distribution improved in the first half of the 1990s (table 3).²²

²⁰ The trend towards a reduction in the inequality of rural rents shown by the CASEM survey is confirmed by the results of National Household Survey No. 81, which DANE carried out almost simultaneously.

²¹ Some analysts (Lora and Steiner, 1995; World Bank, 1994; National Planning Department of Colombia, 1995) consider that the widening of the difference between rural and urban incomes was the main source of deterioration in distribution in the 1990s. Indeed, if the urban-rural population distribution had remained stable, the changes in the terms of trade between agriculture and the rest of the economy would have led to lower relative income per agricultural worker (or family). If the population is mobile, however, the direct relation between movements in added value and relative income is broken, and this would appear to be the case during this period, when the migration of agricultural workers was so great that the gap in productivity per worker between agriculture and urban activities actually closed between 1988 and 1993, rather than widening.

²² The analyses by Berry (1995a), Altimir (1994) or L. Sarmiento (1995), which concentrate on the distribution of urban labour income, give an incomplete picture of the changes in income distribution in society as a whole.

TABLE 3
Colombia: Indices of inequality, 1978-1993

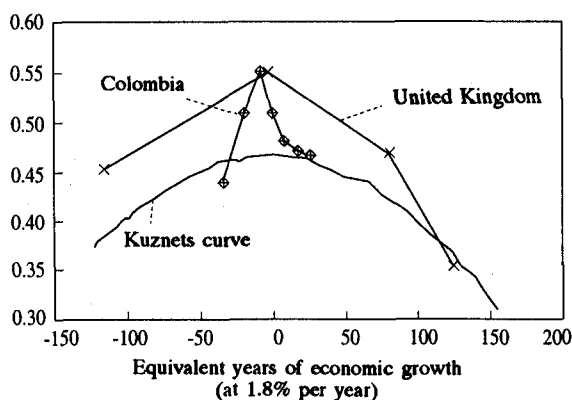
	1978	1988	1993
Labour income	0.411	0.402	0.449
Urban wage-earners	0.382	0.352	0.385
Other workers	0.458	0.475	0.478
Non-labour income	0.564	0.571	0.514
<i>Total</i>	<i>0.481</i>	<i>0.476</i>	<i>0.472</i>

4. Changes in distribution: a comparative view

Income distribution in Colombia in the 1970s and 1980s did not remain static at the levels of the 1960s, which were the levels by which it became internationally known. As we saw in the previous sections, after a long period of deterioration which reached its nadir at the end of that decade, income distribution improved continuously in the following 25 years: faster in the 1970s, more slowly in the 1980s, and somewhat faster in the early 1990s.

How can we gauge how significant the levels and changes in Colombian inequality were during this period? One simple way is to compare the evolution of the Gini coefficient in Colombia with the path it would follow in a typical country displaying the evolution forecast by Kuznets,²³ or with what actually happened in England in recent years (Williamson, 1985). In order to simplify the comparison still further, the GDP was normalized in terms of equivalent growth-years (at the rate of 1.8% per year). The variations forecast by Kuznets normally take a long time to develop (figure 6). An increase in inequality

FIGURE 6
United Kingdom and Colombia: Kuznets curve



Source: Londoño, 1995b.

like that displayed by Colombia in the 1960s –ten points on the Gini coefficient– would normally take 100 or 150 years in an average country, while the decrease in Colombian inequality over the 25 years in question would take three or four times as long in other countries.

Compared with these typical patterns, the English experience seems to have been one of extreme changes in distribution. Colombia has displayed changes in distribution of similar magnitude to those of England (indeed, Colombian inequality in the 1960s was not very different from that of England a hundred years ago), but they took place over a very much shorter period. Thus, Colombia registered in the short space of 50 years changes that had taken over 250 years in England.

IV

Social policy effects: secondary income distribution

In the case of Colombia, what has been called the second round of income distribution has been assuming increasing importance, especially since the 1980s. External and public sector transfers²⁴ to Colombian households and transfers of income to the exterior by Colombian firms have grown considerably. Around 1993, each of these sources (as a proportion of GDP) was three times greater than at the

²³ We used a regression along the lines of $Gini = a + b \ln(Y) + c \ln^2(Y)$, where Y is the per capita income, with purchasing power parity (PPP) at 1980 prices and \ln is its natural logarithm. As noted in Londoño (1995b), 143 observations were used for 93 countries, for the period 1958-1983.

²⁴ These transfers are defined as the difference between the total taxes and other charges paid by households and the social expenditure received by them.

beginning of the 1970s (figure 7), and this warrants a more detailed examination of the public sector's redistributive effect among households.²⁵

1. The evolution of social expenditure

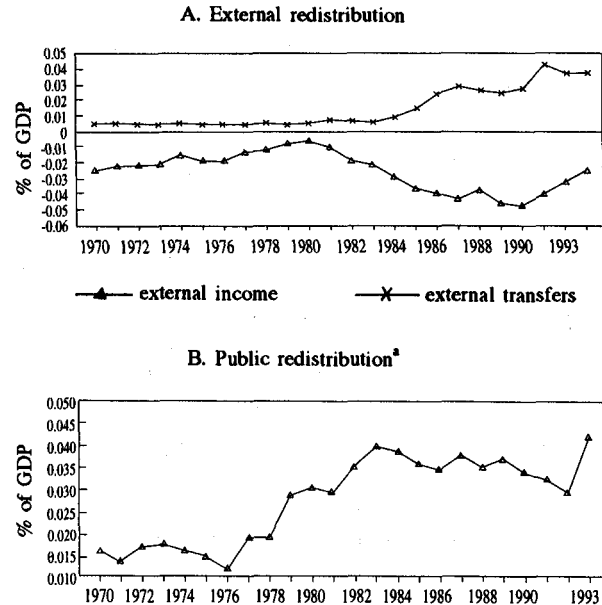
Per capita public social expenditure grew by 4.0% per year in real terms between 1970 and 1995.²⁶ Two components may be distinguished in the dynamics of this public expenditure (figure 8). The first of these is expenditure on pensions, which has grown rapidly and quite steadily, in per capita terms, at the rate of 7.4% per year, raising its share of GDP from 1.0% to 3.7% between 1970 and 1995. The second component consists of the rest of social expenditure, which has grown less rapidly (by 3.2% per year, in per capita terms) and has displayed marked cycles. These cycles, as may be seen from section B of the figure, have been due mainly to variations in spending on education, which has fluctuated enormously, without following any well-defined trend. Expenditure on health, in contrast, has oscillated less and increased its share of GDP considerably between 1970 and 1995.

Altogether, public social expenditure practically doubled as a proportion of GDP between 1970 and 1995, rising from 6.7% to 12.5%, and it was increasingly financed with resources which did not come from the households themselves (figure 7, section B).

²⁵ Transfers of property income to the exterior would appear to have little direct impact on household incomes, since they come mainly from the earnings retained by mining sector firms. The importance of direct transfers from the exterior to Colombian households has increased, however, as a result of remittances by Colombians living abroad and the ill-gotten gains from drug trafficking. Because of the scanty information available in this respect, however, it is not possible to analyse the effect of these latter transfers on income distribution.

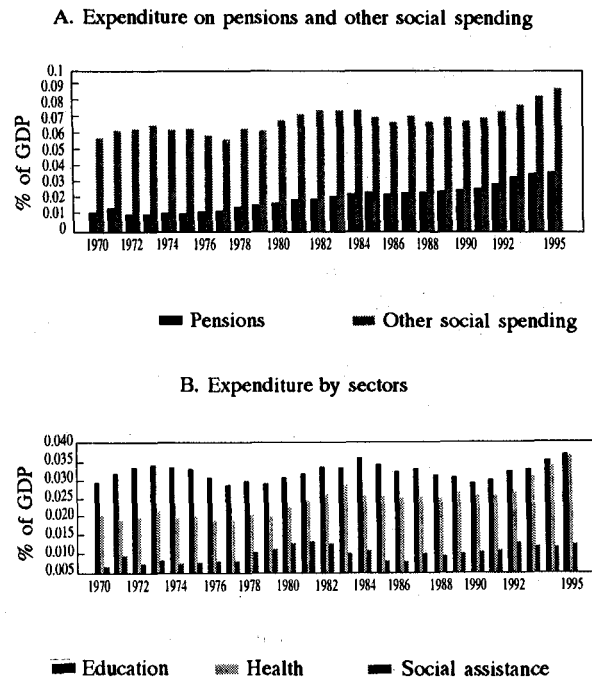
²⁶ In order to evaluate public social expenditure, I employed an information source which is fully consistent but little used by Colombian analysts: table 30 of the national accounts prepared by DANE - "Public administration expenditure, classified by purpose and economic objective". I obtained the data for 1994 and 1995 by extrapolation on the basis of the data given in Sánchez, 1996. Social expenditure is considered to include expenditure on health and sanitation, education and training, social assistance and social security (both pensions and health services); in the latter case, it also includes expenditure on health and pensions by public enterprises.

FIGURE 7
Colombia: Second round of redistribution



^a Public redistribution is the difference between social expenditure, on the one hand, and the taxes and charges paid by households, on the other.

FIGURE 8
Colombia: Evolution of public social expenditure, 1970-1995



2. The distributive effect of social expenditure

In addition to detailed information on the evolution of social expenditure between 1970 and 1995, Colombia also has two very high-quality studies on the distribution of the benefits of public expenditure among users. The pioneering study was carried out by Selowsky (1979), with information from the mid-1970s. Subsequently, Vélez (1996) used the same methodology, with information from the early 1990s. Comparison of the two studies allows us to estimate the levels and changes in income distribution effected through the efforts of the public sector.

The impact of social expenditure on income distribution depends on its amount, on the way it is financed, and on the way its benefits are distributed among users. These results may be expressed mathematically through the following equation,²⁷ which breaks down the Gini coefficient in terms of the coefficients of concentration (C) and progressiveness (P) of the various types of taxes and subsidies:

$$\Delta G = Gf - G_0 = \frac{\gamma (Cs - G_0) - \tau (Ct - G_0)}{1 + \gamma - \tau} = \frac{\gamma Ps - \tau P}{1 + \gamma - \tau}$$

where:

$$\gamma = \frac{S}{Y_0}, \quad \tau = \frac{T}{Y_0}$$

are the fractions of income represented by subsidies and taxes and $Ps = Cs - G_0$, $Pt = Ct - G_0$ are the coefficients of progressiveness of subsidies and taxes.

In other words, changes in the Gini coefficients can be broken down in terms of the fluctuations in the progressiveness of the various subsidies and taxes (measured by the coefficients of concentration or progressiveness) and the changes in the quantitative magnitude of such subsidies and taxes.

Between 1975 and 1995, public expenditure on education and health became more progressive in Colombia. The coefficients of concentration of expenditure on education and health²⁹ became more ne-

gative, indicating that a larger proportion of it reached the poorer strata (table 4). The most spectacular progress was in education: during this period Colombia advanced from having one of the most regressive indexes in Latin America to a position where its indicators surpassed those of the Southern Cone countries.³⁰ The progressiveness of expenditure on health was even greater, although it grew more slowly over the period 1970-1992.³¹

The impact of public spending in the areas of education and health on household income distribution depends on the relative size of social expenditure transfers and the evolution of their progressiveness. This has proved to be of enormous importance in the context of the parameters prevailing in Colombian society. In order to evaluate its evolution between 1970 and 1995, two simulations were made. In the first one, the effect of the social expenditure effort on the different sectors was evaluated, assuming that the coefficients of progressiveness of the services provided remained unchanged.³² In the second, the effect

TABLE 4

Colombia: Progressiveness of social expenditure (Coefficients of concentration)^a

	1974	1992
Education	0.006	-0.081
Primary	-0.256	-0.347
Secondary	0.001	-0.124
University	0.551	0.325
Health	-0.143	-0.159
Ministry of Health	-0.143	-0.66
Social Security	0.156	0.218
<i>Total</i>	<i>-0.013</i>	<i>-0.096</i>

Source: Selowsky (1979) and Vélez (1996).

^a The coefficient of concentration ranges from -1 to +1. If it is positive, this means it is regressive.

²⁷ Derived by Vélez and Medina (1995) on the basis of Kakwani (1977).

²⁸ G_0 = Gini coefficient before subsidies

Gf = Gini coefficient after subsidies

C = coefficient of concentration

P = coefficient of progressiveness

s = subsidies

t = taxes.

²⁹ There is no information which would allow a similar analysis to be made for the transfers implicit in the pension system.

³⁰ According to ECLAC (1995), the Gini coefficient for spending on education in Colombia in 1992 was -0.17, which compares favourably with the corresponding figures of -0.10 for Argentina, -0.12 for Chile and -0.18 for Uruguay.

³¹ Once the subsidized system provided for under Act 100 has been fully implemented and the system of contributions is working to the full, the health system could be much more progressive than primary education. Preliminary calculations indicate that in their first five years of operation the health reforms could lead to a reduction of at least two additional points in the Gini coefficient.

³² The 1992 coefficients given in Vélez (1996) were used.

of the progressiveness of spending on the different social services was evaluated, in line with the evolution observed over the period in question.³³

The exercise gave two important results (figure 9). Thanks to the income redistribution generated by social expenditure, the Gini coefficient was reduced by 3.7 points, which is equivalent to many decades of economic growth. The redistributive effect was 2.1 Gini points in 1970 and 3.7 points in 1995, so that it may be said that the evolution of social spending over those 25 years helped to reduce the Gini coefficient by 1.6 points. As may be seen from figure 9, half of this effect came from changes in the size and structure of social spending among the various services. The other half of the effect (the difference between the two lines in the graph) was obtained through better targeting of social expenditure in each sector, especially during the last two governments.

V

A global appraisal of income distribution trends

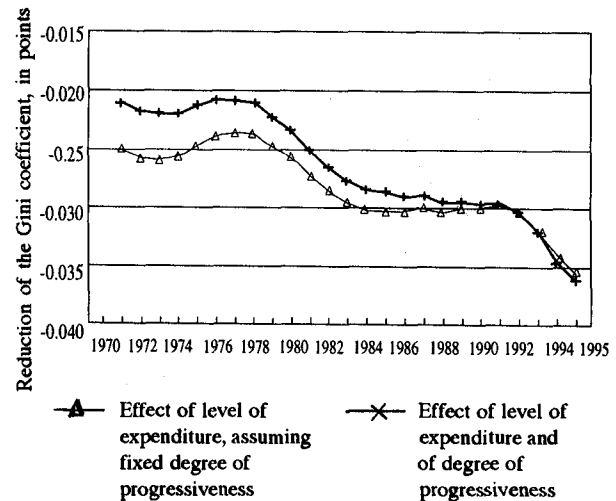
As we have seen in previous sections, the final income distribution among individuals may be affected if there are changes in the primary income distribution of the economy or if it is affected by public action, through transfers³⁴ and taxes. The importance of each of these distributive mechanisms has been clearly illustrated in the previous two sections. In this section, it is proposed to integrate the results obtained in them in order to gain a global view of income distribution trends between 1970 and 1995.

³³ Because of the lack of more detailed information, the coefficients were linearly extrapolated between 1974 and 1992.

³⁴ In this article, only the distributive effects of public social spending are taken into account. Vélez (1996) has made a complete analysis of the impact of the rest of public spending—especially spending on public service enterprises—and taxes.

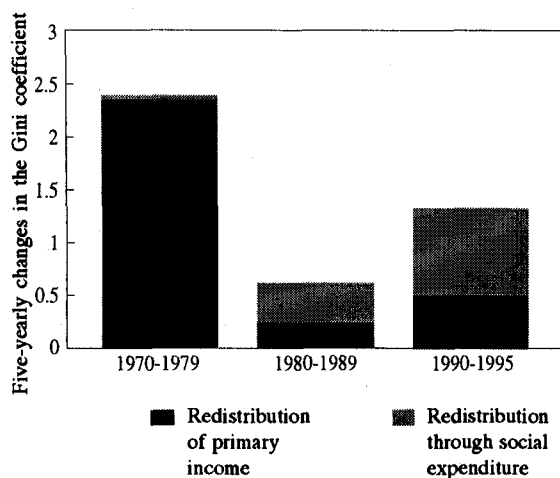
FIGURE 9

Colombia: Distributive effect of social expenditure



As we saw in section III, in those 25 years primary income distribution displayed two phases: rapid progress up to the early 1980s, followed by slower progress thereafter, with some speeding-up in the 1990s. Between 1971 and 1993, the Gini coefficient went down by 5.3 points: an average reduction of 0.21 points per year; the approximate rates of reduction were 0.47 points per year in the 1970s, 0.05 points in the 1980s, and 0.10 points in the 1990s. Secondary income redistribution through social expenditure, however, evolved quite differently over the period. In the 1970s, it grew more slowly than family income, and had no net distributive effect. It increased in the early 1980s, giving rise to some improvements in income distribution, but it ceased to do so from 1984 at least until 1991. In 1992-1995 it increased more rapidly than family income, and since at the same time there was improved targeting of expenditure towards the poorest sectors, there was a marked increase in the distributive effect.

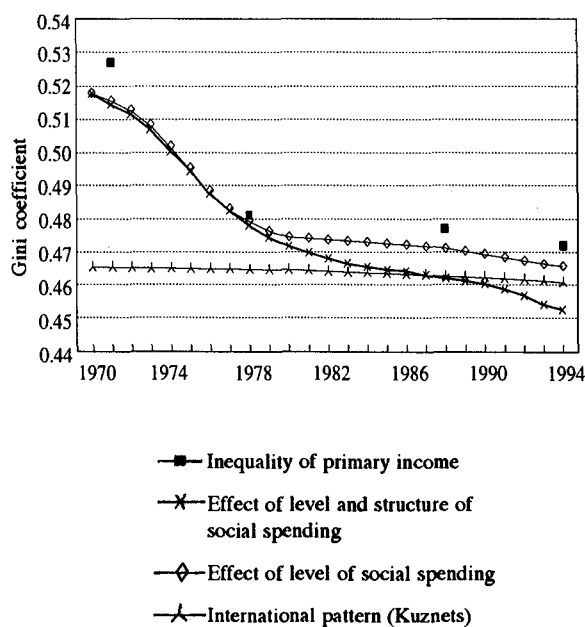
FIGURE 10

**Colombia: Sources of progress
in income distribution**


Altogether, these changes in primary and secondary distribution gave rise to two distinct phases in distribution trends between 1970 and 1995 (figure 10). Final income distribution improved most rapidly in the 1970s, especially because of the buoyancy of labour markets, but subsequently the rate of improvement dropped to less than half, because although there was an increase in fiscal redistribution, the sources of change in primary distribution became more sluggish.

How does the evolution of effective income distribution in Colombia compare with international patterns over the 25 years in question? An empirical analysis indicates that, thanks to the effects of the rapid progress in monetary income distribution in the 1970s and the very large distributive impact of social spending in the 1990s, the degree of inequality in effective income distribution in Colombia is no greater than could be expected in the light of international patterns (figure 11). The reduction of inequality of primary income in the 1970s was rapid,

FIGURE 11

**Colombia: Patterns of distribution
and social expenditure^a**


^a All the data are centered 5-year movable averages.

but it did not manage to eliminate the high level of inequality that Colombia had accumulated up to the 1960s. Subsequently, progress became slower, and at that rate convergence with the levels of inequality forecast by Kuznets for countries at a similar level of development could be expected to take several decades more. However, a strong impulse was given to social spending in the following years. If this spending had simply been expanded, without changing the structure of the public sector that existed in the 1970s, it would not have been possible to eliminate the excessive inequality, but the equity-oriented approach taken to public social spending since the 1980s, plus its rapid growth in the 1990s, speeded up the reduction of the inequalities which had marked Colombia for 50 years.

VI

Trends in poverty and human development indicators

Colombia's indices of inequality are still high in the eyes of any observer. As we saw in the previous sections, however, inequality went down steadily over the period 1970-1995, and thanks to the expansion and targeting of social expenditure it is no longer higher than international patterns. However, slow changes in levels of inequality could be accompanied by equally slow progress in overcoming poverty or improving indicators of well-being. Has this been so in Colombia? In this section, we will describe trends in poverty and in the basic indicators of health and education over the period in question.

1. Trends in poverty

Attempts to measure poverty over time have given rise to as many methodological discussions as those associated with efforts to measure income distribution. The generally preferred method seeks to determine the percentage of the population considered to be below a given poverty line on account of their insufficient monetary income. From the point of view of well-being, however, it is by no means clear that lack of monetary income is a faithful reflection of all the population's unmet needs (Sen, 1992), especially when a substantial component of consumption does not pass through the market (as in the case of production for home consumption or the consumption of goods provided by the public sector). There is also considerable discussion about the exact construction of the thresholds below which people are to be considered poor.³⁵ In recent years, a different criterion for measuring poverty has gained widespread currency in Latin America: that of unmet basic needs, such as employment, education, housing and basic services (UNDP, 1989). There has also been much discussion about which goods should be included in basic shopping baskets, and analysts are far from reaching agreement on this point. Where there is

growing consensus is that both these indicators only partially grasp the complex dimensions of the poverty problem³⁶ (figure 12).

The information available in Colombia allows the evolution of poverty to be quantified over relatively long periods of time. If we look at the dynamics of the population under the poverty line or with unmet basic needs between 1970 and 1995, we see that in the 1970s there was a more rapid reduction in the population considered to be poor according to the latter criterion, but in the 1980s this reduction slowed down (the number of people ceasing to be poor under this concept went down from 200,000 per year in the previous decade to only 180,000 per year: i.e., from 2.0% to 1.2% of the population). The poverty rate in terms of insufficient monetary income (the poverty line) practically did not change, so that the absolute number of persons with insufficient monetary income increased considerably. In the first half of the 1990s, the reduction of poverty speeded up in both absolute and relative terms, regardless of the criterion used. As measured by unmet basic needs, poverty went down between 1990 and 1994 by 900,000 persons per year (3.1% of the population): over three times the rate achieved in the 1980s.³⁷ As measured in terms of

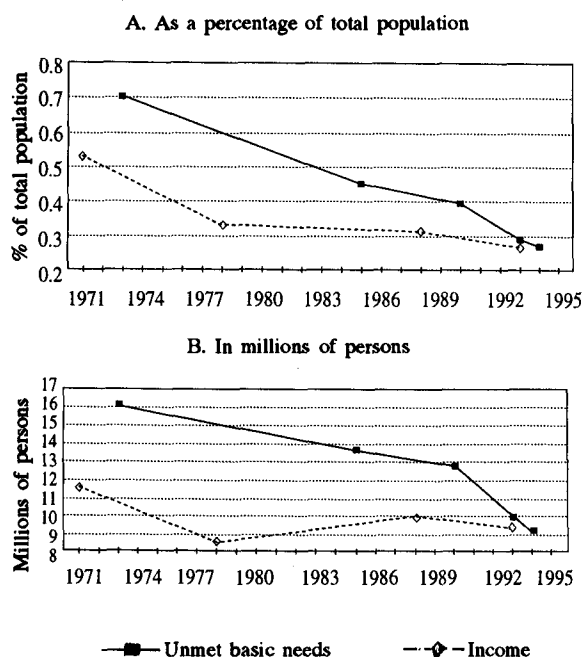
³⁶ There are some interesting analytical and empirical studies which offer alternative methods of measurement. Boltvnik (1992), basing his ideas on Kazzman (1989), has proposed an integrated means of measuring poverty (MIP) which combines in a single matrix the population groups classified as poor under either methodology. Castañeda (1992) has developed a system for identifying the poor population (SISBEN) based on a broader set of indicators of income and consumption of private and public goods.

³⁷ The goal of the "Peaceful Revolution" – the development plan of the Gaviria administration – was to reduce poverty, as measured by unmet basic needs, from 39.5% to 27.3% of the population between 1990 and 1994, by means of its strategies for increasing employment through faster economic growth and progress in the fields of housing, drinking water supply and education (Colombia, DNP, 1991, p. XX). The September 1994 National Household Survey found that 27.1% of the population was in a state of poverty due to unmet basic needs, so that – in contrast with the views of many critics – the main goal of the Peaceful Revolution was more than reached.

³⁵ For a good analysis of the empirical problems encountered in constructing these poverty lines, see ECLAC (1991).

FIGURE 12

Colombia: Poor population, defined in terms of income and of unmet basic needs



Source: Calculations by the author on the basis of DANE data.

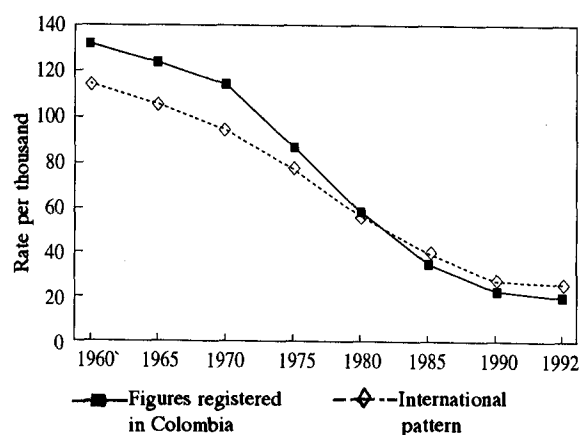
insufficient monetary income, poverty went down more slowly, but even so it was reduced four times faster than in the 1980s (0.8% compared with 0.2% per year). This made it possible to reverse the upward trend in the number of people with insufficient monetary income registered in the previous decade.³⁸

Thus, poverty in Colombia displayed a rapid downward trend between 1970 and 1995 which speeded up still further in the 1990s. The degree of income inequality in Colombia is no longer very different from international levels, while the level of poverty in terms of insufficient monetary income is no higher than might be expected from the experience of other countries of a similar level of development. This is in marked contrast with the situation in the rest of Latin America, where the proportion of poor persons increased steadily in the 1980s and the number of people who are poor in terms of insufficient monetary income rose from 120 million to 168 million between 1980 and 1995.³⁹

³⁸ The most recent data indicate that the slowdown in the economy as from the second half of 1995 has been accompanied by increases in the poverty rate and the number of poor people.

FIGURE 13

Colombia: Evolution of child mortality^a



^a Children under 5 years of age.

2. Trends in human development indicators

Recent human development analyses (UNDP, 1995) have sought to measure human well-being through a basic set of indicators reflecting the levels of health and education of the population: child mortality,⁴⁰ expectation of life at birth, and average schooling of the working-age population. In order to round out our examination of human well-being and its evolution in Colombia, we shall compare the evolution of each indicator with that which might be expected for the country in view of its level of development and international trends.⁴¹

Child mortality in Colombia has been reduced particularly quickly in recent decades (figure 13). In the 1960s, it was 15% above international levels, and

³⁹ For an analysis of these trends, see Londoño, 1996b.

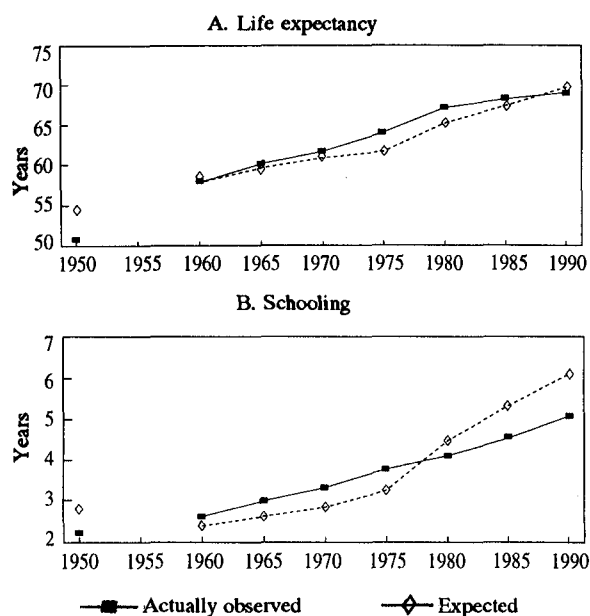
⁴⁰ This means mortality before the age of 5, as measured by direct surveys (Hill and Pande, 1996).

⁴¹ This comparative analysis is based on World Bank data on per capita income (at international purchasing power parity), life expectancy, child mortality, and labour force schooling for over 100 countries over the period 1950-1992. The international pattern was calculated through the following regression:

$$\ln(\text{HDI}) = a + b \ln(y) + c \ln^2(y) + d \text{Region}_i + e \text{Time}_t$$

where the natural logarithm of each human development indicator (HDI) was regressed as a function of per capita income and its square and of dummy variables for each of the nine regions of the world and each of the five-year periods since the war.

FIGURE 14
Colombia: Actual and expected evolution of life expectancy and years of schooling, 1950-1990

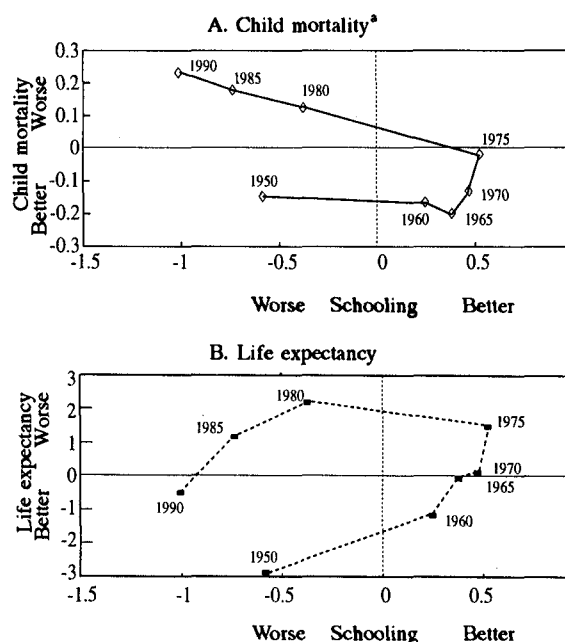


the difference tended to widen still further up to the early 1970s; thereafter, however, it went down more rapidly than in most countries of similar levels of development, and since the mid-1980s it has been almost 25% below the internationally expected levels for such countries. This result may be explained by the evolution of levels of inequality and public health expenditure in Colombia during the respective periods.

However, comparison of life expectancy and labour force schooling in Colombia with international patterns holds out some surprises.

According to various recent studies, life expectancy is quite elastic with respect to income and the spread of medical technology (World Bank, 1993). It tends to rise rapidly in countries with average incomes like those registered in Colombia in the 1950s and 1960s, but when it approaches 70 years it tends to rise more slowly. Life expectancy in Colombia (figure 14 A) was abnormally low in the 1950s, but in the 1960s and 1970s it rose more rapidly than in most countries at a similar level of development. As from 1985, however, it rose very slowly indeed, despite the faster decline in child mortality. The explanation for this is very simple: it would appear that the increase in the homicide rate among young men has

FIGURE 15
Colombia: Evolution of child mortality^a and life expectancy, 1950-1990^b



^a Children under 5 years of age.

^b Differences are measured in years.

meant that male life expectancy has not increased for the last ten years.⁴²

The level of schooling of the Colombian labour force was particularly low for the country's level of development in the 1950s (figure 14 B). Subsequently, the rapid expansion of primary education from the late 1950s until the mid-1970s allowed Colombia to reach higher-than-expected educational levels. Since the late 1970s, however, a decline in the rate of accumulation of human capital coincided with a foreseeable rise in educational expectations in line with the levels of development achieved, so that in the 1980s Colombia registered a growing lag behind international patterns in terms of education, and this has shown no signs of diminishing in the 1990s.⁴³

⁴² This situation has been analysed in Galvis (1989) and Colombia, Ministry of Health (1994).

⁴³ In 1990-1994, the Gaviria administration tried to speed up the expansion of enrolment in secondary education, and coverage was raised from 50% to 56% of the population of corresponding age (Calderón, 1996). This result, however, although positive, did not succeed in covering the growing demand for education resulting from the Colombian development pattern within the new international context.

The combined analysis of the above-mentioned three human development indicators allows us to describe the evolution of social rifts in Colombia between 1950 and 1990 (figure 15). In the 1950s, the country displayed fewer achievements in child health and education than similar nations. In the 1960s, the unsatisfactory situation as regards child health persisted, but the efforts in the field of education were very successful. From the 1980s onward, child health made very satisfactory progress, but education lagged markedly behind the levels expected in the rest of the world, while the achievements in reducing

child mortality were offset on occasions by the impact of violence (figure 15 B). In the 1960s and 1970s, the lower level of violence meant that life expectancy increased more rapidly than would be explained by the reduction in child mortality, but in the 1980s the opposite occurred, thus reversing the cycle. Consequently, after having surpassed international levels in terms of educational levels in the 1970s and life expectancy in the early 1980s, Colombia finds itself once again, in the mid-1990s, with levels of education and life expectancy below those that could be expected for its level of development.

VII

Social prospects in Colombia: some reflections

The foregoing sections gave a simple but coherent description of the evolution of the main social problems facing Colombia. As we have seen, contrary to the expectations of many critics Colombian society in the 1990s does not display growing inequality or greater poverty because of a combination of supposed unavoidable structural tendencies or the effect of neoliberal policies. The trade and labour reforms which have been made, against the background of an expansive but soundly financed social expenditure policy increasingly focussed on the poorest sectors of the population, have made possible faster progress in improving the distribution of effective income among the population. Although the degree of inequality and poverty in Colombia is still high and constitutes a lamentable social problem, it is no longer markedly higher than in other comparable countries.

Although the recent advances strike a positive note, however, it does not appear that they can necessarily be sustained in the future. The advances in income distribution in the 1980s were largely achieved through social expenditure which compensated the poorest sectors of the population for the loss of the benefits that the labour markets spontaneously denied them and through reductions in inequality of non-labour income, but the factors that helped most to further equity in the past and could continue to do so now are more and more feeble.

A source of particular concern is the sluggish development of human capital in Colombia. The country continues to assign unnecessarily low priority to education and vocational training, and it is lagging further and further behind international levels. The events of recent years indicate that shortcomings in the field of human capital could be much more important than most Colombian analysts and politicians thought.

The growth rate of investment in agriculture, especially in land improvement, is also very slow. Unless the foundations are laid for ensuring annual growth rates much higher than those of 1980-1995, economic progress may not meet the population's expectations.

Furthermore, increasing importance is being assumed by sources of income which could run counter to the recent trends towards greater equity. The soaring income from drug trafficking has begun to have substantial effects on the ownership of urban and rural assets (Pardo, 1996), and sooner or later this could give rise to greater inequality. Likewise, the income from criminal activities such as guerrilla actions and common-or-garden violent crime is an increasingly regressive form of redistribution, while the growing concentration of the surplus from mining activities could eventually be reflected in increasing inequality of household income.

At the same time, the possibility of prolonging the expansion of social spending, as a compensatory distributive factor, could soon run up against fiscal and institutional constraints. As we already saw in figure 8 above, the increase in fiscal expenditure in respect of pensions is the main source of fiscal pressure and could eventually have negative effects on the rest of social expenditure. The fact that in 1995 and 1996 basic education absorbed less than 5% of the marginal increase in social spend-

ing should be a warning sign. Moreover, the hesitations and difficulties of the government in moving ahead with the modernization of social management through greater decentralization, competition among producers, greater freedom of users, and the use of rational and predictable resource allocation mechanisms could reverse the achievements in terms of greater equity registered by social spending in recent years.

(Original: Spanish)

ANNEX 1

Colombian income distribution indicators, 1938-1993

A. Employment (thousands of man/years)

	1938	1951	1964	1971	1978	1988	1993
Agriculture							
Day labourers	888	847	995	1 002	1 385	1 750	1 746
Peasants	700	869	1 063	1 178	1 311	1 632	1 207
Rentiers	459	336	400	380	401	426	464
	1 588	1 716	2 058	2 180	2 696	3 382	2 953
Urban activities							
Wage-earners	750	1 348	2 073	2 574	3 499	4 760	6 666
Own-account workers	225	362	494	926	1 531	1 792	3 090
Capitalists	210	300	333	370	480	500	435
	975	1 710	2 567	3 500	5 030	6 552	9 756
Total	2 563	3 426	4 625	5 680	7 726	9 934	12 709

B. Real income (thousands of 1995 pesos)

	1938	1951	1964	1971	1978	1988	1993
Agriculture							
Day labourers	733	876	974	1 286	2 047	1 931	1 927
Peasants	916	1 250	1 559	1 837	2 375	2 119	1 633
Rentiers	1 018	4 521	6 209	5 898	5 465	6 115	5 631
Urban activities							
Wage-earners	1 414	1 438	2 280	2 948	3 299	3 342	3 534
Own-account workers	1 960	1 368	1 407	1 799	2 587	2 561	3 143
Capitalists	3 883	5 810	7 989	8 593	9 022	9 348	9 018

C. Shares of total household income

	1938	1951	1964	1971	1978	1988	1993
Agriculture	0.432	0.445	0.387	0.314	0.291	0.273	0.176
Day labourers	0.160	0.099	0.073	0.071	0.101	0.098	0.075
Peasants	0.157	0.144	0.126	0.119	0.111	0.100	0.044
Rentiers	0.115	0.202	0.188	0.124	0.078	0.075	0.058
Urban activities	0.568	0.555	0.613	0.686	0.709	0.727	0.824
Wage-earners	0.260	0.258	0.358	0.419	0.413	0.460	0.522
Own-account workers	0.108	0.066	0.053	0.092	0.142	0.133	0.215
Capitalists	0.200	0.232	0.202	0.175	0.155	0.135	0.087
Total	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Wages	0.420	0.356	0.432	0.490	0.514	0.557	0.596
Labour	0.685	0.566	0.610	0.701	0.767	0.790	0.855

D. Gini coefficients of inequality

	1938	1951	1964	1971	1978	1988	1993
Agriculture							
Day labourers	0.2630	0.3491	0.3410	0.3105	0.3058	0.2833	0.3048
Peasants	0.4545	0.4241	0.4545	0.4490	0.5205	0.5357	0.5325
Rentiers	0.5117	0.5139	0.5618	0.5612	0.5790	0.5991	0.5377
Urban activities							
Wage-earners	0.2922	0.3754	0.4300	0.4404	0.3819	0.3517	0.3845
Own-account workers	0.3415	0.4413	0.4801	0.501	0.5117	0.5452	0.5511
Capitalists	0.3893	0.5310	0.5790	0.5443	0.5435	0.5373	0.4768
Factorial aggregates							
Labour	0.3553	0.3932	0.4586	0.4390	0.4111	0.4020	0.4491
Non-labour	0.5446	0.5217	0.5679	0.5540	0.5643	0.5713	0.5139
Sectoral aggregates							
Agricultural	0.3910	0.5304	0.5701	0.5235	0.4826	0.4952	0.4846
Non-agricultural	0.3900	0.5140	0.5332	0.5186	0.4703	0.4544	0.4553
Total	0.4537	0.5251	0.5550	0.5268	0.4814	0.4765	0.4721

Bibliography

- Altimir, O. (1994): Income distribution and poverty through crisis and adjustment, *CEPAL Review*, No. 52, LC/G.1824-P, Santiago, Chile, Economic Commission for Latin America and the Caribbean (ECLAC).
- (1996): Economic development and social equity: A Latin American prospective, *Journal of Interamerican Studies and World Affairs*, vol. 38, No. 2-3, Miami, FL, University of Miami.
- Berry, A. (1995a): *The Social Challenge of the New Economic Era in Latin America*, Working Paper, University of Toronto, Center for International Studies.
- (1995b): *The macroeconomic context for policies, projects and programmes to promote social development and combat poverty in Latin America and the Caribbean*, United Nations Development Programme (UNDP), Alleviation and Social Development Project, Working Paper No. 1, New York, UNDP.
- Berry, A. and J. Tenjo (1995): *Estimación de las tasas de retorno a la educación en los años noventa*, Santafé de Bogotá, Universidad de los Andes, mimeo.
- Boltvinik, J. (1992): Conceptos y mediciones de la pobreza en América Latina: evaluación crítica, in L. Beccaria and others, *América Latina: el reto de la pobreza*, Santafé de Bogotá, UNDP.
- Calderón, A. (1996): *The Use of Vouchers for Secondary Schooling in Colombia: An Evaluation*, Washington, D. C., International Monetary Fund (IMF).
- Cardoso, E. and A. Helwege (1992): Below the line: Poverty in Latin America, *World Development*, vol. 20, No. 1, Oxford, U. K., Pergamon Press plc.
- Caro, B. and L.A. Rodríguez (1993): *Evolución del sector informal en Colombia 1984-1992*, Santafé de Bogotá, Departamento Nacional de Planeación (DNP).
- Carrisoza, M. and A. Urdinola (1990): *The political economy of poverty, equity and growth in Colombia*, Washington, D. C., World Bank, mimeo.
- Castañeda, T. (1992): *El sistema de identificación de beneficiarios para el desarrollo de las políticas sociales*, Santafé de Bogotá, Misión Social.
- Colombia, Departamento Nacional de Planeación (DNP) (1991): *La revolución pacífica. Plan de desarrollo económico y social: 1990-1994*, Santafé de Bogotá, Fondo Nacional de Proyectos de Desarrollo (FONADE).
- (1995a): *El salto social: bases para el Plan Nacional de Desarrollo 1994-98*, Santafé de Bogotá.
- (1995b): *Los costos económicos del conflicto armado en Colombia 1990-1994*, Santafé de Bogotá, Unidad de Justicia y Seguridad, 7 December, mimeo.
- Colombia, Ministry of Health (1994): *Estimación de la carga de la enfermedad en Colombia*, Santafé de Bogotá.
- DANE (Departamento Administrativo Nacional de Estadística) (1994a): Cuentas nacionales de Colombia, Santafé de Bogotá.
- (1994b): *Indicadores sociales en Colombia*, Santafé de Bogotá.
- Eastman, J. M. (1979): *La distribución del ingreso en Colombia, Santafé de Bogotá*, Cámara de Representantes.
- ECLAC (Economic Commission for Latin America and the Caribbean) (1991): *Magnitud de la pobreza en América Latina en los años ochenta*, "Estudios e In-

- formas de la CEPAL" series, No. 81, LC/G.1683-P, Santiago, Chile.
- (1995): *Social Panorama of Latin America, 1995*, LC/G.1886-P, Santiago, Chile. United Nations publication, Sales No. E.95.II.G.17.
- Gálviz, T. (1989): *Efectos de la violencia sobre las expectativas de vida en Colombia*, Santafé de Bogotá, Instituto Nacional de Salud.
- Hill, K. and A. Pande (1996): *Trends in Child Mortality, 1960-1992: Estimates for 96 Developing Countries*, Baltimore, MD.
- Kakwani, N. C. (1977): Measurement of tax progressivity: An international comparison, *The Economic Journal*, vol. 87, No. 345, Oxford, U. K., Royal Economic Society.
- Kazman, R. (1989): The heterogeneity of poverty. The case of Montevideo, *CEPAL Review*, No. 37, LC/G.1547-P, Santiago, Chile, ECLAC.
- Londoño, J.L. (1989): La distribución del ingreso en 1988: una estimación con perspectiva histórica, *Coyuntura social*, No. 1, Santafé de Bogotá, Fundación para la Educación Superior y el Desarrollo (FEDESARROLLO).
- (1995a): *Distribución del ingreso y desarrollo económico: Colombia en el siglo XX*, Santafé de Bogotá, Tercer Mundo Editores.
- (1995b): 25 años de cambios distributivos en Colombia, *Coyuntura económica*, vol. XXV, No. 4, Santafé de Bogotá, FEDESARROLLO.
- (1995c): *La distribución factorial y personal del ingreso en Colombia en los años noventa*, Washington, D. C., mimeo.
- (1995d): *Desigualdad, pobreza, democracia y política social*, Washington, D. C., World Bank, World Bank Technical Department for Latin America.
- (1996a): Los pobres podrían beneficiarse más de un gasto público más eficaz, *Coyuntura económica*, vol. XXVI, No. 1, Santafé de Bogotá, FEDESARROLLO.
- (1996b): *Pobreza, desigualdad y formación del capital humano en América Latina, 1950-2025*, Estudios del Banco Mundial sobre América Latina y el Caribe. Puntos de vista, Washington, D. C., World Bank.
- López, H. (1995): *Mercado laboral urbano en Colombia: logros y desafíos para el empleo y la productividad*, Medellín, Colombia, Corporación de Desarrollo para la Investigación y la Docencia Económica.
- Lora, E. and M. L. Henao (1995): Efectos económicos y sociales de la legislación laboral, *Coyuntura social*, No. 13, Santafé de Bogotá, FEDESARROLLO.
- Lora, E. and R. Steiner (1995): *Efectos distributivos de las políticas del gobierno de Gaviria: una estimación de equilibrio general*, Santafé de Bogotá, FEDESARROLLO, mimeo.
- Okun, A. (1975): *Efficiency and Equity: A Tradeoff*, Washington, D. C., The Brookings Institution.
- Palacios, M. (1995): *Entre la legitimidad y la violencia: Colombia 1875-1994*, Santafé de Bogotá, Editorial Norma.
- Pardo, R. (1996): *De primera mano. Sobre violencia y conflicto regional en Colombia*, Santafé de Bogotá, Editorial Norma.
- Reyes, A. (1995): *Serie de empleo a nivel nacional 1976-1994*, Santafé de Bogotá, Departamento Nacional de Planeación (DNP), June, mimeo.
- Robbins, D. (1995): *Trade, trade liberalization and inequality in Latin America and East Asia. Synthesis of seven country studies*, Cambridge, MA, Harvard University, mimeo.
- Samper, E. (ed.) (1976): *La distribución del ingreso en Colombia*, Santafé de Bogotá, Asociación Nacional de Instituciones Financieras (ANIF).
- Sánchez, M. (1996): *La evolución del gasto social en Colombia 1990-1995*, Santafé de Bogotá, DNP/UDS, April.
- Sarmiento, E. (1993): Distribución del ingreso se deteriora: beneficios del crecimiento recaen sobre los ricos, *El Espectador*, Santafé de Bogotá, 21 November.
- (1995): ¿Se hizo el milagro de la distribución del ingreso?, *Coyuntura social*, No. 12, Santafé de Bogotá, FEDESARROLLO.
- Sarmiento, L. (1993): Política social y gasto público en los noventa: ¿qué tan significativos son los cambios?, *Coyuntura social*, No. 8, Santafé de Bogotá, FEDESARROLLO.
- (1995): *La cuestión social en Colombia: una propuesta estratégica*, Santafé de Bogotá, Fundación Friedrich Ebert, November, mimeo.
- Selowsky, M. (1979): *Who Benefits from Public Government? A Case Study of Colombia*, Washington, D.C., World Bank.
- Sen, A. (1992): *Inequality Reexamined*, Cambridge, MA, Harvard University Press.
- Tenjo, J. (1993): Evolución de los retornos a la inversión en educación 1976-1989, *Revista de Planeación y Desarrollo*, vol. XXIV, special issue, Santafé de Bogotá, DNP.
- UNDP (United Nations Development Programme) (1989): *Medición de la pobreza: el enfoque de necesidades básicas insatisfechas*, New York.
- (1995): *Human Development Report 1995*, New York.
- United Nations (1995): *Fourth Survey of Crime Trends and Operation of Criminal Justice Systems 1970-1995*, New York.
- Urrutia, M. (1985): *Winners and Losers in Colombia's Economic Growth of the 1970's*, New York, Oxford University Press.
- Urrutia, M. and A. Berry (1975): *La distribución del ingreso en Colombia*, Medellín, Colombia, La Carreta.

- Urrutia, M. and M. T. Ramírez (1993): Distribución del ingreso y la pobreza en Colombia: evolución reciente, *Revista del Banco de la República*, vol. LXVI, No. 790, Santafé de Bogotá, Banco de la República (BRC).
- Urrutia, M., M. Misas, M. T. Ramírez and N. Rodríguez (1994): Distribución del ingreso en Colombia: una nueva estimación, *Revista del Banco de la República*, vol. LXVII, No. 795, Santafé de Bogotá, BRC.
- Vélez, C. E. (1996): *Gasto social y desigualdad: logros y extravíos*, Santafé de Bogotá, Tercer Mundo Editores.
- Vélez, C. E. and C. A. Medina (1995): *Desigualdad, impuestos y subsidios: un esquema de descomposición*, Santafé de Bogotá, DNP, mimeo.
- Williamson, J. (1985): *Did British Capitalism Breed Inequality?*, London, Allen & Unwin.
- World Bank (1991): *World Development Report 1991*, Washington, D. C.
- (1993): *World Development Report 1993*, Washington, D. C.
- (1994): *Poverty in Colombia*, Washington, D. C.

The United States

to the rescue: financial

assistance to Mexico

in 1982 and 1995

Nora Lustig

*Senior Fellow,
The Brookings Institution.
Associate Fellow,
The Inter-American
Dialogue.*

This article analyses the financial rescue measures taken by the United States in the Mexican payments crises of August 1982 and January 1995. On both occasions, Mexico was on the brink of suspending payments on its external debt, and both times this was avoided thanks to rescue measures. The implications of the two financial rescue programmes were very different, however. The measures taken in August 1982 were followed by a period of many years in which Mexico was practically excluded from private loan markets. In contrast, the 1995 rescue programme was quickly followed by renewed access by Mexico to private capital markets. What is the reason for these different reactions by the markets? One important reason is that the amount of resources involved in 1995 was very large, and these were not short-term funds, as they had been in 1982. Although the 1982 financial assistance allowed Mexico to avoid suspending its payments, it was not enough to overcome the country's over-indebtedness. In the following six years, Mexico had to limp from one debt restructuring exercise to another, which created great uncertainty and affected the economy's capacity to achieve a sustained recovery. The success of the 1995 rescue programme was also due to other factors: on the one hand, the external conditions were much less adverse, and on the other, the Mexican economy was in a much better position –after several years of restructuring measures– to respond with an export surge to the changes in the exchange rate that took place in the context of the payments crisis.

I

Introduction

In January 1995, as in August 1982, Mexico was on the verge of defaulting on its foreign obligations. On both occasions the U.S. government arranged a financial rescue package to avoid this. However, the support provided by the United States administration in 1995 was quite different from the previous one. This paper will describe and compare both rescue packages and seek to explain the reasons for some of the main differences in the U.S. response. Although on both occasions there were other key participants—especially the International Monetary Fund (IMF)—this paper will focus on the role played by the United States.

The financial rescue package in 1995 was much larger and its objectives in some respects more ambitious than in 1982. Measured in constant U.S. dollars, the financial assistance arranged in February 1995 (up to US\$ 48.8 billion) was roughly seven times larger than the US\$ 4.55 billion (US\$ 7.2 billion in constant 1995 dollars) rescue package arranged in August 1982,¹ and the contribution of the United States (up to US\$ 20 billion) was more than three times its contribution of US\$ 3.625 billion (US\$ 5.7 billion in constant 1995 dollars) in 1982, although the actual U.S. contribution of US\$ 13.5 billion in 1995 was equivalent to more than twice the 1982 contribution in real terms. Furthermore, whereas in

1982 the United States loans were to be repaid in one year, the bulk of the loans extended in 1995—US\$ 10.5 billion of the total of US\$ 13.5 billion—are to be repaid between June 1997 and June 2000. The medium-term quality of the U.S. loans is, next to their magnitude, the most important difference between the two rescue programmes.² This remains true even though, in actual fact, Mexico took only two years to repay the whole of the United States loans.

There are two items that highlight the overwhelming success of the 1995 rescue measures. Firstly, if success is measured by the time it took Mexico to regain access to international capital markets, the assistance provided in 1995 was incomparably more successful than in 1982. The rescue package negotiated in August 1982 with the U.S. Treasury, the U.S. Federal Reserve and other Central Banks of industrialized nations was designed to provide interim financing. Its ultimate aim was to avoid a banking crisis of international proportions and to give the Mexican Government additional time to negotiate a workout with its creditors and an accord with the IMF. It was not, however, meant to solve the more fundamental problem of Mexico's over-indebtedness: a problem that would haunt that country as well as many others for the rest of the decade. Between 1982 and 1989, Mexico was practically cut off from private voluntary lending of any sort.

In contrast, the U.S./IMF-led rescue package of February 1995 was designed to solve Mexico's liquidity crisis in full, and it was large enough to allow the conversion of a large portion of the short-term Mexican Government debt with the private sector abroad into medium-term debt, primarily with the U.S. Department of the Treasury and the IMF. The success of these measures may be seen from Mexico's rapid recovery of access to private capital markets. As early as April 1995, one of Mexico's

□ This paper greatly benefited from conversations with Jesús Silva Herzog and officials from both governments and multilateral financial institutions. The author is very grateful for their invaluable comments and insights. She also wishes to give very special thanks to Paul Volcker for his comments on an earlier draft. She is also indebted to Michael Armacost, Albert Fishlow, Lincoln Gordon, Carol Graham, Peter Hakim, Steve Kamin, Daniel Marx, Darryl McLeod and Sidney Weintraub for their very helpful comments, corrections and suggestions on earlier drafts. Thanks are also due to Shihua Lu, Janet Herrlinger, Christianne Hall and Rachel Cohen for their valuable assistance. The views expressed in this paper, and any errors it may contain, are of course entirely the responsibility of the author.

¹ This calculation does not include the Extended Fund Facility (EFF) for US\$ 3.7 billion negotiated between the Government of Mexico and the IMF at the end of 1982, because this was not part of the rescue package arranged in August. If this amount is included, then the 1995 package was roughly four times larger than in 1982.

² Previous U.S. financial assistance for Mexico was always in the form of short-term swaps, usually payable within six months, with the exception of the August 1982 loans (General Accounting Office, 1996, p. 150).

State-owned development banks was able to return to the international capital markets, and between mid-1995 and February 1996 the Mexican Government was able to raise more than US\$ 8 billion, with the maturities and terms of the loans improving.³ Furthermore, this access to the capital markets allowed Mexico to pay off all its United States loans long before their maturities.

By the end of January 1997, this debt was repaid in full, although according to the original repayment schedule the medium-term swaps totalling US\$ 10.5 billion were repayable between June 1997 and June 2000.

Secondly, the available data indicate that the rescue package seems to have also succeeded in restoring financial stability in Mexico, as evidenced by the reduced volatility of the peso since November 1995, the drop in domestic interest rates, and the smaller risk premium on Mexican securities denominated in dollars. However, the package was unable to prevent a major recession in Mexico, the largest since the 1930s: in 1995 output fell by close to 7% and real wages by more than 20%. Nevertheless, since 1996 there are signs that economic recovery is under way: the economic growth rate in that year was over 5%. Despite all the merits of the rescue measures, however, a successful recovery should not be solely attributed to the rescue package, for in the mid-1990s the Mexican economy was not characterized by the large fiscal disequilibrium and rigidities in production that prevailed in 1982.⁴ In addition, the international economic environment was substantially more adverse in the 1980s: U.S. interest rates were at record high levels and oil prices were falling sharply.

The question of whether the industrialized world and the multilateral organizations could have put together a financial assistance programme large enough for Mexico in 1982 and whether this would have avoided the 1980s debt crisis will not be addressed here. However, in retrospect it seems fairly clear that the chosen strategy resulted in high costs for the debtor countries. In the case of Mexico, at the outset in 1982 the U.S. Treasury responded with remarkable lack of vision and –partly because of pressure from the Department of Energy– ended up extracting concessional terms from the Mexican

Government as a *quid pro quo* for receiving an advance payment for future oil sales: an arrangement that left the relationship between the two countries strained. Not everybody in the U.S. Government acted so undiplomatically, though. The U.S. Federal Reserve –well aware of the systemic dangers of a Mexican default– not only arranged close to half of the bridge financing in August 1982 (with the collaboration of other Central Banks in the industrialized world), but also set in motion and guided the process for the successive debt negotiations between Mexico and the private commercial banks.

In contrast, the lead role in arranging the February 1995 rescue package was played by the U.S. Treasury, in close collaboration with the U.S. Federal Reserve, and –perhaps because of the lessons learnt from 1982– other U.S. agencies were not involved. The terms of the U.S. financial support were strictly market-driven, and there were no attempts to extract pecuniary concessions from Mexico. This does not mean, however, that the negotiations with the U.S. Treasury went without controversy. In particular, the U.S. Treasury pressed for a macroeconomic policy course that, at least initially, was not the same as the one favoured by the Mexican Government. The U.S. Treasury firmly believed that high short-run domestic interest rates in Mexico were a prerequisite for stabilizing the peso, while the Mexican financial authorities –fearing that high domestic interest rates would be devastating for an already vulnerable banking system– preferred a policy mix that would result in lower domestic interest rates, even at the expense of a weaker (i.e., more devalued) peso.

Although in 1982 the U.S. authorities recognized the need for fundamental changes in Mexico's economic policymaking, they did not get directly involved. The U.S. rescue package was extended on the condition that the Mexican Government would seek an agreement with the IMF. At that time, the Mexican government was running a huge fiscal deficit in an economy protected by high trade barriers, and even after the August rescue package was arranged the government introduced measures which ran counter to the IMF's dictum: for example, in September 1982 it nationalized the banking system and implemented full-fledged exchange controls. To tell the truth, the U.S. Government and the IMF were not really alarmed by these decisions because –although the outgoing President strongly opposed an agreement with the IMF, as well as its policy recommendations–

³ U.S. Department of the Treasury (1996), p. 15 and General Accounting Office (GAO) (1996), pp. 140-141.

⁴ See, for example, Lustig (1992).

it was known that the new administration due to take office in Mexico on 1 December 1982 would pursue an entirely different course. In particular, it would introduce standard IMF-style stabilization measures and phase-in a programme of structural reforms. Nevertheless, an accord with the IMF could not be completed until two or three months later. In contrast, when the 1995 rescue package was being negotiated there was no disagreement between the Mexican Government and the IMF on economic policy in broad terms. The Mexican authorities were firm believers—as they had been since 1983—in market-oriented reforms and were well aware of the need to introduce further austerity measures to stabilize the markets. This basic consensus made it possible to reach a stand-by accord with the IMF very rapidly, for an extraordinarily large amount of money.

Furthermore, the creditors in 1982 were also quite different. In 1982, they were private commercial banks, which held 70% of Mexico's external debt, and "...claims on Mexico by the top nine U.S. commercial banks amounted to 50 percent of their capital", so that a Mexican default would have been an all too real threat to their survival. In 1995, however, the holders of a large portion of the short-term dollar-denominated government debt instruments (the Tesobonos) were primarily foreign portfolio investors.⁵ This difference might explain why it was possible to negotiate voluntary arrangements directly with the creditors in 1982 (and subsequently), but not in 1995. In the case of commercial banks, the U.S. Federal Reserve Bank could act as an arbitrator and

exercise its leverage to convince the banks to participate in the debt rescheduling process. In the case of investment banks or institutional investors, there is no analogous entity. The difference in the origin of the capital flows may also explain why the Central Banks—the commercial banks' lenders of last resort—of other industrialized countries were not as forthcoming in 1995 as they had been in 1982, as reflected in the relatively restricted nature of the US\$ 10 billion contribution made by the Bank for International Settlements (BIS) to the 1995 rescue package. This is why firm leadership was needed from the Treasury and the IMF in order to set up the rescue programme.

Finally, in 1995 the institutional basis for a currency support mechanism was already in place, since in April 1994 the three NAFTA countries signed the North American Framework Agreement (the NAFA) to provide mutual support for their currencies. Although the existence of such a mechanism translated into closer monitoring of Mexico's economy on the part of the United States Treasury and Federal Reserve during 1994 and the potential availability of close to US\$ 7 billion to support the peso, both turned out to be insufficient. The monitoring neither helped to prevent the crisis nor anticipated its magnitude, while the swap funds neither deterred attacks on the peso, nor were they large enough to solve Mexico's subsequent liquidity crisis. Finding more effective mechanisms to reduce the risk of similar crises in Mexico in the future remains a pending task for the governments of Mexico and the United States.

II

The United States to the rescue: 1982

On 13 August 1982, Jesús Silva Herzog, the Mexican Secretary of Finance, went to Washington to confirm in person that the country had run out of reserves and, if nothing was arranged during the weekend, on Monday morning the government would have to announce publicly that Mexico could not meet its payments. Confronted with the fact that Mexico was on

the verge of defaulting on its foreign obligations, the U.S. Treasury arranged a rescue package of US\$ 2 billion over the weekend.⁶ Under the leadership of Paul Volcker, the U.S. Federal Reserve, in turn, arranged a loan of US\$ 1.85 billion, ready a few days later, with contributions from the Federal Reserve Bank, the Exchange Stabilization Fund of the U.S.

⁵ At the end of 1994, the claims on Mexico by the same group of banks which had been in such a vulnerable situation in 1982 amounted to only 15% of their capital (Truman, 1996, p. 12).

⁶ The emergency loan was organized mainly by the Under-Secretary for the Treasury, Tim McNamar.

Treasury⁷ and the Central Banks of other industrialized nations through the Bank for International Settlements.⁸ Both loans were meant to fill the financial gap while an accord with the IMF could be negotiated. An agreement with the IMF was reached at the end of 1982 in the form of an Extended Fund Facility for US\$ 3.7 billion.

In total, the August 1982 U.S.-led rescue package amounted to US\$ 4.55 billion (table 1), of which the United States contributed US\$ 3.625 billion. The U.S. contribution included: i) a US\$ 2 billion loan arranged by the U.S. Treasury (US\$ 1 billion extended through the Commodity Credit Corporation to pay for future purchases of U.S. maize and US\$ 1 billion as advance payment for oil sales by Mexico to the U.S. Strategic Petroleum Reserve); ii) the United States contribution to the rescue package arranged by the U.S. Fed, in the form of a US\$ 600 million one-year loan from the Treasury's Exchange Stabilization Fund and a US\$ 325 million one-year loan extended by the Federal Reserve; and iii) the US\$ 700 million in swaps extended by the Federal Reserve on 4 August 1982, a few days before the famous weekend of 13. Other industrialized nations contributed a total of US\$ 925 million through the Bank for International Settlements. The loans were for a period of one year, and they were paid in full by 23 August 1983.

The US\$ 4.55 billion, however, was only the contribution from official sources. With help from the U.S. Federal Reserve and the IMF, at a meeting that took place on 20 August 1982, the Mexican Government persuaded (some bankers would say forced) the commercial banks to agree to a 90-day suspension of payments of principal. This meeting was the first of several rounds of negotiations with bankers to reschedule debt payments, until the Brady debt-reduction agreement was signed in February 1990.⁹

⁷ The Exchange Stabilization Fund (ESF) was established by section 20 of the Gold Reserve Act of 30 January 1934, with the purpose of promoting a stable system of exchange rates. U.S. monetary authorities have a history of using these resources to assist Mexico, with the understanding that it is ultimately in the U.S. interest to promote an orderly exchange rate system (General Accounting Office, 1996, p. 148).

⁸ The international package was arranged during the same weekend but it took a few days to sort out some difficult issues such as an assured source of payments for the banks.

⁹ For more details on these rounds see Gurría (1988) and Devlin (1989).

TABLE 1
Mexico: Financial rescue package, 1982^a
(Millions of dollars)

Total August 1982 rescue package	4 550
Total from United States	3 625
Federal Reserve	1 025 ^b
Department of the Treasury	600 ^c
Department of Agriculture	1 000 ^d
Department of Energy	1 000 ^e
BIS (Bank for International Settlements)	925
Memorandum Items:	
IMF	3 700 ^f
Commercial banks	Agreed to a 90-day standstill on principal due ^g

Source: U.S. Federal Reserve and Department of the Treasury.

^a Figures are amounts available (not necessarily drawn) in current dollars. The U.S. and BIS figures correspond to the rescue package arranged in August 1982. The IMF agreement was signed later that year.

^b Short-term swaps, practically all coming due within a year. This figure includes the US\$ 700 million in swaps extended on 4 August 1982.

^c From the Exchange Stabilization Fund. Short-term swap due within a year.

^d From the Commodity Credit Corporation; loan extended to cover future purchases of U.S. corn (maize).

^e To cover future purchases of Mexican oil for the Strategic Petroleum Reserve.

^f Extended Fund Facility; the "letter of intent" was signed in November 1982.

^g This was agreed at a meeting on 20 August 1982.

Despite the fact that, all in all, the United States made a substantial contribution to the financial rescue of Mexico in 1982, and avoided a Mexican default, the relationship between the two countries at the level of the Executive branches became very strained. For one thing, the Mexican Government felt, not without reason, that the U.S. Treasury had been slow to respond in spite of the repeated warnings sent by the Mexican financial authorities. For several months prior to August 1982 the Department of the Treasury appears to have viewed the increasing difficulties encountered by Mexico in borrowing from commercial banks primarily as Mexico's problem, without focusing on the implications a Mexican default would have on the international—and particularly the U.S.—banking system. For the Department of the Treasury, the Mexican Government had misbehaved, running large fiscal deficits financed by external borrowing, and it needed, first of all, to introduce sound economic policies and seek an agreement with the IMF. While it is true that Mexico needed to reduce

its fiscal deficit, this would not have been enough to solve the upcoming foreign exchange shortage. Furthermore, tensions heightened during the negotiations on the short-term US\$ 2 billion loan organized by the Treasury, when the United States tried to force a price deal on Mexican oil sales as part of the conditions of the rescue. The negotiation of the so-called oil deal left Mexican government officials resentful, and –as we shall see– for good reason.

1. Mexico's dilemma: to default or not to default

In the early part of 1982, the Mexican Government –the Finance Ministry in particular– initially contemplated two options, especially after the Bank of America had great difficulty in lining up subscribers for a US\$ 2.5 billion jumbo loan in June. The first was to default without warning and even –some recommended– without any public statement. The second was to work out a “technical” solution with the private banks, the IMF and creditor country governments.¹⁰

The first option was dismissed because it was an instrument of last resort and would leave Mexico in great isolation. In particular, according to Secretary of Finance Silva Herzog's own account his greatest concern was that since Mexico imported between 40% and 50% of its maize consumption a unilateral moratorium could result in a shortage of tortillas –Mexico's staple food– and risk social and political unrest. The second option would take time. An agreement with the IMF would take a few months to work out, and funds would not be available until an adjustment programme could be put together and approved. Moreover, it was not clear if López Portillo, the outgoing President who was to leave office on 30 November 1982, would accept an IMF programme. Apparently, he was strongly opposed to this, almost as a matter of personal pride, for he had begun his term with an IMF programme in place and was not willing to leave the Presidency with his policies bounded by IMF conditionality. Also, as mentioned above, between February and June the U.S. Treasury

did not seem to be fully aware of the seriousness of the situation in Mexico and was not ready to act (Kraft, 1984, p. 11). This response was probably the result of the Treasury's lack of understanding of the full implications of a Mexican default for the United States banking system, together with the desire to put pressure on the Mexican Government to change its economic policies.

In this respect, it might be worth citing Volcker's impressions regarding the United States Government's attitude at that time (Volcker and Gyohten, 1992, pp. 198-199):

“It wasn't hard to see the [Mexican] crisis coming ... The question through the first half of 1982 was not whether Mexico was approaching a crisis but what to do about it. A populist government had refused time and again to trim its economic sails... López Portillo, under attack for personal as well as policy excesses, was in the last year of his six-year term and plainly did not want to confess error. The market sounded a clear warning during February of 1982 in the form of a run on the peso. That provoked a devaluation and a limited austerity programme. Neither action was convincing. ...Silva Herzog and Mancera began visiting Washington about once a month to inform the IMF, the World Bank, the Treasury, and me [Volcker] of the deteriorating situation... Our advice, predictably, was to apply to the Fund for a loan, introduce a really effective programme to reform the domestic economy, and on that basis reduce the hemorrhage of Mexican capital... Their answer was...simple... Their President would not accept it. ...Any possibility would have to await the new President...”

Volcker goes on:

“So, it was a matter of buying time. In an effort to hold things together psychologically, we agreed with considerable unease to extend overnight swap credits once or twice to the Bank of Mexico... Our unease did not arise from any fear of financial loss, but because the ‘window dressing’ disguised the full extent of the pressures on Mexico from the bank lenders and from the Mexicans themselves. [The action was justified] on the basis that Silva Herzog¹¹ was

¹⁰ This is reported in the chronicle written by Kraft (1984) and was confirmed by Ambassador Jesús Silva-Herzog, Secretary of Finance of Mexico at the time.

¹¹ It was already known that Silva-Herzog was incoming President Miguel de la Madrid's choice for Secretary of Finance.

willing to give us his personal assurance that Mexico would seek an IMF programme as soon as the new President had the freedom of action to bring it about."¹²

With no other apparent solution in sight, the Mexican Finance Ministry opted for a third course of action: to visit the Department of the Treasury when money had run out and confront the Washington policy community with a *fait accompli*. Only then would it become clear that if Mexico received no help from the international community of creditor countries, then they—and the United States in particular—would face the threat of a banking crisis of international proportions.

2. Mexico's reserves run out

After the Presidential elections in Mexico, when bank lending finally dried up, the Federal Reserve agreed to activate the swap arrangement that had long existed between the two countries.¹³ On 4 August, a real loan of US\$ 700 million, as opposed to the overnight swaps, was given to Mexico with the aim of tiding the country over the summer while the officials began quiet discussions with the Fund. But since confidence was gone, to everybody's surprise the money that was supposed to last a month or two vanished in almost no time (Volcker and Gyohten, 1992, p. 200).

During the week beginning 9 August, Mexican officials informed their U.S. counterparts that Mexi-

co had run out of reserves, including the US\$ 700 million borrowed four days earlier. The alarm bells began ringing, interrupting more than one peaceful summer vacation, for a Mexican default would in effect threaten the industrialized nations' banking system. To quote Paul Volcker again, the Latin American debt crisis "was just as much of a problem for the First World, which found its banking system suddenly threatened with collapse (*Ibid.*, p. 189). The foreign loans of all banks to developing countries had grown from US\$ 44 billion in 1974 to more than US\$ 360 billion in 1982, of which about US\$ 60 billion was to Mexico. The U.S. banks' share in these loans was about one-third, and for the nine largest U.S. banks Mexican debt was equivalent to 50% of their capital. According to one estimate, if Mexico failed to pay interest for one year, the earnings of the money centre banks could fall by one-third.¹⁴ Mexico and Brazil between them owed enough to strain Citibank and Bank of America, the two largest U.S. banks.¹⁵

3. The weekend rescue package

Thus, when Silva Herzog visited Washington on Friday, 13 August the situation became clear. First, short-term emergency credit had to be made available to Mexico, and this credit had to be arranged literally over the weekend in order to avoid a panic reaction on the following Monday. According to Gurría, Director of External Financing in the Mexican Ministry of Finance, international reserves were less than US\$ 100 million and the week's amortization payments were equal to US\$ 700 million (Leeds and Thompson, 1986, p. 27). Mexico's foreign reserves had to be replenished in order to reassure the international financial community that the country was not only willing but able to meet its immediate obligations. The country's immediate cash-flow

¹² Another account might also give a telling idea of U.S. officials' thinking at the time: "There also was a feeling that until there was an actual crisis, high level [U.S.] officials simply would not focus on the problem. Although some complained that Secretary Regan had turned a deaf ear to the Mexican situation for months prior to the crisis, others felt that his lack of advance action was typical and logical. ...Previous experience with crisis management also convinced some participants that a sense of urgency had to exist before the key actors would be prepared to take the extraordinary measures that were required" (Leeds and Thompson, 1986, p. 25).

¹³ The emergency 24 hour currency swaps with the Federal Reserve took place on 30 April and subsequently in June and July, but the first real loan as opposed to overnight swaps took place on 4 August 1982. Mexico was the only Third World country to have established a swap line with the U.S. Federal Reserve, dating back to 1967, when the first swap between the Federal Reserve and the Bank of Mexico took place (Leeds and Thompson, 1986, p. 16, and General Accounting Office (GAO), 1996, p. 151).

¹⁴ Leeds and Thompson (1986, p. 13) cite Lissakers on this. See also Lissakers (1991).

¹⁵ It is interesting to note that an amount similar to that owed by the Mexican Government in total (to all banks, not just those in the U.S.) was kept in the United States by Mexican nationals. According to one estimate, Mexicans had deposited US\$ 14 billion in the United States and owned about US\$ 30 billion of U.S. real estate.

needs were estimated at US\$ 3.5 billion.¹⁶ It was understood that the U.S. Treasury would organize a short-term loan of US\$ 2 billion or more with funds from within the U.S. Government, while the Federal Reserve would arrange a rescue loan of US\$ 1.5 billion assembled with contributions from the world's central banks. The US\$ 2 billion had to be arranged over the weekend, so officials at the U.S. Department of the Treasury—in particular, Deputy Secretary Tim McNamar—began to seek potential sources immediately.

As the negotiations unfolded and “different options were identified and scrutinized, an ad hoc task force of U.S. government officials was formed, that eventually would include representatives from various corners of the Federal bureaucracy—the Department of Agriculture, the National Security Council, the Office of Management and Budget, the State Department and the Department of Energy.”¹⁷ The idea behind involving many agencies was to increase the number of options and attend to the concerns of the various quarters in the U.S. government. However, it had the disadvantage that since some of the concerns ran counter to each other, the U.S. Treasury ended up having to negotiate both with the Mexican Government and with the other agencies within the U.S. Government.

a) The easy part: the corn agreement

After going through the various alternatives, two were identified in the end.¹⁸ One came from the Department of Agriculture, in the form of a US\$ 1 billion Commodity Credit Corporation concessional loan whereby Mexico agreed to purchase U.S. corn (maize), which was in surplus as a result of the agricultural policy pursued by the United States, in exchange for the loan. This facility had already been used in 1976, proved easy to obtain (it only took about half a day) and was largely uncontroversial.

¹⁶ The cash-flow needs were estimated assuming that Mexico would not negotiate an agreement with the IMF until the incoming President took office in December 1982.

¹⁷ Leeds and Thompson (1986), p. 27. According to a U.S. government official, there was really no “task force”: Tim McNamar from the U.S. Treasury was in charge of putting together the deal.

¹⁸ For a more detailed account, see Leeds and Thompson (1986).

b) The difficult part: the oil deal

Another US\$ 1 billion came in the form of an advance payment for petroleum sales to the U.S. Strategic Petroleum Reserve. This part of the package, however, turned out to be very controversial, to the point that negotiations almost broke down. The Exchange Stabilization Fund (ESF), the main source of the U.S. rescue package in 1995, was also considered.¹⁹ On the advice of his General Counsel, McNamar concluded that it was feasible to use ESF funds, “but only if they would be secured by ‘an assured source of repayment’ (Leeds and Thompson, 1986, p. 29). However, rather than using the ESF to extend the loan and “collateralize” it with oil proceeds, the Department of the Treasury opted for another arrangement, namely, that ESF funds would be used as a “bridge loan” that would have to be repaid within a matter of days and the money would have to come from an entity within the U.S. Government which would be in a position to purchase the oil used as collateral. Since total loans to Mexico were likely to exceed the resources obtained in an IMF agreement, and the “oil deal” could not be completed immediately, it was estimated that this ESF-sourced loan could not be used for a longer period, particularly because it was already envisaged that ESF funds would be applied to the other part of the package whose terms were being arranged by the U.S. Federal Reserve Bank.

Once the decision was made to use the ESF money only for a few days, the next step was to find an agency within the U.S. Government which could buy US\$ 1 billion worth of oil, and agree on a price that was mutually acceptable both for Mexico and the United States. The first agency approached was the Department of Defense, but there were legal impediments preventing this agency from buying crude oil. The second obvious agency was the Department of Energy, which could be interested in buying oil for the Strategic Petroleum Reserve, created in the wake of the 1973-1974 oil crisis, whose task was to create a buffer of oil stocks to guard against future oil shortages. Although this turned out to be the only feasible option, PEMEX and the Strategic Petroleum Reserve had unfortunately had a previous arrangement which

¹⁹ See footnote 7. The first standing swap line between Mexico and the U.S. was established in 1940 (General Accounting Office (GAO) (1996), p. 150).

left both sides discontented.²⁰ Consequently, the Department of Energy entered the negotiations on the so-called "oil deal" with the concern that they "not fall victim to the same errors committed a year earlier" (Leeds and Thompson, 1986, p. 33).

Negotiating the "oil deal" involved several sensitive factors such as the price of the oil, delivery and schedules, and the mix of grades. McNamar's "first substantive proposal ...was for a fixed-term renewable contract to purchase Isthmus crude, along with a suggested delivery date, volume, and a concessional price. The latter...was particularly crucial to the American side, as they wanted to be well compensated for committing to a large advance purchase in a soft oil market" (Leeds and Thompson, 1986, p. 35). According to some accounts, the concessional price was about US\$ 28 per barrel, when the going price in the international market was US\$ 32 (Kraft, 1984, p. 14).

The Mexican delegation "was shocked to learn that [it] could be subject to very hard bargaining" (Leeds and Thompson, 1986, p. 36). Among other things, the Mexican team responded—quite correctly—by saying that granting the United States a concessional price would disrupt Mexico's oil market and other customers could demand similar treatment. There was stalemate, and the negotiations almost broke down. Neither side wanted to run into trouble with their electors for having negotiated a "bad" price for the oil sales. As an alternative, the United States proposed that instead of granting a discount on the price of the oil, the Mexicans might agree "to make up some of the difference by paying a front-end fee to the U.S. for arranging the transaction."²¹

²⁰ The origin of this discontent remains classified information.

²¹ Leeds and Thompson (1986), p. 39. According to one account, initially it was proposed "...that the U.S. loan Mexico US\$ 1 billion against repayment in oil, with the understanding that the loan would bear interest charges. The Americans came up, late Saturday, with a proposal that in return for the US\$ 1 billion loan on Monday, the Mexicans would pay back in oil, over a fifteen-month period, the equivalent of US\$ 1.3 billion: an interest charge of 35%. Oteyza, after a telephone talk with López Portillo, said that it was an outrage, and the Mexicans would not pay more than 20%. López Portillo, according to some accounts, had burst into a flood of profanities and ordered a break in the negotiations. Some Americans clearly sympathized with the Mexicans..." (Kraft, 1984, p.15).

The negotiation went through several iterations, but the terms of the final agreement remain classified. However, according to Angel Gurría: ²² "Mexico paid an implicit interest rate of about 38%, more than twice the prevailing market interest rate ..." for this loan. On the same matter, Volcker remarks that the "...implied interest was egregiously high, reflecting the need to satisfy the Yankee trading instincts of Budget Bureau and Energy Department officials far removed from any sense of the larger issues at stake and more than slightly sensitive to the possibility of subsequent political criticism. The Mexican oil officials, who would have to pay, quite understandably were furious."²³

Given the future evolution of oil prices, in retrospect perhaps the price offered by the United States was not so bad. The yearly average market price of oil corresponding to a weighted average of Mexico's oil export mix was US\$ 28.70/barrel in 1982. This price is similar to what has been cited as the concessional price of US\$ 28/barrel that the United States requested (Kraft, 1984, p. 14). The problem was, however, that at the time of the negotiations the price proposed by the United States was below the market level.²⁴ In the end, the negotiations on the "oil deal" left the Mexican officials with very bitter feelings. In their view, the United States tried to extract unwarranted pecuniary concessions from a financially cornered Mexico.²⁵ Nevertheless, despite all the tensions, the U.S. Treasury part of the rescue package—the US\$ 2 billion in loans—was completed before the weekend was over.

As we shall see below, in 1995 there were no attempts on the part of the United States to strike advantageous bargains with Mexico. However, the 1995 rescue plan came with much tighter conditions on economic policy. In 1982, the U.S. Government essentially relied on the IMF to set the economic

²² At the time Angel Gurría was, as mentioned above, a senior official of the Ministry of Finance and a prominent member of the Mexican delegation.

²³ Volcker and Gyohten (1992), p. 201. See also Kraft's account of the conversation between Regan and President Reagan (Kraft, 1984, p. 16).

²⁴ Not only below the current level but also lower than the future prices for oil.

²⁵ See, for example, Gurría's acrimonious views on this episode in Gurría (1993), pp. 31-32.

policy conditionality and was satisfied with the personal commitment of Mexico's Secretary of Finance—who it was known would be part of the incoming cabinet—that an agreement with the IMF would be sought by the new administration.²⁶

4. The U.S. Federal Reserve takes the lead

At the same time, the U.S. Federal Reserve Bank was able, under Paul Volcker's leadership, to assemble an international package of credits from central banks and monetary authorities equal to US\$ 1.85 billion, with US\$ 325 million coming from the Federal Reserve itself (table 1).²⁷ The package assembled by the Federal Reserve, however, had another U.S.-sourced component: US\$ 600 million from the Exchange Stabilization Fund (ESF), for which the President had to seek authorization from the U.S. Congress to use ESF funds for a period longer than six months. In total, then, half of the package came from the United States and the rest from other G-10 central banks. As lenders of last resort, the central banks of creditor countries understood the need to act swiftly. Although the most vulnerable banks with respect to Mexico were those of the United States, the rest pitched in either because they had high stakes on the international banking system as a whole or because they thought they might need U.S. help in the future when confronted with similar problems in, for example, Eastern Europe. The mere fact that central banks were not lenders of last resort for portfolio investors may explain, at least in part, the strikingly different response of non-U.S. central banks in 1995.

5. The IMF and the commercial banks

The 1982 rescue package was meant to provide interim financing until Mexico could reach an agreement with its private creditors and the International Monetary Fund. In contrast to 1995, negotiating the amount and conditions of an IMF programme would take several months. Once the short-term bridge loan and other credits were agreed in principle, the next step was to involve the commercial banks. It was estimated that between September and December

1982, the Mexican Government would have to pay US\$ 8.7 billion in amortization and US\$ 2.6 billion in interest: a total of US\$ 11.3 billion. Officials in the United States, Mexico and the IMF decided that the banks "ought to be asked to agree to a 'standstill'" on Mexico's debt payments. At a meeting on 20 August held at the New York Federal Reserve Bank, the commercial banks agreed to give Mexico a 90 day extension on the principal due.²⁸

In the meantime, Mexico worked out an Extended Fund Facility with the IMF for US\$ 3.7 billion; the "letter of intent" was signed on 10 November 1982. However, the Fund's financing would not be sufficient to cover the debt payments coming due in the future months: "The banks in their own self-interest would have to supply the rest. If they failed to do so, then the prospects for interest on their existing loans, much less the chances of repayment, would go a-glimmering" (Volcker and Gyohten, 1992, p. 205).

6. Was the 1982 financial assistance package a success?

For Mexico, the 1982 rescue package would turn out to be just the beginning of the long and protracted process of managing its debt overhang. This process included several concerted debt rescheduling exercises, a debt buy-back, and—finally—the 1990 debt-reduction agreement negotiated under the terms of the Brady Plan.²⁹ After the 1982 rescue package Mexico received support from the U.S. Federal Reserve and the Department of the Treasury on three other occasions, but always in the form of interim financing while other workouts were concluded.³⁰

²⁶ The incoming president was set to take office on 1 December 1982.

²⁷ The loan was granted on 26 August 1982.

²⁸ In contrast, the private sector played no role in the 1995 rescue package. Whether the foreign investors holding Mexican paper in 1995 (Tesobonos in particular) could have been convinced to agree to a concerted solution is a point that will not be addressed in this paper. Some analysts argue that Mexican debt was too small a proportion of foreign investors' total holdings and, therefore, there was no obvious incentive to generate collective action in 1995 (see, for example, Truman, 1996). However, it appears that some of the leading U.S. investment banks were potential holders of huge amounts of Tesobonos that some of their borrowers had used as collateral. A Mexican default, then, could conceivably have been very troubling for some of those banks.

²⁹ For more details see, for example, Gurría (1988) and Devlin (1989). The Brady deal is described in the Appendix of Lustig (1992).

Thus, while the 1982 financial rescue package succeeded in avoiding a unilateral default on the part of Mexico and obviated the potential bankruptcy of major banks (particularly in the United States) and a banking crisis of international proportions, it failed on another fundamental count: Mexico, like many countries in the developing world, would be essentially cut off from voluntary lending

in the international capital markets for almost a decade. Throughout the 1980s, Mexico and other highly indebted countries would not be able to grow, and they faced recurrent bouts of high inflation, with poverty and inequality on the rise. Perhaps as a result of the trauma left by the 1980s, the international community—or at least part of it—acted differently in 1995.

III

The United States to the rescue: 1995

1. Mexico devalues the peso and the markets panic

On 16 December 1994, Mexico's international reserves dropped to around US\$ 11 billion (Banco de México, 1995). Faced with this situation of dwindling international reserves, the Mexican Government called an extraordinary meeting of the "Pacto"—the established mechanism for discussing economic policy with representatives of business and labour—in the evening of 19 December. The following morning, the Secretary of Finance announced an immediate increase to 4 pesos per dollar (an increase of about 15%) of the ceiling of the band within which the dollar was allowed to fluctuate.³¹

The value of the dollar reached the new 4 peso ceiling in no time, and it is estimated that in the course of two days close to US\$ 5 billion of international reserves were lost. The markets were sending a clear message: the new exchange rate ceiling was not credible. On 22 December 1994, the monetary auth-

orities had no other option but to switch to a floating exchange rate: in other words, the Banco de México would no longer intervene to maintain the dollar within a pre-specified band.

A few days later, the Mexican Government faced difficulties in rolling over the Tesobonos (the short-term dollar-denominated debt instruments) coming due on the first Tuesday following the devaluation. This was an ominous sign. Contrary to what many analysts had predicted—and expected—the devaluation did not bring calm to the markets. On the contrary, the devaluation actually caused a major loss of confidence among foreign investors holding Mexican paper. Foreign investors "... realized that their investment strategies had been based on one or more false premises concerning the nature of Mexico's exchange rate regime or the probability that they could liquidate their holdings before any crisis hit" (Truman, 1996, p. 8). They realized that the Mexican Government would not be in a position to service short-term claims without incurring a massive depreciation of the peso and hence that the risk of default was as real as ever.

Given the combination of a high concentration of government debt in short-term instruments denominated in dollars (Tesobonos),³² the fact that a large portion of them (US\$ 17 billion) was in the hands of foreigners, and the low level of international reserves shortly after the devaluation (approximately US\$ 6 billion), portfolio investors began to fear that

³⁰ One of these short-term loans was granted in 1986 when, following the drastic fall in oil prices, the United States and the BIS provided a six-month loan for more than US\$ 1 billion. Subsequently, in September 1989 and March 1990, Mexico received short-term bridge loans for US\$ 2 billion and US\$ 1.3 billion, respectively, during the negotiation of the debt-reduction agreement with the commercial banks.

³¹ These consultations took place at a meeting of the "Pacto." The "Pacto"—set in motion for the first time in December 1987—was a mechanism used to set macroeconomic policy in consultation and with the endorsement of representatives of workers, agricultural producers and the business sector. For more details on the origins and characteristics of the "Pacto", see Aspe, 1993, and Lustig, 1992.

³² This was not fresh debt, but accumulated existing debt which needed to be renegotiated.

the Mexican Government would have no choice but to impose exchange controls and default on the Tesobonos. The spectre of default sent the markets into a panic and placed the peso in danger of collapse. The only way that a full-fledged financial meltdown could be prevented would be by arranging a financial assistance package sufficiently large to convince the markets that the Mexican Government would *not* be forced into a default. As we shall see, the size of the required financial rescue package turned out to be far larger than anybody in the United States or Mexican governments, or in the multilateral organizations, had anticipated.

2. U.S. support: already in place but not enough

In contrast to 1982, when the peso was devalued in December 1994 the support from the United States was already formalized in the North American Framework Agreement (NAFA), signed by the three NAFTA countries in April of that year. In fact, a potential financial support package from the United States, Canada and European central banks had been quietly arranged during the NAFTA vote in early November 1993. At the time there were fears that if NAFTA were not passed by the U.S. Congress the Mexican peso would be subject to a lot of pressure. As a result, the industrialized governments agreed to provide US\$ 12 billion in swaps, of which the United States contributed half. These agreements remained secret and expired on 31 December 1993, without any drawings having been made by Mexico (Wertman, 1995a, p. 6).

Then, on 24 March 1994 (immediately after the assassination of Presidential candidate Colosio), U.S. Treasury Secretary Lloyd Bentsen and the U.S. Federal Reserve Chairman, Alan Greenspan, put in place a US\$ 6 billion swap line, with each agency contributing half.³³ This swap facility was to be available for a couple of months, while the pressure on the peso subsided. However, on 26 April the three countries signed the North American Framework Agreement (NAFA), making permanent the US\$ 6 billion contribution from the United States to a swap arrangement with Mexico and Canada. Under this agreement the Bank of Canada and the Banco de México also expanded their existing swap arrange-

ment from C\$ 200 to C\$ 1 billion (then about US\$ 723 million), while the Federal Reserve and the Canadian central bank reaffirmed their existing US\$ 2 billion swap line.³⁴ One important implication of this agreement was that by implementing it the United States and Canada were giving tacit support to Mexico's decision to keep exchange rate policy unaltered in the aftermath of the assassination.

Non-U.S. support was called upon once again when an additional US\$ 6 billion was quietly put together by Europe and Japan, with the help of the U.S. Federal Reserve, in order to back the peso in the period running up to the August 1994 Presidential elections, when it was recognized that given the uncertainties generated by the assassination of the PRI candidate Luis Donaldo Colosio, it was an awkward time to change the exchange rate policy. Under this US\$ 12 billion contingent swap facility, of which the U.S. would contribute up to half, Mexico ".....would be able to draw until September 30 for a period of 90 days [and] all drawings would have to be repaid by December 30 (General Accounting Office, 1996, p. 88). Mexico did not make any drawings from either facility. This episode reveals that at least up until August 1994 the industrialized nations were implicitly endorsing Mexico's exchange rate policy (and, more broadly, its economic policy).

a) *The United States worries about the peso*

The increase in the potential commitment of financial resources in support of Mexico was accompanied by closer scrutiny of Mexico's economy on the part of the U.S. Treasury and the Federal Reserve. The release of a number of previously classified documents reveals that—especially during 1994—U.S. financial authorities were monitoring economic events in Mexico rather closely, with particular concern for the exchange rate.³⁵ In both the U.S. Treasury and the Federal Reserve the predominant view was that the peso was overvalued, but there was no con-

³³ General Accounting Office (1996), p. 82. This swap facility is subject to annual review.

³⁴ Wertman, 1995b, p. 3. Under the Framework Agreement, Mexico could make multilateral or bilateral drawings; bilateral drawings with the United States Treasury would be governed by the Exchange Stabilization Agreement signed on the same day (Wertman, 1995a, p. 7).

³⁵ These documents were declassified in response to requests by Senator D'Amato, a fierce critic of the U.S. rescue package and of the Clinton administration's policy towards Mexico, and are known as "D'Amato's Annexes". For more on this matter see General Accounting Office (1996), Chapter 3.

sensus on the extent of the overvaluation. Moreover, the recommended course of action was not a sudden change but a gradual one, undertaken as "part of a concerted policy rather than an emergency response to a crisis."³⁶

The U.S. Government's concern with Mexico's decision to stick to the existing exchange rate policy deepened after the country's August 1994 Presidential elections, when capital inflows failed to materialize despite the peaceful PRI victory. In September, the Mexican Government tried to inject confidence into the markets by announcing a new Pacto, which ratified the exchange rate policy. To add to the credibility of this agreement, President-elect Zedillo endorsed it explicitly. The U.S. financial authorities, however, remained skeptical. Larry Summers, then Under-Secretary for International Affairs at the U.S. Treasury, commented:

"The Mexican Government surprised the financial markets with the announcement of a new 'Pact' with business and labor on Saturday. Most significant for us, the agreement maintains the current pace of depreciation of the floor of the exchange rate band at four percent per year".

"The Mexican announcement presents us with two issues. The first is the substantive question of whether they made the right decision on the exchange rate. The view of many credible independent analysts is that the peso is still significantly overvalued. The current account deficit is very high at 7% of GNP..."³⁷

The remarks of another official at the U.S. Treasury are also illustrative of U.S. concerns:

"The uncertain economic prospect of Mexico is of critical interest and of some concern to the U.S. It is possible, but unlikely, that Mexico could request activation of the swap before President Salinas' November 1 State of the Union address".

"Hopes for a stable post-election period and a resumption of capital inflows have not materialized. The announcement of a new Pacto did not have the desired effect of strengthening the peso and was soon offset by renewed concerns over political stability as a result of the Ruiz [Massieu] assassination..."

³⁶ Board of Governors of the Federal Reserve System, restricted internal memorandum, "Mexican Exchange Rate Options", 17 August 1994.

³⁷ U.S. Treasury, internal memorandum from Lawrence H. Summers to Secretary Bentsen entitled "Mexico maintains current exchange rate policy in renewal of 'Pacto'", 27 September 1994 (D'Amato's Annexes, p. 364).

"Although the immediate financial situation could improve, we remain concerned that the current exchange rate system could inhibit economic growth and widen the already substantial current account deficit..."³⁸

As the uncertainty over Mexico's economy and the sustainability of the exchange rate increased, the U.S. Government became very concerned that Mexico would ask to draw on the contingent commitment agreed under NAFTA to support what was viewed as an unsustainable policy. Given the circumstances, the recommendation of high-level officials at the Treasury was to discourage the consideration of such a request.³⁹ In a memorandum of October 1994 addressed to the Federal Reserve's Chairman, Alan Greenspan, in anticipation of a meeting with Mexican officials, it was said.⁴⁰

"... You may want to indicate that while we understand the reasons why Mexican officials prefer operating with a relatively fixed exchange rate (against the U.S. dollar), there is some concern about the risks and costs of trying to defend an unsustainable exchange rate. It could be costly in terms of Mexico achieving its broader economic growth objectives, could be disturbing for Mexican financial markets, and could be disruptive to U.S. financial and trade relations with Mexico. Mexican officials should be aware that they should not count on the United States for financial support via the Federal Reserve and Treasury lines to sustain an inappropriate exchange rate. The swap lines are intended to deal with what are viewed as transitory market disturbances, not to buttress an unsustainable exchange rate regime."

Reading the available documents leaves one with the impression that officials at the U.S. Treasury and the Fed were observing Mexican markets and policy moves closely and that they disagreed with the Mexican authorities' decision to stick to the exchange rate policy in the aftermath of the Presidential elections. However, the documents also reveal that the United States was not certain about whether

³⁸ U.S. Treasury, internal memorandum from Timothy Geithner to Secretary Lloyd Bentsen, 2 October 1994 (D'Amato's Annexes, p. 335).

³⁹ See, for example, Summers's memo to Bentsen, 14 October 1994. (D'Amato's Annexes, p. 301).

⁴⁰ Board of Governors of the Federal Reserve System, internal memorandum from Charles J. Siegman to Chairman Greenspan on "Background Material for October 20 Visit by President-elect Zedillo's Adviser Luis Téllez", 19 October 1994 (D'Amato's Annexes, pp. 383-384).

Mexico would be forced to devalue or,⁴¹ more importantly, it was not aware of the potentially devastating effects that a surprise devaluation would have on market confidence. It is remarkable that there seems to have been no discussion of the risks entailed by, first, the accelerating conversion of peso-denominated securities (CETES) into the dollar-denominated Tesobonos; second, the fact that a large portion of the latter were in the hands of foreign investors; and third, the tendency of the ratio of international reserves to Tesobonos to fall at an increasing pace. Apparently, these issues escaped the scrutiny of the IMF and the World Bank as well. This is most remarkable because the outstanding Tesobonos in the hands of foreigners became one of the fundamental causes of the financial debacle. Like the IMF and the World Bank, the United States authorities were not really prepared for a worst case scenario.

b) *The United States receives no warning of impending change in exchange rate policy*

Although they knew that the peso was under a lot of pressure and a whole range of policy alternatives had been discussed with the Mexicans at various points in the past, the U.S. authorities were not warned in advance of the Mexican Government's decision to change its exchange rate policy, when this finally happened. In a U.S. Treasury memo sent on 19 December, the day before the announced change in the exchange rate band, a U.S. official expresses his concern at the news received from Mexico that the peso was under pressure and worries about the possibility that the "...Mexicans might well make a decision to 'withdraw from the market' before or right after Christmas without consulting us."⁴²

⁴¹ For example, in a memo prepared for Summers, someone remarks that "...There is no obvious event on the immediate horizon likely to concentrate pressure or to force a decision [to devalue]..." (Department of the Treasury, 5 December 1994).

⁴² The author of the memo then goes on to say: "We will not look good if Mexico makes a move without consulting us. ...I fear that a devaluation will have a negative impact on Congressional support for our trade policy initiatives, particularly if it is done unilaterally. The downside of initiating contact is that it could lead to a request for activation of the swap. This does not seem appropriate now. There is no visible pay-out. Investors, it appears, are not worried about the size of the current account deficit or a devaluation. [!] They worry about Chiapas and political unrest spreading. Thus, a devaluation may not bring about a resumption of capital inflows." (U.S. Treasury, memo to Tim Geithner, "Contact with Mexicans before they do something", 19 December 1994 (in D'Amato's Annexes, p. 428).

The fears candidly expressed by the cited U.S. official were well founded. On the same evening that the memo was written the Mexican Government convened an emergency meeting of the Pacto, and the following day, 20 December, Secretary Serra announced that the ceiling of the band within which the dollar was allowed to fluctuate would be raised by 15 per cent. Time had run out both for the Mexican Government and the U.S. Treasury: the change in exchange rate policy occurred when reserves were too low, and with no leeway to prepare an economic plan and organize U.S. financial support to cushion the impact of a devaluation. Prevention had not really worked, so the next step was damage-control.

c) *The financial debacle was not expected*

Although officials at the U.S. Treasury and Federal Reserve sensed that the change in the exchange rate policy had not been well received by the markets, neither the Mexican nor the U.S. Governments anticipated the scale of the breakdown in financial markets that followed. To give an example, in the wake of the devaluation, a Treasury Department official based in Mexico wrote the following:

"... We believe the markets have been waiting for the government to take action on the exchange rate and that capital inflows are likely to pick up. There probably will be considerable volatility in the foreign exchange market for a short period of time, followed by some strengthening of the peso. ... When all the smoke clears, probably by early next year, we expect the peso will settle about 8-12 percent below what it was trading at prior to the new policy....Our best guess is that the devaluation will not affect Mexico's basic macroeconomic course or fundamentally alter the country's brighter economic prospects in 1995. Furthermore, the devaluation has not really caught most sophisticated investors by surprise. In spite of the fact that over the next few days many Mexicans will say we told you so and that this is *deja vu*, the new policy is likely to have a salutary effect, unlike the traumatic effects of past devaluations."⁴³

⁴³ U.S. Treasury, "Bi-Weekly Report on Mexico", 21 December 1994. (D'Amato's Annexes, pp. 432 and 434).

That the perceptions of Mexican and U.S. officials on the potential impact of the 20 December announcement to change the ceiling of the exchange rate band were wrong did not take long to reveal itself. On the day after the devaluation, reserves fell by close to US\$ 5 billion, and on 22 December the Mexican authorities had no alternative but to allow their exchange rate to float.

As of 21 December, the U.S. Treasury became quite intensely involved. In a memo prepared for incoming Secretary Rubin, Larry Summers mentions that outgoing Secretary Bentsen had authorized the activation of the swap line, that the Treasury was advising Mexicans on how to respond to the circumstances, that the New York Federal Reserve Bank was arranging a meeting of Secretary Serra with major financial institutions for the morning of 22 December, and that Summers would give press support. The swap line with Canada was also activated.

However, none of the above actions calmed the markets. Secretary Serra was not well received during the meeting in New York, and a few days later he resigned, being replaced on 29 December by Guillermo Ortíz. Two days earlier the peso reached its 1994 low of 5.7 new pesos to the dollar, and the government had to cancel the auction of Tesobonos because there would not be any buyers at reasonable interest rates. On the same day, the Mexican Government announced that it was preparing a new economic plan that would be presented on 2 January 1995.

Clearly neither the Mexican authorities, nor the U.S. Government, nor the IMF and other financial institutions expected what happened: i.e., that foreign investors—particularly holders of Tesobonos—were not willing to roll over the government securities they held. They wanted to cash them and convert them into dollars as soon as they became due. Since Mexico's reserves plus the swap lines were considerably lower than the amounts coming due in 1995, the spectre of non-convertibility began to roam the halls of Wall Street.

The absence of a clear and well-defined economic plan at the time when the peso was first devalued added to the uncertainty. As has become more evident in retrospect, however, the problem of lack of credibility on the part of market agents was not solely due to the hesitancy of the Mexican authorities. Had it not been for the US\$ 17 billion of Tesobonos in the hands of foreigners, (with some US\$ 10 billion

coming due in January alone), the US\$ 18 billion of foreign currency liabilities of local commercial banks, all falling due in 1995, and so on, there probably would not have been a financial debacle following the devaluation.

3. The rescue package is increased

a) *The increase in the funds provided under the North American Framework Agreement ("NAFA Plus")*

The realization that the source of the monetary instability was the size of the short-term public debt in the form of Tesobonos—and, more importantly, the response to this realization—took a few days. First of all, the U.S. and Mexican authorities realized that the financial rescue provisions made under NAFA would be insufficient. This prompted the arrangement of a US\$ 18 billion package announced on 2 January 1995. The package was composed of an expansion of the U.S. swap facility set up under NAFA from US\$ 6 billion to US\$ 9 billion;⁴⁴ US\$ 5 billion from other governments through the Bank for International Settlements; C\$ 1.5 billion (then about US\$ 1.1 billion) from Canada, which also expanded its contribution beyond the commitments under NAFA; and a potential commitment of US\$ 3 billion from international banks.

It was presumed at the time of the announcement that the total of US\$ 18 billion would calm the market agents, since it covered the outstanding Tesobonos held by foreigners coming due in 1995. However, it did not take care of the certificates of deposit in local banks and other short-term obligations coming due in the year. It was assumed, or hoped, that a large portion of them would be rolled over. This assumption was not shared by Mexico's creditors, however, and the pressure on the peso continued unabated. Through simple arithmetical calculations investors estimated that payments coming due in 1995 (of about US\$ 50 billion, assuming that most of the short-term public and private debt (except inter-bank loans) would not be rolled over) were far greater than

⁴⁴ Half of the additional US\$ 3 billion came from the U.S. Treasury under the "Temporary Exchange Stabilization Agreement" (TESA), signed on 4 January 1995 and set to expire on 3 April 1995. The remaining US\$ 1.5 billion came from the Federal Reserve.

the estimated resources available: international reserves in the Banco de México were about US\$ 6 billion and the first international rescue package was equal to US\$18 billion. Consequently, the rescue package plus the international reserves would barely cover half of Mexico's financial obligations for 1995, estimated at not less than US\$ 50 billion.⁴⁵

By the end of the first week of January, it became clear to Mexican Secretary of Finance Guillermo Ortiz that the problem was much more difficult than anticipated. The news on 6 January that some Mexican banks were unable to renew the certificates of deposit held by foreigners triggered another wave of flight from the peso. It became obvious that there would be great difficulties in rolling over any short-term government debt coming due in the first part of 1995. At this time the Mexican authorities began to discuss the terms of an agreement with the IMF and explore other alternatives of support with the U.S. Treasury.

The sentiment of the markets is well reflected in an anecdote told by a high-level IMF official who recounts that a fund manager stared at him with perplexity when told that the Mexicans had committed themselves to a balanced budget for 1995. The fund manager's reply was a daunting question: had the Mexicans included all the payments of the Tesobonos coming due in 1995 in the expense side of the budget?

4. The US\$ 40 billion in loan guarantees

On 9 January 1995, the Mexican Government drew US\$ 500 million from the United States swap line and C\$ 83 million from the Canadian one. The Banco de México used these resources to intervene in the exchange rate market to stop the run on the peso. However, the peso continued to slide. On 10 January the dollar closed at 5.75 pesos, and stock markets in Mexico and other places in the world were falling

⁴⁵ The estimates of total dollar denominated short-term obligations coming due in 1995 include: US\$ 6.3 billion in amortization of short-term public external debt; US\$ 1 billion in amortization payments to the IMF; approximately US\$ 6 billion in amortization of long-term external public debt; US\$ 6.1 billion of non-bank private sector debt due to banks; US\$ 2.1 billion of non-bank private sector debt due to non-banks; and US\$ 29 billion of Tesobonos (not classified as external debt but denominated in dollars). Adding all this up yields a total of US\$ 50.5 billion coming due in 1995, assuming that the US\$ 24.1 billion of interbank loans would be rolled over.

sharply.⁴⁶ That other markets reacted "in sympathy" with Mexico's is reflected by the evolution of the stripped yields of Brady par bonds for Argentina, Brazil, Bulgaria, Morocco, Nigeria, Poland and the Philippines (Truman, 1996, figures 1 and 2).

Ted Truman, Director of the Division of International Finance of the U.S. Federal Reserve Board, notes:

"When the crisis erupted, investors panicked, not only investors in the Mexican stock market and in Mexico debt instruments but also investors in similar instruments issued by borrowers in other countries, especially countries in the same part of the world or perceived to be in similar circumstances. These contagion sales of assets were induced by at least two types of forces. First, as perceived risks rose and expected returns fell, individual investors were induced to disinvest. Second, institutional holders such as mutual funds faced with actual or threatened redemptions were led to liquify their holdings not only of Mexican paper but also of the paper of other countries, especially if they could do so while limiting their capital losses. ..." (Truman, 1996, p. 10).

Whether this was the prelude to a financial debacle engulfing the whole of the developing world can certainly not be proved. Nevertheless, there were indications that such a scenario was possible. This ominous possibility and the certainty that Mexico was on the verge of financial collapse prompted President Clinton⁴⁷ to announce, on 11 January, that "...the United States is committed to doing what we can to help Mexico through what is and should be a short-term crisis."⁴⁸ The impact of Clinton's pronouncement let itself be felt almost instantaneously in Mexico's financial markets: the Mexican stock market's index, for example, reversed its downward trend literally a minute after Clinton's speech.

On the following evening Clinton announced his proposal to request authorization from the U.S. Congress to extend US\$ 40 billion to Mexico in loan guarantees: a package modelled on the US\$ 10 billion in loan guarantees provided to Israel in 1992.⁴⁹

⁴⁶ The Mexican Stock Exchange closed down 6.26% on 10 January 1995 (*Newsday Marketline*).

⁴⁷ Following preliminary consultations with the Congressional leadership on the evening of 10 January 1995.

⁴⁸ *Washington Post*, 12 January 1995, Section A, p. 19.

⁴⁹ *Washington Post*, 14 January 1995, Section D, p. 1.

The President secured the support of the Congressional leaders from both parties and, at least initially, a relatively speedy affirmative vote seemed feasible. This assumption turned out to be incorrect, however. Members of Congress from both parties felt very uncomfortable –to say the least– approving a sizeable rescue package for Mexico at the same time that they advocated austerity measures in the United States. Moreover, many of the new Republican members were isolationists and unsympathetic to NAFTA and Mexico. The conditions to be requested from Mexico began to mount and they eventually covered the entire range of bilateral issues: migration, relations with Cuba, extradition practices, narcotics trafficking, and so on. Eventually it became clear that Congressional approval of a bill that would also be acceptable to the Mexican Government could not be secured, at least in the foreseeable future.⁵⁰

5. The IMF comes on board

It may be surprising that the “NAFTA plus” assistance package of US\$ 18 billion announced in early January did not involve the IMF. Officials from the IMF did go to Mexico at the end of December, but the Mexican authorities were reluctant to negotiate an agreement with the Fund because they thought it would send a signal of weakness. It was not that the Mexican authorities disagreed fundamentally with the IMF prescriptions, as had been the case with López Portillo in 1982. The main problem was the message: countries which went to the IMF were perceived as having misbehaved. In the case of Mexico in early 1995 the necessary message, at least in the eyes of Mexican officials, was that the Mexican Government had been and would continue to be reliable. The crisis of confidence, it was thought, was based on misperceptions and an agreement with the IMF could strengthen them. This resistance to the IMF probably arose from the prevailing impression –in retrospect, a wrong one– that the market’s reaction was temporary and the situation would soon return to normal: i.e., that short-term obligations coming due in 1995 would be rolled over.⁵¹

⁵⁰ For more details see the account in Montaña (1996).

⁵¹ This perception was shared by many analysts in Mexico. I recall very vividly how at the end of January I had several arguments with various colleagues, trying to convince them that Mexico was facing a very serious economic crisis, perhaps the most serious one in its post-revolutionary era.

The Mexican authorities’ reluctance to go to the IMF vanished when they realized that the panic of the markets was *in crescendo*. In particular, they finally became convinced that an agreement was necessary when the incidents of the non-renewal of certificates of deposits held in a Mexican bank occurred at the end of the first week of January 1995. Around that time, and shortly after the announcement of the Mexican economic plan, Michel Camdessus, the IMF’s Managing Director, said that the Fund would begin negotiations with Mexican authorities. This announcement of an impending agreement with the IMF, however, did not do much in terms of restoring confidence in the markets.

On 26 January 1995, the IMF announced that Mexico had requested an 18-month stand-by arrangement for US\$ 7.8 billion (equivalent to 300 percent of Mexico’s quota). This agreement was prepared, and the quantitative targets were set, under the assumption that the US\$ 40 billion in U.S. loan guarantees would be approved. In essence, the agreement included the same quantitative targets as the Mexican economic plan announced on 2 January in terms of fiscal cutbacks, but the Mexican Government agreed to further tightening in the future if the evolution of the exchange rate and current account deficit made it necessary.

The problem with the IMF agreement was that market agents were not convinced –and rightly so– that the targets in the economic programme of early January were credible.⁵² By the end of January the assumption of an exchange rate of 4.5 new pesos to the dollar and a predicted 19 percent yearly inflation rate for 1995 seemed unrealistic. The endorsement of those targets at the time probably caused more harm to the IMF’s credibility than it helped Mexico’s.

6. The February 1995 rescue package

As mentioned above, towards the end of January it became increasingly evident that the United States

⁵² In reality, the IMF agreement included contingent provisions in terms of tightening the fiscal adjustment, for example, in the event that the outcomes in terms of the stability of the peso and inflation were not achieved. However, the terms of these agreements are always secret, and in this case, given the crisis of confidence, it was considered inappropriate for the IMF to openly question the Mexican programme from the start.

loan guarantee package was not supported in Congress and if submitted to a vote any time soon it would face a defeat. The consequence of this was another round of capital flight, and the peso began its seemingly uncontrollable downward slide once again. This led to the two most dramatic decisions of this episode. On 31 January 1995, President Clinton announced that he would use his executive authority to provide Mexico with up to US\$ 20 billion in loans and loan guarantees through the Exchange Stabilization Fund: the largest use ever made of this facility and more than three times the size of the financial assistance given to Mexico in mid-1982, if measured in real terms. At the same time, Michel Camdessus announced that the IMF would increase the 18-month stand-by arrangement to US\$ 17.8 billion: the largest ever extended by the IMF both in terms of its value and as a percentage of the country's quota.⁵³

In addition to the unprecedented contributions of the U.S. Government and the IMF, the package would include US\$ 10 billion from other industrialized nations through the BIS; US\$ 1 billion from Canada; US\$ 1 billion in currency swaps from Argentina, Brazil, Chile and Colombia (which did not materialize), and US\$ 3 billion in new loans from commercial banks (which did not materialize either). The total came close to US\$ 53 billion. However, only the US\$ 20 billion from the U.S., the US\$ 17.8 billion from the IMF and the US\$ 1 billion from Canada actually became available (table 2), plus loans from the World Bank and the Inter-American Development Bank totalling US\$ 3 billion. Although the BIS loan became available on paper it was not very helpful because of the stringent restrictions on its use. In reality, other industrialized nations viewed Mexico's financial troubles as a United States problem and hence they were not eager to get involved; indeed, it appears that some were even annoyed because they were asked to help.

Of the total rescue package, the US\$ 7.8 billion from the IMF stand-by was made immediately available. One limitation of the rest of the funds was that they would not be available all at once but in tran-

⁵³ Current rules state that an IMF member can borrow an amount equal to 100% of its quota per annum, with a cumulative limit of 300%. The 1 February 1995 agreement was equivalent to an unprecedented 688.4% of Mexico's quota.

TABLE 2

Mexico: Financial rescue package, 1995^a
(Millions of dollars)

<i>Total</i>	48 800
United States	20 000 ^b
(Disbursements by February 1996)	(13 500)
(Outstanding debt as of February 1996)	(10 500) ^c
(Outstanding debt as of August 1996)	(3 500)
(Outstanding debt as of January 1997)	None ^d
IMF	17 800 ^e
(Disbursements by February 1996)	(13 000)
(Outstanding debt as of December 1996)	(11 500) ^f
Canada	1 000 ^g
(Disbursements; maximum)	(350)
(Outstanding debt as of February 1996)	None
BIS	10 000 ^h
(Disbursements)	None

Source: U.S. Department of the Treasury and Federal Reserve.

^a Rescue package announced on 31 January 1995. The figures do not include the initial contributions that failed to materialize.

^b From Exchange Stabilization Fund; maximum amount potentially available. Funds could be used in short-term currency swaps, medium-term loans and security guarantees. For more details see General Accounting Office (1996).

^c Short-term currency swaps; paid by Mexico in full.

^d Medium-term swaps for US\$ 10.5 billion coming due between June 1997 and June 2000; paid off in advance in full.

^e An 18-month stand-by agreement announced on 1 February 1995. Of the total, US\$ 7.8 billion was available immediately.

^f Five-year loan with a 3/4 year grace period.

^g Short-term swaps.

^h Terms were too short-term and conditions too restrictive. Not drawn by Mexico.

ches, and their availability would depend on Mexico's strict compliance with a set of economic conditions and targets. In the case of the ESF loans, their availability would also be affected by domestic political factors in the United States. Due to the vehemence of critics of the U.S. rescue package in Congress, the Administration became increasingly cautious in disbursing the ESF loans to Mexico,⁵⁴ especially when, in general terms, the short-term liquidity problem had been solved.

⁵⁴ The attack on the Administration was spearheaded by Senator Alfonse D'Amato, Chairman of the Senate Banking Committee, who was virulently opposed to the rescue package. D'Amato held several hearings at which the majority of the non-government witnesses were very negative about the package and Mexico. He also launched several bouts of attacks in the press against the major players on the United States side.

7. The terms of the U.S. assistance

The terms of the ESF-based US\$ 20 billion U.S. package were formalized in the "U.S.-Mexico Framework Agreement for Mexican Economic Stabilization", signed on 21 February 1995, which governed the U.S. loan and loan guarantees package for Mexico. The terms specified that disbursements can take place for one year and can be renewed once for six months.⁵⁵ As part of this agreement, and since the use of ESF funds required an assured source of repayment, the Mexican Government agreed to deposit the proceeds of oil export sales by PEMEX and its two export sales subsidiaries in a pass-through special account⁵⁶ at the Federal Reserve Bank of New York.⁵⁷

The "1995 Framework Agreement" also specified that Mexico was to be responsible for the payment of all costs, fees and expenses; reporting, notification, and consultation requirements; and, in the case of medium-term swaps, interest charges sufficient to cover the U.S. Government's credit risk costs. Most importantly, under the agreement the Mexican Government committed itself to comply with the IMF programme and additional requirements set by the U.S. Treasury in its "Economic Policy Memorandum" (Annex C of the Framework Agreement). The latter essentially deepens the policy commitments undertaken by Mexico in the IMF accord. In particular, the Mexican Government agreed not to intervene in the foreign exchange market by using its international reserves but to stabilize the peso via fiscal and monetary policy. In addition, it agreed to regularly disclose information on a number of variables and policy decisions in a systematic and transparent way and proceed with structural reforms.

The announcement of the new rescue package at the end of January halted the peso's nosedive. However, the markets remained jittery until the Mexican Government announced a new economic programme with more realistic and credible targets on 9 March

1995, and the first drawing on the ESF funds took place.⁵⁸

One important element that has received relatively little public attention is the economic policy conditions that the United States financial authorities attached to the rescue package. In particular, U.S. Treasury officials were convinced that in order to stabilize the peso the Mexican authorities would have to raise domestic interest rates to the point of generating positive returns even in the very short run. The Mexican Government, in contrast, favoured the stabilization route that had been pursued in 1983: i.e., a larger depreciation of the peso and lower real domestic interest rates, arguing that high interest rates would deal a devastating blow to an already battered banking system. The United States authorities were concerned that further depreciation of the peso would continue to erode market confidence, cause further runs on that currency, and possibly lead to hyperinflation. Their worst nightmare was that the ESF loans to Mexico would vanish in the form of capital flight, at the same time that the peso would continue on its downward slide. In the end, the views of the Department of the Treasury prevailed, but the discussion was far from smooth.⁵⁹

After the signing of the Agreement, and throughout the period in which Mexico was still in debt to the United States, the Department of the Treasury engaged in activities of monitoring and surveillance which in the past would have been the sole responsibility of the IMF. In February 1995, for example, the U.S. Treasury created a "Mexico Task Force" whose purpose was to monitor Mexico's economy and economic policymaking. This should come as no surprise. In 1982, the United States had lent the equivalent of US\$ 5.7 billion in 1995 dollars and the maturity of the loans was one year. In 1995, in contrast, the U.S. financial assistance was for up to US\$20 billion, and of the US\$ 13.5 billion actually disbursed, US\$ 10.5 billion was in medium-term swaps falling due between June 1997 and June

⁵⁵ The six-month extension was granted at the end of the first year, and the agreement expired on 21 August 1996.

⁵⁶ The pass-through quality of the account means that the proceeds do not accumulate as a stock. For more details on the terms of the U.S. rescue package see General Accounting Office, 1996, chapter 4.

⁵⁷ See "Oil Proceeds Facility Agreement", Annex A of the 1995 Framework Agreement.

⁵⁸ Because the Mexican Government wanted to obtain the endorsement of the members of the old Pacto for the new programme, it was not possible to announce the Mexican programme at the same time as the Framework Agreement, and this of course did not help confidence-building. In the end, the Government was not able to secure the endorsement of the members of the Pacto, because they disagreed with the austerity measures, and it finally announced the programme unilaterally.

⁵⁹ Whether this was the least costly stabilization path is a discussion which goes beyond the objectives of this paper.

2000.⁶⁰ Given the size and the maturities of the current lending programme, it is understandable that the United States would want to monitor economic events in Mexico much more closely than before.

8. Was the financial assistance package a success?

The success of the 1995 rescue package is evidenced by two clear indicators. The first is the speed with which the Mexican Government has been able to return to the international capital markets. As mentioned above, as early as April 1995 a Mexican development bank was able to borrow in the international market, and between mid-1995 and early 1996 Mexico was able to raise about US\$ 8 billion, with the terms and maturities of the loans improving over that period.⁶¹ Moreover, although there were a few additional incidents of market volatility, the peso has achieved an acceptable degree of stability since March 1995, and especially since November of that year.⁶² Indeed, it may be noted that the rescue operation was so successful in restoring market confidence that Mexico was able to pay off the whole of the US\$ 13.5 billion owed to the United States by late

January 1997, although the original repayment schedule provided for maturities between June 1997 and June 2000. The second indicator of the rescue package's success is that the possibility of the crisis spreading to other countries in the region and other regions as well was brought to a halt.⁶³ In contrast with 1982, the liquidity and confidence crisis was limited to a single country: Mexico (Eichengreen and Fishlow, 1996).

Nevertheless, despite all its accomplishments, the financial rescue package was not able to spare Mexico from a major recession, the worst since the Great Depression. During 1995, Mexican output fell by close to 7%, unemployment doubled to reach close to 7%, and real wages contracted by 22%. Although without the financial assistance the situation would undoubtedly have been far worse, it is remarkable that such a big financial support programme did not translate into a softer landing of the Mexican economy. Explaining why this has been the case, however, is a topic beyond the purpose of this paper. The important thing is that Mexico's economic recovery continues along the right lines, as witnessed by the increase in output of over 5% in 1996.

IV

Concluding remarks

The foregoing account brings out one fundamental difference between the financial assistance packages of 1982 and 1995. While the former was followed by a decade of living in "exile" from the international capital markets, the latter was successful in quickly restoring market access. The difference in the outcomes must be related to the size of the financial package and its medium-term nature. As mentioned above, in 1995 the financial rescue package was designed to be large enough to plausibly solve Mexico's liquidity crisis; in 1982, in contrast, while the package

was large enough to avoid a Mexican default the country was obliged for the next six years to go from one rescheduling exercise to another, with the uncertainty of whether it would be able to meet its obligations always lurking on the horizon. The 1995 package's success must also be attributed to two other factors, however. First, despite the external disequilibrium in the years leading up to the crisis, the Mexican economy was in far better shape than in 1982. Second, the external environment was much more adverse in 1982 than in 1995, with world interest rates at record high levels and oil prices falling at a time when oil exports represented 80% of Mexico's total exports.

⁶⁰ For full details of the payments programme for the medium-term swaps, see table 2.

⁶¹ General Accounting Office, 1996, p. 140, and United States Department of the Treasury, 1996.

⁶² Whether this stability in the exchange rate market will continue depends on a number of factors, some economic and some political.

⁶³ Although Argentina had a sharp recession in 1995 it was able to avoid a major crisis of confidence.

To a large extent, the differences in the outcome stem from the differences in the United States response. In 1982, the U.S. Treasury organized a US\$ 2 billion short-term loan only when Mexico's reserves were practically down to zero, despite repeated warnings from the Mexican finance ministry. In addition, the U.S. Treasury put the Mexican Government on the spot by trying to extract a concessional price for oil sales and large fees, thus showing not only political insensitivity but also a lack of awareness of how much it was in the United States' interest to avoid a Mexican default. While the U.S. Federal Reserve was much more sympathetic to Mexico and well aware of the systemic dangers of a Mexican default, the chosen strategy did not solve the more fundamental problem of that country's overindebtedness.

In the more recent episode, U.S. support was present even before the crisis. The Clinton administration showed its commitment to help stave off attacks on Mexico's reserves as early as the Fall of 1993, when during the Congressional vote on NAFTA the U.S. Administration set up a US\$ 6 billion swap arrangement. In April 1994, after the assassination of Luis Donaldo Colosio, the PRI Presidential candidate, anticipating that the peso would be under pressure, the Clinton administration—in collaboration with the Canadian Government—transformed the swap line into a permanent arrangement. And in December of that year, when Mexico was on the verge of a financial collapse after the decision to devalue, the U.S. Administration responded with a series of initiatives that culminated in the unprecedented US\$ 48.8 billion financial rescue package, to which the only real contributors were the U.S. government, with up to US\$ 20 billion, the IMF with US\$ 17.8 billion, and Canada with US\$ 1 billion.⁶⁴

Also, unlike 1982, this time the U.S. Administration did not try to extract from Mexico concessions which were not warranted by market conditions, such as asking that country to sell crude oil to the United States at what was then a sizeable discount. Moreover, the U.S. Executive took a notable political risk in rescuing Mexico. With a hostile and hypercritical Congress that had implicitly rejected a Mexican rescue package in January, the Administration was under a lot of pressure to design a programme that would give quick results in terms of the peso's sta-

bility and would ensure the protection of U.S. taxpayers' money.

Why was the response of the U.S. Administration and the IMF so different in 1995 from what it had been in 1982? Several important reasons can be identified. First, the Clinton Administration had invested an important share of political capital in Mexico's fate with its strong endorsement of NAFTA. A collapse of the Mexican peso would have haunted President Clinton throughout his re-election campaign and turned the adoption of NAFTA—viewed by many as a positive achievement—into a political embarrassment, with likely negative consequences for the project of extending NAFTA and building a free trade area in the Americas. Furthermore, the negotiation of NAFTA brought the U.S. and Mexico closer than ever before in institutional terms. Starting with the Bush administration, and continuing with that of Clinton, the two countries' relationship evolved from one characterized by distrust and resentment to a more constructive and cooperative one.

Second, since de la Madrid's Presidency, and especially under the Salinas administration, the Mexican authorities had won the confidence and praise of the United States Government and the international community at large because of their commitment to price stability and market-oriented reforms. Mexico had become a model debtor and model reformer and was constantly held up as a shining example for other countries. For market-reform advocates, "letting Mexico go" would in effect have meant admitting that despite all their efforts and sacrifices, reforming countries and governments could remain unrewarded, opening the way for the return of political support for populist policies. In contrast, in 1982 Mexico was pursuing all the policies regarded as anathema: a large fiscal deficit, widespread State intervention in the economy, and closed trade and investment regimes.

Third, the difference in the response is explained in part by the differences in the causes and nature of the crises. Policy mistakes notwithstanding, the severity of the markets' reaction that followed the December 1994 devaluation was totally disproportionate. This view was not only fully shared but actively propounded—at least in public—by key members of the U.S. cabinet and high-level officials of the multilateral institutions. In contrast, although the 1982 debacle was triggered by adverse external conditions, it was clearly rooted in fundamental domestic errors in economic policy. Paradoxically, the markets were

⁶⁴ The actual use made of these facilities is shown in table 2.

more tolerant with the mismanagement in 1982 than they were in 1994.

Fourth, the memories of the "lost decade" which followed Mexico's 1982 suspension of payments was fresh in most key policymakers' minds at the U.S. Federal Reserve Board, the U.S. Treasury Department and the multilateral financial institutions. The behaviour of other Latin American—and even some non-Latin American—markets in early January 1995 raised the spectre of another crisis of systemic proportions: something that people in the U.S. Government and the multilateral agencies were not ready to risk. The key players in the U.S. Government and the IMF decided that it was better to be accused of taking unprecedented actions than being blamed later for not acting.

However, as regards the U.S. response in 1982 and 1995, there are other factors that are equally important in terms of accounting for the differences. The Clinton administration acted on the belief that the government can and should play an active role to correct situations where markets fail or where the absence of government action can be very costly; this contrasted with the "laissez-faire" ideology prevalent

in Reagan's cabinet. Moreover, a financial collapse in Mexico could result in increasing tensions between the two nations, particularly as a consequence of the impact of the economic crisis on migration flows.

To conclude, although the 1995 financial assistance package accomplished the objective of solving Mexico's short-term liquidity crisis, one could argue that it is unlikely that a similar programme can be repeated in the future. Furthermore, even if it can, a hasty and politically difficult response is not the best option for handling another Mexican or Mexican-like crisis in the future. Given the nature of today's capital markets, similar crises are quite likely to occur. Consequently, the need for the multilateral institutions to implement crisis-prevention and crisis-management mechanisms seems a natural corollary of the lessons learned from the Mexican crisis. In addition, in the specific case of Mexico, preventing or managing future crises may require closer policy consultation—especially between the United States and Mexico—and perhaps different institutional mechanisms from those existing before the peso crisis of 1995.

(Original: English)

Bibliography

- Aspe, P. (1993): *Economic Transformation. The Mexican Way*, Lionel Robbins Lectures, Cambridge, MA, The MIT Press.
- Banco de México (1995): *The Mexican Economy, 1995: Economic and Financial Developments in 1994*, Mexico City, July.
- D'Amato's Annexes (1995): Report on the Mexican economic crisis and Chronology of the Mexican economic crisis, presented by Senator Alfonso D'Amato on June 29, 1995.
- Devlin, R. (1989): *Debt and Crisis in Latin America: The Supply Side of the Story*, Princeton, NJ, Princeton University Press.
- Eichengreen, B. and A. Fishlow (1996): *Contending with Capital Flows. What is Different About the 1990's?*, New York, Council of Foreign Relations.
- GAO (U. S. Government Accounting Office) (1996): *Mexico's Financial Crisis. Origins, Awareness, Assistance, and Initial Efforts to Recover*, Washington, D. C., mimeo, February.
- Gurría, J. (1988): La reestructuración de la deuda: el caso de México, in S. Griffith-Jones (ed.), *Deuda externa, renegociación y ajuste en la América Latina*, Lecturas, No. 61, Mexico City, Fondo de Cultura Económica (FCE).
- (1993): La política de la deuda externa, Mexico City, FCE.
- Kraft, J. (1984): *The Mexican Rescue*, New York, Group of Thirty.
- Leeds, R. and G. Thompson (1986): The 1982 Mexican debt negotiations: Response to a financial crisis, Washington, D. C., mimeo.
- Lissakers, K. (1991): *Banks, Borrowers, and Establishment*, New York, Basic Books.
- Lustig, N. (1992): *Mexico. The Remaking of an Economy*, Washington, D. C., The Brookings Institution.
- Montaño, J. (1996): *El Congreso de los Estados Unidos y su política hacia México*, Mexico City, December, mimeo.
- Truman, E. M. (1996): *The Risks and Implications of External Financial Shocks: Lessons from Mexico*, International Finance Discussion Paper No. 535, Washington, D. C., United States Federal Reserve System.
- United States, Department of the Treasury (1996): *Monthly report by the Secretary of the Treasury*, Washington, D. C., mimeo.
- Volcker, P. and T. Gyohten (1992): *Changing Fortunes: the World's Money and the Threat to American Leadership*, New York, Times Books.
- Wertman, P. (1995a): The Mexican support package: A survey and analysis, *CRS Report for Congress*, No.1006 E, Washington, D. C.
- (1995b): Mexico: Chronology of a financial crisis, *CRS Report for Congress*, No. 1007 E, Washington, D. C.

Convertibility and *the banking system* in Argentina

Alfredo F. Calcagno

*Economist,
Statistics and Economic
Projections Division,
ECLAC.*

The system of currency convertibility has shown that it is effective in overcoming inflation in Argentina, but its capacity for supporting a stable growth process and acting as a monetary and exchange-rate system which does not involve intervention and heavy costs on the part of the State is currently being questioned. The present article deals with this aspect on the basis of an analysis of the 1991-1995 period and identifies some key features of the functioning of the system: its reactions to movements of foreign capital; its interrelations with the domestic banking system; the extent to which it is capable of operating automatically without any need for a lender of last resort, as claimed in the theory on which it is based; and the degree to which the currency issued really has effective backing to ensure its convertibility.

I

Introduction

Radical changes took place in the first half of the 1990s in the rules governing the Argentine economy. The immediate aim of these changes was to control inflation, but they also sought to establish a whole new framework for economic development. To this end, an effort was made to bring about lasting changes in the degree of openness of the economy, in the functions of the State, in labour relations, and in the monetary and financial system. Short- and long-term problems were tackled at the same time, and it seemed that the main measures would have to operate on both these levels. Thus, in the case of trade openness, it was desired to check domestic price rises through foreign competition and also to promote more efficient use of production resources. The privatization process, for its part, was designed to cover cash shortfalls, but it also formed part of a project to reform the State by reorienting State action from the production of goods and services to its "specific functions". Likewise, the monetary and exchange reforms (the core of which is the Convertibility Act) appeared to have a dual purpose: in the short term, to establish an exchange-rate anchor to check inflation, and in the longer term to establish a monetary system which would impose a well-defined rule on currency issues instead of permitting arbitrary actions by the monetary authorities, thus realizing a long-standing dream of the monetarist school, repeatedly expressed in the present century ever since the crisis in the Gold Standard.¹

□ This article is based on document LC/R.1682 of the ECLAC Statistics and Economic Projections Division, the main hypotheses of which were discussed with Pedro Sáinz. The author also wishes to express his thanks for the valuable comments of Oscar Altimir, Gunther Held, Daniel Heymann, Luiz Claudio Marinho, Juan Martín, Edgardo Noya, Arturo O'Connell and Alejandro Ramos.

¹ Among the studies on this subject, special mention may be made of that by Simons, 1936, and –from a non-monetarist standpoint– that by Hayek, 1931.

This latter aspect of the convertibility system has aroused considerable interest both within Latin America and elsewhere. The region had witnessed other cases of systems similar to that of convertibility, with exchange freedom and fixed exchange rates, which did not manage to stabilize prices and led instead to devaluations and balance-of-payments crises. The present Argentine system, however, has lasted longer than any of its predecessors and successfully checked inflation, while it was accompanied by high economic growth rates between 1991 and 1994. Moreover, it survived the Mexican crisis and could therefore win fresh prestige and even become a model monetary system for other countries, provided the Argentine economy were able to resume its growth.

The way the convertibility system operated during the 1995 crisis is particularly interesting. Monetary history shows that systems like the Gold Standard do not suffer major difficulties when gold or convertible currency enter the country: the virtues or shortcomings of the system become clear when the opposite is the case. The outflow of capital from Argentina which took place during the first half of 1995, accompanied by loss of reserves and a decline in bank deposits, had this revealing effect. It is therefore interesting to see how the monetary and banking system reacted to this situation, how far it was possible to maintain the principle of convertibility and, in particular, whether the automatic adjustment that was to be expected in theory –which ruled out the use of a lender of last resort– actually operated in practice.

The convertibility system introduced a new form of operation for the banking system, whose main source of liquidity now became the inflow of foreign capital instead of the Central Bank. At the same time, what happened in the banking system was of crucial importance for maintaining convertibility. In the following sections we will analyse the mutual relations between the new monetary and exchange rate framework and the functioning of the banking system, in the light of the changing conditions on international capital markets.

II

Monetary reform

1. The main measures adopted

When the peronist government took office in 1989, Argentina had suffered fifteen years of economic decline and was in the midst of an inflationary crisis. After a few months in which no definite strategy was followed, the economic policy authorities tackled the problem of inflation by trying to do away with exchange-rate speculation. The existing liquidity was exerting pressure on the foreign exchange market, and the devaluation of the currency was transmitted to all prices, even those of non-tradeable goods and services. The main instrument used to control inflation was the "Bonex Plan", adopted early in 1990. This compressed liquidity by replacing most of the bank deposits (concentrated in the short term) with medium-term public debt paper, denominated in dollars (Bonex, 1989 series).² At the same time, the public sector adopted stringent rules on expenditure which, by postponing some current payments, amounted to exacting forced loans from some of its suppliers and contractors.

The illiquidity resulting from these measures forced many resident agents to repatriate capital, and this gradually made it possible to halt the rise in the dollar and build up some US\$ 3.4 billion in international reserves: a figure which had risen to US\$ 6.2 billion by the end of 1990. After a big spurt in inflation between December 1989 and March 1990, price rises slackened in the rest of the year, reaching single-digit monthly inflation in the last quarter. The stabilization of the exchange rate gradually checked

inflation, but only with considerable delay: the consumer price index rose by 1,344% between December 1989 and December 1990, although the nominal exchange rate only rose by 287%. The perception of growing exchange-rate lags and problems in the fiscal sphere, together with the remonetization that had occurred in the economy, led to a new wave of speculation against the currency, causing loss of reserves and a resurgence of inflation in January and February 1991. In these circumstances, it was decided to replace the economic team.

The new economic authorities explicitly decided to adopt a fixed exchange rate in order to stabilize general price levels. Under the Convertibility Act which came into force on 1 April 1991, the Central Bank was required to sell all the foreign exchange that the market demanded at an exchange rate of 10,000 australes per dollar and to withdraw from circulation all the australes thus obtained; it was decreed that at no time could the international reserves be less than the total monetary base, defined in the Act as "currency in circulation, plus the demand deposits of financial institutions in the Central Bank, in current or special accounts"; and finally, all readjustments on the basis of changes in prices or costs were banned. The general idea of the Act was to take advantage of the indexing of prices to the dollar, which had become general practice after fifteen years of very high inflation, to avoid the inertial inflation that could result from the indexing of contracts (including wage agreements) on the basis of past inflation. Furthermore, the sectors producing tradeable goods were exposed to competition from imports, which was particularly severe because elimination of the possibility of resorting to devaluation was accompanied by reduction of tariff and para-tariff barriers.

The provisions of the Act were quite novel, not so much because of the introduction of a fixed exchange rate, set in advance, with free access to the foreign exchange market (since this had already been tried between December 1978 and April 1981 by Martínez de Hoz, then Minister of the Economy), but because of the restrictions on money issue and the legal form assumed by the measures. The aim was to

² In the first days of 1990, the Executive adopted Decree 36/90, which laid down that financial institutions must replace their clients' national-currency claims as of 28 December 1989—fixed term, readjustable or non-adjustable, special savings accounts, acceptances, deposits and loan security—with the corresponding value in terms of principal, interest and adjustments in External Bonds, 1989 series (BONEX 89). Payment in cash was permitted only up to a certain maximum; amounts exceeding this level were only permitted in respect of payments of wages, social allowances and pensions. See Argentina, Ministry of the Economy and Public Works and Services, 1994, p. 19.

give credibility to the exchange system in two ways. One was the rigidity of the measures: the exchange rate was fixed by law, which could only be changed by another law, although previously a mere administrative decision of the Central Bank was enough; the other was the announcement that the money issued must be backed by the international reserves: if the public so wished, it was stated, they could change their entire national currency holdings for dollars. The possibility of such conversion was ensured by the monetary rule: the Central Bank could only increase the monetary base in accordance with a corresponding increase in its international reserves.³ The exchange rate selected must not give rise to expectations of fresh devaluations, since the criterion for its adoption was precisely its sustainability: in fact, with the dollar fixed at 10,000 australes the monetary base existing in March 1991 was approximately equal to the Central Bank's international reserves.⁴ In response to the view that one last devaluation should be carried out before freezing the exchange rate, the economic authorities argued that such an adjustment would be pointless because it would be transferred to prices almost immediately in its entirety. Thus, it was decided to set the exchange rate anchor for the dollar at a relatively low level, compared with the real average level registered between 1983 and 1988.

As from 1 January 1992, the austral was replaced by the peso (1 peso = 10,000 australes). The Act amending the Charter of the Central Bank – a measure which complemented the monetary reform – was adopted in the same year. This Act provides that the Central Bank shall be independent of the other State powers; prohibits it from issuing securities or

³ Among the international reserves computed as backing for the monetary base the Government included gold, foreign exchange, accounts receivable, the net position with ALADI, and also dollar-denominated Argentine public securities in the hands of the Central Bank, valued at their market prices. Strictly speaking, these latter securities should not be considered as a component of the international reserves, regardless of the currency in which they are denominated, because they are not foreign claims. The special nature of this component of the reserves is implicitly recognized because it is laid down that they cannot account for more than 20% of the total reserves.

⁴ Strictly speaking, this criterion only applies to the determination of a minimum value for the dollar: any higher value would naturally be even more sustainable. Other criteria could also have been used for defining a sustainable exchange rate: for example, the possibility of achieving a given balance of payments current account surplus.

certificates whose purchase is compulsory and from paying interest on bank reserves; prohibits it from "issuing guarantees ... to cover the commitments of financial institutions, including those arising from the receipt of deposits"; severely limits the Central Bank's capacity to grant rediscounts and temporary advances to financial institutions (their duration may not exceed thirty calendar days, and they must not exceed the body's net worth); and restricts the possibility of granting finance to the government, both as regards the total amount and the form assumed.⁵ These provisions are designed to prevent uncontrolled money issues such as might occur through the monetary financing of a fiscal or quasi-fiscal imbalance or a massive rescue operation to aid the financial system.

2. The scope of the reform

Through these measures, the issuing function of the Central Bank was brought closer to that of a currency board which would issue or absorb money in line with variations in the foreign exchange reserves. It could still influence the money supply and bank liquidity by fixing compulsory banking reserve requirements, and in principle there was nothing to stop it from carrying out operations to reduce the monetary base. At the same time, the inclusion among the international reserves for backing the currency of a proportion of dollar-denominated government paper gave it some leeway for expanding the monetary base more than the accumulation of genuine international reserves would permit. Fundamentally, however, this set of reforms tended to deprive the Central Bank of its function as lender of last resort to the banking system and to severely limit the possibility of monetary financing of a fiscal imbalance.

The adoption of this set of rules meant giving up important economic policy instruments in the ex-

⁵ The Central Bank was already prohibited from granting direct loans to the national, provincial or local governments or backing their obligations. It could only provide finance to the government by purchasing National Treasury securities at their market value, up to an amount equal to one-third of its freely available reserves. Furthermore, its holdings of such securities could not increase by more than 10% per year. See Argentina, Ministry of the Economy and Public Works and Services, 1994, p. 20.

change-rate, monetary and financial fields. The decision to do this was due to short-term needs: it was imperative to give credibility to an anti-inflation programme after many others which it had not been possible to maintain. Convertibility, the legal parity of "one peso equals one dollar", and the commitment to back the money issued with foreign exchange reserves were all designed to transfer to the national currency the monetary qualities won by the dollar in the Argentine economy (it was already a unit of account, a store of value, and had gained considerable ground as a means of payment, especially during surges of inflation). These guarantees could be set aside: the currency could still be devalued by a decree of "*force majeure* and urgent need" (of which hundreds were adopted, both before and after the convertibility plan), and as we shall see below, the idea of backing the money issued is largely illusory. However, the adoption of rigid rules was necessary in order to convince the economic agents that this time the programme really was in earnest, and part of this impression of seriousness depended on the length of time that the system thus introduced was supposed to last.

This raises the question of the time horizon of the convertibility system. Was it basically a set of measures designed to do away with inflationary expectations and to generate a virtuous circle of stabilization, reactivation and increased tax revenue on the basis of which it would subsequently be possible to restore more flexible monetary and exchange rules? Or was it designed to go further and to constitute a lasting monetary and exchange system capable of framing and furthering the development process in the long term? The economic and political authorities have not expressed completely clear views in this respect, and they may keep on changing. Some statements by the Ministry of the Economy hinted at a relatively short time horizon (just a few years), but others, by the Minister of the Economy and the President of Argentina himself, hinted at a system that would last for many decades.⁶

In this latter case, we would be dealing with a form of operation of the monetary and banking system that goes far beyond the bounds of a mere anti-inflation programme. We would be coming close to an automatic system such as was advocated by,

inter alia, Henry Simons. According to this latter author, "in a free-enterprise system we obviously need highly definite and stable rules of the game, especially as to money. The monetary rules must be compatible with the reasonable smooth working of the system. Once established, however, they should work mechanically... To put our present problem as a paradox -we need to design and establish with the greatest intelligence a monetary system good enough so that, hereafter, we may hold to it unrationally -on faith- as a religion, if you please."⁷

The time which has passed since April 1991 provides us with evidence on the basis of which we can gauge whether we are dealing with a system that satisfies Simons's demands or whether we need to restore in one way or another the function of lender of last resort or the possibility of amending exchange policy. It is a question of deciding how far and under what conditions the convertibility system may serve not only to favour monetary stability but also to provide a framework for sustained growth and for overcoming crisis situations.

⁶ In a newspaper column circulated by Reuters on 2 February 1996, the Minister of the Economy, Domingo Cavallo, considered that "the system of full convertibility of the Argentine peso is proving to be successful not only as a key stabilization tool after hyperinflation, but also as a means of generating a climate favourable to sustained growth."

⁷ Simons, 1936, p. 14. Taking a less ambitious attitude, Friedrich A. Hayek considered around the same time that "maintaining the semi-automatic system of the Gold Standard" was better than replacing it with a currency managed more or less arbitrarily: "I fear that at the present level of knowledge the risks involved in such an attempt would be much greater than the shortcomings of the system based on the Gold Standard" (see Hayek, 1975, p. 198 (published in English in 1931)). Much later, in his proposal to denationalize the currency by introducing a free banking system, this author modified the suggested solution, but not the problem to be solved, which was the discretionary power of governments in monetary policy. On the contrary, he considered that this problem was now even more serious: "With the abandonment of the Gold Standard and fixed exchange rates, central banks have acquired even more discretionary power than they had when they were still trying to keep to firm rules" (Hayek, 1980, p. 179).

III

The banking system during the period of expansion: 1991-1994

1. The growth of bank deposits

Argentina entered the 1990s with an extremely low level of monetization. The effects of chronic inflation were compounded by the episodes of hyperinflation in 1989 (when the consumer price index rose by 5,000%) and 1990 (when it rose by over 1,300%). Furthermore, the Bonex Plan of January 1990 had frozen a large part of bank deposits for a fixed term. In 1990, the liquidity ratio (as measured by M3 as a percentage of GDP)⁸ was only 5.4%, compared with 12% in 1987 and 24% in 1980.

In these circumstances, the disinflation brought about by the convertibility programme, combined with the abundant supply of foreign capital, made possible rapid remonetization which brought the liquidity ratio up to 17% of GDP in 1994. The flow of foreign capital made possible the accumulation of substantial international reserves (figure 1), in spite of the explosive increase in imports of goods and services (US\$ 6.4 billion in 1990, US\$ 18.2 billion in 1992 and US\$ 25.1 billion in 1994) which turned the big 1990 trade surplus into a growing deficit as from 1992.

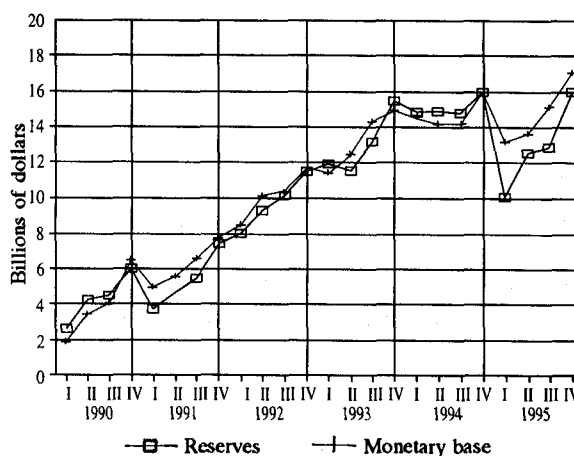
The monetary base grew side by side with the reserves, and with it there was an increase in the liquidity of the financial intermediaries. It was thus possible to expand the supply of credit to the private sector, taking advantage both of the greater loan capacity of the banking system and the initially low levels of indebtedness of many firms and families. Ultimately, the creation of bank money was reflected in an increase in deposits (figure 2).

Monetary and credit expansion is reflected in the balance sheets of the Central Bank, financial institutions and the non-banking private sector. Tables 1, 2 and 3 show the variations in the main classes of as-

⁸ We refer to the means of payment (currency outside banks plus current account deposits, i.e., M1) plus peso-denominated interest-bearing deposits (M2), plus dollar-denominated deposits. Some publications call this aggregate "broad M3".

FIGURE 1

Argentina: International reserves of the Central Bank and the monetary base, 1990-1995



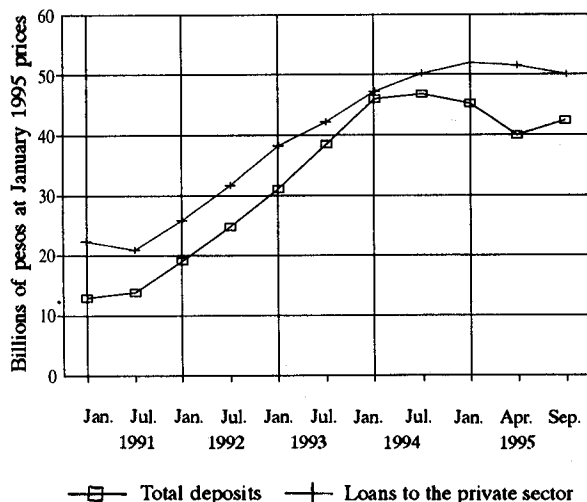
Source: Based on figures of the Central Bank of the Argentine Republic, Gerencia de Estudios Económicos, *Boletín estadístico* (various issues).

The international reserves do not include domestic securities in the possession of the Central Bank. "Monetary base" means currency outside banks plus peso deposits of financial institutions in the Central Bank between 1990 and 1994. As from 1995, because of the successive reforms in the regulations, the concept of monetary base was replaced first of all by "monetary liabilities of the Central Bank" and later by "financial liabilities of the Central Bank". These concepts are explained in footnote 17.

sets and liabilities of these agents between the beginning of the convertibility system (April 1991) and the eve of the Mexican crisis (November 1994).

The bank balances show a big quantitative increase (+57% in the assets and liabilities of the Central Bank and +123% in those of financial institutions), with a leading role being played by foreign-currency operations. In the balance sheet of the Central Bank, accumulation of international reserves accounts for 73% of the increase in assets. For financial institutions, loans in dollars represent 59% of the increase in total loans (including purchase of securities), while increased foreign-currency deposits

FIGURE 2

Argentina: Financial institutions, deposits and loans to the private sector

Source: Based on Central Bank of the Argentine Republic, Gerencia de Estudios Económicos, *Boletín estadístico* (various issues). The balances were converted to constant values on the basis of the general level of the Wholesale Price Index.

account for 55% of the total increase in private deposits (a further 35% corresponds to an increase in national-currency time deposits and 10% to increased current account balances).

The inflow of short-term foreign capital was a decisive element in this evolution. The balance of payments (in the new IMF presentation) registers an extraordinary net inflow of "other short-term debt" for the non-bank private sector in 1992 and 1993 (no comparable figures are available for 1994): this inflow was US\$ 7.9 billion in the first of these years and US\$ 10.5 billion in the second.⁹ In view of the growth in foreign-currency deposits in the Argentine banking system (these rose from US\$ 5.5 billion in July 1991 to US\$ 20.5 billion in July 1994), it may be deduced that much of this capital was deposited in the banking system.

The process of remonetization that took place between 1991 and 1994 may be seen in the assets of the non-financial private sector (table 3), which increased its demand for M1 (currency outside banks and sight deposits) and M3 (M1 plus time deposits in

banks in pesos and dollars). Table 3 shows the variation in only a few balance sheet items of private non-financial agents (i.e., those items which are a counterpart of the operations of the local financial system) and therefore does not present an accounting balance. Broadly speaking, however, it may be noted that the increases in monetary assets and banking liabilities are of a similar order of magnitude: it is a process that is channelled through the local financial system. Furthermore, the fact that the assets in question have increased more than the liabilities suggests that the private non-financial agents have either increased their external liabilities or reduced their foreign assets (i.e., they have repatriated capital).

In order to gauge the soundness or fragility of this financial expansion we must look at the maturities and nature of the resources involved, on the banking liabilities side, and the destination and use made of the credit obtained, on the assets side.

The great majority of bank deposits are short-term, although the one-week fixed terms which predominated in the 1980s are no longer allowed. At the end of 1994, national currency resources consisted mainly of current account deposits (22%), savings bank deposits (28%) and fixed-term deposits (45%). The savings banks offer interest rates a good deal lower than those available on fixed-term deposits (3.3% per year in 1994, compared with 8.2%), but they provide high liquidity (several withdrawals per month are permitted); in the case of the fixed-term national currency deposits, 90% were for between 30 and 89 days and only 10% were for 90 days or more. Most of the deposits in dollars are fixed-term and almost all of them (99%) are for between 30 days and one year (no public information is available on the exact average term).¹⁰

The growth in foreign-currency deposits was the most important factor in the expansion of bank deposits, due to the massive inflow of foreign capital, mostly short-term. A high proportion of short-term foreign capital in the structure of bank resources is of course a factor of financial fragility, because as this money is attracted by the prospects of making profits on the stock exchange or through the differential between domestic and external interest rates, any reduction in these incentives can lead to its rapid withdrawal.

⁹ See IMF, 1995a.

¹⁰ Data taken from Banco Central de la República Argentina, Gerencia de Estudios Económicos, *Boletín estadístico*, various issues.

TABLE 1

**Argentina: Variation in Central Bank
balances between April 1991 and November 1994**
(Millions of pesos)

Assets		Liabilities	
Foreign assets	13 403	Liabilities to international organizations	-867
Finance provided to the Government	2 560	Official deposits	453
Loans to financial institutions	2 439	Miscellaneous accounts	8 760
		Money in circulation outside the financial system	6 311
		Money in circulation in financial institutions	1 051
		Deposits by financial institutions	2 695
Total	18 402	Total	18 402

Source: Based on Central Bank of the Argentine Republic, Gerencia de Estudios Económicos, *Boletín estadístico* (various issues).

TABLE 2

**Argentina: Variation in balances registered in the consolidated
accounts of financial institutions^a between April 1991 and November 1994**
(Millions of pesos)

Assets		Liabilities	
Cash	1 051	Net external credits	1 583
Current account in Central bank	3 051	Official deposits	4 951
Loans and securities, official sector	2 439	Private demand deposits in national currency	3 254
Loans and securities, private sector, in national currency	13 382	Private time deposits, in national currency	10 713
Foreign currency loans to private sector	20 679	Private foreign currency deposits	16 922
Other assets	8 054	Liabilities with Central Bank	4 862
		Other liabilities	-1 063
		Capital and reserves	5 946
Total	47 120	Total	47 120

Source: Based on Central Bank of the Argentine Republic, Gerencia de Estudios Económicos, *Boletín estadístico* (various issues).

^a Includes banks and savings banks, finance companies, savings and loan institutions for housing and other constructions, and credit institutions.

TABLE 3

**Argentina: Variation in some items of the consolidated accounts
of the non-financial private sector between April 1991 and November 1994**
(Millions of pesos)

Assets		Liabilities	
Money in circulation	6 311	National-currency bank loans	13 382
Demand deposits in banks	3 254	Foreign-currency bank loans	20 679
National-currency time deposits in banks	10 713		
Foreign-currency time deposits in banks	16 922		
Total	37 199	Total	34 061

Source: Based on Central Bank of the Argentine Republic, Gerencia de Estudios Económicos, *Boletín estadístico* (various issues).

2. The use made of credit

With regard to the use made of bank loans (the expansion of which is reflected in the "assets" section of table 2), it may be observed that as the volume of finance provided increased, the use made of it

changed considerably. Table 4 shows the sectoral structure (by main activity of the borrower) at the beginning of the process of expansion of credit, and the way this structure subsequently evolved.

When the convertibility programme was launched, there was a rapid increase in loans to families

TABLE 4

Argentina: Distribution of finance, 1990-1995^a
(Percentages)

At end of first quarter of:	1990	1991	1992	1993	1994	1995
Primary activities	8.8	9.4	11.5	12.4	11.5	10.7
Manufacturing	36.5	25.7	20.4	19.6	19.1	17.8
Construction	6.8	6.7	5.8	5.1	4.1	4.2
Electricity, gas and water supply	4.7	3.5	2.8	1.4	2.3	1.9
Wholesale trade	5.2	4.3	5.5	5.7	6.1	5.1
Retail trade	2.0	2.5	6.8	9.0	10.1	10.0
Services and finance	23.8	23.6	21.1	22.7	24.1	24.3
Families	9.9	21.0	22.7	20.3	18.0	20.3
Others	2.3	2.3	3.4	3.7	4.7	5.7
<i>Total</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>

Source: Based on Central Bank of the Argentine Republic, Gerencia de Estudios Económicos, *Boletín estadístico* (various issues).

^a Includes finance (in both pesos and dollars) provided by banks and savings banks, finance companies, savings and loan institutions for housing construction, and credit institutions.

and retail trade, whereas the share accounted for by loans to manufacturing firms went down to less than half. This big increase in consumer credit favoured the recovery of the economy, but it also contributed to the rapid increase in imports and was a factor in the decline in national saving registered between 1990 and 1992. The relative reduction in credit to industry did not mean a reduction in absolute terms in the finance provided to these activities: quite the contrary, in view of the overall growth of credit. Nevertheless, these figures show the low priority given by the banking system to the restructuring of a sector which was facing radical changes in the rules of the game, especially as regards the opening up of the economy and the changes in the exchange-rate system.

Important data for inferring the use made of loans are those regarding the maturities and interest rates at which these are taken out. No precise infor-

mation is available on the total amounts of loans by maturity,¹¹ but it is possible to gauge the relative importance of some typical forms of short-term finance, such as current account advances (20% of total loans in mid-1995), signature loans (30% of the total), and personal loans (10%), while the overall balance of mortgage and secured loans, taken together, was 24% of the total.¹²

Interest rates stood at levels which, in a context of very low inflation, may be considered quite high (see figure 3). During 1993 and 1994 (i.e., before the Mexican crisis broke out), annualized real interest rates for current account advances and personal loans were between 25% and 55% in general terms. At these rates, it may be conjectured that these funds were not used to finance investment but rather to cover firms' short-term liquidity requirements and consumer credit. The rates were lower for secured loans and signature loans—between 15% and 30% per year in real terms—but these costs also seem excessive for financing investment projects. Rates on dollar loans, for their part, although somewhat lower in nominal terms, were also relatively expensive, especially bearing in mind the existence of some exchange risk (see figure 4).

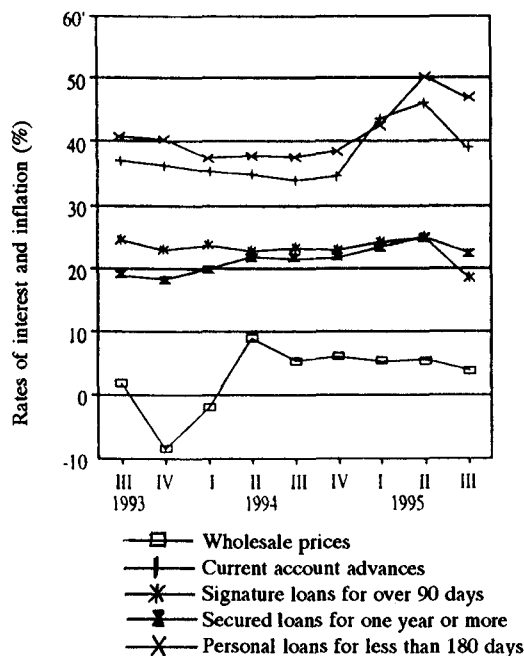
This does not mean that the convertibility plan has been responsible for the high real interest rates: indeed, rates on both deposits and loans went down

¹¹ Data are available, however, on the credit flow: i.e., the amounts lent each month to the non-financial private sector, and short-term operations predominate overwhelmingly in these totals. In November 1994, out of the total operations in national currency (75% of all the loans taken out that month), 81% of the total flow corresponded to current account advances, 14% consisted of signature loans with a term of less than 90 days, and 3% were personal loans for less than 180 days: these three categories thus account for 98% of the total. In the case of foreign-currency loans, where these three categories accounted for 59% of the total, the maturities were somewhat longer. Naturally, the rotation of short-term loans is much faster than long-term operations, so it is not possible to infer from these data the structure of total loan balances by maturities.

¹² See Banco Central de la República Argentina, 1995a. An undetermined proportion of secured loans were for less than one year.

FIGURE 3

Argentina: Annualized nominal interest rates on loans in pesos by the financial system, and rate of variation of nationwide wholesale price index



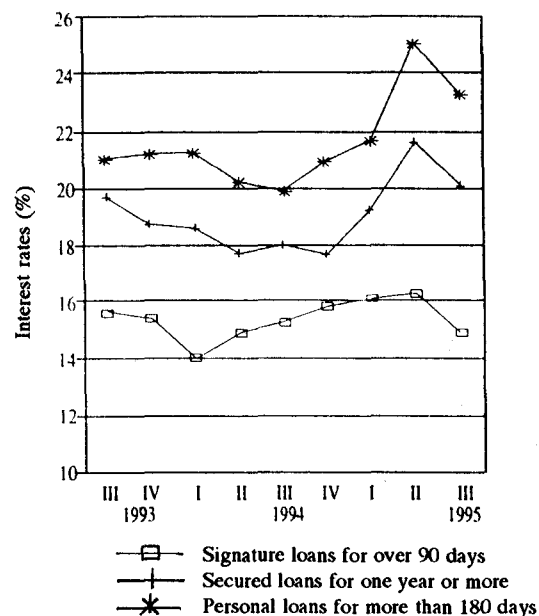
Source: Based on figures of the Central Bank of the Argentine Republic, Gerencia de Estudios Económicos, *Boletín estadístico* (various issues) and INDEC, *Estadística mensual* (various issues).

significantly as from April 1991. Even so, however, interest rates on loans remained far above international levels and this has had various repercussions on the banking system. Thus, for reasons of both cost and maturities, firms with direct access to foreign credit have generally preferred it to that offered by the local financial system, thus depriving the banks of part of their first-line clients, while other borrowers (typically small and medium-sized firms) have been put under heavy pressure by the economic openness and restructuring process, all of which has tended to adversely affect the quality of loan portfolios.

An analysis of the reasons for these high interest rates on loans is beyond the scope of this article, but it is worth highlighting the big difference between the rates on loans and on deposits (a persistent problem of the Argentine economy during the last twenty years), together with a variety of commissions and service payments which also make bank services more expensive. These financial intermediation costs cannot be attributed, as in the 1980s, to extreme de-

FIGURE 4

Argentina: Annualized nominal interest rates on loans in dollars by the financial system



Source: Based on figures of the Central Bank of the Argentine Republic, Gerencia de Estudios Económicos, *Boletín estadístico* (various issues) and INDEC, *Estadística mensual* (various issues).

monetization and the rapid turnover of bank money caused by inflation (although it is true that there is still a great deal of room for increasing the use made of the banks in the Argentine economy). The banks have attributed part of their high costs to the irregular nature of the portfolios they have to put up with, which was a considerable problem even before the 1995 crisis, for their difficulties in recovering the credits granted force them to transfer the costs to other credits or set aside funds to cover bad debts, which means that they must obtain high operating revenues.¹³ If this is so, then it means that there is a vicious circle in which the high interest rates are both the cause and the effect of the high rates of non-recoverability.

¹³ A report by Goldman, Sachs & Co. refers to "the apparent inconsistency between the big interest spreads and low rates of profitability" of banking institutions, explaining this by "the direct and indirect costs of low-quality loans", together with high operating costs. See Corrigan and Stocker, 1996, pp. 32-33.

It would not be in order to make generalizations on the basis of aggregate figures, especially for such a highly segmented banking system as that of Argentina. Such a vicious circle would not appear to exist in the case of the segment of the banking system made up of the big private banks, foreign banks and some official institutions, but it would indeed appear to exist in the case of a large sector of the provincial and cooperative banks and certain types of borrowers (small and medium-sized enterprises and families). This differentiation within the banking system became very clear during the 1995 crisis.

All in all, because of the general orientation of its financing and the levels of its interest rates, the financial system as a whole does not seem to have channelled much of its credit for financing invest-

ment, and from this point of view it does not seem to be an effective agent for consolidating an accumulation process. The expansion of the volume of credit did support the 1991-1994 reactivation by providing backing for the pent-up demand for consumer durables and supplying firms with operating capital (although at a high price), and from this standpoint the financial system indirectly helped firms to finance their investments from their own resources: the main source of finance for Argentine firms in the past.¹⁴ Nevertheless, there is still no solution for the problem of the gap between the operations which are most profitable for the banking system and the investment needs of enterprises and of the economy in general, or the very high spread between interest rates on loans and on deposits.

IV

The 1995 crisis

1. Convertibility is put to the test

Even before the Mexican crisis occurred in December 1994, the Argentine economy was showing some disquieting symptoms. Its current account imbalance was continually growing, and in 1994 it amounted to US\$ 10 billion, equivalent to 54% of the country's exports of goods and services.¹⁵ The public accounts showed a significant deficit in the second half of 1994, after having turned in surpluses in 1992 and 1993. Current resources (tax and social security receipts) stagnated and even tended to decrease during that same half-year, because of the pension reform (in force since August 1994), which reduced the government's income, and a slackening in the rate of economic activity. Against this background, open unemployment came to 12.2% in October, while underemployment came to 10.4% (compared with rates of 9.3% in both cases one year earlier). The capital market, for its part, was affected by the rise in international short-term interest rates, and in November the stock exchange index was already 25% below the February level (the peak for the year). The Argentine economy was faced with a contradiction: its levels of activity and growth were giving rise to a growing external imbalance, but any

slackening of growth could worsen the fiscal situation and affect the already insufficient rate of creation of jobs. The country depended more and more on the inflow of capital to cope with this contradiction.¹⁶

It is therefore not surprising that the Mexican crisis had a bigger and longer impact on Argentina than on other countries of the region: "Argentina was the first country to feel the pressure of the financial markets, probably because it had some of the same macroeconomic features as Mexico, including a fixed exchange rate, a low rate of domestic saving, a weak banking system, and a significant current account deficit" (IMF, 1995b, p. 64). Within this context, there

¹⁴ See Feldman, 1978.

¹⁵ By way of comparison, in the same year the current account deficits (as a percentage of exports) were 3% for Brazil, 7% for Chile, and 24% for Colombia. In Mexico, in contrast, the figure was 58% (excluding assembly-type operations).

¹⁶ For an overview of the economic consequences of the convertibility programme and the challenges which it faced even before the Mexican crisis, see Porta, 1995.

was a flight of capital, with a consequent fall in the reserves and, to a lesser extent, in the monetary base¹⁷ (see figure 1).

Resources for the purchase of foreign exchange came mainly from private sector time deposits, which went down by a little more than 18% between November 1994 and April 1995. At first, depositors were not confident in the stability of the exchange rate, and peso deposits were converted into dollar deposits; total balances at the end of January 1995 were 5% below those of the end of November 1994, but dollar deposits registered moderate growth. Thereafter, there were fears about the solvency of the financial system and both types of deposits went down; part of the remaining balances was redirected to the banks which were considered to be the soundest.

The banks considerably raised their interest rates on deposits in an effort to retain their depositors: thus, in the Federal Capital and Greater Buenos Aires

annual rates doubled, rising from 9% in November 1994 to 20% in April 1995 for fixed-term peso deposits and from 6% to 11% for dollar deposits. Interest rates on loans rose to an average of 50% per year for current account advances, and in the interior of the country and for second-line borrowers (especially small and medium-sized enterprises) they reached levels of 80% or more. Loans not only became more expensive but also harder to obtain, even for many rollovers of short-term loans. Many borrowers were thus faced with the spectre of default, leading to a deterioration in the banks' portfolios. Table 5 shows this evolution of the situation, at least in part.

This table should be viewed as merely an approximate representation of the situation. In particular, it should be borne in mind that banks habitually tend to renew some of the loans that they would like to collect, but cannot. Before declaring a debtor to be delinquent, they often prefer to keep the debt on normal terms, especially when the debtor is an important or long-standing client. In a crisis, it is not a good idea to reveal the deterioration of one's own loan portfolio in all its gory details (for example, this would make it harder to gain access to inter-bank loans), and moreover banks try to avoid having to make heavy provisions for possible losses.

Furthermore, it is difficult to compare the figures for 1994 and 1995. Between mid-1994 and early 1995 there was a change in the method of classifying loans, so that for several months one part of the portfolio was presented according to the old criterion and the other part was classified according to the new one. At the time of writing this article, one-third of the November 1994 portfolio was still classified according to the old method. However, although there is a lack of homogeneity in the components of the questionable loan portfolio, this does not seem to alter the respective orders of magnitude or, consequently, the main lines of the analysis. Thus, for the financial system as a whole, the percentages of loans in the doubtful portfolio were practically identical in both sub-groups: that classified according to the old system and that calculated in line with the new rules.

In table 5 it is worth noting not only the big increase in the doubtful portfolio but also the high levels of dubious loans which already existed in November 1994. This could confirm the views of those who asserted that "a banking crisis was already brewing before the Mexican crisis".¹⁸

¹⁷ A warning is in order in this respect, since the very concept of the monetary base changed during 1995. On 12 January 1995, the Central Bank "dollarized" the peso-denominated compulsory deposits of the financial institutions, with the announced intention of "doing away with market fears of a possible devaluation" because from that moment "the money frozen in the Central Bank was free from any risk of possible devaluations which would adversely affect the financial institutions" (see Argentina, Ministry of the Economy and Public Works and Services, Department of Economic Planning, 1995b). This change in monetary denomination served to justify the withdrawal of these deposits from the "monetary base" aggregate, which was reduced solely to money in circulation. One of the pillars of convertibility—the quantitative link between the international reserves and the monetary base—was thus altered by a mere change of definition. From then on, however, the international reserves served as "backing" for another aggregate, termed the "monetary liabilities" of the Central Bank, which comprised the money in circulation plus the financial institutions' dollar-denominated current account deposits. Subsequently, there was a further change in the rules, whereby the non-interest-bearing compulsory deposits were replaced with "liquidity requirements" consisting of interest-bearing holdings of given foreign or domestic assets; the latter included Bank Liquidity Certificates issued by the State or Central Bank certificates of deposit. This new alteration led to a change in the aggregate "backed" by the reserves, which was termed "financial liabilities of the Central Bank", consisting of the "monetary liabilities", plus the net positions as regards the Central Bank certificates of deposit, the Bank Liquidity Certificates, and government deposits (defined as "those effected by the Treasury, corresponding to the amounts collected from financial institutions in respect of sales of Bank Liquidity Certificates, plus deposits in operational accounts of the National Government in the Central Bank of the Argentine Republic". For a detailed explanation, see Argentina, Ministry of the Economy and Public Works and Services, Department of Economic Planning, 1995a, p. 138.

¹⁸ See Corrigan and Stocker, 1996, p. 55.

TABLE 5

Argentina: Portfolio of doubtful loans of financial institutions, as a percentage of total loans and of net worth, and corresponding values in pesos (as at November 1994 and November 1995)^a

	In millions of pesos		As percentage of loans		As percentage of net worth	
	Nov. 1994	Nov. 1995	Nov. 1994	Nov. 1995	Nov. 1994	Nov. 1995
Domestically-owned public banks	3 200	3 812	26.1	28.3	73.0	79.6
Banco de la Provincia de Buenos Aires	1 532	1 614	21.8	21.3	141.4	132.5
Other provincial and municipal banks	4 454	4 999	41.6	49.2	330.0	579.8
Domestically-owned private banks	2 042	3 037	8.4	12.9	54.2	75.4
Foreign-owned private banks	868	1 263	6.9	9.1	52.2	56.5
Cooperative banks	845	730	14.7	23.3	84.1	120.7
Finance companies	121	186	11.2	24.0	71.2	120.8
Loan offices	21	25	15.5	23.6	34.9	44.6
<i>Total for financial system</i>	<i>13 084</i>	<i>15 667</i>	<i>17.6</i>	<i>21.6</i>	<i>97.9</i>	<i>112.4</i>

Source: Prepared on the basis of Central Bank of the Argentine Republic, *Estados contables de las entidades financieras* (various issues).

^a Loans were considered to be doubtful when, according to Central Bank Bulletin A 1112 (under the old system), they were "subject to special arrangements", "in arrears", "in danger of insolvency", "in process of legal recovery" or "in bankruptcy or liquidation". In the case of commercial loans, they were considered to be in the same situation, according to Central bank Bulletin A 2218, when they were "potentially at risk", "suffering from problems", "with a high risk of insolvency" or "irrecoverable", while consumer or housing loans were considered doubtful if they were "poorly fulfilled", "hard to recover" or "irrecoverable".

The convertibility system had reached a crucial point in both theoretical and practical terms. The loss of reserves should spark off an automatic adjustment through monetary and credit restriction. This would cause interest rates to rise and reduce domestic spending; the adjustment in the level of activity would turn the trade deficit into a surplus, thanks to the reduction of imports, and capital would be attracted back into the country by the high financial returns. The international reserves would thus be restored and there would be a recovery in domestic credit.¹⁹

Even if this adjustment were insufficient to stop the outflow of capital, it was believed that convertibility would be in no danger, provided that the international reserves were sufficiently large. According

¹⁹ "The adjustment to excess spending is automatic. If the inflow of capital goes down, then expenditure also goes down automatically, without any need for devaluation, and proof of this is provided by the reductions in imports registered in January and February of this year, while exports have continued to rise, so that the current account deficit has been practically halved. This is an adjustment process which does not need to subject the population to drastic redistributions of income through measures such as devaluations ... Through the rise in interest rates ... an adjustment is taking place in the levels of both consumption and investment in Argentina". See the interview of the Minister of the Economy, Domingo Cavallo, in *El Mercurio*, 1995.

to an IMF study, "If the outflows of capital are sufficiently large, a currency board could collapse because of the lack of external assets. If the whole of the national currency was not covered at the start, the currency board could find itself without reserves before the whole stock of national currency was converted. If there really was full backing, massive outflows of capital could lead to the elimination of the national currency from circulation and its replacement by the foreign reserve currency. The currency board would continue to exist –albeit with a much reduced balance– and it would still be ready to change external assets for national currency at the original exchange rate."²⁰ That study warns that the situation would give rise to costs, especially for the financial system, because of the "sharp rises in interest rates, which would degrade the quality and liquidity of assets precisely when liquidity is most needed. Consequently, rigid adherence to a currency board in the event of a large-scale outflow of capital could mean instability for the banking system" (IMF, 1995b, p. 125). In the final reckoning, massive conversion of pesos into dollars was not desirable, but it was not inconceivable that it might take place without the need to abandon convertibility. The message

²⁰ IMF, 1995b, p. 124.

of the economic team towards the end of 1994 was that if the public wanted to exchange their pesos for dollars the Government was perfectly able to satisfy their wishes. The national currency might disappear, but not the convertibility system.

In order to ensure this invulnerability of the system to a massive demand for dollars, it had been asserted—with a certain degree of ambiguity—that the currency issued had full backing. Let us look at this more closely. To begin with, what currency are we talking about? We are certainly not talking about the stock of money in the hands of non-financial agents (M3), which was at all times much greater than the international reserves, even if we accept an unjustifiably broad definition of the latter. According to the convertibility system, the size of the reserves should be at least equal to that of the monetary base, but it is not the latter which can exert pressure on the foreign exchange market. The monetary base is a Central Bank liability made up of the currency in circulation and the banks' deposits in the Central Bank. None of these monetary aggregates are speculative balances. Both the public and the banks use them for their most elementary needs: the public use them for their everyday transactions and the banks employ them for their inter-bank payments and the formation of their legal reserves. Thus, it is not the existing monetary base which can make a run on the dollar and absorb the Central Bank's international reserves: it is basically the short-term interest-bearing deposits, which are not included in the monetary base but nevertheless represent the bulk of the M3 aggregate.

This distinction has practical consequences. One of these is of a quantitative nature: when the crisis broke out, at the end of 1994, M3 was three times the size of the reserves. Another consequence concerns the mechanisms involved in a run on the dollar: "if the dollars were purchased by using the monetary base, the buyers would be giving up their liquidity in australes, which could lead to a rapid reversal of the run: normal liquidity requirements would make it necessary to change dollars back into australes. If, however, as we have already noted, the aggregate used for the purchase of dollars is not the monetary base but M3 (and, within M3, basically interest-bearing bank deposits), then those who speculate on a rise in the dollar because of the unsustainability of the legal exchange rate are not giving up their liquidity: they had already done so before. Thus, the specula-

tors do not lose their freedom of action, but they do reduce that of the banks, which will soon be short of currency (i.e., the monetary base) for returning deposits. The banks will raise their interest rates to try to stop the run, will seek inter-bank loans at rising interest rates, and will finally have to turn to the Central Bank".²¹ This is what happened in the early months of 1995.

The Central Bank was thus faced with an old dilemma, but now with a further complication: the new rules had left it with fewer instruments at its disposal. Sticking to the theoretical mechanism of the automatic adjustment meant leaving the banks to meet the withdrawal of deposits with their own liquid resources, their capacity for indebtedness (with the exterior or with other more liquid banks), and their capacity for recovering the credits granted.

These responses are not sufficient in the face of a more or less generalized withdrawal of deposits. The total liquidity of the financial institutions, after putting together their cash in hand, their deposits in the Central Bank and their compulsory reserves on foreign currency deposits, amounted in November 1994 to 9.1 billion pesos, or rather less than 20% of the total deposits. The banking system would be in the red well before the total exhaustion of its liquidity because it would not be able to pay the compulsory reserves on deposits. Inter-bank loans serve to facilitate the normal functioning of the banking system rather than to cope with a stampede, since in such a situation the institutions with some degree of liquidity try to ensure their own solvency rather than take advantage of opportunities for financial gains. At all events, even if the entire liquidity of the banking institutions were socialized for the general good, it would still be insufficient to deal with massive withdrawals, and this is so in the case of both peso and dollar deposits. In November 1994 the compulsory reserves in respect of the latter did not amount to even US\$ 3 billion, for a total of US\$ 21 billion in dollar deposits. It is true that the banks have access to the Central Bank reserves under the Convertibility Act, but in order to buy those dollars they have to present central bank money (base money), which is precisely what they lack.

²¹ See Calcagno, 1991, p. 14.

There remains the possibility of calling in the loans granted by them. The practical difficulties involved in this are obvious, however: bank loans are less liquid than deposits, to the extent that the banks fulfill one of their functions, which is convert (prolong) the maturities of financial assets. Furthermore, suddenly demanding the repayment of a large number of loans will lead to an economic depression which will make their effective recovery impossible. It must also be borne in mind that in order to obtain liquidity in central bank money (base money) or in dollars, which is what the depositors who want to withdraw their savings from the local financial system demand, it is not enough simply to collect a loan for a similar amount to that demanded by a depositor. If the debtor repays the loan by drawing on his account in the same bank A which lent him the money, then the bank will simultaneously suffer reductions in its assets (the loan) and its liabilities (the debtor's deposit), without obtaining any liquidity in central bank money; likewise, if the debtor firm or family draws on another bank (B), bank A can demand the corresponding amount in central bank money from bank B through the clearing house, thus simply passing on its own liquidity needs, and the banking system as a whole continues to require base money.²² This money will appear if the debtor pays in cash or by drawing on an account maintained in another country. The fact is that, conceptually, it is necessary to call in an amount of credits greater than the amount of central bank money initially required, in a process which is transmitted to other banks. This would bring on a process of debt deflation.²³

2. Handling the crisis

Let us now see what actually happened in practice: how the balances of the various agents evolved in the first months of the crisis (tables 6, 7 and 8) and, in particular, the response of the Central Bank.

²² The mechanism is essentially the same for deposits and loans in dollars: if a credit is repaid by drawing on another foreign currency account in the local banking system, the liquidity requirement is transferred from one bank to another but is not eliminated for the system as a whole.

²³ Such processes are typical of deflationary crises which have occurred when, in a situation of economic and banking crisis, the banks are unable to obtain support from a lender of last resort. See the classic analysis by Fisher, 1933.

Table 6 shows the fall in the international reserves (-2,706 million pesos), which was greater than the contraction in the monetary base (-886 million pesos). The loss of reserves was extremely intense between the end of December and the end of March: -5,832 million pesos (dollars), or 36.3% of the balance at the end of 1994. In April 1995 Argentina began to receive external financial aid from multilateral agencies (+1,909 million pesos (table 6)), but the outflow of deposits from the banking system and the net demand for dollars by private individuals nevertheless continued. This loss of deposits continued until the mid-May elections (in which the outgoing government was re-elected) cleared up the political doubts which had existed in addition to the prevailing economic uncertainty.

Tables 7 and 8 show the decline in bank deposits. This decline affected all types of deposits, but to very unequal extents. Official deposits and private demand deposits went down relatively little (-312 and -170 million pesos, representing reductions of -4.5% and -4.1% respectively), but time deposits fell much more severely: -26.6% in the case of peso deposits and -12.5% for foreign currency deposits, making a total of nearly 6.5 billion pesos. The different rates of decline of private deposits (in dollars or pesos) point to the existence of exchange risk.

It may also be observed that the consequent pressure on the international reserves came from time deposits, which went down sharply, and not from M1 (the total amount of which remained unchanged, since the slight reduction in demand deposits was offset by a slight increase in the currency in circulation). Furthermore, the fact that all deposits went down (regardless of their currency denomination) shows that there was mistrust not only of the stability of the exchange rate but also of the solvency of the financial system.

In order to cope with the reduction in their deposits, the financial institutions had to make use of their available resources in both pesos and dollars. They used their cash balances and their reserves in the Central Bank, and there was also a reduction from US\$ 3.0 billion to US\$ 1.4 billion in their reserves on dollar deposits, consisting mainly of deposits in the New York branch of the Banco de la Nación Argentina and other banks abroad. It may be seen from table 7 that this decline coincides with an increase in one item ("net external credits") of the

TABLE 6

**Argentina: Variation in Central Bank
balances between November 1994 and April 1995**
(Millions of pesos)

Assets		Liabilities	
Foreign assets	-2 706	Liabilities to international organizations	1 909
Finance provided to the Government	-1 786	Official deposits	60
Loans to financial institutions	2 063	Miscellaneous accounts	-3 512
		Money in circulation outside the financial system	367
		Money in circulation in financial institutions	-572
		Deposits by financial institutions	-681
Total	-2 429	Total	-2 429

Source: Based on Central Bank of the Argentine Republic, Gerencia de Estudios Económicos, *Boletín estadístico* (various issues).

TABLE 7

**Argentina: Variation in balances registered in the consolidated
accounts of financial institutions^a between November
1994 and April 1995**
(Millions of pesos)

Assets		Liabilities	
Cash	-565	Net external credits	1 581
Current account in Central bank	-750	Official deposits	-312
Loans and securities, official sector	-475	Private demand deposits in national currency	-170
Loans and securities, private sector, in national currency	-1 309	Private time deposits, in national currency	-3 829
Foreign currency loans to private sector	989	Private foreign currency deposits	-2 622
Other assets	-1 870	Liabilities with Central Bank	1 778
		Other liabilities	-869
		Capital and reserves	464
Total	-3 980	Total	-3 980

Source: Based on Central Bank of the Argentine Republic, Gerencia de Estudios Económicos, *Boletín estadístico* (various issues).

^a Includes banks and savings banks, finance companies, savings and loan institutions for housing and other constructions, and credit institutions.

TABLE 8

**Argentina: Variation in some items of the consolidated accounts
of the non-financial private sector between
November 1994 and April 1995**
(Millions of pesos)

Assets		Liabilities	
Money in circulation	367	National-currency bank loans	-1 309
Demand deposits in banks	-170	Foreign-currency bank loans	989
National-currency time deposits in banks	-3 829		
Foreign-currency time deposits in banks	-2 622		
Total	-6 254	Total	-320

Source: Based on Central Bank of the Argentine Republic, Gerencia de Estudios Económicos, *Boletín estadístico* (various issues).

banks' liabilities.²⁴ Their use of their own liquid resources was not sufficient, however, to meet the demand for the return of deposits, although it was excessive with respect to their obligation to maintain the minimum legal reserve requirements. The automatic adjustment would have led to a process of debt deflation and, most likely, to a chain reaction in the form of the collapse of many banks and enterprises, but in fact there was no such adjustment. Thus, it may be observed from table 7 that although there was a decline of some 7 billion pesos in bank deposits between the end of November 1994 and the end of April 1995, the global balance of credits to the private sector (both peso and dollar credits) only went down by 320 million. There are many possible reasons for this: some credits were not immediately due, and many which *were* due (such as renewable short-term credits for firms' working capital) could not be collected in the midst of an economic crisis. These defaults are often not made public, and give rise to forced renewals of the loans in question.

If we compare bank movements with the consolidated balance of the non-financial private sector (table 8), we see that the reduction in assets (bank deposits and currency outside banks) does not match the variation in liabilities (debts owed to banks). The counterpart of this reduction in assets must be sought outside the local financial system, in the establishment of foreign-currency assets abroad or assets kept "under the mattress". It should also be noted that the M1 monetary aggregate (currency outside banks and demand deposits) in the hands of the non-financial private sector does not go down (it actually increases slightly). In other words, it was time deposit balances, not the currency normally used for transactions (part of which is base money), which were used to buy dollars.

There was thus no automatic adjustment to deal with the reduction in bank deposits. There was, however, strong intervention—by action and omission—on the part of the Central Bank. On the one hand, it considerably reduced the minimum reserve requirements. Thus, the minimum reserve percentages on

current account deposits and regular savings deposits went down from 43% in December 1994 to 33% between January and July 1995 and 20% in August, while the reserve requirements on fixed-term deposits (in both dollars and pesos), which stood at 3% in December 1994, fell to 1% in January-February, subsequently rose to 2%, and disappeared altogether in August 1995.²⁵ Furthermore, the interest rates on the missing reserves charged by the Central Bank to institutions which were unable to meet the reserve requirements were far below those currently being demanded in the inter-bank market, and banks were also allowed to use their available cash resources to account for up to 50% of the minimum requirements.

These measures proved to be insufficient. Under the pressure of their lack of liquidity, the banks tried to collect their outstanding credits and to sell their public securities or use them as collateral. Both types of assets went down, as may be seen from table 7. However, it is no simple matter for banks to collect debts from firms which are suffering from serious contractions in sales, in the general level of activity, and in the supply of credit, and in contrast the consequences of even an incipient debt deflation process are extremely costly for the economy.²⁶ In these circumstances, the Central Bank was gradually resuming its role of lender of last resort, which—as we saw earlier—was supposed to have been severely limited—though not completely abolished—in the current monetary system.

²⁵ As from November 1995, the system of non-interest-bearing compulsory reserves was replaced with "minimum liquidity requirements" in respect of total liabilities, which may take the form of interest-bearing financial instruments that can be domestic (Bank Liquidity Certificates issued by the National Government or Central Bank certificates of deposit) or external (deposits in an account of the Deutsche Bank in New York, bonds issued by OECD governments, etc.). These requirements range from 0% to 15%, depending on the maturities of the various bank liabilities.

²⁶ "The problems of illiquidity [of the banks] resulted in the almost complete disappearance of private credit. Financial institutions began to renew loans for periods of between one and seven days, at rates reaching 70% per year in pesos and 55% in dollars. These rates were increased by up to ten percentage points in the case of institutions which, because of their pressing need for funds to cover liabilities, pressured their clients in this way to pay their debts ... Small and medium-sized enterprises, which had obtained credit the year before at rates of a minimum of 4% per month, had to renegotiate their debts at rates of a minimum of 8-9% per month, while they had practically no access at all to new lines of credit" (See FIEL, 1995b).

²⁴ The financial institutions' resort to external funds is also reflected in the new presentation of the balance of payments, which shows an inflow of US\$ 1,566 million to the banking sector (excluding the Central Bank) during the first quarter of 1995.

To begin with, the monetary authorities encouraged the functioning of a safety net for the private banks, whereby the banks with greatest liquidity purchased the portfolios of the neediest institutions. However, the abuses committed with regard to the discount rates applied to good portfolios led to the establishment of a new safety net through the State-owned Banco de la Nación. For this purpose, the Central Bank established a non-disposable deposit equivalent to 2% of the total deposits at 30 November 1994, to be paid into the Central Bank's account in the Banco de la Nación. On this basis, the Banco de la Nación was able to help institutions suffering from illiquidity by purchasing some of their loan portfolios. Assistance granted in this way during the first quarter of 1995 came to 982 million pesos.²⁷ Finally, on 1 March a decree was adopted to reform Act 24144, which laid down the Charter of the Central Bank. This reform facilitated the provision by the Central Bank of "advances to financial institutions to deal with temporary situations of illiquidity". These advances were not subject to any mandatory terms or guarantees, which were left to the discretion of the Central Bank. The latter institution was also empowered to transfer or sell loans acquired from illiquid institutions to other institutions which had surplus liquidity. The Central Bank thus indirectly took on the management of the bank safety net, and when we add to this the Central Bank's heavy injection of liquidity into the banking system through its operations with public security swaps,²⁸ we see that by March 1995 it had largely resumed its functions as a lender of last resort. By May 1995 the financial system had received nearly 3.5 billion pesos from the Central Bank in rediscounts and swaps. This was equivalent to some 50% of the deposits lost since the end of November 1994.

The history of this rediscovery of the importance of having a lender of last resort does not end here. At the end of March it was announced that a Bank Capitalization Trust Fund would be set up, to be financed (in the amount of some US\$ 2.6 billion) by World Bank loans and the issue of Argentine bonds underwritten by local financial institutions and foreign

banks (about US\$ 1 billion by each group).²⁹ This Fund was intended to facilitate and partly finance the capitalization, restructuring or sale of financial institutions suffering from problems. At the same time, the formation of the Provincial Development Trust Fund was announced, for supporting the privatization of provincial banks. It was to be financed by using the YPF shares in the possession of the State (US\$ 1.3 billion) as security and obtaining loans from the IDB (US\$ 750 million) and the World Bank (US\$ 500 million). Finally, in December 1996 an agreement was signed with thirteen international banks, led by the Chase Manhattan, for a stand-by credit of up to US\$ 6.1 billion which would be available "if there was generalized lack of confidence in the Argentine financial system or the system required additional international liquidity over and above the funds already at the disposal of the banks".³⁰ In such an event, the banks will automatically extend a line of credit at the request of the Central Bank, against collateral of Argentine securities. The cost of this programme will be shared by the Central Bank and the banks wishing to have access to this finance, and will consist of a retaining fee of around 0.6% as long as the funds are not used, and LIBOR plus 2.2% if the line of credit is used.

The Central Bank's intervention to tackle the banking crisis was also designed to check the outflow of deposits. On the one hand, it reinstated the official guarantee on deposits which had been abolished when the Central Bank's Charter was reformed in 1992. On the other hand, it passively tolerated the *de facto* suspension of the return of deposits by many financial institutions.³¹ In financial slang, these in-

²⁹ See FIEL, 1995c, p. 18.

³⁰ Statements by Roque Fernández, Minister of the Economy, on 20 December 1996 (*Reuters*).

³¹ This official permissiveness was quite explicit. When he was asked: "Is it possible that a bank which does not return deposits will nevertheless not be suspended?" the President of the Central Bank (and later Minister of the Economy), Roque Fernández, answered: "That is quite possible. There is no law which calls for the mandatory suspension of a bank suffering from an isolated problem" (report published in *Ambito Financiero*, 1995c, p. 25). Thus, as in the case of the Bonex Plan, some deposits suddenly lost their liquidity. The difference between the two episodes is that in the second case this measure was not general and resulted from the toleration of certain situations rather than a formal decision. Would more drastic measures have been taken if the outflow of deposits and the fall in reserves had continued? This possibility was repeatedly denied, but many depositors feared that the government might resort to a Bonex Plan II.

²⁷ See FIEL, 1995a, pp. 16-17 and 1995d, p. 17.

²⁸ These swaps consist of the purchase of securities for cash and their simultaneous sale on a futures basis.

stitutions "sat on" the deposits and simply decreed the forcible reprogramming of fixed-term maturities or imposed ceilings on withdrawals. This permissiveness on the part of the Central Bank permitted the survival of institutions which had technically become insolvent. In its Bulletin A 2319 of 21 March, the Central Bank went a step further in this tactic of transferring the problems of the banks to their clients. From that date on, instead of excluding from the clearing house all institutions which did not have sufficient liquidity to cover (in Central Bank money) the amounts owed by them to other institutions, it decreed that cheques issued by non-financial agents could be rejected, even when there were funds in the account on which they were drawn.

Thus, by action and omission, the Central Bank exercised decisive influence in order to control the banking crisis and avoid the closure of various institutions. As became clear later, the authorities' aim was to avoid a chain of failures which would foment a run on the banks, rather than to preserve all the institutions indefinitely. On the contrary, the clearly announced aim was to promote greater concentration of the banking system.³²

The loss of reserves was stopped through the agreement with the International Monetary Fund: in April 1995 the Fund deposited US\$ 1.64 billion and pledged a further US\$ 1.2 billion, to be disbursed in several quotas. Although the amounts pledged were much smaller than those made available in the rescue operation for Mexico, they made possible a change in expectations and a recovery in the levels of the capital markets, which had been sinking since December 1994 (indeed, the downward trend in the stock market began in the first quarter of that year, with the rise in United States interest rates). The outflow of bank

deposits persisted for a little longer, more or less up to the Presidential elections in May 1995.

The resort to external finance by the national government and the Central Bank was a decisive factor in containing the exchange-rate crisis at its most critical point and then restoring the international reserves and remonetizing the economy. Thus, during the last three quarters of 1995 the Central Bank increased its external indebtedness by US\$ 1.93 billion (mainly in respect of disbursements by the IMF), while the national government increased its indebtedness by US\$ 5.36 billion (basically through the issue of securities and the disbursements of multilateral agencies) even though it paid off loans amounting to US\$ 2.3 billion. In the second half of the year, the national government also received almost US\$ 1 billion through privatization operations. This total of US\$ 8.3 billion may be compared with the increase in the Central Bank's international reserves, which rose from some US\$ 10 billion at the end of March 1995 to almost US\$ 16 billion at the end of December.

3. Some consequences of the crisis for the financial system

When the possibility of both devaluation and the generalized failure of banks became more remote, in the second half of the year, there was a return movement of deposits and a decline in interest rates. However, the situation did not return to what it had been before the crisis, which affected the various types of banks in different ways. The financial system was left with a lower-quality portfolio and less capacity or willingness to set about expanding the supply of credit.

The 1995 crisis gave rise to significant restructuring of the financial system. The rapid outflow of deposits between November 1994 and March 1995 affected almost all the institutions, but to very different degrees. Over that period, the financial system lost 15.2% of its total deposits (both in pesos and in dollars), and these funds were used mainly to form foreign exchange holdings outside the financial system, but in addition to this general movement there was another involving the redistribution of the remaining deposits: depositors who wished to remain in the local financial system chose banks according to their perceived solvency. This was reflected in a loss of deposits which was smallest in the case of the biggest financial institutions (table 9).

³² The declaration by the Minister of the Economy that there were "a hundred institutions too many" (half the total number existing at that time) did little to tranquillize depositors. The Minister then clarified his statement by showing that even in the midst of the crisis he did not lose sight of his long-term objectives: "there are too many banks, but this does not mean that there are banks which are going to have to disappear through bankruptcy. They must be absorbed by other large banks, or merge with each other. There must be a process that leaves us with a smaller number of institutions, but with banks that are stronger and above all have lower operating costs. This process is already under way, and we are going to give it the fullest support." (See *Ambito Financiero*, 1995a, p. 2).

TABLE 9

**Argentina: Loss of deposits between November 1994 and March 1995,
by size of financial institutions**

Institutions, in order of size ^a	Deposits in November 1994 (millions of pesos)	Deposits in March 1995 (millions of pesos)	Percentage variation
1 to 10	23 984	22 469	-6.3
11 to 30	10 672	9 181	-14.0
31 to 50	4 753	3 468	-27.0
51 to 100	6 427	4 102	-36.2
101 to 204	2 619	1 840	-29.7
<i>Total for financial system</i>	<i>48 454</i>	<i>41 060</i>	<i>-15.3</i>

Source: Based on figures from Central Bank of the Argentine Republic, *Estados contables de las entidades financieras* (various issues).

^a The institutions are listed in order of their total deposits in November 1994.

TABLE 10

**Argentina: Indicators of shares of different types of institutions in the
financial system, November 1994 and November 1995**

Institutions, grouped by legal status and ownership	Number of institutions in November 1994	Number of institutions in November 1995	Number of branches ^a in Nov. 1994	Number of branches ^a in Nov. 1995	Share of deposits in 1994	Share of deposits in 1995
National public banks	4	4	594	578	13.9	14.9
Banco de la Provincia de Buenos Aires	1	1	306	306	9.5	11.2
Other provincial and municipal banks	28	25	810	697	15.6	13.3
Domestically-owned private banks	66	56	1 255	1 491	33.4	33.5
Foreign-owned private banks	31	31	397	419	16.1	21.2
Cooperative banks	38	11	877	479	10.3	5.2
Finance companies	21	18	32	32	1.0	0.7
Loan offices	15	12	21	19	0.2	0.1
<i>Total for financial system</i>	<i>204</i>	<i>158</i>	<i>4 292</i>	<i>4 021</i>	<i>100.0</i>	<i>100.0</i>

Source: Based on Central Bank of the Argentine Republic, *Estados contables de las entidades financieras* (various issues).

^a Including both head offices and branches.

It must be noted that some institutions had to unilaterally suspend the return of deposits, and this suggests that, for some groups, the rates given in table 9 underestimate the withdrawals actually demanded by depositors. Once the worst of the crisis was over and the Central Bank became less passive in the face of those institutions' inability to meet their obligations, the process of concentration began to gather momentum, for either institutions returned depositors' funds, which were then transferred to other banks perceived to be more solvent, or else they were unable to return them, in which case they were suspended, closed down, split up or merged. Thus, whereas in November 1994 the fifteen biggest institutions received 58.2% of total deposits, one year later the percentage was 67.4%.

Table 10, which compares the situation before the crisis with that existing a year later, shows an

other aspect of the restructuring of the financial system sparked off, or at least hastened, by the crisis.

In November 1995, total deposits were still 6% below their level of one year before. Between these two dates, there was a slight increase in the proportion of deposits accounted for by the most important public banks (basically the Banco de la Nación and the Banco de la Provincia de Buenos Aires) and a larger increase in the proportion of deposits in foreign banks. The biggest declines were in deposits in cooperative banks, followed by provincial and municipal banks (excluding the Banco de la Provincia de Buenos Aires). As we shall see below, domestic-capital private banks underwent substantial restructuring, but this did not affect their share of the market.

The most striking change was in the cooperative banks, which lost almost a third of their deposits between November 1994 and March 1995 and went

down in one year from 38 banks to only 11. Because of the loss of deposits, a number of institutions decided to merge: five cooperative banks merged into one new institution (Argencoop), and another eight set up a private bank in the form of a limited company (BISEL). Other banks in this sector were absorbed by other institutions or had to close down, subsequently selling off their branches and in some cases transferring their assets and liabilities. The most notable case was that of the Banco Integrado Departamental, which absorbed two other cooperative banks with official support in February, but was suspended soon after and finally liquidated in August 1995, its main purchasers being the Bank of Boston and the Banco de Galicia, with financial support from the Trust Fund, the Banco de la Nación and the Central Bank.³³

Some other cooperative banks (the largest) purchased other institutions or took part in the liquidation of failed banks: this was so in the case of the Banco Mayo,³⁴ and in those of the Hogar de Patricios Coop., Bica, Credicoop, Coopesur and Cooperativo de Caseros. Except for the last-named,³⁵ these banks managed to restore their levels of deposits during the second half of 1995.

Of the private banks operating as limited companies, fourteen closed down or were absorbed during 1995. The same thing occurred in the case of six new institutions, among them three privatized provincial banks (those of Entre Ríos, Misiones and

Formosa) and two from the cooperative sector, as mentioned earlier. The main private banks participated to varying extents in the purchase of branches of institutions put up for sale; this was so in the case of the banks of Galicia, Crédito Argentino, Francés and Río, all of which are among the top ten financial institutions in terms of deposits. Similar action was taken by foreign banks which are also among the top ten, namely Citibank and the Bank of Boston. All these banks significantly increased their levels of deposits during 1995.

The foreign banks emerged from the crisis as the main winners. Their growing share in banking activities seems to be a reflection of the advantages they enjoy in a system of convertibility and openness to capital movements. Their links with the exterior give them access to lines of foreign credit on better terms than their competitors, and in a context of convertibility this is an important consideration. As far as the 1995 crisis was concerned, not only were they not affected by the withdrawal of deposits (between November 1994 and the same month in 1995 their deposits increased by 23.7% and their financing by 9.4%) but the big foreign banks were indirectly favoured by the flight of deposits from other institutions, as they were the main recipients abroad of the money fleeing the country. Their growing weight in the Argentine banking system was dramatically strengthened by the acquisition of a number of major private banks: Banco Vizcaya acquired a controlling interest in Banco Francés and Banco Crédito Argentino, Banco Santander did the same with Banco Río, Banamex bought 31% of Bansud, HSBC acquired Banco Roberts, and Scotiabank absorbed Banco Quilmes. As a result, by the second half of 1997 only one of the 10 largest private banks was still Argentine-owned.

The finance companies and credit institutions suffered a further decline in their already scant importance in the financial system: in November 1995 their volumes of deposits were respectively 34% and 38% lower than the levels of a year before.

Finally, let us look at the situation of the public banking system. The Banco de la Nación provided active support for the restructuring of the private banking system. In the midst of the crisis it was seen as a refuge from the fragility of the financial system, so that by November 1995 it had already recovered the whole of the deposits lost at the height of the crisis. Few public banks managed to avoid losing de-

³³ "The Bank of Boston took over 93 branches and undertook to return deposits of up to 3,000 pesos (75% of the total), while in the case of larger deposits 40% of the money would be returned immediately and the rest would be returned to the extent made possible by the resources of a trust fund made up of available assets and accounts receivable. It received 210 million in aid from the Trust Fund, the Banco de la Nación and the Central Bank. The Banco de Galicia, for its part, took over 40 branches, whose depositors were to be repaid along the same lines as those of the Bank of Boston. Finally, Exprinter acquired two branches and the remainder went to BISEL" (see FIEL, 1995e, p. 19).

³⁴ In 1995 this bank absorbed the Caudal, Provencor and Olavarría banks (domestic-capital private banks); the Cooperativa de la Plata and Noar (cooperative banks) and the Dardo Rocha credit institution. In November 1995 it had a total of 530 million in deposits, compared with 320 million a year before.

³⁵ The Banco Caseros, which ceased to operate as a cooperative, received aid from the Central Bank (102 million pesos) and the Trust Fund (43 million), but it was not able to recover from its loss of deposits and the high rate of delinquency of its loan portfolio, and on 19 October 1996 the Central Bank suspended its permission to operate.

TABLE 11

Argentina: Loans with a high risk of insolvency, or irrecoverable, in terms of absolute value and as percentages of total loans and net worth (November 1995)

	Value of portfolio (millions of pesos)		As percentage of total loans		As percentage of net worth	
	High risk	Irre- coverable	High risk	Irre- coverable	High risk	Irre- coverable
National public banks	813	935	6.0	6.9	17.0	19.5
Banco de la Provincia de Buenos Aires	479	182	6.3	2.4	39.3	14.9
Other provincial and municipal banks	1 364	2 247	13.4	22.1	158.2	260.7
Domestically-owned private banks	1 193	400	5.1	1.7	29.6	9.9
Foreign-owned banks	327	125	2.4	0.9	14.6	5.6
Cooperative banks	281	102	9.0	3.3	46.4	16.9
Finance companies and savings and loan companies for housing construction	47	34	6.0	4.5	30.2	22.5
Loan offices	8	5	7.7	4.2	14.7	8.0
<i>Total for financial system</i>	<i>4 511</i>	<i>4 032</i>	<i>6.2</i>	<i>5.6</i>	<i>32.4</i>	<i>28.9</i>

Source: Based on Central Bank of the Argentine Republic, 1995b.

posits during 1995. Notable exceptions from this were the Banco de la Provincia de Buenos Aires and the Banco de la Ciudad de Buenos Aires, which are not only the biggest of the provincial and municipal banks but also stand out in that group on account of the relatively high quality of their portfolios. Both these banks increased their share of the market, as also did the Banco de la Pampa, which absorbed the Banco de Coronel Dorrego y Trenque Lauquen.

This extensive restructuring process was actively supported by the Ministry of the Economy and the monetary authorities. It was decreed that the Trust Fund would finance banks that purchased institutions put up for auction (or their portfolios) to the extent of up to 25% of the cost of the operation. Such banks would also be given special facilities as regards minimum liquidity levels and refinancing of rediscounting operations on advantageous terms. It was also decreed that a bank which purchased a financial institution would receive any rediscounts and advances already granted by the Central Bank to the institution in question, to be financed over 140 months at an interest rate equal to the average savings bank rate of around 3% per year: the lowest rate on the market.

The restructuring of the financial system, which is still under way, is not the only effect that the crisis has had on that system. The banking system as a whole now bears the burden of a large portfolio of doubtful debts (see table 11) which obliges it to adopt more conservative credit policies and is one of the factors that keep interest rates on loans high.

The combination of all these factors has aggravated the discrimination against small and medium-sized enterprises and the regional economies. The disappearance of a high proportion of the cooperative banks (many of which are regional institutions), which traditionally directed their credits to these types of firms and to the regions,³⁶ and the crisis suffered by many provincial banks, have deprived many small borrowers and regional producers of their habitual sources of credit. Furthermore, the fact that these borrowers are seen as less solvent is reflected in credit which is harder to obtain and more expensive. On the part of the possible lenders, "a situation has arisen where the banks prefer to invest funds in swaps with the Central Bank at 5% per year rather than lend them to small and medium-sized enterprises at not less than 5% per month".³⁷

³⁶ Based on a sample of 46 private banks, it was determined that in 1986 the cooperative banks with headquarters in the Federal Capital granted 68% of their credits to small and medium-sized enterprises and 8% to other small borrowers, while in the case of the cooperative banks located in the interior the corresponding percentages were 57% and 33%. By way of comparison, it may be noted that the foreign banks devoted 9% and 1% of their loans to these purposes, while in the case of private banks operating as limited companies, with headquarters in the Federal Capital and Greater Buenos Aires, the respective figures were 13% and 3%. These figures were calculated by the author on the basis of data from the Central Bank of Argentina.

³⁷ See FIEL, 1995f, p. 18.

TABLE 12

Argentina: Variation in balances registered in the consolidated accounts of financial institutions^a between April and September 1995
(Millions of pesos)

Assets		Liabilities	
Cash	244	Net external credits	-606
Current account in Central Bank	-1 385	Official deposits	-764
Loans and securities, official sector	4 179	Private demand deposits in national currency	110
Loans and securities, private sector, in national currency	-1 076	Private time deposits, in national currency	1 046
Foreign currency loans to private sector	297	Private foreign currency deposits	2 425
Other assets	4 146	Liabilities with Central Bank	-104
		Other liabilities	4 281
		Capital and reserves	16
Total	6 404	Total	6 404

Source: Based on Central Bank of the Argentine Republic, Gerencia de Estudios Económicos, *Boletín estadístico* (various issues).

^a Includes banks and savings banks, finance companies, savings and loan institutions for housing and other constructions, and loan offices.

Another factor which delayed the recovery of the levels of bank credit to the private sector was the repayment of rediscounts and foreign lines of credit, while moreover part of the banks' loans went to the public sector, which was seeking to finance its deficit (see table 12). As far as the potential borrowers are concerned, the risks involved in entering into new debts are now greater, not only because their level of indebtedness is higher than it was in 1991 but also because of the general economic climate, which makes their capacity to repay such debts more doubtful (thus, the high levels of unemployment seem to have inhibited the demand for credit by families). All this explains why the gradual recovery in deposits

was not matched by a similar increase in loans to the private sector (table 12).

It was only in 1996 that this finance showed a quantitative recovery, but even so its growth lagged behind that of bank deposits and the system was now more highly segmented because during the crisis "there was a change in the configuration of the financial system, with an increase in the proportion of loan potential corresponding to institutions that tend to direct their finance to big, important clients ... there was probably an increase in the differentiation of credit markets, so that at certain times there were signs of an excess supply of funds in some sectors, while liquidity was very tight in others".³⁸

V

Summary and conclusions

1. The broader implications of convertibility

When Argentina adopted its system of convertibility, there were very few countries that had a monetary system similar to a Currency Board. These countries (Bermuda, Brunei, the Cayman Islands, the Faeroe Islands, the Falkland Islands, Gibraltar and Hong Kong) are very small, with very open economies, and in a number of cases they are former colonies.³⁹ In

the final analysis, their experience was not a relevant example for larger countries with economies that are naturally much less open. This goes a long way towards explaining the interest aroused by the case of Argentina.

In Argentina, the prime objective in establishing the convertibility system was to bring a stubborn process of inflation under control. The authorities gradually began to see convertibility as more than just a means of escaping from the inflationary spiral, however, and they began to view it as a system capable both of favouring a sustained long-term process of growth with stability and of absorbing possible short-

³⁸ See ECLAC, ECLAC Office in Buenos Aires, 1996, p. 23.

³⁹ See Williamson, 1995. Estonia (1992) and Lithuania (1994) may also now be added to this list.

term upsets (through the automatic adjustment). If it did indeed possess these qualities, then it would be a model that other countries might try to adopt, especially if they were following a development strategy based on an open economy (as regards movements of both goods and capital) and were seeking to minimize government action in the field of monetary policy. If the effectiveness of convertibility were limited to the stabilization of prices, however, the adoption of this model would only be justified for a limited period, in countries which were trying to escape from a process of high inflation and had not found less radical solutions for generating the necessary credibility. Furthermore, in order for this system to be preferable to other means of stabilization such countries would have to display certain conditions such as the existence of generalized indexing of prices on the dollar and a plentiful supply of foreign exchange.⁴⁰

The present study does not aim to give a final answer in the debate over the real nature of the Argentine convertibility system (whether it is a short-term anti-inflation measure or a lasting monetary system), but it does seek to provide some useful background elements through an analysis of the functioning of the banking system under convertibility. In particular, it seeks to establish whether this monetary system serves as a suitable framework for the smooth operation of the banking system and, when necessary, makes possible an automatic adjustment which obviates the need for direct intervention by the monetary authorities, or whether, on the contrary, it tends to amplify credit cycles and thus affects the functioning and solvency of financial institutions, which may subsequently call for the massive intervention of a lender of last resort.

2. Convertibility and the banking system

The possible existence of a special relationship between the convertibility-based monetary and exchange system and the functioning of the banking

⁴⁰ For John Williamson, there are three good reasons why a country might want to adopt the system of a currency board: if they were small or open economies; if there was no other way of restoring public confidence in the economic policy; and if they wanted to use their exchange rate as a nominal anchor. "In the first case, there is no reason why a currency board should not become a permanent monetary system, but in the second (and perhaps the third) case a currency board would be an unnatural arrangement and hence could probably only be a temporary solution" (Williamson, 1995, p. 34).

system has not always received the attention that we feel it deserves. Instead, there has been a tendency to separate the two spheres and even present them as contrasting elements: this is so in the case of Minister Cavallo himself, who asserted a few days after leaving office that "the lesson taught to us by the tequila effect is that ... we have a very good monetary system but are far from having a high-quality financial system".⁴¹ In the face of this apparent dichotomy, however, we must ask ourselves how, and how far, the convertibility framework affected the "poor quality" of the financial system.

Some of the measures whereby the convertibility system was set up obviously directly affected banking activity: this is so, for example, in the case of the elimination of the guarantee on deposits, the severe restrictions imposed on the Central Bank's power to provide liquidity to financial institutions, the prohibition of interest-bearing bank reserve requirements, and the declaration of the Central Bank's independence. Although these measures were designed essentially to prevent the uncontrolled issue of base money, in order to ensure that it was backed by international reserves, they established a new framework for the (admittedly highly unregulated) activities of financial institutions. It was expected that these would operate under three-fold control: that of the depositors (who now no longer enjoyed State guarantees), that of the Central Bank, and that of the financial institutions themselves, which had been forewarned of the restrictions they would face in trying to obtain rediscounts. However, subsequent experience was not marked by effective control of the banking system or austere self-discipline. That experience was affected by the vagaries of international capital movements at least as much as by the above-mentioned rules.

The Argentine experience shows two clearly differentiated stages, the succession of which is a classic example of a credit cycle. The first stage (1991-1994) was marked by the rapid expansion of credit and bank deposits, based largely on the inflow of short-term foreign capital, which introduced an element of volatility that was potentially dangerous for the stability of the financial system. As far as bank assets

⁴¹ See Domingo Cavallo's presentation at the Seminar on policy rules and the lessons of the tequila effect, in *El Cronista*, 1996, p. 11.

are concerned, the cost of credit and the rapidity of its expansion in a context of financial deregulation seem to have conspired against the quality of the loans granted, for these were not channelled, within a development-oriented approach (in which investments and innovations are prerequisites for sustained growth), towards the best uses and the best borrowers. In fact, the types of credit which grew fastest were those oriented towards consumer credits (for families and retail trade), while the share of manufacturing in the banks' portfolios fell by half (from 37% to 18% of the total), although it increased in absolute terms.

The second stage covers the year 1995. It begins with the Mexican crisis in December 1994, and is marked by simultaneous and matching reductions in bank deposits and in the international reserves, although bank loans remained unchanged. Analysis of this stage shows that the pressure on the international reserves was due to changes in time deposits in banks (in both pesos and foreign currency), while the means of payment (M1) remained unchanged and the monetary base (or "monetary liabilities of the Central Bank", as defined in footnote 17) went down only slightly. The conversion mechanism was not limited to accounting entries whereby the Central Bank simultaneously reduced an asset (the international reserves) and a liability (the monetary base). The banking system was in the limelight: the incipient exchange crisis, in which the Central Bank lost over a third of its reserves in three months, was also a crisis of bank liquidity.

Many banks had to use their reserves of central bank money and foreign exchange much more than the requirements for minimum levels of liquidity originally allowed. Some institutions also tried to recover loans from their clients by sharply increasing the interest rates on loan renewals. This pressure was not very effective in reducing the size of the loan portfolio but it did bring down its quality, since it adversely affected economic activity and the solvency of many non-financial agents. As they were unable to cope with the outflow of deposits (in spite of the sharp rise in the interest rates offered), dozens of financial institutions unilaterally suspended the repayment of deposits and the payment of cheques (even when they had sufficient funds), with the acquiescence of the Central Bank, which restored the insurance of deposits and played an active role as

lender of last resort, through swaps, advances and rediscounts in favour of banks that were in difficulties. For this purpose, the provisions (some of them with the status of Acts of Parliament) which prohibited these functions were revoked through decrees and resolutions. At the same time, the Central Bank lowered the reserve requirements and charged interest rates far below market levels in cases of non-compliance with these rules.

The Banco de la Nación Argentina also took part in this rescue operation, and safety nets and trust funds were set up to provide liquidity for the banking system and finance its restructuring. In the process of restructuring of the banking system, which is still under way, the Central Bank is playing a decisive role by suspending the operations of some banks and providing finance on very favourable terms for their potential purchasers. This is a process which is greatly increasing the degree of concentration of the banking system and in which the foreign banks are the main beneficiaries. Within the context of the convertibility system, these banks have their own lenders of last resort, and moreover they were not only much less affected by the wave of withdrawals at the height of the crisis but have also managed (both inside and outside the country) to win a substantial part of the deposits withdrawn from other institutions.

Finally, the national government and the Central Bank obtained foreign loans during the last three quarters of 1995 which enabled them to restore the international reserves and favoured the remonetization of the economy: together, they increased their indebtedness by US\$ 7.3 billion, although they paid off loans for US\$ 2.3 billion. Despite the Central Bank's assistance and the external indebtedness assumed by the government, the product nevertheless fell by 4.4%, unemployment rose to over 18% of the economically active population, there was a significant increase in the level of delinquency of bank portfolios (which already stood at a high level even before 1995), and 53 financial institutions had to close down (through bankruptcy, absorption or mergers) between November 1994 (when they totalled 204) and November 1995.⁴²

⁴² However, new institutions appeared as the result of mergers or the establishment of new firms, so that the total for this period only reflects the disappearance of 46 institutions.

We thus see that the demand for foreign exchange by holders of monetary and quasi-monetary resources gave rise to an adjustment process very far removed from the automatic reactions that were supposed to take place. This process also shows that backing the monetary base with an equivalent amount of international reserves does not serve the purpose it was supposed to ensure, which was to guarantee that any person who wanted to change his pesos into dollars could do so, and that even in the extreme situation where all holders of national-currency resources wanted to change them entirely into dollars, the economy would keep on functioning, but in a completely dollarized form. On the contrary, we saw that this backing is not sufficient for changing the entire liquid assets (M3) and that the banking system enters into crisis long before the exhaustion of the Central Bank's reserves: it is not capable of carrying out a large-scale debt deflation process, nor can it withstand a sustained outflow of deposits without the aid of a lender of last resort. As in other episodes of monetary history, we see that the various types of backing that may be assigned to the currency—except for the backing represented by the inherent stability of the economy as a whole—only work as long as they are not called into play: their real function is merely to reduce the probability that the currency thus “backed” may be rejected and that there may be a massive demand to change it into foreign exchange.

3. “Pure” and “dirty” convertibility

There is no record in social science of any pure, perfectly controlled experiments: economic phenomena are the result of a host of simultaneously acting factors, and they take place in a changing context, so that it is always possible to maintain that in other circumstances the results of a given experiment would have been quite different. In the case under analysis here, it may be asked to what extent the financial instability observed in the Argentine experience is inevitable in a context of convertibility. Or, to put it a different way, might it not be possible to endow convertibility—which has an inherent tendency to be procyclical—with some policies capable of preventing or moderating such instability? For this purpose, controls could be imposed on external capital flows and more instruments could be provided for the application of an active monetary policy (such instruments were in fact used during the 1995 crisis).

In Argentina, it was decided to permit absolute freedom of capital movements, on the basis of arguments ranging from complete confidence in an automatic and painless adjustment in the event of a reversal of capital flows to the denial that such flows could possibly have any harmful effects.⁴³ However, this policy was probably due much less to doctrinaire considerations than to the economic programme's dependence, from the very beginning, on the inflow of capital. The Government's strategy was to take advantage of the economic conditions prevailing in 1991 (generalized indexing of prices to the exchange rate, extensive idle capacity, existence of a trade surplus and the abundant supply of foreign capital)⁴⁴ to fix the exchange rate, stabilize prices and reactivate the economy. This big inflow of capital was indispensable for consolidating the convertibility system, by making possible both an increase in the international reserves and a rapid recovery in growth, the latter being of crucial importance for increasing tax revenue. The use of the nominal exchange rate as an exchange-rate anchor, however, could not avoid some degree of inertia in inflation (especially in non-tradeable goods and services), and in a context of expansion of credit and recovery of aggregate expenditure this gave rise to a growing balance of payments current account imbalance. From then on, the Government was in a position where it could not keep the economy growing without a growing inflow of foreign capital, while it could not maintain fiscal balance without sustained growth. It could not, therefore, indulge in the luxury of “filtering” the capital

⁴³ “I am not worried about the capital account position” is one of the phrases used by Domingo Cavallo which sums up the official attitude during the 1991-1994 period in the face of the concern expressed about the current account imbalance. Even during the crisis, Minister Cavallo asserted at the IDB Assembly in Jerusalem that “capital inflows were highly beneficial (in supporting the rapid economic growth of recent years), and now the outflow of capital is equally favourable” [because it hastened the structural adjustment of the provinces and, in particular, facilitated the Governors' decision to privatize the provincial banks] (see *Ambito Financiero*, 1995b).

⁴⁴ This situation combined two factors: one of them—which had nothing to do specifically with Argentina—was connected with the availability of capital for all the emerging economies, while the other was typical of cases of stabilization based on the use of an exchange-rate anchor: with a fixed exchange rate and the possibility of high financial yields in the short term (either through interest rates much higher than international levels, or through the recovery of stock exchange prices), there naturally tends to be a sudden influx (or repatriation) of capital.

received: its option was to achieve a positive adjustment which would keep up growth rates and, through improvements in productivity and the expansion of exports, make the real economy adjust to the prevailing exchange rate.

Passing on now to a more general level, we may distinguish between a full or "pure" convertibility system, which does not allow of controls over capital flows or the adoption of an active monetary policy, and a limited or "dirty" system which does include such elements. The possibility of controls over capital flows represents a restriction of convertibility insofar as it would deprive certain economic agents of the possibility of converting their external assets into national-currency assets, or vice versa. In the case of the first-named system, the Argentine Convertibility Act does not prohibit this possibility: indeed, that Act leaves no room (in its spirit or its letter) for refusing to sell all the foreign exchange that is requested at the fixed exchange rate (doing so would mean abandoning the fixed rate). To put it briefly, some attempt could be made to moderate the capital flows in the stage where they are flowing into the country, but it would be much more difficult to do so in a period of loss of reserves without simply abandoning the principle of convertibility. Another possible policy would

be to reserve some margin of freedom to tackle situations of bank illiquidity by reducing the compulsory reserves (or liquidity requirements) or by issuing currency against dollar-denominated public securities, within the permissible limits. This would mean introducing some degree of anticyclical monetary policy, and although in the Argentine experience this did not succeed in markedly moderating the severity of the economic cycle, it was an important factor in handling the crisis. Naturally, to the extent that the quality of the "backing" for the monetary base deteriorates (i.e., when the share of the genuine foreign reserves goes down and the share of domestic public securities in those reserves goes up), the image of convertibility tends to weaken. Thus, the introduction of a monetary policy means abandoning the idea of the automatic adjustment and the predominance of fixed rules over decisions taken by the authorities (discretionality). Because it is more flexible, this system of "dirty" convertibility may not comply with the need to inspire sufficient confidence in the early stages of an anti-inflation plan, but it is a system worth considering as part of a strategy for gradually leaving convertibility without being forced to do so by loss of reserves or a banking or fiscal crisis.⁴⁵

(Original: Spanish)

Bibliography

- Ambito Financiero* (1995a): Buenos Aires, Editorial Amfin, 3 February.
- (1995b): Buenos Aires, Editorial Amfin, 4 April.
- (1995c): Buenos Aires, Editorial Amfin, 17 April.
- Argentina, Ministry of Economic Affairs and Public Works and Services (1994): *Argentina en crecimiento. La reforma económica y sus resultados. El programa "Argentina en Crecimiento, 1993-1995"*, Buenos Aires.
- Argentina, Ministry of Economic Affairs and Public Works and Services, Economic Planning Department (1995a): *Informe económico*, No. 15, Buenos Aires.
- (1995b): *Informe económico*, No. 16, Buenos Aires.
- Central Bank of the Argentine Republic (various issues): *Estados contables de las entidades financieras*, Buenos Aires.
- (1995a): *Estados contables de las entidades financieras*, Buenos Aires, November.
- (1995b): *Estados contables de las entidades financieras*, Buenos Aires, June.
- Central Bank of the Argentine Republic, Gerencia de Estudios Económicos (various issues): *Boletín estadístico*, Buenos Aires.
- Calcagno, A. F. (1991): El nuevo régimen cambiario y monetario: un análisis crítico, *Realidad Económica*, No. 99, Buenos Aires, Instituto Argentino para el Desarrollo Económico (IADE).
- Corrigan, E. G. and T. Stocker (1996): *Building a Progressive and Profitable National Banking System in Argentina*, New York, Goldman, Sachs & Co., 30 April.

⁴⁵ Along the same lines, John Williamson suggests a gradual policy for abandoning the currency board system once sufficient credibility has been gained. This policy would consist of "gradually adding (to the model) features that allow it to carry out the normal tasks of a Central Bank in defence of the banking system, thus resulting in progressive erosion of its automatic nature, which is a key feature of a currency board" (see Williamson, 1995, p. 35).

- ECLAC (Economic Commission for Latin America and the Caribbean), ECLAC Office in Buenos Aires (1996): *Nota sobre la evolución de la economía argentina en 1995*, Documento de trabajo No. 69, LC/BUE/L.152, Buenos Aires.
- El Cronista* (1996): Buenos Aires, Sociedad Anónima de Ediciones e Impresiones, 13 August.
- El Mercurio* (1995): Santiago, Chile, Empresa Editorial El Mercurio, 5 March.
- Feldman, E. (1978): *Foreign and domestic banks in Argentina (1958-1970)*, Oxford, U. K., Oxford University, Ph. D. dissertation, mimeo.
- FIEL (Foundation for Latin American Economic Research) (1995a): *Indicadores de coyuntura*, No. 342, Buenos Aires, February.
- (1995b): *Indicadores de coyuntura*, No. 343, Buenos Aires, March.
- (1995c): *Indicadores de coyuntura*, No. 344, Buenos Aires, April.
- (1995d): *Indicadores de coyuntura*, No. 345, Buenos Aires, June.
- (1995e): *Indicadores de coyuntura*, No. 346, Buenos Aires, August.
- (1995f): *Indicadores de coyuntura*, No. 347, Buenos Aires, September.
- Fisher, I. (1933): The debt deflation theory of great depression, *Econometrica*, vol. I, No. 4, New York, Econometric Society, October.
- Hayek, F. A. (1975): *Prix et production*, Paris, Calmann Lévy (originally published in English in 1931).
- (1980): *Desnacionalización de la moneda*, Buenos Aires, Fundación de la Bolsa de Comercio de Buenos Aires (originally published in English in 1978).
- IMF (International Monetary Fund) (1995a): *Balance of Payments Statistics, Yearbook*, Washington, D. C.
- (1995b): *International Capital Markets. Developments, Prospects and Policy Issues*, Washington, D. C.
- National Institute of Statistics and Censuses (INDEC) (various issues): *Estadística mensual*, Buenos Aires.
- Porta, F. (1995): *Cuatro años con tipo de cambio fijo: ¿ajuste estructural o ajuste recesivo?*, Documento de trabajo No. 21, Buenos Aires, Research Centre for Industrial Transformation (CENTI).
- Simons, H. (1936): Rules vs. authorities in monetary policy, *Journal of Political Economy*, vol. 44, Chicago, IL, University of Chicago Press, February.
- Williamson, J. (1995): *What role for currency boards?*, Policy Analysis in International Economics, No. 40, Washington, D. C., Institute for International Economics (IIE), September.

Manufactured exports

from small Latin American economies:

the challenges ahead

Rudolf M. Butelaar*
Pitou van Dijck**

* *Chief, Industrial Development Unit, ECLAC Subregional Headquarters in Mexico.*

** *Associate Professor of Economics, Center for Latin American Research and Documentation (CEDLA), University of Amsterdam.*

This article explores the challenges that small, less industrialized Latin American countries face in achieving sustained growth of manufactured exports. The improvement of export performance was one of the aims of the policy reforms adopted since the 1980s in line with the so-called Washington Consensus. The economic environment for manufacturing firms improved significantly, and growth of industrial production and exports was stimulated. Nevertheless, the manufacturing sector has not yet become a major engine of growth, and industrial exports have only recently started to increase. Moreover, manufactured exports depend to a high degree on strategies of foreign firms and are mainly concentrated in relatively less dynamic sectors of world trade. Notwithstanding the broadness and comprehensiveness of the Washington Consensus, additional measures are needed in order to achieve the systemic competitiveness of manufacturing industries. In this article, five challenges to economic policy in the countries in question are distinguished: i) the reform of trade and exchange rate regimes must be completed. In this regard, the maintenance of a high and stable real effective exchange rate has appeared to be very difficult in the 1990s; ii) public and private investment appear to show a crowding-in effect, and need to be stimulated simultaneously; iii) additional measures are needed to support openness and exports, and this calls for institutions to facilitate the technological capabilities and the export drive of domestic firms; iv) the social and political acceptability of these programmes needs to be enhanced, and v) it is necessary to learn to cope with new international trade rules in order to prevent such rules from becoming new barriers to the penetration of international markets.

I

Introduction

A significant reorientation of the macroeconomic policies and trade and industrialization regimes of a large number of Latin American countries took place during the second half of the 1980s and the early 1990s. The far-reaching adjustments that were implemented as part of stabilization and restructuring programmes reflect the new priorities in the region which are often referred to as the Washington Consensus. The main priorities have been in the areas of fiscal discipline, the reorientation of government expenditure, tax reform, financial liberalization, exchange-rate adjustment, trade liberalization, attraction of foreign direct investment, deregulation, and the establishment of property rights (Williamson, ed., 1990). The emphasis has been on "getting prices right" and on reducing the role of government to the creation of a stable and stimulating macroeconomic environment, the correction of market failures and the provision of public goods.

If we focus more specifically on the reorientation of trade and exchange-rate policies, it may be noted that in nearly all countries the average import tariff rates have been lowered significantly, tariff dispersion has been reduced, the use of non-tariff barriers to trade has been largely abandoned, and the real effective exchange rates (REER) have become more favourable to import-substituting and exporting industries. Moreover, most countries have become members of the World Trade Organization (WTO) and participate in one or more regional preference systems.

Notwithstanding the progress made in implementing the Washington Consensus and particularly in the reform of trade policy and exchange-rate regimes, it may be questioned whether the mix of policies currently pursued in the region will suffice to bring about the required transformation of the manufacturing sector and a new insertion in international markets.

The issue of sustainable growth of manufactured exports has been studied in particular for the larger Latin American countries, which have attained a relatively strong industrial base. The small and medium-sized economies, with a weaker industrial base, face different challenges and deserve specific attention in this respect. The project which served as a basis for the analysis and critical reflections presented in this article focused on the problems relating to the new insertion into world markets faced by a sample of small and medium-sized Latin American countries and generated a series of cross-country analyses as well as six country-specific studies (Buitelaar and Van Dijck (eds.), 1996).

As will be shown in the following section of this article, a substantial number of small and medium-sized countries have made significant progress in recent years in re-orientating their manufacturing sectors towards a more export-orientated growth pattern and in making them contribute more significantly to overall export income. At the same time, however, it is shown that the contribution of the manufacturing sector to overall production has declined rather than increased in several of the selected countries, that manufactured exports are largely concentrated in product groups that are less dynamic in world trade, and that the penetration of international markets is still very limited. In subsequent sections, a number of critical reflections are made on the policies currently pursued in those countries to promote a more diversified and dynamic export sector, and it is argued that government should take a more prominent position to stimulate systemic competitiveness and a successful and comprehensive insertion in world markets.

□ This article is based on the results of a joint research project carried out by ECLAC and the Center for Latin American Research and Documentation (CEDLA) of the University of Amsterdam, the main findings of which have been published in Buitelaar and van Dijck (eds.), 1996. The authors wish to thank Ramón Padilla of ECLAC for his assistance with the updating of tables.

II

Recent performance of the manufacturing sector

In order to put the challenges that lie ahead in a clear perspective, we shall begin by presenting a series of indicators relating to the development of the manufacturing sector in the selected countries during the period 1970-1994. Changes in the 1990s are shown on an annual basis to facilitate a balanced appreciation of the progress made in recent years.

As table 1 shows, the absolute size of the manufacturing sector in the selected countries is very small, the countries with the largest manufacturing base in 1994 being Venezuela, Colombia and Chile. It is noteworthy that during the period 1970-1994 the share of the manufacturing sector in GDP did not increase significantly, as might have been expected from studies of development patterns over time and across countries. On the contrary, the contribution of the sector to GDP increased only in Costa Rica, El Salvador and Venezuela, while in all other selected countries it decreased or stagnated, at least when measured in domestic market prices (in constant US dollars). However, it should be noted that liberalization measures introduced in the second half of the 1980s and early 1990s may have significantly narrowed the gap between domestic and international prices and consequently reduced the statistical illusion created by the use of domestic market prices for manufacturing output rather than international prices. Growth of manufacturing production was relatively high in the 1970s, dropped sharply during the first half of the 1980s and recovered in most of the selected countries in the second half of that decade. The recovery was particularly strong in Chile. In the course of the 1990s, however, growth rates tended to decline in most of the countries in our sample.

Traditionally, the manufacturing sector was strongly oriented towards the domestic market, due to the anti-export bias in government incentives and the lack of international competitiveness of domestic industries. As shown in table 1, in most of the countries the contribution of manufactured exports to total GDP and the share of manufactures in total exports were rather low initially but increased significantly in

recent years, with the average growth rates of manufactured exports significantly exceeding the average growth of manufacturing production. Nevertheless, the contribution of manufactured exports to total GDP is still very limited, particularly in Ecuador and Venezuela. The contribution of manufacturing industry to total exports of goods has become particularly significant in El Salvador, Uruguay and Colombia, but it is still very limited in Ecuador, Venezuela and Chile. The growth of non-traditional exports has resulted in a more diversified export structure, as indicated by the declining values of the concentration index shown in the final rows of the table.

The aggregated data presented here, however, do not necessarily reflect an increase in the international competitiveness of domestic industries, since foreign-owned firms tend to play a significant role in the manufacturing sectors of most Latin American countries and this is even more true in the case of exports. The number of domestic firms directly engaged in exports of manufactures in a significant and systematic manner is rather small in most of the selected countries. This is even true of Chile, which introduced an outward-oriented policy as far back as the 1970s. Particularly in the Caribbean and in some Central American countries, exports of manufactures are to a substantial degree generated by foreign-owned firms located in export processing free zones. By offering substantial incentives to foreign investors, countries in these areas have attracted foreign investments outside as well as inside such zones.

The findings presented above may be summarized as follows. First, the industrial transformation of the selected economies has progressed only slowly during the period under investigation, and the recovery of industry did not play a leading role in overall economic growth in the second half of the 1980s and early 1990s. Second, the manufacturing sector has become more export-oriented recently, even though foreign firms play a significant role in the new export sectors. Third, the contribution of the manufacturing sector to total exports of goods in-

TABLE I

Latin America: Manufacturing production and exports in selected countries
(Millions of dollars and percentages)

	Years	Chile	Colombia	Costa Rica	Ecuador	El Salvador	Guatemala	Uruguay	Venezuela
1. Value added in manufacturing (millions of 1990 US dollars)	1994	8 021	10 251	1 362	2 796	1 424	1 323	2 388	12 034
2. Share of manufacturing output, in 1980 constant US dollars, in GDP (percentage)	1970	24.5	22.1	15.5	15.9	15.2	16.6	26.7	17.5
	1980	21.4	23.3	18.6	17.7	15.0	17.6	28.2	18.8
	1994	20.6	20.4	19.0	14.7	16.5	15.2	19.3	19.5
3. Growth of manufacturing production (percentage)	1970-1980	-0.8	5.8	7.9	10.5	4.1	6.2	3.5	5.7
	1980-1985	-1.9	1.3	0.2	0.8	-2.2	-2.1	-6.2	1.8
	1985-1989	7.8	4.2	4.8	0.1	2.8	1.7	4.3	2.1
	1990	1.1	4.2	2.6	-5.0	4.9	2.4	-1.4	6.0
	1991	6.6	0.8	2.0	3.9	5.9	4.6	-0.5	9.7
	1992	11.0	5.9	10.3	3.6	9.8	3.3	1.5	2.5
	1993	5.1	2.3	6.4	2.5	-1.5	2.7	-9.0	-0.7
	1994	2.9	2.8	4.2	4.7	7.9	2.7	3.1	-4.1
4. Value of manufactured exports (millions of current US dollars)	1994	1 865	3 293	374	286	363	471	823	2 298
5. Share of manufactured exports in GDP (percentage)	1970-1975	0.8	1.8	4.7	0.3	5.0	5.2	2.1	0.3
	1985-1990	1.8	2.5	6.1	0.3	2.5	3.1	5.9	1.9
	1994	4.7	6.0	...	1.9	5.4	5.2	7.1	3.5
6. Share of manufactures in exports (percentage)	1970	4.4	8.1	19.7	1.7	28.7	28.0	20.4	1.5
	1980	9.7	20.4	34.3	3.0	20.1	24.2	38.2	1.7
	1990	9.8	25.3	25.7	2.6	22.6	23.7	39.1	10.7
	1991	12.7	33.3	24.5	2.4	40.6	27.9	40.1	9.6
	1992	13.2	31.8	25.6	4.0	47.8	29.9	40.8	11.0
	1993	16.1	39.9	...	7.1	46.1	30.7	42.2	13.3
	1994	16.4	36.9	...	7.4	44.7	31.3	42.9	13.8
7. Growth of manufactured exports (percentage)	1970-1990	13.4	12.6	9.7	10.9	2.0	5.5	14.6	19.6
	1991	22.5	42.5	0.1	10.3	-17.8	17.8	-4.1	-24.1
	1992	14.8	-9.0	17.4	73.1	79.9	15.5	4.6	8.3
	1993	14.3	34.9	...	78.4	24.3	6.2	2.6	32.0
	1994	24.3	10.8	...	33.4	9.8	14.5	21.5	13.2
8. Concentration index ^a	1980	0.406	0.579	0.316	0.547	0.380	0.310	0.235	0.674
	1992	0.308	0.238	0.303	0.467	0.238	0.219	0.176	0.555

Source: 1, 5 and 7 taken from IDB, 1992 and 1995.

2 taken from ECLAC, 1994 and 1996.

3 taken from United Nations, 1991, and ECLAC, 1996.

4 and 6 taken from World Bank, 1992 (country pages) and ECLAC, 1996.

8 taken from UNCTAD, 1993 and 1995.

^a Hirschmann index has been normalized to make values range from 0 to 1 (maximum concentration).

creased in all the countries in the sample, and this resulted in lower export concentration ratios.

It is reasonable to consider that increasing export-market shares is one of the principal aims of the economic reforms. An analysis is presented below of the changes in the market shares of eight countries in the total imports of manufactures of 24 OECD nations.

The import markets of the industrialized countries constitute the most demanding and competitive part of international trade, and for that reason this market share can be considered a good measure of success. The analysis was performed at the three-digit level of the Standard International Trade Classification (SITC), for the period 1977 (when SITC Rev. 2 was

TABLE 2

Latin America: Market shares in OECD imports of manufactures, 1977-1994
(Percentages)

	Chile	Colombia	Costa Rica	Ecuador	El Salvador	Guatemala	Uruguay	Venezuela
1. Total market share								
1977	0.01	0.06	0.02	-	0.03	-	0.05	0.02
1994	0.03	0.06	0.06	0.01	0.02	0.04	0.02	0.03
Annual average growth of this share	4.58	-0.43	8.48	3.23	-0.62	15.4	-6.43	3.06
2. Market share in dynamic sectors								
Year of inflection	1983	1987	1980	1988	1988	1983	...	...
1977 ^a	0.01	0.03	0.03	-	0.06	-	0.03	0.02
1994 ^a	0.02	0.05	0.09	-	0.04	0.06	0.01	0.02
Annual average growth of this share	3.11	2.82	5.97	1.43	-2.52	18.6	-9.8	0.26
3. Market share in stagnant sectors								
1977 ^a	0.02	0.08	-	-	0.02	-	0.06	0.03
1994 ^a	0.04	0.06	0.02	0.01	-	0.01	0.03	0.05
Annual average growth of this share	5.93	-1.92	9.05	4.24	-7.94	2.7	-4.27	3.68
4. Proportion of exports in dynamic sectors, 1994^b	45	49	49.9	41.6	43	28	55.9	41.6
5. Proportion of exports in stagnant sectors, 1994^b	55	51	50.1	58.4	57	72	44.1	58.4

Source: COMTRADE, using the CAN programme.

^a The relative dynamism of the sectors was calculated with base year 1977 and final year 1994.

^b The relative dynamism of the sectors was calculated with base year 1993 and final year 1994.

adopted) to 1994. Manufactured imports are defined as SITC sections 5-8, excluding divisions 67 and 68. The data source used (the United Nations Comtrade database) was analysed with the Competitive Analysis of Nations (CAN) software developed by ECLAC (Mandeng, 1991).

As table 2 shows, the overall market shares of five countries increased between 1977 and 1994, while those of three countries show a decline. A distinct pattern may be observed in the case of six countries that lost market shares at the beginning of the period but are gaining shares in the second half. The table also shows the year of inflection, with Chile, Costa Rica and Guatemala being the countries that were successful earlier in the 1980s, and Colombia, Ecuador and El Salvador representing cases where the trend reversed towards the end of that decade. For two countries, no clear change of trend can be discerned: Uruguay lost market shares in each of the 17 years, while Venezuela registers several periods of growth and decline.

The CAN software allows a distinction to be made between sectors with an above-average growth

rate of imports (dynamic sectors) and sectors with a below-average growth rate (stagnant sectors). As the data refer to current import values, price fluctuations may affect the relative growth rates. Moreover, the product mix of dynamic and static sectors is sensitive to the definition of the base year and the final year. For most countries, especially in South America, market shares in 1977 were larger in sectors that were stagnant during the period 1977-94 than they were in dynamic sectors.¹ Also, growth rates of market shares in stagnant sectors tended to be higher than growth rates in dynamic sectors. Thus, at the end of the period most South American countries continue to show higher market shares in stagnant sectors than in dynamic sectors. The sectors in which these countries participate may be characterized as industrial commodities which are strongly dependent on the availability of natural resources. Petrochemical industries in Venezuela, copper-based manufactures and wood products in Chile, and leather and wool manufactures in Uruguay are cases in point.

¹ For instance, the market shares of Colombia in 1977 were 0.08 in stagnant sectors and 0.03 in dynamic sectors (table 2).

The Central American countries show a different picture. Market shares at the beginning of the period were very low, and their increase reflects the participation of these countries in OECD imports of apparel, a product which makes intensive use of low-wage labour. At that time, apparel trade was a particularly dynamic part of OECD imports: the globalization of US apparel producers, which took advantage of special import provisions, dynamized international trade in these products. However, from 1992 onwards these sectors have ceased to be dynamic, and the Central American countries find themselves—like the South American countries in our sample—participating in sectors that were stagnant during the period

1993-94. In 1994, for example, 72% of the exports of Guatemala were concentrated in stagnant sectors, compared to 28% in dynamic sectors. It may be observed that Colombia is a case where the features of South American and Central American countries are combined, since Colombia exports both industrial commodities and apparel.

Both export drives, i.e. the natural resource-based industrial commodities exports of the South American countries and the cheap-labour-based apparel exports of Central American countries, seem to require an evolution towards exports with a higher value-added content in order to make the increase in market shares more sustainable.

III

The challenges ahead

Notwithstanding the significant changes in policies and the great efforts to stimulate and diversify exports, the domestic industrial base for trade of the small and medium-sized Latin American countries is still weak and the contribution of domestic firms to their exports of manufactures is relatively small. The prospects of a successful new insertion in world markets depend critically on the relationship between governments and the private sector, and particularly on the capability of governments to create an atmosphere that is conducive to investment in the tradeable goods sectors. These countries face challenges that require new initiatives by government and the private sector that are vital to a successful industrial transformation in the long term.

On the basis of the country studies included in the research project, we distinguish five such challenges: i) completing the reform of the trade and exchange-rate regimes; ii) stimulating private and government investments; iii) implementing additional government measures to support openness and exports, and to improve the quality of human resources and technological capabilities; iv) improving the social and political acceptability of the economic reform strategy, and v) coping with new competitors in international markets and new rules and regulations in the world trading system.

1. Completing the reform of the trade and exchange-rate regimes

The significant changes in the trade and industrialization regimes that were introduced in the course of the 1980s and early 1990s have resulted in a more competitive and export-oriented setting for the manufacturing sector. Tariff rates were slashed in many of the countries, as was the coverage of non-tariff barriers in most countries. As shown in table 3, by 1994 average tariffs had declined to low levels, although in many countries the rates of dispersion were still substantial. The policies of liberalization and stabilization were accompanied by significant changes in exchange-rate regimes.

Table 4 shows the adjustments made in the real effective exchange rate (REER) during the period 1985-1994. The index is defined as the local currency price of foreign currency, so that a rise in the index signifies a depreciation. Very significant depreciations were effected in Ecuador, Venezuela and Colombia in the second half of the 1980s. The REER tended to fluctuate rather strongly in the second half of the 1980s in El Salvador and to a lesser extent in Ecuador. In the early 1990s, exchange rates tended to appreciate in all countries in the table except Costa Rica. The appreciation was particularly strong in Uruguay, Colombia and Ecuador. These fluctuations

TABLE 3

Latin America: Trade liberalization in selected countries, 1985-1992

	Tariff rates (percentages) ^a	Tariff dispersion		Coverage of non-tariff barriers (percentages)		
	1985	1991-1992	1994	1994	1985-1987	1991-1992
Chile	36.0	11.0	10.96	66	101	-
Colombia	83.0	67	11.57	640	732	10
Costa Rica	92.0	16.0	11.74	788	8	-
Ecuador	50.0	18.0	11.91	628	593	...
Guatemala	50.0	19.0	10.82	707	74	60
Uruguay	32.0	12.0	14.74	586	141	...
Venezuela	30.0	17.0	11.80	604	441	50

Source: Prepared by the authors, with data from the World Bank and UNCTAD.

^a Tariff rates include tariffs and para-tariffs.

TABLE 4

Latin America: Real effective exchange rates in selected countries, 1985-1994

	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994
Chile	73.0	86.4	93.1	99.6	97.3	100	96.9	91.7	91.0	89.2
Colombia	54.6	73.2	82.1	85.2	88.3	100	96.7	88.6	84.3	75.3
Costa Rica	76.1	84.6	93.2	101.8	98.1	100	109.6	107.5	109.2	106.0
Ecuador	49.5	61.5	80.0	106.5	92.1	100	95.3	94.6	82.3	77.7
El Salvador	93.5	114.1	100.4	88.0	89.2	100	97.3	96.3	87.5	83.2
Guatemala	70.0	71.8	74.0	79.8	82.6	100	85.0	80.5	79.3	75.8
Uruguay	85.8	87.0	89.2	94.6	90.4	100	87.7	81.9	69.9	66.3
Venezuela	51.1	61.2	85.4	76.5	89.9	100	93.6	89.6	86.7	90.3

Source: IDB, 1995, country tables.

and the recent tendency towards currency appreciation may have disruptive effects on the new export activities of these countries as well as on other sources of foreign exchange such as traditional exports and tourism. The very success of a credible policy of stabilization and early liberalization of the capital account has induced the return of flight capital and an inflow of foreign investments which may have created a new form of overabundance of foreign exchange, resulting in a tendency towards over-valuation of the domestic currency. This complicates the process of completing the reforms.

Completing the reform of the trade and exchange-rate regimes fits in with the Washington Consensus: "getting prices right" is in many cases a precondition for industrial development that has not yet been met and requires further policy changes. Notwithstanding the significant adjustments referred to above, some tariff and non-tariff barriers are still

in place, domestic price regulations are in force, and market barriers frustrate the entry of newcomers (and especially of small firms) into the marketplace. Moreover, governments are often not capable of establishing exchange-rate regimes that support industry and export diversification in a consistent manner in the longer term. This is particularly true of countries that are heavily dependent on the production and export of only one or a few primary products and are potentially vulnerable to the "Dutch disease".

It should be noted, however, that "getting prices right" is not a synonym of government abstention, as State intervention may be needed in order to do away with market imperfections created by the private sector, to improve the smooth and flexible functioning of markets, and to correct positive and negative externalities, although preferably such interventions should not interfere with a free-trade regime.

It is very hard to generalize regarding the optimal speed of liberalization in the light of the experience of Latin American as well as other countries. Crucial factors in this regard are the efficiency of domestic industry and its capability to transform itself into an internationally competitive sector in the short term, producing product categories and qualities that are in demand abroad, and the expectations of the private sector with respect to the sustainability of the policy mix that is required to operate in open markets. Shock reforms may be justified in order to reduce the possibilities for pressure groups to block or retard reforms, but such a strategy may have high economic and social costs. If a shock-type approach is required, additional measures may be needed to reduce its negative effects on employment and the current account of the balance of payments during a transitional stage (Linnemann, 1996).

With regard to adjustments in the exchange-rate regime, experience indicates that the choice of such a regime depends on the economic environment of a country. A pegged-rate system is attractive for small countries that have a dominant trade relation with one partner, as is the case of the Central American countries. In countries with a more diversified structure of export destinations, an exchange-rate system pegged to a basket of international currencies may be called for, while countries with an export structure dominated by one or a few export commodities with widely fluctuating international prices may find a floating nominal exchange rate more appropriate (Visser, 1996).

However, a number of factors may reduce the options open to the government to pursue an effective exchange-rate policy. First, the availability of abundant natural resources and the dependence on few exportable commodities may cause "Dutch disease" effects that hamper the drive to export manufactures. Cases in point are Colombia with coffee and illegal exports, and Venezuela and Ecuador with oil exports. In some small economies, such as those of Central America, Dutch disease effects may arise even through the abundance of foreign aid. If a stable nominal exchange rate is not possible, at least a stable real exchange rate is called for in order to promote exports.

Second, if the exchange rate is to be used as an instrument to stimulate exports, it is necessary to free the foreign exchange market from restrictions that artificially keep the exchange rate down. The dangers

of dual and multiple exchange-rate systems are that they can easily be abused for political motives. Payments restrictions and dual and multiple exchange-rate systems pose a threat to economic welfare. A crucial question in this context is how to bring about the liberalization of the international payments system. No standard recipes can be given. Simultaneous liberalization of the capital and current account, or liberalization of the capital account even before the liberalization of the current account, may seriously jeopardize efforts to implement exchange-rate regimes that favour a better insertion in the international economy. Whichever way capital flows—in or out—it may be wise for the authorities to maintain their grip on it. It would probably be wise to ease restrictions on capital imports slightly when the current account is liberalized. Empirical analysis shows that adjustments in the exchange-rate have a significant effect on the value of exports, in particular manufactured exports. However, success in the liberalization of the international payments system must be accompanied by international marketing efforts of domestic firms and institutional support from export-promotion institutions.

Third, the exchange rate is not an instrument that can easily be controlled by the local monetary authorities. As shown above, a stable REER is not easy to come by, and wide fluctuations from year to year have an adverse effect on the profitability of the tradeables sectors. The nominal exchange rate itself is no longer under the direct control of the Central Bank in most countries, while open-market operations are constrained by the need to maintain minimum reserve levels. The domestic rate of inflation has thus become the main target in most cases (Fitz-Gerald, 1996).

2. Stimulating investment

During the 1980s, both private and public investments declined dramatically and investments in infrastructure and education were delayed and neglected in most countries in the region. Moreover, the share of private investment in GDP decreased significantly, as for example in Colombia and Venezuela, although not in Chile. Private investment has been hampered by high real interest rates, and these low investment rates have tended to reduce overall economic growth. A statistical analysis including 31 Latin American and Asian countries shows that there are significant

relations between changes in the shares of investment, domestic savings and exports in GDP during the 1980s. This indicates that improvement of export performance and strengthening of international competitiveness require stimulation of investment and domestic savings. Domestic saving, as a proportion of GDP, is particularly stimulated by high real interest rates (Van Dijck, 1992). Moreover, Riedel has shown that government capital expenditure and an appropriate macroeconomic climate, as reflected by the minimalization of government-induced market distortions and an open trade regime, stimulates the rate of return on private investments (Riedel, 1992, p. 62). In the same vein, the World Bank review of the best practices in trade policy reform underlines the importance of government investments that are complementary to private sector investments in order to strengthen the export sector (Thomas and Nash with S. Edwards *et al.*, 1991, p. 109).

The Washington Consensus emphasizes the role of sound macroeconomic policies in stimulating investment and the return of flight capital and foreign investors. However, structural adjustment programmes as implemented in Latin America in the 1980s did not contain specific provisions for investment promotion and an industrialization policy, and industrial policy and investment stimulation measures were dismantled. Rather, the programmes assumed implicitly that with trade liberalization, stabilization and devaluation, private investment in tradeable sectors would rise and competitive industries would emerge.

Three observations can be made in this regard. First, a crowding-in phenomenon can be observed, as a lack of public investment in infrastructure such as transportation and telecommunications has a negative impact on foreign direct investment. Second, reduction of public investments in technological development, R&D, education and training has reduced the capacity of domestic firms to compete internationally. Third, the elimination of specific credit and technical assistance programmes for small firms has reduced their ability to enter the industrial sector.

Complementary to these observations, Tavares de Araujo (1996) notes that a minimum package for stimulating private investment in manufactures should include a high and stable real exchange rate in equilibrium, as discussed earlier, efficient public spending on R&D and technological infrastructure

financed through an increase in taxes, and an institutional framework to regulate the competition process by strengthening discipline, enhancing mobility and improving resource availability. Moreover, fiscal policy should be systematically committed to the reduction of tax rates and the broadening of the tax base, leading to a higher tax burden for society at large. It is important to maintain a tax system compatible with the levels of public investment required by the current international patterns of technical progress and welfare.

In order to stimulate private investment, particularly in export sectors, the expectations of the private sector must be in line with the strategy that the government envisages. The structural adjustment that accompanies the opening of the economy must be supported politically by the public and by investors and producers in the private sector. Necessary preconditions for this to happen are consistency in government policies, a clear longer-term perspective for economic development, and a strong commitment of government to such long-term objectives. In view of the history of debilitating policies and the limited capacity of many governments—particularly in the smaller countries—to interact with the private sector and steer the course of development in an efficient manner, this may indeed be a major challenge. In this area, important lessons may be learned from the successful East Asian countries which have managed to create a reliable and stimulating general atmosphere for industry without burdening society at large with the costs of inefficiency and inward-orientation.

3. Additional and selective government interventions

In order to gain a competitive edge in international markets, governments may have to play an active supporting role well beyond the creation of a supportive macroeconomic environment and an adequate contribution to the development of infrastructure and human capital formation. More specific interventions and types of support for industries with a potential competitive advantage have been considered at the theoretical level and have been implemented in practice by governments of open and competitive economies such as the so-called miracle economies of East and Southeast Asia.

Clearly, globalization and technological progress have rendered traditional industrial policy instru-

ments obsolete (Tavares de Araujo, 1996). Technological progress has strengthened the demand for protectionist policies, but protectionism is not a viable option any longer. The question is how to create special conditions for capital accumulation at home without establishing direct constraints on the international movement of citizens, goods and financial resources.

Neither theory nor international experience provide clear guidelines for the use of specific industrial policy instruments at the sectoral or enterprise level in order to stimulate international competitiveness (Krugman, 1988). In the Latin American countries analysed here, no serious attempts have been made to implement industrial policies to accompany the process of trade liberalization. Peres (1996) reviews a number of industrial policy proposals termed "policies for industrial competitiveness". Interesting approaches have been adopted since 1994 in Colombia and Costa Rica, but their execution has proved difficult due to institutional weaknesses. As studies of the East Asian experience have shown, the impact of specific types of government interventions in support of technological development and export growth is difficult to assess (World Bank, 1993). Also, some efforts to shift comparative advantages by stimulating capital- and skill-intensive sectors have involved substantial fiscal and overall welfare costs (Van Dijk, 1992 and 1995). Consequently, the case for pursuing such types of industrial policies is not yet proven.

New institutions may be required to facilitate the export drive of domestic firms. There are no *a priori* reasons for government to be involved in the establishment of export-promotion institutions. Nevertheless, export reconnaissance and marketing institutions may have some of the characteristics of quasi-public goods and may require a government initiative for their creation.

In the past, many government export-promotion institutions and mechanisms have failed, possibly due in part to the rather unfavourable policy framework in which they had to operate (Hogan, Keesing and Singer, 1991, pp. 10-15). Hence, a reorganization or recreation of such institutions is required, in which three areas may be distinguished: direct financial support, fiscal incentives, and a cluster of export-promotion mechanisms and instruments. In the area of direct financial support, all the country studies refer

to the inadequate functioning of the domestic capital markets. High interest rates and sub-optimal allocation of credit were major constraints on investment, and moreover domestic investors lacked access to international financial resources. In the case of Costa Rica, it was reported that security was more important to banks than the profitability of the projects. Two specific issues have been commented upon in the case studies: the low level of development of export-financing schemes and the poor results achieved with special industrial reconversion funds. The latter problem is partly explained by the fact that very few firms were under pressure to reconvert. Improvement of the functioning of domestic capital markets should be given priority over the establishment of special reconversion funds.

Moreover, the experiences with fiscal incentives indicate that, in order to be successful, incentives for non-traditional exports should be an integral part of any export-oriented growth strategy, but practical implementation problems have limited the contribution of the systems actually in use, with the exception of the Chilean case. Further efforts should be made to simplify the systems, limit red tape and design features that guarantee access of small exporters to the incentives.

Finally, the effectiveness of export promotion institutions has been limited in many cases by budget constraints, low levels of competence and inadequate coordination. Improved cooperation between the private and public sectors is required in order to support exports in an efficient manner.

4. Improving the social and political acceptability of economic reform

During the 1980s social conditions deteriorated significantly, as reflected by an increase in average urban unemployment to over 10% by the mid-1980s. More specifically, the contribution of the manufacturing sector to total employment declined. In particular, employment in large manufacturing establishments went down rapidly, while employment in small enterprises as well as in the informal sector increased. Wage indicators for the manufacturing sector declined more sharply than per capita GDP. Moreover, in a number of countries – such as Chile, Costa Rica, Ecuador and El Salvador – government spending on health and education went down as a proportion of overall government spending, although the corre-

sponding proportion remained stable or increased in countries such as Uruguay and Venezuela. Primary school enrolment declined or remained unchanged in seven out of the fourteen Latin American countries analysed. This trend is worrying in view of the critical role of education and skill formation in the process of economic growth and industrial development. Lack of progress towards universal primary education and towards significant increases in secondary education is also a source of continued income inequality. Furthermore, there is evidence that although expenditure in the 1980s on education became more concentrated on the poor, the opposite is true of expenditure on health (Van der Hoeven and Stewart, 1996).

Compensatory programmes and social investment funds were established to mitigate the costs of the adjustment. Latin America has played a pioneering role in the development of social investment funds in the context of structural adjustment programmes. So far, however, many of these funds have not been sufficiently efficient and effective in reaching their target groups. A study by Stewart and Van der Geest (1995) shows that the proportion of non-deserving among the recipients of the funds was large, with Chile as the major exception because of effective targeting. Likewise, the proportion of persons in the target group who were not reached by the programme was large in the case of Costa Rica, but once again Chile's performance in this respect was much better. Public expenditure may be focused more effectively on the poor in several ways: by targeting expenditure specifically on the poor, by diverting an important part of public expenditure to social expenditure, and by raising the overall level of public expenditure in general.

Now that the first stage of policy reform –i.e., liberalization and stabilization– has been implemented to a large extent in most of the countries in Latin America, second-stage reforms are required to ensure sustainable growth. In this stage, governments will not only have to maintain macroeconomic stability and attractive conditions for private investments but will also have to devote their attention to consensus-building, as a major component of a sustainable and reliable climate for investment (Naím, 1995). Haggard has rightly stressed the role of institutions designed to facilitate political decision-making, and he considers the organization of the

decision-making process to have been a key factor in the success of the East Asian developmentalist State (Haggard, 1990).

5. Future prospects and constraints in the global economy

Finally, we must refer to two major external challenges to Latin America's new insertion in the world economy: the increasing number of competitors in global markets, and the new rules and regulations pertaining to regional trade systems as well as the world trading system at large, which may either facilitate or hamper the new outward-oriented industrialization policies in Latin America.

The so-called export-push model has been implemented by many countries all around the world, and competitive export-oriented production sites have been established by many of them. In Asia, two generations of "tigers" have been succeeded by countries such as China, India and Vietnam which pursued inward-oriented policies for a long time but are now on the road to trade liberalization and export-push strategies. China, in particular, has become a new centre of gravity in world trade and investment flows. The newly-liberalizing economies in Eastern Europe and the former Soviet Union are also becoming new sources of supply of a wide range of manufactured products in world markets. Integration into the European Community will give some of these countries a competitive edge over outsiders that compete in the European market. Also, some of the countries of Northern Africa may become competitors in a narrow range of unskilled-labour-intensive products in European markets, and their competitive position will be strengthened by free trade arrangements between the European Community and the North African region that are envisaged for the year 2010. This world-wide export drive and intensification of international competition only strengthens the arguments made earlier in favour of a reliable and supportive macroeconomic environment and the provision of additional facilities for export firms, provided there are sound economic arguments for such interventions.

The world-wide trend towards regionalization may create new opportunities as well as obstacles for Latin American exporters. By now, about 100 preferential trade agreements (PTAs) have been notified to the WTO, and nearly all the countries in the world

participate in at least one such preferential system. The Latin American countries, in particular, have revitalized their existing PTAs and also created a large number of partly overlapping PTAs among themselves. Moreover, they have started to participate in PTAs with the USA and the EC. The intensification of regional integration is reflected in the increasing share of intra-regional exports in total exports of manufactures in recent years. These arrangements may generate traditional advantages of trade creation and the exploitation of economies of scale, but they may also generate the disadvantages of trade diversion for insiders and outsiders. Generally speaking, however, in a world in which countries have been liberalizing their trade regimes prior to the establishment of preferential areas, and in which they have committed themselves to further multilateral liberalizations, the risk of strongly trade-diverting preferential agreements is significantly reduced.

It is in the interest of the Latin American countries to participate in predominantly trade-creating free trade areas and to contribute to the establishment of a liberal multilateral trading system or open regionalism. NAFTA has eroded the preferential access to the United States market previously enjoyed by the Central American and Caribbean countries under the Caribbean Basin Initiative, the Generalized System of Preferences and the Guaranteed Access Levels Programme. If the establishment of a Free Trade Area for the Americas (FTAA) should materialize, this would offer all Latin American countries preferential access to the United States market, to the disadvantage of producers in Asia and Europe. On the other hand, PTAs between the EC and countries in Eastern Europe and North Africa, and among members of APEC, may have trade diversion effects for Latin American countries: hence the interest of the latter in establishing their own preferential arrangements with the EC and in becoming partners of APEC.

The world-wide export drive has been strongly stimulated by the far-reaching changes in international trade rules (GATT, 1994). The rules governing world trade have been profoundly changed with the ratification of the results of the Uruguay Round negotiations, although the implementation of the new trade rules will take many more years and will most likely be contested in a number of cases. Most importantly, trade-weighted average import tariffs for

manufactured goods will be reduced by 38% in developed countries and by 20% in developing countries to average levels of 3.9% and 12.3%, respectively. In general, these tariff cuts will take place in equal steps over a five-year period starting in January 1995. However, the cuts will be below the average in some sectors of particular importance to Latin American countries, such as textiles and clothing, leather, footwear, travel goods, fish and fish products. Moreover, the 37% reduction of the tariff differential between unprocessed and processed products may stimulate the pre-export processing of primary products. The abolition of the Multifibre Arrangement and the integration of the trade rules for textiles and clothing in the WTO may also be of great importance to some Latin American countries, although in this case the most substantial liberalization steps are likely to take place only at the end of a ten-year period.

The adjustments made in the GATT/WTO rules on anti-dumping measures and safeguards may have significant effects on Latin America's export prospects. Anti-dumping cases have become the preferred channel through which industries suffering from foreign competition petition for protection against foreign suppliers. Traditionally, anti-dumping measures were applied mainly by industries in developed countries against competitors which also came from developed nations, but more recently they have also been applied against competitors from newly developing countries. The new rules are more precise and may limit abuse. The new agreement on safeguards limits the length of time that such protectionist measures may be used, requires compensatory concessions, and restricts the use of safeguards against developing countries. The agreement prohibits the use of so-called voluntary export restraints (VERS) or orderly marketing arrangements (OMAs).

There are two important reasons for strengthening the capacity of the WTO to supervise and discipline regional preference systems: to avoid losses of well-being due to trade diversion effects for non-participants of these preference areas, and to reduce the risk that such areas might become stumbling blocks on the road to an open multilateral trading system. Therefore, the Understanding on the Interpretation of Article XXIV of the WTO refers to the need to make overall assessments of the effects of PTAs and to lib-

eralize internal trade among the parties within a period of ten years. The WTO Committee on Regional Trade Agreements (CRTA) will be in charge of assessing compliance of PTAs with Article XXIV.

It is hard to overestimate the importance of the significant improvements in the dispute settlement mechanism of WTO. The new mechanism is faster and leaves less opportunity for the accused party to prolong and block the procedure. The first experiences with the new mechanism have been very encouraging for exporting Latin American countries. The dispute over the quality standards set by the United States for petroleum products imported from Venezuela and Brazil is a case in point. The United States had introduced these quality standards for imported products as a measure to combat air pollution, but the Panel decided in favour of Venezuela and Brazil in January 1996 and so did the Appellate Body in April 1996. Subsequently the United States adjusted its import regulations in this regard.

Social and environmental standards may play an increasingly prominent role in international trade relations in the future, and determined initiatives by Latin American governments may be needed to prevent such standards in OECD countries from becoming new types of *de facto* barriers to imports. The relationship between the multilateral trade system and such standards has become extremely controversial in the WTO, and the conflicting views that exist in this respect, particularly between developing and developed countries, will make it very hard to include such standards in the WTO rules in the short run.

The crucial issue in the controversy on social standards is whether the WTO rules will permit the use of trade sanctions to enforce compliance with selected ILO core labour standards. The USA has applied such standards in bilateral and regional trade arrangements and has been in favour of the establishment of WTO standards in this respect. Social standards were included in the Caribbean Basin Initiative of 1983 and in the USA's GSPs since 1984. Labour laws and rights were also referred to in the NAFTA side agreement on labour cooperation. More recently, the Harkin Bill proposes to prohibit imports of goods whose production has involved child labour.

Already in 1987, the USA proposed the establishment of a GATT Working Party on social standards and trade, but the proposal was resisted, particularly by developing countries. At the Marrakesh meeting

in April 1994, the United States attempted to have the issue explored by a WTO working group. At the annual ILO conference in June 1994 which celebrated the 75th anniversary of the Organisation, strongly opposing views were put forward on the role that the ILO should play in furthering the application of ILO core conventions and on the use of social clauses in trade agreements, particularly by the WTO. Again, at the fifth conference of labour ministers of developing countries in New Delhi in January 1995, countries took a firm position against social clauses in trade agreements, while however supporting a stronger role for ILO in setting standards (Van Dijk and Faber, eds., 1996).

The issues of trade and the environment have become increasingly interwoven. Thus, trade regulations have been included in 17 out of 127 international environmental treaties. Moreover, NAFTA has been the first major regional trade agreement including environment-related measures. On the occasion of the signing of the Final Act of the WTO Marrakesh meeting, the decision was taken to establish the Committee on Trade and Environment (WTO/CTE). Among the issues to be addressed by this committee are the links between the WTO system of rules and multilateral environmental agreements (MEAs), and between those rules and environmental policies such as eco-taxes and charges, eco-labelling, packaging and recycling requirements, and product standards and technical regulations. The international pressure for linking the environmental agenda with international trade rules makes it all the more appropriate for Latin American governments to introduce principles of sustainable development and to take determined measures to prevent environmental standards abroad from becoming bottlenecks for trade expansion in the future.

Notwithstanding uncertainties regarding the appropriate and timely implementation of the GATT/WTO agreements on the liberalization of world trade and on the future application of the new trade rules and dispute settlement procedures, it is safe to conclude that the new rules of conduct for the world's trading nations have clearly become more favourable to small exporting countries and fit in with the new industrialization policies of those countries, which will make them increasingly dependent on free and undisrupted access to the large markets of OECD countries.

IV

Final observations

The policy setting in many small and medium-sized countries in Latin America has become more conducive to the sustainability and growth of an internationally competitive manufacturing sector. The progress towards a stable macroeconomic environment of low inflation and moderate fiscal deficits, the commitment of governments to market-friendly policies, openness of markets, renewed access to the international capital markets and the improvements in the rules and institutions that govern international trade have been important contributions in this regard. The renewed regional co-operation has also stimulated manufactured exports.

As noted earlier, the shares of manufactured products in international markets are rising, manufactures are becoming a more substantial part of total exports, and the ratio of exports to GDP has increased in most of the selected countries. Nevertheless, this does not mean that manufacturing industry has again become an engine of growth in the smaller Latin American countries. In those nations, the share of industry in GDP is stagnant and the export structure is concentrated in less dynamic sectors of world trade.

The policy agenda for strengthening industrial development comprises three main areas: the completion of the macroeconomic reforms, a more active stance by governments regarding industrial development, and higher priority for social policies. With regard to macroeconomic reforms, the maintenance of a high and export-stimulating real exchange rate has been difficult to achieve and will require additional efforts. Also, domestic savings need to be stimulated in order to increase the level of investment and to reduce the dependence on foreign capital.

Second, increased competition in international markets and demanding production standards pose new challenges for exporters. Therefore, joint public and private-sector initiatives and supportive institutions are required to improve technological and managerial capabilities and to increase the productivity of human resources.

Third, social acceptability is a major challenge to the completion of the reforms, particularly in view of the limited positive effect on employment that industrial exports have had so far. Consequently, complementary social policies deserve high priority in the context of market-oriented reforms.

(Original: English)

Bibliography

- Buitelaar, R. and P. Van Dijck (eds.) (1996): *Latin America's New Insertion in the World Economy. Towards Systemic Competitiveness in Small Economies*, London, Macmillan Press.
- ECLAC (Economic Commission for Latin America and the Caribbean) (1994): *Statistical Yearbook for Latin America and the Caribbean. 1993 Edition*, LC/G.1747-P, Santiago, Chile. United Nations publication, Sales No. E/S.94.II.G.1.
- (1996): *Statistical Yearbook for Latin America and the Caribbean. 1995 Edition*, LC/G.1853-P, Santiago, Chile. United Nations publication, Sales No. E/S.96.II.G.1.
- FitzGerald, V. (1996): Structural adjustment in the 1980's: Stimulus or setback for private investment in the industrialisation process?, in R. Buitelaar and P. Van Dijck (eds.), *Latin America's New Insertion in the World Economy. Towards Systemic Competitiveness in Small Economies*, London, Macmillan Press.
- GATT (General Agreement on Tariffs and Trade) (1994): *The Results of the Uruguay Round of Multilateral Trade Negotiations. The Legal Texts*, Geneva.
- Haggard, S. (1990): *Pathways from the Periphery: The Politics of Growth in the Newly Industrializing Countries*, Ithaca, NY, Cornell University Press.
- Hogan, P., D.B. Keasing and A. Singer (1991): *The Role of Support Services in Expanding Manufactures Exports in Developing Countries*, Washington, D.C., World Bank, Economic Development Institute (EDI).
- IDB (Inter-American Development Bank) (1992): *Economic and Social Progress in Latin America. Report 1992*, Washington, D. C.

- (1995): *Economic and Social Progress in Latin America. Report 1995*, Washington, D. C.
- Krugman, P.R. (1988): Introduction: New thinking about trade policy, in P.R. Krugman (ed.), *Strategic Trade Policy and the New International Economics*, Cambridge, MA, The Massachusetts Institute of Technology (MIT).
- Linnemann, H. (1996): The gains from trade reconsidered, in R. Buitelaar and P. Van Dijck (eds.), *Latin America's New Insertion in the World Economy. Towards Systemic Competitiveness in Small Economies*, London, Macmillan Press.
- Mandeng, O. (1991): International competitiveness and specialization, *CEPAL Review*, No. 45, LC/G.1687-P, Santiago, Chile, ECLAC.
- Naím, M. (1995): Latin America: The second stage of reform, in L. Diamond and M. F. Plattner, *Economic Reform and Democracy*, Baltimore, MD, The Johns Hopkins University Press.
- OAS (Organization of American States) (1994): *Preliminary Report to the Special Trade Commission for the Ministerial Meeting on Trade in the Western Hemisphere, 1995*, Washington, D. C.
- Peres, W. (1996): *El resurgimiento de las políticas de competitividad industrial en América Latina y el Caribe en los años 90*, Santiago, Chile, ECLAC, mimeo.
- Riedel, J. (1992): *Public investment and growth in Latin America*, Washington, D. C., IDB, mimeo.
- Stewart, F. and W. Van der Geest (1995): Adjustment and social funds: Political panacea or effective poverty reduction?, *Employment Papers*, No. 2, Geneva, International Labour Organisation (ILO).
- Tavares de Araujo, J., Jr. (1996): The scope for industrial policy in a free-trade environment, in R. Buitelaar and P. Van Dijck (eds.), *Latin America's New Insertion in the World Economy. Towards Systemic Competitiveness in Small Economies*, London, Macmillan Press.
- Thomas, V. and J. Nash, with S. Edwards and others (1991): *Best Practices in Trade Policy Reform*, Washington, D. C., World Bank.
- UNCTAD (United Nations Conference on Trade and Development) (1993): *Handbook of International Trade and Development Statistics, 1992*, New York, United Nations publication, Sales No. E/F.93.II.D.9.
- (1995): *Handbook of International Trade and Development Statistics, 1994*, New York/Geneva, United Nations publication, Sales No. E/F.95.II.D.15.
- United Nations (1991): *National Accounts Statistics: Analysis of Main Aggregates, 1988-1989*, New York.
- Van der Hoeven, R. and F. Stewart (1996): Social development during periods of structural adjustment, in R. Buitelaar and P. Van Dijck (eds.), *Latin America's New Insertion in the World Economy. Towards Systemic Competitiveness in Small Economies*, London, Macmillan Press.
- Van Dijck, P. (1992): The empty box syndrome, *CEPAL Review*, No. 47, LC/G.1739-P, Santiago, Chile, ECLAC.
- (1995): Sustainable outward-oriented industrialization policies, *IDB Working Papers Series*, No. 202, Washington, D. C., IDB.
- Van Dijck, P. and G. Faber (eds.) (1996): Introduction, *Challenges to the New World Trade Organization*, The Hague, Kluwer Law International.
- Visser, H. (1996): The exchange rate as an export-stimulation mechanism, in R. Buitelaar and P. Van Dijck (eds.), *Latin America's New Insertion in the World Economy. Towards Systemic Competitiveness in Small Economies*, London, Macmillan Press.
- Williamson, J. (ed.) (1990): *Latin American Adjustment. How Much Has Happened?*, Washington, D. C., Institute for International Economics (IIE).
- World Bank (1992): *World Tables 1992*, Washington, D.C.
- (1993): *The East Asian Miracle. Economic Growth and Public Policy*, Washington, D. C.

Why doesn't investment *in public transport* reduce urban *traffic congestion?*

Ian Thomson

*Transport Unit,
International Trade,
Transport and Finance
Division, ECLAC.*

There is urban traffic congestion in most parts of the world, including Latin America. Among the measures aimed at solving this problem, many cities have built suburban railways or metros. However, these have had little or no effect, as is shown by studies which indicate that investments in the public transport system are incapable of solving this problem on their own. This article takes the view that when a new metro line or similar system is opened, many travellers who previously used the buses transfer to it, as do a few who previously used their cars. This frees some road space at peak hours, which is promptly used by other travellers who change their travel times or routes to take advantage of it. Furthermore, the parking spaces freed by the few persons who change from their private cars to the new trains are immediately occupied by the vehicles of people who previously used public transport because they had nowhere to park. Very soon, even though the new trains may be crowded with passengers, peak-hour traffic congestion is about as bad as ever. This sequence shows that metros and similar systems actually generate only a fraction of their potential benefits. In order for them to serve the community better, they should be coordinated with other measures, one of which would be to impose further restrictions on parking in areas around city-centre stations and other commercial areas.

I

Expectations and reality

What we see every day in the streets makes us doubt very much whether improvements in public transport systems will really reduce traffic congestion. The cities with the most extensive public transport systems, such as London or Paris, do not stand out by the freedom from congestion on their streets, and in Latin America the metros and similar systems which have been constructed do not seem to have done much to reduce congestion.

Yet one of the reasons most frequently put forward in support of investments in metros or similar systems is precisely that they will help to reduce congestion. Expectations of reduced congestion are held out in the relevant preliminary projects, in the declarations of technical experts and politicians, and even in the project appraisals made by teams of consultants. In Santiago, Chile, for example, it was forecast that in 1980 the metro would transport 202,330 passengers in the maximum peak hour, and that 95,800 of them would be people who had stopped using their private cars (i.e., more than the number of people who would stop using the buses).¹ In other words, it was expected that 47.4% of metro users would change to it from private means of transport.

It may have been that the consultants (mostly foreigners) hired to evaluate the proposal to build a metro in Santiago at that time were more optimistic than their opposite numbers in other cities about the possibility of interesting private car users in the new system, but there was a good deal of optimism in other sectors too. Some experts who examined the objectives of the various metro projects noted that the main objectives of the project, in the light of the situation of urban transport and of the city itself at that time and in the future, included improving the fluidity and speed of travel, solving the problem of traffic congestion, meeting social demands, revitalizing city centres, and correcting the tendency towards agglomeration (Figueroa, 1986), and it was widely believed that a metro would relieve congestion by reducing the number of buses on the streets and would possibly attract some private car users (Allport and Thomson, 1990).

Laymen in matters of urban transport considered that it was only logical that the construction of a metro would reduce congestion in nearby streets, and many specialists shared this belief. However, as we shall show below, what really happened is something that seems to defy all logic.

II

Our basic thesis, and a methodology for the economic and social evaluation of metros

The basic thesis of this article may be summed up in only a few words:

i) An improvement in a public transport system brings about only a very small increase in the total number of users of that system, its main impact being a redistribution of demand whereby users transfer to the improved components from the competing unimproved components.

ii) The relatively few private car users who move to the improved component of the public transport system free road and parking space, but this is immediately occupied by other persons, including some who previously used public transport, so that congestion returns to the levels registered before improvements were made in the public transport system.

iii) The reduction in the number of bus passengers may also free some road space (but not parking spaces), and this will lead to some redistribution of car trips in terms of time: thus, the space freed at peak periods is occupied once again, leaving the

¹ Estimated on the basis of the tables on pages 98 and 100 of SOFRETU/BCEOM/CADE, 1968.

streets somewhat less congested at the times of day close to those periods.

A number of studies² make it abundantly clear that metros or similar systems do not reduce traffic congestion. This conclusion runs counter to those of other studies which assert that they do reduce congestion and therefore bring environmental and other benefits. It seems quite wrong, for example, to assert that "all countries in the world openly acknowledge the negative effects of traffic congestion on the environment, and there is therefore clear awareness of the benefits of light railways, whose advantages include clean operation, safety ..." (Jorge, 1994). If light railways, or more conventional ones, do not reduce traffic congestion, then their environmental benefits are non-existent.

The thesis proposed here has some implications for the methodology to be used in the economic and

social evaluation of metros. The fact that a metro or similar system does not reduce congestion does not mean that its construction may not be appropriate from an economic and social standpoint, but it does mean that the possible benefits of constructing the new system would lie in the differences of cost between transporting users by the metro and by the previous means of public transport. Sometimes it may also be necessary to take into account the possibility that the metro permits an increase in the total number of journeys made.

In typical cases, the corresponding calculations will be quite easy: if it is assumed that metros do not have much effect on traffic congestion this would make their economic and social evaluation much simpler than if the degree of congestion had to be taken into account.

III

More detailed aspects of the proposed thesis

1. Consequences of changes in land use caused by the metro

Metros make some parts of urban areas more easily accessible, especially around metro stations. This raises property values and may give rise to tendencies towards densification in the areas around stations through, for example, the construction of tall apartment buildings and, especially, office blocks.

There are mathematical models which include both the simulation of transport patterns and land use. They have been applied in a number of Latin American cities, such as São Paulo. Although they are intellectually interesting and sometimes mathematically elegant, however, they are of very limited usefulness because they are almost impossible to calibrate. Nevertheless, although in practice it may not be possible to quantify it in advance, it cannot be denied in principle that there is a two-way relation between the transport system and land use.

This relation does not always manifest itself, for various reasons which include the existence of prior regulatory plans which constrain the natural actions of the property market. Consequently, densification of land use does not always take place, at least to a significant extent (as for example in the cases of Rio de Janeiro and San Francisco), but it has occurred in such cases as the suburbs of London in the early decades of this century and, more recently, in Santiago (Chile), Hong Kong and Toronto, sometimes through the natural action of the market and in other cases through a planning process carried out by the private or public sector.³

When the metro encourages the development of commercial activities around its stations, the majority of the people who work there and the clients and other users of such activities will naturally use the metro to go there and back. Nevertheless, a significant number of people will use their private cars for this purpose, thus aggravating congestion. In Santia-

² Foster and Beesley, 1963; Younes, 1995; Allport and Thomson, 1990; Bamford and Allport, 1990.

³ See for example Allport and Thomson (1990) and Knight (1980).

go, the concentration of journeys by vehicles other than the metro is higher in the area of influence of the metro than in the city as a whole, and of course it is much higher than in areas where there is no metro (table 1).

Thus, although this may not seem logical, the metro would appear to give rise to an increase in the number of car trips in its own area of influence. If the metro had not been built, these trips would probably have been made in other parts of the city. It is also likely, however, that the density of commercial activities would have been less than in the area of the metro, and these trips would therefore have caused less congestion.

This indirect result of the metro –stimulation of private car use in the areas it serves– could be made a more expensive proposition for car users by imposing strict controls on parking both on the street and off it, even in new buildings, but little has been done in Latin America in this respect. Very frequently, for example, the authorities fix a minimum number of parking spaces per square metre or per employee, whereas what they ought to do is fix a maximum number (see *El Mercurio*, 1996).

2. The latent demand for car trips

If someone has a car, he will most likely use it to get from one place to another, even though this option may not involve any saving of time or money compared with public transport. This preference for the private car may be due to a variety of reasons, such as freedom to choose the time of the return journey, the possibility of carrying packages, protection from the weather, greater privacy, or the possibility of listening to a preferred radio station while driving.

Transport simulation models reflect this preference for car travel in different ways, for subjective reasons. One option is to determine adjustment factors quantified through calibration of the modal partition module. To put this more simply, what is done is to select essentially monetary values which, when used to modify the costs of car travel, make it possible to reproduce as accurately as possible the modal partition actually observed: these factors would represent the revealed preferences of travellers. Another method, which has been used more frequently in recent years, is to use surveys to determine

TABLE 1

Journeys by means other than the Metro generated in the area of influence of the Santiago Metro and in Greater Santiago, 1991

(Number of journeys per km² in morning peak period)

Means of transport	Area of influence of the Santiago Metro ^a	Greater Santiago as a whole
Private car journeys	816	492
Bus journeys (in car-equivalents)	206	122
Taxi journeys	21	12
Collective taxi journeys	33	14
<i>Total</i>	<i>1 076</i>	<i>640</i>

Source: Estimates by the author, on the basis of data from Comisión de Planificación de Inversiones en Infraestructura de Transporte (no date); Catholic University, Instituto de Economía (1993); Empresa de Transporte de Pasajeros Metro S.A. (several years), and telephone consultations with the latter company.

^a The area of influence of the Metro is defined as a strip five blocks wide (equivalent to 500 metres) along the Metro lines.

the declared preferences of travellers among the various travel options, defined in terms of cost, time and other features.

Very frequently, the demand for car travel in the most highly commercial areas of cities exceeds the available parking space; this factor is incorporated into the models in different ways. If the opening of a metro or some other improvement in the public transport system initially resulted in a significant shift in demand from private cars to the improved system, this would free parking spaces. However, because of the unsatisfied demand for car travel (due to the insufficient parking space), the spaces thus freed would not remain unused for long, because other persons, who previously used public transport, would now use their cars in order to take advantage of the new situation. Thus, the number of car trips would remain the same, although the trips would probably now have different starting points.

In other words, the opening of a metro along one major thoroughfare of a city could lead to an increase in car trips on other major streets. This result can be simulated through a normal transport planning model, but there are other comparable effects which cannot be simulated through the vast majority of such models.

3. Preferences in terms of time, and road space

Initially, the metro should lead to a reduction in congestion on parallel streets, due both to a small reduction in car travel and a larger reduction in bus journeys. However, this reduction could prove to be transitory.

Many people –including the author– do not travel at peak hours because of the delays and tensions caused by the serious congestion usually prevailing at such times. In principle, it would suit them best to travel at these times, but in fact they travel a little earlier or later in order to travel at times when traffic is somewhat easier.

With the opening of a new metro or similar system, however, traffic congestion around the metro would go down, and this would encourage persons who used to travel a little before or after the peak periods to change to times when traffic is heavier.

As a result, congestion at times of heavy traffic would be almost as bad as before, while it would go down more or less permanently in the periods immediately before and after rush hours, thus making the concentration of journey frequencies at given times even more acute.

4. Political expediency

It is worth adding at this point a few words on the expediency of carrying out metro projects, as perceived by local politicians, in order to help to understand why new public transport systems are constructed that do little or nothing to reduce congestion.

With very few exceptions, mayors, regional authorities and other political figures who promote the construction of metros thereby also improve their own political prospects. Normally, the city where a metro is built pays only a small part of the investment costs involved, but almost the whole of the benefits generated by the metro are confined to that metropolitan area (see Thomson, 1985). Obviously, the citizens gain more than they lose and tend to feel grateful to their political representatives who played a part in the decision to build the metro. The losers are the other inhabitants of the country, who have to help to pay for the investment although they do not receive even the slightest part of the benefits.

Consequently, local politicians naturally tend to promote the construction of a metro in their cities, justifying their position with arguments that seem logical at first sight but do not stand up to more serious analysis.

IV

Effects of the metro on congestion: some specific cases

The following sections contain some important conclusions for our analysis, drawn from various studies carried out in order to determine the effects of a metro or other mass transport system on congestion.

Let us distinguish first of all between two types of repercussions of metros on the volume of street traffic: the direct impact, represented by the number of travellers who change to the metro, and the indirect impact, represented by changes in the behaviour of travellers as a result of that direct impact, which may have the effect of stimulating a change to private car use. We make this distinction because normally metro companies are well capable of estimating the direct impacts, through user surveys, but they, or

other authorities, very rarely know much about the indirect impacts.

1. Results of analyses by simulation models

The Transport and Road Research Laboratory in the United Kingdom has used a simulation model to investigate the effects on the volume of private car traffic caused by different levels of investment in public rail transport. A model was prepared for a medium-sized city, the construction of a metro or light railway system in radial corridors was posited, and an evaluation was also made of the impact of changes in fares (see results in table 2).

TABLE 2

**Medium-sized cities: impact of construction of
metro lines or light railways on car traffic**

	Percentage change in car/kilometres compared with base situation	
	Peak period	Off-peak period
Metro on three radial corridors	-1.3	-0.3
Metro on six radial corridors	-2.6	-0.6
Metro on six radial corridors, fares reduced by 50%	-3.0	-0.9
Metro on six radial corridors, fares increased by 50%	-2.2	-0.5

Source: The Chartered Institute of Transport, 1996, Annex B.

No information is available on the length or cost of the metro and light railway systems modelled, but it is fairly clear that very large investments in the construction of such systems bring about only minimal reductions in private car use. Even then, the small changes calculated in such use could lead to overestimation of the accompanying changes in congestion, because it is highly improbable that the model used (of which we do not have any details) was capable of simulating the redistribution of journeys in time at peak periods, or the redistribution between those periods and the rest of the day, as a result of differential changes in the amount of road space freed by the transfer of some journeys to the metro or light railway system.

Other studies carried out in Great Britain give rather similar results. The execution in London of an extensive programme of construction of mainly underground railways –including among others the new railway along the East-West axis through the city centre, extension of the Jubilee line of the Underground, extension of the Docklands light railway, and a tramway system in the suburb of Croydon– would reduce the percentage of person/kilometres corresponding to car travel from 52.4% to 47.6%, but only if in addition the bus frequencies were increased by 20%, the traffic control system was further perfected, and rigid control over car parking on the streets of the capital was ensured.⁴ Another study, also in London, estimated that the application of a strategy of improvements in bus and train frequencies, plus the extension of the system of preferential treatment for buses in traffic, would reduce the number of vehicle/kilometres by 1% in the city centre and by 2% in the rest of the city. If at the same time large sums were invested in the rail system, the figures would increase to 4% and 5%, respectively.

⁴ See The Chartered Institute of Transport, 1996, Annex B.

According to the report of The Chartered Institute of Transport (1996, Annex B), all relevant studies indicate that measures designed to improve the competitiveness of public transport would probably only have minor effects on private car use. On the other hand, however, the authors of that study also consider that the models used may underestimate the effect of improvements in public transport on car traffic because they do not take due account of qualitative rather than merely quantitative aspects (*Ibid.*, p. 49).

2. The Victoria Line of the London Underground

The Victoria Line, which runs between the East-Central suburbs of London and the central area and was subsequently extended to the south, was planned in the 1960s and opened at the end of that decade. The cost-benefit analysis carried out to determine the economic feasibility of this project was considered a model of its kind at the time and is still mentioned as a classic study (Foster and Beesley, 1963, pp. 46-78). Among the stated objectives of the project was the reduction of street congestion, and it was expected that the possibility of faster travel by this means would reduce the volume of cars on the streets and make for more expeditious bus transport. According to the analysis in question, 35% of the benefits of the line would come from the reduction of that volume by 8,000 one-way car trips per day.

In reality, however, only 5,500 users of the new line were people who had changed over from private car use, and 1,400 of them still kept on using their cars to reach the subway. The researcher Bassem Younes suggests that the space freed in the streets immediately after the opening of the line may have been cancelled out by the use of this space to satisfy

the latent demand for car travel (Younes, 1995, pp. 333-336), and he concludes that the impact of the Victoria Line on car traffic was very marginal and the streets continued to bear almost the same volume of traffic as before.

3. West Berlin

Younes also analysed the extension of the metro of what was then West Berlin to Spandau between 1980 and 1984; as in London, one of the objectives of this project was to reduce traffic congestion on the streets. He concluded that the case of Berlin proved once again that improvements in public transport did not automatically lead to a significant and substantial reduction in motor vehicle use (Younes, 1995, pp. 333-356).⁵

He arrived at this conclusion after studying the results of a survey carried out by the Department of Transport and Public Works of Berlin. In this particular case, however, the results may be interpreted differently. In Spandau, between 1979 and 1985 the proportion of journeys made by private car increased only modestly, from 42.6% to 43.2%, while journeys by public transport increased a little more, from 25.3% to 27.3%. In the comparable district of Lichtenrade, where there were no changes in the metro system, the proportion of journeys by car rose from 43.7% to 52.4%, while the share of public transport went down from 31.8% to 24.6%. We thus see that, using the same basic figures as Younes, it is possible to arrive at a different conclusion: that the extension of the metro to Spandau did have a significant impact on private car use and did help to reduce traffic congestion.

4. Stuttgart

This other case studied by Younes concerns the extension of line 1 of the suburban railway system, between Schwabstrasse and Vaihingen/Böblingen. This project was completed in September 1985. Here, too, one of the aims of the project was to check the growing level of private car use. Younes's task was easier

because the metropolitan authorities had carried traffic studies along the line of influence of the extension both before and after its entry into service.

In spite of the extension of the line, traffic on the city streets grew more within the area of influence of the extension than in the rest of the city (table 3). The growth was generally less in areas closer to the city centre, because of the saturation of the streets and the restrictions imposed by the shortage of parking places.

Younes concluded that the impact of the extension of the suburban railway was felt within the public transport system, especially in the form of transfers from the buses to the trains, while any road capacity freed was quickly used up by the latent demand.

It is also clear that the extension of the railway made possible more journeys to the city centre and implicitly helped to make the central area of the city more viable, especially as an area of concentration of jobs.

6. Cities in developing countries

A study carried out by the United Kingdom Transport and Road Research Laboratory states that little evidence has been found of a relation between building a metro and reducing traffic volumes, and the majority of users of rail transport systems in developing countries come from other forms of public transport.

Another British study which analysed the effect of mass transport systems on congestion in developing countries (Allport and Thomson, 1990) concludes in general that in almost all the transport corridors there was congestion ranging from moderate to severe before the construction of the metro, and in the great majority of cases the improvement seems to have been slight or non-existent, while in many cases the congestion even got worse. In some cases there was a clear improvement immediately after the opening of the metro, but the benefit was only fleeting. This is consistent with the thesis put forward in this article.

Of the 12 cases shown in Box 1, only three credit the metro or light railway with bringing about a significant reduction in traffic congestion. Another study concludes that in general the proportion of private car occupants who would transfer to a metro opened in the same corridor would be between 0% and 4% (Bamford and Allport, 1990).

⁵ Younes uses the term "motor vehicle", but it is clear that he is referring specifically to automobiles rather than other types of motor vehicles, which could in principle even include the motorized cars of the metro.

TABLE 3

Changes in volumes of private car traffic, before and after extension of Line 1 of the Stuttgart suburban railway

	Ring	Increase in traffic between May 1984 and April 1986 (%)	Increase in traffic between October 1984 and October 1986 (%)
Within area of influence of the extension	Inner	3.6	...
	Outer	13.3	11.5
In the city as a whole	Outer	...	6.3

Source: Younes, 1995, p. 350 (some minor errors in the original table have been corrected).

BOX 1

SELECTED CITIES IN DEVELOPING COUNTRIES: SUMMARY OF
IMPACT OF METROS ON TRAFFIC CONGESTION

- Cairo: No discernible impact.
- Calcutta: No impact.
- Hong Kong: Car ownership went down around the time that the metro was opened, but the reason was an increase in taxes, rather than the metro. Some 16% of bus passengers transferred to the metro, but later bus traffic increased and congestion was the same as before.
- Manila: Some reduction in congestion was registered, probably due to the new light railway system and an economic recession.
- Mexico City: Congestion caused by private cars continued to be very severe, even though car ownership went down as a result of an economic recession. Bus speeds are relatively high, but presumably because of the establishment of exclusive bus lanes rather than the impact of the metro.
- Porto Alegre: Congestion was not very severe either before or after the construction of the metro.
- Pusan: The metro probably helped to relieve traffic congestion.
- Rio de Janeiro: Bus flows only went down a little, so there cannot have been much impact on congestion.
- Santiago: Congestion along the main East-West axis continued to be severe, and bus traffic continues to be close to the maximum possible levels.
- São Paulo: Bus flows went down by 500 per hour in each direction along each corridor; to begin with there was less congestion, but this later became severe once more and spread to many areas.
- Seoul: Congestion was serious, generalized and rapidly growing. The mass transport system did not have any observable impact on traffic volume or bus flows.
- Tunis: No impact was expected on congestion, and this was confirmed by practical experience.

Source: Allport and Thomson, 1990, table 8.1. The comment about exclusive bus lanes, in the case of Mexico City, is the responsibility of the author of the present article.

V

A form of public transport capable of attracting motorists

1. Motorists' rejection of common-or-garden buses

Experience all over the world indicates that improving the common-or-garden bus systems does not succeed in attracting private car drivers. Routine rail systems (metros, tramways, etc.) interest them a little more, but not too much. Only varieties of public transport which offer private car drivers a higher level of comfort have managed to lure significant numbers of motorists out of their private cars and into the ranks of public transport users.

In wealthier countries, such higher-class public transport services could run on rails. The Metros of some United States cities such as San Francisco or Washington, for example, offer quite agreeable travelling conditions, and their suburban stations have spacious parking lots, planned for bimodal journeys combining private and collective transport. This is an interesting option for private car users. However, there are no Latin American countries where it would be socially or politically acceptable to finance (necessarily with public funds) the construction of a metro to satisfy the tastes of the elite.

2. Luxury buses

Another option is to authorize the operation of higher-class bus services, which already exist in cities such as Buenos Aires, Córdoba, Guatemala City, Rio de Janeiro, São Paulo, Santafé de Bogotá, etc. These buses usually have comfortable reclining seats, air conditioning and background music, and moreover they do not carry standing passengers. In Buenos Aires and some Brazilian cities, their fares are four or five times higher than on a regular bus, but even so these higher-class services attract enough users to make them a profitable proposition. It should be noted, however, that the financial situation of their operators is highly susceptible to changes in the economic environment. Thus, the economic problems of Brazil in the 1980s seriously affected the

popularity of the *frescões* of Rio de Janeiro, and it is quite likely that the stagnation of the Argentine economy in the mid-1990s is affecting the profits of the firms operating "differential" services in Buenos Aires.

The establishment and operation of higher-class bus services usually costs the public sector little or nothing, and they have shown themselves to be successful in attracting private car users. In Buenos Aires, for example, 14% of the users of "differential" buses would otherwise have used their private cars (Vicente and Brennan, 1989). In Bogotá, 48% of the users of executive buses came from families owning one or more cars, while 19% had cars for their own personal use (Acevedo, 1989). In Amsterdam, 39% of the users of a luxury express bus service chose it instead of travelling by private car (OECD, 1994).

Higher-class buses are clearly capable of attracting persons who would otherwise have travelled by car. This would be their direct impact (see section IV.1 of this article). No information is at hand about their indirect impact, but it seems obvious that unless measures are taken to control the problem, it is very likely that the parking and road space freed through a reduction in direct car use will be occupied by people who changed in the opposite direction: i.e., from public to private transport.⁶

3. The Curitiba system

In Curitiba, Brazil, there is no higher-class collective transport system, compared with the average quality of such transport in that city, but in general terms the collective transport system is of higher quality than in almost any other Latin American city. In Curitiba, the express buses run on a system of exclusive bus lanes some 60 kilometres long. The various lines are integrated with each other, and citizens of all social classes have an excellent opinion of the system. In

⁶ For fuller details on the influence of higher-class buses on congestion, see Thomson (1996).

spite of the existence of exclusive bus lanes, a journey by private car tends to take less time than the same journey by public transport (see Buleze and others, 1985, table 12), but even so a considerable percentage of collective transport users leave their cars at home and prefer to use the bus.

Some of these users assuredly choose the bus for reasons of convenience, reliability or cost, while others do so because they have nowhere to park, but

it cannot be denied that the intrinsic qualities of an integrated public transport system which has been well planned for many years can make it attractive enough to be preferred by people who would otherwise have travelled by private car. What we do not know is whether the direct reduction in congestion that may have taken place will be maintained, or if it will be offset by the indirect generation of other private car journeys.

VI

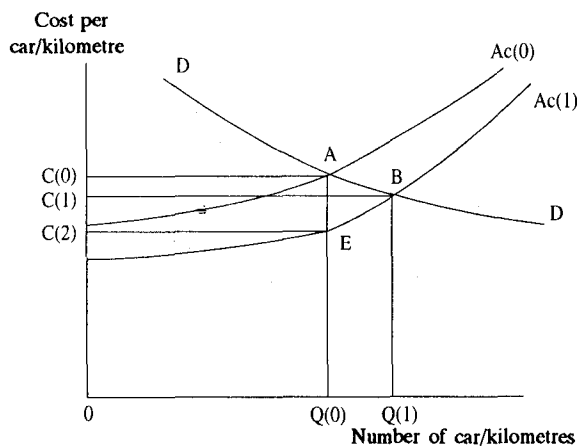
The importance of measures to control private car use

1. Basic principles

If we look at the traffic situation in a corridor before and after the construction of a metro, we see that the direct impact of the latter is that it attracts a number of journeys previously made by bus and a few journeys previously made by private car, thus increasing the road space available for other road users (figure 1). The relation defining the supply of road space available to the latter is shown by curve $Ac(0)$ before the construction of the metro and $Ac(1)$ after it enters into operation. The relation governing the demand for road space is shown by curve DD , whose form reflects the elastic nature of such demand.

FIGURE 1

Theoretical representation of road use by non-Metro-users



The case shown in the figure does not provide for the application of a system of tolls whereby road users would pay charges reflecting the difference between the mean cost and the marginal social cost of their occupation of road space. Such tolls or charges could generate economic and social benefits in the situations both before and after the construction of the metro, by reducing traffic volume and congestion.

In the first situation, the volume of traffic is $0Q(0)$, at a mean cost of $0C(0)$. After construction of the metro, this volume rises significantly, to $0Q(1)$, and the mean cost goes down by a relatively smaller amount to $0C(1)$. The benefits received by users are identified by the area $C(0)-A-B-C(1)$.

If, however, it were possible in the second situation to keep the volume of traffic down to the pre-metro level, the benefits obtained would increase to the considerably larger amount of $C(0)-A-E-C(2)$. Consequently, if it were feasible to limit the increase in road use, this would be clearly desirable in terms of overall welfare.

2. Practical measures

The need to restrict the indirect impact is clear, but the ways of doing so are not so obvious. The optimum amount of restriction varies in each case, and depends in principle not only on the number of journeys transferred to the metro or the road space thus freed, but also on other factors, such as the seriousness of congestion along the metro axis.

In practical terms, however, it would be reasonable to try to reduce parking space in the area of influence of each metro station by the same amount as the number of cars and drivers who travelled to such areas each day but have now transferred to the metro as a result of its direct impact. The corresponding reductions could be quantified by analysing the results of a transport simulation model, so as to be able to reduce the parking space simultaneously with the opening of the metro.

Another option would be to carry out a survey among metro users, once it is in operation, to find out how many passengers previously travelled by private car. This method has the advantage of being more precise, but it would be more complicated from the political point of view because it would mean depriving motorists of parking spaces to which they were already becoming accustomed.

There are not many practical measures that can be taken to minimize the impact of changes in travel times by drivers who reschedule their journeys by changing from periods just before or after the rush

hour to the peak period itself, in order to take advantage of the road space newly freed by the direct impact of the metro. One option could be to impose controls on the time of entry into parking areas, but this would be difficult to carry out in practice because, *inter alia*, the drivers who thus changed their journey times would not be going to a single area but to a considerable number of different areas, where they would be competing for parking spaces with other drivers who it was not intended to restrict.

In theory, the distribution of car journeys in time could be controlled by a sophisticated version of a road toll system which linked the amount of the toll to the degree of congestion at each particular time of day. Generally speaking, this arrangement would make it possible to adapt traffic volumes to the available road capacity and demand characteristics at each time, but options like this are very much in the future, and could remain there for ever. In the meantime, the available range of practical measures is much more limited.

(Original: Spanish)

Bibliography

- Acevedo, J. (1989): *El servicio ejecutivo de buses de transporte público en Bogotá*, paper presented at IV Encuentro Técnico entre Países Latinoamericanos sobre Transporte Urbano, Havana, ECLAC, mimeo.
- Allport, R. and J. Thomson (1990): *Study of Mass Rapid Transit in Developing Countries*, London, Transport and Road Research Laboratory.
- Bamford, T. and R. Allport (1990): The TRRL Metro pre-appraisal model, *Urban Transport in Developing Countries*, V Conferencia sobre Transportes Urbanos en los Países en Desarrollo, São Paulo, CODATU, September.
- Buleze, E. and others (1985): *Integração do sistema de transporte urbano de Curitiba*, paper presented at Primer Encuentro Técnico entre Países Latinoamericanos sobre Transportes Urbanos, Brasilia, Economic Commission for Latin America and the Caribbean (ECLAC)/Empresa Brasileira dos Transportes Urbanos (EBTU), October, mimeo.
- Comisión de Planificación de Inversiones en Infraestructura de Transporte (no date): *Encuesta origen-destino de viajes del Gran Santiago 1991*, Santiago, Chile, Secretaría Ejecutiva de la Comisión de Planificación de Inversiones en Infraestructura de Transporte (SECTRA).
- El Mercurio* (1996): Más estacionamientos deberán tener las nuevas construcciones urbanas, Santiago, Chile, 27 July.
- Empresa de Transporte de Pasajeros Metro, S. A. (several years): *Memoria anual*, Santiago, Chile.
- Figuroa, O. (1986): *Observation des métros latinoaméricains*, Paris, Institut National de Recherche sur les Transports et leur Sécurité (INRETS).
- Foster, C. and M. Beesley (1963): Estimating the social benefit of constructing an underground railway in London, *Journal of the Royal Statistical Society*, Series A, vol. 126, part 1, London, Royal Statistical Society.
- Knight, R. (1980): The impact of rail transit on land use: Evidence and change of perspectives, *Transportation*, vol. 9, No. 1, Amsterdam, Elsevier Science Publishers (B.v.North-Holland), March.
- Jorge, M. (1994): *Transporte urbano de pasajeros por trenes livianos. Beneficios ambientales*, Actas del VII Congreso latinoamericano de Transporte Público y Urbano, Buenos Aires, Congresos Latinoamericanos sobre Transporte Público y Urbano, November.
- OECD (Organization for Economic Co-operation and Development) (1994): *Congestion Control and Demand Management*, Paris.

- Catholic University of Chile, Instituto de Economía (1993): *Estimación de los beneficios sociales del Metro*, Santiago, Chile, October.
- SOFRETU (Société Française d'Etudes et Réalisations de Transports Urbains)/BCEOM (Bureau Central d'Etudes pour les Equipements d'Outre-Mer/CADE (Consultora de Administración de Empresas) (1968): *Estudio del sistema de transporte metropolitano de Santiago de Chile*, Santiago, Chile, May.
- The Chartered Institute of Transport (1996): *Better Public Transport for Cities*, London, June.
- Thomson, I. (1985): Los metros sudamericanos: un análisis de su evaluación económica, *Estudios urbanos y regionales*, No. 33, Santiago, Chile, Catholic University of Chile.
- (1996): *Una evaluación crítica de algunos aspectos del desarrollo del sistema de transporte urbano de Santiago*, paper presented at Congreso de la Sociedad Chilena de Ingeniería de Transporte, Santiago, Chile, Sociedad Chilena de Ingeniería de Transporte, October.
- Vicente, O. and P. Brennan (1989): *Los servicios diferenciales en la Región Metropolitana de Buenos Aires*, paper presented at IV Encuentro Técnico entre Países Latinoamericanos sobre Transporte Urbano, Havana, mimeo.
- Younes, B. (1995): The benefits of improving public transport: A myth or a reality?, *Transport Reviews*, vol. 15, No. 4, London, Taylor & Francis Ltd.

Notes on the measurement *of poverty by the* income method

Juan Carlos Feres

*Division of Statistics
and Economic Projections,
ECLAC.*

The fact that different studies seeking to measure poverty in a given country often give differing results, although they apparently use the same method and the same data sources, has long given rise to a feeling of confusion among both experts in the field and the public in general. Such discrepancies (regarding the size of the phenomenon and the characteristics of households considered to be poor) reduce the credibility and technical reliability of these measurements, shed doubts on estimates of the level and evolution of poverty, and hinder international comparisons. This is why it is important to foster greater consensus among researchers regarding the criteria and procedures to be used, with a view to progressing towards a common pattern which will make the measurements more consistent and homogeneous and guarantee their effective comparability. This article outlines some aspects of the "income method" which affect the identification of poor households and the calculation of the extent of poverty and hence –since they could help to serve the above-mentioned purpose– warrant special consideration in future studies on this subject. These aspects are: differences in the cost established for the basic food shopping basket; the procedures used to calculate the value of non-food items; the use of scales of equivalence for households of different sizes and compositions; evaluation of the reliability of measurements of current income; problems associated with expanding the coverage of the concept of income; poverty measurements, and, lastly, the sources of information normally used in studies of this type.

I

Introduction

In Latin America, two methodologies are most frequently used for measuring and describing poverty: the "income method" or "poverty line method", and the direct method based on the consideration of social indicators, the most frequently-used version of which in recent years has been the so-called "maps of unsatisfied basic needs".

These two methods, of course, are based on quite different conceptual approaches, so that "in reality, they are not alternative ways of measuring the same thing, but represent two quite different concepts of poverty" (Sen, 1981). These concepts are based, in one case, on the notion of the capacity to satisfy essential needs, and in the other –the direct method– on the observation of the real consumption of persons, matched against given conventions regarding minimum needs. However, both methods are of great interest and aid significantly in the task of diagnosing poverty.

The main sources of information for maps of unmet basic needs are population and housing censuses, while estimates using the poverty line method are prepared on the basis of household surveys. Both these systems have their corresponding methodologies and operational frameworks, of course, but in their practical application they often display variations from these norms which cannot always be explained entirely by the well-known limitations in terms of available information. Consequently, the results of different studies which apparently use the same methodologies and the same data sources (especially in the case of the poverty line method) quite often display differences (sometimes considerable) in the estimated magnitude of poverty and the characteristics of the households classified as poor. This is obviously disconcerting both for experts in the field and for the public at large, and these discrepancies affect the credibility and technical reliability of the measurements made, shed doubt on evaluations of the level and evolution of poverty, and hinder international comparisons.

Efforts to tackle this problem should obviously include the exercise, in each study, of the greatest care and strictness with regard to the concepts, criteria and assumptions used and the information sources

and data processing procedures employed, so as to enable the rigorous analysis and interpretation of the results obtained.

This is not enough, however. It is also necessary that there should be greater consensus among researchers regarding the procedures to be applied at the different stages in the estimation process, so as to advance towards a common pattern capable of improving the consistency and homogeneity of the measurements and ensuring their effective comparability. This should be complemented, of course, by even closer scrutiny of the information obtained with these methods with respect to its real usefulness, scope and limitations for the purpose of analysis and decision-making in the social field (diagnosis and definition of target groups and design, follow-up and evaluation of the impact of policies and programmes aimed at overcoming poverty).

Although this forms part of a debate which has already become quite traditional in Latin America, and although a good deal of progress has been made in this respect, we believe that there is room for a further widening of the idea of the common application of concepts and methods, even though the nature and complexity of the matters dealt with means that some degree of diversity will always be permissible and even sometimes advisable.

This article briefly outlines some essentially methodological aspects of the income method which affect the identification of poor households and the calculation of the extent of poverty and may hence be useful in this respect. The importance of these aspects has already been highlighted by the extensive literature generated on this matter in the region in recent years, so that they warrant special consideration in future research on this subject.

We shall centre our comments on seven items: differences in the cost established for the basic food shopping basket; the procedure for calculating the value of non-food items; the use of scales of equivalence for households of different sizes and compositions; evaluation of the reliability of measurements of current income; problems associated with expanding the coverage of the concept of income; poverty

measurements, and, lastly, the sources of information used in studies of this type.

Consequently, we will not deal here with aspects relating to the conceptual dimension of the income

method, although it is acknowledged that this dimension is extremely important and in some cases may strongly condition the options available at the methodological level.

II

The basic food shopping basket

Determining the value of the basic food shopping basket, which represents the cost of satisfying basic food needs at a given time and place, is a process involving several stages, which require a great deal of information. In Latin America, this task has been carried out mainly on the basis of what might be called the "ECLAC lines": the definition of baskets whose size and composition are such as to satisfy the nutritional needs and reflect the consumption habits prevailing in a society (adaptation to consumer preferences), in accordance with the domestic supply and relative prices of foodstuffs. In determining the value of the basket, the prices used for each article are those collected for the calculation of the consumer price index (ECLAC, 1991).

Although this methodology is applied in the region on a relatively generalized scale and it lays down in detail the procedures governing the different phases of the estimation process, each specific case where it is used comes up against special situations (due to lack of information or other reasons) which ultimately affect the cost of the basic food shopping basket. It is thus almost inevitable that different values will be arrived at, not only by different researchers but even within the context of one and the same study, depending on the options selected as regards criteria, assumptions and treatment of the basic data. In turn, the different values arrived at for the basic shopping basket, also known as indigence lines or extreme poverty lines, will be directly reflected in differences in the estimated dimension of poverty.

The problem is even more serious when the available information is clearly weak or incomplete, as often happens in the case of some urban areas of countries of the region or rural areas in general. When this happens, the analysis has to be based on mere hypotheses or guesses.

Although researchers are well aware of this, however, they generally tend to work on the implicit

or explicit assumption that the cost of the basic food shopping basket is a specific and highly accurate value, and later on the same is true of the value of the poverty index.

In view of this variability,¹ it would seem more reasonable to establish this cost in terms of a range of values rather than a specific figure. Obviously, this would make it a little harder to analyse changes (especially small changes) in the level of poverty over time, but it would have the advantage of giving greater consistency with the degree of precision usually attained in these estimates. If this view is accepted, then the problem would be how to determine the size of the range of values in question.

This is undoubtedly an eminently empirical task. Leaving aside essentially statistical aspects, the minimum and maximum of the range should depend on the sensitivity of the cost of the basic food shopping basket to the assumption of alternative values (within reasonable limits) for certain relevant parameters which enter into its estimation. Among the most important factors in this respect are those connected with: i) the nutritional requirements of the different groups (by sex, age and activity), since the basket should be in keeping with the average needs of the population; ii) the consumption structure implicit in the basic food shopping basket and the physical quantity of each of its components, and iii) the prices on the basis of which the basket is valued.

The first of these factors includes the height and hence the weight of adults, which it is necessary to know in order to calculate the basal metabolism rate (energy) or protein requirements; the distribution

¹ In addition to this variability, there is also the statistical variability inherent in the sample-based nature of some of the data used to construct the basic food shopping basket, due to such factors as socio-demographic distribution or consumption structures.

over the day of the different predominant activities (light, moderate and heavy), especially in the case of the adult population, and the gross energy expenditure corresponding to each activity. The second set of factors comprises aspects relating to the selection of the reference group for evaluating the habits of the population; the treatment to be given to consumption "away from home" (form of acquisition of foodstuffs), and assumptions regarding the evolution of consumption patterns, when no recent survey results are available in this respect. Finally, the third set of factors includes the selection of the prices considered to be appropriate for valuing the basic food shopping basket (average prices, minimum prices, prices prevailing in the poor sectors, etc.); the differences to be assumed between regions or areas in the absence of detailed information, and the index to be used for updating the value of the basket (consumer price index for foodstuffs, consumer price index for the poor, or product prices).

Various studies (ECLAC, 1991; Gerstenfeld, 1993) have simulated the effect of some of these factors. For example, analyses have been made of the sensitivity of the average energy needs of the whole

population to variations in their determinants. Thus, increases or decreases of 2 cm in the height of the adult population lead to positive or negative variations of no more than 22 Kcal per person per day in calorie requirements (i.e., less than 1% of total calorie requirements). The different hypotheses on the time distribution of the various predominant activities, for their part, involve variations of no more than 26 Kcal per person per day, while the impact of the different values of gross energy expenditure for each activity ranges from -1.2% to +0.7%.² Likewise, in certain countries and for certain periods the differences in the cost of the basic food shopping basket resulting from the use of one particular price index rather than another for updating purposes have proved to be minimal or insignificant.

However, the available information is still very insufficient and does not always provide conclusive results. More needs to be done to achieve a level of formalization which will permit the determination of something like the net effect of the whole set of factors influencing changes in cost of the basket. This is therefore one of the items on which it is necessary to keep working.

III

Non-food expenditure

Under the poverty line method, the cost of satisfying non-food needs is usually determined on a normative basis, in the light of the observed relation between food expenditure and total consumption expenditure (Engel's coefficient) in the various household strata, especially those belonging to the reference group (households whose food expenditure is slightly above the basic level assumed).³

At least two conceptual connotations have been noted in this respect. The first one is that the fore-

going assumes that households that can satisfactorily meet their food needs also satisfy the minimum levels of all their other basic needs.⁴ The second is that the fact that the data registered in the surveys correspond entirely to private consumption expenditure means that part of the satisfaction of basic needs is not reflected in that consumption pattern, in so far as households have access to goods and services wholly or partly subsidized by the State (ECLAC, 1990).⁵

What we wish to highlight here, however, is another matter. If we accept Engel's coefficient as the rule for establishing the cost of satisfying non-food

² It should be borne in mind, however, that if the variations were expressed in terms of adult requirements rather than the average for the whole population, these percentages would be rather higher.

³ Perhaps the only exception to this procedure is that of the study "Macroeconomía de las necesidades esenciales en México" (COPLAMAR, 1983), in which an attempt was made to identify specific indicators for the satisfaction of each type of non-food need. See also Boltvinik, 1990.

⁴ This is not necessarily so. See, in this respect, an interesting analysis of the question of housing, in connection with the treatment of imputed income corresponding to the use of one's own dwelling, in Beccaria and Minujin, 1993.

⁵ We shall return to this point in section VI below.

needs, we run up against the problem of the differences in the value of this coefficient for the different types of households in a reference stratum.⁶ Such differences are mainly connected with the size and composition of the household and the stage in the life-cycle through which it is passing.

An example of this may be found in the results of the analysis made by Feres and León (1988) on the basis of data from the 1984-1985 survey on income and expenditure in Colombia, which clearly illustrate the differences that exist, in terms of the main items in the structure of non-food expenditure, between households of similar income levels but different composition. Thus, in the set of households in Bogotá, Cali and Medellín which made up the second quartile in terms of per capita expenditure, differences were observed in the proportion of expenditure devoted to transport, education, health and housing. In the case of the latter item, households made up of young couples without children spent an average of nearly 20% of their total expenditure on housing, whereas for older couples with two children the figure was 15%. The differences observed in the proportion of expenditure devoted to food were even greater.

Thus, as the cost of covering non-food needs varies in the course of the different stages in the family life-cycle in accordance with the size and composition of the household, as well as in line with such factors as the amount of wealth accumulated and the degree of access to public services, there is ample

justification for a detailed analysis of these items of expenditure, which could possibly result—as in the case of food—in the establishment of specific coefficients for different types of households.

However, this is an aspect which also enters into the “scales of equivalence” analysed in section IV: it is perhaps these scales that should serve to reflect in full the effects of the differences of composition and economies of scale of households which are implicit in their consumption expenditure profiles.

At the same time, because of the infrequency with which family budget surveys are carried out, it is necessary to have some criterion for updating the structure of household expenditure. In the absence of other information, and without resorting to sophisticated elasticity calculations, one readily available way could be to look at the evolution of the various expenditure items and, at each particular time, weight the original coefficient by the differences in the changes in relative prices. The experience of most countries of the region in recent years with regard, for example, to the disparity between changes in the prices of tradeable goods and changes in non-tradeables, or between public service charges and food prices, amply justifies such a procedure.

A different matter (which we will not discuss here) is the determination of coefficients of expenditure on food in areas for which no information is available, such as a large part of the rural areas of Latin America.

IV

Scales of equivalence

Poverty studies usually use per capita units to express both the values of poverty lines and the resources available to households for satisfying their basic needs, thereby acknowledging that the level of well-being is closely linked with the number of persons in the family. As already noted, however, in reality pov-

erty lines, or income, should also recognize the economies of scale associated with different sizes of households, the effects of the particular makeup of their members (by sex, age or other relevant feature), and the structure of consumption corresponding to the various phases or stages in the family life-cycle. All these elements should be summed up in the “scales of equivalence” among households.⁷

⁶ ECLAC studies have routinely adopted, for all countries, coefficients of 0.5 for urban areas and close to 0.57 for rural areas, which are equivalent to inverse values (Orshansky's ratio) of 2.0 and 1.75 respectively (Altimir, 1979). These values have been retained even in some countries where the average coefficient observed in the reference group diverges from them, mainly with the objective of not affecting comparability with previous estimates (ECLAC, 1991).

⁷ Another factor, whose empirical analysis is even more complex, may be added to this list: the intra-household structure of consumption.

Using –or failing to use– these scales in the various studies gives rise to results which differ from each other not only in terms of the extent of poverty but also, and especially, in the identification of poor households. For example, many families which have middle-level incomes but are of large size (and therefore have a high proportion of children) could have their classification changed from “poor” to “non-poor” if the applicable equivalences were taken into account.

It must be acknowledged, however, that these scales are hard to establish, and although there are some concrete proposals for improving them, they have so far been considered very partial and imperfect. The three main methods used for preparing these scales are: i) surveys to weigh individual needs (this method introduces subjective elements); ii) empirical research on the behaviour of household expenditure (using some indicator of well-being, such as Engel’s coefficient, for households of different sizes and compositions; and iii) studies based on nutritional (and psychological) information.

Naturally these different methods also give different results.

In order to illustrate the great disparities that may occur in this respect, table 1 presents five scales currently used in different countries. As may be seen from the table, they may display such large differences as to significantly affect the results obtained in a poverty study. Consequently, before deciding whether or not to apply scales it is very important to get to know them in detail and evaluate their background and rationale.

One criterion used in Latin America to prepare scales of equivalence (valid only for food consumption) is that based on the energy needs of each individual (ECLAC, 1991). Although it makes it possible to take into account the differing food needs of the different members of a household, it does not explicitly incorporate the possible economies of scale in food consumption, and this criterion cannot therefore be considered sufficient for extrapolating consumption expenditure as a whole, although its usefulness in the area of food is undeniable. Table 2 presents an example of this type of scale, based on the energy requirements of an adult male between 31 and 60 years of age with moderate activity.

Thus, while acknowledging the pressing need to incorporate scales of equivalence in the methodology of poverty studies, there is not much yet that can be reliably proposed in this respect. This is therefore another item that should be placed on the methodology research agenda of the countries of the region.

TABLE 1
Scales of equivalence among households

	Men	Women
A. Amsterdam scale^a		
18 years or more	1.00	0.90
14 - 17 years	0.98	0.90
Under 14	0.52	0.52
B. OECD scale (Organization for Economic Cooperation and Development)^b		
First adult	1.0	
Additional person of 14 or older	0.7	
Additional person under 14	0.5	
C. Modified OECD scale^c		
First adult	1.0	
Additional person of 14 or older	0.5	
Additional person under 14	0.3	
D. Subjective scale		
First adult	1.000	
Second person	0.232	
Third person	0.159	
Fourth person	0.126	
Fifth person	0.105	
Sixth person	0.091	
E. LIS scale^d		
Head of household	1.0	
Adults and children	0.5	

^a Used in consumption expenditure studies in the United Kingdom.

^b Arbitrary, but more realistic than the per capita scale.

^c Compromise between the OECD scale and the subjective scale.

^d LIS: Luxembourg Income Study.

TABLE 2
Peru: Scale of equivalence among households, based on energy needs

Socio-demographic categories	Men	Women
Under 1 year of age	0.274	0.253
1 - 3 years	0.502	0.469
4 - 6 years	0.651	0.587
7 - 9 years	0.748	0.660
10 - 13 years	0.825	0.728
14 - 17 years	0.990	0.774
18 - 30 years		
Activity ← light	0.883	0.701
Activity ← moderate	0.994	0.722
Activity ← heavy	1.143	0.761
31 - 60 years		
Activity ← light	0.888	0.725
Activity ← moderate	1.000	0.747
Activity ← heavy	1.150	0.787
Over 60		
Activity ← light	0.729	0.659
Activity ← moderate	0.821	0.679
Activity ← heavy	0.944	0.715

Source: ECLAC, 1991, Annex 2.

V

Reliability of income measurements

Among the many aspects investigated by household surveys, one which gives rise to most controversy regarding the quality of its results is the measurement of the various income flows received by persons and families. It is known that these measurements are skewed, traditionally in the direction of under-estimation, but there is no consensus about the magnitude of these skews and the way to determine this (Feres, 1988). In poverty studies, which represent a normative cross-section of income distribution, these skews must be evaluated and corrected. Otherwise, they will automatically be reflected in the estimated dimension of poverty.

Although in almost all countries the surveys often used for this purpose form part of a regular, ongoing programme, with highly standardized contents and processes, there is not enough evidence to confirm the theory that these skews remain relatively stable in the successive survey rounds.⁸ On the contrary, in many cases the information which it has been possible to assemble tends to contradict –often very markedly– the idea of the possible “freezing” of such skews. There is therefore no alternative but to evaluate the reliability of the income measurements in each individual survey and try to correct the degrees of under-estimation thus revealed.

The skews may be of different types. Some are connected with the sample-based nature of the survey (inadequacy or poor quality of the sample frame, problems of coverage, rejections, statistical variability, etc.), while others are due rather to contingencies or errors foreign to the sampling procedure (Altimir, 1975). It is assumed that the first-named skews will be taken care of within the context of each survey and are generally evaluated by the responsible authorities. The latter type of skews, however, are above all errors of response, which are usually harder to detect, are not always entirely the fault of the in-

terviewee, are difficult to correct and usually represent a major proportion of the total error of estimation.

For our purposes, we are particularly interested in the problems of failure to respond, of incomplete coverage of the concept of income being surveyed, and of under-declaration.

Failure to answer certain questions on income may reach significant levels in surveys, to such a point as to distort the results and artificially inflate the indexes of poverty (and especially of indigence).⁹ When this happens, it is necessary to make the corresponding imputations in line with the characteristics of each recipient who did not answer. This is perfectly possible in most cases, and the survey itself provides information for this purpose, using the income declared by persons and households with similar characteristics.¹⁰

An alternative criterion is obviously simply to exclude from the survey, for all purposes connected with income variables, all those who do not report their income. If this is accompanied by the relevant adjustments in the sample (replacements or changes in the factors of expansion) there will be no problem, but if not the representativeness of the survey will be affected or it will be necessary to assume that the persons excluded from the sample have the same distribution and characteristics as those remaining in it. Such an assumption would require at least the confirmation of field research in this respect, which has generally not been carried out in Latin America.

⁸ If this stability did exist, it would not solve the problem of the accuracy of the estimates, but it would largely solve the problem of their comparability, and this would have a positive impact on income distribution studies.

⁹ An extreme example of this is provided by the Permanent Household Survey (EPH) in Argentina. In the October 1990 survey of the Federal Capital and Greater Buenos Aires, 23.2% of employed persons did not report their labour income, and in 1992 the figure was 17.8%.

¹⁰ Generally speaking, this is not very difficult in the case of income from employment, pensions and imputed rents (which represent some 90% of total income), but it is naturally more difficult in the case of other types of income, where it is very hard to detect possible omissions. There are well-proven computer programmes for making these imputations (see Feres, 1996).

The income concept studied in surveys can be supplemented by imputation in order to make it compatible with total current household income. This case is different from the previous one, however. Here, it is necessary not only to identify the probable recipients of each class of income which has not been studied but also to generate an estimate of the total or average amount of this income, on the basis of data from a source exogenous to the survey, which, as we shall see below, consists of the national accounts. It is also necessary to possess some criteria for distributing this income among recipients. What happens in practice is that the survey itself sometimes provides information which permits the identification of these recipients and the distribution of the income among them, but in other cases it is only possible to make a rough allocation on the basis of guesswork. Even in this case, however, it is preferable to make the corrections and thus minimize the risk of over-estimating poverty indexes.

In order to analyse the reliability of income data and evaluate possible skews due to under-declaration, it is also necessary to have a quantitative reference pattern, independent of the survey itself, to provide estimates of the different types of income received and to serve as a basis for comparison. This role is usually assigned to the national accounts.

So far, most of the Latin American countries do not regularly prepare the household income and expenditure account of the system of national accounts, or else they do not do so with the necessary level of disaggregation. Moreover, criticisms of the accuracy and reliability of the national accounts themselves are very frequent, and could shed doubt on the advisability of using them to evaluate surveys. However, there is no denying that the national accounts are the only system of statistics that permits the detailed evaluation and reconciliation of data from multiple sources, within a coherent and systematically applicable conceptual framework.

The most important thing, therefore, would be to seek ways of gradually increasing the availability, quality, level of disaggregation and conceptual precision of the household account, rather than merely casting aspersions on its validity. This has been the line taken, for example, by ECLAC in its efforts to encourage countries to take on this task: the Commission has collaborated in the development of methodologies and even provided its own estimates.

The next step is to define the criteria and procedures for adjusting the income data obtained in surveys.¹¹ If we assume that the degree of under-estimation of each type of income is determined by its difference from the total amount of such income registered in the national accounts, the first task to be carried out is the standardization of concepts between the two sources. For this purpose, we need to consider several concepts as detailed below.

1. Remuneration of employees

According to the instructions, surveys generally investigate income from labour, and especially the remuneration of employees, in liquid terms (i.e., the amount that the worker effectively receives after the corresponding legal deductions). In the household account, however, remunerations are given in gross terms, so that in order to achieve equivalence of concepts with the survey data it is necessary to deduct from them the social security contributions (in order to obtain the net remunerations) and direct taxes.

This is possible by using the information on the value of social security contributions. Contributions to the traditional (pay-as-you-go) system are included among household expenditure, while contributions to individual capitalization systems (if these exist) must be specially estimated as memorandum items in the accounts.¹²

2. Operating surplus

Income in respect of ownership of dwellings (effective or imputed rent) must be deducted from the operating surplus, and such income must also be given separate treatment as regards its comparison with the survey.

Thus, the net operating surplus (after deduction of the "ownership of dwellings" item and direct taxes) is assimilated to the concept of the primary income of own-account workers, which is what the surveys seek to measure.

¹¹ For a detailed description of the criteria used by ECLAC in its studies on the extent of poverty, see ECLAC, 1991, chapter II.

¹² In section 5 below, some comments are made on conceptual and practical difficulties connected with the accounting treatment to be given to transactions under the new pension schemes.

3. Direct taxes

The net remuneration of employees registered in the household account must also be reduced by the amount of direct taxes paid, in order to make the income consistent with the concept of effective remuneration that the surveys are supposed to record. The same must be done with respect to profits, since the accounting concept also includes such taxes.

For this purpose, the direct taxes paid by households and registered in the account must be broken down in order to associate them (in their entirety) with each of these two sources of income. To this end, it is necessary to systematize the information available at each time on the different types of taxes in order to estimate the amount paid in respect of wages and salaries and deduce, from the difference, the amount corresponding to profits.

4. Imputed and effective rents

Each of the years for which the household account is estimated must include a set of memorandum items. These should cover imputed rents for the use of a dwelling owned or provided, and that part of the operating surplus of the "ownership of dwellings" sector that corresponds to imputed rents.

These data will not only give the value of imputed rents but will also make it possible to calculate the amount of effective rents and make the necessary adjustments in the operating surplus to ensure that it can be compared consistently with the concept of the profits of own-account workers recorded in the surveys.

a) Imputed rents

As may be gathered from the foregoing, the memorandum items must include both the gross product of the imputed rents and its corresponding added value (operating surplus). The difference between the two represents the production costs, which in this case are connected basically with repair costs, property taxes, fixed capital consumption and maintenance charges.¹³

¹³ The values estimated for some countries reveal that these costs can amount to a very substantial proportion of the total. In Chile, for example, they amount to 46% of the value of imputed rents (a percentage determined in the input-product matrix).

Although in terms of household income the comparison should strictly speaking be with the imputed rents obtained from the survey at the added value level, it is reasonable to assume that in practice the households interviewed reply on the basis of what they consider the rent of their dwelling would be if they had to seek accommodation on the market. Thus, the value declared is closer to the concept of the value of production than to the added value, because it may be assumed that households do not deduct any of the cost items referred to earlier. In any case, it would be impossible to calculate these costs from any of the other information registered in the survey.

Consequently, for this non-monetary income flow the comparison between the values of the reference framework and the survey itself is usually at the level of the total value of the imputed rents, without prejudice to the fact that other problems may also arise in the course of the comparison, as we shall see later.

b) Effective rents

According to the information available in the memorandum items, this income flow is calculated as the difference between the operating surplus of the "ownership of dwellings" sector and the amount corresponding to imputed rents. When it is investigated separately in surveys, this provides the possibility of directly contrasting the measurements made of it by the two information sources.

5. Benefits received under the new social security systems

The value of the benefits received by households under the new social security systems (based on individual capitalization) in countries where these have been applied, which is included among the memorandum items, is considered together with the value of the benefits received under the old social security system, which is registered in the household account. This is because it is necessary to make the concept of the reference framework match that effectively declared in the surveys.

It should be noted that the benefits under the new system do not figure among the income in this account because, from the accounting standpoint, the contributions to the new system are considered as a

financial transaction (saving), and the benefits obtained from them are assimilated with the withdrawal of one's own funds (dissaving). However, when evaluating the available resources of the household, and in view of the form that these withdrawals normally assume, it would seem more logical to consider them as current income.

At all events, it is worth recalling that this is one of the types of income which, for purposes of adjustment, is entered in net terms, since the contributions are simultaneously deducted from employees' wages.

Somewhat different treatment is given to transactions with private health insurance companies, since when such companies exist they are assimilated to insurance companies. From the accounting standpoint, the benefits received from them are registered in household income as indemnities received from risk insurance, while employees' contributions are registered mainly as net insurance premiums, with a small part being classed as final consumption expenditure, because it is considered as payment for services (administrative costs and profits of the institutions). Consequently, as a function of the adjustment of income declared in the survey, the value of this type of benefits is calculated, also in net terms, within the set of items making up current transfers.

6. Adjustment of the concept of disposable income

A point which can give rise to some controversy is the following: should the household income measured in the survey be reconciled at the global level with the concept of disposable income as presented in the national accounts, or should certain items be considered strictly in terms of gross income? In other words, should some income flows registered in the household account be reduced by the amount of the expenses incurred by households under the same headings?

Specifically, this would affect such items as cash capital inflows (property rents received, less interest and other rents paid), risk insurance (indemnities received, less net premiums paid) and current transfers (inward transfers received, less outward transfers made).

In the ECLAC studies, it was decided to use these variables without deducting the respective outlays, since the surveys are designed to register the corresponding gross income, and it cannot be assumed that the persons interviewed are declaring their income in net terms.

Moreover, three other circumstances should be borne in mind. The first, which is of a strictly practical nature, is that this set of income flows represents a very small proportion of total household income, so that whatever the criterion adopted its incidence on the final result will be very slight. The second, which is of a more conceptual nature, is that in poverty studies what it is desired to evaluate is the magnitude of the resources available to the household, rather than the use made of those resources, which, from a normative point of view (and especially in the case of poor households), belongs rather to the sphere of the considerations taken into account when setting the value of the poverty line (that is to say, the expenditure needed to cover basic needs). The third circumstance is that, in line with the technique used to correct under-declaration of capital income in the surveys, which imputes such income only to the highest-income quintile, adopting the alternative criterion would at most be reflected in a slight drop in income concentration, but it would hardly affect the measurement of poverty at all.

The foregoing illustrates the methodological advances made as regards the evaluation and correction of the skews affecting income measurement in household surveys. At the same time, however, it points to the need to continue improving the quality of such adjustments,¹⁴ as well as increasing the reliability of the information from both surveys and national accounts (Altimir, 1987).

¹⁴ A measure which could help in this direction, for example, would be to make wider use—in the first stages of adjustment of multi-purpose surveys—of the information provided by studies on family budgets. It would be particularly important to go beyond the mere comparison by source of income and break down the adjustment into branches of economic activity or occupational groups.

VI

Broadening the coverage of the concept of income

As already noted, the fact that the consumption expenditure registered in household surveys corresponds exclusively to private consumption expenditure means that, when households have access to some transfers of goods and services wholly or partly subsidized by the State, part of the process of satisfaction of their basic needs is not reflected in the survey data.

In principle, the poverty line method does not present any great conceptual difficulties for expanding the concept of total current household income to include effective access to these free or subsidized public services, because incorporating them explicitly would probably reduce Engel's coefficient (thus raising the poverty line), while increasing household income proportionately.

Let us look at a simple example of a household whose income is below the poverty line. Let us assume that its expenditure ratio is:

$$\frac{\text{Expenditure on food}}{\text{Expenditure on food} + \text{Other private expenditure}} = 100/200 = 0.5 \text{ (2.0)}$$

An increase of 50 in their total expenditure, as a result of including their consumption of non-food public goods and services, would give the following:

$$\frac{\text{Expenditure on food}}{\text{Total private expenditure} + \text{public goods}} = 100/250 = 0.4 \text{ (2.5)}$$

Although it is quite true that this increases the total expenditure of the household, and their food expenditure ratio goes down to 0.4, placing the pov-

erty line at 250, the value of the consumption of public goods and services should also be computed as part of the household's income, so that the consumption capacity of that household in relation to the poverty line remains unchanged.

It may be deduced from this example that the problem lies rather in the different access of different households to public goods and services at a given moment and over the course of time. Alternatively, the problem lies in the validity of the assumption that the amount and distribution of public goods is relatively stable, which implies that households take their expenditure decisions in the light of the prevailing institutional system and that Engel's coefficient is therefore suitable for estimating the global cost of their needs as a whole.

On the empirical level, however, the situation is different. The surveys do not provide sufficient information on this item. Only very few surveys – such as the National Economic and Social Characterization Survey (CASEN) in Chile, for example – identify the households and persons receiving public monetary transfers and ask them about the amount of such benefits, or record enough information to make the necessary imputation (on the basis of cost data external to the survey).

Naturally, the problem is even greater in the case of non-monetary transfers. The challenge here is to design and implement the necessary instruments for obtaining the information at the level of each household and ensuring its regular updating. This would give the additional benefit of providing the necessary background information for broadening the analysis of living conditions and permitting the follow-up and appraisal of particular social programmes.

VII

Poverty measurements

Most of the poverty studies carried out in Latin America normally provide results on the identification and quantification of poor households. In other words, they provide information on the incidence of poverty, broken down by geographic units or economic and social groups. There are not so many studies, however, which cover other dimensions of the problem, such as poverty gaps (the distance between the income of the poor and the poverty line) and the severity of poverty (how poor the poor really are). Moreover, it is by no means usual for them to provide information on the profiles or characteristics of poor households, which are particularly useful for diagnosis and policy design.

Among the many poverty measurements proposed which could enhance the analytical possibilities of these studies are those that bring out the insufficiency of the income of the poor, the magnitude of the social effort needed to overcome poverty, or (through statistical breakdowns of the indexes) the part played by different factors in the evolution of the overall incidence of poverty (Ravallion, 1992). From a formal point of view, each of these measurements has its advantages and limitations.

Sen (1976) noted two main axioms that poverty indexes must fulfill: i) the axiom of uniformity, whereby a reduction in the income of a poor household (other conditions being equal) must raise the poverty index, and ii) the axiom of transference, whereby a transfer of income from a poor household to a richer one (other conditions being equal) must likewise increase the poverty index.

Not all the known indexes satisfy these conditions. Clearly, for example, the measure of the incidence of poverty (H) does not have either of these properties, while indexes of poverty gaps satisfy the axiom of uniformity but not that of transference. In this respect, Sen himself proposed an index which overcomes these limitations:

$$P(s) = H [I + (1-I) G]$$

where: H = incidence of poverty
 I = percentage distance of average income of the poor from the poverty line
 G = Gini coefficient of the income distribution of the poor.

As we can see, in this index the incorporation of the Gini coefficient solves the problem that the measures H and I remained unchanged when there were transfers of income among poor people. In turn, $0 \leq P(s) \leq 1$. It may be deduced from this that:

$P(s) = H * I$ if all poor people have the same income

$P(s) = 0$ if all persons have an income higher than the poverty line, and

$P(s) = 1$ if all persons have an income equal to zero.

Foster, Greer and Thorbecke (1984), for their part, also formulated a poverty index, incorporated in a family of indexes based on different values of the parameter α (which represents something like the degree of aversion of society to poverty). When $\alpha = 0$ the index is equal to the incidence of poverty (H); when $\alpha = 1$ it is equal to the poverty gap ($H * I$), and when $\alpha = 2$ the index represents the mean distance of the income of the poor, squared, from the poverty line (FGT). Thus:

$$P(FGT) = (1/n) \sum_{i=1}^q [(z-y_i)/z]^2$$

where: n = total population
 q = total number of poor people
 z = poverty line
 y_i = income of the i^{th} poor person.

This index complies with the axioms of uniformity and transference and also satisfies the properties of additiveness and breakdown. However, its inter-

pretation –in terms of the significance of the index itself and the changes in it– is not very clear.

The foregoing examples merely seek to bring out the possibility and importance of supplementing the traditional analysis of the magnitude and evolution of poverty with the incorporation of measures and

profiles that permit enhancement of the diagnosis and fuller knowledge of the situation of poor sectors, naturally within the framework of the limitations imposed by the sample-based nature of the information and the reliability of the basic data normally used in this type of study.

VIII

Sources of information

Finally, some general comments are called for on the information sources used for the execution of poverty studies using the poverty line method: specifically, household surveys.

For the purposes of this article, a distinction needs to be drawn between at least three types of household surveys which are regularly effected in Latin America and whose information permits the calculation of social indicators, including those for poverty.

First, there are multi-purpose household surveys, incorporated in ongoing or periodical survey programmes. They are held at least once a year, and their central module is generally designed to measure employment and at the same time to record information on a broader range of characteristics of the persons interviewed (demographic, migration, education and income data) and their dwellings. Most of these surveys include, in some of their rounds, special modules added to the main questionnaire of the survey: these modules have become an interesting and low-cost instrument which is well adapted to the need to carry out research or go into greater detail on certain subjects such as female labour, education and training, access to health services, etc.

A second type of survey, which is carried out less frequently and at varying intervals, consists of family income and expenditure or budget surveys. These, too, are sample-based studies which provide very useful information for studying the social situation. In addition to data on some general features of the persons and dwellings surveyed, they usually contain detailed information on family income and expenditure, which serves to define the basic food shopping baskets whose cost is used in the estimation of poverty lines. They also serve as a (statistical) control of the seasonal nature of income and expendi-

ture, if different households are habitually interviewed over a whole year. This provides quite good-quality information, whose quality is also aided by the collection instruments and procedures used, the methods of evaluation (income-expenditure balance and checking at the places of purchase), and the selection of the interviewees (often direct informants). Moreover, these surveys are usually integrated in the conceptual framework of the national accounts, especially with regard to the consumption structure of households, and their subject-matter makes it possible (to some extent) to study the impact of some short-term economic policies on consumption expenditure, although this latter objective is adversely affected by the sporadic nature of these studies (due, among other things, to their high cost), the fact that their geographical coverage is generally not nationwide, their high degree of complexity, and the fact that –for the same reason– it is hard to obtain panel-type samples. Likewise, their large size makes it difficult to go into detail on such subjects as education or housing, or to incorporate other areas such as access to health services or the receipt of non-monetary transfers from the State.

Finally, there are surveys which are specially prepared for the purpose of the follow-up and evaluation of social conditions and poverty situations in the region. These surveys, which are carried out every two or three years, are designed to investigate more extensively or in greater detail some particular aspects such as the impact of social policies and programmes on different sectors of the population. A pioneering example is the Chilean National Economic and Social Characterization Survey (CASEN), which has been quite widely copied and studied in Latin America. These kinds of surveys normally study in detail not only the global resources (income)

of households, but also their effective access to particular welfare programmes (school meals, food or housing subsidies, etc.) and public services (health, education, infrastructure, etc.). This makes it possible to measure the effect and evaluate the degree of targeting of these programmes, while at the same time analysing important characteristics of the beneficiary groups on the basis of information about the household collected by the survey rather than by the administrative records of each programme.

It may be noted that many countries of the region have programmes which include two or even all three of the types of surveys mentioned, each subject to different frequencies of execution. In recent times, however, due to the growing demand for information on the social sector, certain shortcomings have been showing themselves more openly, especially as regards the subject coverage and frequency of the surveys, but also in terms of the consistency of the data generated by different sources and the capacity of the latter to meet the needs raised by social policies and projects. This has led in some cases to the proliferation of surveys or to the expansion of questionnaires to obtain more information than it is reasonable to expect from the type of survey and instruments used

(for example: trying to investigate matters typical of income and expenditure surveys by using the simpler and cheaper, but less effective, procedures of routine multi-purpose surveys).

In addition to pressing on with efforts to improve the quality of the data produced by the different studies, it seems necessary to clarify the potential of each type of survey more fully by promoting some degree of specialization, but within a context of mutual consistency and complementation (an integrated system). Thus, those countries (the majority, in Latin America) which lack one or more types of surveys should press forward with a view to completing the system. The wide variety of different situations displayed by the countries means that in some cases the objective should be to achieve greater continuity and better quality in multi-purpose surveys, expanding their geographical coverage and strengthening their institutional backing. In others, however, it will be more important to carry out a new income and expenditure survey or to design and implement a study on the living conditions of the population. In the most advanced countries, the main objective will be to improve the coherence and integration of all these instruments.

IX

Conclusion

Even if they use the same methodology for measuring poverty—in this case, the income or poverty line method—different studies may still arrive at different results because in its actual application the methodology often follows different paths in terms of the criteria, procedures and information sources used. This gives rise to a natural feeling of confusion, undermines the credibility and technical reliability of the studies in question, and limits the possibilities for using them in the field of social action. It would therefore be desirable to identify the factors behind such discrepancies, with a view to securing greater consistency and homogeneity of the measurements made.

In the present article, an attempt has been made to summarize some of the factors which are considered to have a very important incidence on the identification of poor households and on calculations of the extent of poverty. Suggestions are also made

which could be useful in a future debate aimed at securing broader consensus on the application of concepts and methods. By way of summing up, some final observations are now presented.

It frequently happens that different costs are established for the basic food shopping basket, because of differences in the information and procedures used. This would appear to suggest that in poverty studies it would be better to work with a range of values rather than a single value.

The structure of expenditure varies in line with the size and composition of the household and the stages of the family life cycle, among other factors. Consequently, rather than applying an (average) coefficient of expenditure on non-food goods for all the households in a corresponding income group, it would be better to use a “set of coefficients”. Likewise, when no recent data are available on the break-

down of expenditure, these coefficients should be updated, at least in accordance with the evolution of the relative prices of food, on the one hand, and other consumer products on the other.

The use of values expressed in per capita terms is necessary, but clearly insufficient. The big differences between households in terms of given key characteristics mean that it would be desirable to evaluate their needs or their resources in units of equivalence. However, we are still a long way from possessing good measures of this type.

Evaluating the quality of income measurements in household surveys is an essential task in estimates of poverty by the poverty line method. As well as making progress towards greater coverage and accuracy of the primary data, there is room for further improvements in the procedures for correcting and adjusting those measurements.

Part of household consumption, especially in low-income sectors, comes from transfers by the State. This is not reflected in the private expenditure covered by the surveys, which should therefore incorporate instruments designed to obtain this type of information.

Stratification of the population in line with poverty criteria opens up the possibility of preparing information and indicators that could be very useful for gaining a better knowledge of poverty and its evolution.

For many reasons, improving the quality, coverage and relevance of the information generated by household surveys continues to be a matter of crucial importance. At the same time, each country should strive to advance towards the establishment of an integrated system of social surveys and indicators.

(Original: Spanish)

Bibliography

- Altimir, O. (1975): *Estimaciones de la distribución del ingreso en América Latina por medio de encuestas de hogares y censos de población. Una evaluación de confiabilidad*, Santiago, Chile, ECLAC, August, mimeo.
- (1979): *La dimensión de la pobreza en América Latina*, "Cuadernos de la CEPAL" series, No. 27, Santiago, Chile, ECLAC, United Nations publication, Sales No. S.81.II.G.48.
- (1987): Income distribution statistics in Latin America and their reliability, *The Review of Income and Wealth*, No. 2, New Haven, CT, International Association for Research on Income and Wealth.
- Beccaria, L. and A. Minujin (1993): *Sobre la medición de la pobreza: enseñanzas a partir de la experiencia argentina*, Buenos Aires, mimeo.
- Boltvinik, J. (1990): *Pobreza y necesidades básicas*, Caracas, United Nations Development Programme (UNDP).
- COPLAMAR (Coordinación General del Plan Nacional de Zonas Deprimidas y Grupos Marginados)(1983): *Macroeconomía de las necesidades esenciales en México: Situación actual y perspectivas al año 2000*, Mexico City, Siglo XXI Editores, S. A.
- ECLAC (1990): *Una estimación de la magnitud de la pobreza en Chile, 1987*, LC/L.599, Santiago, Chile.
- (1991): *Magnitud de la pobreza en América Latina en los años ochenta*, "Estudios e Informes de la CEPAL" series, No. 81, LC/G.1653-P, Santiago, Chile.
- Feres, J. C. (1988): Las encuestas de hogares y la medición del ingreso en América Latina, *Estudios de economía*, vol. 15, No. 1, Santiago, Chile, University of Chile, Faculty of Administrative Sciences.
- (1996): *La medición del ingreso en la perspectiva de los estudios de pobreza. El caso de la encuesta CASEN de Chile: 1987 a 1994*, Documentos sociales, No. 47, Santiago, Chile, Ministry of Planning and Cooperation (MIDEPLAN)/ECLAC, January.
- Feres, J.C. and A. León (1988): *Colombia: Estructura de gasto familiar en distintos tipos de hogares*, Santiago, Chile, ECLAC, April, mimeo.
- Foster, J., J. Greer and E. Thorbecke (1984): A class of decomposable poverty measures, *Econometrica, Journal of the Econometric Society*, vol. 52, No. 3, Evanston, IL, The Econometric Society.
- Gerstenfeld, P. (1993): *Mediciones de pobreza en Uruguay. Aspectos metodológicos*, LC/MVD/R.116, Montevideo, ECLAC Office in Montevideo.
- Ravallion, M. (1992): *Poverty comparisons. A guide to concepts and methods*, Living Standards Measurement Study Working Paper, No. 88, Washington, D.C., World Bank.
- Sen, A. (1976): Poverty: An ordinal approach to measurement, *Econometrica, Journal of the Econometric Society*, vol. 44, No. 2, Evanston, IL, The Econometric Society.
- (1981): *Poverty and Famines. An Essay on Entitlement and Deprivation*, Oxford, U.K., International Labour Organisation (ILO)/Clarendon Press.

Fiscal policy *and the economic cycle* in Chile

Carlos Budnevich*
Guillermo Le Fort**

** Chief, Financial
Analysis Department,
Central Bank of Chile
** Chief, International
Division, Central Bank
of Chile.*

This article studies the effect of the stabilization of fiscal expenditure and the anti-cyclical use of taxes as stabilization variables in the Chilean economy, through the calibration of a basic macroeconomic model adapted to the actual conditions of that economy. The results show that some 25% of the variability of economic growth could be eliminated by obviating fiscal cyclical impulses through constant growth of public investment and consumption and through anti-cyclical taxes. On the one hand, it is proposed that a system of stabilization of the growth of fiscal expenditure should be established, through a system of rules and degrees of flexibility subject to specific clauses. An important element in the implementation of stabilization policies is a tax revenue stabilization fund which would register and store up the counter-cyclical reactions of the fiscal authorities and make fiscal expenditure independent of the revenue obtained at any particular point in the economic cycle. On the other hand, an analysis is made of both the feasibility and the efficacy of fixing the value added tax (IVA) in a more flexible manner, as well as the problems of inconsistency over time that this would cause. For this latter reason, an analysis is also made of the costs and benefits of supplementing more flexible application of the IVA with greater flexibility as regards income tax or tax incentives for investment. It is concluded that the State has a variety of instruments that could be used to implement an anti-cyclical policy, such as the possibility of establishing rules for the growth of expenditure, stabilization funds, and greater flexibility of taxes.

I

Introduction

The Chilean economy has displayed sustained growth for the past eleven years. The average annual growth rate of GDP in those years has been over 6.5%: far above the historical average for Chile. Although this growth has been high and sustained, however, it has shown substantial cyclical variations, with growth rates ranging from 3.3% in 1990 to 11% in 1992 (figure 1).

This cyclical behaviour may be ascribed to various causes, including the frequent shocks to which the Chilean economy has been subjected in that period and indeed throughout almost the whole of the country's history as an independent nation.¹ These shocks include both those of external origin, due to changes in the conditions prevailing in the international economy, and those of domestic origin, including the effects of changes in macroeconomic policies.

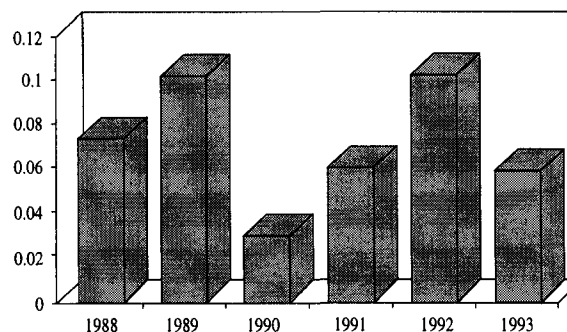
It is more or less generally agreed that these cyclical fluctuations in real economic activity are costly for the economy as a whole, as compared with a hypothetical situation of stable growth at the overall average rate. Variability of growth brings a greater level of risk into the economy, and this may negatively affect investment and future growth possibilities. Moreover, some of the effects of a transitory low growth rate are not completely offset in periods of high growth. In particular, the reduction of activity and employment in a period of low growth can have a substantial effect on the accumulation of human capital in the poorer sectors.

Since cyclical instability is undesirable, then, the question is whether public policy has elements at its disposal for smoothing out such variations. Here, we will analyse the possibility that fiscal policy may be defined on the basis of a scheme designed to moder-

□ A preliminary version of this article was presented at a seminar held in the Central Bank in January 1996. The authors wish to express their gratitude for the comments of José de Gregorio and Gonzalo Sanhueza and the valuable collaboration of Oscar Landerretche M. and Sergio Godoy. The contents of this article reflect the personal opinions of its authors, however, and in no way involve the institution for which they work.

¹ For an interesting summary of the shocks suffered by the Chilean economy in the course of its history, see Cortés, 1984.

FIGURE 1
Chile: Annual growth rate of gross domestic product between 1988 and 1993



ate such cycles, since the priority objective of monetary policy is to control inflation. The question we will investigate is whether or not stabilization of the growth rate of public expenditure at a level close to the growth rate of the potential product could have a significant effect on the variability of GDP growth. We will also try to see whether more flexible tax policy, defined in counter-cyclical terms, could be effective in this respect. In order to answer these questions, it is necessary to make a quantitative evaluation of the effects of public expenditure and tax policies on cyclical growth of the product.

It would also be interesting to find out how far fiscal policy defined on the basis of medium- and long-term conditions can moderate the cyclical effects, as compared with an expenditure policy defined on the basis of annual revenue. If expenditure depends on the income available at a given moment, and this in turn depends on the economic cycle, then it seems very reasonable to assume that the redefinition of expenditure policy could have a moderating effect on cyclical variability.

In the following sections, we will try to appraise the effect that various policies could have on public expenditure, as well as the likely effect of suitable management of indirect taxes on the stability of growth. First of all, we will review the main macroeconomic events that marked the 1988-1993 period

(section II). We shall then give a brief description of the model used to carry out the simulations for verifying the effects of the various fiscal policy options on the stability of growth, and the main results of these simulations will be presented (section III). Finally, section IV will sum up the main conclusions of the study.

This study does not deal with many important aspects of fiscal policy definition, including measures for optimizing the effectiveness of the various expenditure programmes, the size of the State, the level of public expenditure, and the objectives pursued by it. It is worth noting, however, that the adoption of any rule regarding the growth rate of public spending will naturally reduce uncertainty about this important macroeconomic variable. The fear felt by some sectors that the size of the public sector may increase and that the way the budget is handled may give rise to economic instability and

inflation – fears that have been borne out by past experience in Chile and other countries – adversely affects investment and holds back growth.

These considerations point to the desirability that the government should have tools at its disposal for coping with unexpected circumstances such as those caused by external events. The most important of these circumstances is a possible recessionary cycle, in the face of which the existence of a pre-determined limit on the growth of public expenditure, together with the current difficulties in modifying taxes in a flexible manner, would mean that the fiscal authorities' hands were tied. Likewise, if there was a situation of dual overheating of the economy, the existence of a formal commitment not to increase public spending more than the product would impede the adoption of a temporarily contractive spending policy because such a policy could not be offset by expansionary spending policies in subsequent years.

II

The Chilean economy, 1988-1993

Compared with previous years, the six-year period 1988-1993 turned in very favourable results. The average annual GDP growth rate was over 7%, after having been less than 1% in the period from 1982 to 1987. This higher growth was reflected in a lower unemployment rate: only 6% on average, compared with 14% in the previous six-year period. The Chilean economy has not only fully recovered from the crisis of the 1980s, which was reflected in the fact that in 1986 the level of GDP was only the same as in 1981, but has achieved sustained growth at rates much higher than those of the past.

The high average growth rate has been achieved in a context of markedly cyclical behaviour, which has made it necessary to effect two major adjustments in monetary policy during the period. Thus, the interest rate on Central Bank paper was substantially raised twice during this period, first in 1990 and later in mid-1992, to deal with growth rates of the product and of expenditure considered to be excessive in the light of the objectives in terms of inflation and the external accounts. The effectiveness of those adjustment processes was such that this period of vigorous economic growth has been accompanied

by rates of inflation which were not only low by Chilean standards but also showed a downward trend. Average inflation in the period in question was 17.5%, compared with 22% in the previous six-year period, and the annual rate went down from a high of 27.3% in 1990 to less than 10% in 1994. In this respect, it may be wondered whether support from fiscal policy in pursuing these objectives would help to reduce the magnitude of the economic cycle and make it easier to bring Chilean inflation down to rates comparable with those of the industrialized nations.

The years 1988 and 1989 were markedly expansionary, with the GDP rising by 7.3% and 10.2%, respectively, while inflation was 12.7% in the first of these years but rose to 21.4% in the second. The external situation was quite favourable, with trade surpluses of US\$ 2,218.6 million (9.2% of nominal GDP) and US\$ 1,578.1 million (5.6% of nominal GDP), respectively. The current account deficits were US\$ 167.4 million (0.7% of nominal GDP) in 1988 and US\$ 705 million (2.5% of nominal GDP) in 1989: both of these deficits were easily financed thanks to the heavy inflow of capital in these two years. For its

part, the public sector turned in a moderately expansionary performance in 1988, when real public absorption grew by 6.4%, and a contractive performance in 1989, when real public absorption went down by 1%.

In view of the expansion referred to earlier, the Central Bank—which is an independent body—decided on 8 January 1990 to raise the interest rate on its one-year paper from 8% to 9.7%, but not to raise the short-term rate, as it does now, thus causing a monetary shock to reduce expenditure and control inflation. The authorities' diagnosis was that over the previous two years there had been an expansion of aggregate demand that was not sustainable in the long term. This rise in interest rates, together with a better perception by the international financial system of the country risk, gave rise to a heavy inflow of capital which was absorbed by the Central Bank, whose reserves rose by 82% during the year.

In spite of this monetary adjustment policy, inflation showed a good deal of reluctance to go down in that year, although it must be acknowledged that some important price rises militated against anti-inflationary policy in 1990,² and their effects on a highly indexed economy like that of Chile tend to persist in time. The restrictive monetary policy was quite effective in bringing down the level of activity, which was reflected in a decline in the growth rate of GDP from 10.2% in 1989 to 3% in 1990, due above all to a substantial slackening of domestic spending (especially consumption expenditure) on the part of both the government and the private sector. The external situation, for its part, was quite favourable, with a highly positive trade balance of the order of US\$ 1,273.1 million (4.2% of nominal GDP) and a current account deficit of US\$ 648.0 million (1.9% of nominal GDP) which was easily financed by the heavy inflow of capital (especially short-term capital) whose causes were explained above. The public sector helped the adjustment of the economy in 1990 because public absorption fell by 5%.

In the course of 1991, the Central Bank gradually lowered the interest rates on its promissory notes in response to the slackening in activity and the decline in inflation. The GDP grew by 6.1% and infla-

² Such as the sharp rise in oil prices, the increase in the Value Added Tax (IVA) and some wage pressures such as the (real) rise in the minimum wage (which was raised by almost 45% in nominal terms in June).

tion finally responded to the adjustment policy by going down to 18.7%, compared with 27.3% the year before.³ With regard to the external sector, the trade balance turned in a surplus of the order of US\$ 1,575.9 million (4.64% of nominal GDP) and the current account deficit was practically nil, but the heavy inflow of capital continued, being reflected in a nominal increase of 24.2% in the international reserves. In view of this persistent entry of resources, in mid-year the Central Bank decided to take measures to stem the inflow of foreign exchange, especially of the shortest-term resources.⁴ The behaviour of the public sector was much more expansionary than the year before, and real public absorption rose by 7.1%.

During 1992 the GDP grew by 10.3%, while unemployment went down from 6.6% in 1991 to 4.9%—historically a very low level for the Chilean economy—and inflation sank to 12.7%.⁵ The external situation was very favourable, too, with a trade surplus of US\$ 749.2 million (1.8% of nominal GDP) and a current account deficit of US\$ 743.0 million (likewise 1.8% of nominal GDP), easily financed from the capital inflows, which even made possible an increase in the international reserves. The public sector behaved in a clearly expansionary manner, with real public absorption growing by 13.1%.

The gradual rise in interest rates in 1992, and a less favourable situation as regards external demand, caused the growth rate of economic activity to slacken in 1993: the GDP grew by around 6% and the unemployment rate went down slightly to its lowest level in the last twenty years, while inflation tended

³ It must be recognized, however, that the lowering of tariffs and the fall in oil prices also played a significant role in this reduction of inflation.

⁴ The most important measures in this respect were the 2% revaluation and the establishment of a non-interest-bearing one-year compulsory deposit of 20% of external credits. This enabled the inflow of capital to be checked to some extent. The revaluation and the lowering of tariffs also represented the recognition by the economic authorities that the heavy inflow of foreign exchange registered in the last year and a half had a substantial structural or permanent component and was not just a temporary phenomenon, as had originally been thought.

⁵ Factors in this reduction in inflation were the nominal appreciation of the currency during the year, which amounted to only 3.8%, the sustained downward trend in oil prices, and the gradual raising of interest rates by the Central Bank in order to discourage domestic spending, which was felt to be growing too fast.

to go down slightly compared with the previous year. Because of the more sluggish performance of the external sector, which was reflected in a decline of some 8.5% in the terms of trade, the trade balance registered a deficit of the order of US\$ 978.6 million (2.2% of nominal GDP) –the first in over ten years– and the current account deficit came to US\$ 2,092.0 million (4.8% of nominal GDP). Although this deficit was the biggest in the decade it was nevertheless

financed without difficulty because the inflow of capital continued and the Central Bank's international reserves even grew by a little over 8%, from US\$ 9,009 million (21.8% of nominal GDP) to US\$ 9,759 million (22.3% of nominal GDP). The public sector behaved a good deal more moderately than the year before, aiding the adjustment to some extent with a growth rate of real public absorption of 6.4%.

III

The simulation model and its results

The model used in the simulations is a simplified Keynesian-type macroeconomic model,⁶ with only four behaviour functions: real private consumption, excluding expenditure on consumption directly financed by transfers from the public sector; real taxes, excluding public income from copper; imports of goods and services in real terms, and the real exchange rate. The other variables of aggregate demand, including transfers from the public to the private sector, private investment, public consumption and investment, and exports, are considered to be exogenous. Other endogenous variables, such as the GDP, are calculated on the basis of identities which incorporate both exogenous variables and those of behaviour.

The model is strictly real –that is to say, it ignores the monetary and financial effects of the measures employed– since it does not include the money market or interest rates as arguments to explain the behaviour functions presented. Nor does it cover the possible wealth effects of the fiscal policy adopted, or possible crowding out between government expenditure and investment through interest rates, because the effects of the interest rate mechanism are ignored in the interests of simplification, and investment is considered to be exogenous. What the model *does* include is the direct effect of public expenditure on private consumption (without transfers),

because when public expenditure increases, so does the GDP, and this in turn increases private consumption.⁷ This effect is partly offset by the increase in public income, which reduces disposable income.

Private consumption without transfers is defined as private consumption expenditure, excluding current transfers from the public sector, which are considered as income of groups having a unitary marginal propensity to consume. Private consumption without transfers is a function of private disposable income –which is calculated as national income (GDP) plus net factor income from the rest of the world, less taxes– and of that same consumption itself, after a lag period.⁸ Taxes not connected with copper, which include all current government income except that from copper mining, are a function of GDP.

⁶ Keynesian model along the lines of Blinder and Solow (1989), Christ (1967) and Frenkel and Razin (1987). The application of Keynesian models in an open economy with freedom of private capital movements is analysed in Mundell (1963), Fleming (1962) and Sachs and Larraín (1993).

⁷ This effect is among the possible results foreseen by the most extreme Keynesian model, in which aggregate supply is completely elastic and investment is not sensitive to interest rates, so that the effect of greater government spending increases the product demanded and supplied, which –other conditions being equal– increases private consumption. Furthermore, in this model increases in the GDP and absorption increase imports, for two reasons. First, through the direct effect of the GDP, as demonstrated below in equation (3), and second, because when absorption rises the real exchange rate falls: as the trend product is a given value, the ratio between it and absorption goes down, so that the real exchange rate falls –see equation (4) below– and hence imports rise. This increase in imports causes the GDP to go down, and this also reduces the effect of public spending on private consumption (without transfers).

⁸ The auto-regressive process of consumption may be explained both by the existence of adjustment costs in consumption and by the formation of expectations regarding future income.

The real exchange rate (RER) represents the relative price between tradeable and non-tradeable goods. It is defined as the ratio between external prices measured in dollars—represented by the weighted average of the wholesale price indexes of the main trading partners, measured in dollars—and domestic prices measured in dollars, represented by the consumer price index divided by the nominal exchange rate. In the model, the rate of variation of the real exchange rate is an inverse function of the difference between the growth rates of aggregate expenditure and the trend product. Thus, a growth rate of expenditure which exceeds the growth rate of the trend product gives rise to an excess of demand for non-tradeable goods and hence tends to reduce the real exchange rate.

Lastly, the demand for imports is a function of the domestic product and the real exchange rate; it reacts to changes in absorption through the effect that the latter has on the real exchange rate. All the equations were calibrated to simulate the effective result. This was done by adding for each endogenous variable a representative series of exogenous shocks, defined in order to ensure that the model faithfully reproduced the results observed in reality. These series were employed in the various simulations.

The model is thus as follows (the variables market with $\bar{}$ are exogenous):

$$(1) RER = RER \frac{(Y^T)}{E}$$

$$(2) YcSPNoCu = YcSPNoCu(Y)$$

$$(3) Imp = Imp(Y, RER)$$

$$(4) Cstr = Cstr(YPD, Cstr_{t-1})$$

$$(5) Y = Cstr + \bar{I} + \bar{G} + \bar{Tr} + \bar{X} - Imp$$

$$(6) E = Cstr + \bar{I} + \bar{G} + \bar{Tr}$$

$$(7) Ypd = Y - \overline{PFNR} - (\overline{YcSPCu} + \overline{YcSPNoCu}) - \overline{OYSP}$$

where:

RER : Real exchange rate
Y : GDP
Y^T : Trend GDP⁹

E : Domestic absorption
YcSPNoCu : Current public sector income not connected with copper
Imp : Imports
Cstr : Private consumption without transfers
I : Private investment
G : Public consumption and investment
Tr : Transfers from the public to the private sector
X : Exports
Ypd : Disposable private income
PFNR : Net factor income from the rest of the world
YcSPCu : Current public sector income connected with copper
OYSP : Other public sector income.

The first four equations are behaviour equations, while the last three are basic identities of the national accounts. In order to be able to carry out simulations, equations (1) - (4) must be given a specific functional form as shown below:¹⁰

$$(1) RER_t = RER_{t-1} \cdot ((Y_t^T/Y_{t-1}^T) \cdot (E_{t-1}/E_t))^{a_0} \cdot a_1$$

$$(2) YcSPNoCu_t = B_0 + YcSPNoCu_{t-1} \cdot ((Y_{t-1})^{b_1})$$

$$(3) Imp_t = Imp_{t-1} \cdot ((Y_t^T/Y_{t-1}^T)^{c_1}) * ((RER_t/RER_{t-1})^{c_2})$$

$$(4) Cstr_t = D_0 + d_1 \cdot (Ypd) + d_2 \cdot (Cstr_{t-1})$$

The coefficients of these equations are given in table 1.

TABLE 1
Coefficients of the equations

Coefficient	Value
a_0	0.47000
a_1	1.03465
B_0	-23.00000
b_1	1.20000
c_1	1.20000
c_2	-0.40000
D_0	101.79045
d_1	0.53819
d_2	0.49219

⁹ The trend GDP is calculated by making the GDP for the period immediately before the starting period, in this case 1987, grow at the average growth rate for the period 1988-1993.

¹⁰ The subscript *t* in the variables represents the period. The equations shown here ignore the adjustment variable.

TABLE 2

Chile: Adjustments of constants

	Real exchange rate	Current income of public sector (non-copper)	Taxes	Private consumption, without transfers
1981	-8.60	-4.69	-13.00	282.66
1982	-5.22	-147.61	-217.34	-370.60
1983	5.02	-82.11	-66.79	-215.31
1984	1.27	48.14	53.13	-99.67
1985	10.94	-41.44	-49.39	-385.99
1986	5.03	-43.77	42.46	-340.13
1987	2.03	-0.25	110.78	-249.18
1988	3.56	-73.62	70.84	-150.30
1989	-3.69	-110.79	132.92	-62.53
1990	-2.90	-80.28	-0.65	-284.69
1991	-11.38	82.46	-53.44	-277.05
1992	-9.71	-11.70	118.65	-214.07
1993	-1.10	-28.79	99.19	-273.72

The values assumed for the elasticities represent plausible figures for them. As already explained, it was necessary to add to the equations shown here the adjustments given in table 2. This was done in order to reproduce exactly the behaviour of the economy. These adjustments represent the exogenous shocks which have affected the different behaviour variables and are not represented by the effects of the variations in the exogenous variables.

This model has not been estimated empirically, although the values of the elasticities used are based on estimates carried out earlier, since its objective is not to empirically estimate values for the parameters explaining the macroeconomic behaviour observed in Chile but to illustrate in a simplified form the relations that represent such behaviour in the country. The model was used to simulate the macroeconomic effects of changes in fiscal policy as regards the variability of the growth rate of public expenditure and the flexibility of indirect tax rates.

The exercise described below is designed to study the effect of fiscal policy on the cyclical behaviour of GDP in the period 1988-1993. This behaviour is measured by the standard deviation of the GDP growth rate from its trend values. The cyclical effect of fiscal policy is singled out through simulations that compare the fiscal policy applied during the period under investigation with a counter-cyclical fiscal

policy scheme which stabilizes the growth of public absorption and flexibilizes tax rates. This fiscal policy scheme consists of eliminating cyclic impulses of fiscal origin by stabilizing the growth rate of real public absorption, and offsetting cyclical impulses of private origin through changes in the rates of certain indirect taxes.

1. Simulation exercises

Three simulations were carried out (table 3). Simulation 1 was used as the basis for calibrating the model with the effective data. Simulation 2 consisted of modifying public expenditure while keeping the growth rate of public absorption constant throughout the period; it was carried out without changing tax rates, in order to single out the counter-cyclical impact attributable to control of public spending. Finally, simulation 3 maintained the constant growth rate of public absorption while incorporating temporary increases or reductions in the rates of certain indirect taxes, for counter-cyclical purposes.

The yield of the temporary increases or reductions in tax rates was limited to a value equivalent to 0.5% of annual GDP, in view of the practical difficulties in securing bigger changes in tax revenue. In order to obtain additional revenue equivalent to half a percentage point of annual GDP, it is necessary to increase the rate of the Value Added Tax (IVA) by one

TABLE 3

**Simulation exercises on counter-cyclical
fiscal policy, for the period 1988-1993**
(Percentages)

	Actual data	Simulation 1 (base)	Simulation 2 ^a	Simulation 3 ^b
Gross domestic product				
Average growth rate	7.12	7.12	7.12	7.15
Standard deviation of growth rate	2.79	2.79	2.41	2.12
Aggregate domestic debt				
Average growth rate	7.89	7.89	7.89	7.93
Standard deviation of growth rate	4.62	4.62	3.90	3.50
Total consumption				
Average growth rate	7.00	7.00	7.21	7.28
Standard deviation of growth rate	2.62	2.62	1.37	1.10
Public absorption				
Average growth rate	4.45	4.45	4.05	4.05
Standard deviation of growth rate	6.57	6.57	...	...
Imports				
Average growth rate	13.47	13.47	13.46	13.49
Standard deviation of growth rate	9.11	9.11	8.40	7.93
Disposable private income				
Average growth rate	7.13	7.13	7.18	7.41
Standard deviation of growth rate	5.74	5.74	6.91	7.94

^a Public expenditure was changed, while keeping the growth rate of public absorption and the tax rates constant.

^b While keeping the growth rate of public absorption constant, transitory increases or decreases were made in certain indirect taxes.

percentage point for a whole year, so that this scheme would require a band of variation of IVA of +/- one percentage point.¹¹ All increases in revenue were allocated to saving, as the growth rate of public absorption remained unchanged.

2. Results of the simulation

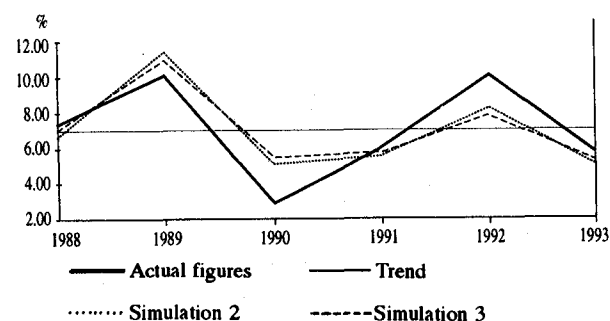
The variability of the growth rate of GDP was quite notable: over the period 1988-1992 it ranged from

3.0% to 11% (figure 2). A simple interval for the GDP growth rate, at a level of confidence of 95%, would give a range from 2.4% to 12.6%, in view of the standard deviation observed in the sample. This indicates a substantial degree of uncertainty about the future behaviour of economic activity.

According to the simulation exercises, counter-cyclical fiscal policy would reduce the variability of GDP growth, as represented by its standard deviation, by 24%. This would be due almost equally to stabi-

FIGURE 2

Chile: Twelve-month rates of variation of gross domestic product



¹¹ The use of other indirect taxes for this purpose cannot be ruled out *a priori*, but in view of its coverage, easy administration and rapid response the IVA would appear to be the most effective instrument for this objective. One reason for limiting the variation of the rate of IVA is based on the theoretical argument that it is best to avoid alterations in tax rates in order to avoid distorting relative prices and generating uncertainty about the policy outlook (for the bases of this argument, see Barro, 1979, and for a brief explanation of it see Blanchard and Fischer, 1989). The microeconomic argument in favour of a constant tax rate is at least partly offset by the macroeconomic argument stressing the reduced uncertainty that results from a more moderate cyclical variation in GDP, which is precisely what adjustable tax rates are supposed to promote.

zation of the growth rate of public absorption and flexibilization of tax rates. Thus, a constant growth rate of public expenditure would reduce the variability of GDP by 14%, while the remaining 10% reduction would be attributable to flexibilization of tax rates.

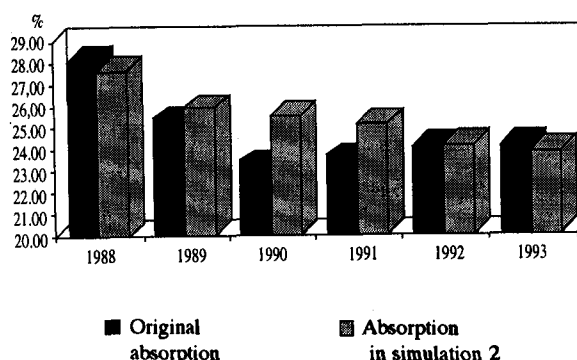
There has been a notable reduction over the period in the relation between public absorption and the product. From 1988 to 1993, the cumulative growth rate of macroeconomically significant public expenditure has been below the growth rate of GDP (figure 3). In the simulation exercises with counter-cyclical fiscal policy, the growth rate of public absorption remained almost at the levels of the base simulation, the only differences being in the gentler reduction patterns displayed by simulations 2 and 3 because they kept the rate of expansion of expenditure constant.¹²

Another significant point is the decline registered during the period under investigation in the proportion of GDP accounted for by taxes not connected with copper mining, which have not fully recovered since the 1990 tax reform. It should also be noted that the variability of the growth rate of taxation went down in the scenario where tax rates were variable. This indicates that the stabilization of the growth of GDP predominated over the effect of counter-cyclical variations in tax rates.

The variability of total consumption goes down when counter-cyclical fiscal policy is applied, but that of private consumption without transfers tends to remain steady. The explanation for this would appear to be that the variability of tax rates gives rise to variability of private consumption which is not offset by the greater stability of GDP growth. Indeed, the variation of disposable private income increases when a counter-cyclical fiscal policy like that described here is applied.

¹² The growth rate of public absorption was marginally reduced in order to avoid the mean growth rate of GDP from increasing in simulations 2 and 3. The indivisibility of the change in tax rates, which was kept at the level of increases or decreases of one percentage point in IVA (changes of 0.5% in GDP), explains the marginal increase in the growth rate of GDP in simulation 3.

FIGURE 3
Chile: Public absorption as % of gross domestic product



The global fiscal balance, including the estimated cash deficit of the Central Bank, becomes more variable when counter-cyclical policies are applied. Theoretically, this result is correct, because this takes place to the extent that fiscal policy actions offset cyclical impulses of private origin, and this effect is accentuated when taxes are used as an instrument for offsetting cyclical impulses of non-fiscal origin, since the variability of the fiscal balance then increases significantly compared with the base situation but rises only marginally when the cycle is eliminated.

The results obtained show that a by no means insignificant portion of the variability of GDP growth may be attributed to the variability of growth in public spending. Extraordinarily flexible fiscal policy is needed in order to eliminate the cyclical component of GDP, however. Such policy should act to offset cyclical impulses of private origin by using counter-cyclical taxes, while it should avoid fiscal cyclical impulses by keeping the growth rate of public investment and consumption constant. At all events, it is clear that cyclical impulses cannot be completely offset by fiscal policy: indeed, 75% of the cyclical variability of GDP cannot be offset by this means.

IV

Main features and problems of the proposed anti-cyclical fiscal policy

This article explores the possibilities open to the government for stabilizing the Chilean economic cycle (defined as the variability of GDP growth rate) by using the various instruments at its disposal. There is general agreement on the prejudicial effects on the economy of extreme variations in the GDP growth rate such as those registered in the case of Chile in recent periods. Such variability has harmful effects on domestic investment and hence on future growth possibilities.

The fact that the authorities have some scope for reducing cyclical fluctuations makes it desirable to study some possible procedures for this purpose, in view of the substantial cyclical variability displayed by economic activity in Chile in the 1990s and the frequent temporary shocks suffered in the past. In order to progress in this direction, however, budget discussions would have to cover a longer term: perhaps in terms of five-year expenditure programmes. This is impossible in the present political and legislative context, in which the present level of expenditure is discussed in the light of the tax and non-tax income available now or in the short term.

There are various aspects that need to be examined and clarified in connection with a proposal for counter-cyclical fiscal policy: the nature of the limitations to be placed on the growth of public expenditure, the types and degree of flexibility of taxes, and the characteristics of the necessary fiscal stabilization fund.

1. Restrictions on the growth of public expenditure

A counter-cyclical fiscal policy proposal would involve limiting the growth of public expenditure to the potential GDP growth. In order to get round the problem of measuring the potential GDP, it would appear to be reasonable to use as a reference standard a mobile average of the GDP growth rates. In order to prevent cyclical fluctuations from introducing too much variability into the growth rate of public expenditure,

it would seem desirable for that mobile average to refer to a relatively long period of time: say, ten years. It cannot be ruled out that, in line with structural objectives of the public sector, the growth rate of public absorption may be lower or higher than the average growth rate of GDP over the last ten years.

Since the objective of the proposal is to contain the impact on aggregate demand for goods and services, the public expenditure which must be limited is that corresponding to public absorption. This includes all central government consumption and investment expenditure that generates pressures on the aggregate demand for goods and services, including wages and salaries, purchases of goods and services, and transfers. Consequently, in the light of the concepts of expenditure currently used in preparing the public budget, it would be advisable to exclude for this purpose the items corresponding to financial investment (loans) and interest payments on the domestic public debt (mainly to the Central Bank) and the external public debt.

There can be no doubt that, whatever the way in which the growth of public expenditure is restricted, some degrees of flexibility and some safety valves must be left available for modifying the limits in certain circumstances. In particular, the government must retain some degree of discretionality with respect to the level of public investment expenditure or possible emergency situations, although deviations in these cases must be for fully justified reasons and must be compensated in the years following the period for which the budget was prepared.

2. More flexible treatment of taxes

The main candidate for flexible treatment is undoubtedly the value added tax (IVA), the rate of which was already made flexible to some extent in the tax agreement adopted by Congress which allowed the government to fix the rate of IVA between 16% and 18% as from 1996. The use of this

tax as a means of cyclical stabilization has various important advantages. First, its broad coverage means that quite small changes in its rate are sufficient to produce a significant effect in terms of revenue. Reasonable changes in the rate of IVA are more effective and give rise to fewer distortions than changes in other tax rates. Moreover, IVA is the tax that most directly affects consumption expenditure. And finally, the response to a change in its rate in terms of revenue is relatively immediate and does not give rise to major problems of evasion or administration.

The impact of a higher rate of IVA on expenditure takes place because the higher tax reduces disposable income, on which consumption expenditure depends to a large extent. Thus, the pro-cyclical application of this rate is a stabilizing element. Furthermore, as temporary changes in the rate of IVA change the relative cost of expenditure at the present moment, as compared with expenditure in the future, pro-cyclical fluctuations in this rate can do much to help stabilize the purchase of durable goods subject to IVA.

In spite of its positive effect on the level of activity, however, treating the rate of IVA in a flexible manner has a cost that must be taken into account: its pro-cyclical application will tend to affect the rate of inflation as measured in the short term, and this imposes certain limits on the potential use of this mechanism. As noted in the previous section, in order to change tax revenue by 1% of GDP it is necessary to change the rate of IVA by around two percentage points. Likewise, this cost highlights the need and desirability of making progress in reducing the practical importance of indexing mechanisms, which increase the vulnerability of inflation rates to cost shocks.

This limitation on the use of IVA as a stabilizing instrument suggests that it might be advisable to supplement this mechanism with some flexibilization of direct taxes (especially income tax), which do not have a direct impact on costs and prices. Since the revenue from income tax is relatively small, however, very significant changes would be needed in the tax rates in order to raise the amount collected by a more or less substantial margin, and this would have highly distorting effects. Furthermore, because of problems of coverage and evasion, in the short term the increase in the rate of income tax would tend to affect mainly salaried persons. Finally, it should be

borne in mind that income taxes are already stabilizing elements because of the nature of their present design.¹³

The foregoing options could be supplemented with more flexible treatment of tax incentives for investment. These incentives represent only a minor amount in terms of tax revenue, but they can do a great deal to help stabilize expenditure more during a cycle, because they make it possible to change the relative profitability of investing at present, as compared with putting off investment into the future. The risk involved in using this instrument is that it can open up loopholes for tax evasion.

If we consider that the tax rises would take place in contexts of strong expansion of aggregate demand, where there is a danger of high inflation, while the tax reductions would take place in fundamentally recessionary contexts, we see that the expectations anticipating the tax policy would become a pro-cyclical element. Consequently, the right moment for lowering or raising tax rates will depend on the way such expectations are formed and the degree of elasticity of demand in response to them.

Let us assume a scenario with expectations and agents that carry out inter-temporal substitution and therefore clearly perceive the relative prices of consuming now or in the future (typically with regard to durable goods). If the economy is passing through a recessionary period and a reduction in taxes is expected, then in the period between the announcement and the reduction there will be a contraction in demand, but regardless of whether there is any announcement or not, as the idea spreads in the market that a reduction in tax rates is on the way, then demand will begin to contract, and the agents will put off their decisions to invest in durable goods. In contrast, if the economy appears to be facing an upsurge in inflation, the agents will bring forward their decisions to invest in durable goods, thus once again producing a pro-cyclical effect.

¹³ In the case of profits tax, this is because the tax base has cyclical fluctuations which are a good deal more marked than those of the product. In the case of personal taxes, this is due to their progressive nature: when personal incomes rise, the increase in revenue is more than proportional, while the opposite occurs when personal incomes fall.

The effectiveness of measures taking a flexible approach to tax rates depends largely on the ability of the authorities to foresee the formation of expectations by the agents and, in the final analysis, on the timeliness of the adjustments in tax rates.

3. The stabilization fund: its nature and characteristics

The stabilization fund is designed to act as a complement to counter-cyclical fiscal policy and may be understood as the element which serves to record and store up the counter-cyclical reactions of fiscal policy. Defined in this way, it is obviously far from representing a global indicator of the results of fiscal management. Neither does it seek to measure the overall structural financial results, nor that part relating to the direct impact of the economic cycle on the public finances. These features rule out the imposition of drastic limitations on public sector financial management. The establishment of such a stabilization mechanism does not, however, solve the problem of whether the restriction of solvency is duly internalized by the public sector.

Consequently, the stabilization fund defined below should be viewed merely as an accounting record of the inflow and use of the extra resources deriving from the application of counter-cyclical fiscal policy. It would receive its income from the extra revenue obtained through changes in tax rates from the normal level established for IVA, and from the profits –if any– generated by the resources accumulated in the fund. These resources would go down if withdrawals had to be made on account of declines in revenue due to rates of IVA lower than those considered normal.

V

Conclusions

In order to make a qualitative evaluation of the various options open to the Chilean government, several simulations have been made for the period 1988/1993, using a general, real and simple Keynesian-type model with four behaviour equations: real private consumption, excluding public transfers; real

In order to give a more temporary nature to this type of policy, we believe that it is also necessary to place minimum and maximum limits on the size of the fund as a percentage of GDP. We suggest that the lower limit should be zero and the upper limit 8% of GDP, which would make it possible to cope with cycles like those of the Chilean economy. In the event that one of these limits were reached, we propose that an automatic tax correction mechanism should then come into play, with tax rises if the lower limit were reached, or withdrawals through the lowering of tax rates if the upper limit were attained. It may be recalled that expenditure would be restricted by the global limitation imposed on the growth of public spending.

In order not to impose immediately a highly restrictive situation in terms of the handling of this instrument, we believe that a fund equivalent to 2% of GDP should be taken as the starting point. This could be achieved through the transfer of part of the financial resources currently deposited by the government in the Central Bank. The resources generated by the fund should be deposited in the Central Bank and be managed by the latter body for the purpose of buying back its own debt. The Central Bank would, of course, take measures to sterilize the monetary consequences of this mechanism, just as it would in the case of any other public sector deposits.

Finally, with regard to the interest rate that the Central Bank should pay the government for the resources in the stabilization fund, one alternative would be an interest rate of zero, which would have the advantage of relieving the Bank's cash deficit, but another, perhaps more desirable, alternative would be to pay an interest rate in dollars on these deposits on the same terms as the rates paid on government promissory notes with the Central Bank.

non-copper taxes; real exchange rate, and real imports.

The results obtained indicate that the government could make a substantial contribution to stabilizing GDP growth. Thus, the standard deviation of GDP is reduced by 24% under a counter-cyclical fis-

cal policy in which the growth rate of public absorption is equal to that of mean GDP growth and the rates of indirect taxes (IVA) are used as a stabilizing element.

In the final analysis, it seems reasonable to study the possibility of planning expansions of public spending more carefully, so that they will help to reduce the magnitude of the economic cycles in the domestic economy. The model shows that at least 25% of the variability of GDP growth can be reduced through a policy of stabilizing the growth of expenditure and applying a counter-cyclical tax policy. It is necessary, however, to study more closely a number of institutional aspects which would be needed in order to ensure the effectiveness of such policy.

Firstly, with regard to the fixing of the growth rate of public expenditure, it is necessary to decide what is the most reasonable measurement period of the potential product, on the one hand, and what is the optimum period that the planning of public expenditure should cover, on the other. In the present study, we have come to the conclusion that using mobile averages covering ten years and five-year planning periods could be a reasonable criterion of a sufficiently long-term nature; in the same connection, it would be necessary to establish new rules for the preparation of the national budget, especially as regards degrees of flexibility and systems of compensa-

tion over time. An institutional aspect of crucial importance is the establishment of a stabilization fund to serve as a buffer between the variability of tax revenue (which is subject to economic cycles) and expenditure (which is normally subject to fixed rules). Such a fund should have upper and lower limits so that its resources are used on a transitory basis and there is less discretionality in their use.

Secondly, it is necessary to study the best mix of taxes that could be applied more flexibly, since the use of IVA alone could have some destabilizing effects on short-term inflation. Income tax and tax incentives for investment would appear to be suitable mechanisms for combining with IVA in this respect. An important aspect that needs to be studied is the inequitable impact that the adjustment can have on certain sectors. It is also necessary to bear in mind that some sectors of the population may not have access to credit markets, thus making it more difficult for them to move their consumption decisions over time. Furthermore, there are differences in the coverage of the various taxes and the degrees of evasion associated with them, and these factors may give rise to serious distortions when establishing greater flexibility. The efficacy of the proposed tax policy will depend essentially on the capacity to take timely action in response to changes in expectations.

(Original: Spanish)

Bibliography

- Barro, R. J. (1979): On the determination of the public debt, *Journal of Political Economy*, vol. 87, No. 5, part 1, Chicago, IL, The University of Chicago Press.
- Blanchard, O. and S. Fischer (1989): *Lectures on Macroeconomics*, Cambridge, MA, The MIT Press.
- Blinder, A. and R. Solow (1989): Does fiscal policy matter?, in A. Blinder (ed.), *Macroeconomics Under Debate*, Ann Arbor, MI, University of Michigan Press.
- Cortés, H. (1984): Lecciones del pasado: recesiones económicas en Chile: 1926-1982, *Cuadernos de Economía*, vol. 21, No. 63, Santiago, Chile, Catholic University of Chile, Instituto de Economía.
- Christ, C. F. (1967): A short-run aggregate-demand model of the interdependence and effects of monetary and fiscal policies with Keynesian and classical interest elasticities, *The American Economic Review*, vol. LVII, No. 2, Menasha, WI, The American Economic Association.
- Fleming, J. M. (1962): Domestic financial policies under fixed and under floating exchange rates, *Staff Papers*, vol. IX, No. 3, Washington, D. C., International Monetary Fund (IMF).
- Frenkel, J. A. and A. Razin (1987): *Fiscal Policies and the World Economy*, Cambridge, Massachusetts, The MIT Press.
- Mundell, R. A. (1963): Capital mobility and stabilization policy under fixed and flexible exchange rates, *Canadian Journal of Economics and Political Science*, vol. XXIX, No. 4, Toronto, Canadian Political Science Association.
- Sachs, J. D. and F. Larraín (1993): *Macroeconomics in the Global Economy*, Englewood Cliffs, New Jersey, Prentice Hall.

An appraisal of *capital goods policy* in Argentina

Pablo Sirlin

*Economic Research Institute,
Faculty of Economic Sciences,
University of Buenos Aires.*

This article makes both a theoretical and an empirical analysis of the new policies applied in Argentina since 1992 with regard to the treatment accorded to capital goods: exemption from import duties, with drawback facilities for domestic producers in respect of their local sales. The new system is evaluated through a detailed analysis of its effects on demand for capital goods (section II); on the domestic supply of such goods (section III); and on some macroeconomic variables such as the fiscal balance (section IV) and the external balance (section V). Some aspects relating to the management and control of the new system are then dealt with (section VI), the main results of an empirical analysis of its effects are outlined (section VII), and finally a global appraisal is made of it (section VIII). It is concluded that the new system regarding capital goods has had both favourable and unfavourable effects. Among the former are an increase in the investment rate and general productivity of the economy and a reduction in costs made possible by cheaper capital goods, while the unfavourable effects include the unsatisfactory evolution of the domestic supply of capital goods (except transport equipment), the macroeconomic impact on the fiscal sector, the external sector and unemployment, and the higher management costs, both public and private, of the new system compared with the previous one.

I

Introduction

Since the early 1990s, the Argentine Government has simultaneously been applying a macroeconomic stabilization plan and a broad process of structural reforms, especially a rapid increase in trade openness. The massive inflow of capital and the big increase in expenditure (fundamentally on consumer goods) encouraged by these policies have given rise to strong appreciation of the exchange rate. Although this situation had elements in common with similar processes in other countries of the region, the Argentine case was complicated by the fact that the episodes of hyperinflation in 1989-1990 and the form of the stabilization process (in which the convertibility of the currency was fixed by law) left very few opportunities for the use of exchange policy as a corrective measure.

Towards the end of 1992, the growing trade deficit and the excessive pressures suffered by the tradeables sector of the economy (on account of the simultaneous processes of trade openness and cur-

rency appreciation) led the Argentine Government to apply a number of measures designed to correct the problem of relative prices by fiscal means and to facilitate the restructuring of the production sectors.

These measures included a new form of treatment of capital goods, consisting of exemption from import duties (representing a 20% reduction in the effective exchange rate for the importation of such goods, through the elimination of 25 percentage points of overall protection) and the granting of a drawback (although only of 15% in this case) on the local sales of domestic producers.^{1, 2}

The simplest and most direct theoretical reading of the new policy is that it replaced a second-best promotional instrument (trade protection) with a first-best instrument (a subsidy). The objective of the present article is precisely to analyse theoretically and empirically how good this kind of policy is in general, and how advisable its application is in the case of Argentina in particular.³

II

Impact of the new policy on demand for capital goods

The new capital goods policy makes both domestic and imported capital goods cheaper, and this must be analysed from at least three standpoints: as a stimulus

for investment, as a reduction of production costs, and as a change in the relative prices between different factors of production.

□ This article is a summary of a considerably longer research study. The author wishes to express his gratitude for the valuable comments made on the original version by M. Bekerman, P. Gerchunoff and H. Nochteff.

¹ However, this difference in rates underestimates the change in the relative incentives to buy domestic or imported capital goods, fundamentally because the new system gave rise to substantial financial and management costs which have to be borne exclusively by local producers. Furthermore, the tariff exemption increased the portion of the total purchase price of imported capital goods eligible for financing, which represents a substantial benefit in view of the big advantages in terms of financing offered by foreign products in comparison with locally-produced goods (Argentina, Secretaría de Industria y Comercio Exterior, 1994).

² In March 1995, because of the urgent fiscal needs of the government, the tariffs were raised again (to 10%) and the drawback on domestic sales was lowered (likewise to 10%). This reduced to some extent the differences generated by the new policy as regards the relative incentives for the purchase of domestic or foreign capital goods.

³ Both the theoretical and empirical analyses concentrate on the effects of the new policy during 1993 and 1994, since the subsequent behaviour of industrial policy departed from the supply-side version we are discussing here, concentrating instead on fiscal considerations, and the subsequent behaviour of demand for capital goods was governed basically by the negative impact of the recession.

From the first point of view, the lowering of the cost of these goods leads to an increase in the internal rate of return of investment and production restructuring projects at all levels of interest rates, promoting an increase in investment. The positive effects of this increase go beyond the microeconomic area and extend to the macroeconomic level, where they are reflected in rises in the average level of productivity of the economy, in the strengthening of aggregate demand, and, in general, in better expectations among the economic agents regarding the sustainability of the stabilization and growth process.

The second standpoint for analysing the effect of the new policy on the demand for capital goods concerns the reduction in costs that it involves, for quite apart from the increase in investment in such goods, it is also necessary to analyse the lowering of the cost of all those goods that would nevertheless have been acquired even at the original price (which included import duties).

According to conventional theory, this effect is seen as a mere redistribution of income from the State to the purchasers of capital goods and consumers in general, and is not included in analyses focussing on economic efficiency.⁴ In economies with persistent imbalances in certain sectors (such as the fiscal and external sectors), however, the distributive effects directly affect the efficiency variables, so that the cost-benefit analysis becomes more complex.

In situations of rigidity of the real exchange rate, general reductions (or increases) in costs are reflected in an increase (decrease) of the macroeconomic competitiveness of local tradeable goods production. The tariffs applied to imported capital goods are one more element in the fixed unit costs of all the sectors of production using such goods. We thus find ourselves in the presence of yet another component of the so-called "Argentine cost", and its elimination is a similar case (although its impact is much smaller) to that of many other measures that the government has taken in the direction of "fiscal devaluation".⁵

⁴ See, for example, Grossman, 1990.

⁵ It should be noted that the lowering of the cost of these goods extends to all sectors of the economy, and not just to the tradeables sectors (which are the only ones suffering from problems of competitiveness). Although the increases in the productivity of the non-tradeables sectors affect the costs of the economy as a whole, this effect is much slower and less direct (because of the regulation of the prices of privatized public services, for example).

The third standpoint concerns the change in the relative prices of the different factors of production (fundamentally capital and labour). Thus, while trade protection is eliminated for capital goods, wage costs continue to be influenced by labour taxes and the impact of the tariffs and export drawbacks that affect the tradeable goods forming part of the family shopping basket. It should be recalled that when a number of distortions exist at the same time (such as trade protection for all goods), the complete elimination of just one of them (in this case, the elimination of protection for capital goods) may reduce rather than improve efficiency. The change in this relative price may give rise to two types of adjustments: replacement of labour with capital goods in existing production activities, and a change in the relative rates of return of investment projects, as between sectors that are capital-intensive and those that are labour-intensive. From a neo-classical point of view, which assumes a high degree of interchangeability between labour and capital (well-behaved isoquantics), this can have a considerable impact on the equilibrium wage or the unemployment rate.⁶

Another price relation which is changed is that between capital goods imported from the rest of the world and those imported from MERCOSUR (which already enjoyed substantial tariff preferences, and even total preferences in some categories). In this case, the result would be to reduce the trade diversion generated by the integration process, by encouraging purchases from the cheapest foreign source.⁷ At the same time, the *quid pro quo* for the concession made by Brazil in accepting the Argentine policy may well be some future concession (with its attendant economic costs) that may be demanded from Argentina at the bargaining table.

⁶ In this respect, such a noted economist as J. L. Bour has suggested that the relative price between capital goods and wages should be changed as a way of combatting unemployment (Economic Supplement of the newspaper *Página 12*, Buenos Aires, 31 December 1994).

⁷ It should be remembered, however, that —as laid down in the theory of customs unions— trade diversion does not necessarily have a negative effect on well-being when it occurs in sectors with economies of scale and positive externalities, or when there are possibilities of securing improvements in the terms of trade (Chudnovsky, 1992).

III

Effect on the domestic supply of capital goods

There are basically two reasons why this effect should be incorporated in the analysis of social costs and benefits. The first reason is that reducing (increasing) domestic production may lead to the disuse (use) of production resources that have no place in other production activities. The Keynesian disuse or downgrading of specific production resources (such as some labour skills and the production experience built up by firms) represent situations where the reduction of domestic production may have high costs in terms of social well-being.⁸

The second reason is that, even when there are no problems of reassignment of production resources, it may be argued that the use of such resources in the capital goods industry gives social returns which are different from those that would be generated by other uses. Conventional analysis, which incorporates all the assumptions regarding perfect competition, tends to indicate that the product generated by the resources used in protected industries is less than their social opportunity cost. Thus, the elimination of tariffs would make it possible to free these resources, which would find more productive uses.

There are reasons for believing, however, that the social benefits generated by the capital goods sector may be greater rather than less than those generated by other economic activities. Firstly, the fact that this is a technology-intensive industry gives entrepreneurs the possibility of obtaining quasi-monopolistic (Schumpeterian) rents. In the case of the Argentine capital goods industry, which consists predominantly of small and medium-sized firms and lags significantly behind the international technological frontier, it may be objected that these above-average returns may be irrelevant because of internal features of the firms, but even so there are still above-average returns which are external to the firms: i.e., the exter-

nalities generated by the local production of these goods. Among the many types of positive externalities which have been attributed to the local production of capital goods are the higher relative skills attained by the labour force of this sector; its positive influence in terms of the spread and use of technological know-how by the other sectors of production (Porta, 1994);⁹ the easing of external constraints which may constitute operational gaps that hinder growth,¹⁰ and the benefits (with respect to the terms of trade and the volatility of international demand) offered by a pattern of specialization more oriented towards products with greater differentiation and higher added value, such as capital goods (Bekerman and Sirlin, 1996).

These benefits, however, must be compared with those offered—in terms of modernization of the production system and increased investment—by greater access to imported capital goods. In other words, the benefits provided by the externalities connected with the local production of these goods must be compared with the benefits that could be obtained by the appropriation of the externalities generated in more highly developed countries through the international dissemination of the technological advances incorporated in their products. The importance of this aspect should not be underestimated in view of the serious technological lag of this sector's structure of production in the country and its limited capacity for designing and producing technologically sophisticated goods.

⁹ Likewise, Wade (1990) notes that the social costs (in terms of lack of innovative capacity and chronic external deficits) of not having a domestic capital goods industry are not fully reflected in free-market prices used for choosing between domestic and imported goods.

¹⁰ Dosi, Pavitt and Soete (1990), for example, hold that "the sensitivity of the pattern of specialization and the external accounts situation to Ricardian adjustments (of prices) depends on the degree of availability 'of capital goods'".

⁸ However, this argument is offset by the positive effect of the cheaper imports of capital goods on the investment rate and the competitiveness of the tradeables sector of the economy.

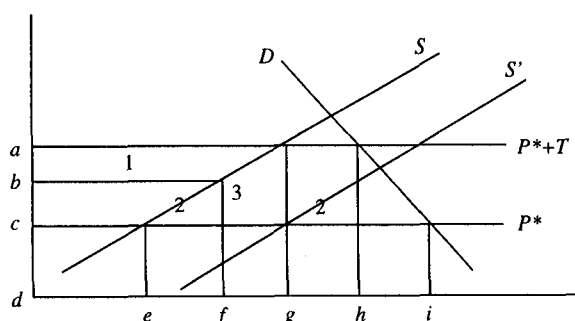
Let us now examine the effects of the new capital goods policy on the domestic supply of these goods, using two frames of analysis. The first of these, which is a conventional-type approach of a static and comparative nature, shows the effect of the changes in price signals on the equilibrium levels of local production. The second, which has more heterodox micro-bases, shows the impact of growing foreign competition on the strategic decisions of local capital goods firms with regard to their production and technological restructuring.

If we use the first frame of analysis, the crucial aspect is whether or not the new policy changes the incentives to buy domestic or imported goods. If the degree of price reduction brought about by the new policy were similar in both cases, then the impact on local production would undoubtedly be positive, depending only on the price-elasticity of the corresponding demand function. If the prices of imported goods went down more than those of locally produced items (as occurred in the Argentine case), however, the aggregate impact would become indeterminate and would depend on a number of variables, including the type of market for each product (i.e., more or less competitive), the level of relative advantage or disadvantage of local producers compared with foreign manufacturers in terms of costs, and the elasticities of the supply and demand functions for domestic and imported capital goods.

Let us look first of all at the simplest case (figure 1): that of a local firm with an upward supply curve (marginal costs); there is no product differentiation between local and foreign supply, and in the relevant section the demand curve faced by local firms is infinitely elastic to international price levels. The initial situation is given by the international price plus the tariff $P^* + T$. At this price, local supply covers only the fraction dg/dh of the total amount demanded, and the rest (gh) is imported. The elimination of trade protection would lead to a price reduction equal to the segment ac , to the replacement of domestic production by imports in the amount eg , and finally to an increase hi in the proportion of total demand satisfied by imports. The subsidy (ef) granted to local firms would partially reverse the displacement of local supply by imports.

In this case, if the tariff reduction is bigger than the drawback rate (subsidy), then local production will inevitably fall, and the greater the elasticity of the supply curve and the bigger the differential be-

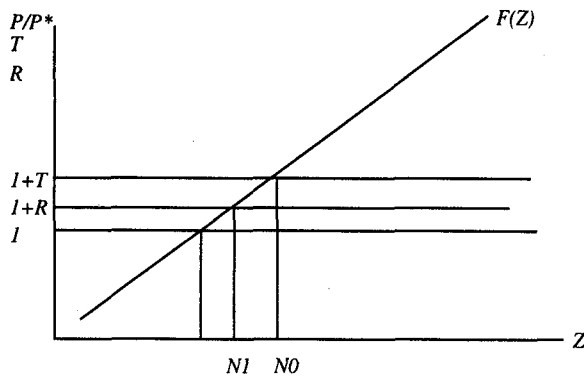
FIGURE 1



tween the drawback rate and the former trade protection, the more pronounced that fall will be. In turn, the increase in imports will be a function of the reduction in domestic supply and the elasticity of the demand curve. As already noted, in the absence of other distortions this fall in local production would mean an increase in efficiency equal to area 3 of figure 1. If, however, we assume that these "imperfections" in the economy are considerable, the decline in production will have an indeterminate effect on efficiency. If we assimilate the total amount of such imperfections to an externality and assume that the size of this was corrected by the former protective tariff (as in the "social" supply curve S' in figure 1), then any reduction in domestic production must lead to a decline in efficiency.

A second case of interest is that in which there is a continuum of firms or segments in this sector which produce with infinitely elastic supply curves in the relevant section and differ from each other in terms of their degree of advantage or disadvantage in matters of costs compared with imported goods. This case is shown in figure 2, where the function $F(Z)$ indexes the firms or products (Z) in terms of the difference between their prices and those of imported goods. The abscissa axis shows the number of firms, while the ordinate axis shows the price variables. At the starting point, local industry is protected by import duties (T), which permits the survival of a quantity $N0$ of firms. With the application of the new policy, the drawback on domestic sales (R) becomes the only factor of promotion for the sector. As this drawback is less than the value of the previous trade protection, the number of firms that can survive goes down to $N1$. The reduction in the number of firms does not necessarily mean that aggregate production must fall. The result is rather indeterminate, depend-

FIGURE 2



ing on the comparison between the increase in demand, which favours the surviving firms (because of the lower prices of their products), and the loss of production of the firms which have disappeared. What is relatively certain is that the share of local production in the total supply of capital goods will tend to go down.

The third case of interest to us is that in which the strong competition from capital goods imported from the other MERCOSUR countries (previously favoured by high preferences) has led, before the new system, to a shift in the corresponding international supply curve, and local firms have sought to insulate themselves from foreign competition by the imposition of para-tariff barriers, heavy product differentiation, imperfect tradeability, etc. (a typical example is that of the truck manufacturers, covered by the system of drawbacks on capital goods, whose tariff protection was reduced but who maintained their system of para-tariff protection—quotas—, which is the most effectively operative means of protection). These situations do not comply with the general rule that the prices of imports are lowered more than those of locally produced goods. Here, the import supply curve does not change much, so that the drawback does not operate as partial compensation, but as a subsidy for local production. The effect on the level of production will therefore necessarily be positive.

The existence of these different cases indicates that there is an unequal impact on different segments of the capital goods sector. Likewise, it could be said that there are differences by strata: the small and medium-sized firms in the sector have probably been more heavily affected (or less benefitted) by the new policy because of the large economies of scale inherent in the handling of drawback applications and

their smaller oligopolistic capacity to defend market niches.

To sum up, then, it may be noted that the impact of the new capital goods policy on local production varies considerably, depending on the typical case to which the firm or production segment in question corresponds. At the aggregate level, the result is indeterminate. At all events, except in the case of sectors which for some reason are not affected by the elimination of tariff preferences, it may be assumed that local producers are adversely affected, either in terms of absolute levels of production or of market shares.

The second frame of analysis for examining the impact of the new policy takes into account its repercussions on the decisions taken by capital goods producers with regard to their production and technological restructuring. It is no longer a question of identifying where the new equilibrium point will be located, in the light of the production and supply functions, but of determining what strategies will be adopted by the firms to try to modify those functions. The effect of tariff reduction or elimination (which is not offset by the production subsidy) raises the level of competitive exposure of local firms. Many authors belonging to the neoclassical school bring in this factor and maintain that the greater pressure of competition gives rise to improvements in the level of efficiency x of firms. However, as Atiyas, Dutz and Frischtack (1992) note in their study on processes of restructuring of production, the pressure of competition on a sector is probably a necessary but not of itself sufficient condition for promoting an efficient restructuring process. When this greater pressure of competition is not accompanied by an abundant and versatile supply of the resources needed for restructuring (finance, information, etc.), firms will tend to adopt defensive reactions. These reactions do not involve a strengthening of the true competitiveness of the firms through investments in capital and technology, but reflect mere efforts to reduce costs (especially labour costs) or, still worse, the dismantling of local production in order to take advantage of the experience accumulated in the past by engaging in the marketing and repair of imported products.

The new capital goods policy has given rise basically to greater competitive pressure on local producers of those goods. Versatility and, above all, resources were aspects that were more or less neglected in the beginning. Some firms have been able to meet the challenge facing them, and have designed successful conversion strategies. These cases have

been limited, however, to those segments of the capital goods sector (as described earlier) where the firms were less affected by competition from imports and were able to take maximum advantage of their dynamism and store of experience. At the aggregate level, however, the evolution of the sector has been frankly unfavourable. Indeed, many firms which made substantial investments in the late 1980s with a view to converting their activities and gaining a better position within MERCOSUR were thrown off their

stroke by the changes in policy in the early 1990s and sank into irreversible financial crises.

The critical situation of the sector led the government to apply other measures (such as the new arrangements for the importation of inputs, parts and components for capital goods) aimed at making local producers more competitive, but according to various specialists in this sector these policies have not succeeded in reversing the slump suffered by a broad segment of capital goods producers.

IV

Fiscal Impact of the new capital goods policy

As already noted, there are numerous factors which mean that the redistributive effects (from the State to purchasers of capital goods) implicit in the new policy are accompanied by important aspects relating to economic efficiency. These factors include in particular the impact of that policy on the fiscal accounts, since it involves replacing an instrument that generated fiscal income (trade protection) with one which gives rise to outlays (drawbacks on domestic sales).

The problem is that the government does not possess optimal mechanisms for obtaining revenue (taxes that do not cause distortions and have zero collection costs) to cover the outlays involved in optimal subsidy policies (an aspect which has been extensively dealt with in the economic literature). The conclusion which has been reached is that the subsidy policy continues to be optimal even though it can only be applied in part, while import duties (whose collection costs are less than those of other taxes) may turn out to be sub-optimal tax instruments. In Argentina, the marginal costs of collection (both of new and existing taxes) are so high that they are ultimately reflected in severe fiscal constraints.

This raises two problems which are often unjustifiably neglected. Firstly, because it affects the fiscal balance the new policy has indirect effects not only on specific variables such as interest rates, the balance of payments, etc., but also on less analytically determinable variables such as the expectations of domestic and international investors. It can therefore be asserted that each peso that enters the govern-

ment's coffers has a higher accounting price than a peso that ceases to flow out of them, while the price of the latter, in turn, is higher than unity. Consequently, the fiscal cost of this instrument becomes a key aspect of the cost-benefit analysis.

Secondly, the cost-benefit status of this particular instrument cannot be analysed in isolation: it is necessary to make a comparison between the different benefits obtainable by using scarce fiscal resources for different types of industrial policies.

However, there is also a second aspect relating to the fiscal costs of the new policy. Whereas trade protection is a more or less automatic (although not optimal) sectoral promotion mechanism, subsidy arrangements involve much higher management costs, due to the need to identify the recipients of drawbacks properly (in the case of tariff protection the recipients are selected automatically), to administer a complicated system of drawbacks, and to apply suitable mechanisms of control over levels of production, sale prices, etc. In addition to these management costs that have to be borne by the State, there are also the substantial management costs that must be borne by local producers, as noted earlier. In this respect, the theory of "second best" solutions (see, for example, Corden, 1978) clearly states that if the management costs of a subsidy system are much greater than those of a system of trade protection, the order of "optimality" of public policies may be reversed, and the use of trade protection may once again be the most appropriate.

V

Impact of the new policy on the balance of payments

One of the central elements of trade policy debates is the question of anti-export bias. The elimination of tariffs on capital goods reduces the anti-export bias in so far as it simultaneously encourages both imports (of such goods) and exports (by all the sectors whose productivity is increased or whose fixed unit costs are reduced).¹¹ Conventional approaches do not bother to investigate what happens if one of these two effects is greater than the other. It is implicitly assumed that when there is an imbalance between them the real exchange rate will spontaneously adjust to its new equilibrium level. Thus, any analytical link between trade policy and possible problems of trade imbalances is simply ignored.

In post-convertibility Argentina, however, there is a clear problem of relative rigidity of the real exchange rate. Furthermore, trade openness in general (and the openness in the capital goods sector in particular) has given rise to a much bigger increase in imports than in the stimuli for new exports. At least, this is what happened up to the end of 1994. It is not clear to what extent the increase in exports registered after that year was due to lower costs and increased productivity, on the one hand, or to the domestic recession and the temporary improvement in the terms of trade, on the other.

The approach taken by the most orthodox school to this matter has been to flatly deny that tariffs (or their elimination) have any effect on the trade balance, which, they claim, is determined by macro-economic variables such as excess of absorption, which would be influenced, in turn, by the results of the balance of payments capital account (Rodríguez, 1995). This approach rejects the role of trade policy as a policy for modifying expenditure and thus inherently altering the relation between absorption and income. This approach also assumes that capital

income is totally independent of the trade balance, whereas in reality imports of capital goods usually involve international finance, so that a reduction (increase) in imports of goods due to an increase (decrease) in tariffs would simultaneously reduce (increase) the inflow of capital and hence eliminate any pressure on the real exchange rate. This is why—in contrast with the orthodox approach referred to above—it may be asserted that tariffs on imports of capital goods do indeed have a direct effect on the trade balance.

Even so, the query remains about the long-term external sustainability of high trade deficits caused by imports of capital goods. The fact is that the effects of the changes in production brought on by the process of modernization and retooling give rise to movements which are very hard to predict accurately.

Without pretending to settle in this article the debate on the sustainability of the Argentine trade deficit, it must be stressed that the external impact of the new capital goods policy cannot be ignored, because: i) the capital account is rationed, at least potentially;¹² ii) the natural adjustment variables, such as the real exchange rate, are subject to strong inflexibilities (which affect the nominal exchange rate or the general level of prices, and iii) the combined effect of these two situations means that the current trade balance has a significant impact on the agents' expectations.

In these conditions, it may be maintained that the accounting price of each dollar that ceases to flow out through the trade account is higher than each dollar that enters through the capital account, and that the latter price is higher than unity. Consequently, the impact of the new policy on the external accounts cannot be ignored when analysing its social costs and benefits.

¹¹ The anti-export bias present within the capital goods sector itself (in terms of the incentives to sell abroad or at home) does not enter into the analysis because of the existence of export drawbacks.

¹² It cannot be claimed that this situation can only be traced back to the period after the "tequila effect", because the danger was latent in the 1990s.

VI

Management and control aspects of the new policy

We must now look at some aspects of the new policy which have to do with the possible sources of administrative inefficiency and unproductive rent-seeking that mark various industrial policy instruments.

Everything appears to indicate that the new drawback system needs a larger administrative apparatus if it is to be effectively managed. It should be borne in mind that the more aspects have to be subjected to control, the greater the possibility that fiscal interests may be adversely affected and that unproductive rent-seeking may take place. In this respect, the number of aspects that have to be subjected to control under a drawback system is greater than in the case of trade protection, where it is only necessary to control the type, amount and price of the imported products.¹³ It is impossible to give a final verdict in this respect, however, in view of the serious and generally acknowledged administrative shortcomings displayed by the Argentine customs

system and the arbitrary criteria followed in the past in fixing tariff levels.

Lastly, it may be noted that the implementation of this new policy (and indeed of the other Argentine industrial policies in the 1990s) does not appear to have been accompanied by a process of institutional improvement in the public offices responsible for its application. Indeed, the tasks of implementation, control and follow-up are spread out among different public bodies –the Office of the Director-General of Taxes (DGI), the Ministry of Industry, the Office of the Director-General of Domestic Trade, etc.– with all the consequent problems of coordinating action within the bureaucracy. Furthermore, it may well be considered that since the agency selected for the execution of the policy (the DGI) is basically a tax collection body, it may not be capable of understanding and running the capital goods system as an industrial policy rather than as a mere arrangement for making fiscal outlays.

VII

An empirical evaluation of the new system

1. The evolution of imports

The main difficulty encountered when trying to calculate the effect of the new system on imports of capital goods is that of estimating the reference values: that is to say, determining what capital goods imports would have been in 1993 and 1994 if the new policy had not been put into effect. In the present study, we have compared the growth rates regis-

tered between 1992 and 1994 in imports of goods corresponding to the tariff items covered by resolution 501 (exemption from import duties) with the rates recorded for the capital goods tariff items which had already been exempted from customs duties because they were goods that were not produced locally (table 1). The analysis also covered the origin of the imports, in order to distinguish between the growth rates of goods from MERCOSUR (which already enjoyed substantial tariff preferences) and those from the rest of the world.

If we take the imports which already enjoyed tariff exemption as a parameter, we see that the growth rate of the imports corresponding to the tariff items covered by resolution 501 is significantly

¹³ Once again, the costs of each of these systems must be weighted by the share of domestic production in total demand. If this share is only very small, the greater relative costs in terms of management and unproductive rent-seeking could finally lead to lower absolute costs compared with those generated by trade protection.

TABLE 1

Argentina: increase in imports of capital goods, by origin, 1992-1994
(Percentages)

	Variation, 1992-1994
Origin: Entire world	
1. Increase in total imports	102.9
2. Increase in goods corresponding to tariff items covered by resolution 501 ^a	153.3
3. Increase in goods corresponding to tariff items already enjoying exemption	71.1
4. Greater increase in (2) compared with (3)	48.0
Origin: MERCOSUR	
1. Increase in total imports	118.6
2. Increase in goods corresponding to tariff items covered by resolution 501 ^a	150.2
3. Increase in goods corresponding to tariff items already enjoying exemption	26.7
4. Greater increase in (2) compared with (3)	97.5
Origin: Rest of world	
1. Increase in total imports	100.4
2. Increase in goods corresponding to tariff items covered by resolution 501 ^a	154.3
3. Increase in goods corresponding to tariff items already enjoying exemption	73.7
4. Greater increase in (2) compared with (3)	46.4

Source: Prepared by the author on the basis of data from the National Institute of Statistics and Censuses (INDEC).

^a On exemption from import duties.

greater (nearly 50% more than imports from the world as a whole and from the rest of the world). It should be noted, however, that this is the estimate which tends to overestimate the impact of the new policy most seriously, because of the prior existence of a system of dual tariffs (depending on whether or not there was local production of the items in question) which gave an incentive for the wilful mis-declaration of the tariff item corresponding to a given product. With the new policy, this incentive has disappeared, but it is very likely that a certain proportion of the increase in imports corresponding to the tariff items covered by resolution 501 was due to mere falsification of customs declarations.

Another important aspect of imports of capital goods relates to their sectoral destination (table 2). As may be seen from the table, the tradeables sector proper (agriculture, mining and industry) absorbed 42% of total imports of capital goods in 1992, but this share showed a downward trend in 1993 and 1994. According to these statistics, the destination sector which grew most was transport (six percentage points), with much smaller increases in the case of commerce, banking and insurance, telecommunications and construction. It should be noted, however, that the changes in relative shares shown in the table may be distorted by the effects of the special system

for the motor industry on imports of transport equipment.

A third aspect which warrants analysis is the role of MERCOSUR in imports of capital goods.¹⁴ In 1992 the share of imports from MERCOSUR in total capital goods imports was relatively small, amounting to not more than 14% (table 3). For the subset of tariff items covered by resolution 501, however, this share rose to 26%, with the difference being particularly notable in the case of specialized non-electrical machinery and transport equipment. This situation may indicate either the previous existence of substantial trade diversion (the imports from Brazil are concentrated in the sectors previously protected by Argentina, to which Brazil gained preferential access) or merely the existence of similar supply structures. The fact that between 1992 and 1994 the growth rate of imports from MERCOSUR covered by resolution 501 was almost identical to that of imports from the rest of the world (see table 1) would appear to weaken the trade diversion hypothesis: Brazilian capital goods have managed to maintain their share of the Argentine market even under the same conditions of access as those applying to imports from the rest of the world.

¹⁴ Only imports from Brazil and Uruguay were taken into account, since those from Paraguay are relatively insignificant.

TABLE 2

Argentina: Sectoral destination of capital goods imports, 1992, 1993 and 1994
(Percentages)

	1992	1993	1994
Agriculture	2.5	2.4	2.9
Mining	0.4	0.4	0.4
Industry	39.7	37.7	33.0
Electricity, gas and water	6.5	6.4	6.1
Construction	7.2	7.9	8.1
Transport	13.2	14.7	19.5
Commerce, banking and insurance	8.8	9.2	9.1
Communications	14.8	16.1	15.3
Health	4.8	3.4	3.6
Research	0.7	0.6	0.6

Source: Argentina, Ministry of the Economy and Public Works and Services, *Informe económico*, various issues.

TABLE 3

Argentina: Share of MERCOSUR in imports of capital goods, 1992
(Percentages)

	Of total imports	Of tariff items covered by resolution 501
Metal structures	3.3	3.3
Non-electrical machinery, n.e.s.	12.8	15.9
Non-electrical machinery, specialized	17.0	45.8
Electrical machinery	7.5	12.8
Telecommunications equipment	3.9	4.8
Transport equipment	24.3	81.7
Technical and precision instruments	2.8	3.1
Data processing and office equipment	4.9	4.2
Others, n.e.s.	6.1	4.3
Total	13.5	26.0

Source: Prepared by the author on the basis of data from the National Institute of Statistics and Censuses (INDEC).

In order to distinguish between the cases analysed in section III, it should be noted that imports from Brazil corresponding to the tariff items covered by resolution 501 account for high shares (over 30%) in the case of motor vehicles, agricultural machinery, machinery for the rubber and plastics industry, and machinery for road-building and the construction sector. They also have substantial shares in food-processing machinery, machinery for non-metallic minerals, and railway equipment, although the absolute amounts are not very significant.

2. The evolution of domestic capital goods production

In this case, the information on domestic production is more limited and less consistent than that on imports. As a first approach to this matter, table 4 shows the evolution of the indicators of physical

volume of production, on the basis of data prepared by the sectoral associations.

Because of the low sectoral coverage of the available indicators on the physical volume of production, they cannot be used to estimate the aggregate performance of the capital goods sector. What is worth stressing is the great heterogeneity between the behaviour of the different segments of the sector. The following representative cases may be noted in this respect:

i) A very good performance was turned in by the segments producing trucks (class B vehicles) and such items as trailers and semi-trailers, which represent the most privileged segments because they enjoy the benefits not only of the drawback system but also of specific non-tariff protection mechanisms.

ii) A good performance (although not so good as the previous case) was registered by the segments producing agricultural machinery and road ma-

TABLE 4

Argentina: Evolution of physical volume of domestic production
(Percentages)

	1992/1993	1993/1994	1992/1994
Agricultural machinery	6.7	12.2	19.7
Road machinery ^a	-12.8	27.7	11.4
Tractors ^b	-22.9	25.8	-3.1
Machine tools for metals ^c	-26.6	-3.9	-29.4
Machine tools for wood ^c	-20.0	-10.2	-28.1
Motor vehicles, class B ^d	11.6	38.3	54.4
Trailers ^e	25.7	11.5	40.2
Semi-trailers ^e	24.9	4.8	30.9

Source: Aggregate estimates by the author, based on data from the Argentine Agricultural Machinery Manufacturers' Association (CAFMA) for that branch, and data from other bodies as indicated.

^a Data from the Association of Metalworking Industries of the Argentine Republic (ADIMRA).

^b Data from the Association of Argentine Tractor Manufacturers (AFAT).

^c Data from the Argentine Association of Manufacturers of Machine Tools, Accessories and Related Products (AAFMHA).

^d Prepared by the Latin American Economic Research Foundation (FIEL), on the basis of data from the Motor Manufacturers' Association (ADEFA).

^e National Institute of Statistics and Censuses (INDEC).

chinery. In these two cases, much of the competitive pressure from imports comes from MERCOSUR (which accounted for 70% and 50%, respectively, of imports in these categories in 1992).¹⁵ In these cases, as noted in section III, the new policy does not cause any major reduction in the cost of imports, so that the drawback system does not operate as a form of partial compensation but as a fully-fledged subsidy for local producers.

iii) In the case of machine tools, there was a sharp drop in production. Here, unlike the preceding case, the bulk of the competitive pressure comes from imports from the rest of the world. The process of general economic openness begun in the early 1990s, together with an excessive supply of machine tools on international markets and a severe recession in Brazil, has tended to give rise to a critical situation for this industry, and the greater trade openness furthered by the new capital goods policy has probably made the situation of most of the firms in this branch even more critical. As we were able to note from some of the interviews with firms in this sector, however, there are some machine tool firms which have succeeded in carrying through their restructuring pro-

cess and are now in a good position to compete with foreign products. All in all, this segment seems to fit in quite well with the second case set forth in section III, where some firms remain competitive and are favoured by the new policy, whereas a certain proportion (in this case, a significant proportion) of the remaining firms are forced to leave the market or change over to the marketing of imported goods.

Leaving aside the question of the marked heterogeneity observed among the different segments of capital goods production, let us try to determine what the aggregate behaviour of the sector has been. A first approximation in this respect may be provided by the official statistics on gross domestic fixed investment (table 5).¹⁶ These data confirm fairly conclusively that Argentine capital goods production (with the obvious exception of transport equipment) has not only not been able to win part of the increased demand for investment goods but has actually been displaced in absolute terms by imported goods. Although the statistics for 1990 and 1991 have not been published, through consultations with national accounts special-

¹⁵ It should be added, in this respect, that in the agricultural machinery segment the systems of marketing and after-sales service tend to give rise to some degree of natural protection, so that according to the estimates of specialists in this sector the general share of imports in the market is not more than 25%.

¹⁶ This information is presented by way of illustration because it is the only aggregate information available. It should be borne in mind that the data on this investment cover a much broader universe of goods than that affected by the new capital goods policy. At the same time, there is some doubt about the reliability and consistency of these figures in the case of some indicators of the physical volume of production.

TABLE 5

**Argentina: Variation in the components of
gross domestic fixed investment, at constant prices^a**
(Percentages)

	1992/1993	1993/1994	1992/1994
Machinery and equipment	18.5	22.6	45.3
Domestic	7.4	-1.8	5.5
Transport equipment	15.0	13.4	30.4
Other machinery, equipment, etc.	3.9	-9.4	-4.8
Imported	33.0	48.4	97.4

Source: Argentina, Ministry of the Economy and Public Works and Services, *Informe económico*, various issues.

^a The series at current prices show the same trends, although slightly less marked, reflecting the decline in the relative prices of capital goods.

ists we were able to establish a fact which is extremely important for our analysis: between 1990 and 1991, and again between 1991 and 1992, the behaviour of the domestic machinery and equipment branch was less dynamic than that of imported machinery and equipment, but it registered positive growth rates rather than the negative rates registered in 1994 and the whole of the two-year period 1993-1994. These trends would appear to be confirmed by estimates of the sectoral GDP—at the five-digit level of the Standard International Trade Classification (SITC)—which have not yet been published either, on account of problems of reliability.

To sum up, then, empirical analysis of domestic capital goods production and its evolution tends to corroborate the assumption that the aggregate performance of the sector was negative and that there was a high level of heterogeneity within it.

3. Estimation of the fiscal cost of the new capital goods policy

The direct fiscal cost of the new policy includes the amount paid in respect of drawbacks on domestic sales and the loss of tariff revenue due to the exemptions from import duties. It is estimated that the drawbacks due in 1994 came to 259.1 million pesos, corresponding to domestic sales of 1,700 million.¹⁷ The indirect effects mentioned in section IV cannot

¹⁷ In order to make this estimate, we took the total drawbacks paid in 1993 and 1994 and allocated 66% of them to 1994. Because of the lack of statistics on the drawbacks due, the cut-off date was set at 3 January 1995 (by which time it is assumed that most of the applications in respect of sales made in 1994 had already been entered) and the values were adjusted to include pending applications (i.e., applications in respect of which the corresponding drawbacks had not yet been paid).

be quantified, but they nevertheless should not be ignored in an overall evaluation of the new policy.

According to the available data, the share of local supply in the branches covered by the new capital goods policy is around 30%.¹⁸ For the subset of goods covered by resolution 501 (which are merely those where it is presumed that domestic production exists), the share of local supply in the total market is estimated to be 45.6%.

With regard to the first component of the fiscal cost, the breakdown of drawback applications prepared by the Department of Major Domestic Taxpayers shows the degree of concentration existing among the firms in the sector that use the system. These data (which likewise underestimate the real degree of concentration) indicate that 3.4% of the applications account for 41% of the total amount paid. To put it another way, while the average value of each drawback applied for by the major taxpayers of the sector amounts to 522,000 pesos, in the case of the rest of the firms the corresponding figure is only 26,000 pesos. This fact, together with the high fixed costs (especially administrative costs) involved in handling drawbacks, indicates that there are big economies of scale which make the system much less favourable for the small and medium-sized firms in the sector.

The second component in the fiscal cost is the loss of tariff revenue. We have calculated this using the same criterion that was used in sub-section 1 above to estimate the reference value of what the level of imports of capital goods would have been if the new

¹⁸ This figure underestimates the real share because of the voluntary self-exclusion of some local producers who have not used the drawback system (either for fear of the fiscal investigations implicit in the system or because they have captive markets).

TABLE 6

**Argentina: Costs and benefits of the new policy for
the capital goods sector (excluding transport equipment)^a**
(Millions of dollars)

	Benefits		Costs		A+B-C
	Subtotal	Total	Subtotal	Total	
Variation in imports	251				
Variation in domestic sales	-53				
Total variation in demand (A)		198			
Reduction in total costs	423				
Reduction in costs, without transfers (B)		187			
Fiscal cost of loss of tariff revenue			260		
Fiscal cost of drawbacks			168		
Total fiscal cost (C)				428	
Benefits, less costs (A+B-C)					-43

Source: Prepared by the author.

^a The variation in imports was estimated using the same method employed to deduce the fiscal cost of the new policy (second method set forth in section VII.1). Domestic sales were estimated by applying the variation in gross domestic fixed investment estimated by the Ministry of the Economy (see section VII.2) to the value of domestic production, as estimated from the drawbacks paid out (see section VII.3). The cost reduction effect is equal to the public transfer to the sector purchasing capital goods (i.e., equal to the fiscal cost of the measure), and the proportion which went to the tradeables sector was estimated by applying the shares of the different sectors in imports of capital goods, as estimated by the Ministry of the Economy (see section VII.1). The share of capital goods as a whole (excluding transport equipment) in total drawbacks and in the equivalent value of production was estimated at 65%, according to calculations made by the staff of the Ministry of Industry.

policy had not been applied. Only imports from the rest of the world were taken into account (i.e., we excluded imports of capital goods from MERCOSUR, which already enjoyed major preferences).

Thus, assuming that the level of imports in 1994 would have been 1,029 million pesos if the new policy had not been applied, we estimate that the loss of tariff revenue (fifteen percentage points of tariffs plus ten percentage points of the "tasa estadística" surcharge) would amount to 257 million pesos.

To sum up, then, the direct fiscal cost of the new capital goods policy in 1994 may be estimated at US\$ 500 million, divided more or less equally between payments of drawbacks and loss of tariff revenue.

4. Aggregate costs and benefits

It is of interest to bring together the three elements of empirical analysis in respect of which we were able to make more or less consistent estimates, in order to get an idea of the overall costs and benefits of the new policy. The points of particular interest in this respect are the increase in demand for capital goods attributable to this policy, the direct reduction in costs obtained by the tradeables sector of the economy, and the direct fiscal cost of the new arrangements. Although some other components of the

cost-benefit analysis which are difficult to quantify have been left out of this exercise (such as the effects of the deterioration in the external sector accounts on the monetary reserves and the expectations of the economic agents, the private and public management costs of the new system, its effects on employment, etc.), we must not forget their importance for a truly integral appraisal of the new policy. As the behaviour of the transport equipment branch is strongly influenced by the existence of the special system for the motor industry, it was decided to exclude it from this analysis. Likewise, as imports from MERCOSUR already enjoyed substantial tariff preferences, only the imports and loss of tariff revenue corresponding to imports from the rest of the world were taken into account.

While the estimates (not included in this article) which include transport equipment give a positive result, the exclusion of this branch gives a negative picture.¹⁹

¹⁹ Table 6 is only designed to illustrate the very limited effectiveness of the new capital goods policy: it does not represent an estimate of the social costs and benefits in terms of efficiency. The analysis of the increase in demand, for example, includes the total value of the increase in purchases, and not the "triangle" that would measure the net gains of the consumer surplus. Likewise, the table shows the total fiscal outlays, but not the costs of collection or distortional effects.

VIII

General appraisal

A general appraisal of the new policy indicates that it has both favourable and unfavourable effects. Among the former are the increase in the investment rate and in the general productivity of the economy, and the reduction in costs due to the lower cost of capital goods. Among the latter are the effects on the evolution of the domestic supply of these goods (except transport equipment), the macroeconomic impacts on the fiscal sector, the external sector and unemployment, and the higher public and private management costs of the new system compared with the previous one.

The initial difference between the drawback rate and the trade protection rate which was eliminated suggests that the impact on domestic production was not initially given much weight. Thus, the drawback system may be seen as a safety net for local producers to palliate a prior decision to open up the sector, rather than as a policy designed to provide support for an offensive industrial restructuring exercise. The drop in the levels of production of the capital goods sector, which is subject to considerable externalities, the management costs of the new instrument, and the new distortions generated in the relative price of capital goods versus labour are factors which call into question the advisability of the new system from a microeconomic standpoint.

Even if we conclude that the cost-benefit ratio of the new policy is favourable from this standpoint, it would still reflect the contradiction analysed by Fanelli and Frenkel (1995) between the positive microeconomic effects of some structural reforms and the aspect of the macroeconomic sustainability of the stabilization and growth process.

The fiscal and external costs of the new policy were given little weight in the initial cost-benefit appraisal, probably because of the abundant finance available in 1993 and 1994 for both the government and the external sector. The question of whether the extremely high discount rate used (implicitly reflecting the lack of concern for the fiscal and external adjustments that would later be necessary) was correct or not is something that can only be determined

ex post through a joint analysis of the process of convergence of the economy towards a stable growth model. The question that we *do* need to ask is whether –within the same government economic policy framework– it would not have been more advisable to use other industrial policy instruments.

As already noted in section V, fiscal constraints make it impossible to carry out all the policies which might be considered appropriate. Consequently, we must ask ourselves not only whether the change in policy has a positive impact on the above-mentioned process, but also whether the new instrument is more effective than other alternative industrial policies. The exercises effected in section VII.4 above would seem to indicate that if the priority aims of the measure were to increase the investment and reduce the costs of the tradeables sector of the economy, then the cost-benefit evaluation ceases to be favourable if the transport equipment branch is excluded from the analysis. The low price-elasticity of demand for capital goods revealed in the empirical analysis gives grounds for thinking that the State could have raised the investment rate more either by making direct public investments or by inviting tenders from the private sector for the operation of production investment funds established with public resources. If it is possible to ensure efficient allocation of resources and appropriate channelling to infrastructural projects, there can even be a parallel increase in private investment, due to the crowding-in effect that public investment can have on private investment, as more recent studies tend to acknowledge (Schmidt-Hebbel, Servén and Solimano, 1996).²⁰

²⁰ The advocates of the supply-side approach tend to assume that any resources procured by the State for the design of industrial strategies to promote investment in industry and the restructuring of production will automatically tend to be wasted through inefficiency and corruption. Although it is true that these problems do exist, they tend to be self-generated by this economic philosophy itself, because it rejects the need to make the necessary efforts to strengthen the institutions responsible for handling industrial policy instruments.

At all events, the new capital goods policy does not seem to have sufficiently grasped the fact that the investment rate is influenced by other factors which are just as important as the price of those goods, or even more so: these factors include the level of growth of income (the acceleration effect), the situation as regards the expectations of the economic agents, and the financing terms associated with the supply of capital goods.

With regard to the function fulfilled by the new policy in terms of reducing costs, and its direct impact on the competitiveness of the economy, it may be wondered whether a better cost-benefit equation would not have been secured by the application of the same policy, but limited selectively to the tradeables sector of the economy.²¹ Generally speaking, this policy has taken a very narrow view of the factors conditioning competitiveness. Thus, the efforts made to reduce the prices of capital goods are out of all proportion to the efforts to promote retooling through suitable credit and technology policies. Except in the case of the special

system for the motor industry, the fiscal resources devoted to the new policy are much greater than those allocated to all the other policy instruments of the Ministry of Industry. Thus, for example, US\$ 500 million are allocated to this policy each year, in contrast with the US\$ 30 million annual budget of the National Industrial Technology Institute or the US\$ 60 or 70 million allocated each year to subsidize interest rates on loans to small and medium-sized firms.

The same lack of proportion is to be observed between the fiscal cost of the new policy and the virtually insignificant budgetary and policy efforts aimed at strengthening the institutions responsible for its management, which raise doubts as to whether the effective control capacity required by the new system really exists. The by no means insignificant share of local production in the total supply of capital goods, as estimated in section IV.3, means that the new policy involves higher management costs than the previous trade protection system.

(Original: Spanish)

Bibliography

- Argentina, Ministry of Economic Affairs and Public Works and Services (several issues): *Informe económico*, Buenos Aires.
- Argentina, Secretaría de Industria y Comercio Exterior (1994): *Sector fabricante de bienes de capital. Impacto del régimen de reintegros a las ventas internas*, Buenos Aires, mimeo.
- Atiyas, I., M. Dutz and C. Frischtak (1992): *Fundamental Issues and Policy Approaches in Industrial Restructuring*, Industry and Energy Department working paper, Industry Series paper, No. 56, Washington, D. C., World Bank, Industry and Energy Department, April.
- Bekerman, M. and P. Sirlin (1996): Patrón de especialización y política comercial en la Argentina de los noventa, *Desarrollo económico. Revista de Ciencias Sociales*, vol. 36, special issue, Buenos Aires, Institute for Economic and Social Development (IDES).
- Bekerman, M., P. Sirlin and M. L. Streb (1995a): *Las nuevas orientaciones de política industrial, tecnológica y de promoción de exportaciones en Argentina y Brasil. Asimetrías y posibilidades de coordinación*, Centro de Estudios de la Estructura Económica (CENES), Doc. de Trabajo No. 1, 1995.
- (1995b): *Política económica en experiencias de Asia. Los casos de Corea del Sur, Taiwán, Malasia y Tailandia*, Doc. de Trabajo No. 2, Buenos Aires, Centro de Estudios de la Estructura Económica (CENES).
- Chudnovsky, D. (1992): *The Future of Hemispheric Integration: The MERCOSUR and the Enterprise for the Americas Initiative*, Documentos de Trabajo, No. 9, Buenos Aires, Research Centre for Industrial Transformation.
- Corden, M. (1978): *Política comercial y bienestar económico*, Madrid, Ediciones ICE.
- Dosi, G., K. Pavitt and L. Soete (1990): *The Economics of Technical Change and International Trade*, Hertfordshire, U. K., Harvester-Wheatsheaf.

²¹ In other countries, for example, there have been various cases where capital goods have been exempted from import duties only when intended for use in export industries. With regard to the South-East Asian countries, see Bekerman, Sirlin and Streb, 1995b.

- Fanelli, J. M. and R. Frenkel (1995): *Interacciones en el crecimiento económico*, Documentos CEDES, No. 104, Buenos Aires, Centro de Estudios de Estado y Sociedad (CEDES).
- Grossman, G. (1990): *Promoting new industrial activities: A survey of recent arguments and evidence*, OECD Economics Studies, No. 14, Paris, Organization for Economic Cooperation and Development (OECD), Spring.
- Porta, F. (1994): Los bienes de capital y el MERCOSUR, *Realidad económica*, No. 122, Buenos Aires, Instituto Argentino para el Desarrollo Económico (IADE).
- Rodríguez, C. (1995): *El comercio exterior en la encrucijada*, Documentos de Trabajo, No. 101, Buenos Aires, Centro de Estudios Macroeconómicos de Argentina (CEMA).
- Schmidt-Hebel, K., L. Serven and A. Solimano (1996): Saving and investment: Paradigms, puzzles, policies, *The World Bank Research Observer*, vol. 11, No. 1, Washington, D. C., World Bank.
- Wade, R. (1990): *Governing the Market: Economic Theory and the Role of Government in East Asian Industrialization*, Princeton, NJ, Princeton University Press.

The restructuring *of the Brazilian* industrial groups *between 1980 and 1993*

Ricardo M. Rulz

*Associate Professor,
Faculty of Economic Sciences,
Federal University
of Minas Gerais.*

This article analyses the strategies applied by the Brazilian industrial groups during the period 1980-1993: that is to say, before the Real Plan was put into effect. After some introductory comments regarding the debate on economic groups, hypotheses are presented on the evolution of the Brazilian industrial groups in the 1980s and early 1990s; the main elements in the Brazilian economy which conditioned the restructuring strategies of the groups are identified, and these strategies are categorized on the basis of this analysis and of the hypotheses put forward in the introductory section. A general analysis is then made of the strategies of a sample of industrial groups, and in conclusion some aspects of the Brazilian groups are compared with those of "winning" business organizations (the Japanese *Keiretsu* and the South Korean *Chaebol*) and some theoretical considerations are put forward on the possibilities of expansion of the Brazilian groups in the light of their sectoral positions.

I

Introduction: "winning" business structures

Many economic publications of the 1980s describe and analyse the competitive merits of the great enterprises and industrial groups of Japan and South Korea, of some Italian groups, and of other groups from the recently-industrialized Asian countries. A number of authors have displayed special interest in the impact of these concentrated production structures on international trade, finance and technological development.¹

Economic groups display a number of features which distinguish them from other firms in a particular market structure. Tavares (1972, pp. 196-197) noted that the fundamental objective of a conglomerate is really to control the market surplus, and it only seeks to achieve integration of production and control over the whole process of production, innovation or technological adaptation when these are essential to the attainment of that objective. In other words, the aim of a conglomerate is not to concentrate production, regulate the absorption of technology and increase production efficiency by taking advantage of economies of scale and linkages or complementation. What it really wants is to gain possession of the surpluses of various firms or sectors and apply them in new and diversified ways which minimize risks and keep up the profitable accumulation of capital. This typically financial form of business organization is capable of controlling the surpluses of activities whose forms of production are not related, and it can even collaborate with the interests of firms or groups that would be antagonists under conditions of normal oligopolistic competition.²

¹ OECD (1992) makes an interesting comparison between the winning firms of the 1980s and the former structures based on the Fordist production pattern. See also Torres (1991).

² With regard to the capacity of industrial consortia and financial corporations to allocate resources, Hobson (1985, p. 191) says that these bodies are increasingly taking on the form of a purely financial power: of a mass of credit that is directed to any point in the economic system where it is needed in order to force an industrial merger or stifle any threat to invade one of its "spheres of influence".

The analysis of Japanese and South Korean groups made by Coutinho (1992) highlights three basic characteristics of these capitalist structures. First, they are multisectoral groups industrially linked with sectors that generate new technologies (such as microelectronics and electrical equipment) and with firms in industries that use new technologies (such as the motor vehicle, chemical and telecommunications industries). This broad industrial base has allowed them (and continues to allow them) to take advantage of technological and commercial synergies within a single industrial group.

A second characteristic is that they finance investments with long lead times. There is a banking nucleus linked with the industrial strategies (a relationship which is particularly marked in the case of the Japanese groups, the *keiretsu*). This financial structure is founded on stable and abundant monetary resources obtained at relatively low interest rates from the group's own wage bill (pension and insurance funds, etc.). These resources are transferred to the firms in the group in accordance with their investment programmes. The groups thus have a captive loan fund which partly protects them from restrictive monetary policies and ensures the flexibility of their investment plans.

The third characteristic is connected with their vertical and horizontal cooperation strategies. At the vertical level, these groups maintain close partnerships with small and medium-sized enterprises, thus ensuring a regular and flexible supply of parts and inputs, while at the same time enabling them to focus and concentrate their resources on activities which they consider to be strategic. At the horizontal level, they establish agreements, associations and alliances with other major firms, especially in the field of technological development.

The combination of these characteristics within the same business structure was an outstanding feature of the great "winning" industrial enterprises of the 1980s, and this fact raises once again the question of the characteristics displayed by the Brazilian groups (size, sectoral position, industrial and financial synergies, and strategies).

II

The strategies of the economic groups

1. Defensive/speculative strategies: formation of conglomerates

The few studies published on the strategies of the Brazilian economic groups in the 1980s suggest a basic hypothesis: these strategies display a marked defensive/speculative tendency which is reflected in investments³ in firms or real assets that represent protection against the danger of economic instability. The biggest firms sought to acquire shares in firms considered to be market leaders and tried to reduce risks by diversifying their investment portfolios (Almeida, Kawall and Novais, 1990).

Commenting on this behaviour, these authors (*ibid.*, p. 16) assert that the growth in the investments of the leading firms had such marked characteristics that there can be no doubt about its significance: it was a typical move in the direction of diversification and the formation of major private sector conglomerates. They also assume that the aim of the diversification was to stabilize the return on capital within large corporations. This strategy led to the formation of groups with interests in various markets. If they are correct in their assumptions, then this represented a shift of resources of a defensive nature, quite distinct from offensive-type diversification involving the promotion of new related activities and the search for technological synergies, new products and new markets, which would mean financing (and not just stabilizing) new venture investments.

Coutinho (1990 and 1991) criticized the strategies and structures of the Brazilian industrial groups, contrasting their features with the competitive "virtuosity" of the *keiretsu* and *chaebol*. In line with the proposals of Almeida, Kawall and Novais (1990), he speculated that these were merely "poorly informed equity-oriented diversification strategies" aimed at making "good deals" which, while individ-

ually profitable, did not bring any kind of internal synergy for the group. Rounding out his criticisms, he added that the Brazilian groups did not develop strategies which gave priority to complementation and technological synergy, and moreover they had a poorly diversified sectoral structure, concentrated in conventional sectors. With regard to their indebtedness policy, he said that these groups preferred to invest with their own capital, which tended to limit their expansion capacity and make them easy victims of restrictive monetary policies.⁴

It has also been suggested, however, that the Brazilian industrial groups applied strategies marked by the pursuit of real assets with some degree of liquidity. It could be said that their acquisition policies were conditioned largely by financial/speculative aspects related to an unstable economic environment with limited investment opportunities.

Since this was the predominant type of behaviour with regard to the restructuring strategies of the industrial groups, the following questions may be asked: In an economic environment marked by instability and uncertainty, would it not have been better to give priority to the strengthening of strategic activities which increase the capacity to react to disruptive movements? Would it not have been better to discard a defensive/speculative strategy (based on the execution of "good deals") which does not increase market power and adopt instead a more coherent competitive strategy which favours the industrial integration of the firm or group in question? And if this were so, would not this defensive/speculative behaviour be a secondary aspect in a more general strategy for the expansion of major companies and economic groups?

³ From an accounting (but not economic) standpoint, the investments correspond to the application of resources in other firms in the form of transfers of monetary resources and assets, acquisition of equity, etc.

⁴ These views are similar to those set forth by Queiroz (1972, p. 13), who said in his evaluation of the strategies of the economic groups operating in Brazil in the early 1960s that although the extreme diversification of some groups was not rational from the organizational standpoint, it offered advantages in terms of the survival and progress of the groups in a relatively limited market sometimes subject to sharp sectoral fluctuations. Groups organized in this way can establish a business strategy which allows them to withstand possible adverse results in one branch, provided that other branches keep on growing.

To some extent, the hypothesis of a defensive/speculative form of behaviour also implicitly includes the idea that economic instability was one of the leading conditioning elements in the restructuring strategies. This idea is open to question, however. Were the strategies of the industrial firms and groups really determined solely by economic instability? To put it another way, was the prevailing economic situation the main conditioning factor in the diversification strategies? Might there not be other elements, connected with the industrial profile of the group, which conditioned its strategies with regard, for example, to its direction of diversification? May there not have been coherent long-term industrial restructuring processes: i.e., non-speculative strategies?

2. Coherent corporate strategies

The theoretical basis for this questioning of the strategies is a hypothesis formulated from the ideas set forth by Steindl (1983), Penrose (1959) and Dosi, Teece and Winter (1992). These authors take the view that the preferred space for the investments of the firms is in the same industry in which they are located or in economic spaces linked with that which they consider to be most important.

Steindl asserts that the preferred area for a firm's investment is the same space in which it is already operating. In investing, the firms seek to strengthen their competitive position either by incorporating new techniques that enable costs to be reduced, stepping up product and market differentiation, or acquiring competing firms. Diversification into other industries, he considers, only tends to take place when there are no more profitable spaces left in the firm's own industry or when the expenditure to strengthen the firm's competitive position is insufficient to absorb the expansion potential of the firm (or group).

Penrose supplements and strengthens this analysis, asserting that a firm defines its preferred areas of investment in the light of the trading environment and its technical base. Thus, a firm evaluates its technical and market knowledge and defines a space where, if it expands into it, it will be able to take advantage of its accumulated competitive advantages and strengthen its already firmly established competitive positions. If there are lucrative economic spaces in its own area of specialization, a firm is hardly likely to decide to invest in industries far removed from that area.

Dosi, Teece and Winter (1992) also concur with these views, although in their approach the technological dimension is given greater prominence. These authors take the view that in large corporations there is a consistent thread running through their processes of diversification and horizontal specialization, which are largely conditioned by the following factors: the know-how built up in the various activities of the firms, technological opportunities, production linkages, complementary assets, and competitive selection. Furthermore, they claim that transaction costs (the existence of specific assets, cognitive diversity, opportunism, etc.) are also important factors in defining vertical integration strategies. They therefore stress that the industrial profile is an important element conditioning restructuring strategies.⁵

In the light of these considerations, a second hypothesis can be formulated. The 1980s were marked by instability and lack of clarity regarding the areas of probable expansion of the economy. In this climate of uncertainty, the most widespread strategy of groups and large corporations was to try to strengthen their competitive position and hence their positions in industries considered to be strategic (core businesses). These groups and firms tried to build economic spaces where they could use their market power and defend the profitability of their assets. In line with the views expressed by Penrose, they decided on their investment priorities in the light of their areas of specialization. This would suggest that they applied coherent synergic strategies relating to the sectoral profile: that is to say, strategies which were not merely of a defensive/speculative nature.

If this hypothesis is correct, then defensive/speculative strategies were not those which most faithfully reflected the behaviour of the big industrial firms and groups in the 1980s, since these groups did not disperse their investments in order to obtain average levels of profitability and avoid the risks involved in concentration of capital in a single industrial segment. On the contrary, they sought to strengthen their industrial structures and, on this basis, to expand by incorporating new activities which had strong financial, technological or commer-

⁵ Pondé (1993) gives an analysis of transaction costs, taking a neo-Schumpeterian approach. With regard to the factors mentioned by Dosi, Teece and Winter, see Dosi (1988); Very (1993) also sets forth some similar ideas.

cial backing in the existing industrial base. In effecting this expansion, they may have opted to diversify their activities in a structured and coherent manner by entering other industrial sectors.

The prevailing economic situation may have stimulated restructuring processes (diversification and specialization), but in order to identify the reasons for this it is necessary to analyse the long-term movements of the major enterprises and industrial groups, which would mean reducing the explanatory importance of factors which might be considered as transi-

tory and which would therefore justify defensive/speculative measures. The truth is that it is necessary to analyse the whole competitive context in which the firms or groups in question operate, their industrial profile, and their strategic decisions, including the diversification of their activities. In this respect, the restructuring strategies of Brazilian firms were determined by the overall interaction of the general behaviour of the Brazilian economy, the performance of the industrial sectors, and the specific sectoral profiles of the industrial groups.

III

Conditioning elements and industrial strategies

1. General conditioning elements and reactions

Analysis of the Brazilian economy reveals some general elements which conditioned the restructuring strategies of the industrial groups during the period 1980-1993.

First, it may be noted that large corporations kept up their accumulation capacity during the 1980s, in spite of the recession and economic instability. They reduced their indebtedness and began to put their surplus resources to work in the financial market and to use them to acquire real assets. This fact may have prompted expanding industrial groups to acquire firms considered to be profitable or of strategic importance or to take out shares in them.

Second, in contrast with the rapid growth registered in the 1970s, the domestic market grew only slowly. This stagnation of the domestic market, and the prevailing economic policy, led firms to seek markets abroad, although the domestic market continued to be the main area of expansion for most companies.

Third, technological change led to the redefinition of areas of competition, so that some activities expanded rapidly thanks to the new technological opportunities, others were restructured in line with the innovations, but some areas of activity stagnated or deteriorated because of the unfavourable impact of technological changes. In this process, trade protection and government incentives played a vital role in the growth of domestic capital.

The economic changes which took place in 1990-1993 faced business strategies with new demands and heightened those already being faced. First, the domestic recession and the lack of industrial guidelines caused expansion to continue to be directed towards the external market, stimulating the growth of those industrial sectors and firms which had turned to exports in the 1980s.

Second, the authorities ceased to apply selective industrial policies which placed conditions on the entry of foreign capital and encouraged the development of some industrial sectors. As a result, because of the scarcity of domestic capital in technology-intensive sectors, foreign firms came to enjoy big competitive advantages in the core segments of the new industrial growth, and domestic capital tended to be restricted to the sectors where it already occupied a competitive position.

Third, the State decided to redefine its participation in production activities and put into effect an extensive privatization programme covering all firms not of a strictly public character. Thus, the former State enterprises began to offer opportunities for expansion to some industrial groups.

Lastly, there was the question of trade openness. The marketing of imported products and the possibility of strong foreign competition gave rise to various reactions. Some firms reduced their industrial activities and concentrated instead on certain specific segments, complementing their own product lines

with imports. Others decided to import inputs, machinery and equipment so as to raise their production efficiency.

Not all firms and industrial groups showed the same capacity to react to these changes. Faced with the multiple conditioning elements referred to in the previous paragraph, the groups could adopt various strategies, depending on their specific industrial profiles. Thus, there were different types of appraisals and capacities for action to tackle the prevailing economic restrictions and opportunities.

2. Expansion, diversification and specialization strategies

Diversification and specialization are aspects of competitive strategies and are subject to certain conditioning elements. In his study of the growth of companies, Penrose (1959) considers that firms prefer to invest (especially when diversifying) in activities closest to their own area of expansion.⁶ This is an economic space, determined by the firm's marketing area and technical base, in which the firm aims to attain a leading position compared with existing and potential competitors. Consequently, its diversification horizon consists of a range of options determined by the strategic importance and competitive advantages that the firm believes it has.

Dosi, Teece and Winter (1992) believe that large corporations are groups which have a special kind of corporate coherence. They consider that transaction costs, technical and organizational know-how, technological opportunities, production linkages, complementary and specific assets, and competitive selection are important aspects in the definition of this corporate space. They suggest that there is a strategic group of core competences which condition the group's expansion possibilities, and they note that this core normally has two dimensions: one organizational and economic, and the other technical. The organizational/economic dimension covers i) the capacity to decide what to produce and at what price; ii) the capacity to decide whether to manufacture or purchase the goods, and in the case of manufacture,

to decide whether to do so alone or in association with another firm; and iii) management capacity: that is to say, the capacity to plan the organizational structures and policies so as to ensure efficient operation. The technical dimension, for its part, includes the capacity to develop and plan new products and processes, the capacity to operate the installations effectively, and the capacity to accumulate know-how (Dosi, Teece and Winter, 1992, p. 198).

These authors consider that if there is no core of competences and capacities which give coherence to a firm's business activities, then it is likely that the enterprise—which in such a case is a portfolio of autonomous enterprises—will only be able to survive in environments where there is very little selectivity: for example, where there is no credit and firms are protected from their competitors by regulations, reserved markets, import barriers, etc.

In the light of the above hypotheses and the factors affecting the coherence of enterprises, strategies can be classified in two groups: coherent strategies, and non-coherent or defensive/speculative strategies. However, this division is not sufficiently detailed to describe the various possible strategies, especially the coherent ones, and we therefore decided, in the classification set forth below, to increase the degree of segmentation.

Non-coherent—or, more exactly, insufficiently coherent—strategies are a reflection of the hypothesis that the groups diversified their activities in order to defend their liquid resources from economic instability by acquiring shares in companies in various industries, in an effort to reduce the risks involved in the concentration of capital in a particular sector.

Coherent strategies (strategies involving diversification, synergic diversification, specialization and intensive specialization), for their part, represent the hypothesis which asserts that there is a relation between the industrial structure of the groups and their restructuring. These strategies are marked by the search for external markets, spaces in the domestic market, and technological opportunities. They also place emphasis on the importance of planning and long-term corporate expansion in order to cope with the short-term movements which were largely responsible for the defensive/speculative strategies.

Specialization strategies (especially those involving intensive specialization) correspond to the hypothesis that, in the early 1990s, industrial groups and

⁶ In the original text, Penrose says "area of specialization", but in order to avoid future ambiguities it was decided to use the term "area of expansion".

large corporations concentrated their resources in the industrial sectors and segments where they believed they had solid competitive advantages.

Although this movement is only recent and has not yet been completed, it may be assumed that these strategies are different from those used in the 1980s, when groups expanded into related industries (synergic diversification strategies), acquired competing firms, incorporated complementary or subsidiary activities into their areas of expansion (specialization strategies with horizontal and vertical integration) or even speculated and acquired shares in leading firms and activities considered to be safe.

a) *Non-coherent strategies*

Defensive/speculative strategies are characterized by the management of a portfolio of real assets in firms among which there is little coherence. A salient feature of these strategies is the acquisition of shares in companies which are well-placed in their markets and are financially sound. Another frequent feature is the acquisition of companies whose main assets consist of mineral deposits or urban or rural properties, which act as a value reserve or as hot money.

The evaluation criteria applied when acquiring new companies do not take account of the potential competitive relations with other firms in the group. All that is demanded is that the acquisitions should be "good deals", that is to say, that they should correspond to assets with low relative cost, high liquidity, low risk and positive returns above a predetermined minimum.

According to the definition given by Dosi, Teece and Winter (1992, p. 201), this strategy is likely to lead to the formation of conglomerates: i.e., business structures which have a high degree of diversification but in which the synergies between activities are limited (low level of coherence), so that in a more selective environment (for example, one marked by recession and trade openness) these structures would tend to disappear, probably because of the need to defend a sectoral presence considered to be of greater importance.

b) *Coherent strategies*

In contrast with the above strategy, coherent strategies deliberately seek to exploit or increase established competitive advantages. Through acquisi-

tions or expansion, they seek to create synergies with the main firms in the group and to open up new areas of expansion.⁷ Although conglomerates have a wide range of expansion options, their strategies tend to show some common features and may be classified in four groups:

i) *Synergic diversification strategies.* These strategies are aimed at expanding and strengthening the group's presence in a given set of industries, and they seek to incorporate industrial segments or activities close to the main area of expansion of the group.

According to Chandler (1990, pp. 36-45), who classifies strategies as either offensive or defensive, synergic diversification strategies should be considered as offensive, because they seek to take advantage of the groups' production, technological, organizational, financial and commercial capacities to introduce new products and enter new markets. The greatest incentive for this type of expansion is the economies of scope that it offers. Idle capacity in the production structure due to declines in demand and/or discontinuities of scale is another element which, in combination with economies of scope, can facilitate access to new markets and products (Penrose, 1959).

In the opinion of Dosi, Teece and Winter (1992), synergic diversification is more common in companies or groups with strategic cores characterized by the accumulation of generic know-how. The capacity to generate new products and processes, to build and control distribution networks, to step-up production efficiency, etc. creates investment opportunities, since it fits the company or group to expand into new industrial segments. In such cases, coherently diversified business structures would be formed.

⁷ Hobson (1985, p. 151) describes the tactics of what might be termed a coherent strategy for a large corporation: A conglomerate must naturally seek, on the one hand, to control or take possession of the market for its main raw materials, and on the other, of the markets on which to sell its manufactured products (...). Furthermore, it generally seeks to control the main and subsidiary manufacturing processes (...) so as to ensure its self-sufficiency. Horizontal expansion is reflected partly in the development of new products and sub-products and partly in the incorporation of other types of products which would otherwise compete with the products manufactured by the conglomerate and thus limit its monopoly. Within this set of possibilities, it may be conjectured that some activities are more important than others: for example, those relating to control of raw materials and technology.

ii) *Specialization strategies*. These strategies seek to concentrate the group's activities in a well-defined area of expansion, and they do not necessarily represent strategies which are lacking in offensive qualities compared with synergic diversification strategies. Indeed, they may represent the consolidation of a firm's position in an important industrial activity. The pursuit of economies of scale, modernization and control of technology, the defence of competitive positions, and expansion into certain markets are motives which may contribute to the concentration of investments in certain industrial activities, leaving aside some others considered to be less profitable or less dynamic.

Chandler (1990, pp. 36-45) considers that both horizontal integration (specifically with the aim of controlling installed capacity) and vertical integration (aimed at exclusive control over strategic inputs) are generally defensive strategies. When horizontal integration is defensive, its aim is to protect existing investments by gaining greater control over production, prices and markets and thus limiting the possible intensification of competition in terms of price formation or technological aspects. He notes, however, that by exploiting economies of scale horizontal integration can generate significant reductions in operating and management costs and increase technological efficiency, thus possibly resulting in a more offensive approach.

Vertical integration may be connected solely with the establishment of barriers to the entry of new competitors (control over sources of raw materials or the supply of parts) or with increased control over demand (downstream vertical integration), both of which approaches are eminently defensive. On the other hand, however, vertical integration may reflect efforts to reduce operating costs, to improve quality, to increase the supply of inputs, etc., and in such cases it would represent a more offensive approach. Dosi, Teece and Winter (1992) state that vertically integrated companies and groups are more common in industries with limited technological capacity, very strong production linkages and specialized assets.

It will be noted that specialization strategies, like synergic diversification strategies, are conditioned by the technological base and the marketing area. In some cases, distinguishing between one and the other may be quite complex, because they are both conditioned by the same strategic core. Vertical and horizontal integration strategies may correspond both to

synergic diversification and to specialization. In these cases, investments in related activities (vertical integration, for example) would have diversifying effects when they lead to a relative reduction in the links between their expansion and the growth of the firms to which they were originally subordinated.

Previously, specialization was considered as a free option of a company or group, but it may also be seen as something imposed by circumstances. Inability to ensure a firm's competitive position in a wide variety of markets may lead to specialization and may also reduce diversification, whether the latter is synergic or not. There are factors such as intensive technological changes, the appearance of strong competitors, or an increase in scales of production which may demand investments beyond a group's financial capacity. In such cases, concentration would reflect the group's inability to compete in various industries simultaneously, regardless of the expansion opportunities that may have existed.

iii) *Intensive specialization strategies*. These strategies are aimed at the concentration of activities in a limited strategic core area and tend to reflect the centralization of activities around an industrial segment with just a few product lines or with very similar products. Generally speaking, intensive specialization corresponds to intra-sectoral concentration, whereas specialization corresponds to sectoral concentration. According to the classification prepared by Dosi, Teece and Winter, intensive specialization strategies tend to create specialized companies.

iv) *Diversification strategies*. Diversification strategies, in contrast with synergic diversification strategies, are aimed at entering markets and incorporating companies or activities which are not directly related with those already being operated by the group. Among the motivating elements for these strategies are the perception of persistent stagnation of demand, the availability of financial resources, and the existence of expanding markets and highly profitable opportunities in other industries.

The possibility of expanding into other unrelated activities is also conditioned by aspects connected with competition. Companies diversify into particular industries when they consider that they are capable of achieving competitive costs, winning clients, and keeping up with technological progress. A diversification strategy tends to be inter-industrial, whereas synergic diversification is closer to an intra-industrial form of investment.

According to the classification prepared by Dosi, Teece and Winter, diversification strategies contribute to the formation of conglomerates, since there is only a small degree of coherence among the different activities of the group. Unlike non-coherent strategies of a defensive/speculative nature, however, these strategies lead to a lasting sectoral presence

which would correspond to the creation of new expansion frontiers, and it would not be correct to assert that these strategies are motivated by primarily financial/speculative considerations. With the aid of this classification, we will seek in the following sections to make an appraisal of the restructuring strategies of a sample of Brazilian industrial groups.

IV

An analysis of the restructuring strategies of some Brazilian industrial groups

In order to analyse restructuring strategies, we prepared a sample of industrial groups made up of large corporations, excluding those which are not typically industrial or which are firmly located in construction or commerce. Another criterion in the selection of these groups was the availability of publicly available information (newspapers, magazines, reports, balance sheets, etc.) which would make it possible to trace the past development of the strategies. Bearing in mind these restrictions, 18 Brazilian industrial groups operating in different sectors were selected. Two more groups were selected which were largely foreign-owned: the Argentine group Bunge and Born, and the Belgian group Belgo-Mineira. These two groups were selected because they apply strategies which are largely conditioned by the Brazilian economic environment and because they further highlight the strategies of such typical Brazilian groups as Hering, Vicunha and Gerdau.

The sample covers a broad range of industrial activities, the most notable exception being the chemical industry. This industry was excluded because of the well-known complexity of its technical and production aspects, the marked overlapping of domestic (State and private) and foreign capital in it, and the far-reaching changes which are under way in connection with the privatization of State enterprises. Tables 1 and 2 summarize the restructuring processes in this sample of large corporations and industrial groups.

1. Business strategies in the 1980s

The restructuring of industrial groups in the 1980s was related with four general features which gave the

economy a special nature. First, there was the reigning economic instability, which led groups to acquire firms and assets to serve as a value reserve or as hot money. These strategies did little to strengthen comparative advantages or create new areas of expansion. The assets of almost all groups included companies in the fields of mining, real estate and reforestation, as well as shares in other industrial corporations. The Weg, Bunge and Born, Suzano, Vicunha and ABC-Algar groups are examples of this general behaviour characterizing a highly varied set of groups with different sectoral presences and competitive strategies.

The second feature—the recession and stagnation of the domestic market—mainly influenced the strategies aimed at market control. Financial power was of fundamental importance for acquiring existing firms and, in a few cases, installing new plants. The groups strengthened their competitive position by buying out their competitors and carrying out vertical integration either forward, thus seeking to control demand, or backwards, through the acquisition of suppliers of inputs (as was done, for example, by the Vicunha, Gerdau, Belgo-Mineira and Votorantim groups). Generally speaking, the aim was to acquire firms of strategic importance for control of the areas of expansion; less frequently, the aim was to diversify production lines by taking advantage of commercial or possibly technical synergies (as in the case of Sadia, Cofap and Metal Leve).

Export considerations were a third determining factor in restructuring strategies. The desire to obtain a place in the external market was a more or less important influence on all the industrial groups. Some of them (such as Caemi) gave up the produc-

TABLE 1

**Brazil: Profile of selected industrial groups
in 1980, 1989 and 1992**

Groups	1980	1989	1992
Machline	Electronics, including consumer goods Automation of services Finance Computers Telecommunications	Electronics, including consumer goods Automation of services Microelectronics Telecommunications (segment) Finance	Electronics, including consumer goods (segment) Automation of services (segment) Microelectronics (paralysed)
ABC-Algar	Agricultural activities Telephone services Commerce and services Real estate Tourism Cold storage (packing) plants	Agricultural activities Telephone services Telecommunications Computers Agroindustry (soya) Commerce and services Real estate Tourism	Agricultural activities Telephone services Telecommunications (segment) Agroindustry (soya) Cold storage (packing) plants (paralysed)
Docas	Finance Port services Telecommunications Agricultural activities Real estate	Finance Telecommunications Computers Peripherals Agricultural activities Real estate	Finance Agricultural activities Real estate
Gerdau	Iron and steel Commerce Reafforestation	Iron and steel Commerce Reafforestation Data processing services	Iron and steel Commerce Reafforestation Data processing services
Villares	Iron and steel Industrial machinery and equipment Heavy foundry work	Iron and steel Industrial machinery and equipment Industrial automation Heavy foundry work	Iron and steel Industrial machinery and equipment (segment)
Belgo-Mineira	Iron and steel Mining activities Reafforestation	Iron and steel Mining activities Reafforestation Metalworking	Iron and steel Mining activities Reafforestation Metalworking
Cofap	Motor vehicle parts	Motor vehicle parts Electronics	Motor vehicle parts Marine electronics
Metal Leve	Motor vehicle parts Industrial machinery and equipment Agroindustry (juices)	Motor vehicle parts Industrial machinery and equipment Industrial automation	Motor vehicle parts

Source: Ruiz (1994).

TABLE 2

Brazil: Profile of selected industrial groups in 1980, 1989 and 1992-1993

Groups	1980	1989	1992-1993
Weg	Electromechanics	Electromechanics Electronic components Industrial automation Chemical industry (dyes) Reafforestation Cold storage (packing) plants Foodstuffs (fisheries)	Electromechanics Electronic components Industrial automation Chemical industry (dyes) Reafforestation Cold storage (packing) plants Foodstuffs (fisheries)
Hering	Textiles and clothing Agroindustry (soya)	Textiles and clothing Agroindustry (soya) Cold storage (packing) plants Prepared meat products Vegetable oil products	Textiles and clothing Agroindustry (soya) Cold storage (packing) plants Prepared meat products Vegetable oil products
Bunge and Born	Textiles and clothing Flour milling Agroindustry (soya) Vegetable oil products Paints and varnishes Mining/chemical industry Mineral extraction Real estate Finance and insurance Computers Data processing services	Textiles and clothing Flour milling Agroindustry (soya) Vegetable oil products Paints and varnishes Mining/chemical industry Mineral extraction Real estate Cement	Textiles and clothing Flour milling Agroindustry (soya) Vegetable oil products Paints and varnishes Mining/chemical industry Mineral extraction Real estate (paralysed) Cement
Vicunha	Textiles Agricultural activities	Textiles and clothing Agricultural activities	Textiles and clothing Agricultural activities Iron and steel
Alpargatas	Textiles and clothing Footwear	Textiles and clothing Footwear	Textiles and clothing Footwear
Sadia	Agricultural activities Cold storage (packing) plants Flour milling Agroindustry (soya)	Agricultural activities Cold storage (packing) plants Flour milling Agroindustry (soya) Prepared meat products Vegetable oil products	Agricultural activities Cold storage (packing) plants Flour milling Agroindustry (soya) Prepared meat products Vegetable oil products Edible pasta industry
Perdigão	Agricultural activities Cold storage (packing) plants Flour milling	Agricultural activities Cold storage (packing) plants Flour milling Prepared meat products Agroindustry (soya)	Agricultural activities Cold storage (packing) plants Flour milling Prepared meat products Agroindustry (soya)
Votorantim	Cement Aluminium Metalworking Chemical industry Mining activities	Cement Aluminium Iron and steel Metalworking Chemical industry Mining activities Paper and paperboard	Cement Aluminium Iron and steel Metalworking Chemical industry Mining activities Paper and paperboard Agroindustry (juices)

Table 2 (concluded)

Klabin	Paper and paperboard Lumbering Reafforestation Ceramics	Paper and paperboard Lumbering Reafforestation	Paper and paperboard Lumbering Reafforestation
Suzano	Paper and paperboard Lumbering Reafforestation Petrochemicals	Paper and paperboard Lumbering Reafforestation Petrochemicals Others	Paper and paperboard Lumbering Reafforestation Petrochemicals
Caemi	Mining activities Iron and steel Wood pulp Paper Cold storage (packing) plants Agricultural activities Agroindustry	Mining activities Wood pulp Paper	Mining activities Wood pulp Iron and steel
Matarazzo	Edible pasta industry Vegetable oil products Plastics and plastic products Textiles Metalworking Cement Mining activities Paper and paperboard Chemical industry Sugar and alcohol Agricultural activities Commerce Real estate	Vegetable oil products Plastics and plastic products Mining activities Paper and paperboard Chemical industry Sugar and alcohol Agricultural activities Commerce Real estate	(...)

Source: Ruiz (1994).

tion of goods normally not tradeable on the external market. Others which relied largely on the domestic market (such as Cofap, Gerdau and Votorantim) invested in measures to secure a viable position in the external market.

The two above-mentioned market movements (external and internal) did not give rise to a radically export-oriented trend in the restructuring process. All the groups tried to enter the external market, but only a few set aside the domestic market in so doing (an important exception is Caemi). In the restructuring strategies, the domestic market was retained as a strategic area of expansion. Some groups with an important position on the international market (such as Sadia and Hering) took active measures to expand their position on the domestic market. For these groups, the chances of succeeding on that market were greater than those of achieving expansion on a competitive and unstable external market.

Technological change was the fourth determining factor in the restructuring processes of some industrial groups and large corporations (such as ABC, Sharp, Weg and Villares). Only a few, however, were capable of maintaining a strategy based exclusively on technological opportunities. Many strategies failed or were not carried through (as in the cases of Docas, Metal Leve and Villares), while others flagged and their viability was brought into question (for example, Sharp and Weg). The strategies which succeeded in the 1980s were those which were largely but not exclusively technological.

The groups which sought to strengthen their position in more traditional sectors (textiles, foodstuffs, iron and steel, etc.) increased their net worth, maintained their financial security, and some of them managed to enter the external market. At the same time, they strengthened their leading positions on the domestic market and increased their market power,

thus ensuring a better capacity to react to upsets. In various ways, established competitive advantages were reproduced, restricted areas of growth were created, and market concentration was increased. For many groups, this cautious strategy was responsible for their good performance in a period of uncertainty and instability (as for example in the cases of Belgo-Mineira and Votorantim).⁸

Another constant feature was the absence of links between the industrial structures and financial institutions. The closer links finally established between Brazilian industrial groups (such as Sharp, Bunge and Born and Vicunha) and financial institutions are nothing like the movements observed in some foreign countries, such as Japan. If the sample studied is representative of general behaviour, then the relations between the groups and the banks corresponded to a manner of maximizing the financial returns on idle monetary resources or working capital. They were not aimed at forming structures to back long-term investments.⁹

Although the separation between industrial and financial capital has existed for a long time past, the recessionary economic climate, fluctuating and rising interest rates, the increasingly short-term nature of the available finance, etc. tended to make it even more marked. The only exceptions to this were the groups which did not opt for cautious financial policies. In most cases, however, such policies were considered to be good management practice. Investment plans using the companies' own capital were considered to be better than those using capital from third parties. Indeed, those companies which did not follow this rule ran into serious financial problems, as in the cases of the ABC, Algar and Perdigão groups.

⁸ Although the sample studied is rather limited, it supports the hypothesis that in the 1980s there was a significant increase in industrial concentration (and especially economic concentration) in many segments of industry. As a result of the stagnation of the domestic market, the more progressive firms strengthened their positions still further, through the acquisition of "marginal" firms.

⁹ Cruz (1994) sums up the special nature of the financing arrangements for the Brazilian economy. With regard to national capital finance, he observes that there continues to be only limited access to (domestic or external) long-term finance which would permit the expansion of investments beyond the limits of companies' own funds. Similarly, other authors have noted that this is one of the main problems impeding the recovery of growth by the Latin American economies.

To sum up, then, it may be asserted that the groups used strategies characterized by investment and the acquisition of companies which would give them greater power in the markets of the industrial core segments seen as strategic, and there was a predominance of coherent strategies, especially those based on specialization, supplemented by synergic diversification (table 3).

In spite of the stagnation of some markets and the severe economic instability, there was not much diversification into activities that did not have many links with the areas of expansion, nor was there much acquisition of activities which seemed to be "good deals": few companies were guided by purely speculative strategies.

The prevailing economic instability must not be overlooked, however, as an incentive for the acquisition of other firms. As the severe instability made basic parameters of capitalist calculations (expected income and profits, interest rates, exchange rates, etc.) very volatile, it may have helped to intensify divergences in the evaluation of the expected return on assets, thus encouraging the consideration of possible acquisitions. However, the process continued to be conditioned by the sectoral position of the groups and the complex logic of industrial competition.¹⁰

2. Business strategies in the early 1990s

Unlike what happened in the 1980s, when the restructuring of the industrial groups was characterized by specialization strategies combined with synergic diversification, in the early 1990s the strategies were characterized by sectoral specialization supplemented with (intrasectoral) intensive specialization (see table 3).

Many strategies were reviewed when the economic changes of the early 1990s took place. Because of the severe recession, the groups postponed their expansion plans and disposed of their non-strategic assets, especially those of a speculative nature (this was done, for example, by Weg, Bunge and Born and

¹⁰ It should be noted that the difference between prices of assets is not a specific feature of a period of high instability. There are many differences between firms in the same industry which give rise to differing appraisals of asset prices, even in periods of relative economic stability.

TABLE 3

Brazil: Strategies of the selected industrial groups

Groups	1980-1989	1989-1992/1993
Machline	Synergic diversification	Intensive specialization
ABC-Algar	Synergic diversification and speculation	Intensive specialization
Docas	Synergic and speculative diversification	Intensive specialization
Gerdau	Specialization	Specialization
Villares	Synergic diversification	Intensive specialization
Belgo-Mineira	Synergic diversification	Synergic diversification
Cofap	Synergic diversification	Specialization
Metal Leve	Synergic diversification	Specialization
Weg	Synergic and speculative diversification	Specialization
Hering	Synergic diversification	Synergic diversification
Bunge and Born	Synergic and speculative diversification	Intensive specialization
Vicunha	Specialization	Diversification
Alpargatas	Specialization	Intensive specialization
Sadia	Synergic diversification	Synergic diversification
Perdigão	Synergic diversification	Specialization
Votorantim	Specialization and diversification (in the late 1980s)	Diversification
Klabin	Specialization	Specialization
Suzano	Specialization	Diversification
Caemi	Intensive specialization	Specialization
Matarazzo	Speculative diversification	(bankrupt)

Source: Prepared by the author.

ABC-Algar). In a second phase, they decided to reduce the degree of diversification of their industrial structures (as in the case of Bunge and Born, Villares and Metal Leve, for example). Finally, within their strategic expansion areas, they decided to paralyse, scrap or sell off their least efficient industrial plants, or those which had high levels of idle capacity (Perdigão, Villares and Bunge and Born).

The recession also encouraged restructuring processes giving priority to a greater external presence (as for example in the cases of Villares, Caemi and Votorantim). The drop in domestic demand caused several groups to reduce their operations aimed at that market, and although this situation had prevailed during the whole of the 1980s, it got worse in the period 1990-1993.

When the government discarded sectoral industrial policies and there was a big increase in trade openness, diversification into technology-intensive industries was largely abandoned (as for example by Villares, ABC-Algar and Docas). As there was no ac-

tive State protection, the heavy external competition and the recession were sufficient to cause firms to put off their plans to enter new industrial sectors, preferring instead to operate in the sectors considered to be most stable. Ultimately, all this acted as a stimulus for the application of strategies involving specialization in sectors where the firms felt they had solid competitive advantages.

The differences between the two periods (1980-1989 and 1990-1993) stand out more clearly if we compare the years in which there was a recession. In 1981-1983, the groups opted to adjust their production structures through changes in production levels, reduction of financial costs, and expansion of exports. The recession was considered to be only temporary, and the pressures arising from competition, technological innovations and new producers (especially from abroad) were not seen as a threat to the strategies and industrial structures built up in the 1970s. The industrial policy adopted at that time protected domestic production from outside competition

and opened up room for expansion, especially of technology-intensive activities. Thus, for example, even during the recession many groups pressed on with intensive policies of acquisition and expansion (as in the cases, for example, of Perdigão, Vicunha, Gerdau, Belgo-Mineira, Klabin, Metal Leve, ABC-Algar, Sharp and Docas).

In the early 1990s, however, the economic climate was seen in a different light. The prevailing restrictions obliged the groups to make a fresh adjustment and reduce their levels of production, together with a redefinition of their areas of expansion. Thus, not only was there an adjustment like that which took place in the 1981-1983 period, but there was also a redefinition of structures involving the exclusion of firms which were technology-intensive but not export-oriented and the dismantling of plants which were inefficient or marginal (this took place, for example, in the cases of the Sharp, Sadia, ABC-Algar, Bunge and Born, Villares and Caemi groups). It is these features which differentiate the restructuring processes of the groups in the early 1990s¹¹ from those applied in the 1980s.

3. Offensive, conservative and defensive strategies

One of the aspects giving a particular character to the strategies of the groups studied was the way they reacted to instability and uncertainty. Some groups dared to tackle the adverse economic environment head-on and quickly invested in the expansion of their industrial base. Others took a defensive attitude and virtually stagnated, while many others applied conservative strategies.

An example of an offensive strategy was that applied by the Perdigão group, which applied rather daring financial policies in the 1980s and maintained a high level of indebtedness, although the economic environment counselled a more cautious approach. In the early 1990s the group was decapitalized, with investments which were coming to an end, and it could not withstand the recession.

¹¹ Tavares (1993, p. 23) considers that when the big corporations felt themselves to be threatened by the recession and the prospect of reductions in exchange-rate and tariff protection, they reacted by trying for the first time to effect a microeconomic adjustment which, while confirming the recession and unemployment, sought to achieve modernization in order to be able to keep on competing in international markets.

The behaviour of the Docas and Sharp groups was another example of offensive strategies. They expanded into technology-intensive sectors requiring large and recurrent investments, so that they had to apply a more daring financial policy. On account of the economic changes which took place in the early 1990s, a large part of the activities of these groups were sold or paralysed.

The approaches adopted by the Hering and Cofap groups are examples of offensive strategies as regards investments (and also technology in the latter case), although they acted more cautiously as regards indebtedness. Their financial policy was more in keeping with an economic environment marked by uncertainty, and this enabled them to withstand economic upsets.

The strategy of the Belgo-Mineira group reflects a coherent defensive policy marked by low indebtedness, investments made with the group's own capital, and partial modernization of the production base. Under this policy, the group kept its production capacity unchanged, vertically integrated its production, and did not try to take measures to affect the competition in its market or to invest in other segments. This was a defensive strategy adopted until the conditions for investment improved.

The Votorantim group applied a similar strategy in the 1980-1987 period, reducing its indebtedness and investing only with its own capital in mutually related activities. Only at the end of the 1980s did the group expand its investments. The selected sectors—pulp and paper and citrus juices—had already become internationally competitive. This may be considered a rather conservative strategy.

The approaches adopted by the Vicunha and Gerdau groups are examples of conservative strategies. Both of them combined expansion of the production base with their internal accumulation capacity, the issue of shares and carefully managed indebtedness, managed to consolidate their position in their main market segments, and stood up to adverse movements of the economy. These were suitable strategies for a period marked by uncertain economic conditions.

It is considered that, out of these three types of strategies, the conservative strategy was the one most widely adopted by the Brazilian industrial groups as a whole. During the period under consideration, few groups completely paralysed their areas of expansion, and likewise only a few took the risk of going against

the prevailing trends in the economic environment and expanding their investments with third-party capital in non-conventional or technology-intensive areas. The sectoral industrial policies were an important element behind these "offensive strategies".

Most of the groups invested in the purchase of competing firms and in activities which were complementary, subsidiary and quite closely linked to their strategic core areas. When they invested outside their own area of expansion, they opted for industries which were more firmly established from the technological point of view, with external competitiveness already clearly established and, as far as possible, guaranteed by natural factor endowment and/or by intensive use of cheap unskilled labour (the Vicunha and Votorantim groups, for example).

Although there were some exceptions, this set of elements gives grounds for classifying the strategies of the Brazilian groups as predominantly conservative, since they invested in keeping with their strategic core areas, up to the limits imposed by their internal accumulation capacity and a safe level of indebtedness.

V

Winning business structures and development

The (re)structuring of the Brazilian industrial groups which took place in the 1980s and above all in the early 1990s further increased the profound differences between the structures of those groups and winning business structures such as those of the *keiretsu* and the *chaebol*. One of the features of the latter forms of business organization and of many transnational corporations is that their strategies link forms of industrial insertion which spread new technologies with others which absorb technology.

The dismantling of active industrial policies in Brazil (and the failure to reformulate them), especially in the case of policies relating to new technologies, has led to a reversal of the timid movements towards the internalization of a core of technology which had taken place in some Brazilian groups. This has jeopardized the possible dynamic stimuli that could exist between mature industrial structures and new industries making intensive use of technology.

The general conclusion that may be drawn from this analysis of the restructuring processes of this sample of industrial groups is that the behaviour of the Brazilian industrial groups can be most accurately described as consisting of coherent strategies based on synergic considerations, diversification, specialization, and intensive specialization. In other words, the fundamental feature was the relation between the sectoral structures of the groups, the acquisition and sale of assets, diversification and specialization, and the strengthening (and defence) of their strategic activities. The major Brazilian private firms increased their degree of industrial coherence, since they defended and strengthened their position in industry while not neglecting opportunities for synergic investments. Within this industrial coherence, however, there is still a missing conditioning element, namely, the technological vector. In their restructuring process of the early 1990s, the industrial groups left out those areas of expansion related to the new technologies, which are important elements in the industrial strategies applied by the industrial groups seen as winners.¹²

A second feature of the "winning" strategies is the financing of investments with long lead times by a banking core linked up with the industrial strategies. In the case of the Brazilian groups, the links between the financial and industrial spheres, when they existed, only served to permit quick returns on financial resources, without resulting in the establishment of broad and stable investment finance funds. Investments continued to depend on the internal accumulation of resources.

Regardless of the differences in size and sectoral presence (table 4), the most disturbing feature is the

¹² Fanelli and Frenkel (1995) detected similar movements in other Latin American economies. The strategies which we have termed defensive, conservative and offensive may be considered, in that order, as strategies with decreasing degrees of flexibility. In the case of Brazil, decisions to adopt strategies with a high degree of flexibility were common, but not as common as in other Latin American countries.

TABLE 4

Brazil and South Korea: Sales by economic groups, 1980-1993
(Millions of current dollars)

Company	1980	1983	1985	1988	1990	1992	1993	Main activity
South Korea								
Samsung	3 798	7 167	14 193	27 386	45 042	49 560	51 345	Electronics
Daewoo	...	6 313	8 698	17 251	22 260	28 334	30 893	Electronics
Sunkyong	1 449	...	6 437	7 723	10 694	14 530	15 912	Petrochemicals
Ssangyong	1 708	3 257	3 689	6 021	8 069	14 610	14 479	Petrochemicals
Hyundai	5 540	9 300	14 025	8 250	12 811	8 606	9 204	Transport equipment
Hyosung	1 950	2 107	2 390	4 183	5 263	6 335	6 332	Textiles
Goldstar	...	...	...	...	4 253	4 917	5 366	Electronics
Honam Oil	...	...	...	2 867	3 512	4 021	4 267	Petrochemicals
Brazil								
Votorantim	1 098	960	1 081	1 825	1 769	2 098	2 798	Various ^a
Ipiranga	1 843	1 519	...	2 018	2 220	2 090	2 121	Petrochemicals
Hering	424	538	938	885	1 851	1 511	1 637	Textiles/foodstuffs
Sadia	426	667	832	1 190	1 440	1 491	1 514	Foodstuffs
Gerda	519	397	630	2 161	1 033	1 150	1 494	Metalworking
Machline	246	285	235	659	844	...	1 040	Electronics
Vicunha	174	249	383	534	762	799	904	Textiles
Belgo-Mineira	...	...	...	700	786	858	767	Metalworking
Antártica	301	313	308	437	753	670	785	Beverages
Brahma	501	419	461	620	1 177	670	...	Beverages
Klabin	275	262	421	744	718	1 623	606	Paper and pulp
Perdigão	186	253	318	382	569	...	594	Foodstuffs
Suzano	241	173	217	473	428	485	582	Paper and pulp
Cofap	142	124	208	437	567	845	548	Motor vehicle parts
Villares	388	490	388	790	756	689	516	Metalworking
Itamarati	...	403	523	995	856	573	...	Agricultural activities
Ultra	278	210	105	404	439	356	476	Petrochemicals
Caemi	714	498	560	879	322	...	431	Mining/iron and steel
Alpargatas	514	419	501	762	992	...	406	Textiles/footwear
Paranapanema	81	148	406	506	234	308	343	Mining
Metal Leve	120	99	172	335	365	278	339	Motor vehicle parts
Dedini	185	182	218	260	230	282	338	Mechanical engineering/ metalworking
ABC-Algar	87	105	139	276	328	288	327	Telecommunications/ foodstuffs
Weg	65	45	92	173	200	168	181	Electromechanical products

Source: Prepared by the author on the basis of information published in *Fortune* (Time, Inc., New York) in 1981, 1984, 1986, 1989, 1991, 1993 and 1994 and in *Balanço Anual* (Jornal Gazeta Mercantil, São Paulo, Brazil) in the same years.

^a Non-metallic minerals, paper and pulp, metalworking, chemical industry and foodstuffs.

long-term performance of the Brazilian groups compared with that of the winning business structures. These differences increased still further in the 1990s, since the strategies seeking to achieve technological synergies were abandoned, there was an increase in sectoral specialization in mature industries, and the distance separating industry from the financial system grew still wider. The rapid increase in the presence of Brazilian industry on the domestic market, though a sought-for objective, strengthened

existing competitive advantages to the detriment of the establishment of new forms of insertion connected with new markets, products and processes.

This type of restructuring also heightened other features of Brazilian capitalism, such as the preference for concentrating on sectors which make intensive use of natural and energy resources, which are marked by the production of standardized goods with conventional technology and static economies of scale, and which take advantage of ecological

dumping and the use of cheap unskilled labour (Fajnzylber, 1990; Canuto, 1994).

If, for example, we consider the evolution of the industrial structures of the seven largest developed countries (Canada, France, Germany, Italy, Japan, the United Kingdom and the United States) over the period 1985-1989 and we group the industrial sectors by their degree of dynamism, we obtain the order given in table 5.¹³

If we look at the sectors classified as "dynamic" or "very dynamic", we see that the restructuring of the Brazilian industrial groups in the early 1990s left out a number of important activities belonging to those sectors, especially those connected with electronics and electromechanics. In these industries which have high growth rates and make intensive use of research and development, there was an increase in the presence of foreign capital, which, although not occupying majority or leading positions, reached significant levels.¹⁴

There are some exceptions to this, however. The State still has a leading share in the telecommunications segment, and although the petrochemicals industry is not dealt with in this article, private and public Brazilian capital still have a major share in it.

Only a few of the groups analysed in this article (the Cofap and Weg groups, for example) have maintained a coherent presence in dynamic technology-intensive activities. Most of them (such as ABC-Algar, Docas, Machline and Villares) have abandoned these activities or applied more conservative strategies in this respect. Among the groups which maintained a presence in dynamic sectors, mention may be made of Votorantim, Klabin, Suzano and Caemi. These groups were in the pulp and paper industry: an activity which makes intensive use of natural resources and whose limited capacity for innovation and the spread of new products and pro-

¹³ The order of industrial sectors in terms of their dynamism was obtained by combining the following criteria with equal weights: growth in added value at current and constant prices (base: 1985=100), variation in prices, and contribution to growth. This latter element was obtained by taking the growth in added value, weighted by the share of the sector in the industrial structure in the base year, and dividing it by the growth in total industrial added value, likewise at current and constant prices.

¹⁴ For more details on the growing presence of foreign capital in the industrial structures of Brazil and other Latin American countries, see Bielschowsky (1994), Bielschowsky and Stumpo (1995) and Di Filippa (1995).

TABLE 5

**Most highly developed countries:
Level of dynamism of their
Industrial sectors**

Level of dynamism	Industrial sectors
Very dynamic	Transport equipment Electrical machinery Other chemical products Other metallic and non-metallic products Chemical products Non-electrical machinery Paper and paper products
Dynamic	Printing and publishing Plastic products Metal products Glass and glass products Professional and scientific equipment Rubber products Petroleum refining
Sluggish	Food products Ceramic products Miscellaneous chemical products Other industrial manufactures Iron and steel Beverages Textiles
Stagnating	Non-ferrous metals Clothing Tobacco and tobacco products Wood and wood products Footwear Furniture and fittings Leather and leather products

Source: Ruiz (1994), on the basis of UNIDO, 1991 and 1992.

cesses considerably restricts its future growth prospects, as may be seen from the crisis suffered by the sector in the 1990-1993 period.

Most of the Brazilian groups will tend to concentrate on sluggishly growing activities such as foodstuffs and beverages, ferrous metals, textiles and clothing, and non-ferrous metals. Within the foodstuffs sector, significant growth rates have been displayed by some industries (soya beans and soya products, meat and poultry, concentrated juices) which make intensive use of natural resources and involve little industrial processing.

In the light of the strategies of the industrial groups described in the preceding paragraphs, it may be asserted that Brazil's historical status as an under-

developed peripheral nation has been reaffirmed by the neoliberal-type policies implemented in the early 1990s. The restructuring of the domestic groups has been directed towards the occupation of a subordinate place in both the national and international economy. Responsibility for establishing the structures of the new industries which are stimulating the world economy (and will continue to do so in the future) and are shaping a new international division of labour, such as those in the electronics, electromechanical and transport equipment sectors, has been placed in the hands of foreign-owned enterprises (Laplane, 1992).

Thus, the apparent optimism implicit in asserting the coherent nature of the restructuring processes must not blind us to the fact that the expansion of the domestic groups will continue to depend largely on the behaviour of other agents, whether they be the State or the transnational corporations, or, more precisely, on the position that the branches of foreign firms installed in Brazil occupy in the global strategies of their parent corporations.

With regard to this latter aspect, an analogy should be made with the theory formulated by Schumpeter in 1912. In his model, there are two types of individuals (or types of conduct): managers and entrepreneurs. The former are merely responsible

for keeping up the economic routine (the "circular flow"). The entrepreneurs, however, innovate, create new products, think up new ways of producing goods: they are the central agents in new economic development. We must ask ourselves, then: are Brazilian businessmen mere managers or timid entrepreneurs? Are the foreign businessmen reluctant entrepreneurs? Has the State turned out to be an unsuccessful innovator? If so, then who is to act as a dynamic entrepreneur in the Brazilian economy?

As the industrial groups analysed here are representative of the general behaviour of Brazilian business interests, some further questions arise: What are the frontiers of expansion that the Brazilian groups have in mind, in the light of their concentration in industrial sectors considered to be "mature"? What groups could still take a less passive place in the national and international economy? Or perhaps, to phrase this better: What are the possible links between national capital and the many forms of foreign capital? Are there Brazilian groups that could collaborate in a more equitable growth pattern? There are no hard and fast answers to these questions, so that the debate—and the impasse—over the future growth path of the Brazilian economy remains as active as ever.

(Original: Portuguese)

Bibliography

- Almeida, J.S., C. Kawall and L.F. Novais (1990): *O ajuste da grande empresa privada nos anos 80*, Campinas, Brazil, Instituto de Pesquisas Tecnológicas/Fundação Economia de Campinas/Universidade Estadual de Campinas (IPT/FECAMP/UNICAMP), Institute of Economics, mimeo.
- Bielschowsky, R. (1994): *Two studies on transnational corporations in the Brazilian manufacturing sector: the 1980s and early 1990s*, "Desarrollo Productivo" series, No. 18, LC/G.1842, Santiago, Chile, Economic Commission for Latin America and the Caribbean (ECLAC).
- Bielschowsky, R. and G. Stumpo (1995): Transnational corporations and structural changes in industry in Argentina, Brazil, Chile and Mexico, *CEPAL Review*, No. 55, LC/G.1858-P, Santiago, Chile, ECLAC.
- Chandler, A. D. (1990): Introduction, *Scale and Scope: The Dynamics of Industrial Capitalism*, London, The Belknap Press of Harvard University Press.
- Canuto, O. (1994): Abertura comercial, estrutura produtiva e crescimento econômico na América Latina, *Economia e sociedade*, No. 3, Campinas, Brazil, UNICAMP, Institute of Economics, December.
- Coutinho, L. G. (1990): *Desenvolvimento tecnológico da indústria e a constituição de um sistema nacional de inovação no Brasil*, Campinas, Brazil, IPT/FECAMP/UNICAMP, Institute of Economics, summary, mimeo.
- (1991): A fragilidade da proposta neoliberal em face do anacronismo da estrutura empresarial brasileira, *Brasil em mudança. Fórum nacional*, São Paulo, Brazil, Editora Nobel.
- (1992): A terceira revolução industrial, *Economia e sociedade*, No. 1, Campinas, Brazil, UNICAMP, Institute of Economics.
- Cruz, P.R.D.C. (1994): Notas sobre o financiamento de longo prazo na economia brasileira, *Economia e sociedade*, No. 3, Campinas, Brazil, UNICAMP, Institute of Economics, December.

- Di Filippo, A. (1995): Transnationalization and integration of production in Latin America, *CEPAL Review*, No. 57, LC/G.1891-P, Santiago, Chile, ECLAC.
- Dosi, G. (1988): Sources, procedures and microeconomic effects of innovation, *Journal of Economic Literature*, vol. XXVI, No. 3, Nashville, TN, American Economic Association, September.
- Dosi, G., D. J. Teece and S. Winter (1992): Toward a theory of corporate coherence: Preliminary remarks, in G. Dosi, R. Giannetti and P. A. Toninelli, *Technology and Enterprise in a Historical Perspective*, Oxford, U. K., Clarendon Press.
- Fajnzylber, F. (1990): *Industrialization in Latin America: From the "Black Box" to the "Empty Box"*, "Cuadernos de la CEPAL" series, No. 60, LC/G.1534-P, United Nations publication, Sales No. E.89.II.G.5, Santiago, Chile, ECLAC.
- Fanelli, J. M. and R. Frenkel (1995): Stability and structure: interactions in economic growth, *CEPAL Review*, No. 56, LC/G.1874-P, Santiago, Chile, ECLAC.
- Hobson, J. A. (1985): *A evolução do capitalismo moderno. Um estudo da produção mecanizada*, São Paulo, Brazil, Editora Abril Cultural.
- Laplaine, M. F. (1992): *O complexo eletrônico na dinâmica industrial dos anos 80*, Campinas, Brazil, UNICAMP, Institute of Economics, doctoral thesis, mimeo.
- OECD (Organization for Economic Cooperation and Development) (1992): *Technology and the Economy. The Key Relationship. The Technology/Economy Programme*, Paris.
- Penrose, E. T. (1959): *The Theory of the Growth of the Firm*, New York, John Wiley & Sons, Inc.
- Pondé, J. L. (1993): *Coordenação e aprendizado: elementos para uma teoria das inovações institucionais nas firmas a nos mercados*, Campinas, Brazil, UNICAMP, Institute of Economics, master's thesis, mimeo.
- Queiroz, M. V. (1972): *Grupos econômicos e o modelo brasileiro*, São Paulo, University of São Paulo (USP), Faculty of Philosophy, Letters and Human Sciences, Department of Social Sciences, doctoral thesis, mimeo.
- Ruiz, R. M. (1994): *Estratégia empresarial e reestruturação industrial (1980-1992): um estudo de grupos econômicos selecionados*, Campinas, Brazil, UNICAMP, Institute of Economics, master's thesis, mimeo.
- Steindl, J. (1983): *Maturidade e estagnação no capitalismo americano*, São Paulo, Brazil, Editora Abril Cultural.
- Tavares, M. C. (1972): *Da substituição de importações ao capitalismo financeiro*, Rio de Janeiro, Brazil, Editora Zahar.
- (1993): *As políticas de ajuste no Brasil: os limites da resistência*, Textos para discussão, No. 9, São Paulo, Brazil, Fundação do Desenvolvimento Administrativo/Instituto de Economia do Setor Público (FUNDAP/IESP), August.
- Torres, E. (1991): *A economia política do Japão. Reestruturação econômica e seus impactos sobre as relações nipo-brasileiras (1973-1990)*, Rio de Janeiro, Brazil, Federal University of Rio de Janeiro, Institute of International Studies, doctoral thesis, mimeo.
- UNIDO (United Nations Industrial Development Organization) (1991): *Industry and Development. Global Report*, New York.
- (1992): *Industry and Development. Global Report*, New York.
- Very, P. (1993): Success in diversification: Building on core competences, *Long Range Planning*, vol. 26, No. 5, London, Society of Long Range Planning, Ltd.

Restructuring of production *and territorial change:* a second industrialization *hub in Northern Mexico*

Tito Alegría
Jorge Carrillo
Jorge Alonso Estrada

*Researchers,
El Colegio de la
Frontera Norte,
Tijuana, Mexico.*

This article takes the view that the restructuring of industry in Mexico is taking place in two different territorial environments which, to some extent, have independent development paths: on the one hand, there is the territorial environment shaped in accordance with the logic of northern border industrialization, while on the other hand there is the territorial environment of the industries set up during the import substitution industrialization phase, concentrated in the metropolitan areas of Central Mexico. In the authors' opinion, these are parallel but different industrialization paths, with different processes and forms of social organization of production in their territories: consequently, in order to understand the true significance of the restructuring of production it is necessary to study the logic of the industrial sectors and that of the territory simultaneously, since the course of events with regard to industrial restructuring is strongly affected by regional and local dynamics. Hence, it is necessary to establish a profile of the way the various forms of restructuring are processed and take place at this level. After an introduction in which these items are set forth (section I), the article goes on to analyse the recent evolution of industry, in order to gauge the correctness of the argument that the dynamic growth nucleus is shifting to the North (section II); the notion of the functional-territorial hub is discussed in order to be able to interpret the dynamics described in the previous section (section III), and the northern border hub is defined in terms of two aspects of its social organization which differentiate it strongly from the central hub: the role of regional economic groups, and the characteristics of the regional labour markets.

I

Introduction

The shift of Mexico's industrial growth from the metropolitan areas of Central Mexico to the cities of the north has been described in some studies as one of the most notable aspects of the reorganization of the Mexican economy. This "northernization" of the country's industrial development has been described in terms of various indicators which highlight the relocation and reorganization of key sectors (motor industry, electronics, etc.), changes in the dynamics and structure of the labour force (De Oliveira and García, 1993), substantive changes in labour relations associated with relocation (De la Garza, 1993), or structural changes in assembly-type border industrialization and an increase in the relative weight of this type of activity (González-Aréchiga, 1988; Carrillo, 1989).

In spite of the accuracy of these indicators and the diligence of those who have used them, interpretations of the significance of this process range from mistrust to exaggerated enthusiasm. On the one hand, there are those who view the process very favourably and see in the type of industrialization which has occurred in northern and border areas a kind of harbinger of future national success in a context of greater economic openness, thanks to greater competitiveness and the introduction of advanced practices and technology. On the other hand, there are quite a few analysts who argue that the new type of northern industrialization only offers precarious wages and working conditions, increases ecological risks, represents a scandalous subjugation of the country's development to the needs of the transnational corporations, and is thus a foretaste of a curse which will spread to the rest of Mexico when the economic reforms and the North American Free Trade Agreement (NAFTA) finally take off.

These are the terms –expressed surreptitiously, subtly or quite openly– in which the regional aspects of the industrial restructuring of Mexico have been described. Quite apart from the degree of truth of these interpretations, it is obvious that this restructuring is taking place within a framework of options which have not yet revealed their full implications. It is open to doubt, for example (because there is concrete evidence in this respect), that the border industrialization is tending to put wages and working conditions on a more precarious basis (Carrillo, coord., 1993), but if we look a little more closely at the features of the northern industrialization process it becomes clear that the idea that this process can be extended to the other industrial areas of the country is excessively bold. As the industrial restructuring of Mexico has already provided a wealth of experience and empirical data, it allows us to weigh up fallacies like this and put forward some soundly-based views regarding the current course of the process.

This is precisely what this article seeks to do, in presenting an interpretation based on an analysis of the features of industrialization in northern Mexico. On the basis of the studies made in recent years, our argument is that the industrial restructuring of Mexico is taking place in two different territorial spaces which, to some extent, have independent development paths. The first of these spaces, consisting of the metropolitan areas of central Mexico, is that which contains the industries set up in the import substitution phase; the second is the area shaped in accordance with northern border industrialization (which is not necessarily confined exclusively to the border areas).

Our thesis questions the interpretations of the territorial impact of the restructuring process which see this reorganization as a unitary process tending towards either polarization or convergence. We believe that in reality we are dealing with parallel but different industrialization paths, with different processes and forms of social organization of production in their respective areas. We also seek to show up the error of interpreting the restructuring process from the standpoint of a single industrial sector or branch,

□ A preliminary version of this study was presented at the International Seminar on Territorial Impacts of Restructuring Processes, organized by the Institute of Urban Studies of the Catholic University of Chile (Santiago, Chile, 12-14 July 1995).

neglecting the socio-spatial aspects of the process. On the contrary, the development paths historically associated with each area largely explain the nature and evolution of the two industrialization axes that mark the Mexican industrial restructuring process.

Our approach is therefore based on the methodological assumption that in order to understand the real meaning of the production restructuring process it is necessary to study the logic of the industrial sectors and of the territorial areas simultaneously. First, we will look at some statistical data on recent industrial development in order to evaluate the extent

of applicability of the theory on the "northernization" of the dynamic growth core. We will then analyse the notion of the functional-territorial hub, in order to propose criteria for interpreting the significance of the process in question. Finally, we will describe the northern border hub in terms of two aspects of its social organization which radically distinguish it from the central hub: the role of its economic groups, and the characteristics of its labour markets. In dealing with both of these aspects, we will use the concepts of mesoeconomic regulation and micro-economic regulation.

II

Territorial patterns in the configuration of the new dynamic centres of Mexican industrialization

The first task to be faced in dealing with the "northernization" of the new Mexican industrialization process is to assess the magnitude of this phenomenon, since few efforts have yet been made to gain a broad empirical knowledge of the scope of recent northern border industrialization. In this section, we will present the results of a modest but revealing effort in this respect, using data on industrial employment taken from the 1980 and 1993 economic censuses (INEGI, 1983 and 1995). The dates of these censuses are important because they correspond approximately to two high points in the national economic cycle: 1980 and 1993. The first of these corresponds to the high part of the cycle immediately preceding the intensification of the restructuring process begun with the 1982 crisis, while the second is just before the high point of the cycle which ended with the December 1994 financial crisis. Although this information does not cover all the details of a process which has been quite dynamic, it nevertheless provides some useful indicators.

In order to define what we have called the dynamic core of industrialization, that is to say, the classes of industrial production responsible for the absolute increase in industrial employment between 1980 and 1993, we identified in the four-digit Mexican classification the branches which most increased

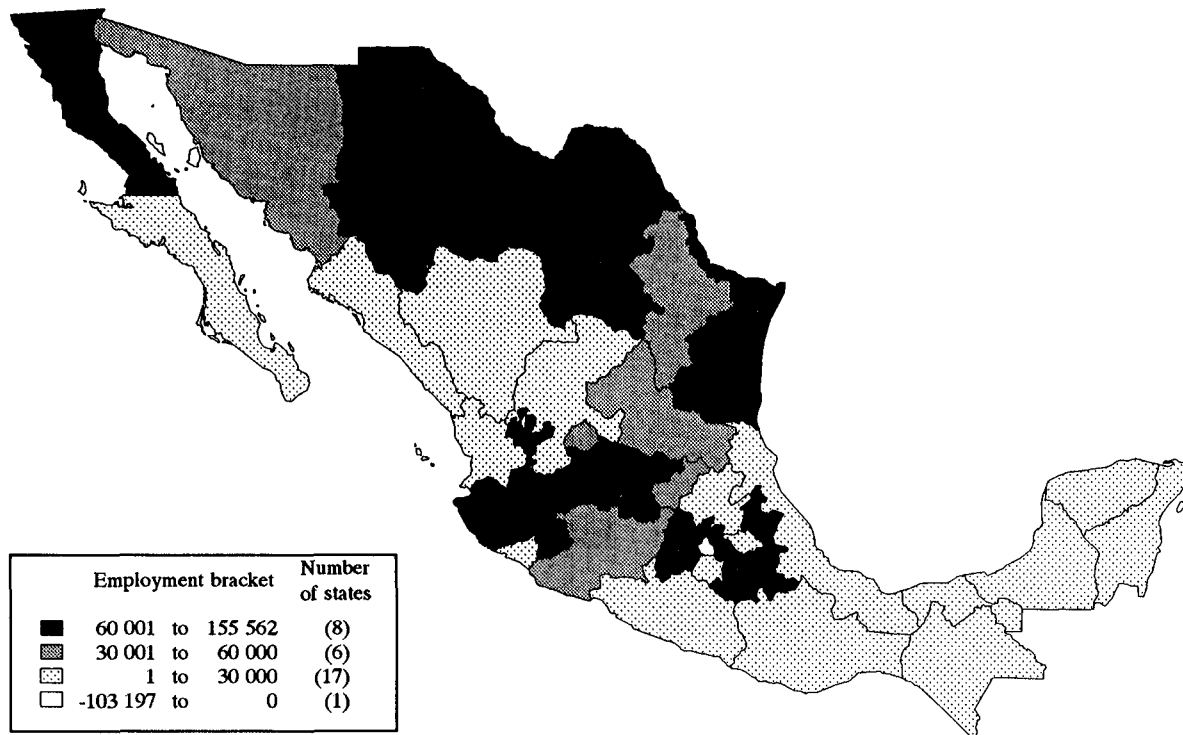
industrial employment between those dates. Altogether, the branches which increased employment in absolute terms accounted for 1,130,140 jobs. The dynamic core consists of the ten branches which increased employment most and are responsible for 57% of the absolute difference between industrial employment in 1980 and in 1993. The electrical machinery and equipment branch (3831) was the most dynamic, generating 10.4% of that difference. The absolute loss of jobs in the branches whose shares declined amounted to 85,206 jobs, with over half of that figure corresponding to basic iron and steel industries (43,347 jobs). It is interesting to note that in the entire four-digit industrial classification only these ten branches suffered a decline; the others improved their shares.¹

After having thus defined the dynamic core of the industrial restructuring process, we turned our attention to determining the territorial pattern of this

¹ It is important to note that this type of analysis leaves out the effect of the relative weights of the various branches but highlights their share in growth. Nevertheless, we only detected one branch which lost ground although it had substantial relative weight in both periods: namely, soft-fibre yarns and fabrics (branch 3212), which accounted for 5.3% of total industrial employment (with 112,812 jobs) in 1980 but, due to its poor performance, only accounted for 3.6% (with 115,788 jobs) in 1993.

MAP 1

Mexico: New Industrial employment, by states, 1980-1993



dynamism. Map 1 shows the distribution of the absolute growth in industrial employment between 1980 and 1993, by states. The first thing that strikes us in this map is that there are two main geographic areas of growth: the northern states associated with the growth of assembly industries and new export activities, and the states in central Mexico historically associated with industrial growth based on the old import substitution model and now subjected to an intensive restructuring process in the light of the new export-oriented model involving greater trade openness. It may be noted that between 1980 and 1993 the northern and border states (excluding Nuevo León, which although a northern state has been historically and functionally associated with the import-substitution growth pattern) generated 39.3% of new industrial employment.

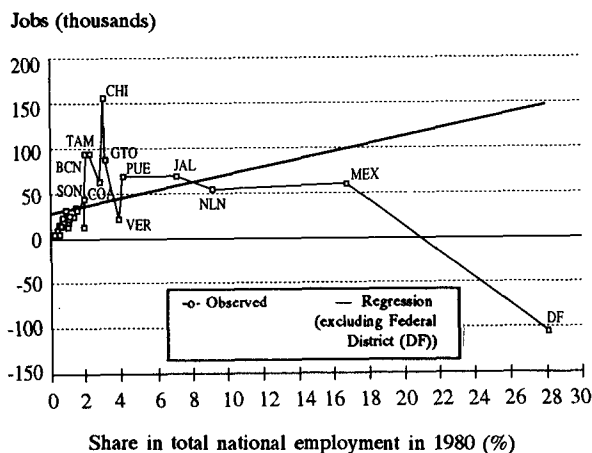
It may be gathered from these data that although relative growth has been significantly greater in the northern states, nevertheless in the traditional industrial growth hub (with the notable exception of the Federal District, which was the only loser) the states of Nuevo León, Jalisco, Estado de México, Puebla

and Guanajuato kept up their growth and leading positions in the period in question, despite the severity of the restructuring process that affected them.

However, we need a more precise indicator to define the trends in the territorial distribution of industrial growth. Is there a trend towards the "north-ernization" of Mexican industrial development, or is it a question rather of a process with different characteristics? In order to appraise this question we used as a reference point the degree of industrial concentration displayed by the states and the Federal District in 1980, in order to analyse this initial distribution with respect to the differences in absolute employment displayed by the same states between that year and 1993.

It is quite a simple matter to produce an indicator for this analysis: i.e., relating the absolute variation in industrial employment in the states between 1980 and 1993 with the share each of them had in industrial employment in 1980 (figure 1). If we place the states on the horizontal axis according to their percentage share of industrial employment in 1980 and place the absolute differences in employment be-

FIGURE 1
Mexico: Changes in industrial employment, by states,^a between 1980 and 1993



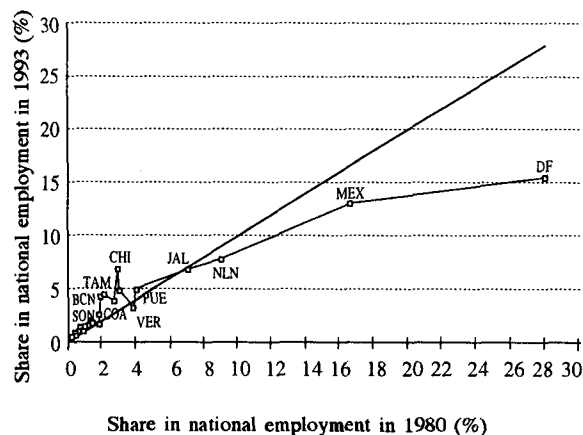
^a Sonora, Baja California, Tamaulipas, Chihuahua, Guanajuato, Coahuila, Veracruz, Puebla, Jalisco, Nuevo León, Estado de México (MEX) and Federal District (DF).

tween 1980 and 1993 on the vertical axis, we see that the line of regression between the two variables (excluding the Federal District) has a positive slope. This means that the old pattern of territorial concentration in the central states tends to be maintained, the only exception being the Federal District (i.e., metropolitan Mexico City), which radically departs from the scheme because it is the only state that suffered a loss of employment in absolute terms.

Furthermore, while recent Mexican industrialization has been concentrated in the northern and border states,² it has also been strongly represented in other states in central Mexico, especially Guanajuato, Puebla and Jalisco. Thus, it may be said that although the territorial dispersal of industrial growth largely benefitted the northern and border states, in the centre of the country the loss of dynamism of the Federal District was accompanied by a dispersal of growth among the central states, including those which already had a considerable share in 1980, such as Nuevo León and the state of México. All in all, there has been a significant change in the pattern of geographical concentration of industry, but without greatly altering the positions of the most important states (figure 2).

² The states of Baja California, Sonora, Chihuahua, Coahuila and Tamaulipas.

FIGURE 2
Mexico: Shares of individual states^a in industrial employment in 1980 and 1993

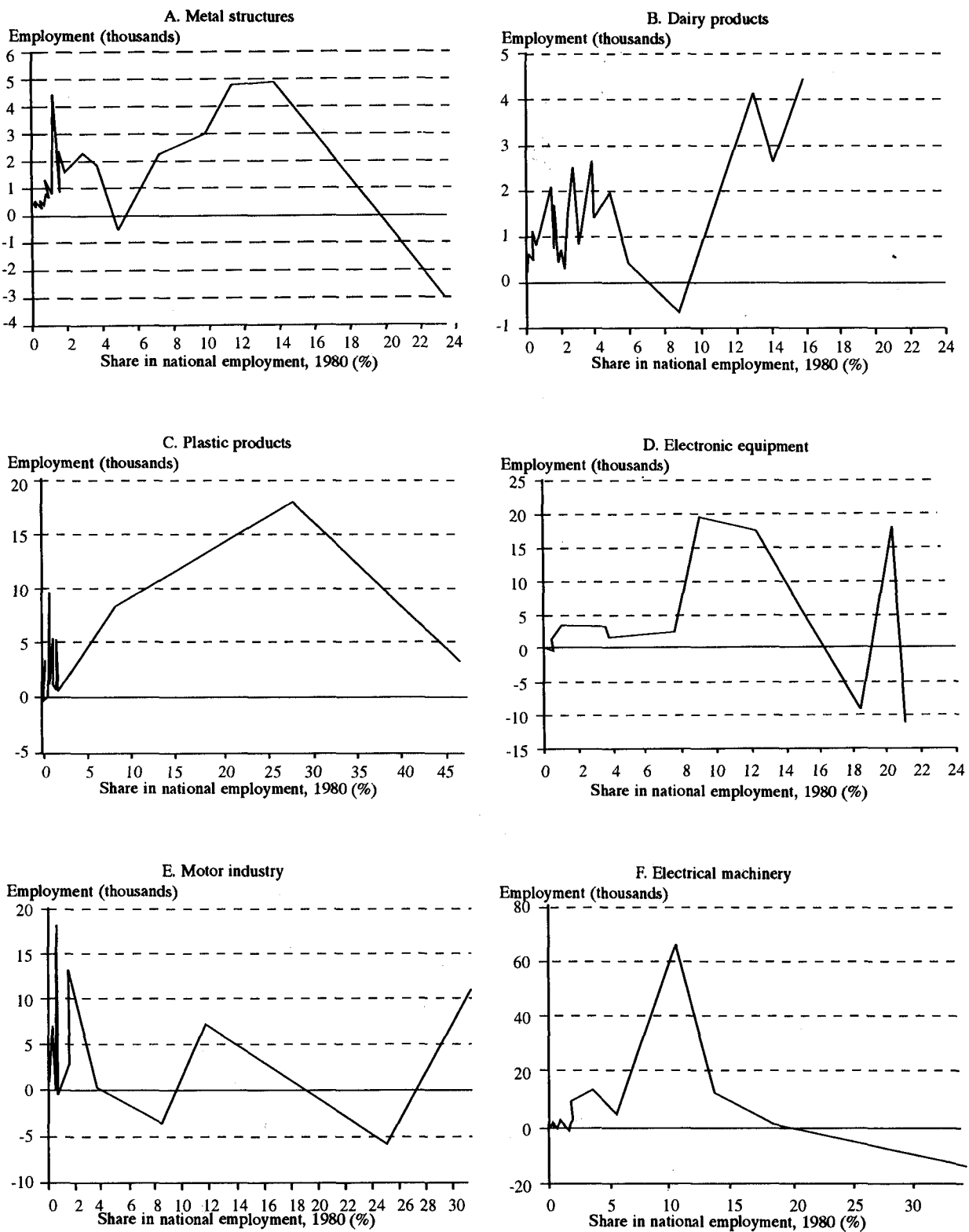


^a Sonora, Baja California, Tamaulipas, Chihuahua, Guanajuato, Coahuila, Veracruz, Puebla, Jalisco, Nuevo León, Estado de México (MEX) and Federal District (DF).

Finally, we wished to determine whether what we noted regarding the overall differences in employment between 1980 and 1993 also applies to the dynamic core (figure 3). The results are interesting and confirm the previous trend. Despite their wide range of different performances, almost all sectors (to different degrees) display a bimodal distribution of growth: that is to say, significant growth in areas where there was no industrial concentration in the import substitution period, but also growth in areas of high concentration associated with the old territorial pattern (though distorted at one extreme by the negative performance of the Federal District). Thus, for example, in the cases of metal structures (branch 3811), dairy products (branch 3112), plastic products (branch 3560) and the motor industry (branch 3841) the distribution is markedly bimodal (although the performance of the Federal District tends to distort the effect). The case of the motor industry (map 2) is important because it is usually taken as a reference when studying the relocation of motor vehicle assembly and component plants in Mexico (Arteaga, ed., 1993; Carrillo, ed., 1990; Mortimore, 1995); it also shows that although prominence has been given to the growth associated with the northern industries, the areas in the central part of the country maintained a similar level of dynamism. This is not so, however, in the case of the electronic, radio and television equipment industry (branch 3832), where the north-

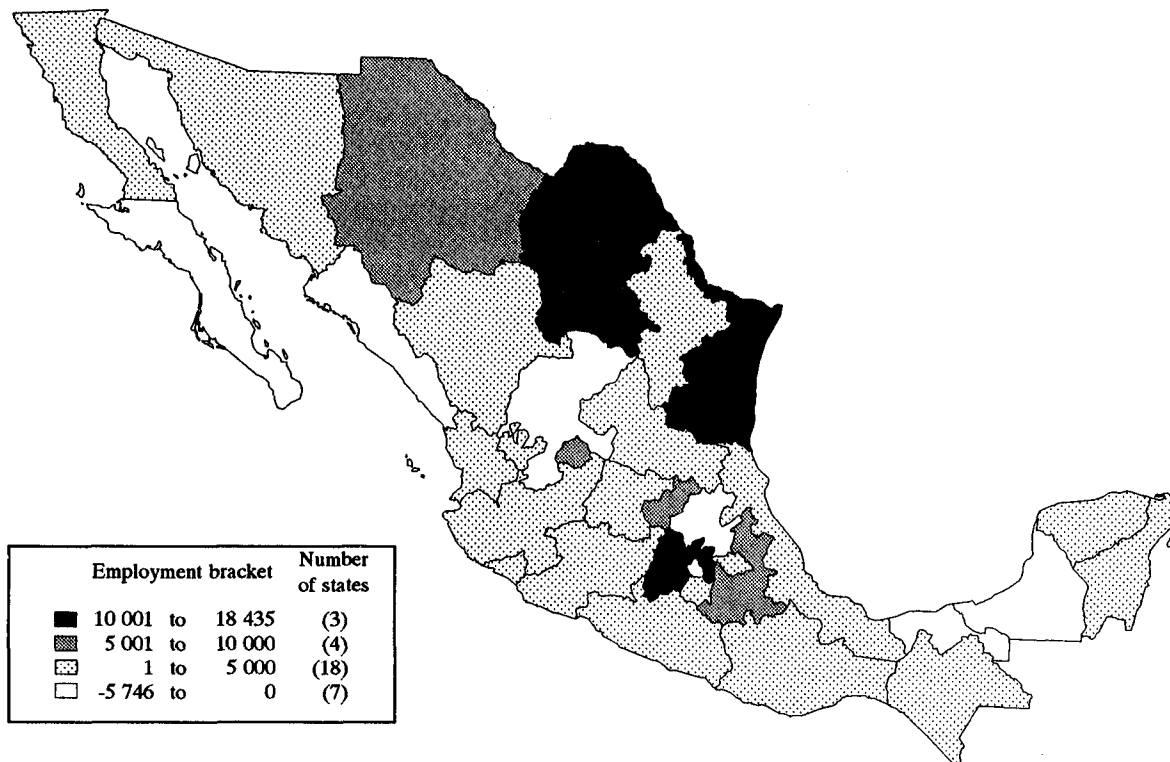
FIGURE 3

Mexico: Changes in employment in selected industrial branches, 1980-1993



MAP 2

Mexico: New employment in the motor industry, by states, 1980-1993



ern states, which already accounted for substantial percentages of the sector, kept up their dynamism, while the Federal District and the state of México, which had reached similar levels of concentration, suffered a serious decline in their positions.

These results permit a clearer picture to be gained of the supposed “northernization” of recent industrial growth in Mexico. In our view, what is really involved is the emergence of a new growth hub, and while it cannot be denied that this hub is very dynamic, we should not overlook the fact that the industrial conversion process has also meant growth for the traditional areas of Mexican industrial development. The exception to this is the Federal District, which has undoubtedly suffered a serious loss of employment (-103,197 jobs), but even so it still accounts for a substantial percentage of industrial employment (15.5% in 1993 compared with 25.5% in 1980).

At all events, it may be assumed that the industrial conversion process in the geographical area historically associated with Mexican industrial development has allowed it to keep its leading role in

industrialization, strengthened by the trend towards the dispersal of industrial growth within the area (in Puebla and Guanajuato, for example). If growth rates are used as the main element of analysis, it might be thought that the northern border hub will lead the way in terms of dynamic growth, since it has the highest rates. It should be emphasized, however, that the changes will depend ultimately on the level of development attained by the restructured sectors of central Mexico in the coming years, since the functional-territorial rationales of the two hubs are operating at very different moments in the respective expansion processes, and although numbers are important in this case, what is most essential is to understand the social rationales behind the respective growth processes.³

³ It should not be forgotten that the rationale of the northern border hub is based on the fact that the area is just beginning to develop, whereas that of the central hub is combined with a rationale of industrial conversion (e.g., in Aguascalientes).

III

The two functional-territorial hubs in the context of the industrial restructuring of Mexico

Quantitative analysis only reflects part of the story, for although the northern border expansion represents the emergence and consolidation of a second space for recent industrial growth, what we really want to emphasize is that it is not a question of the mere shifting of industrial growth from one point in the territory to another: i.e., it is not exclusively a spatial distribution phenomenon. What is involved are two different configurations of industrial development organization, coexisting under the wing of the same macroeconomic governance model. Moreover, the characteristics of the branches making up the dynamic core of recent industrialization take on radically different organizational features depending on which hub they belong to: in other words, the process is not purely sectoral.

We use the concept of functional-territorial hubs to highlight the need to include within a single analytical framework the dynamics of industrial sectors, branches or products and those of territorial configurations.⁴ We may define this concept as the set of trajectories of changes in organizational and production patterns registered in the development of a dynamic industrialization core, within the framework of the aspects of territorial interdependence expressed in a set of conventions and institutions of economic governance. In other words, industrial development takes shape on the basis of a close relation with the organizational configuration of the spaces in which it takes place and is historically located.

The concept of economic governance⁵ is used here to indicate a certain process common to the dif-

ferent trajectories of change displayed by the dynamic core of industrialization. In other words, the heterogeneity of the different outcomes, expressed for example in a varied range of regional production systems, has as its counterpart a shared common range of forms of economic coordination (and of ways of seeking their definition and change); this common range includes, for example, the relations and strategies of the dominant economic groups, the nature of intra- and inter-company relations, the system of industrial relations, and other aspects. This common environment, we must stress, is a basic feature of the hub and is expressed, with the relevant special features, in each regional production system and each production sector, branch or chain forming part of that system.

A decisive aspect of economic governance as it affects the dynamic industrialization core may be noted at the macro level: we refer to the economic policy and national development model and the forms of international coordination involved in it. The special feature of the Mexican case is that whereas in the period of stabilizing development there was only a single functional-territorial industrialization hub, the new model caused the expansion and qualitative evolution of a hub which, in the previous period, had remained an area on the periphery of the dynamic core: the industrialization hub consisting of the export assembly industry located in border areas of northern Mexico. This process was later complemented by the expansion of the export manufacturing operations of the transnational corporations which, as from the late 1970s, found northern Mexico to be an ideal location for such activities. In the central part of the country, for its part, there was an intensive process of restructuring of the industries which had accounted in the past for the development of Mexican industry. The fundamental differences between these two hubs therefore should not be sought at the level of macroeconomic governance,

⁴ The idea of the functional-territorial hub should be understood as a conceptual tool, and hence any substantive element arising from this idea (such as the idea of a northern border hub in Mexico) should be understood as an "ideal type".

⁵ Understood as the institutions, conventions, practices and processes of coordination produced and reproduced by the economic agents in order to ensure the successful outcome of their intervention (see Campbell and Lindbergh, 1991, and Storper and Harrison, 1990).

although, because of the particular characteristics of the two hubs, the effects of economic policy measures (such as exchange-rate measures) are very different, each of the hubs has its own organizational and production rationale *vis-à-vis* a given economic policy model.⁶

The fundamental differences between the two hubs lie at the meso and micro levels of their economic governance. Meso-economic regulation refers to the organizational level at which economic groups or business organizations act in order to maintain, modify or generate an economic regulation framework in keeping with their strategic expansion and development guidelines. Microeconomic regulation refers to the organizational level at which measures are taken to settle operational aspects of the production processes (such as intra- and inter-company relations) and of the local labour markets, as well as aspects connected with technology and production performance.

Although a detailed analysis of both these hubs would be outside the scope of this article,⁷ which is devoted to the analysis of the northern border hub, we can briefly indicate some radical differences between them.

With regard to meso-economic governance, in the central hub it is the strategic guidelines of the major Mexican oligopolistic groups that determine the efforts made to secure changes in the regulatory framework of the dynamic core of that area. The configuration of those groups during the period of stabilizing development and import substitution gave them a national character, even though they were located in different regional settings (metropolitan Mexico City, Guadalajara, Puebla and Monterrey). The actions taken by those groups continue to be of national scope and, to a certain extent, the emergence in Mexico of the new secondary export model is linked with the outcome of the conflict among those

groups regarding the definition of the course and features of national-level economic regulation.⁸

In the case of the northern border hub, in contrast, the economic groups associated with the creation and consolidation of its regulatory framework hardly lost their regional nature at all, although they contended individually (as in the case of the Chihuahua Group) or collectively (as in the case of the border industrial associations) for a space of their own within the national industrial development strategy.

In the field of microeconomic governance, the distinctions are even more radical. In the central hub, the development of the import substitution model gave rise to a system of production and industrial relations which could be described as almost Fordist: mass production for domestic consumption, stable domestic production linkages, and a system of industrial relations in which the labour force had its prerogatives (collective bargaining). The restructuring of this hub meant a radical change in the details of these aspects, but it basically continued to evolve along the same lines: production for the domestic market, but now under a model involving trade openness and strong export orientation; strengthening of domestic production linkages of a competitive nature, but with the substitution of imported inputs for domestic inputs which did not meet the demands of competitiveness; weakening of the trade unions and the rights of the labour force, but maintenance of collective bargaining nevertheless.

The northern border hub, in contrast, operated from the start on the basis of the rationale of a new industry, without effective trade union organizations (except in a few cases such as that of Tamaulipas), almost without domestic production linkages, and with operating conditions quite different from those of the local labour markets (employment of a majority of women, for example).

The most radical difference between the two hubs, however, is the continuity or discontinuity between meso-economic and microeconomic governance. In the central hub, the entrepreneurs who control the oligopolistic domestic groups also control the strategies governing the production processes of the firms in question, but in the case of the northern

⁶ An important task in this analytical approach, which we unfortunately cannot undertake here, is the evaluation of the different impacts of the various economic policy measures on the two hubs, in order to determine whether conflicting needs arise because of their respective development paths, or whether those policy measures have managed to strike a suitable balance capable of maintaining both growth paths.

⁷ Such an analysis, together with a more detailed analysis of the concept of the functional-territorial hub, may be found in Alonso (1996).

⁸ By "economic regulation" we mean the formal procedures and rules adopted in order to adapt and condition the conduct of the individual agents to a predetermined objective.

border hub this control is exercised by the transnational corporations, as part of their broad strategic guidelines, while the action of the entrepreneurs of that area is limited to generating and maintaining the regulatory framework and providing services and the industrial infrastructure. Indeed, in the microeconomic governance of their production guidelines, the transnational corporations operating in one hub adopt different strategic approaches from those operating in the other.

Although this study is devoted to the analysis of the emergence and consolidation of the northern border hub, it is important to note that the concept of the functional-territorial hub seeks to explain the decisive segmentation which has occurred in Mexican industrialization and to highlight the emergence of two rationales of meso-economic and microeconomic governance which operate on a parallel basis, with few mutual production linkages, but under a single economic policy and development model.

IV

The northern border hub: the economic regulation of the new type of industrial development

1. The emergence of this second hub

The new northern border industrialization of Mexico started with a set of industrial activities developed under the system of temporary importation of inputs for subsequent re-export after processing set up in the mid-1960s, usually grouped together under the title of border export assembly industries. In the Mexican context, this industrialization was belated and atypical compared with the established import substitution model. Mexico's industrialization, begun in the 1930s, was marked by a high degree of territorial concentration of activities in the cities of Guadalajara, Monterrey, Puebla and, above all, metropolitan Mexico City, representing the historical configuration of the central hub. The policy responsible for this fitted in perfectly with the import substitution model, was highly protectionist, and was designed to satisfy the priorities of the domestic market.

Northern border industry was set up in an area where labour was over-abundant but jobs were scarce. Because of changes in the agricultural sector and migratory flows from the south, this area had registered population growth which exceeded its capacity to absorb labour. Between 1940 and 1960 the population doubled and the area consequently faced serious problems in terms of employment, housing and urban services. Furthermore, the cancellation by the United States in 1964 of the binational agreement

on the entry of temporary labourers led to the massive repatriation of Mexican workers, many of whom decided to settle in the Mexican border area.

It is against this background that we should interpret the establishment in 1965 of the Border Industrialization Programme, which permitted and encouraged the installation of export assembly plants, on an exceptional basis and subordinated to import substitution industrialization. Through this measure, the Mexican government –taking into account some incipient experiences with export processing zones in other countries– embarked upon a policy which was to be of an exceptional nature, with a clearly defined scope in terms of time and geographical extension. The idea was that in the medium term the industrialization drive would generate production linkages which would encourage industrialization with a domestic base, whereby the border area could be “reintegrated” into the national economy. With regard to its geographical scope, the model was adapted exclusively to the exceptional conditions of the northern border area in respect of its labour market and its proximity to the United States.

Because of the supposed pre-eminence of the import substitution model, the export assembly industry was seen as an eminently peripheral phenomenon, both because of its relatively small size in the overall Mexican context and because of the express intentions of the government policy which supported

it. The 1982 crisis, however, caused a break with that approach. That year witnessed the definitive "take-off" of border industrial development, thanks to the effects of increased world competition on the United States economy and, above all, the macro-economic policy measures adopted by Mexico to consolidate the export industrialization model. Border industrialization ceased to be a mere peripheral process. Since 1970, employment in the northern border hub has grown by 10% per year, compared with only 2% in nationwide manufacturing. Today, with nearly 3,500 establishments and 750,000 jobs, it can be said that the export assembly industry, together with the export manufacturing plants in northern Mexico, has formed a second functional-territorial industrial development hub in the country, the core of which is located in just a few border localities.

At the same time, since the late 1970s the transnational corporations operating in Mexico, especially in sectors under increasing pressure from foreign competition (such as the motor industry), decided to establish export plants in the northern part of the country in order to establish a shared production strategy with their United States operations. The increased trade openness and the new export-oriented economic policy measures intensified that process, while also generating suitable conditions for the establishment of manufacturing operations (such as the production of television sets) by other transnational corporations which found in the northern border location and the forms of production organization prevailing there a favourable environment for their expansion strategies. By the late 1980s, the combination of the above-mentioned actions by the government and the transnational corporations had been firmly consolidated into what we have termed the northern border national industrialization hub.

This was not just a simple process of industrial expansion, but a process involving the appearance of manufacturing and assembly operations in the branches which formed the dynamic core of national industrialization. The two most eloquent examples of this process are the electronic components and consumer electronic products industry and the motor vehicle and vehicle components industry. In both cases the dynamism and magnitude of Mexican industrial expansion and the attainment of global competitiveness levels are associated mainly with the evolution of those sectors in the northern border hub, and only

to a much more limited extent with their evolution in the central hub. Even within the same firm (Ford, for example), the organizational and production rationales of the two hubs sometimes exist side by side (Carrillo, 1995) and are reflected in different paths within the dynamic core.

2. Meso-economic governance: entrepreneurs and the shaping of the institutional framework

The appearance of the assembly industry on the northern border was not simply the result of government policy, that is to say, of the series of Presidential decrees which permitted the maintenance of a special industrialization policy in border areas, subsequently extended to the rest of Mexico. Important contributory factors were the local conditions and, above all, the economic agents who determined its dynamism and the profile that the growth would assume. The emergence of an entrepreneurial sector associated with that growth is of fundamental importance for understanding the impact and potential of northern assembly industrialization. This is because the entrepreneurial groups of the area contributed to the process of its integration by transferring surpluses from one sector to another within it through their investment portfolios and organizational makeup. Even though those groups were not the determining agents of the production process and in many cases were outside it or merely acted as the symbolic owners of the assembly firms, the evolution of the process was not unconnected with their strategic interests in those areas.

It is important to understand the actions of the economic groups of the northern border area in the promotion of assembly activities and export plants (generally subsidiaries of transnational corporations), as well as the way those activities fit in with the organizational rationale and structure of opportunities in the various sectors of the area's economy. It is worth highlighting the fact that the entrepreneurial sector has played a decisive role in the functional-territorial configuration of the northern border hub through its intermediation in shaping the institutional framework (i.e., negotiating the border development policy) and acting as an important agent in organizing the overall economy of the area.

The entrepreneurial sector of the area did in fact originate from the special border fiscal arrangements made in the 1930s, because these made possible the

growth of the commercial and services sector, which even now is responsible for a substantial part of the area's economic dynamism. It was in the border towns (especially Tijuana and Ciudad Juárez) that grew most thanks to these policies that the biggest growth in assembly activities was registered.

The special fiscal arrangements for cross-border imports and exports (also known as "free zones") played a very important part in the development of the northern border hub. Commercial imports for consumption in the border area itself were of vital importance for the entrepreneurs of the area. In fact, those arrangements acted as the main form of accumulation, mainly because domestic producers (i.e., the big oligopolistic Mexican groups) could not compete with imports in border markets in terms of price and quality. This meant that there was a constant contradiction between the import substitution model and these special arrangements: in other words, between the border entrepreneurs and the big national oligopolistic groups. This contradiction was expressed at the time in a now historic controversy with a very high ideological content: whether to encourage the "national integration" of the border areas or to promote their "regional development". It is well known that the first of these objectives guided the economic decisions of the federal government with respect to the border areas, giving rise to a climate of permanent tension with the entrepreneurs of those areas.

For this reason, the relations between border entrepreneurs and the federal government have a long tradition of tensions and conflicts. The free zone arrangements became the major problem in relations between the entrepreneurs and the government in the mid-1950s, when regional repercussions began to arise as a result of the combination of a protectionist policy which restricted imports and an overvalued exchange rate which encouraged the consumption of imported goods. This situation was characteristic of national import substitution industrialization policy during the process of stabilizing development.

It was precisely this conflict which gave rise in the past to a certain degree of unified collective action among the border entrepreneurs. During the import substitution period, the federal government's development policy with respect to border areas and the dispute over the arrangements for free zones reflected a fundamental conflict of interests between the border economic groups and the most important groups at the national level, which were located

above all in the major metropolitan areas of the country and included domestic and foreign monopoly groups.

Thus, the dispute over the system of free zones was above all a conflict among economic groups, in which the State intervened as a mediator of their differences and as the regulator of capitalist competition. The specific question of border economic policy reflected the correlation of forces among the different business groups, the scope for the harmonization of interests left open by the capital accumulation cycle, and the capacity of the State to work out, in the regulation of those competing interests, an agreement which was satisfactory to all the economic groups.

The nature of this conflict changed substantially after the 1982 crisis, for three structural reasons. First, the new policy of under-valuation of the peso compared with the dollar made domestic products more competitive with cross-border imports, thus enabling the establishment of domestic trading channels and ensuring the stability of the supply flows from the central area to the border zones. Second, although the policy of greater trade openness caused immediate problems for the free zones, it nevertheless created a suitable context for the regional groups to invest with a long-term approach in the various sectors of the economy, especially services and manufacturing. Third, in so far as the generation of foreign exchange became a priority of the Mexican model, this furthered the policy of supporting export assembly industries, thus ensuring considerable expansion of northern border business activities associated with the assembly industry (professional services, industrial management, construction, infrastructural rents, etc.).

A second important group in the northern border business sector was made up of the entrepreneurs whose markets were fundamentally the surrounding areas but who continued to have strategic plans for penetrating the big domestic markets.⁹ At all events, these groups played an important part in promoting the new export-oriented industrialization, especially with the aim of strengthening their position in line with their growth strategies.

⁹ An exceptional case is that of the Chihuahua Group, which at one time attained levels comparable with the other domestic groups but now maintains a strategic approach oriented towards exports and the penetration of local area markets.

It is hard to forecast how successful these groups will be in the immediate future, although the new industrialization process is likely to be advantageous for at least some of them. It has been suggested that conflicts of interests may arise among the northern border business groups: i.e., between the assembly industry groups and those associated with commerce and services (Salas Porras, 1987, pp. 51-58), which could adversely affect the strategic management capacity of the entrepreneurs of the area as a whole. Currently, however, there does not seem to have been any conflict with consequences extending beyond the sphere of the strategic decision-making of some groups in the area (such as the Chihuahua Group). The most likely outcome is that the growing dynamism of assembly and export industrialization, due to the diversification of the long-term investments of the local economic groups, will enable both the assembly industries and the commerce and services sectors to find an advantageous place in the new national economic growth model.

What does seem increasingly unlikely is that local production linkages may be established with the export assembly industries and the export manufacturing plants. This repeated expectation of the Border Industrialization Programme and the series of decrees issued in the past for the promotion of assembly industries continues to be the biggest challenge for strengthening the area's industrial development possibilities. Once again, the key to understanding the lack of industrial entrepreneurs associated with the assembly industry is to be found in the features and requirements of the assembly industry production processes and the type of local entrepreneurial attitudes developed in the past in the border areas.

3. Microeconomic regulation: changes in organization and their impact on the labour force¹⁰

In the northern border hub, microeconomic regulation takes place at the company level. Since industrial dynamism is a function of inter- and intra-firm transactions and the marketing chains are in the hands of the transnational corporations which run this process, industrialization in this area is depend-

ent on the interaction of the global rationale of the firms, on the one hand, and the specific nature of the local labour markets, on the other.

Generally speaking, the firms established in the northern border hub have undergone a series of changes connected above all with technology, forms of production and organization, labour management, and production chains, as we shall see below.

a) *The transition from assembly activities: from assembly work to competitive manufacturing*

In the debate on the emergence and evolution of the export assembly industry in Mexico, there are two approaches which seek to describe this process: one based on the neo-Taylorist paradigm and another based on flexible production.

The neo-Taylorist approach emphasizes the regressive nature of the development of the export assembly industry, highlighting such aspects as alarming working conditions and environments, environmental degradation, and the lack of national production linkages because of the simple assembly operations carried out by these firms. This approach is based on concepts formulated in the 1960s and 1970s which linked the process of internationalization of production and the consequent development of export firms with low-technology activities making intensive use of routine manual labour, with few or no linkages with the domestic economies, with relatively low wages and with a high level of utilization of women with skills limited to the domestic sphere: in short, it sees the assembly industries as being based on a vertical integration model harking back to the primitive forms of Taylorism. According to the regulation school of thought, the extension of Fordism to peripheral countries is an attempt at industrialization using Fordist technology and consumption models, but without the corresponding social conditions, work processes and mass consumption standards. In this sense, the transplantation of this approach –initially called post-Taylorism– is considered a caricature even in the best of cases (Lipietz, 1995). This model is characterized by the intensive use of cheap labour, the division of activities into separate groups, the flexibility of labour regulations in the absence of trade unions, and the use of very little technology, and it usually depends on the existence of an authoritarian and repressive State.

¹⁰ For a more detailed analysis of this subject, see Alonso, Carrillo and Contreras, 1994.

The second approach, based on flexible production, has emphasized the introduction of new production techniques and processes and new labour skills. It focusses primarily on the most modern sectors of export assembly industry. In various empirical investigations, it has stressed the study of the new methods of organization of production (such as just in time production and total quality control), the introduction of flexible technologies (numerically controlled machines) and the application of methods of organization and control of labour skills and management (quality circles, versatility, wage systems, participation techniques, etc.).¹¹ Generally speaking, this approach has tried to give a picture of a "transition" in industry, showing various aspects of its changing nature and complexity. Various studies¹² have reported at length on the industrial changes in the assembly sector, thus justifying the application to these firms of the title we have used here: "second-generation assembly firms".

At the present time, it is clear that, at the micro-economic governance level, there has been a substantial albeit partial spread of second-generation assembly firms. Carrillo and Ramírez (1993), using a multivariate analysis, find that 18% of 358 assembly plants (in three sectors of the economy) are of high technology and flexibility, compared with only 5% of all plants nationwide. Likewise, according to the managers consulted, 40% of the production workers operate under flexible organizational techniques. Moreover, in a non-probabilistic survey covering 71 assembly plants in four localities, Wilson (1992, p. 63) also found that 18% of the plants were using flexible production. Finally, Pelayo Martínez (1992, p. 9) found, in a survey of 18 motor vehicle component assembly plants in Ciudad Juárez, that 38% of them were using the just in time production system, 44% used quality circles, and 100% used statistical process control. If we also take account of the automobile and engine export firms, we see that the spread of the just in time system and total quality

control, along with automation processes, is even greater (see, *inter alia*, Micheli, 1994; Shaiken, 1990, and Carrillo (ed.), 1990).

If we look at the strategies applied by companies like Ford and General Motors (Carrillo, 1995; Micheli, 1994) and their suppliers (Ramírez, 1995) in the two industrialization hubs, we see that the spread and adaptation of flexible production is much greater in the northern border export firms than in those of the central hub. This fact represents a substantive difference from the restructuring strategies of the plants oriented towards the domestic market. Thus, everything indicates that there has been greater adaptation to the principles and practices associated with just in time production and total quality control in the northern border hub than in the case of the firms in the central hub.

b) *Labour relations*

Various studies note that foreign investors' perception of the labour environment is an important factor in their decisions to locate industries in the northern border area of Mexico. A labour environment favourable to the interests of the firms is seen as one where there are no militant trade unions, there is a low rate of labour conflicts, and collective contracts are flexible in terms of labour regulation. Except for a few labour movements and inter-union conflicts, labour relations in the export assembly industries, as well as in the motor industry export firms, have been non-conflictive and represent a contrast, in this respect, with those of the companies which arose and developed under the import substitution industrialization policy.

Generally speaking, four main features of labour relations in the export assembly industries may be identified:¹³ i) low conflictivity, despite the repeated criticisms of working conditions; ii) a highly unionized industrial environment, especially in the north-east border area (rates of unionization of the plants exceeding 90%); iii) the participation of "active" (traditional) and "phantom" (regressive/functional) unions, both incorporated in the main national trade union confederations, and iv) highly flexible collective labour protection contracts.

¹¹ For more details on the features of the flexible production system, see Humphrey, ed., 1993, pp. 6-8; Kaplinsky, 1993, pp. 3-8, and Coriat, 1993, pp. 22-23.

¹² Such as those of Echeverri-Carrol (1994), Wilson (1992), Koido (1991 and 1992), Sklair (1993), Carrillo (coord.) (1993), Shaiken (1990), Brown and Domínguez (1989) and Mertens and Palomares (1988).

¹³ On the basis of the studies by Covarrubias (1992), Williams and Passé-Smith (1992) and Carrillo and Ramírez (1990).

It is hard to determine how far this has influenced the working conditions and environment in the export assembly industries. What is certain, however, is that while in those industries there is progress in the labour sphere and some degree of stability in the trade unions (Carrillo, coord., 1993; Carrillo and Ramírez, 1990), in the firms oriented towards the domestic market and located in the traditional industrial centres there has been a reversal in labour conditions and a deterioration in the bargaining power of the trade unions (De la Garza, 1993).

The way the trade unions function is of course an important element in the institutional mechanisms which, at least potentially, should play a part in the improvement of labour conditions. However, it would appear that it is the real shortage of labour in the northern border hub, rather than the trade unions, which is behind the relative improvement in those conditions in the latter area.

c) Working conditions: wages and benefits

Both in the northern border assembly industries (especially the second-generation ones) and in the export manufacturing industries (motor vehicles, engines, cement or mining products), labour conditions have evolved positively (at least up to the 1994 crisis), whereas in the central hub they have deteriorated (let us make a comparison, for example, between the Ford plant in Hermosillo and that in Cuautitlán, or between the border assembly plants and those of the central area). This trend may be illustrated by the levels reached in the early 1980s. Whereas in the northern border hub most of the firms are quite recent and started from a low level of labour conditions but subsequently began to improve, the plants in the central hub made substantial economic and labour gains in the 1960s and 1970s, thanks to the participation of the trade unions, but began to deteriorate in this respect from the 1980s onward. These firms have undergone profound restructuring processes which have been reflected in a decline in employment, an increase in labour flexibility, lower wages and the loss of capacity for trade union negotiations.

Looking at the export assembly industries from the standpoint of flexible production, what we want to know is whether the evolution of labour conditions in them is a steady process of change, or whether the changes are relatively small and reversible. The available information indicates the following: i) from

1982 up to 1994 both nominal and real wages in these industries increased; ii) economic benefits also increased, forming a growing part of the overall wages (23% in 1982, 30% in 1990, and a forecast of 43% for 1997), and iii) although many of the assembly plants continue to make intensive use of unskilled labour, in a substantial proportion of them work has been enriched by the skills learned and involvement in the job.

Labour conditions in the export assembly industries display a more positive trend than in other sectors of manufacturing. On the one hand, by local standards the incomes of workers employed in those industries are higher than those paid in other manufacturing plants, and they are undoubtedly higher than the general and professional minimum levels prevailing in the country; on the other hand, the evolution of wages shows that although in 1980 average wages in the nationwide manufacturing sector were 56% higher than in the export assembly industries, by 1990 this advantage had gone down to 30%, and projections for 1997 indicate that wages in assembly industries will be 12% higher in that year.

By international standards, the export assembly industries have also shown that they respect internationally established workers' rights, and they have even been evaluated more favourably than export processing zones in other countries (United States Department of Labour).

We thus see that although the firms in the central hub pay higher wages than the export assembly industries, the differences have been going down appreciably over time, and the export firms are even being taken as models for labour conditions in the rest of the country.

d) Employment, skills and stability

In general terms, employment and job stability, as well as labour skills, have evolved differently in the firms of the northern border hub than in the companies of the central area.

Firstly, employment grows more quickly in the export firms than in those producing for the domestic market: in 1994-1995 employment in the export assembly industries grew by 13.3%, whereas it increased by only 1.5% in the rest of Mexican manufacturing. In the northern border hub the average number of workers per establishment has risen appreciably (for example, from 377 to 2,029 between 1985 and 1995 in the firms producing television sets), in contrast with the evolution observed in

manufacturing firms in the central hub. However, the socio-demographic profile of the workers in the northern border hub is marked mainly by the employment of young women with little schooling and experience in the sector, whereas there is a bigger proportion of skilled male workers in the central hub.

Secondly, labour skills have gradually risen in the export assembly industries and the export firms. In the assembly firms, the average schooling of the workers has risen from six to seven years, while the proportion of workers with previous work experience rose from 30% in 1979 to 70% in 1989.¹⁴ In the area of working conditions, the tasks that workers have to carry out have become more complex because of the spread of some new manufacturing processes and the use of new technologies and methods such as total quality control (especially statistical control of processes and quality control groups). At the organizational level, according to the management surveys, the number of highly trained employees has grown over time from 20% in 1979 to 40% in 1989. It should be noted in this respect that although the work in the export assembly industries is relatively unskilled in general terms, the fact that 80% of the occupational structure consists of workers directly connected with production is associated with at least three factors: the age of the firms (the newer a firm is, the fewer skilled workers it will have in its organizational structure); the high turnover of staff (whose replacement constantly renews the unskilled segments of the labour force), and the compact organizational structures of the firms (consisting of four categories, for example).

V

Some conclusions

More than a decade has passed since the 1982 crisis, and many of the structural changes brought on by the change in course of the national industrial development model have assumed special features within their territorial expression. Our aim in this study is to put forward an alternative approach to those based

Thirdly, employment in the export assembly industries is really of a temporary nature, as workers constantly leave their jobs. The average monthly turnover in 358 plants analysed in 1989 was 12% (compared with 2% in firms located in Monterrey, for example). The northern border export assembly industries have the highest rates of turnover in the whole of Mexican manufacturing; this labour instability is associated mainly with socio-demographic factors (Carrillo and Santibáñez, 1993). A broad-ranging study in Tijuana found that single persons and the younger workers rotate more frequently, due no doubt to the stage they are at in their life cycles and the abundant job prospects in the northern border area.

To sum up, and simplifying the way the firms are categorized, in the northern border hub, and particularly in highly dynamic and internationally competitive export firms which are not devoted to assembly activities, labour relations are not conflictive, because the influence of the unions is low, wages are gradually improving (at least up to 1994), and benefits form an increasing part of the overall wages. The number of workers per firm is growing rapidly, skill levels are gradually rising, tasks are becoming more complex as more advanced technological processes and new forms of organization of work are introduced, and there is a flexible external labour market because of the abundant job opportunities. In general terms, all these features differentiate the northern border industries from non-export-oriented firms located in the traditional industrial areas (Monterrey, Guadalajara, Puebla, etc.).

exclusively on sectoral analysis (such as industrial sociology) or territorial analysis (such as regional science), proposing instead a working hypothesis which includes both aspects. Obviously, much remains to be done in this sphere, both at the conceptual and research levels. Nevertheless, even bearing in mind that this is just a hypothesis, there is evidence to back up the theory that the restructuring of production in Mexico has been characterized by functional-territorial industrial growth hubs. We hope

¹⁴ Firms like Ford Hermosillo, for example, only take on workers who have completed at least the technical school cycle of studies.

that further progress in this research will make it possible to gain a broader picture of the regional development options open to the various northern and border localities.

The idea of a functional-territorial hub allows us to take into account both the heterogeneous nature of the production linkages and the regulatory framework which gives some characteristics of territorial homogeneity to the process. With regard to this homogeneity, we may ask how far the entrepreneurs of the northern border area can maintain a collective strategy, or whether there is a risk of a split between the rationales of the different entrepreneurial sectors operating in the area.

As regards the heterogeneity of the process, we must seek to progress in the identification of the wide range of linkages and relations between, on the one hand, the export assembly industries and other export firms, and on the other their parent companies and foreign contractors and, ultimately, the whole structural diversity of the external industrial sector with which they are linked. What is involved, then, is a scenario with different development paths, different needs and internal production organization and control rationales, and different inter- and intra-firm relations. In order to analyse these dynamics, we will need development path studies such as those proposed by Storper and Harrison (1990) for the case of industrial districts. There are very few studies aimed in this direction (Mercado, 1988), although they would be very useful for understanding export assembly industries better. It would also be desirable to give up any idea of continuing to study the export assembly industry as a homogeneous unit of analysis. It is not just a question of acknowledging the structural

heterogeneity of the main variables defining this industry (Carrillo, coord., 1993; González-Aréchiga and Ramírez, 1989), but of assuming that it is not an industry at all in the recognized sense. In fact, the export assembly industry is merely a set of manufacturing plants operating under a specific tariff system in order to obtain a number of advantages for their exports. Little progress has been made in analysing labour diversity from the standpoint of the structural heterogeneity of the assembly plants. In other words, this diversity has not been seen as the result of differences in their relations and linkages, and little consideration has been given to the economic governance which defines it and which holds the answer to our questions about the development potential of this model.

In order to accept the existence of a "regional question" it is necessary to determine how changes are taking place in regional linkages in Mexico: that is to say, how the forms of social organization of the Mexican economy in the various regions and localities are being redefined. The basic premise of the present article is that in order to determine the nature of these structural trends in the country it is necessary to move from the analysis of processes at the global level to the analysis of the development trends of specific regions and localities. The course of events with regard to the restructuring of industry partly depends on regional and local dynamics, and until such time as we have a profile of how the various forms of restructuring are processed and take place at those levels, there is not much we can say about their real course.

(Original: Spanish)

Bibliography

- Alonso, J. (1996): *La espacialidad social en el análisis de la reestructuración*, paper presented at the COLEF 3 Seminar (Tijuana, Mexico, 20-22 October 1994), El Colegio de la Frontera Norte.
- Alonso, J., J. Carrillo and O. Contreras (1994): Mercados laborales y condiciones de trabajo en la transición de la industria maquiladora, in W. Senderberger and O. Contreras (eds.), *Las maquiladoras en México: presente y futuro del desarrollo industrial*, Tijuana, Mexico, International Labour Organisation (ILO)/El Colegio de la Frontera Norte.
- Arteaga, A. (coord.) (1993): *Proceso de trabajo y relaciones laborales en la industria automotriz en México*, Mexico City, Autonomous Metropolitan University (UAM)/Friedrich Ebert Foundation.
- Brown, F. and L. Domínguez (1989): Nuevas tecnologías en la industria maquiladora de exportación, *Comercio exterior*, vol. 39, No. 3, Mexico City, El Colegio de Mexico, March.
- Campbell, J. and L. Lindberg (1991): The State and the organization of economic activity, in J. Campbell and others (eds.), *Governing the American Economy*, Cambridge, U. K., Cambridge University Press.

- Carrillo, V. (1989): Transformaciones en la industria maquiladora de exportación, in Barajas and González-Aréchiga (eds.), *Las maquiladoras: ajuste estructural y desarrollo regional*, Tijuana, Mexico, El Colegio de la Frontera Norte.
- (1995): Flexible production in the auto sector: Industrial reorganization at Ford-Mexico, *World Development*, vol. 23, No. 1, Oxford, U. K., Elsevier Science Ltd.
- Carrillo, V. (ed.) (1990): *La nueva era de la industria automotriz*, Tijuana, Mexico, El Colegio de la Frontera Norte.
- Carrillo, V. (coord.) (1993): *Condiciones de empleo y capacitación en las maquiladoras de exportación en México*, Tijuana, Mexico, Ministry of Labour and Social Welfare/El Colegio de la Frontera Norte.
- Carrillo, V. and M.A. Ramírez (1990): Maquiladoras en la Frontera Norte: opinión sobre los sindicatos, *Frontera Norte*, vol. 2, No. 4, Tijuana, Mexico, Colegio de la Frontera Norte, July-December.
- (1993): Nuevas tecnologías en la industria maquiladora, in J. Micheli (comp.), *Tecnología y modernización económica*, Mexico City, Autonomous Metropolitan University (UAM)/National Council for Science and Technology (CONACYT).
- Carrillo, V. and J. Santibáñez (1993): *Rotación de personal en las maquiladoras de exportación en Tijuana*, Tijuana, Mexico, Ministry of Labour and Social Welfare/El Colegio de la Frontera Norte.
- Coriat, B. (1993): *Pensar al revés*, Madrid, Siglo XXI.
- Covarrubias, A. (1992): *La flexibilidad en Sonora*, Mexico City, National Autonomous University of Mexico (UNAM)/El Colegio de Sonora/Friedrich Ebert Foundation.
- De la Garza, E. (1993): *Reestructuración productiva y respuesta sindical en México*, Mexico City, National Autonomous University of Mexico (UNAM), Instituto de Investigaciones Económicas/Autonomous Metropolitan University (UAM).
- De Oliveira, O. and B. García (1993): *Cambios socioeconómicos y dinámica de los mercados de trabajo en México: 1950-1992*, Mexico City, El Colegio de México.
- Echeverri-Carroll, E. (1994): *Flexible linkages and offshore assembly facilities in developing countries*, Austin, Texas, University of Texas, School of Business, mimeo.
- González-Aréchiga, B. (1988): Deterioro de los términos de intercambio de la industria maquiladora: 1980-1985, *Foro internacional*, vol. 28, No. 3, Mexico City, El Colegio de México, A. C., January-March.
- González-Aréchiga, B. and J. C. Ramírez (1989): Productividad sin distribución: cambio tecnológico en la maquiladora mexicana (1980-1986), *Frontera Norte*, vol. 1, No. 1, Tijuana, Mexico, El Colegio de la Frontera Norte, January-June.
- Humphrey, J. (ed.) (1993): Quality and productivity in industry: New strategies in developing countries, *IDS Bulletin*, vol. 24, No. 2, Brighton, U. K., University of Sussex, Institute for Development Studies (IDS), April.
- INEGI (Instituto Nacional de Estadística, Geografía e Informática) (1983): *Censos económicos de 1980*, Mexico City.
- (1995): *Censos económicos de 1993*, Mexico City.
- Kaplinsky, Raphie (1993): *Implementing JIT in LDCs: From theory to practice*, paper presented at the Workshop on Intra-firm Reorganization in Third World Manufacturing (Brighton, 14-16 April), University of Sussex, IDS, mimeo.
- Koido, A. (1991): The color television industry: Japanese-U.S. competition and Mexico's maquiladoras, *Manufacturing Across Borders and Oceans*, Monograph Series, No. 36, San Diego, California, Center for US-Mexican Studies/University of California.
- (1992): *U.S.-Japanese competition and auto component maquiladoras: The case of the wiring harness sector in the State of Chihuahua*, paper presented at the XVII International Conference of the Latin American Studies Association, Los Angeles, California, Latin American Studies Association (LASA), 24-26 September, mimeo.
- Lipietz, A. (1995): De Toyota-City a la Ford-Hermosillo: la japonización de pacotilla, *El Cotidiano*, No. 67, Mexico City, Autonomous Metropolitan University (UAM), January-February.
- Mercado, A. (1988): *Difusión de tecnología basada en la microelectrónica en la industria metalmeccánica mexicana*, Mexico City, El Colegio de México, November.
- Mertens, L. and L. Palomares (1988): El surgimiento de un nuevo tipo de trabajador en la industria de alta tecnología. El caso de la electrónica, in E. Gutiérrez (comp.), *Reestructuración productiva y clase obrera*, Mexico City, Siglo XXI/National Autonomous University of Mexico (UNAM).
- Micheli, J. (1994): *Nueva manufactura. Globalización y producción de automóviles en México*, Mexico City, National Autonomous University of Mexico (UNAM), Facultad de Economía.
- Mortimore, M. (1995): *Transforming Sitting Ducks Into Flying Geese: The Mexican Automobile Industry*, "Desarrollo Productivo" series, No. 26, LC/G.1865, Santiago, Chile, Economic Commission for Latin America and the Caribbean (ECLAC).
- Pelayo Martínez, A. (1992): Nuevas tecnologías en la industria maquiladora de autopartes en Ciudad Juárez. Materiales y observaciones de campo, *Cuadernos de trabajo*, No. 6, Ciudad Juárez, Universidad Autónoma

- ma de Ciudad Juárez, Unidad de Estudios Regionales, Fall.
- Ramírez, J. C. (1995): La organización justo a tiempo en la industria automotriz del norte de México. Nuevos patrones de localización y eficiencia, *Documentos de trabajo*, No. 33, Mexico City, Centro de Investigación y Docencia Económicas.
- Salas Porras, Alejandro (1987): Maquiladoras y burguesía regional, *El cotidiano*, special issue 1, Mexico City, Autonomous Metropolitan University (UAM).
- Shaiken, H. (1990): *Mexico in the global economy*, Monograph Series, No. 33, San Diego, California, Center for U. S.-Mexican Studies/University of California.
- Sklair, L. (1993): *Assembling for Development. The Maquila Industry in Mexico and the United States*, San Diego, California, Center for U.S.-Mexican Studies/University of California.
- Storper, M. and B. Harrison (1990): *Flexibility, Hierarchy and Regional Development: The Changing Structure of Industrial Production Systems and Their Forms of Governance in the 1990s*, Working Paper No. 9002, Los Angeles, California, Graduate School of Architecture and Urban Planning/University of California at Los Angeles (UCLA).
- Williams, E. J. and J. T. Passé-Smith (1992): *The Unionization of the Maquiladora Industry: The Tamaulipas Case in National Context*, San Diego, California, San Diego State University, Institute for Regional Studies of the Californias.
- Wilson, P. A. (1992): *Exports and Local Development. Mexico's New Maquiladoras*, Austin, Texas, University of Texas Press.

Recent ECLAC publications

Periodical publications

Economic Survey of Latin America and the Caribbean, 1995-1996, LC/G.1929-P. ECLAC, Santiago, Chile, September 1996, 349 pages. United Nations publication, Sales No. E.96.II.G.2.

This edition of the Economic Survey of Latin America and the Caribbean once again displays substantial changes compared with previous years. As in the 1995 edition, it includes some aspects of economic performance in the first half of the year of publication, with the aim of achieving continuity in the follow-up of economic events, in so far as this is possible on the basis of the information available when the Survey went to press.

The Survey is published this year in a single volume which includes both a regional-level analysis and an analysis of the situation in each individual country. The regional analysis includes a chapter on employment and wages and another on saving and investment: subjects which were dealt with last year in the chapter on the level of activity, inflation and employment. Two other chapters are devoted, respectively, to structural reforms and to the vulnerability of the banking systems of Latin America. This volume also contains some statistical tables, but most of the tables are in an annex published in the form of a diskette, which was distributed separately last year but is now attached to the printed Survey.

The most important novelties in this edition concern the statistical information. Firstly, 1980 is no longer used as the base year for the national accounts series at constant prices, which are calculated on the basis of the year 1990 as from this edition. A new methodology has also been adopted for the analysis of the external sector, since the Survey has now begun to use the fifth edition of the International Monetary Fund's Balance of Payments Manual instead of the fourth. These methodological changes have been reflected in the trends and composition of the series in the following manner:

- The surplus on the regional account for goods and services at constant prices has gone down, as have the losses due to the terms of trade effect, because in both cases the prices of the products exported by the region in 1980 were very high compared with all the subsequent years.
- The ratio of gross fixed investment to the gross domestic product has increased substantially, by over three percentage points, especially in the cases of Brazil, Colombia and Peru.
- The growth rate of the product shows some differences compared with that calculated using the previous base year, due mostly to the lesser importance of some primary sectors, such as agriculture in El Salvador and mining in Peru.
- The value of exports and imports, and also their volume, is considerably higher because they now include in-bond assembly transactions, whose added value was registered in the previous version in the non-factor services account. Consequently, the value of services has gone down.
- Transfers are no longer classified as private or public, but are now divided into current and capital transfers, which has helped to bring down the current account deficit by a substantial amount, since a considerable proportion of the trans-

fers which were previously included in the capital account because they were official are now included in the current account.

- The capital account, which has undergone the biggest changes, is now called the "financial account"; a distinction is now made between investment within the economy and investment by foreign residents, whereas previously only the net value was given. Portfolio investment is no longer broken down by its term, which is now only taken into account in the case of "other capital", which corresponds above all to bank loans and loans from multilateral and governmental agencies. Investment in bonds is now registered as portfolio investment, which is broken down into shares and bonds. This change is by no means insignificant, since portfolio investments are no longer characterized as being highly volatile.
- Global financing of the balance (below the line) now includes a new category -exceptional finance- which registers the use made of normal International Monetary Fund loans and of resources from emergency aid programmes, such as those received by Argentina and Mexico in 1995, which came to very large amounts. It also includes arrears of interest payments, which previously amounted to large sums in most countries but which are now only substantial in the cases of Nicaragua and Peru, and the latter country has already begun to regularize them.

Preliminary Overview of the Latin American and Caribbean Economy, 1996, LC/G.1947-P. ECLAC, Santiago, Chile, December 1996, 55 pages. United Nations publication, Sales No. E.96.II.G.13.

The main feature of the economic situation in Latin America and the Caribbean in 1996 was the reappearance of the moderate growth, with price stability, which had characterized the region's economic performance in the 1990s before the outbreak of the Mexican financial crisis late in 1994. Within this overall picture, the gradual recovery of the Mexican and Argentine economies was particularly noteworthy. Thus, the average GDP growth rate for the region as a whole was estimated at 3.4% (1.7% per capita), average inflation was expected to go down to less than 20%, and over half the countries of the region were expected to register single-digit price increases, or only a little more than that level. The growth achieved was due to the sustained increase in exports and, to a lesser extent, to the greater access to external finance. Thus, the current account deficit (2% of the regional GDP) was more than offset by capital inflows of some US\$ 50 billion, resulting in a considerable increase in the international monetary reserves. However, unemployment was higher than in 1995 and in many countries wages stagnated or even went down, so that it was expected that growth patterns in 1996 would continue to be unequal, as they have been since the beginning of the decade.

The recovery in the product took place in a somewhat less favourable international context than in the last few years. While world growth kept up a steady pace, the growth rate of world trade went down to 5%, after the exceptionally large increase of 8% in terms of volume in 1995. Moreover, the price trends for the commodities of greatest interest for the Latin American and Caribbean countries were uneven. Thus, for example, the prices of many metals went down, as did the price of coffee, but that of wheat showed an upward trend. Oil prices, for their part, were higher than in previous years, which was an advantage for oil-exporting countries but a drawback for importers. Consequently, although the

terms of trade for the region as a whole did not change with respect to 1995, they went down for most countries and registered a substantial increase in only three nations.

In 1995, economic trends in the region displayed marked divergences, since the Mexican and Argentine economies contracted while the others continued to grow, but in 1996 there was a greater degree of convergence. Thus, while Mexico and Argentina registered positive growth rates (although these did not make up for the declines in the previous year), a number of countries of the region grew more slowly in 1996, because of policies designed to reduce inflation (as in Brazil, Chile, Colombia, Costa Rica and some others) or measures to avoid balance of payments problems (as in Peru). Consequently, in most countries growth rates were between 3% and 5%. Only five nations exceeded this range (Barbados, Chile, Guyana, Nicaragua and the Dominican Republic), and in only two of these cases (Chile and Guyana) did these growth rates represent the continuation of a sustained growth pattern. Three countries (Costa Rica, Jamaica and Venezuela) had growth rates below 2%, and Venezuela was in fact the only country whose economy actually declined, although the situation improved in the latter months of the year.

The growth of the region as a whole was boosted above all by exports, whose increase in volume was practically three times the overall increase in GDP. Exports were the main factor behind the recovery of the Mexican economy, and they made up for sluggish domestic demand in a number of countries, including Colombia, Peru, Venezuela and most of the Central American nations. Among the various components of domestic demand, consumption seems to have grown faster than investments in the region as a whole, although investment did show a positive trend after its decline in the previous year. If the final data confirm this trend, the 1996 investment coefficient in Latin America and the Caribbean, which is perhaps more sensitive to high interest rates than consumption expenditure, will be even lower than the already low figure of 21% registered in 1995.

The more favourable economic growth trends have not been reflected in increased employment. On the contrary, the data for the first three quarters of the year indicate that unemployment continued to rise, after having already increased considerably in 1995. Indeed, urban unemployment in 1996 registered its highest level so far in the decade. The overall regional situation is attributable largely to the fact that the generation of employment in Argentina and Mexico was not commensurate with the recovery in economic activity, while other countries where employment had evolved relatively well in previous years (Brazil and Colombia) went through a difficult spell in 1996. Only in a few countries (Chile and Peru) did the unemployment rate continue to fall. With regard to wages, the situation was more uneven, since they went up in some countries, stagnated in others, and even went down in some cases.

Inflation continued to slacken in 1996. Thus, average inflation in the region has gone down steadily from 888% in 1993 to 337% in 1994, 26% in 1995 and 20% in the twelve months from November 1995 to November 1996. This latter figure is the lowest since the early 1970s. Moreover, in many countries inflation stood at single-digit levels or at least very close to 10%. In Argentina, prices rose by less than 1%, while at the other extreme inflation in Venezuela reached three digits for a time. Brazil and Mexico achieved particularly significant reductions in their inflation rates.

Stabilization continued to be a top priority for most of the governments of the region, the main instruments used being fiscal and monetary policies. Chile maintained its fiscal surplus, while Mexico, Panama, Paraguay, Peru and the Dominican Republic kept

their public finances balanced. Venezuela completely eliminated the heavy deficit it had registered in the past, but the fiscal accounts deteriorated significantly in four countries (Argentina, Colombia, Ecuador and El Salvador), and although the fiscal situation in Brazil and Costa Rica did not get worse it continued to give cause for concern.

One of the main components of the stabilization measures was the adoption of austere monetary policies. In many cases, high interest rates were fixed in order to restrict aggregate demand and limit the expansionary impact of the accumulation of international reserves on expenditure. Exchange-rate appreciation also helped to reduce inflation: this occurred in 11 countries of the region, and in only five nations was there real devaluation of the currency. Although this appreciation helped to keep inflation in check, however, it also made foreign trade more difficult in some cases.

The trends observed in 1996 give grounds for several general conclusions. First, the Latin American and Caribbean economies have shown a certain capacity for withstanding adverse events. Although the economic recovery of Mexico and Argentina is still incomplete and has involved high social costs, there is no doubt that it is pointing the way to a gradual reactivation. Another significant item is the fact that the recession which affected these two countries did not spread in a generalized manner to the rest of the region. Second, there has been a gradual improvement in the amounts and terms of the external finance that the region has been able to procure, although these resources have gone primarily to the largest economies. Third, the recovery registered in 1996 has enabled the Latin American and Caribbean countries to return to a situation of moderate growth rates and increasing price stability, although the difficult relation between growth and inflation has continued to hamper the possibility of faster expansion. Lastly, unemployment has begun to represent a serious problem: a disquieting fact which further accentuates the unequal growth pattern already mentioned and has been the subject of close attention in the Secretariat's reports. Reversing this state of affairs will call—among other factors—for an ongoing increase in production capacity based on both rising levels of investment and on growing productivity. The relative consolidation of the supply of external finance provides a favourable context for the application of policies aimed at furthering this objective.

Other publications

Panorama de la inserción internacional de América Latina y el Caribe. Edición 1996 (Overview of the international linkages of Latin America and the Caribbean), LC/G.1941. ECLAC, Santiago, Chile, 2 December 1996, 225 pages.

With this new periodical publication, the ECLAC Secretariat seeks to set afoot an ongoing follow-up of the nature of the region's linkages with the international economy, the trade policy instruments that may be used for improving these linkages within the framework of the relevant multilateral and regional commitments, and the factors that affect demand both in the markets of the industrialized countries and in those of the big transnational corporations.

This first issue, corresponding to 1996, covers the evolution of the trade and trade policy of the countries of the region, with special attention to structural changes in the world economy which affect trade and investment opportunities, the regional and sub-regional integration process, and the implementation of multilateral trade agreements. The document is divided into four parts: the

international economy (chapters I and II), Latin American and Caribbean trade and trade policy, 1995-1996 (chapters III to V), the regional integration process in Latin America and the Caribbean, 1995-1996 (chapters VI to IX), and major issues in international trade (chapters X and XI).

América Latina y el Caribe: Series regionales y oficiales de cuentas nacionales, 1950-1994 (Latin America and the Caribbean: Regional and official national accounts series, 1950-1994), LC/G.1888-P. "Cuadernos Estadísticos de la CEPAL" series, No. 23, ECLAC, Santiago, Chile, October 1996, 123 pages.

This "Cuaderno Estadístico" contains national accounts series at constant prices. It is divided into four parts and an annex and also includes a diskette. The second and third parts contain five-yearly data for the period 1950-1990 and annual data from 1990 on.

The first part contains a brief summary of the methodological aspects applicable to measurements of national accounts series at constant prices. This summary consists of four chapters: the first chapter deals with general aspects of such methods; the second contains some brief remarks on the classes of index numbers; the third describes the reference periods of the indexes of prices and amounts, and the fourth chapter sets forth the general methods used to calculate the national accounts series.

The second part contains tables with data on Latin America, expressed in millions of 1980 dollars: this set of tables gives the gross domestic product at market prices, with the variables corresponding to branches of activity and to the forms of expenditure of the gross domestic product, together with tables providing summaries of Latin America as a whole and indicators of economic activity. These tables cover 23 countries in the case of those giving figures by branches of activity, and 19 countries in the case of the other tables (type of expenditure and indicators). The tables of indicators also include some giving information on other Caribbean countries, such as total gross domestic product and population.

The third part contains tables, by countries, on gross domestic product by branch of activity and by type of expenditure. These tables are in national currency at constant prices and correspond to the official series presented by the countries in their national accounts.

The annex gives instructions for the installation and use of the diskette, together with an index identifying the files it contains. For greater ease of use, it provides complete series in Lotus format and texts in ASCII format.

La reforma laboral y la participación privada en los puertos del sector público (Labour reform and private participation in public sector ports), LC/G.1880-P. "Cuadernos de la CEPAL" series, No. 77, ECLAC, Santiago, Chile, August 1996, 167 pages. United Nations publication, Sales No. S.96.II.G.7.

For centuries, employment conditions for port labour were established unilaterally by marine transport entrepreneurs, but in recent decades they have been fixed in Latin America and the Caribbean by governments (which are also the employers) and the trade unions. The port labour systems currently in force seek to satisfy the dockers' desire to receive adequate remuneration, but they insulate them from the market signals and give rise to monopolistic cargo handling services, with consequent inefficiency and overmanning. In a globalized economy, it is essential to eliminate these costs.

International trade has transformed competition: it is no longer a question of a contest between final products, but of competition among all the inputs that enter into a product, and labour is just another input, with its own market requirements. The commercial objectives of marine transport users and shipowners and the social goals of dock workers have become complementary and interdependent, and they can only be attained through a collective, collaborative effort. Commercial success has a social base which is important not only for port workers but also for marine transport users and entrepreneurs. The market mechanisms and anti-monopoly laws form an independent and impartial parameter in the light of which a balance can be struck between the commercial and social objectives of employers and workers. In a globalized economy, social equity is opportunity-oriented and seeks to create a labour force which is strongly motivated by its participation in profits and management decisions, backed up by training programmes, employment services, compensation arrangements and early retirement plans.

In order to establish labour systems which operate as a function of the market, governments must give up their deep-rooted tendency to try to solve commercial problems by political means. They must form teams made up of people from different ministries, user groups, port labour unions, marine transport entrepreneurs and port managers, and they must do away with regulatory obstacles to make way for the free play of the market mechanisms, decentralize the labour market, use anti-monopoly laws to prevent abuse of those mechanisms, and comply with the need for a form of social equity designed to provide equality of opportunity when granting benefits to workers. They must not expect marine transport entrepreneurs to pay for the political value of port labour services or to employ unnecessary labour. Users and marine transport entrepreneurs should see port labour as a special instrument for the provision of services, while workers should understand that their future is linked to the commercial success of those users and entrepreneurs. It will be necessary to update these systems frequently in order to meet the changing conditions of the market and to monitor their application in order to ensure that their provisions are fulfilled.

México: La industria maquiladora (Mexico's assembly industry), LC/MEX/L.263/Rev.1, "Estudios e Informes de la CEPAL" series, No. 95, ECLAC, Mexico, August 1996, 237 pages. United Nations publication, Sales No. S.96.II.G.8.

This document seeks to analyse the evolution of the assembly industry in Mexico by following its main stages, marked largely by the incorporation of new branches or changes in production processes. These are the factors which have made this activity so dynamic.

The evolution of the assembly industry has been accompanied by structural changes which manifest themselves in a number of ways. They therefore need to be studied from the standpoint of: i) the structure by branches of activity; ii) the technological profile; iii) the origin of the capital involved; iv) the size of the plants; v) the level of productivity, and vi) the pattern of location.

This study seeks to evaluate the benefits of the assembly industry for the Mexican economy not only in terms of the employment it has generated but also its multiplier effects on domestic manufacturing through the incorporation of intermediate goods in the production process. With regard to wages and salaries, the study not only analyses their evolution but also the links between real wages and productivity increases.

Since a significant proportion of the assembly firms located in Mexico are connected with corporations based in the United States, an analysis was made of that country's preferential tariff arrangements, especially items 806.30 and 807.00 (items 9802.00.60 and 9802.00.80 of the Harmonized System), which cover the bulk of assembly operations.

The installation of an assembly industry requires a legal framework that permits its operation and allows flexibility. The analysis made of the history of Mexican legislation in this field shows the changes that have been made in it to adapt it to the changing conditions of the assembly industry.

In conclusion, a brief analysis is made of the ways in which the signing of the North American Free Trade Agreement (NAFTA) has affected the assembly industry, through the amendment or immediate or deferred elimination of some of the existing rules.

Las relaciones económicas entre América Latina y la Unión Europea (The economic relations between Latin America and the European Union), LC/G.1915-P. ECLAC, Santiago, Chile, August 1996, 396 pages. United Nations publication, Sales No. S.96.II.G.6.

The main purpose of this study is to analyse the links between the countries of the European Union and those of Latin America in some of the main areas of their mutual economic relations, so as to provide readers who are interested in these matters –especially foreign service officials– with a guide on what has happened in the recent past and some guidelines for the future. The study seeks, in particular, to help to strengthen the institutional and operational capacity of the Latin American foreign ministries.

To this end, the study is divided into three parts, namely, the way European international cooperation is run; foreign investment and technology transfer between Europe and Latin America; and the development of trade between the two regions. The study also includes a general summary and conclusions containing the views of various experts on the above-mentioned subjects.

The first part of the study looks at the way international cooperation operates, both from the standpoint of the supply of such cooperation by the main countries in the European Union and from the angle of Latin America's demand and needs for official development aid. There are two salient features of European/Latin American cooperation: the changes in geographical priorities and the reduction in the resources set aside for such aid, on the supply side, and the fact that the new Latin American development models have also changed the priorities and the relative importance of the recipients of this aid.

With regard to foreign investment and technology transfer, which is the subject of the second part, it is noted that after the last decade of the 1980s, a new production and technological paradigm is beginning to emerge in the Latin American countries, and foreign direct investment flows are assuming renewed importance. The changes in production patterns that the region needs in order to improve its international economic linkages and speed up its development require access to the most advanced sources of technology and to investment resources to supplement domestic saving. This is one of the areas where the foreign services of Latin America need to be adapted in order to play to the full their role as a link between the European Union –and other developed countries– and Latin America.

The third part of the study, which deals with trade relations, describes the lopsided nature of trade between the European Union and Latin America, due to the predominance of commodities in the latter region's exports and the prevalence in its imports from Europe of products of high added value. Furthermore, the European Union has implemented a trade policy which discriminates against certain geographical areas, adversely affecting exports where Latin America has comparative advantages. In this respect, the Latin American foreign services must redouble their efforts to secure a reduction in European protectionism, especially since the conclusion of the Uruguay Round of GATT (now the World Trade Organization), which opens up new possibilities of access to the markets of the European Union.

Suscripción por el año N°

Ejemplares atrasados N°

Nombre:

Domicilio:

Código y ciudad:

País: Tel: FAX:

E-Mail:

Adjunto cheque (*) del Banco N°

por valor de \$ / US\$ (Para exterior: **sobre plaza USA.** / No enviar giros postales).

(*) *Agradeceremos emitir el cheque a nombre de UN-ECLAC.*

Favor cargar tarjeta de crédito MasterCard Visa

Nombre que aparece en la tarjeta: Número:

Firma:

Fecha de vencimiento:



Los precios de suscripción anual vigentes para 1997 son de US\$20. El precio por ejemplar suelto es de US\$10 más costo de envío. Los precios de suscripción por dos años (1997-1998) es de US\$35.

Publicaciones de la CEPAL
COMISIÓN ECONÓMICA PARA AMÉRICA LATINA
Y EL CARIBE
Casilla 179-D - Santiago de Chile
publications@eclac.cl



CEPAL

REVIEW

Request for subscription
and/or back issues

Subscription for the year No.

Back issues Nos.

Name:

Address:

City and postal code:

Country: Telephone: FAX:

E-Mail:

I enclose cheque(*) No. drawn on the following bank:

in the amount of \$ / US\$ (For requests originating outside Chile, the

cheque must be drawn on a **United States bank.** / Do not send money orders).

(*) *The cheque should be made payable to UN-ECLAC.*

Please charge my credit Card MasterCard Visa

Name as appears on card: Number:

Signature:

Expiration:



Annual subscription costs for 1997 are US\$22. The price of single issues is US\$10 plus shipping costs. The cost of a two-year subscription (1997-1998) is US\$40.

ECLAC publications
ECONOMIC COMMISSION FOR LATIN AMERICA
AND THE CARIBBEAN
Cailla 179-D - Santiago, CHILE
publications@eclac.cl



ECLAC publications

ECONOMIC COMMISSION FOR LATIN AMERICA AND THE
CARIBBEAN
Casilla 179-D Santiago, Chile

PERIODIC PUBLICATIONS

CEPAL Review

CEPAL Review first appeared in 1976 as part of the Publications Programme of the Economic Commission for Latin America and the Caribbean, its aim being to make a contribution to the study of the economic and social development problems of the region. The views expressed in signed articles, including those by Secretariat staff members, are those of the authors and therefore do not necessarily reflect the point of view of the Organization.

CEPAL Review is published in Spanish and English versions three times a year.

Annual subscription costs for 1997 are US\$20 for the Spanish version and US\$22 for the English version. The price of single issues is US\$10 in both cases.

The cost of a two-year subscription (1997-1998) is US\$35 for Spanish-language version and US\$40 for English.

Estudio Económico de América Latina y el Caribe

1980,	664 pp.
1981,	863 pp.
1982, vol. I	693 pp.
1982, vol. II	199 pp.
1983, vol. I	694 pp.
1983, vol. II	179 pp.
1984, vol. I	702 pp.
1984, vol. II	233 pp.
1985,	672 pp.

Economic Survey of Latin America and the Caribbean

1980,	629 pp.
1981,	837 pp.
1982, vol. I	658 pp.
1982, vol. II	186 pp.
1983, vol. I	686 pp.
1983, vol. II	166 pp.
1984, vol. I	685 pp.
1984, vol. II	216 pp.
1985,	660 pp.

1986,	734 pp.	1986,	729 pp.
1987,	692 pp.	1987,	685 pp.
1988,	741 pp.	1988,	637 pp.
1989,	821 pp.	1989,	678 pp.
1990, vol. I	260 pp.	1990, vol. I	248 pp.
1990, vol. II	590 pp.	1990, vol. II	472 pp.
1991, vol. I	299 pp.	1991, vol. I	281 pp.
1991, vol. II	602 pp.	1991, vol. II	455 pp.
1992, vol. I	297 pp.	1992, vol. I	286 pp.
1992, vol. II	579 pp.	1992, vol. II	467 pp.
1993, vol. I	289 pp.	1993, vol. I	272 pp.
1993, vol. II	532 pp.	1993, vol. II	520 pp.
1994-1995,	348 pp.	1994-1995,	332 pp.
1995-1996,	349 pp.	1995-1996,	335 pp.

(Issues for previous years also available)

Anuario Estadístico de América Latina y el Caribe / Statistical Yearbook for Latin America and the Caribbean (bilingual)

1980,	617 pp.	1989,	770 pp.
1981,	727 pp.	1990,	782 pp.
1982/1983,	749 pp.	1991,	856 pp.
1984,	761 pp.	1992,	868 pp.
1985,	792 pp.	1993,	860 pp.
1986,	782 pp.	1994,	863 pp.
1987,	714 pp.	1995,	865 pp.
1988,	782 pp.	1996,	866 pp.

(Issues for previous years also available)

Libros de la CEPAL

- 1 *Manual de proyectos de desarrollo económico*, 1958, 5th. ed. 1980, 264 pp.
- 1 *Manual on economic development projects*, 1958, 2nd. ed. 1972, 242 pp.
- 2 *América Latina en el umbral de los años ochenta*, 1979, 2nd. ed. 1980, 203 pp.
- 3 *Agua, desarrollo y medio ambiente en América Latina*, 1980, 443 pp.
- 4 *Los bancos transnacionales y el financiamiento externo de América Latina. La experiencia del Perú*, 1980, 265 pp.
- 4 *Transnational banks and the external finance of Latin America: the experience of Peru*, 1985, 342 pp.
- 5 *La dimensión ambiental en los estilos de desarrollo de América Latina*, Osvaldo Sunkel, 1981, 2nd. ed. 1984, 136 pp.
- 6 *La mujer y el desarrollo: guía para la planificación de programas y proyectos*, 1984, 115 pp.

- 6 **Women and development: guidelines for programme and project planning**, 1982, 3rd. ed. 1984, 123 pp.
- 7 *África y América Latina: perspectivas de la cooperación interregional*, 1983, 286 pp.
- 8 *Sobrevivencia campesina en ecosistemas de altura*, vols. I y II, 1983, 720 pp.
- 9 *La mujer en el sector popular urbano. América Latina y el Caribe*, 1984, 349 pp.
- 10 *Avances en la interpretación ambiental del desarrollo agrícola de América Latina*, 1985, 236 pp.
- 11 *El decenio de la mujer en el escenario latinoamericano*, 1986, 216 pp.
- 11 **The decade for women in Latin America and the Caribbean: background and prospects**, 1988, 215 pp.
- 12 *América Latina: sistema monetario internacional y financiamiento externo*, 1986, 416 pp.
- 12 **Latin America: international monetary system and external financing**, 1986, 405 pp.
- 13 *Raúl Prebisch: Un aporte al estudio de su pensamiento*, 1987, 146 pp.
- 14 *Cooperativismo latinoamericano: antecedentes y perspectivas*, 1989, 371 pp.
- 15 *CEPAL, 40 años (1948-1988)*, 1988, 85 pp.
- 15 **ECLAC 40 Years (1948-1988)**, 1989, 83 pp.
- 16 *América Latina en la economía mundial*, 1988, 321 pp.
- 17 *Gestión para el desarrollo de cuencas de alta montaña en la zona andina*, 1988, 187 pp.
- 18 *Políticas macroeconómicas y brecha externa: América Latina en los años ochenta*, 1989, 201 pp.
- 19 *CEPAL, Bibliografía, 1948-1988*, 1989, 648 pp.
- 20 *Desarrollo agrícola y participación campesina*, 1989, 404 pp.
- 21 *Planificación y gestión del desarrollo en áreas de expansión de la frontera agropecuaria en América Latina*, 1989, 113 pp.
- 22 *Transformación ocupacional y crisis social en América Latina*, 1989, 243 pp.
- 23 *La crisis urbana en América Latina y el Caribe: reflexiones sobre alternativas de solución*, 1990, 197 pp.
- 24 **The environmental dimension in development planning I**, 1991, 302 pp.
- 25 *Transformación productiva con equidad*, 1990, 3rd. ed. 1991, 185 pp.
- 25 **Changing production patterns with social equity**, 1990, 3rd. ed. 1991, 177 pp.
- 26 *América Latina y el Caribe: opciones para reducir el peso de la deuda*, 1990, 118 pp.
- 26 **Latin America and the Caribbean: options to reduce the debt burden**, 1990, 110 pp.
- 27 *Los grandes cambios y la crisis. Impacto sobre la mujer en América Latina y el Caribe*, 1991, 271 pp.
- 27 **Major changes and crisis. The impact on women in Latin America and the Caribbean**, 1992, 279 pp.
- 28 **A collection of documents on economic relations between the United States and Central America, 1906-1956**, 1991, 398 pp.
- 29 *Inventarios y cuentas del patrimonio natural en América Latina y el Caribe*, 1991, 335 pp.
- 30 *Evaluaciones del impacto ambiental en América Latina y el Caribe*, 1991, 232 pp.
- 31 *El desarrollo sustentable: transformación productiva, equidad y medio ambiente*, 1991, 146 pp.
- 31 **Sustainable development: changing production patterns, social equity and the environment**, 1991, 146 pp.
- 32 *Equidad y transformación productiva: un enfoque integrado*, 1993, 254 pp.
- 33 *Educación y conocimiento: eje de la transformación productiva con equidad*, 1992, 269 pp.
- 33 **Education and knowledge: basic pillars of changing production patterns with social equity**, 1993, 257 pp.
- 34 *Ensayos sobre coordinación de políticas macroeconómicas*, 1992, 249 pp.
- 35 *Población, equidad y transformación productiva*, 1993, 2nd. ed. 1995, 158 pp.
- 35 **Population, social equity and changing production patterns**, 1993, 153 pp.
- 36 *Cambios en el perfil de las familias. La experiencia regional*, 1993, 434 pp.
- 37 *Familia y futuro: un programa regional en América Latina y el Caribe*, 1994, 137 pp.
- 37 **Family and future. A regional programme in Latin America and the Caribbean**, 1995, 123 pp.
- 38 *Imágenes sociales de la modernización y la transformación tecnológica*, 1995, 198 pp.
- 39 *El regionalismo abierto en América Latina y el Caribe*, 1994, 109 pp.
- 39 **Open regionalism in Latin America and the Caribbean**, 1994, 103 pp.
- 40 *Políticas para mejorar la inserción en la economía mundial*, 1995, 314 pp.
- 40 **Policies to improve linkages with the global economy**, 1995, 308 pp.
- 41 *Las relaciones económicas entre América Latina y la Unión Europea: el papel de los servicios exteriores*, 1996, 300 pp.
- 42 *Fortalecer el desarrollo. Interacciones entre macro y microeconomía*, 1996, 116 pp.
- 42 **Strengthening development. The interplay of macro- and microeconomics**, 1996, 116 pp.
- 43 *Quince años de desempeño económico. América Latina y el Caribe, 1980-1995*, 1996, 120 pp.
- 43 **The economic experience of the last fifteen years. Latin America and the Caribbean, 1980-1995**, 1996, 120 pp.

MONOGRAPH SERIES

Cuadernos de la C E P A L

- 1 *América Latina: el nuevo escenario regional y mundial / Latin America: the new regional and world setting*, (bilingual), 1975, 2nd. ed. 1985, 103 pp.
- 2 *Las evoluciones regionales de la estrategia internacional del desarrollo*, 1975, 2nd. ed. 1984, 73 pp.
- 2 **Regional appraisals of the international development strategy**, 1975, 2nd. ed. 1985, 82 pp.
- 3 *Desarrollo humano, cambio social y crecimiento en América Latina*, 1975, 2nd. ed. 1984, 103 pp.
- 4 *Relaciones comerciales, crisis monetaria e integración económica en América Latina*, 1975, 85 pp.
- 5 *Síntesis de la segunda evaluación regional de la estrategia internacional del desarrollo*, 1975, 72 pp.
- 6 *Dinero de valor constante. Concepto, problemas y experiencias*, Jorge Rose, 1975, 2nd. ed. 1984, 43 pp.
- 7 *La coyuntura internacional y el sector externo*, 1975, 2nd. ed. 1983, 106 pp.
- 8 *La industrialización latinoamericana en los años setenta*, 1975, 2nd. ed. 1984, 116 pp.
- 9 *Dos estudios sobre inflación 1972-1974. La inflación en los países centrales. América Latina y la inflación importada*, 1975, 2nd. ed. 1984, 57 pp.
- s/n *Canada and the foreign firm*, D. Pollock, 1976, 43 pp.
- 10 *Reactivación del mercado común centroamericano*, 1976, 2nd. ed. 1984, 149 pp.
- 11 *Integración y cooperación entre países en desarrollo en el ámbito agrícola*, Germánico Salgado, 1976, 2nd. ed. 1985, 62 pp.
- 12 *Temas del nuevo orden económico internacional*, 1976, 2nd. ed. 1984, 85 pp.
- 13 *En torno a las ideas de la CEPAL: desarrollo, industrialización y comercio exterior*, 1977, 2nd. ed. 1985, 57 pp.
- 14 *En torno a las ideas de la CEPAL: problemas de la industrialización en América Latina*, 1977, 2nd. ed. 1984, 46 pp.
- 15 *Los recursos hidráulicos de América Latina. Informe regional*, 1977, 2nd. ed. 1984, 75 pp.
- 15 **The water resources of Latin America. Regional report**, 1977, 2nd. ed. 1985, 79 pp.
- 16 *Desarrollo y cambio social en América Latina*, 1977, 2nd. ed. 1984, 59 pp.
- 17 *Estrategia internacional de desarrollo y establecimiento de un nuevo orden económico internacional*, 1977, 3rd. ed. 1984, 61 pp.
- 17 **International development strategy and establishment of a new international economic order**, 1977, 3rd. ed. 1985, 59 pp.
- 18 *Raíces históricas de las estructuras distributivas de América Latina*, A. di Filippo, 1977, 2nd. ed. 1983, 64 pp.
- 19 *Dos estudios sobre endeudamiento externo*, C. Massad and R. Zahler, 1977, 2nd. ed. 1986, 66 pp.
- s/n **United States - Latin American trade and financial relations: some policy recommendations**, S. Weintraub, 1977, 44 pp.
- 20 *Tendencias y proyecciones a largo plazo del desarrollo económico de América Latina*, 1978, 3rd. ed. 1985, 134 pp.
- 21 *25 años en la agricultura de América Latina: rasgos principales 1950-1975*, 1978, 2nd. ed. 1983, 124 pp.
- 22 *Notas sobre la familia como unidad socioeconómica*, Carlos A. Borsotti, 1978, 2nd. ed. 1984, 60 pp.
- 23 *La organización de la información para la evaluación del desarrollo*, Juan Sourrouille, 1978, 2nd. ed. 1984, 61 pp.
- 24 *Contabilidad nacional a precios constantes en América Latina*, 1978, 2nd. ed. 1983, 60 pp.
- s/n **Energy in Latin America: The Historical Record**, J. Mullen, 1978, 66 pp.
- 25 *Ecuador: desafíos y logros de la política económica en la fase de expansión petrolera*, 1979, 2nd. ed. 1984, 153 pp.
- 26 *Las transformaciones rurales en América Latina: ¿desarrollo social o marginación?*, 1979, 2nd. ed. 1984, 160 pp.
- 27 *La dimensión de la pobreza en América Latina*, Oscar Altimir, 1979, 2nd. ed. 1983, 89 pp.
- 28 *Organización institucional para el control y manejo de la deuda externa. El caso chileno*, Rodolfo Hoffman, 1979, 35 pp.
- 29 *La política monetaria y el ajuste de la balanza de pagos: tres estudios*, 1979, 2nd. ed. 1984, 61 pp.
- 29 **Monetary policy and balance of payments adjustment: three studies**, 1979, 60 pp.
- 30 *América Latina: las evaluaciones regionales de la estrategia internacional del desarrollo en los años setenta*, 1979, 2nd. ed. 1982, 237 pp.
- 31 *Educación, imágenes y estilos de desarrollo*, G. Rama, 1979, 2nd. ed. 1982, 72 pp.
- 32 *Movimientos internacionales de capitales*, R. H. Arriazu, 1979, 2nd. ed. 1984, 90 pp.
- 33 *Informe sobre las inversiones directas extranjeras en América Latina*, A. E. Calcagno, 1980, 2nd. ed. 1982, 114 pp.
- 34 *Las fluctuaciones de la industria manufacturera argentina, 1950-1978*, D. Heymann, 1980, 2nd. ed. 1984, 234 pp.
- 35 *Perspectivas de reajuste industrial: la Comunidad Económica Europea y los países en desarrollo*, B. Evers, G. de Groot and W. Wagenmans, 1980, 2nd. ed. 1984, 69 pp.
- 36 *Un análisis sobre la posibilidad de evaluar la solvencia crediticia de los países en desarrollo*, A. Saieh, 1980, 2nd. ed. 1984, 82 pp.
- 37 *Hacia los censos latinoamericanos de los años ochenta*, 1981, 146 pp.

- s/n *The economic relations of Latin America with Europe*, 1980, 2nd. ed. 1983, 156 pp.
- 38 *Desarrollo regional argentino: la agricultura*, J. Martin, 1981, 2nd. ed. 1984, 111 pp.
- 39 *Estratificación y movilidad ocupacional en América Latina*, C. Filgueira and C. Geneletti, 1981, 2nd. ed. 1985, 162 pp.
- 40 *Programa de acción regional para América Latina en los años ochenta*, 1981, 2nd. ed. 1984, 62 pp.
- 40 *Regional programme of action for Latin America in the 1980s*, 1981, 2nd. ed. 1984, 57 pp.
- 41 *El desarrollo de América Latina y sus repercusiones en la educación. Alfabetismo y escolaridad básica*, 1982, 246 pp.
- 42 *América Latina y la economía mundial del café*, 1982, 95 pp.
- 43 *El ciclo ganadero y la economía argentina*, 1983, 160 pp.
- 44 *Las encuestas de hogares en América Latina*, 1983, 122 pp.
- 45 *Las cuentas nacionales en América Latina y el Caribe*, 1983, 100 pp.
- 45 *National accounts in Latin America and the Caribbean*, 1983, 97 pp.
- 46 *Demanda de equipos para generación, transmisión y transformación eléctrica en América Latina*, 1983, 193 pp.
- 47 *La economía de América Latina en 1982: evolución general, política cambiaria y renegociación de la deuda externa*, 1984, 104 pp.
- 48 *Políticas de ajuste y renegociación de la deuda externa en América Latina*, 1984, 102 pp.
- 49 *La economía de América Latina y el Caribe en 1983: evolución general, crisis y procesos de ajuste*, 1985, 95 pp.
- 49 *The economy of Latin America and the Caribbean in 1983: main trends, the impact of the crisis and the adjustment processes*, 1985, 93 pp.
- 50 *La CEPAL, encarnación de una esperanza de América Latina*, Hemán Santa Cruz, 1985, 77 pp.
- 51 *Hacia nuevas modalidades de cooperación económica entre América Latina y el Japón*, 1986, 233 pp.
- 51 *Towards new forms of economic co-operation between Latin America and Japan*, 1987, 245 pp.
- 52 *Los conceptos básicos del transporte marítimo y la situación de la actividad en América Latina*, 1986, 112 pp.
- 52 *Basic concepts of maritime transport and its present status in Latin America and the Caribbean*, 1987, 114 pp.
- 53 *Encuestas de ingresos y gastos. Conceptos y métodos en la experiencia latinoamericana*. 1986, 128 pp.
- 54 *Crisis económica y políticas de ajuste, estabilización y crecimiento*, 1986, 123 pp.
- 54 *The economic crisis: policies for adjustment, stabilization and growth*, 1986, 125 pp.
- 55 *El desarrollo de América Latina y el Caribe: escollos, requisitos y opciones*, 1987, 184 pp.
- 55 *Latin American and Caribbean development: obstacles, requirements and options*, 1987, 184 pp.
- 56 *Los bancos transnacionales y el endeudamiento externo en la Argentina*, 1987, 112 pp.
- 57 *El proceso de desarrollo de la pequeña y mediana empresa y su papel en el sistema industrial: el caso de Italia*, 1988, 112 pp.
- 58 *La evolución de la economía de América Latina en 1986*, 1988, 99 pp.
- 58 *The evolution of the Latin American Economy in 1986*, 1988, 95 pp.
- 59 *Protectionism: regional negotiation and defence strategies*, 1988, 261 pp.
- 60 *Industrialización en América Latina: de la "caja negra" al "casillero vacío"*, F. Fajnzylber, 1989, 2nd. ed. 1990, 176 pp.
- 60 *Industrialization in Latin America: from the "Black Box" to the "Empty Box"*, F. Fajnzylber, 1990, 172 pp.
- 61 *Hacia un desarrollo sostenido en América Latina y el Caribe: restricciones y requisitos*, 1989, 94 pp.
- 61 *Towards sustained development in Latin America and the Caribbean: restrictions and requisites*, 1989, 93 pp.
- 62 *La evolución de la economía de América Latina en 1987*, 1989, 87 pp.
- 62 *The evolution of the Latin American economy in 1987*, 1989, 84 pp.
- 63 *Elementos para el diseño de políticas industriales y tecnológicas en América Latina*, 1990, 2nd. ed. 1991, 172 pp.
- 64 *La industria de transporte regular internacional y la competitividad del comercio exterior de los países de América Latina y el Caribe*, 1989, 132 pp.
- 64 *The international common-carrier transportation industry and the competitiveness of the foreign trade of the countries of Latin America and the Caribbean*, 1989, 116 pp.
- 65 *Cambios estructurales en los puertos y la competitividad del comercio exterior de América Latina y el Caribe*, 1991, 141 pp.
- 65 *Structural Changes in Ports and the Competitiveness of Latin American and Caribbean Foreign Trade*, 1990, 126 pp.
- 66 *The Caribbean: one and divisible*, 1993, 207 pp.
- 67 *La transferencia de recursos externos de América Latina en la posguerra*, 1991, 92 pp.
- 67 *Postwar transfer of resources abroad by Latin America*, 1992, 90 pp.

- 68 *La reestructuración de empresas públicas: el caso de los puertos de América Latina y el Caribe*, 1992, 148 pp.
- 68 ***The restructuring of public-sector enterprises: the case of Latin American and Caribbean ports***, 1992, 129 pp.
- 69 *Las finanzas públicas de América Latina en la década de 1980*, 1993, 100 pp.
- 69 ***Public Finances in Latin America in the 1980s***, 1993, 96 pp.
- 70 *Canales, cadenas, corredores y competitividad: un enfoque sistémico y su aplicación a seis productos latinoamericanos de exportación*, 1993, 183 pp.
- 71 *Focalización y pobreza*, 1995, 249 pp.
- 72 *Productividad de los pobres rurales y urbanos*, 1995, 318 pp.
- 73 *El gasto social en América Latina: un examen cuantitativo y cualitativo*, 1995, 167 pp.
- 74 *América Latina y el Caribe: dinámica de la población y desarrollo*, 1995, 151 pp.
- 75 *Crecimiento de la población y desarrollo*, 1995, 95 pp.
- 76 *Dinámica de la población y desarrollo económico*, 1995, (en prensa).
- 77 *La reforma laboral y la participación privada en los puertos del sector público*, 1996, 168 pp.
- 77 ***Labour reform and private participation in public-sector ports***, 1996, 160 pp.
- 78 *Centroamérica y el TLC: efectos inmediatos e implicaciones futuras*, 1996, 164 pp.
- 79 *Ciudadanía y derechos humanos desde la perspectiva de las políticas públicas*, 1997, 124 pp.
- 81 *La apertura económica y el desarrollo agrícola en América Latina y el Caribe*, 1997, 136 pp.
- 82 *A dinâmica do Setor Saúde no Brasil*, 1997, 220 pp.
- 8 *Estructura del gasto de consumo de los hogares según finalidad del gasto, por grupos de ingreso*, 1984, 146 pp.
- 9 *Origen y destino del comercio exterior de los países de la Asociación Latinoamericana de Integración y del Mercado Común Centroamericano*, 1985, 546 pp.
- 10 *América Latina: balance de pagos, 1950-1984*, 1986, 357 pp.
- 11 *El comercio exterior de bienes de capital en América Latina*, 1986, 288 pp.
- 12 *América Latina: índices del comercio exterior, 1970-1984*, 1987, 355 pp.
- 13 *América Latina: comercio exterior según la clasificación industrial internacional uniforme de todas las actividades económicas*, 1987, Vol. I, 675 pp; Vol. II, 675 pp.
- 14 *La distribución del ingreso en Colombia. Antecedentes estadísticos y características socioeconómicas de los receptores*, 1988, 156 pp.
- 15 *América Latina y el Caribe: series regionales de cuentas nacionales a precios constantes de 1980*, 1991, 245 pp.
- 16 *Origen y destino del comercio exterior de los países de la Asociación Latinoamericana de Integración*, 1991, 190 pp.
- 17 *Comercio intrazonal de los países de la Asociación de Integración, según capítulos de la clasificación uniforme para el comercio internacional, revisión 2*, 1992, 299 pp.
- 18 *Clasificaciones estadísticas internacionales incorporadas en el Banco de Datos del Comercio Exterior de América Latina y el Caribe de la CEPAL*, 1993, 313 pp.
- 19 *América Latina: comercio exterior según la clasificación industrial internacional uniforme de todas las actividades económicas (CIIU) - Volumen I - Exportaciones*, 1993, 285 pp.
- 19 *América Latina: comercio exterior según la clasificación industrial internacional uniforme de todas las actividades económicas (CIIU) - Volumen II - Importaciones*, 1993, 291 pp.
- 20 *Dirección del comercio exterior de América Latina y el Caribe según principales productos y grupos de productos, 1970-1992*, 1994, 483 pp.
- 21 *Estructura del gasto de consumo de los hogares en América Latina*, 1995, 274 pp.
- 22 *América Latina y el Caribe: dirección del comercio exterior de los principales productos alimenticios y agrícolas según países de destino y procedencia, 1979-1993*, 224 pp.
- 23 *América Latina y el Caribe: series regionales y oficiales de cuentas nacionales, 1950-1994*, 1996, 130 pp.
- 24 *Chile: comercio exterior según grupos de la Clasificación Uniforme para el Comercio Internacional, Rev. 3, y países de destino y procedencia, 1990-1995*, 1996, 480 pp.

Cuadernos Estadísticos de la CEPAL

- 1 *América Latina: relación de precios del intercambio*, 1976, 2nd. ed. 1984, 66 pp.
- 2 *Indicadores del desarrollo económico y social en América Latina*, 1976, 2nd. ed. 1984, 179 pp.
- 3 *Series históricas del crecimiento de América Latina*, 1978, 2nd. ed. 1984, 206 pp.
- 4 *Estadísticas sobre la estructura del gasto de consumo de los hogares según finalidad del gasto, por grupos de ingreso*, 1978, 110 pp. (Out of print; replaced by No. 8 below)
- 5 *El balance de pagos de América Latina, 1950-1977*, 1979, 2nd. ed. 1984, 164 pp.
- 6 *Distribución regional del producto interno bruto sectorial en los países de América Latina*, 1981, 2nd. ed. 1985, 68 pp.
- 7 *Tablas de insumo-producto en América Latina*, 1983, 383 pp.

Estudios e Informes de la C E P A L

- 1 *Nicaragua: el impacto de la mutación política*, 1981, 2nd. ed. 1982, 126 pp.
- 2 *Perú 1968-1977: la política económica en un proceso de cambio global*, 1981, 2nd. ed. 1982, 166 pp.
- 3 *La industrialización de América Latina y la cooperación internacional*, 1981, 170 pp. (Out of print, will not be reprinted.)
- 4 *Estilos de desarrollo, modernización y medio ambiente en la agricultura latinoamericana*, 1981, 4th. ed. 1984, 130 pp.
- 5 *El desarrollo de América Latina en los años ochenta*, 1981, 2nd. ed. 1982, 153 pp.
- 5 **Latin American development in the 1980s**, 1981, 2nd. ed. 1982, 134 pp.
- 6 *Proyecciones del desarrollo latinoamericano en los años ochenta*, 1981, 3rd. ed. 1985, 96 pp.
- 6 **Latin American development projections for the 1980s**, 1982, 2nd. ed. 1983, 89 pp.
- 7 *Las relaciones económicas externas de América Latina en los años ochenta*, 1981, 2nd. ed. 1982, 180 pp.
- 8 *Integración y cooperación regionales en los años ochenta*, 1982, 2nd. ed. 1982, 174 pp.
- 9 *Estrategias de desarrollo sectorial para los años ochenta: industria y agricultura*, 1981, 2nd. ed. 1985, 100 pp.
- 10 *Dinámica del subempleo en América Latina*. PREALC, 1981, 2nd. ed. 1985, 101 pp.
- 11 *Estilos de desarrollo de la industria manufacturera y medio ambiente en América Latina*, 1982, 2nd. ed. 1984, 178 pp.
- 12 *Relaciones económicas de América Latina con los países miembros del "Consejo de Asistencia Mutua Económica"*, 1982, 154 pp.
- 13 *Campeinado y desarrollo agrícola en Bolivia*, 1982, 175 pp.
- 14 *El sector externo: indicadores y análisis de sus fluctuaciones. El caso argentino*, 1982, 2nd. ed. 1985, 216 pp.
- 15 *Ingeniería y consultoría en Brasil y el Grupo Andino*, 1982, 320 pp.
- 16 *Cinco estudios sobre la situación de la mujer en América Latina*, 1982, 2nd. ed. 1985, 178 pp.
- 16 **Five studies on the situation of women in Latin America**, 1983, 2nd. ed. 1984, 188 pp.
- 17 *Cuentas nacionales y producto material en América Latina*, 1982, 129 pp.
- 18 *El financiamiento de las exportaciones en América Latina*, 1983, 212 pp.
- 19 *Medición del empleo y de los ingresos rurales*, 1982, 2nd. ed. 1983, 173 pp.
- 19 **Measurement of employment and income in rural areas**, 1983, 184 pp.
- 20 *Efectos macroeconómicos de cambios en las barreras al comercio y al movimiento de capitales: un modelo de simulación*, 1982, 68 pp.
- 21 *La empresa pública en la economía: la experiencia argentina*, 1982, 2nd. ed. 1985, 134 pp.
- 22 *Las empresas transnacionales en la economía de Chile, 1974-1980*, 1983, 178 pp.
- 23 *La gestión y la informática en las empresas ferroviarias de América Latina y España*, 1983, 195 pp.
- 24 *Establecimiento de empresas de reparación y mantenimiento de contenedores en América Latina y el Caribe*, 1983, 314 pp.
- 24 **Establishing container repair and maintenance enterprises in Latin America and the Caribbean**, 1983, 236 pp.
- 25 *Agua potable y saneamiento ambiental en América Latina, 1981-1990 / Drinking water supply and sanitation in Latin America, 1981-1990* (bilingual), 1983, 140 pp.
- 26 *Los bancos transnacionales, el estado y el endeudamiento externo en Bolivia*, 1983, 282 pp.
- 27 *Política económica y procesos de desarrollo. La experiencia argentina entre 1976 y 1981*, 1983, 157 pp.
- 28 *Estilos de desarrollo, energía y medio ambiente: un estudio de caso exploratorio*, 1983, 129 pp.
- 29 *Empresas transnacionales en la industria de alimentos. El caso argentino: cereales y carne*, 1983, 93 pp.
- 30 *Industrialización en Centroamérica, 1960-1980*, 1983, 168 pp.
- 31 *Dos estudios sobre empresas transnacionales en Brasil*, 1983, 141 pp.
- 32 *La crisis económica internacional y su repercusión en América Latina*, 1983, 81 pp.
- 33 *La agricultura campesina en sus relaciones con la industria*, 1984, 120 pp.
- 34 *Cooperación económica entre Brasil y el Grupo Andino: el caso de los minerales y metales no ferrosos*, 1983, 148 pp.
- 35 *La agricultura campesina y el mercado de alimentos: la dependencia externa y sus efectos en una economía abierta*, 1984, 201 pp.
- 36 *El capital extranjero en la economía peruana*, 1984, 178 pp.
- 37 *Dos estudios sobre política arancelaria*, 1984, 96 pp.
- 38 *Estabilización y liberalización económica en el Cono Sur*, 1984, 193 pp.
- 39 *La agricultura campesina y el mercado de alimentos: el caso de Haití y el de la República Dominicana*, 1984, 255 pp.
- 40 *La industria siderúrgica latinoamericana: tendencias y potencial*, 1984, 280 pp.
- 41 *La presencia de las empresas transnacionales en la economía ecuatoriana*, 1984, 77 pp.

- 42 *Precios, salarios y empleo en la Argentina: estadísticas económicas de corto plazo*, 1984, 378 pp.
- 43 *El desarrollo de la seguridad social en América Latina*, 1985, 348 pp.
- 44 **Market structure, firm size and Brazilian exports**, 1985, 104 pp.
- 45 *La planificación del transporte en países de América Latina*, 1985, 247 pp.
- 46 *La crisis en América Latina: su evaluación y perspectivas*, 1985, 119 pp.
- 47 *La juventud en América Latina y el Caribe*, 1985, 181 pp.
- 48 *Desarrollo de los recursos mineros de América Latina*, 1985, 145 pp.
- 48 **Development of the mining resources of Latin America**, 1989, 160 pp.
- 49 *Las relaciones económicas internacionales de América Latina y la cooperación regional*, 1985, 224 pp.
- 50 *América Latina y la economía mundial del algodón*, 1985, 122 pp.
- 51 *Comercio y cooperación entre países de América Latina y países miembros del CAME*, 1985, 90 pp.
- 52 **Trade relations between Brazil and the United States**, 1985, 148 pp.
- 53 *Los recursos hídricos de América Latina y el Caribe y su aprovechamiento*, 1985, 138 pp.
- 53 **The water resources of Latin America and the Caribbean and their utilization**, 1985, 135 pp.
- 54 *La pobreza en América Latina: dimensiones y políticas*, 1985, 155 pp.
- 55 *Políticas de promoción de exportaciones en algunos países de América Latina*, 1985, 207 pp.
- 56 *Las empresas transnacionales en la Argentina*, 1986, 222 pp.
- 57 *El desarrollo frutícola y forestal en Chile y sus derivaciones sociales*, 1986, 227 pp.
- 58 *El cultivo del algodón y la soya en el Paraguay y sus derivaciones sociales*, 1986, 141 pp.
- 59 *Expansión del cultivo de la caña de azúcar y de la ganadería en el nordeste del Brasil: un examen del papel de la política pública y de sus derivaciones económicas y sociales*, 1986, 164 pp.
- 60 *Las empresas transnacionales en el desarrollo colombiano*, 1986, 212 pp.
- 61 *Las empresas transnacionales en la economía del Paraguay*, 1987, 115 pp.
- 62 *Problemas de la industria latinoamericana en la fase crítica*, 1986, 113 pp.
- 63 *Relaciones económicas internacionales y cooperación regional de América Latina y el Caribe*, 1987, 272 pp.
- 63 **International economic relations and regional co-operation in Latin America and the Caribbean**, 1987, 267 pp.
- 64 *Tres ensayos sobre inflación y políticas de estabilización*, 1986, 201 pp.
- 65 *La industria farmacéutica y farmoquímica: desarrollo histórico y posibilidades futuras. Argentina, Brasil y México*, 1987, 177 pp.
- 66 *Dos estudios sobre América Latina y el Caribe y la economía internacional*, 1987, 125 pp.
- 67 *Reestructuración de la industria automotriz mundial y perspectivas para América Latina*, 1987, 232 pp.
- 68 *Cooperación latinoamericana en servicios: antecedentes y perspectivas*, 1988, 155 pp.
- 69 *Desarrollo y transformación: estrategia para superar la pobreza*, 1988, 114 pp.
- 69 **Development and change: strategies for vanquishing poverty**, 1988, 114 pp.
- 70 *La evolución económica del Japón y su impacto en América Latina*, 1988, 88 pp.
- 70 **The economic evolution of Japan and its impact on Latin America**, 1990, 79 pp.
- 71 *La gestión de los recursos hídricos en América Latina y el Caribe*, 1989, 256 pp.
- 72 *La evolución del problema de la deuda externa en América Latina y el Caribe*, 1988, 77 pp.
- 72 **The evolution of the external debt problem in Latin America and the Caribbean**, 1988, 69 pp.
- 73 *Agricultura, comercio exterior y cooperación internacional*, 1988, 83 pp.
- 73 **Agriculture, external trade and international co-operation**, 1989, 79 pp.
- 74 *Reestructuración industrial y cambio tecnológico: consecuencias para América Latina*, 1989, 105 pp.
- 75 *El medio ambiente como factor de desarrollo*, 1989, 2nd. ed. 1991, 123 pp.
- 76 *El comportamiento de los bancos transnacionales y la crisis internacional de endeudamiento*, 1989, 214 pp.
- 76 **Transnational bank behaviour and the international debt crisis**, 1989, 198 pp.
- 77 *Los recursos hídricos de América Latina y del Caribe: planificación, desastres naturales y contaminación*, 1990, 266 pp.
- 77 **The water resources of Latin America and the Caribbean - Planning hazards and pollution**, 1990, 252 pp.
- 78 *La apertura financiera en Chile y el comportamiento de los bancos transnacionales*, 1990, 132 pp.
- 79 *La industria de bienes de capital en América Latina y el Caribe: su desarrollo en un marco de cooperación regional*, 1991, 235 pp.
- 80 *Impacto ambiental de la contaminación hídrica producida por la Refinería Estatal Esmeraldas: análisis técnico-económico*, 1991, 189 pp.

- 81 *Magnitud de la pobreza en América Latina en los años ochenta*, 1991, 177 pp.
- 82 *América Latina y el Caribe: el manejo de la escasez de agua*, 1991, 148 pp.
- 83 *Reestructuración y desarrollo de la industria automotriz mexicana en los años ochenta: evolución y perspectivas*, 1992, 191 pp.
- 84 *La transformación de la producción en Chile: cuatro ensayos de interpretación*, 1993, 372 pp.
- 85 *Inversión extranjera y empresas transnacionales en la economía de Chile (1974-1989). Proyectos de inversión y estrategias de las empresas transnacionales*, 1992, 257 pp.
- 86 *Inversión extranjera y empresas transnacionales en la economía de Chile (1974-1989). El papel del capital extranjero y la estrategia nacional de desarrollo*, 1992, 163 pp.
- 87 *Análisis de cadenas agroindustriales en Ecuador y Perú*, 1993, 294 pp.
- 88 *El comercio de manufacturas de América Latina. Evolución y estructura 1962-1989*, 1993, 150, pp.
- 89 *El impacto económico y social de las migraciones en Centroamérica*, 1993, 78 pp.
- 90 *El papel de las empresas transnacionales en la reestructuración industrial de Colombia: una síntesis*, 1993, 131 pp.
- 91 *Las empresas transnacionales de una economía en transición: La experiencia argentina en los años ochenta*, 1995, 193 pp.
- 92 *Reestructuración y desarrollo productivo: desafío y potencial para los años noventa*, 1994, 108 pp.
- 93 *Comercio internacional y medio ambiente. La discusión actual*, 1995, 112 pp.
- 94 *Innovación en tecnologías y sistemas de gestión ambientales en empresas líderes latinoamericanas*, 1995, 206 pp.
- 95 *México: la industria maquiladora*, 1996, 237 pp.

Serie INFOPLAN: Temas Especiales del Desarrollo

- 1 *Resúmenes de documentos sobre deuda externa*, 1986, 324 pp.
- 2 *Resúmenes de documentos sobre cooperación entre países en desarrollo*, 1986, 189 pp.
- 3 *Resúmenes de documentos sobre recursos hídricos*, 1987, 290 pp.
- 4 *Resúmenes de documentos sobre planificación y medio ambiente*, 1987, 111 pp.
- 5 *Resúmenes de documentos sobre integración económica en América Latina y el Caribe*, 1987, 273 pp.
- 6 *Resúmenes de documentos sobre cooperación entre países en desarrollo, II parte*, 1988, 146 pp.
- 7 *Documentos sobre privatización con énfasis en América Latina*, 1991, 82 pp.
- 8 *Reseñas de documentos sobre desarrollo ambientalmente sustentable*, 1992, 217 pp.
- 9 *MERCOSUR: resúmenes de documentos*, 1993, 119 pp.
- 10 *Políticas sociales: resúmenes de documentos*, 1995, 95 pp.
- 11 *Modernización del Estado: resúmenes de documentos*, 1995, 73 pp.
- 12 *Gestión de la información: reseñas de documentos*, 1996, 152 pp.
- 13 *Políticas sociales: resúmenes de documentos II*, 1997, 80 pp.

ISSN 0147-5967

Volume 23, Number 2, October 1996

Journal of COMPARATIVE ECONOMICS

The Journal of the Association for Comparative Economic Studies

Co-Editors: John P. Bonin, Wesleyan University
Josef C. Brada, Arizona State University

Editorial Board:

Philippe Aghion	W. Bentley MacLeod
Michael Alexeev	Ronald McKinnon
Avner Ben-Ner	Janet Mitchell
Abram Bergson	J. Michael Montias
Elizabeth Clayton	Richard D. Portes
Stanley Fischer	Thomas G. Rawski
Paul G. Hare	Gérard Roland
Gary Jefferson	Gianpaolo Rossini
Karel Kouba	Jeffrey Sachs
Marie Lavigne	Judith Thornton

Founding Editor: John Michael Montias



ACADEMIC PRESS

San Diego New York Boston
London Sydney Tokyo Toronto

Fulltext Journals
on the Internet
<http://www.ideallibrary.com/>
<http://www.europe.ideallibrary.com/>

Academic Press
Online Journal Library

JOURNAL OF FINANCIAL MANAGEMENT AND ANALYSIS (JFMA)
INTERNATIONAL REVIEW OF FINANCE

AIM : The JFMA -- a refereed journal -- offers techniques and new concepts backed up by case studies and new methodologies and provides a bridge between financial management theory and practice. The Journal is an indispensable decision kit for finance practitioners, policy makers and scholarly community from developed and developing countries and for those directly concerned with today's critical issues in financial management, and offers a unique opportunity to contribute your own expertise to develop the financial management science.

JFMA focuses on financial management issues confronting MNC-controlled and MNC-dependent developed and developing countries, by providing a forum facilitating the development of the science of financial management.

RECENT ISSUES : Each issue contains unique financial management issues like :

- World Bank Financing Methods Need Overhauling
- Punctured Investment Tyre Widens Liquidity Gap
- Banking Development : A Panacea for Stock Market Crash
- Overcapitalisation (Locked-Up Capital) Breeds Inflation
- India's 'Self-Reliance' Strategy Induces Venture Capital
- Punctured Investment Cycle Tyre Leads to Bank Mergers
- 'Priority Sector' Financing in India Needs Overhauling
- Good 'Political Risk' Induces Foreign Investment
- Non-Plan Expenditure Exerts Inflationary Pressures
- Good Business Ethics Germinates Sound Financial Management
- Do MNCs Follow Dharmic (Righteous) Management Codes?
- Does Open Door Policy-Induced Foreign Investment Mount External Debt?
- Does Net Present Value-Based Investment Derail 'Organic' Development Track?
- Do MNCs Engage in Arbitrage Using Gambler's Earnings Hypothesis?
- Does Abnormal Profit-Oriented Wage Differential Lead to Productivity Loss?
- Are G-7 Countries Expatriates in G-15 Countries?
- Does It Take Money to Make Money in Speculative Transactions?
- Depreciated Money Value Chases Abnormal Profit Earnings Through MNCs.

MANUSCRIPTS FOR SUBMISSION : Typed articles, in triplicate (including summary of the paper in 300 words), are invited on any aspect bearing on financial management from scholars and practising financial managers, planners, analysts, consultants and other professionals for consideration for publication in JFMA, with submission fee of U.S.\$ 15.

EDITORIAL BOARD CONSISTS OF : Eminent financial management experts from different countries of the world.

ANNUAL SUBSCRIPTION : U.S.\$ 85

Subscription and manuscript may be sent to :
Managing Editor, JFMA

Om Sai Ram Centre for Financial Management Research
15 Prakash Cooperative Housing Society, Relief Road
Santacruz (West), Mumbai - 400 054 INDIA

FRANK CASS

The Journal of Development Studies

Managing Editors

David Booth, *University of Hull, UK*

Christopher Colclough, *IDS, University of Sussex, UK*

Colin Kirkpatrick, *DPPC, University of Bradford, UK*

The Journal of Development Studies is one of the most well-known and well-established international journals in the area of development studies. Since its foundation in 1964, it has published many seminal articles on development and opened up many new areas of debate. Priority is given to papers which (a) are interdisciplinary, (b) provide critical tests, based on empirical work, of alternative theories, perspectives or schools of thought; and (c) are relevant to important issues in development policy. It also welcomes critical surveys of the literature in important fields of development policy and practice. Each issue keeps the reader up-to-date with the latest research and also contains reviews of recently-published books on development. Two Dudley Seers prizes are awarded annually for the best two articles published in the journal.

Recent Articles

Modules for Modernisation: Colonial Irrigation in India and the Technological Dimension of Agrarian Change by *Alex Bolding, Peter P Mollinga and Kees van Straaten*

Determinants of Smallholder Landownership: Evidence from South Sulawesi by *Marc Pomp*

Governance and Rural Development in Mexico: State Intervention and Public Accountability by *Jonathan Fox*

The Hazards of Small Firms in Southern Africa by *Michael A McPherson*

Community, Collective Action and Common Grazing: The Case of Post-Socialist Mongolia by *Robin Mearns*

What Happens to Industrial Structure When Countries Liberalise? Indonesia since the Mid-1980s by *H H Aswicahyono, Kelly Bird and Hall Hill*

ISSN 0022-0388 Volume 32 1995/1996

Six issues per year: October, December, February, April, June, August

Individuals £45/\$65 Institutions £155/\$195

UK/OVERSEAS ORDERS to: Frank Cass, 890-900 Eastern Avenue,

Hford, Essex IG2 7HH, UK. Tel: 0181 599 8866

Fax: 0181 599 0984 E-mail: sales@frankcass.com

US ORDERS to: Frank Cass, c/o ISBS,

5804 N E Hassalo Street, Portland, OR 97213-3644, USA.

Tel: (503) 287-3093, (800) 944-6190 Fax: (503) 280-8832 E-mail: orders@isbs.com

Frank Cass

The European Journal of Development Research

Journal of the European Association for Development Research
and Training Institutes (EADI)

Editor-in-chief

Helen O'Neill, University College Dublin, Eire

Managing Editor

Cristóbal Kay, Institute of Social Studies, The Hague, Netherlands

Book Reviews Editor

Thomas Hansen, Roskilde University, Denmark

The European Journal of Development Research aims to achieve the highest standards of debate and analysis on matters of policy, theory and practice, in all aspects of development studies. It exists particularly in order to publish research carried out in Europe or in co-operation with European institutions. All issues are special issues with a common theme in addition to 'free-standing' articles.

Recent Articles

How Safe are 'Social Safety Nets'? Adjustment and Social Sector Restructuring in Developing Countries by *Jessica Vivian*

Competition and Contracting in Selective Social Provisioning by *Maureen Mackintosh*

Structural Adjustment and Social Emergency Funds: The Cases of Honduras, Mexico and Nicaragua by *Lourdes Benería and Breny Mendoza*

North-South Relations in the Process of Change: The Significance of International Civil Society by *Gorm Rye Olsen*

Globalisation, Regionalism and the South in the 1990s: Towards a new Political Economy of Development by *Timothy M Shaw*

A Comparison of Four Development Models in Latin America by *Chris van der Borgh*

ISSN 0957-8811 Volume 8 1996

Two issues per year: June, December

Individuals £36/\$55 Institutions £70/\$95

UK/OVERSEAS ORDERS to: Frank Cass, 890-900 Eastern Avenue,
Ilford, Essex IG2 7HH, UK Tel 0181 599 8866

Fax 0181 599 0984 E-mail jnlsubs@frankcass.com

US ORDERS to: Frank Cass, c/o ISBS

5804 N E Hassalo Street Portland, OR 97213-3644, USA

Tel (503) 287-3093, (800) 944-6190 Fax (503) 280-8832 E-mail orders@isbs.com

Our issues cover your issues

The Institute of Development Studies produces a range of publications on development issues, including:

- IDS Bulletin
- IDS Discussion Papers
- IDS Policy Briefings
- IDS Working Papers
- IDS Research Reports
- IDS Development Bibliographies

Send for your free Publications Catalogue

Back issues (for up to five years) can be purchased from the IDS Publications Office. Full details can be found in the free Publications Catalogue, which also has information on books written by IDS members. Please send catalogue requests to:

Publications Office (Catalogues)
Institute of Development Studies
at the University of Sussex
Brighton BN1 9RE, UK



Tel: (01273) 678269 (Intl +44 1273)

Fax: (01273) 621202/691647

E-mail: ids.books@sussex.ac.uk

THIRD WORLD QUARTERLY

Journal of Emerging Areas



EDITOR

Shahid Qadir,
Royal Holloway,
University of London,
UK

Supported by an
International Editorial
Board

*Third World
Quarterly* is the

leading journal of scholarship and policy in the field of international studies. For almost two decades, it has set the agenda on Third World affairs. As the most influential academic journal covering the emerging world, *Third World Quarterly* is at the forefront of analysis and commentary on fundamental issues of global concern.

Third World Quarterly provides expert and interdisciplinary insight into crucial issues before they impinge upon media attention, as well as coverage of the latest publications in its comprehensive book review section.

Third World Quarterly's original articles provide diverse perspectives on the developmental process and a candid discussion of democratic transitions as well as identifying significant political, economic and

social issues. Readable, free from esoteric jargon, informed without being abstruse, always authoritative and often provocative, *Third World Quarterly* covers the key North-South developments in the post-Wall world.

SPECIAL ISSUES

Third World Quarterly annually commissions special issues on key concepts and processes. The 1997 Special Issue will be entitled *Tempering Collaboration: UN task-sharing with regional arrangements and non-governmental organizations for security and services*.

SUBSCRIPTION RATES

Volume 18, 1997, 5 issues. ISSN 0143-6597.

Institutional rate:

EU £184.00; Outside EU £198.00;
North America US\$334.00.

Personal rate:

EU £46.00; Outside EU £46.00;
North America US\$82.00.

Third World Quarterly is also available in electronic form over the Internet. For further information on how to subscribe and to view the journal, please connect to:
<http://www.catchword.co.uk>

ORDER FORM

Please send a completed copy of this form, with the appropriate payment, to the address below:

Name _____

Address _____

Visit the Carfax Home Page at:
<http://www.carfax.co.uk>

UK Tel: +44 (0)1235 521154
UK Fax: +44 (0)1235 401550
E-mail: sales@carfax.co.uk



Carfax Publishing Company · PO Box 25 · Abingdon · Oxfordshire OX14 3UE · UK

Journal of Latin American Studies

Now in its 29th year of publication

Over the past twenty eight years this prestigious, international journal has established itself at the forefront of its field. Its interdisciplinary approach and breadth of coverage have made it a vital forum for the exchange of ideas.

Coverage

Contributions come from a wide variety of disciplines:

- history
- economic history
- economics
- geography
- international relations
- politics
- social anthropology
- sociology

Book reviews

Journal of Latin American Studies has an extensive book review section which aims to review all major new publications in the field. It is invaluable for students of Latin America in all its aspects.

Features:

- Many articles on contemporary themes
- Fast publication time
- Extensive book review section
- Reviews and commentaries appearing close to the date of publication
- Occasional special issues

Subscription

Volume 29, 1997 published in February, May and October: £84 for institutions; £43 for individuals; £29 for SLAS/LASA members; £26 for students; prices include delivery by air. ISSN 0022-216X.

52705

Further information

Please send me a sample copy/ information on *Journal of Latin American Studies*

Name _____

Address _____

Send to: Journals Marketing Department,
Cambridge University Press, The Edinburgh
Building, Cambridge,
CB2 2RU, UK.
Tel: +44 (0)1223 325806
Fax: +44 (0)1223 315052
E-mail: journals_marketing@cup.cam.ac.uk
In USA, Canada & Mexico write to:
Cambridge University Press, 40 West 20th
Street, New York, NY 10011-4211, USA



CAMBRIDGE
UNIVERSITY PRESS



LATIN AMERICAN RESEARCH REVIEW

*An interdisciplinary journal concerned
with scholarly studies of Latin America*

Articles, Review Essays, Research Reports & Notes

Gilbert W. Merkk

Editor

Jon M. Tolman

Associate Editor

Karen L. Remmer

Associate Editor

Sharon Kellum

Managing Editor

The Latin American Studies Association publishes the **LATIN AMERICAN RESEARCH REVIEW** three times a year to improve communication among individuals and institutions concerned with scholarly studies of Latin America. Subscription rates and further information may be obtained from the LARR office.

LATIN AMERICAN RESEARCH REVIEW

Latin American Institute
801 Yale N.E.
University of New Mexico
Albuquerque, New Mexico 87131

Telephone: (505) 277-5985
FAX: (505) 277-5989



ASR

AMERICAN SOCIOLOGICAL REVIEW

PAULA ENGLAND, EDITOR

The *American Sociological Review* (bimonthly, ISSN 0003-1224) publishes original work of interest to the discipline in general, new theoretical developments, results of research that advance our understanding of fundamental social processes, and important methodological innovations. Like other ASA publications, the emphasis is on exceptional quality. Unlike the more specialized journals, the primary objective of ASR is to publish work that most advances our general knowledge of society. Recent or forthcoming issues include:

Variations in Tax Progressivity in the United States, 1916 to 1986
Michael Patrick Allen and John L. Campbell

Spousal Alternatives and Marital Dissolution
Scott J. South and Kim M. Lloyd

■ **Collective Action and Network Structure**
Roger Gould

■ **Does Economic Growth Benefit the Masses?**
Glenn Firebaugh and Frank D. Beck

■ **Social Networks and Organizational Dynamics**
J. Miller McPherson, Pamela Popielarz, and Sonja Drobnic

■ **The Epidemiology of Social Stress**
R. Jay Turner, Blair Wheaton, and Donald A. Lloyd

■ **Career Mobility and the Communist Political Order**
Andrew G. Walder

■ **Habermas, Goffman, and Communicative Action**
James J. Chriss

■ **Cohort Size and Arrest Rates Over the Life Course: Easterlin Reconsidered**
Darrell Steffensmeier, Cathy Streifel, and Edward Shidadeh

1996 subscription rates: ASA members \$30, nonmembers \$60, institutions \$120. Add \$15 for subscriptions outside the U.S. Single issues available. The ASA offers a 10% discount to agents ordering on the behalf of libraries and institutions.

AMERICAN SOCIOLOGICAL ASSOCIATION
1722 N Street NW, Washington, DC 20036, (202) 833-3410

THE INDIAN JOURNAL OF LABOUR ECONOMICS

The Journal, in print since 1958, is published quarterly as the organ of the Indian Society of Labour Economics. The chief aim of the Journal is to promote scientific studies in labour economics, industrial relations, trade unionism and related topics. It publishes research articles, notes and book reviews on these subjects, particularly in the context of India and other developing countries.

Recent articles published in the Journal include

Vol. 38, No. 1, 1995: Trade Unions Response to Changing Times by P.A. Sangma; Attack on Poverty and Deprivation: Role of Structural Change and Structural Adjustment by C.H. Hanumantha Rao; A Note on Measurement and Use of Poverty Estimates by Yoginder K. Alagh; Reforms and Employment by A.M. Khusro; Development and Employment by S.R. Haahim; Labour Market Flexibility and the Indian Economy by Ajit K Ghose; Economic Growth, Rural Labour markets and Rural Poverty: Understanding the Linkages by Indira Hirway; Flexibility as an Aspect of Work Culture by C.S. Venkata Ratnam; Poverty Alleviation Programmes and the Dynamics of Rural Women's Labour Force participation: Two Case Studies from DWCR, Bihar by Sujata Prasad.

Vol. 38, No. 2, 1995: Safety Net of the National Renewal Fund: Some Basic Issues by Indira Hirway; Unemployment and Large-scale Industries: A Historical Study of the Roots of Labour Surplus in the Jute Industry by Arjan de Haan; Does Women's Time Allocation Respond to Economic Incentives? Evidence from a Developing and a Developed Country by P. Duraisamy and Malathy Duraisamy; Employer-Employee Relations: Need for Transition in Values by Sanjay Modi, K.C. Singhal & Umesh C. Singh; Human Resource Allocation and Education-Employment Trade-offs by Shri Prakash & Ranita Dutta; Employment Trends in Agro-Climat Resource Regions by Niti Mathur; Graduate Employment: The Earning Aspect by Baldev Singh; Trends, Pattern and Characteristics of Indian Labour Migration to the Middle East during the Twentieth Century by S.K. Sasikumar.

Vol. 38, No. 3, 1995: Special Issue on Rural Labour Market Interventions (Guest Editor: R. Radhakrishna): Policies for Rural Labour: From Relief to Structural Change by V.M. Rao; The Informal Sector Reconsidered by J. Breman; Government Interventions and Social Security for Rural Labour by S. Mahendra Dev; Unionising Agricultural Labour: Some Issues by Sucha Singh Gill; State and Union Intervention in Rural Labour: A Study of Kerala by K.P. Kannan; Union Intervention in Rural Labour markets: The Experience of Andhra Pradesh by D. Narasimha Reddy; Peasant Mobilisation in Bihar: Implications for Rural Labour Markets by Alakh N. Sharma & Ajay Kumar; Labour Institutions in Backward Agriculture: Need for Intervention by M. Krishnalak; Self-Employment and Capacity Enhancing programmes by N.J. Kurlan & P.V. Rajeev; An Assessment of Wage-Employment Programmes: JRY & EAS by Rohini Nayyar; Rural Employment Guarantee Scheme of Andhra Pradesh by S. Sudhakar Reddy & M.C. Swaminathan.

Vol. 38, No. 4, 1995 (Conference Issue): Contains 24 full articles and abstracts of 39 articles on the 37th Labour Economics Conference Topics.

Topics: Structural Adjustment, Labour Market and Poverty *Employment in Service Sector *Organising the Unorganised Workers.

The issues also include sections on research notes, communications, labour statistics and usual book reviews.

ANNUAL SUBSCRIPTION RATES

	India	Abroad
Individual	Rs. 150	US\$ 35
Institutional	Rs. 300	US\$ 55

Payments in the form of bank draft/cheque may be sent in favour of The Indian Journal of Labour Economics. Rs. 12/US\$ 3 should be added extra in case of outstation cheques.

All editorial and business correspondence should be done with the Editor/Managing Editor, The Indian Journal of Labour Economics, c/o Institute of Applied Management Research, I.P. Estate, Mahatma Gandhi Marg, New Delhi - 110002. Phone/Fax: 3319009.

كيفية الحصول على منشورات الأمم المتحدة

يمكن الحصول على منشورات الأمم المتحدة من المكتبات ودور التوزيع في جميع أنحاء العالم. استعلم منها من المكتبة التي تسأل عنها أو اكتب إلى : الأمم المتحدة، قسم البيع في نيويورك أو في جنيف.

如何获取联合国出版物

联合国出版物在世界各地书店和经销处均有发售。请向书店询问或写信到纽约或日内瓦的联合国销售处。

HOW TO OBTAIN UNITED NATIONS PUBLICATIONS

United Nations publications may be obtained from bookstores and distributors throughout the world. Consult your bookstore or write to: United Nations, Sales Section, New York or Geneva.

COMMENT SE PROCURER LES PUBLICATIONS DES NATIONS UNIES

Les publications des Nations Unies sont en vente dans les librairies et les agences dépositaires du monde entier. Informez-vous auprès de votre libraire ou adressez-vous à : Nations Unies, Section des ventes, New York ou Genève.

КАК ПОЛУЧИТЬ ИЗДАНИЯ ОРГАНИЗАЦИИ ОБЪЕДИНЕННЫХ НАЦИЙ

Издания Организации Объединенных Наций можно купить в книжных магазинах и агентствах во всех районах мира. Наводите справки об изданиях в вашем книжном магазине или пишите по адресу: Организация Объединенных Наций, Секция по продаже изданий, Нью-Йорк или Женева.

COMO CONSEGUIR PUBLICACIONES DE LAS NACIONES UNIDAS

Las publicaciones de las Naciones Unidas están en venta en librerías y casas distribuidoras en todas partes del mundo. Consulte a su librero o diríjase a: Naciones Unidas, Sección de Ventas, Nueva York o Ginebra.

Las publicaciones de la Comisión Económica para América Latina y el Caribe (CEPAL) y las del Instituto Latinoamericano y del Caribe de Planificación Económica y Social (ILPES) se pueden adquirir a los distribuidores locales o directamente a través de:

Publicaciones de las Naciones Unidas
Sección de Ventas - DC 2-0853
Fax (212)963-3489
Nueva York, NY, 10017
Estados Unidos de América

Publicaciones de las Naciones Unidas
Sección de Ventas, Fax (22)917-0027
Palais des Nations
1211 Ginebra 10, Suiza

Unidad de Distribución
CEPAL - Casilla 179-D
Fax (562)208-1946
Santiago de Chile

Publications of the Economic Commission for Latin America and the Caribbean (ECLAC) and those of the Latin American and the Caribbean Institute for Economic and Social Planning (ILPES) can be ordered from your local distributor or directly through:

United Nations Publications
Sales Section, DC 2-0853
Fax (212)963-3489
New York, NY, 10017
USA

United Nations Publications
Sales Section, Fax (22)917-0027
Palais des Nations
1211 Geneva 10, Switzerland

Distribution Unit
CEPAL - Casilla 179-D
Fax (562)208-1946
Santiago, Chile