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International financial *reform: the* broad agenda

José Antonio Ocampo

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This paper argues that the agenda for international financial reform must be broadened in at least two senses. First of all, it should go beyond the issues of financial crisis prevention and resolution, to those associated with development finance for poor and small countries and to the "ownership" of economic and development policies by countries. Secondly, it should consider not only the role of world institutions but also of regional arrangements and the explicit definition of areas where national autonomy should be maintained. These issues should be tabled in a representative, balanced negotiation process capable of overcoming some of the adverse political economy features that characterize the current debate. After some initial considerations of the nature of the problems that the current system faces and some political economy aspects, the author addresses the following issues: i) the reforms relating to the prevention and resolution of financial crises; ii) the role of development finance, including the use of multilateral development finance to support increased participation of low-income and small middle-income countries in private capital markets and the financing of social safety nets during crises; iii) the need to reach a renewed international agreement on the limits of conditionality and full recognition of the central role of the "ownership" of development and macroeconomic policies by developing countries; iv) the role of regional and subregional institutions in increasing the supply of "global public goods" and other services in the area of international finance; and v) the need to maintain several realms of national autonomy, including capital account regulation and the choice of exchange rate regimes. The author argues that regional institutions and national autonomy are particularly important for the smaller players in the international arena, who would gain significantly from competition in the services provided to them and from the maintenance of freedom of action in a context of imperfect supply of global public goods.

I

Introduction

The recent phase of financial turmoil that started in Asia, crossed through Russia and reached Latin America generated a deep sense that fundamental reforms were required in the international financial architecture to prevent financial crises and improve their management when they occur. The crisis led, indeed, to the recognition that there is an enormous discrepancy between the sophisticated and dynamic financial world and the institutions that regulate it, and that "existing institutions are inadequate to deal with financial globalization".[1]

The crisis gave rise to some positive responses: a concerted expansionary effort led by the United States, which was probably the crucial step that facilitated the fairly rapid though incomplete normalization of capital markets; the approval of new credit lines and the expansion of International Monetary Fund (IMF) resources; the recognition that incentives must be created to induce more suitable debt profiles in developing countries; a special boost for international efforts to establish minimum standards of prudential regulation and supervision, as well as of information; the partial acceptance by the IMF that fiscal overkill is inappropriate in adjustment programmes; the improvement of the Highly Indebted Poor Countries (HIPC) Initiative; and the greater emphasis given to the design of adequate social safety nets in developing countries. Some responses were positive but do not seem to be leading in any clear direction (or even seem to be leading in the wrong one). This is the case of the adoption of collective action clauses in issues of external debt securities, as an essential step to facilitate internationally agreed debt standstills and workout procedures. In some cases, the responses were insufficient or clearly inadequate: IMF conditionality was further extended; the issues associated with stable arrangements to guarantee the coherence of the macroeconomic policies of industrialized countries did not receive sufficient scrutiny; the Japanese proposal to create an Asian Monetary Fund gave rise to undeservedly strong opposition that led to its rapid dismissal; more generally, the role that regional institutions can play in an appropriate international financial arrangement was not given adequate attention; and no steps were taken to ensure the fair representation of developing countries in the discussions on reform or in a revised international architecture.

The fairly rapid normalization of capital markets seems to be giving way to a sense of complacency that could slow down the reform effort. Moreover, it may lead efforts in the wrong direction, as for example in giving give new impetus to discussions on capital account convertibility. On the other hand, the calmer environment could be taken as an opportunity to broaden the agenda and to set in motion a representative, balanced negotiation process. The agenda should be broadened in at least two senses: first of all, it should go beyond the issues of financial crisis prevention and resolution (which may be termed the "narrow" financial architecture)[2] to include those associated with development finance and the "ownership" by the countries of economic and, particularly, development policies; secondly, it should consider, in a systematic fashion, not only the role of world institutions, but also that of regional arrangements and

□ This article is partly based on the Report of the Task Force of the Executive Committee on Economic and Social Affairs of the United Nations (United Nations, Task Force, 1999a), of which the author was Coordinator, as well as on two later studies (Ocampo, 1999a and 1999b) and a study carried out jointly with Stephany Griffith-Jones (Griffith-Jones and Ocampo, 1999), with the support of the Ministry of Foreign Affairs of Sweden. The discussions at the meeting organized by the International Development Research Centre (IDRC) in Ottawa, Canada, in preparation for a large-scale project on international financial reform, were very useful in clarifying some of the issues addressed in this paper. The author wishes to thank Oscar Altimir, Reynaldo Bajraj, Nicolás Eyzaguirre, Günther Held, Gerald K. Helleiner and the participants in a workshop on the World Financial Authority held at the New School for Social Research in New York for their comments on a previous draft of this study, and Guillermo Mundt and Camilo Tovar for their elaboration of the data included in section II.

[1] United Nations, Report of the Task Force of the Executive Committee on Economic and Social Affairs (1999a, section I).

[2] Ocampo (1999a).

the areas where national autonomy should be maintained. This is the focus of this paper. The following two sections present brief introductory reflections on the nature of the problems that the system faces and the political economy of the reform effort. The paper then goes on to deal with crisis prevention and management, development finance, the issue of conditionality versus "ownership" of policies, which concerns both sides, the role of regional institutions, and national regulations and autonomy.

II

The nature of the problems facing the system

International capital flows to developing countries have exhibited four outstanding features in the 1990s.[3] First of all, official and private flows have shown opposite patterns: whereas the former have tended to decline, private capital flows have experienced rapid medium-term growth. Secondly, different private flows have exhibited striking differences in terms of stability. Thirdly, private flows have been concentrated in middle-income countries, with official flows playing only a very partial redistributive role at the world level. Finally, the instability of private financial flows has required the design of major emergency rescue packages, of unprecedented size, which have concentrated funds in a few large "emerging" economies.

The first two patterns are shown in table 1. Both foreign direct investment (FDI) and all types of private financial flows have registered strong medium-term growth. However, these flows have exhibited striking differences in terms of stability: whereas FDI has been resilient in the face of crises, private financial flows have experienced strong volatility and "contagion" effects. In contrast, official development finance and particularly its largest component, bilateral aid, has lagged behind. Indeed, bilateral aid has fallen in real terms throughout the decade, and in 1998 it is estimated to have amounted to only 0.22% of the GDP of industrialized countries: a significant fall with respect to the 0.35% of GDP reached in the mid-1980s.[4] The reduction in bilateral aid has been strongest in the case of the largest industrialized countries, though this trend has been partly offset, in terms of effective resource transfers, by the increasing share of grants in official development assistance. Also, contrary to private flows, official finance has not been pro-cyclical and, indeed, some components of it –particularly balance of payments support but also multilateral development finance– have displayed counter-cyclical behaviour.

The third pattern is shown in table 2. Private flows have been strongly concentrated in middle-income countries. The share of low-income nations in private financing has been lower than their share in the total population of developing countries, which was to be expected, but it is also lower than their share in developing countries' GDP. This situation is particularly striking in the case of bond financing, commercial banking and portfolio flows, if India is excluded in the latter case. In all these cases, private financing to poor countries is minimal. The share of low-income countries in FDI is also smaller than their contribution to developing countries' GDP. Moreover, a striking feature of FDI is its high concentration in China, which, on the contrary, receives a smaller proportion of financial flows. The high concentration of the most volatile flows in middle-income countries, excluding China, has meant in turn that questions of financial volatility and contagion have become particularly important for them.

Low-income countries have thus been marginalized from private flows and have continued to depend on declining official resource flows. More specifically, they have been strongly dependent on official development assistance, particularly grants, coming mostly in the form of bilateral aid. If we again exclude India, this is the only component of the net resource flows to developing countries that is highly progressive, in the sense that the share of low-income countries exceeds not only their share in

[3] For a full evaluation of these trends, see UNCTAD (1999, chapters III and V) and World Bank (1999).
[4] World Bank, 1999, chap. 4, p. 70.

TABLE 1

Net long-term resource flows to developing countries,[a] 1990-1998
(Billions of dollars)

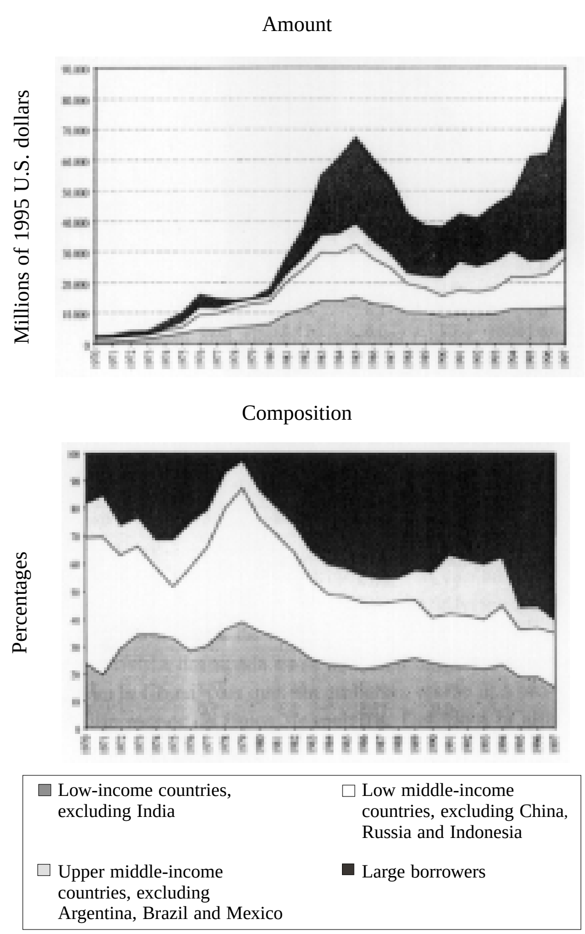
	1990	1991	1992	1993	1994	1995	1996	1997	1998[b]
Net long-term resource flows	*100.8*	*123.1*	*152.3*	*220.2*	*223.6*	*254.9*	*308.1*	*338.1*	*275.0*
Official	56.9	62.6	54.0	53.3	45.5	53.4	32.2	39.1	47.9
Private	43.9	60.5	98.3	167.0	178.1	201.5	275.9	299.0	227.1
From international capital markets	19.4	26.2	52.2	100.0	89.6	96.1	149.5	135.5	72.1
Private debt flows	15.7	18.6	38.1	49.0	54.4	60.0	100.3	105.3	58.0
Commercial banks	3.2	4.8	16.3	3.3	13.9	32.4	43.7	60.1	25.1
Bonds	1.2	10.8	11.1	37.0	36.7	26.6	53.5	42.6	30.2
Other	11.4	3.0	10.7	8.6	3.7	1.0	3.0	2.6	2.7
Portfolio equity flows	3.7	7.6	14.1	51.0	35.2	36.1	49.2	30.2	14.1
Foreign direct investment	24.5	34.4	46.1	67.0	88.5	105.4	126.4	163.4	155.0

Source: World Bank, *Global Development Finance 1999*.
[a] Net long-term resource flows are defined as net liability transactions of original maturity greater than one year. Although the Republic of Korea is a high-income country, it is included in the developing country aggregate since it is a borrower from the World Bank.
[b] Preliminary.

developing countries' GDP but also in population. This is also true of multilateral financing, excluding the IMF.

The volatility of private financial flows, on the one hand, and their strong concentration in middle-income countries, on the other, have jointly generated the need for exceptional financing on an unprecedented scale, which has been concentrated in a few "emerging" countries. As a result, IMF (including Enhanced Structural Adjustment Facility) financing has exhibited strong counter-cyclical behaviour compared with private flows but has been concentrated in a few countries. As figure 1 indicates, both patterns are closely associated, as cyclical borrowing by a few countries is the major determinant of the overall cyclical pattern. This latter feature has become even more marked in recent years. Thus, whereas India and the three largest Latin American borrowers received less than half of net real flows from the Fund in 1980-1984, net real flows to only four large borrowers (Indonesia, Republic of Korea, the Russian Federation and Mexico) have in fact exceeded by a small margin the total net real flows from the Fund in 1995-1997. As a result, the share of IMF financing going to large borrowers[5] has displayed a strong upward trend over the past two

FIGURE 1
Use of IMF credit, 1970-1997



[5] This group includes Argentina, Brazil, China, Indonesia, India, Republic of Korea, Mexico and the Russian Federation.

TABLE 2

Net flow of resources, 1992-1997

(Annual averages, billions of dollars and percentages)

	Foreign direct investment		Portfolio equity flows		Grants		Bilateral financing		Multilateral financing (excluding IMF)	
	Amount	Percentage	Amount	Percentage	Amount	Percentage	Amount	Percentage	Amount	Percentage
Developing countries	*99.0*	*100.0*	*35.7*	*100.0*	*29.7*	*100.0*	*2.9*	*100.0*	*13.7*	*100.0*
Excluding China	66.8	67.5	31.7	88.9	29.4	99.0	0.5	19.0	11.6	84.5
Low-income countries	*6.7*	*6.8*	*3.4*	*9.5*	*15.8*	*53.2*	*0.8*	*27.1*	*5.9*	*43.4*
India	1.6	1.6	2.5	6.9	0.6	1.9	-0.3	-11.3	1.0	7.4
Other countries	5.1	5.2	0.9	2.6	15.2	51.3	1.1	38.4	4.9	36.0
China [a]	*32.1*	*32.5*	*3.9*	*11.1*	*0.3*	*1.0*	*2.3*	*81.0*	*2.1*	*15.5*
Middle-income countries	*60.1*	*60.8*	*28.3*	*79.4*	*13.7*	*46.1*	*-0.2*	*-8.1*	*5.6*	*41.1*
Argentina	4.4	4.5	1.7	4.9	-	0.1	-0.1	-3.2	0.9	6.6
Brazil	7.7	7.7	4.1	11.5	0.1	0.2	-1.3	-43.4	-0.1	-0.6
Russian Federation	1.9	1.9	1.1	3.1	1.1	3.7	0.6	21.4	0.9	6.2
Indonesia	3.5	3.6	2.4	6.8	0.2	0.8	1.2	41.7	0.1	0.9
Republic of Korea [b]	1.5	1.5	3.1	8.8	-	-	-0.2	-5.4	0.6	4.1
Mexico	8.1	8.2	5.1	14.3	-	0.1	-0.6	-21.4	0.3	2.2
Other countries	33.0	33.3	10.7	30.1	12.2	41.2	0.1	2.2	3.0	21.7

	Bonds		Commercial bank loans		Other loans		Total		Memo:	
	Amount	Percentage	Amount	Percentage	Amount	Percentage	Amount	Percentage	GDP	Population
Developing countries	*34.6*	*100.0*	*28.3*	*100.0*	*4.9*	*100.0*	*248.7*	*100.0*	*100.0*	*100.0*
Excluding China	32.9	95.2	26.6	94.0	1.1	21.4	200.7	80.7	89.2	74.8
Low-income countries	*0.5*	*1.5*	*0.9*	*3.3*	*0.4*	*7.2*	*34.5*	*13.9*	*11.4*	*41.0*
India	0.4	1.1	0.8	2.8	0.4	8.9	6.9	2.8	5.6	19.3
Other countries	0.2	0.4	0.2	0.6	-0.1	-1.7	27.6	11.1	5.8	21.7
China [a]	*1.7*	*4.8*	*1.7*	*6.0*	*3.9*	*78.6*	*48.0*	*19.3*	*10.8*	*25.2*
Middle-income countries	*32.4*	*93.7*	*25.7*	*90.7*	*0.7*	*14.2*	*166.3*	*66.9*	*77.8*	*33.9*
Argentina	5.5	15.9	0.8	2.9	-	-0.9	13.3	5.3	5.0	0.7
Brazil	3.1	9.0	8.2	29.0	-0.6	-11.3	21.2	8.5	10.5	3.3
Russian Federation	0.8	2.2	0.3	1.1	1.4	28.7	8.1	3.2	7.3	3.1
Indonesia	1.6	4.7	0.9	3.2	0.2	3.7	10.2	4.1	3.4	4.0
Republic of Korea [b]	4.5	12.9	4.1	14.5	-0.2	-4.8	13.4	5.4	7.3	0.9
Mexico	5.2	15.2	0.3	1.1	-0.3	-6.9	18.2	7.3	6.7	1.9
Other countries	11.7	33.8	11.0	38.9	0.3	5.6	81.9	32.9	37.6	19.8

Source: World Bank, *Global Development Finance, 1999*, Washington , D.C., March 1999 and *World Economic Indicators*, Washington, D.C., 1998 for GDP and population data.

[a] The World Bank considered China as a low-income country until 1998. Since 1999 it has been classified as a middle-income country. In this table it is considered in a separate category.

[b] The World Bank classifies it as a high-income country, but it is included as a middle-income country in *Global Development Finance, 1999*.

decades. Indeed, in recent years, the IMF financing data underestimate the magnitude of emergency financing to large borrowers, as the bilateral contributions to the rescue packages of six nations (Indonesia, Republic of Korea, Thailand, Russia, Brazil and Mexico) are not included in the figures.[6]

Strictly speaking, however, "crowding out" by the largest borrowers does not seem to have taken place, as overall Fund financing has responded elastically to the needs of these large borrowers, with financing to other poorer or smaller middle-income countries remaining unchanged or even increasing marginally when they also require additional balance of payments financing. This was the case in the 1980s for much of the developing world and has also been true of the supply of finance to the medium-sized Asia-Pacific nations in recent years. In any case, IMF and counterpart bilateral liquidity financing have complemented private funds throughout the business cycle. Given the high concentration of private financing in middle-income countries, this has led to a similar pattern of concentration in the case of official liquidity financing. In the context of a significant scarcity of official finance for low-income countries, the high concentration of balance of payments financing in a few large "emerging" economies raises significant concern about the overall rationality governing the distribution of global capital flows, including even official flows. It certainly raises questions about whether the problems of the largest developing countries generate specific biases in the response of the international community.

Thus, although the volatility and contagion exhibited by private capital flows, which have been at the centre of recent debates, are certainly a matter for concern, no less important problems are the marginalization of the poorest countries from private capital flows and the decline in the bilateral aid on which they largely depend. International financial reforms must thus be focused also on guaranteeing solutions to all these problems. Moreover, the debt overhang of many developing countries, particularly poor ones, continues to weigh heavily on their development possibilities.

III

Some reflections on the political economy of the reform process

The nature of the current controversies regarding international financial reform reflects three features of the political economy of the globalization process which is under way. The first is the reluctance of most countries, both industrialized and developing countries alike, to give up economic sovereignty to international organizations. Under the influence of the strong market forces characteristic of globalization, which tend to weaken the nation-State, and the concomitant unilateral national liberalization processes that many countries have followed, government regulations have lost ground all over the world. Many analysts perceive this result as an advance, but it is also a source of significant distortions and risks. Indeed, the issues associated with capital flows that are discussed in section IV below are a good example of cases where most analysts agree that inadequate regulation –both national and international– has been an essential determinant of market instability. Another good example is that of "fair trade" rules, such as antidumping and countervailing duties, which, when applied at the national level, are generally suboptimal compared with other forms of regulating competition, such as antitrust provisions, and may create distortions of their own, even if applied within World Trade Organization rules. National restrictions on labour mobility also generate distortions, and the asymmetric character of factor mobility (i.e., the greater mobility of capital and skilled labour versus unskilled labour) generates strong adverse income distribution pressures worldwide.[7]

[6] It must be emphasized, however, that in rescue packages pledged bilateral financing tends to be disbursed in smaller proportions than the corresponding multilateral finance.

[7] With regard to this latter point, see Rodrik (1997).

The second feature is the disorganization of the actors, particularly developing countries, in the international policy debate. This may be a reflection of the weakening of the historical mechanisms of concerted action (such as the Group of 77), but it also reflects the "policy competition" that globalization itself has generated: the great incentive that each country has to claim that it is more attractive for investment in an era of mobile capital and a decline in the importance of traditional production location factors. This has raised the costs of generating international coalitions and implies that the international agenda may tend to be even more biased than it traditionally has been towards the largest countries and best organized coalitions, which are unlikely to fully internalize the effects that their policies and agendas have on the rest of the world. It should probably be added that, although open regionalism is also a feature of globalization, and strong integration forces have been at work in many parts of the developing world (e.g., Latin America and Southeast Asia), this has not led to strong developing-country coalitions. The fact is that, the European Union aside, countries are also unwilling to give up their sovereignty even to regional institutions.

The disorganization of the actors is closely associated with a third feature of globalization: the incomplete and even lopsided character of the international policy agenda that accompanies the process, i.e., the strong thrust in some directions but, on the contrary, a disregard for others that should equally be part of a more balanced globalization process. Four issues figure predominantly in the agenda: free trade, intellectual property rights, investment protection and capital account liberalization. The latter has been subject to some reservations in the light of the recent crises: it should be gradual, emphasis should be given to longer-term flows, and strong prudential regulations and supervision should precede it. Other issues are conspicuously left aside: labour mobility, international rules on capital taxation (essential to guarantee adequate taxation of this highly mobile factor), the design of truly international rules on competition and codes of conduct for multinational firms, and compensatory financing and technology transfers to guarantee the inclusion of those countries which tend to be left behind in the globalization process.

These political economy elements have major implications for international financial reform. The most obvious are that there are only likely to be weak pressures for substantial reform,[8] that designing a balanced negotiation process will be a complex business, and that negotiation processes may underestimate or bypass altogether the interests of certain actors. Obviously, the ideal outcome would be for adequate fora and a broad agenda to be chosen, so as to adequately represent the interests of those actors who would otherwise not have a strong voice.[9] These elements also imply that the international financial architecture will continue to rely essentially on a network of **national** institutions, so that its major task is the creation of adequate incentives for these institutions to internalize the externalities that they generate among themselves. This means, in turn, that national autonomy will continue to play a central role in many (if not most) policy areas and that policy instruments that are ruled out at the national level (such as certain restrictions on market activities, or unilateral debt standstills) should probably be left open as options at the international level.

A final, crucial implication is that no international financial architecture is neutral in terms of the balance of international relations. It will be strongly argued in this paper that an international system that relies on one or a few international institutions will be less balanced than one that relies on a network of regional institutions, and that countries with very limited power in the international arena will be better off if they have access to a broader menu of alternatives for managing a potential crisis or financing development than if they are restricted to fewer options. The first part of this proposition means, in fact, that the strongest defence mechanism for the weaker actors is competition in the supply of support to them. The second means that, in the absence of adequate international support, the "second-best" solution may be more, rather than less, national autonomy. National autonomy obviously has costs, as the greater menu of alternatives for managing crises must be traded off against the need to generate "credibility": a factor that inclines developing countries to adopt the policy package they believe the market considers to represent best practice (a result of the "policy competition" to which we alluded earlier).

[8] See Eichengreen (1998).

[9] These are fundamental concerns of United Nations, Report of the Task Force of the Executive Committee on Economic and Social Affairs (1999a), the Group of 24 (1998) and Helleiner and Oyejide (1998).

IV

Financial crisis prevention and resolution

The issues associated with the prevention and resolution of financial crises have received extensive attention in recent discussions.[10] The most important area of agreement relates to the need to improve the institutional framework in which financial markets operate: that is to say, to strengthen prudential regulation, supervision and accounting practices of financial systems worldwide; to adopt minimum international standards in these areas and sound principles of corporate governance; and to improve the information provided to financial markets. From the point of view of the industrialized countries, the central issues for their corresponding domestic agencies are stricter regulation and supervision of highly leveraged institutions and operations, controls on offshore centres, and the need for greater weight to be given to the risks associated with operations with countries having a high level of net indebtedness, particularly of a short-term character, in order to discourage risky financing at the source.

From the point of view of the borrowing economies, greater weight should be given by domestic regulators to the accumulation of short-term liabilities in foreign currencies, to risks associated with the rapid growth of credit, to currency mismatches of assets and liabilities, and to the valuation of fixed assets as collateral during episodes of asset inflation. Most importantly, due account should be taken of the links between domestic financial risks and changes in key macroeconomic policy instruments, notably exchange and interest rates. This indicates that prudential standards should be stricter in developing countries, where such links are more important, and that they should be strengthened during periods of financial euphoria to take into account the increasing risks being incurred by financial intermediaries. Due account should also be taken of the important externalities which large non-financial firms could generate for the domestic financial sector, which means that the level of external liabilities of these firms should also be regulated. We will return to these issues in section VIII below.

Nonetheless, substantial divergences of opinion remain. Firstly, there is no consensus as to what kind of institutions should be entrusted with enhanced responsibilities in this field. The Bank for International Settlements (BIS) should certainly play the leading role, but this requires a significant expansion of developing-country membership in that organization and of developing-country participation in the definition of all sorts of international standards and codes of conduct in general. More ambitious proposals, such as the creation of a World Financial Authority on the basis of the BIS and the International Organization of Securities Commissions, should also be considered.[11] Secondly, although the essential role of regulation and supervision is to make financial intermediaries more risk-conscious, there are clear limits to the appropriateness of discouraging private risk-taking. Thirdly, differences exist as to the relative merits of prudential regulation and supervision versus other possible instruments in key areas. One particularly relevant issue in this regard, as we will see below, relates to capital account regulation. Fourthly, there are significant differences of opinion as to what can be expected from enhanced prudential regulation and supervision, since regulations will tend to lag behind financial innovations, supervisors are likely to face significant information problems, and macroeconomic events may overwhelm even well-regulated systems. Finally, traditional prudential regulation and supervision tend to have pro-cyclical

[10] See, among others, Camdessus (1998a and 1998b), IMF (1998), IMF, Interim Committee of the Board of Governors on the International Monetary System (1998), Group of Seven (1998), UNCTAD (1998, part I, chap. IV), United Nations, Report of the Task Force of the Executive Committee on Economic and Social Affairs (1999a), Miyazawa (1998), Rubin (1999), Akyüz and Cornford (1999), Eatwell and Taylor (1999), Eichengreen (1999), Griffith-Jones (1998), Griffith-Jones and Ocampo (1999), Ocampo (1999a and 1999b), White (1999) and Wyplosz (1999).

[11] Eatwell and Taylor (1999).

macroeconomic effects (they may be unable to prevent excessive risk-taking during booms and they may accelerate the credit crunch during crises, when bad loans become evident and the effects of provisioning standards are thus felt): a fact which may increase rather than decrease credit risks through the business cycle.

Equally important are the doubts as to what can be expected from better information. Indeed, although improved information enhances microeconomic efficiency, it may not improve macroeconomic stability, which is dominated by the evolution of opinions and expectations rather than information in the strict sense of that term (i.e., factual information). The tendency to equate opinions and expectations with "information" is one of the greatest confusions in the recent literature. Well-informed agents (rating agencies and institutional investors, for example) are equally subject to the whims of opinion and expectations: a fact that accounts for their inability to stabilize markets and indeed, under certain conditions, to avoid generating still further instability.[12] To use modern terminology, rather than "information cascades", what characterizes macroeconomic financial instability are "opinion and expectation cascades", i.e., the alternate "contagion" with both optimism and pessimism through the business cycle. Even the best information system will be unable to correct this "market failure", as the whims of expectations involve "information" about the future, which will never be available.[13]

The consensus on the need to strengthen the institutional framework in which financial markets operate has not been matched by a similar emphasis on the importance of the coherence of macroeconomic policies worldwide, i.e., on appropriate mechanisms to internalize the externalities generated by national macroeconomic policies. This issue is crucial in relation to both booms and crises, but the need to strengthen the extremely weak existing arrangements is particularly vital during booms, when IMF surveillance is perceived by national authorities as an academic exercise, consultative mechanisms seem less necessary and "market discipline" has perverse effects, as it does not inhibit excessive private risk-taking or the adoption of pro-cyclical national policies. Indeed, one of the most serious shortcomings of the existing arrangements is that the current institutions –both national and international– focus their attention on crises rather than booms, thus underplaying the preventive role that they should perform. Obviously, concerted expansionary action during crises is also essential and, as was pointed out in the introduction to this paper, the moves in that direction after the Russian crisis are probably the single most important reason for the relative though incomplete normalization of capital markets in 1999. The lack of adequate representation of developing countries is another deficiency of the current arrangements. The proposals to strengthen IMF surveillance of macroeconomic policies and to transform the IMF Interim Committee into a Monetary and Financial Policy Committee are the most encouraging in this regard, though the latter should be accompanied by increased representation of developing countries on that Committee. Likewise, given its more adequate balance in the representation of developing and developed countries, the United Nations should also play an enhanced role in the normative area, either through the Economic and Social Council or an Economic Security Council.

Enhanced provision of emergency financing during crises is the third pillar of the system to prevent and manage financial crises. This principle may be called the principle of the "emergency financier", to differentiate it from the role that central banks play at the national level as "lenders of last resort", which is not exactly matched by the IMF. More specifically, the Fund provides exceptional financing but certainly not **liquidity**: a fact that is reflected in the lack of automatic availability of financing when a crisis occurs.[14] The "moral hazards" raised by such financing make it necessary to define access rules on the borrowers' side and to create orderly debt workout mechanisms that guarantee that private lenders will assume a fair share of the costs of adjustment.

The main lessons from recent crises are that: i) large-scale funding may be required, though not all

[12] See, on the former, Larraín, Reisen and von Maltzan (1997), and on the latter, Calvo (1998).
[13] For a more extensive analysis, see Ocampo (1999a). Keynes's concept of a "beauty contest" is thus much more appropriate for analysing the volatility of expectations, as Eatwell (1996) has emphasized.

[14] This important distinction is made by Helleiner (1999a). For a fuller discussion of this issue and its relation to IMF access to adequate resources, see Mohammed (1999).

of it needs to be disbursed if support programs rapidly restore market confidence; ii) funds should be made available **before** –rather than after– international reserves reach critically low levels; and iii) because of strong contagion effects, contingency financing may be required even by countries that do not exhibit fundamental imbalances. At least the last two of these lessons imply a significant departure from the traditional IMF approach, which is based on the principle of correcting fundamental balance of payments disequilibria once they have become evident. Positive measures have been adopted in this area, including a significant expansion of IMF resources through a quota increase and the New Arrangements to Borrow, which finally entered into effect in late 1998; the launching of a new window in December 1997 to finance exceptional borrowing requirements during crises; and the creation of the Contingency Credit Line in April 1999 to provide financing to countries suffering the effects of contagion, though under very restrictive eligibility requirements.

The major controversies are over inadequate funding, conditions for access and credit terms. With respect to the first point, bilateral financing and contributions to the IMF will continue to be scarce during crises. This is a crucial issue, as the stabilizing effects of rescue packages will not take place if the market feels that the intervening authorities (the IMF plus additional bilateral support) are unable or unwilling to supply funds in the quantities required. As bilateral financing and contributions to the IMF will continue to be scarce and unreliable in crises, the best solution is to allow additional issues of Special Drawing Rights (SDRs) during episodes of world financial stress; these funds could be eliminated once financial conditions normalize.[15] This procedure would bring a counter-cyclical element into world liquidity management and would give SDRs an enhanced role in world finance: a principle that developing countries have advocated in the past and should continue to endorse in the future. Second-best alternatives would be to make more active use of Central Bank swap arrangements under IMF or BIS leadership, and to allow the IMF to raise the resources needed in the market.

The broad issues raised by conditionality will be discussed in section VI below. However, two issues must be emphasized here. First, it has been argued that contingency credit lines to deal with contagion should be automatic, provided that countries fulfil certain prior criteria, and should thus be detached from traditional conditionality. The window created recently for this purpose does not fully meet these criteria: although the consultations provided for in article IV of the IMF Articles of Association were given an enhanced role in determining access in advance, such access still requires negotiations prior to approval by the Board of Governors (a special "activation" review) and an explicit standby agreement. Moreover, countries with current access to IMF financing were not considered eligible; this is an important restriction, as it eliminates countries which have experienced a strong recovery from past crises but still have pending IMF credits. Finally, the combination of conditionality with the application of harder terms than those traditionally used in regular IMF financing for this window and for exceptional financing (i.e., higher interest rates and shorter maturities) is also controversial. This eliminates the "credit union" character of IMF financing but still falls far short of being a "market condition".

Internationally sanctioned debt standstills and orderly workout procedures are essential mechanisms to avoid the coordination problems implicit in chaotic capital flight, to guarantee appropriate sharing of adjustment costs by private lenders and, hence, to avoid "moral hazard" issues associated with emergency financing. Due to the effects that the use of these mechanisms could have on their credit standing, borrowing countries are unlikely to abuse them. Nonetheless, to avoid "moral hazard" issues on the borrowers' side, such arrangements must be subject to international control, either by requiring prior IMF approval or by allowing countries to call a standstill unilaterally but then requiring that they submit it for approval by an independent international panel, whose authorization would give it legitimacy.[16] A third alternative could be to draft *ex-ante* rules under which debt service would be automatically suspended or reduced if certain macroeconomic shocks

[15] See United Nations, Report of the Task Force of the Executive Committee on Economic and Social Affairs (1999a).

[16] UNCTAD (1998), Part I, chapter IV; United Nations, Report of the Task Force of the Executive Committee on Economic and Social Affairs (1999a).

were experienced; such rules have already been incorporated in some debt renegotiation agreements.

The use of these mechanisms has four implications. Firstly, to avoid both free riding and discrimination against countries or groups of countries that adopt them, they require the universal adoption of "collective action clauses" in international lending. The G-7 countries should take the lead in this process, as they suggested in October 1998,[17] for otherwise it could become an additional source of discrimination against "emerging markets". Secondly, aiding countries in this way ("bailing in") should be encouraged by giving seniority to lending that is extended to countries during the period in which the standstill is in effect and during a later phase of "normalization" of capital flows. Thirdly, debt renegotiations under this framework must have a short, strictly-defined time horizon beyond which the IMF or the independent panel would have the authority to determine the terms of rescheduling. Finally, to avoid repeated renegotiations –one of the most troublesome features of debt rescheduling operations in recent years– except for the portion that is written off or refinanced on highly concessional terms the service of the remaining portion should be subject to certain contingent macroeconomic conditions that determine debt service capacity (e.g., terms of trade, normalization of lending, domestic economic activity, etc.).

The most problematic of all rescheduling processes in recent decades have been those associated with heavily indebted poor countries (HIPCs). The HIPC Initiative has been slow in its implementation due to the complexity of the process for determining eligibility (and, obviously, the conditionality attached to it) and the lack of adequate funding.[18] The recent Cologne Debt Initiative may serve to overcome some of these problems, providing "faster, deeper and broader debt relief".[19] It is essential, of course, that aside from eligibility criteria and the implementation of the most generous terms, additional funding should effectively become available. In particular, in an environment of scarcity of official development assistance (ODA) funds, it is essential that the funds allocated to HIPC debt relief should not crowd out fresh ODA. This would be regrettable, as new financing is a necessary complement to debt relief and the latter is unlikely, by itself, to accelerate economic growth in heavily indebted poor countries. Moreover, the lack of adequate funding has generated additional demands that must be met from the net income (profits) of development banks, which has led some of them, including the World Bank, to increase spreads and thus lending rates. This means, paradoxically, that other developing debtor countries will end up paying part of the costs of debt relief. Financing problems are particularly acute in the case of regional and subregional development banks: a fact which may severely disrupt some of their activities if the trust funds provided for under the HIPC Initiative do not adequately cover the cost of debt relief.

The definition of international rules on capital account regulation and exchange rate regimes has not been addressed in this section because, under the current incomplete world financial arrangements, national autonomy should continue to prevail in these areas, as analysed in section VIII below.

V

Development finance

As indicated in section II, although adequate financing from the IMF is certainly important to low-income countries, the major issues for them are associated with the need to guarantee adequate development finance, through ODA and multilateral lending, and to create mechanisms that will allow them to participate more actively in private capital markets. Given the relative magnitude of financing to low-income countries (see table 2), the reversal of ODA flows, particularly those originating in the

[17] Group of Seven (1998).

[18] United Nations (1999b).

[19] Group of Seven (1999).

largest industrialized economies, is certainly the most important issue. As we already pointed out, it is important that efforts to accelerate implementation of the HIPC Initiative should not crowd out new ODA financing in the budgetary processes of the industrialized countries. Indeed, in addition to a more ambitious HIPC Initiative, the world requires an even more ambitious and permanent "ODA Initiative" aimed at effectively meeting internationally agreed targets. An essential characteristic of this process, as is emphasized in the following sections, should be effective "ownership" of policies by developing countries: a process that calls for less direction from abroad and more emphasis on the role of national development institutions. The latter objective requires, in turn, respect for the central role that the parliaments and governments of aid-receiving nations should have in the global allocation of aid through their budgetary processes and the vital role that the governments of those countries should have in directing traditional areas of public policy (such as social policy and infrastructure), even when civil society is given a major role in the execution of those policies.

Equally important, however, is the need to speed up the growth of multilateral lending. Due to the high concentration of private flows in a few "emerging" economies, such lending will continue to play an essential role even with respect to middle-income nations. More broadly, multilateral lending will continue to play a very important role in at least four areas: i) channeling funds to low-income countries; ii) providing long-term finance to middle-income and small countries which, because they do not have a sufficiently high credit rating or because of the fixed costs involved (e.g., in bond financing), do not have adequate access to private funds; iii) acting as a counter-cyclical means of compensating for fluctuations in private capital market finance; and iv) facilitating the transition to new forms of private financing. To these we should also add the traditional "value added" of multilateral financing: lending-associated technical assistance.

The first of these functions underscores the central role that financing from the World Bank, the International Development Association and the regional and subregional development banks will continue to play in the immediate future. The second and third functions emphasize the role that official development assistance will continue to play even for middle-income countries. It must be stressed, however, that the counter-cyclical provision of funds should not be confused with the provision of emergency balance of payments financing, which is essentially a task of the IMF. However, the large-scale requirements for counter-cyclical financing to middle-income countries during crises may crowd out financing to poor countries: a point which has been made by the President of the World Bank.[20] Thus, if multilateral development financing is not significantly expanded, its role as a counter-cyclical device will necessarily be very limited and will certainly be of secondary importance relative to its first two roles, particularly the provision of long-term development financing to poor countries. This is underscored by the data from table 2, which indicate that multilateral financing in 1992-1997 represented only 13% of that provided by the private sector, excluding FDI, and only 6% in the case of middle-income countries. Consequently, if it is to carry out a useful counter-cyclical function, this will certainly require a significant increase in resources.

The fourth function is of fairly recent origin but has been rapidly gaining in importance in the 1990s and should become one of the primary focuses of multilateral financing in the future. This function has been associated in the recent past with direct financing to the private sector (by banks or associated financial corporations) or with the design of guarantee schemes to support private infrastructure projects in developing countries. It could also be used to support developing countries' efforts to return to markets during crises and, even more importantly, to support initial bond issues by developing (and particularly poor developing) countries seeking to enter private capital markets. Co-financing or guarantee schemes could be used for this purpose. It must be emphasized, however, that the full development of these schemes would require a radical change in the management of guarantees by development banks because, under current practices, guarantees are treated as if they were equivalent to loans: a practice which severely restricts the banks' ability to extend them. Such an expansion of the role of development banks in guaranteeing private financing has been criticized on the grounds that it could involve excessive

[20] Wolfensohn (1998).

risk-taking by these institutions. Nonetheless, in a world that will probably be dominated by private financing, this may be absolutely essential in order to prevent low-income countries from being left out of major developments in the capital markets, and it should therefore receive priority attention in the current discussions.

In the recent debates on these matters, due emphasis has also been placed on the role that multilateral development banks should play in financing social safety nets in developing countries. Strong social safety nets are, indeed, essential for managing the social repercussions of financial vulnerability in the developing world. The concept itself is subject to some confusion, however, as it is used to refer both to the design of long-term social policies and to specific mechanisms to protect vulnerable groups during crises. The term should probably be used to refer specifically to the latter, although, as we will argue below, these arrangements should be part of stable social protection mechanisms. Although multilateral banks have been involved in the former for a long time and have also accumulated some experience with the latter, the preferred mechanism since the late 1980s has been social emergency funds (later transformed in many countries into more stable social investment funds). Although they have introduced some innovations in social policy, such as competitive mechanisms to allocate resources and participation by civil society in social policies, their effects have been rather limited, their targeting has not always been effective, and they may have crowded out resources from long-term social policies.[21] Other instruments have also been used in the past by developing countries, including various types of unemployment insurance (the main instrument used for this purpose in the industrialized world), emergency employment or emergency labour-intensive public works programmes, income-support schemes in conjunction with training, and some nutrition programmes. The recent crisis seems to have led to the design of new instruments: special subsidies for households with school-age children (tied to school attendance), and various support programmes designed to ensure that households with an unemployed head do not lose their homes during crises.

Recent analyses have drawn some basic conclusions about these programmes. Firstly, safety nets must be part of **permanent** social protection schemes, as only a permanent scheme guarantees that the programmes will respond without delay to vulnerable sectors' needs for protection during crises.[22] This means, in turn, that financing must be fundamentally of a domestic character, with only a very limited proportion of external financing, which may contribute only marginally, if at all, during crises (see below). Secondly, given the heterogeneity of labour markets in developing countries, a combination of several programmes, with different target groups, is necessary.[23] Thirdly, these programmes must be adequately financed and should not crowd out resources from long-term investment in human capital. This leads in turn to a fourth conclusion: that the effective functioning of social safety nets requires that public-sector expenditure should include counter-cyclical components. This would be impossible –without generating inefficiencies in the rest of public-sector expenditure– unless fiscal policy as a whole is counter-cyclical: a point that has not been sufficiently emphasized in current discussions. In the absence of this counter-cyclical fiscal pattern, external financing from development banks during crises would be unnecessary or, at best, illusory, as overall net fiscal financing requirements will actually decrease despite the increased spending associated with social safety nets.

[21] See in particular Cornia (1999), and also ECLAC (1998a, chap. VI), Graham (1994) and Lustig (1997).

[22] This issue is highlighted in the best available analysis of the subject (Cornia, 1999), which also emphasizes the need for adequate financing.

[23] Márquez (1999).

VI

Conditionality versus "ownership" of economic policies

The most controversial aspect of international emergency and development financing is undoubtedly conditionality. In the case of the IMF, this issue has long been a central area of contention, but in recent years –and even decades– the issue has become increasingly troublesome for three different reasons. Firstly, the scope of conditionality has been gradually expanded to include not only the realms of other international organizations –quite often, for example, that of the World Trade Organization and the development banks– but also those of domestic economic and social development strategies and institutions which, as the United Nations Task Force has noted, "by their very nature should be decided by legitimate national authorities, based on broad social consensus".[24] Secondly, whereas the legitimacy of conditionality is indisputable when domestic policies are the source of macroeconomic imbalances that lead to financial difficulties, as well as being necessary to avert "moral hazard" issues, it is unclear how this principle applies when such difficulties are generated by international crises and, particularly, by contagion effects. As already noted, it is even less clear why conditionality should be combined in such cases with adverse credit terms. Finally, many observers have criticized the over-adjustment ("overkill") implicit in some IMF programmes: a fact which has led the Fund to allow some room for counter-cyclical fiscal policies in its adjustment programmes.

Even if the legitimacy of the principle of conditionality –or, as it is sometimes defined, "support in exchange for reforms"– is accepted, there are good reasons for reviewing its characteristics. Indeed, the perception that conditionality has been carried beyond what may really be necessary in order for the Fund to perform its functions properly may be helping to undermine its legitimacy. A strong argument can therefore be made that the way to restore full confidence in the principle of conditionality is by reaching a renewed international agreement on how it should be used.

Several principles can be advanced in this regard. Firstly, conditionality should be restricted to the macroeconomic policies that were its purview in the past, and it should only be used when expansionary policies are clearly associated with the generation of macroeconomic imbalances. Reforms of domestic prudential regulation and supervision may also be required, but in this case parallel agreements should be made with the corresponding international authorities (an issue which is still controversial, as we have seen). Secondly, a suitable volume of low-conditionality funds should be available when the source of the imbalance is an international shock. This principle should be fully recognized in the new contingency credit line available to countries suffering the effects of contagion. Over and above the pre-set limit for these funds, however, access to Fund resources could also be subject to macroeconomic conditionality on the traditional terms. Thirdly, as we already noted, more stringent credit terms should not be used as a complement to conditionality. Fourthly, when signing an agreement with the Fund automatic rules should be agreed upon by common consent whereby the restrictiveness of the adjustment programme would be eased should evidence of overkill become clear. Finally, regular official evaluation of IMF programmes, either by an autonomous division of the Fund (as in the World Bank) or by outside analysts, should be introduced and the main conclusions of these evaluations, after review by the Board of Governors, should be explicitly incorporated into regular Fund practice.

Similar issues have arisen in relation to development finance. With respect to this matter, a recent World Bank report which analyses the success of structural lending, according to its own evaluation, comes to the conclusion that conditionality does not influence the success or failure of such programmes

[24] United Nations, Report of the Task Force of the Executive Committee on Economic and Social Affairs (1999a, section 5). See also Group of 24 (1999), Feldstein (1998) and Rodrik (1999b).

at all.[25] Nonetheless, according to the same report, the effectiveness of aid is not independent of the economic policies that countries follow. In particular, the growth effects of aid are higher for countries that adopt "good" policies, which, according to the Bank's (certainly debatable) definition, include a stable macroeconomic environment, open trade regimes, adequate protection of property rights and efficient public bureaucracies that can deliver good-quality social services. With regard to the effectiveness of aid, good policies have an additional positive effect in the form of the "crowding-in" of private financing. Neither of these effects are present, however, in countries following "wrong" policies. Expressed in terms that are now familiar in the aid literature, the "ownership" of good economic policies, i.e., the commitment of national authorities to them, is what really matters. Conditionality has no additional contribution to make in these cases, and it is obviously ineffective in the case of countries that do not follow good policies.

Curiously enough, on the basis of this study the World Bank draws the conclusion that conditionality is good after all, claiming that "Conditional lending is worthwhile where reforms have serious domestic support"[26] and, in particular, that it "still has a role –to allow government to commit to reform and to signal the seriousness of reform– but to be effective in this it must focus on a small number of truly important measures".[27] This statement is certainly paradoxical if the conclusions of the report are taken at face value. Rather, this study raises serious doubts about the rationality of conditionality itself: a fact which is, indeed, implicit in the idea that "ownership" of economic policies is, after all, the essential issue.[28]

A recent analysis by Rodrik comes to complementary conclusions which are extensive to short-term macroeconomic policies.[29] Thus, aside from arguing that international arrangements should allow for diversity in national development strategies (different "brands of capitalism"), this author makes a strong argument that adequate institutions for conflict management, which can only be guaranteed by national democratic processes, are crucial for macroeconomic stability, which, in turn, is vital for economic growth. To borrow the term already used above in another context, the "ownership" of macroeconomic adjustment programmes is also essential to guarantee their political sustainability.

The issue of conditionality versus a country's ownership of economic policies is indeed essential to the broader objectives of democracy at the world level. There is clearly no sense in promoting democracy if the representative and participatory processes at the national level are given no role in determining economic and social development strategies, as well as the particular policy mix by which macroeconomic stability is sought. Both these elements may not only be relatively ineffective but will also lack political sustainability if this role is appropriated by international institutions or the aid agencies of the industrialized countries.

VII

The role of regional institutions

There are at least three arguments in support of a strong role for regional institutions in the new financial order. The first one is that, as we have noted, globalization also entails open regionalism. The growth of intraregional flows of trade and direct investment is a striking feature of the ongoing globalization process. This factor increases macroeconomic linkages and thus the demand for certain services provided by the international financial system which we have analysed in previous sections: macroeconomic surveillance and internalization of the externalities that national macroeconomic policies have on neighbouring countries, mutual surveillance of each other's mechanisms for the prudential regulation and supervision of the financial system, and the regional effects of potential debt standstills and workout procedures.

[25] See World Bank (1998b), chap. 2 and appendix 2.
[26] *Ibid*., p. 48.
[27] *Ibid*., p. 49.
[28] For a fuller discussion of these issues, see Helleiner (1999b).
[29] Rodrik (1999a).

Secondly, some of these services may be subject to diseconomies of scale and it is unclear whether others have economies of scale which are strong enough to justify single international institutions in specific areas (i.e., the existence of natural monopolies). Traditional issues of subsidiarity are thus raised. For example, macroeconomic consultation and surveillance at the world level may be necessary to guarantee policy coherence among major industrialized countries, but it would certainly not help to manage the externalities generated by macroeconomic policies on neighbours in the developing world (or even within Europe). Due to differences in legal traditions and the sheer scale of the diseconomies involved, surveillance of national systems for prudential regulation and supervision of the financial sectors, and even the definition of specific minimum standards in this area, could be dealt with more appropriately with the support of regional institutions. Development finance can operate effectively at different scales and, as we will see, can perform certain functions at the regional and subregional levels that could not be performed at the international level. Also, although the danger of regional and international contagion means that the management of the largest balance of payments crises should be assigned to a single world institution, it is unclear how far we should push this assertion. Strong regional institutions can serve as regional buffers, as the post-war Western European experience indicates. Regional reserve funds can also play a useful role even in the most serious crises (as shown by the Latin American Reserve Fund, formerly the Andean Reserve Fund) and, if expanded, could even provide full support to the small and medium-sized countries in some regions. Also, as the increasing concentration of balance of payments support in a few countries indicates (see section II above), there may be biases in the response of the international community according to the size of the country involved: a fact which would justify a division of labour between world and regional organizations in the provision of such services.

The third argument was already put forward in section III: for smaller countries, access to a broader menu of alternatives for managing a crisis or financing development is relatively more important than the "global public goods" (such as global macroeconomic stability) provided by the largest international organizations, but in whose provision they assume that they have little or no influence (i.e., they have the attitude of "free riders"). Due to their small size, their negotiating power *vis-à-vis* large organizations is very limited, and their most important defence is therefore the existence of competition in the provision of financial services from such institutions to them.

There may be a fourth argument, of a political economy nature: countries are likely to take quite different attitudes to the analyses made by international and by regional organizations (and to the attached conditionality). To use the term employed in the previous section, they are probably more likely to have a sense of "ownership" of the latter, as they feel they have a stronger voice in the analyses made by regional organizations: a fact that will improve rather than reduce their effectiveness. The fear that this may lead to lax arrangements is unwarranted, as the proposal to create and strengthen regional financial institutions entails financial commitments by the developing countries to provide the capital for the corresponding reserve funds and development banks, so that the countries will tend to closely monitor the soundness of their activities. In reality, the supply of capital is the single most important restriction on the growth of these regional financial networks. The fact that many of them will raise money in the market will provide an additional means of control over their operations.

The current discussions have underscored the inadequate supply of some services provided by international financial institutions, including some "global public goods". However, it would be wrong to conclude from this statement that an increase in that supply should come from a few world organizations. Rather, the organizational structure should consist, in some cases, of networks of institutions that provide the services required on a complementary basis, and in others of a system of competing organizations. The provision of the services required for financial crisis prevention and management should be closer to the first model, whereas in the realm of development finance competition should be the basic rule (and, in fact, should include competition with private agents as well). However, the purity of the model's structure is probably not the most important feature: it is desirable that in some cases parts of networks should compete with each other (e.g., regional reserve funds versus the IMF in the provision of emergency financing), while in other cases competing organizations should cooperate.

This implies that the International Monetary Fund of the future should not be viewed as a single, global institution, but rather as the apex of a network of regional and subregional reserve funds. In order to encourage the development of the latter, incentives could be created whereby common reserve funds could have automatic access to IMF financing and/or a share in the allocation of SDRs proportional to their paid-in resources –in other words, contributions to common reserve funds would be treated as equivalent to IMF quotas.[30] As already noted, regional reserve funds could not only provide most of the exceptional financing for smaller countries within a region, but also part of the financing for larger countries, and they could also serve, at least partly, to deter would-be speculators from attacking the currencies of individual countries.

This model should be extended to cover macroeconomic consultation and surveillance, as well as the coordination and surveillance of national systems of prudential regulation and supervision. Thus, regional and subregional systems, including peer review mechanisms, should be designed to internalize the externalities that macroeconomic policies generate on neighbours. This would complement, rather than substitute for, regular IMF surveillance. In the area of prudential regulation and supervision, more elaborate systems of regional information and consultation, including the design of specific regional "minimum standards", could also play a positive role. Again, peer reviews should be part of this system. In the case of debt standstills and workouts, regional mechanisms should at least play a role in assessing the specific regional impacts that they may have.

It is important to emphasize that, aside from other functions considered in section V, subregional development banks can play a significant role as a mechanism to pool the risks of groups of developing countries, thus allowing them to make more aggressive use of opportunities provided by private capital markets. In Latin America, an interesting experience in this regard is that of the Andean Development Bank (Corporación Andina de Fomento, CAF), an institution owned in its entirety by developing countries. The fact that the credit ratings of this institution have exceeded those of Colombia (the only Andean country that has been classified as "investment grade" in the 1990s and has thus been able to issue debt obligations on favourable terms) indicates that such a risk-pooling policy can be very effective.

As it is well known, Western Europe provides the best example of regional financial cooperation in the post-war period. The United States, through the Marshall Plan, catalysed the initial phases of this process, which underwent a dynamic deepening from the design of the European Payments Union to a series of arrangements for macroeconomic coordination and cooperation that eventually led to the current monetary union of most of its members. The history of many institutions, including the Bank for International Settlements, is associated with these cooperation efforts. At different stages, they demonstrated the essential contribution that regional schemes can make to the stability of the world economy. No similar schemes have been devised in the rest of the world, although some proposals have been made, the most ambitious of which was the Japanese suggestion to create an Asian Monetary Fund.

On a much more limited scale, there are institutions which have likewise played a useful role in the developing world, particularly in the area of development finance. In Latin America and the Caribbean, for example, the Inter-American Development Bank far outweighs the World Bank in development finance to the region. The Andean Development Bank likewise outweighs the IDB in financing to the Andean region countries in recent years. The Andean (now Latin American) Reserve Fund has played a limited but constructive role in balance of payments support to the Andean countries over the past two decades. Under the existing integration schemes, some dialogues have also taken place on macroeconomic coordination, but progress has been rather limited in this area. At all events, the call for stronger macroeconomic coordination mechanisms has been a common theme during the recent crisis.

An institutional framework such as that suggested would have two positive features. First of all, it could help to bring more stability to the world economy by providing essential services that can hardly be provided by a few international institutions, particularly in the face of a dynamic process of

[30] United Nations, Report of the Task Force of the Executive Committee on Economic and Social Affairs (1999a, section 9) and Ocampo (1999a).

open regionalism. Secondly, from the point of view of the equilibrium of world relations, it would be more balanced than a system based on a few world organizations, and this would increase the commitment of less powerful players to abide by rules that contribute to world and regional stability.

VIII

The realms of national autonomy

Whatever new international system is developed, it is clear that it will continue to be a very imperfect "financial safety net". Consequently, a degree of "self-insurance" by countries will continue to be essential to avoid financial crises, as well as to avoid "moral hazard" issues intrinsic in any support scheme. This raises the question of the national policies necessary to guarantee financial stability and the areas where national autonomy should be maintained. We consider that the international system should continue to maintain national autonomy –at least in the case of developing countries– in two critical areas: management of the capital account and choice of the exchange rate regime. The choice of development strategies is obviously another essential realm in which national autonomy should prevail, as we emphasized in section VI.

The experience of the developing countries indicates that the management of capital account volatility requires: i) consistent and flexible macroeconomic management; ii) strong prudential regulation and supervision of domestic financial systems, and iii) equally strong "liability policies", aimed at inducing good public and private external and domestic debt profiles.[31] Traditionally, the emphasis has been on crisis management, but the authorities should focus their attention rather on the management of **booms**, since it is in the periods of euphoria of capital inflows, trade expansion and terms-of-trade improvements that crises are incubated. Crisis prevention is thus very closely linked with the proper management of boom periods.

The nature of the policies to be used will naturally vary according to the structural peculiarities of different economies, as well as their macroeconomic traditions and levels of development. In the macroeconomic area, the two main objectives should be to avoid the accumulation of unsustainable levels of indebtedness by either public or private agents during booms and to avoid imbalances in major prices, particularly the exchange rate and domestic asset prices. In the fiscal area, the focus should be the sustainability of public-sector debt ratios **throughout the cycle**, which requires fiscal strengthening during the upswing in order to give the authorities sufficient freedom to permit some fiscal loosening during the subsequent downswing in order to avoid an excessive contraction of economic activity. In contrast, as is well known, in open economies authorities face major difficulties in applying contractionary monetary and domestic credit policies during boom years, in the absence of adequate regulation of capital inflows. Sterilized foreign-exchange reserve accumulation is a first alternative, but experience indicates that this may be self-defeating unless there is adequate restraint on capital inflows, due to interest-rate arbitrage. A second possibility is direct control of the growth of credit from domestic financial intermediaries, but this alternative may actually induce additional external borrowing in the absence of adequate controls and tends to protect inefficient intermediaries. A third alternative is the use of increased reserve or liquidity requirements in respect of the liabilities of the domestic financial system, but this may also generate incentives for non-financial agents to borrow abroad.

Regulations on capital inflows may also be essential to avoid unsustainable exchange rate appreciation during booms. Although some appreciation may be inevitable and even an efficient way of absorbing the increased supply of foreign exchange, an excessive revaluation may also generate irreversible "Dutch disease" effects. The regulation of capital **inflows** thus plays an essential role in open developing economies as a mechanism for monetary and domestic credit restraint and for the avoidance of un-

[31] The literature on national policies is extensive. See, among recent contributions, ECLAC (1995 and 1998b), World Bank (1998a, chap. 3), Ffrench-Davis (1999), Helleiner (1997), and Ocampo (1999b).

sustainable exchange rate appreciation during booms. The macroeconomic effects of the regulation of inflows have, unfortunately, received much less attention in the past than the question of the regulation of outflows during crises. The nature of such regulations will be considered below. Regulations governing outflows may nevertheless also play a role as a way to avoid excessive increases in interest or exchange rates, which may have adverse effects on macroeconomic dynamics, including a greater risk of domestic financial crises. Such regulations are also an essential element when applying debt standstill and orderly debt workout procedures. It is essential, of course, that they be used as a complement and not a substitute for fundamental macroeconomic adjustment.

As we pointed out in section IV, prudential regulation and supervision must take into account not only the micro- but also the macroeconomic risks typical of developing countries. In particular, due account should be taken of the links between domestic financial risk and changes in key macroeconomic policy instruments, notably exchange and interest rates. The risks associated with the rapid growth of domestic credit, currency mismatches between assets and liabilities, the accumulation of short-term liabilities in foreign currencies by financial intermediaries and the valuation of fixed assets used as collateral during episodes of asset inflation must also be adequately taken into account. Depending on the type of operation, higher capital requirements, matching liquidity requirements or caps on the valuation of assets should be established. Moreover, given these macroeconomic links, prudential regulation should be strengthened during periods of financial euphoria to take into account the increasing risks being incurred by financial intermediaries. These links also mean that the application of contractionary monetary or credit policies during booms (e.g., higher reserve requirements or ceilings on the growth of domestic credit) may be a necessary complement to stricter prudential regulation and supervision. Moreover, due to the important externalities which large non-financial firms can generate for the domestic financial sector, particularly in the context of exchange rate depreciation, the external liability exposure of these firms should also be subject to some regulation. Tax incentives (e.g., limits on the deductibility of exchange-rate losses) and rules that force non-financial firms to disclose information on their external liabilities may thus be relevant complements to appropriate prudential regulation and supervision of financial intermediaries.

The experience of many developing countries indicates that crises are associated not only with high debt ratios but also with inadequate debt **profiles**. The basic reason for this is that, in conditions of uncertainty, financial markets respond to gross –rather than only to net– financing requirements, or in other words, the rollover of short-term debts is not neutral in financial terms. This means that "liability policies" aimed at improving debt profiles play an essential role. Although improving the external debt profile should be the central role of such policies, there is a strong complementary relationship between good external and internal debt profiles. Thus, excessive short-term domestic borrowing may force a government that is trying to roll over debt during a crisis to raise interest rates in order to avoid capital flight by investors in government bonds. Also, excessively high short-term private liabilities increase the risks perceived by foreign lenders during crises: a fact that may induce a stronger contraction of external lending.

In the case of the public sector, direct controls by the Ministry of Finance are an appropriate instrument of a liability policy. In the private sector, exchange rate flexibility may also deter some short-term flows and may thus partly operate as a "liability policy", but its effects are limited in this regard, as it is unlikely to smooth out medium-term financial cycles, which will then be reflected in a parallel cycle of nominal and real exchange rates. Direct controls on capital inflows may also be an appropriate instrument for achieving a better private debt profile, but a more interesting indirect price-based policy tool is reserve requirements on capital inflows, such as those used by Chile and Colombia in the 1990s. These requirements are a particular type of Tobin tax, but the equivalent tax rate (3% in the case of Chile for one-year loans and 10% or more in Colombia during boom periods) is much higher than that proposed for an international Tobin tax. A flat tax has positive effects on the debt profile, as it induces longer-term borrowing, for which the tax can be spread over a longer time period and is easier to administer. The effects of this system on the magnitude of flows have been the subject of heated controversy. At all events, since tax evasion is costly and short- and long-term borrowing are not perfect substitutes, the magnitude of flows should also be affected.[32] A basic advantage of this instrument is that it is targeted at capital inflows and is thus a preventive policy tool. It also has specific advantages over prudential regulations that could have similar effects, as it affects both financial and non-financial agents and it uses a non-discriminatory price instrument, whereas prudential regulation only affects financial intermediaries, is usually of a quantitative nature, and the supervision is essentially discretionary.[33]

Simple rules are preferable to complex ones, particularly in underdeveloped regulatory systems. In this sense, quantitative controls, such as flat prohibitions on certain activities or operations, may actually be preferable to sophisticated price-based signals, but simple price rules, such as those used by Chile and Colombia, can also be effective. Any regulatory system must also meet the additional requirement of having adequate institutional backing. A **permanent** system of capital account regulations, which can be strengthened or loosened in the course of the business cycles, is therefore preferable to the alternation of free capital movements during booms and quantitative controls during crises. Indeed, the latter system may be totally ineffective if improvised during a crisis, since the administrative machinery to make it effective will not be operative and it may thus lead to massive evasion or avoidance of controls. Such a system is also pro-cyclical and leaves aside the most important lesson learned about crisis prevention: the need to avoid over-borrowing during booms and thus focus attention primarily on capital inflows rather than outflows.

This indicates that capital account regulation may be an essential instrument for crisis prevention and management in a context of strong volatility of capital flows and weak international financial safety nets. It may be complementary to other desirable policies in the macroeconomic and financial regulatory areas, and in some cases it may actually be preferable to other alternatives. The foregoing analysis also suggests the desirability of using capital account regulation as a **permanent** policy instrument. Of course, none of these mechanisms is foolproof, and some developing countries may prefer to use policy mixes that avoid their use (e.g., more active use of fiscal and exchange rate policies, as well as of prudential regulation) or may prefer a less interventionist approach, even at the cost of greater GDP volatility. Thus, the most compelling argument is for maintaining the autonomy of developing countries to manage their capital accounts.

There are actually no strong arguments in favour of moving towards capital account convertibility.[34] There is no evidence that capital mobility leads to efficient smoothing of expenditures in developing countries throughout the business cycle, and on the contrary there is strong evidence that in these countries the volatility of capital flows is an additional source of expenditure instability. There is also no evidence of an association between capital account liberalization and economic growth, but there are some indications that point in the opposite direction.[35] In simple terms, the argument is that, even if it were true that freer capital flows, through their effects on a more efficient savings-investment allocation process, have positive effects on growth, the additional volatility associated with freer capital markets has the opposite effect. As already noted, the absence of an adequate international financial safety net is an equally important argument in this connection. Why should developing countries give up this degree of freedom if they do not have access to adequate amounts of contingency financing with well-defined conditionality rules and there are no internationally agreed standstill and debt workout procedures? As we pointed out in section III, this is a crucial issue for countries without significant power in the international arena, for whom renouncing a possible means of crisis management is a costly alternative. In reality, there are strong similarities between today's international financial world and the era of "free banking" at the national level, when, in the absence of central banks as lenders of last resort and officially managed bank rescue schemes, inconvertibility of private bank notes was a necessary legal alternative in the face of bank runs.

[32] Agosin (1997), Agosin and Ffrench-Davis (forthcoming), and Ocampo and Tovar (1997 and 1999).

[33] Ocampo (1999a). Indeed, this instrument is similar to practices used by private agents, such as the sales fees imposed by mutual funds on investments held for a short period, in order to discourage short-term holdings. See Morgan (1998), p. 23.

[34] For a more extensive analysis of this subject, see United Nations, Report of the Task Force of the Executive Committee on Economic and Social Affairs (1999a); UNCTAD (1998), part I, chap. IV; ECLAC (1995, Part Three); Eichengreen (1999); Griffith-Jones (1998); Grilli and Milesi-Ferretti (1995); Krugman (1998a, 1998b); Ocampo (1999a), and Rodrik (1998).

[35] See in particular Eatwell (1996), Rodrik (1998) and, for Latin America, Ocampo (1999b).

Similar arguments could be used to claim that there are no grounds for limiting the autonomy of developing countries to choose their exchange rate regime. There are certainly some virtues in the argument that, in the current globalized world, only convertibility regimes or totally free-floating exchange rate regimes can generate sufficient credibility in the eyes of private agents. However, the imposition of any international rules in this area would be unfortunate. The advantages and disadvantages of these extreme positions, as well as of interventionist regimes in between the two, have been subject to extensive debate and, of course, have given rise to a considerable store of experience. In practice, countries almost invariably choose intermediate regimes: a fact that is probably explained not only by the deficiencies of the extremes, but also by the many other demands that the authorities face. The choice of the exchange rate regime has, nonetheless, major implications for economic policy that must be recognized in macroeconomic surveillance. Also, as already noted, domestic prudential regulations must take into account the specific macroeconomic risks that financial intermediaries face under each particular regime.

IX

Conclusions

In this paper it has been argued that the agenda for international financial reform must be broadened in at least two senses. First of all, it should go beyond the issues of financial crisis prevention and resolution, on which the recent debate has been focused, to cover also those associated with development finance for poor and small countries, measures to overcome the strong concentration of private and even official financing in a few large "emerging" economies, and the importance of the "ownership" of economic and development policies by countries. Secondly, it should consider, in a systematic fashion, not only the role of world institutions but also of regional arrangements and the explicit definition of areas where national autonomy should be maintained. These issues should be dealt with in a representative, balanced negotiation process capable of overcoming some of the adverse political economy features that characterize the current debate.

In the area of financial crisis prevention and resolution, a balance must be struck between, on the one hand, the current emphasis on the need to improve the institutional framework in which financial markets operate, and on the other the still insufficient attention to or action on the design of appropriate schemes to guarantee the coherence of macroeconomic policies worldwide, the enhanced provision of emergency financing during crises, and the creation of adequate debt standstill and orderly debt workout procedures. In the area of development finance, emphasis should be given to the need to increase funding to low-income countries, including the use of multilateral development finance to support increased participation of low-income and small middle-income countries in private capital markets. The role of multilateral development banks in the financing of social safety nets during crises should also be emphasized. The enhanced provision of emergency and development financing should be accompanied by a renewed international agreement on the limits of conditionality and full recognition of the central role of the "ownership" of development and macroeconomic policies by developing countries.

It has also been argued that regional and subregional institutions should play an essential role in increasing the supply of "global public goods" and other services in the area of international finance. The required financial architecture should in some cases take the form of a network of institutions that provide the services required in a complementary fashion (in the areas of emergency financing, surveillance of macroeconomic policies, prudential regulation and supervision of domestic financial systems, etc.), while in others (particularly in development finance) it should consist rather of a system of competitive organizations. The fact that any new order will continue to form only an incomplete "financial safety net" means both that national policies will continue to play a disproportionately large role in crisis prevention and that certain areas should continue to be realms of national autonomy (particularly capital account regulations and the choice of exchange rate regimes). Regional institutions and national autonomy are particularly important for the smaller players in the international arena, who would gain significantly from competition in the services provided to them and from greater freedom of action in a context of imperfect supply of global public goods.

(Original: English)

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Two challenges for the *twenty-first century: achieving* financial discipline and putting the *internationalization process in order*

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This article takes stock of the situation caused by the Asian financial crisis and analyses the various proposals made for dealing with it so as to avoid its repetition; it is concluded that financial globalization has destabilized the potentially favourable effects of the process of opening up to international trade and productive investment. It notes that while the 1997 financial crisis did not have the deflationary consequences of the 1929 crisis, thanks to the institutional changes made when policy-makers reacted to it, the generalization of export-led growth strategies tends to repeat situations of over-production, further aggravated by the volatility of international capital flows. There is now a feeling that the twenty-first century should mark a dual turning-point: on the one hand, a better balance should be sought between domestic growth and outward-looking policies, and on the other hand –and above all– a number of reforms designed to avoid further great financial crises should be put into effect. A debate is currently under way on the relative merits of various options in this respect: negotiation of a new international system; a Brady Plan for banks; stricter application of prudential regulations; greater transparency of short-term capital movements; the expansion of new options markets, or even the establishment of a Tobin Tax. It would be dangerous to make major structural changes in the productive and social organization of the world's economies solely in response to the pressures of the international financial markets. Lastly, the formation of regional integration areas represents a middle way between internationalization in all directions and a protectionist withdrawal behind national frontiers. At all events, notable changes may be expected compared with the 1990s.

I

Introduction

The 1990s seems to have marked a turning-point in the crisis which began in the late 1960s in the United States and spread from there to the other developed countries through the effects of the oil shocks. The Fordist production model had been gradually losing its effectiveness and was making way for new principles which the Japanese seemed to have discovered and applied with singular efficiency: to such a point that in the 1980s some analysts forecast the "Japanization" of production systems and indeed of the Western economies in general.

The present situation, at the close of the 1990s, is very different, however: the internationalization of trade and production, and even more so the growing force of financial innovations and their spread all over the world, mark a new stage with new types of rules. From now on, growth patterns will be based on the exploration of all aspects of foreign competition and the form of incorporation in international financial networks. In this respect, the United States economy would appear to be leading the way for the other countries, which must adjust in one way or another to this new model governed by finance.

The present study seeks to make a critical analysis of this view of the situation, which is now widely held. It shows that the process of internationalization of trade and production must not be viewed in the same light as the financial globalization process. Financial crises can spread very rapidly from one country to another, but national situations and regulatory systems continue to be very diverse. Thus, the dominant role of financial considerations is above all a feature of the United States and British economies and applies very little to Germany and Japan, to name only two examples of alternatives to a type of capitalism dominated by pure market forces. Moreover, while it is quite true that moderate speculation tends to stabilize the functioning of goods and services markets, excessive accentuation of this process has a potentially destabilizing effect on financial markets. If we accept this interpretation, then it is important to discipline finances. At the same time, however, it must be recognized that not all economies have an export-led growth pattern, so it would not be possible to apply the same political economy precepts everywhere.

The study closes with a comparative analysis of the different solutions proposed for overcoming the potential imbalances marking the current international economy. The ideal solution would be to negotiate a new international financial architecture, but this raises formidable political problems.

II

Finances for better or for worse

The last fifteen years have been marked by the deregulation of national financial systems, the proliferation of innovations in terms of new financial instruments, and the de-territorialization of certain markets, to such a point that most national regulatory systems have been significantly changed. Governments decided to engage in this deregulation in the hope of furthering investment, economic growth and employment, without prejudice to the smooth progress of the economic situation (Aglietta, Brender and Coudert, 1990). This trend was observed both in the great industrialized nations and in the emerging economies, where it was reflected in the rapid importation of the most sophisticated financial instruments from Wall Street and the City. It is therefore hardly surprising that the institutions previously governing the growth patterns of most countries have fallen out

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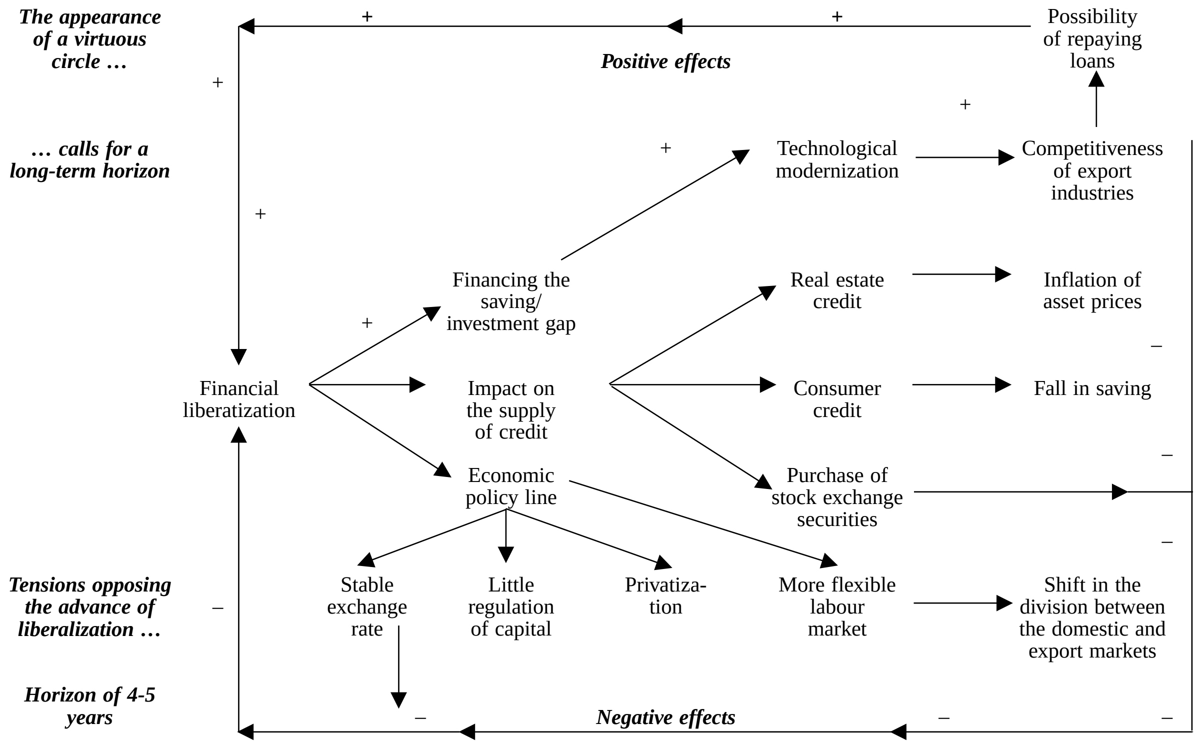
FIGURE 1

Financial liberalization is not a cure-all.
Its contradictory medium- and long-term effects



of step with the new financial system resulting from opening up to these innovations.

Looking back, the contradictory effects of this opening up to international finance may be summarized as follows (figure 1):

- On the one hand, when foreign capital inflows take the form of direct investmen they help to form new production capacity incorporating the latest technological advances, because the aim of the transnationals in the 1990s has been to build up a production base in selected countries which will ensure their international competitiveness. This strategy is diametrically opposed to that aimed at import substitution. If the macroeconomic conditions are stable enough and the capital flows continue for a decade or so, it may be expected that the growth in exports will finally make it possible to repay the external indebtedness involved (in this case, private). This trend represents a change from the 1980s, when international loans went to finance public deficits. This is the "virtuous" side of globalization, with international borrowing making it possible to anticipate higher rates of national saving while speeding up growth. However, there is another and more dubious consequence.

- Thus, on the other hand investment also takes the form of diversification of stock and bond portfolios, giving rise to the concept of an "emerging market". Its effects on the improvement of production efficiency may be seen on the opposite side of the "virtuous circle" referred to above. At first, there is an abundant supply of credit, reflected in a real estate boom, strong expansion of consumer credit, and the purchase of stocks and shares, giving rise to a speculative "bubble" from which none of the reputedly promising countries has escaped, either in Latin America or Asia (Contamin and Lacu, 1998). Asset price inflation, sometimes a fall in the rate of saving, and the shift in production from exports to the domestic market bring on a vicious circle which runs counter to the "virtuous circle" that it was anticipated would prevail when it was decided to introduce financial liberalization. If the exchange rate is kept stable in terms of another reference currency (often the US dollar), this is sufficient to cause inflationary pressures to be reflected in a deterioration in the trade balance, which, once it goes beyond a certain level, finally puts the international community on the alert and brings on the withdrawal of short-term capital (UNCTAD, 1998, pp. 59-76).

The drama for Mexico, then Indonesia, Thailand and South Korea, is that this turnaround in the judgement of the financial markets took place before the benefits of technological and industrial modernization had been garnered. Thus, in these countries financial liberalization brought on a series of crises of an unprecedented nature which took finance ministers and central bankers by surprise. Moreover, the events which took place shed doubts on the strategy and adjustment plans of the International Monetary Fund, which are based on a very simple idea: one model, one crisis, one cure for all.

More generally, international finance has made the process of accumulation and consumption extremely flexible in the short and medium term, but with the accompanying risk of increasing the severity of the financial and economic crisis that follows the period of boom and speculation. Over-adjustment –both upward and downward– is a marked feature of the financial markets. While it is well known that all financial bubbles eventually burst, as demonstrated in the notable history of such phenomena by Charles Kindleberger (1978), it is not so normal for them to culminate in a wide-ranging cumulative depression. The only precedent for the crisis of the late 1990s is the Great Depression experienced from 1929 to 1932. However, economic and financial history teaches us that crises follow but do not resemble each other, since the institutional reforms made in order to overcome them give rise to new forms of regulation which can in turn suffer a new kind of structural crisis (Boyer and Saillard (eds.), 1995).

III

A global financial crisis, but with a variety of national situations

Does adjustment, which is often dramatically severe, take the same form in all countries? If the hypothesis that globalization is a factor leading to unprecedented coherence of the international system were correct, then such uniformity should actually be observed, subject to a few points of divergence due to the persistence of national institutions still in the course of standardization. In fact, however, globalization represents a new form of interdependence of national economies rather than a force which homogenizes them and blends them in a great melting-pot (Boyer, 1997; Lafay, Freudenberg, Herzog and Ünal-Kesenci, 1999).

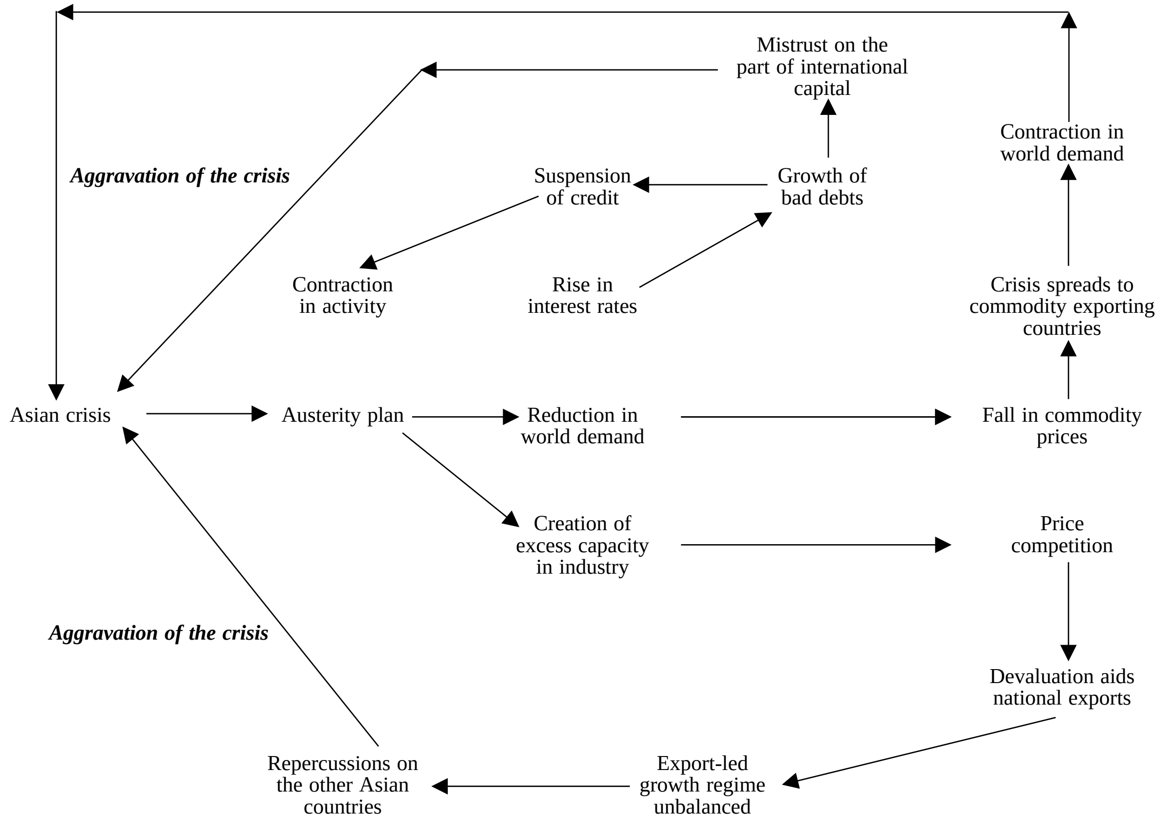
This can be seen directly from an analysis of the mechanisms by which the Asian crisis was transmitted (figure 2). Three main mechanisms are involved:

- First, the Asian countries were obliged to accept a structural adjustment plan in order to obtain IMF aid. Such plans, however, were originally prepared for countries suffering from heavy public deficits and lax monetary management, rather than systemic fragility of the banking system. What happened was that, under the influence of a rapid liberalization process, there was a failure to introduce the prudential mechanisms and control bodies which proved necessary in the developed countries in order to avoid major financial crises (Williamson and Mahar, 1999; Aglietta, 1995 and 1998). Consequently, the rise in interest rates, the contraction in public expenditure, the pressures to open up the domestic market, and the acquisition of local firms by foreign interests, as well as the questioning of the labour laws protecting wage-earners, are all factors which helped to accentuate the contraction in activity in each country in the first stage. This unfavourable evolution further weakened the banking system and favoured the build-up of fresh bad debts. It is noteworthy that a completely opposite policy was applied in the United States in the fall of 1998: a reduction in the Federal Reserve interest guidelines relieved the pressure on the hedge funds, whose ill-advised speculation could have brought on a systemic crisis.

- Second, most of the newly industrialized countries had obvious excess capacity when the speculative bubble burst (Hochraich, 1999; Godement, 1999). As the adjustment plans sought to reduce do-

FIGURE 2

Why did the Asian crisis spread to the rest of the world, assuming different forms in each country?



mestic demand, local enterprises turned their efforts towards outside markets. As this was a generalized trend, there was a considerable drop in export prices, which intensified competition with other countries and often led to devaluation of their currencies. This occurred in Southeast Asia, but it was also present in Latin America. The examples of the electronics or motor industries are sufficient to show how the strategy of seeking to export to the world market has led to excess capacity all over the world. It was through this mechanism that the crisis in the Asian countries spread to the most prosperous economies in both North America and Europe. Its effect was favourable as regards inflation control, which is the obsession of the central banks, but its effect on the profits of the great transnationals was more dubious, and it had repercussions in terms of the instability of stock market prices on Wall Street and most of the other markets. After a period of corrections following the August 1998 Russian crisis, the boom in stock prices resumed even more strongly on Wall Street, in the name of a “flight to quality”. In view of the reigning uncertainty in Asia, the sluggishness of the Japanese economy and the dismal situation in Europe in the first half of 1999, capital flooded into the United States, starting the speculative bubble all over again.

- Third, the international commodity market is a good barometer for judging the world situation. As Asia had been the most dynamic growth area, the downturn in activity reduced the demand for oil and for primary commodities in general. This is why countries as different as Canada, Norway, Russia and Venezuela were finally affected by the Asian financial crisis, albeit a year later. These developments had repercussions on the expected profits and stock values of the oil companies and those operating on the commodities markets. Even in the commodity-producing countries, the crisis had very special effects: how could what happened in the case of Norway be compared with the effects in Russia, Canada or Venezuela? Forms of regulation remain basically national, but they are subject to shocks which are no longer purely domestic but increasingly international (Berger and Dore (eds.), 1995; Hollingsworth and Boyer (eds.), 1997).

So once again we see the diversity of national reactions:

- In Russia, the move towards a finance-based model further destabilized a production system which was already in a very bad way as a result of growing imbalances and opening-up to international trade, even in the case of the most essential goods, such as agricultural products (Sapir, 1996).

- In the United States, the financial crisis only began to make itself felt in October 1998, when the whiplash effect of the summer 1997 financial crisis showed up on the books of the big American corporations. Thanks to the stock market recovery, however, optimism very soon returned and bolstered faith in the emergence of a "New Economy" which would enjoy steady growth and be free from the dangers of both inflation and recession (*The Economist*, 1999a).

- Japan, for its part, has been experiencing ever since 1991 the difficulty of running a liberalized banking system which is in the midst of a speculative bubble and is hence incapable of solving the problem of bad debts for itself. The evolution of the dollar/yen exchange rate has set the pace at which the Japanese crisis has developed (McKinnon, 1999). Massive budgetary injections and an interest rate close to zero barely served to stave off recession, which finally broke out in the first quarter of 1997.

- In a sense, the Southeast Asian nations have been experiencing a situation of the same type since 1997, although in their case it has been much more violently marked because their form of domestic regulation lacks the stabilizing elements of the Japanese economy (Godement, 1999). Once again, however, it should be noted that there are great contrasts between the way the respective situations evolved in South Korea, Thailand and Indonesia.

- The Latin American countries were also caught in the storm and their policy-makers have been thoroughly disconcerted. As the Minister of Finance of Mexico said in mid-1998: "How is it that Mexico finds itself in a crisis, when the government has followed all the instructions of the international organizations?". The differences between the monetary policies of Argentina and Brazil led to sharp exchange-rate fluctuations which threatened to destabilize MERCOSUR.

- Finally, in Europe the launching of the Euro has made it possible to stabilize exchange rates among the eleven countries participating in this exercise, which fully vindicates the idea of European monetary integration in a sense, but since January 1999 there has been the problem of the international financial markets' appraisal of the viability of this new currency. The difficulties in coordinating national budgetary policies and the conflicts over the strategy of the European Central Bank have naturally heightened the suspicions of the financial community, made wary of risks by their recent experience. The depreciation of the Euro with respect to the dollar between January and August 1999 is as much a result of the differences in situations and in monetary policies between Europe and America as of the difficulty of giving birth to a new currency in a context of globalized financial markets (Boyer, 1999a).

IV

The trend towards a finance-based model is still very uneven between countries

The persistence of marked differences between the paths followed by individual countries suggests that globalization is far from having taken possession of all countries and hence transforming all their domestic economic institutions. This disparity between transnationalizing financial innovations and national institutions may be interpreted in two different ways, however.

- It may be considered, for example, that the magnitude of the crisis in the Asian countries is due to their delay in adopting all the rules of a fully developed financial economy, so that financial open-

TABLE 1

The North American economy is based on finance to an exceptionally high degree

	United States	Great Britain	Canada	Japan	Germany	France
1. Propensity to consume, 1996	0.95	0.926	0.956	0.869	0.884	0.908
2. Stock holdings/disposable income, 1997 (%)	145	75	95	30	25	20
3. Capital gains/disposable income (%)	35.5	15	11	-7	7	5
4. Share of stocks and bonds in financial assets of households	28.4	52.4	...	25.3	21.3	14.5
5. Money market rate	5.34	7.38	5.20	0.32	3.5	3.46
6. Yield on bonds	6.51	5.59	7.30	1.06	3.97	4.23
7. Reference yield (%)	12-16	12-16	12-16	5	6-7	9

Source: Line 1: Keizai Koho Center (1998, p. 97). Lines 2 and 3: *The Economist* (1998, p. 129). Line 4: Japan Almanac (1998). Line 5: *The Economist* (1998, p. 129).

ness has not been accompanied by the corresponding modernization of risk management facilities (Williamson and Mahar, 1999). Consequently, governments should press on with the importation of the kind of rules and control bodies which govern the financial systems of the United States or Great Britain: traditionally the countries which have gone furthest in innovations and risk management. This is clearly the question for Japan. It is also clear, however, that the other domestic institutions should be reformed accordingly too, since the maintenance of the highest and stablest yields possible, as demanded by pension funds, for example, is not generally compatible with the codification of wage relations or the style of management practiced by the State. This is why in South Korea, for example, the question of more flexible labour regulations has come up once again after the 1997 crisis.

- In contrast, it may be considered that the present financial crisis is simply another episode, coming after many others (Kindleberger, 1978), in which speculation has tried to break loose from the economic and social constraints which previously affected it, but in which a crisis has very soon occurred whose severity shows the non-viability of a system governed solely by finance: a subject dear to the heart of John Maynard Keynes (1935), and also of Karl Polanyi (1946). According to this second interpretation, it is necessary to bring back some discipline into financial innovation in order to make it comply with the need to stabilize the international economy and ensure steady accumulation of productive capital at the national level (Orléan, 1998 and 1999). In this respect, is it not noteworthy that the economies where financial liberalization has been carried out in a prudent manner (Germany, India) or where productive capital has been made welcome but not speculative funds (Chile before 1998) have registered a much more controlled evolution, without major crises, in spite of the world economic upsets around them?

Indeed, the fact is that by no means all countries are on the verge of adopting a new system of accumulation governed entirely by finance (table 1). Only the so-called Anglo-Saxon countries, headed by the United States, are serious candidates for such a system, for the proportion of their wealth held in the form of stocks and shares is high with respect to their disposable income and seems to play some part in a particularly high propensity to consume which, moreover, increases still further as the financial investments of American households develop. In September 1998, the rate of saving in the United States became negative (-0.2%) because households financed their consumption by resorting to credit: a situation without precedent since 1959. Furthermore, the Stock Exchange is an essential means of capital allocation and control over the way firms are run, through, for example, the pursuit of much higher yields than in Europe or Asia. In contrast, Germany is very far from having these characteristics, which no doubt explains the different types of evolution observed on the opposite sides of the Atlantic.

The other European countries, as well as Japan, are also a long way from adopting the finance-based economic model, and this is not necessarily a handi-

TABLE 2

North American capitalism is not so superior in terms of efficiency

	Efficiency of companies		Access to employment and hours worked			Distribution of fruits of growth		Social justice. Ratio of male workers' wages, deciles 9 and 1		
	Profit-ability, 1997 (%)	Growth rate of manufac-turing product-ivity, 1990-1997 (%)	Hours worked per year, 1996	Growth rate of employ-ment, 1990-1998 (%)	Unem-ployment rate (August 1998)	Growt rate of consump-tion, 1990-1997 (%)	Size of public and social transfers/ GNP (%)	1979	1995	Annual rate of change (%)
Countries which adopted liberalism										
United States	...	3.2	1 986	1.3	4.6	2.4	32.0	3.18	4.35	+2.7
Great Britain	10.4	3.9	1 926	0	6.3	1.8	39.7	2.45	3.31	+2.0
Countries with a strong public tradition										
Germany	14.5	2.7	1 517	-0.6	10.7	1.8	47.7	2.38	2.25	-1.3
France	15.9	2.8	1 679	0.1	11.8	1.2	54.1	3.39	3.43	+0.2
Meso-corporativist countries										
Japan	12.8	2.2	1 993	0.6	4.3	2.0	35.2	2.59	2.77	+1.2
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)

Source: Columns 1, 2, 4, 5, 6 and 7: OECD, 1998 (calculations made on the basis of the statistical annex). Column 3: Japan Almanac, 1999, p, 107. Columns 8, 9 and 10: Richard Freeman, 1998, p. 44.

cap, as we can see by comparing some major performance indicators: in these countries, productivity grows at roughly the same pace as in the United States or Great Britain, and at the end of the 1990s their firms are making perfectly satisfactory profits, but income distribution is much fairer than in the highly finance-based countries (Boyer, 1999b).

It is by no means obvious that European and Japanese policy-makers should force the pace of financial liberalization in order to meet the demands of globalization. This advice is often proffered to Japan, which is recommended to import most of America's institutions if the government intends to try to overcome the serious crisis of the 1990s (Dornbush, 1998), but in fact it would appear to be easier, wiser and finally just as effective simply to make marginal reforms in the institutions inherited from the time of rapid growth. To be sure, the persistence and magnitude of unemployment in Europe and its rapid increase in Japan naturally shed some doubts on the viability of the institutions governing labour relations and the labour market, but the cost/advantage balance is not weighed clearly in favour of an American-type model (table 2). As Richard Freeman (1998) noted, contrary to general belief, the United States has not by any means reached a kind of economic nirvana, except in the case of the richest households, and it would not be advisable for Europe –even if it were possible– to imitate the American model in all its details. The example of Britain points in the same direction: adoption of a finance-based model has increased inequality without having much effect on firms' efficiency (Froud, Haslam, Johal, Leaver, Williams and Williams, 1998).

V

The great financial crises follow but do not resemble each other

This interpretation has important implications for understanding the crisis that broke out in 1997, spread to the rest of the world, and got worse in the fall of 1998. The spectre of a return to the catastrophic chains of events observed between 1929 and 1932 once again haunts the financial community and the international organizations. A step by step comparison, enlightened by regulation theory (Aglietta, 1976; Boyer and Saillard (eds.), 1995), tends to tone down these conclusions, however (table 3).

At a certain level of abstraction, there is no shortage of analogies between 1929 and 1998.

- For a start, a series of speculative bubbles ended up by bursting, first in Japan in 1990, then in the Southeast Asian countries in 1997, and finally in the United States in the fall of 1998. It should be noted, however, that the order of the crises was different from that of the 1930s: at that time it was the United States economy which was hit first by the outbreak of the financial crisis which then spread to the other developed economies and finally to the "periphery". In the 1990s, the opposite took place as a direct result of the booms on the emerging markets, which thus brought the instability of the centre to the periphery. However, the more highly developed and firmly established prudential control arrangements in North America slowed down the spread of the crisis associated with the bursting of the Asian financial bubble. Paradoxically, these uneven degrees of financial maturity sent financial flows back towards Wall Street as from late 1998/early 1999. However, the weakening yield/risk ratio and the fact that the financial yield tends to be higher than the economic yield proper shed doubts on the long-term viability of the path followed by the United States economy since 1991 (Artus and Debonneuil, 1999).

- Secondly, the accumulation regime displays certain similarities. In many countries, it is marked by a profit rate which is considerably higher than in the 1980s, but with insufficient demand to keep up such a level of profitability in the long term. It is therefore a crisis of realization rather than of valuation which looms on the horizon. The United States is an exception to this, but in 1997 most of the other OECD countries were in a situation rather reminiscent of that prevailing when the 1929 crisis broke out in the United States. The effects of the existence of excess capacity were naturally heightened by the slump in demand from the Asian countries. So far, the United States has been the "buyer of last resort", but a conjunctural turnaround in that country would assuredly reveal the magnitude of the imbalances which have built up at the world level (Brenner, 1998). A second paradox is that most of the developed countries still have a growth regime driven by domestic consumption (Bowles and Boyer, 1995), whereas almost all governments base their policy decisions on the hypothesis that growth is conditioned by profit and competitiveness. This error of diagnosis was already present in the 1930s.

- The third point of similarity is that the international financial system presses in favour of downward readjustments, which obliges countries with an external-sector deficit to adopt austerity plans, whereas the countries with a surplus have no incentive (or are unable, like Japan) to reactivate their economies, since the financial fragility of the banks leads to a generalized "wait and see" attitude with regard to investment and consumption. Moreover, financial adjustments can be brutal and rapid, whereas adjustments in economic activity and specialization continue to be much slower. This great lesson from the *General Theory* remains fully valid in these times of electronic money and globalized finance. In 1929, too, the speed with which the financial crisis spread was a decisive factor in the size of the depression and the contraction in economic activity.

- Lastly, even at a time which is supposed to be marked by globalization there is still no supranational system of regulation to ensure the viability of a variety of national growth regimes governed by finance. Although it is quite true that there are international organizations such as the IMF and the Bank for International Settlements which are responsible for preventing financial crises, it is equally true that they do not have the financial or political resources to in-

TABLE 3

From a financial crisis to a structural crisis: a comparison of 1929 with 1998

	1929	*1998*
Nature of system of accumulation		
United States	Intensive, without mass consumption	Extensive, with differentiation of consumption
Other industrialized countries	Intensive, without mass consumption	Moderately intensive, governed by competitiveness
Non-industrialized countries		Dependent on foreign capital and exports
Ranking of institutional forms	Dynamism of finance	Globalized finance controls companies and governments
	Wave of concentration	Wave of concentration in response to demands of financial markets
	Largely competitive wage relations	Erosion of wage earners' bargaining power
	State not supposed to be interventionist	Indebtedness of State limits autonomy of economic policy
	Multi-polar international order	United States has leadership power, but the world is of a multi-polar nature
Sources of crisis		
United States	Excessively high profits compared with effective demand	Speculation feeds consumption and conceals the imbalance in the accumulation system
	Speculation in financial markets	Profits demanded by finance are not compatible with the long-term profit rate
Other industrialized countries (such as France, for example)	Excessively high profits compared with effective demand	Imbalances in the accumulation system are transmitted to external markets (excess capacity; pursuit of trade surpluses)
		Financial crises are transmitted to the domestic economy
Recently industrialized countries		Discrepancy between time-scale of finance (attraction of capital) and time-scale of production (generation of a trade surplus)
		IMF adjustment plans aggravate the imbalances
General situation		
World	Fall in commodity prices	Fall in commodity prices
	Rapid shifts of capital	Instability of capital movements
United States	Optimism of agents: "A New Era"	New economy with constant growth
	Over-valuation of stock markets	Over-valuation of stock markets
	More erratic evolution of stock prices	Great instability of stock prices
	Federal Reserve Bank reluctant to intervene	Federal Reserve Bank conscious of danger of a systemic collapse
	Growth paralysed by stock market crisis	Dynamic growth continues, but profits are under stress
Japan		Deflation of assets since 1992, general deflation since 1997
		Contraction in credit due to bad debts and uncertainty

tervene when there is a "domino effect" serial collapse that results in a major crisis that could exhaust their resources and means of intervention. The recapitalization of the IMF agreed at the end of October 1998 (Camdessus, 1998) and the guidelines given by the Group of Seven (G-7) bear witness to the awareness of the danger that financial instability represents for the cohesion of the world system, but this does not mean that the arms available to the international organizations are in keeping with the dangers involved in a possible recurrence of speculation. Thus, for example, the fact that the IMF granted Brazil a line of credit for US$ 41 billion (IMF, 1998a) to ward off speculative movements still did not prevent the brutal devaluation of the Real after the Brazilian Presidential elections.

Thus, although there are some common features between 1929 and 1998, closer analysis of the forms of regulation and strategies adopted by governments reveals some notable differences.

- In the old industrialized economies, the wage-earning society continues to set the form of regulation, through a closely-knit network of interdependent institutions. The relative inertia of adjustments in employment, hiring and the collective negotiation of wages, the existence of a minimum wage, the breadth and diversity of coverage of social security and the existence of unemployment insurance are all typical features of a form of labour relations which in many countries –especially in Europe- prevents a slump in consumption and hence in economic activity. This is one of the hidden stabilizers which prevented the repetition after the first oil shock of the catastrophic episodes that took place between the wars. On the other hand, however, this institutional stability can prevent changes in the form of regulation and the establishment of a development regime more in keeping with both domestic and international constraints.

- A second difference from the 1930s is that previously the countries of the periphery were mainly suppliers of raw materials and semi-processed goods for the industrialized economies, whereas now much of the production of the Southeast Asian countries and some of the Latin American countries takes the form of manufactures which compete with the products of the OECD countries. For this reason, the excess of manufacturing capacity is no longer observed only in the United States or Europe, but at the world level, in the newly industrialized countries, including China, which has made rapid progress since 1978 in its process of industrialization and entry into the world market. The crisis of excess production is therefore much more difficult to handle now, since it affects different countries: it is a potential source of international economic conflicts, and this makes it all the harder to find a positive solution for the present difficulties. We are thus now involved in a dangerous and potentially zero-sum game instead of the positive-sum game of the past.

The experience of the catastrophic chains of events of the 1930s (financial crisis –competitive devaluation– withdrawal into protectionism –rising nationalism– world conflict) continues to exert a powerful influence on the political and economic leaders of the 1990s, even though few of them actually lived through these episodes. Thus, in mid-1998 the President of the United States, the President of the Federal Reserve Board, the top executives of the World Bank and the IMF, and the Finance Ministers of the Group of Seven all proclaimed their intention of preventing the financial crisis from degenerating into an economic depression. This is why the great financial crises follow but do not necessarily resemble each other.

This is the central message of regulation theory: the great crises follow one another, but never in an identical form, because it is typical of capitalism that it evolves in a spiral, never passing twice through the same configuration (Boyer, 1999b). Such an economic system favours ongoing innovation, and crises and conflicts give rise to the readjustment of institutional forms, which are thus marked by a strong historical element and notable irreversibility. Each structural crisis tends to be new and original in terms of the interaction of its causes and transmission mechanisms. This is a challenge to the current neoclassical theories, which claim instead that the determinants of macroeconomic balance remain unchanged in space and time.

VI

Disciplining world finance: a New Deal for the twenty-first century?

All is not for the best in the best of worlds: since the Asian crisis broke out in 1997 belief in the self-balancing nature of the financial market has been severely shaken and the Russian crisis in 1998 led to further questioning of this eminently optimistic conception. In this respect, it is significant that the financial press has now begun to talk about a new "New Deal" centered on the debt problem (*Business Week*, 1998, p. 60). This proposal is interesting from more than one point of view.

Firstly, it comes from the big industrial corporations, which have noted that the expansion of globalized finance, which was supposed to facilitate their operations and raise their profitability, may in fact prove harmful to them, because it gives rise to instability on product markets and fosters phases of contraction of bank credits which affect both consumption and investment. This is a message which had already been highlighted by the first studies on speculation: while a little speculation may stabilize product markets, its generalized spread to finance brings major instability (Kaldor, 1940). In the face of growing uncertainty, imitative forms of behaviour become general, thus tending to increase the likelihood and magnitude of financial bubbles (Aglietta and Orléan, eds., 1998). Last but not least, financial globalization creates great uncertainty about the evolution of exchange rates, interest rates, and even the very direction of national economic policies and hence also of growth. The way financial liberalization and globalization evolve brings to mind the image of the sorcerer's apprentice, overwhelmed by his own creations.

Secondly, the choice of the term "New Deal" is enlightening because it contrasts with the meaning this term had for the Unite States after the economic collapse in 1929. At that time, financial and banking activity was strongly regulated once again: for example, the law prohibited deposit banks from carrying on activities with stocks and securities, precisely in order to avoid the sources of systemic fragility which manifested themselves once again in the 1990s. The new situation was therefore related mainly to the status of wage-earners, who were granted a number of rights that went against pure market logic: minimum wage, right to retirement, right to education, right to share in the fruits of economic activity, etc. In the 1990s, in contrast, the journalists of *Business Week* were advocating the equivalent of a Brady Plan. It may be recalled that this Plan had converted Latin American public debt into securities tradeable on financial markets. In 1998 this proposal was expanded to cover the absorption of unpaid private debts owed to the banks. This new "New Deal" thus referred to an institutional arrangement between bank capital and financial capital, which is clear proof of the place now occupied by finance, both in the United States and in the newly industrialized countries. Incidentally, this plan confirms that errors of management are not restricted to governments or to Latin America but also affect banks and private firms and can even affect most Asian countries, though not all, as shown by the example of Taiwan. A few years ago, these countries were still considered as possessing special virtues (World Bank, 1993), and there was a danger of underestimating the structural weaknesses which had nevertheless been present for a long time in such economies as South Korea or Indonesia (Hochraich, 1999; Godement, 1999).

However, these proposals completely overlook the fact that unless there are new national commitments to stabilize domestic demand the economies hardest hit by the financial crisis will not be able to recover their growth. It is important not to try to solve the problem of over-production by exaggerated reductions in export prices but, instead, to look for ways of returning to the growth path through more buoyant domestic demand and establishment of the infrastructure needed for long-term development. There are great needs in Asia, Latin America and above all Russia, where a third of the population is below the poverty line and the number of people in this situation has grown steadily since 1995. The main criticism that can be levelled at the IMF's plans for the Asian countries is indeed that they aggravated the contraction of domestic demand instead of stimulating it, in contrast with the economic policy applied by the OECD countries (lower short- and long-term interest rates, increased public expenditure). Furthermore, there is an increasingly widespread conviction that all national economies should base their economic growth on improvements in their competitiveness: that is to say, they should adopt an export-led model. This error would be all the more harmful because it would assume that the United States would play the part of "consumer of last resort".

VII

The paths open for the future: multiple policy options

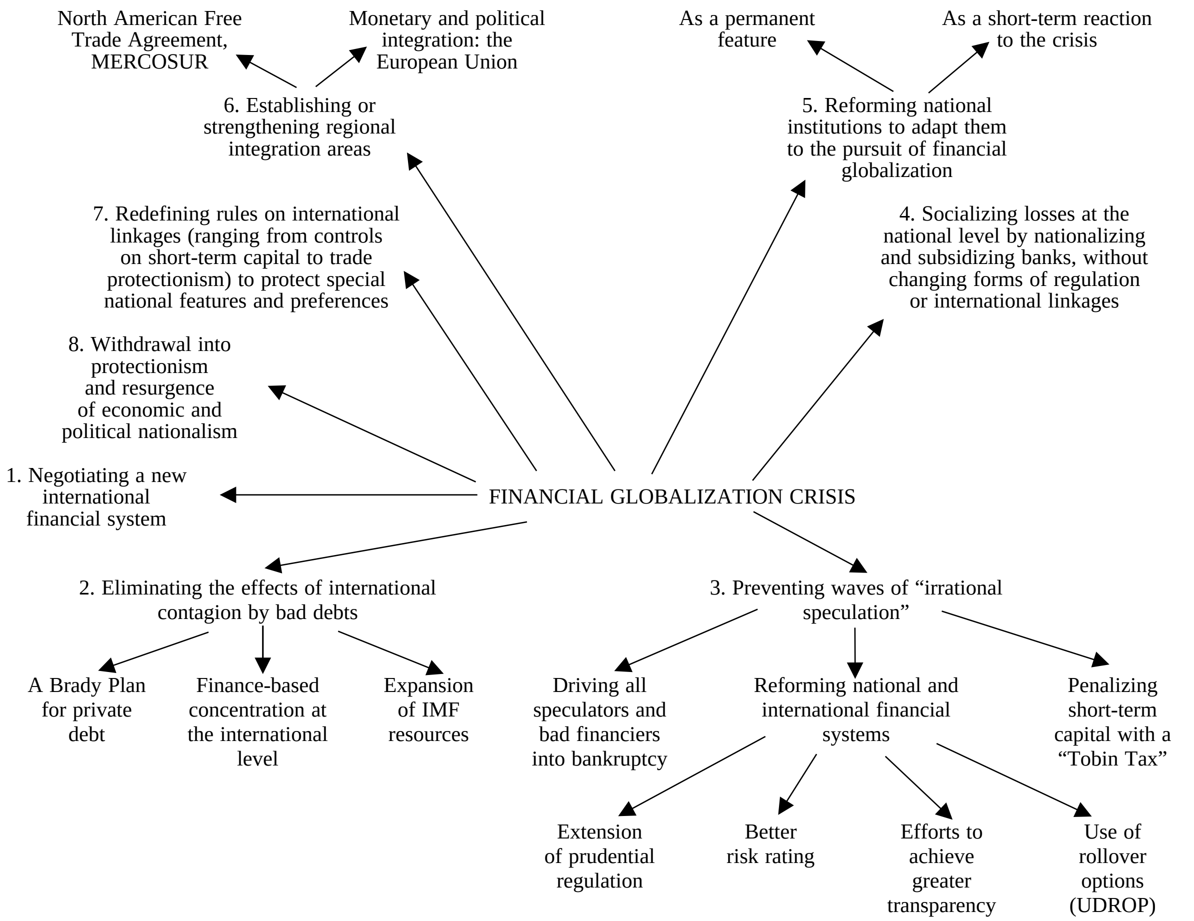
If we take the proposal for a new "New Deal" literally, then, it is essential that governments should look for a broader range of options and adopt a strategy better adapted to the diversity of political coalitions, the particular needs of specialization, and the need for better international linkages. In the final analysis, there will be as many strategies as there are types of trajectories of the societies in question, whose forms of regulation will continue to be very different (Amable, Barré and Boyer, 1997). It is encouraging that there has been an increase in the number and variety of proposals since mid-1998 (figure 3). On the other hand, it is regrettable that the unexpected dynamism of the United States economy up to mid-1999, the halt in the recession in Japan and the lull in the problems of Europe have tended to put off the implementation of these proposals.

The first strategy, proposed by British Prime Minister Tony Blair, is to negotiate a new international system. This proposal is supported by the Keynesian-inspired economists and experts who propose a new international architecture (IMF, 1998a; CAE, 1999a and b). What should have been a priority item on the policy-makers' agenda ever since 1971, after the two oil shocks, and even more so after the financial liberalization, has finally become a current issue. But for this to happen we had to witness the destructive effects of speculation in the 1990s, although the December 1987 stock market crisis should have sounded an alarm for both analysts and policy-makers. The difficulty now lies in the content of the reforms, since the different countries have different, if not downright contradictory interests, depending on whether they are debtors or creditors, whether they are responsible for a significant part of international financial intermediation or not, and so forth. The precedent of Bretton Woods suggests that political and geopolitical factors predominate, since in spite of the talents of John Maynard Keynes, the United States plan was eventually imposed. This seems to ensure that the initiatives of Washington and New York, which are at the heart of the financial globalization process, will be crowned with success, and both the economic benefit of the United States and its diplomatic leadership have been strengthened over the last decade.

Containing the risk of contagion with bad debts is a second option. In a sense, this would appear to be easier to achieve, because it involves less political opposition. The idea of a Brady Plan, taken up again by *Business Week*, is logical up to a point because it aims to make the banks and financial institutions which have accumulated these bad debts pay part of the cost of the adjustment, thus relieving the burden on the public finances and on taxpayers, who generally have little capacity to privatize benefits and socialize losses. There could also be a move towards concentration, through mergers of big banking or financial establishments at the international level. This trend has already been observed in the United States and Japan, but it could spread across national frontiers and thus give rise to new international alliances. Finally, the idea of strengthening the funds available to the IMF for solving or forestalling international financial crises (Camdessus, 1998) now appears to be a priority, in spite of parliamentary opposition to greater public expenditure, in view of the serious risk of a systemic financial crisis perceived in the late 1990s. Furthermore, the independent Central Banks must learn to operate in a more interdependent man-

FIGURE 3

How to surmount the financial globalization crisis: an overview of the strategies open to governments



ner now that financial globalization has increased the risk of instability (Aglietta and Cartelier, 1998).

Preventing future outbreaks of "irrational speculation" (to use the term employed in 1997 by Alan Greenspan when he was trying to stop Wall Street from getting out of control) is a third strategy whose actual form will depend on various possible lines of action which will ultimately prove very different from each other.

The conservative tradition, basing itself on the theory of moral hazard, recommends bankrupting all speculators who are not able to pay their debts and all bankers who have made too many mistakes. The idea is that if they are sure that in future the public authorities will not come to their rescue, financiers will opt for more cautious evaluation of risks, so that the next speculative bubble will be more moderate or will actually be nipped in the bud. This is quite reasonable, but in the meantime what is to be done if the bad debts are so numerous that they endanger the credibility of the whole financial system?

A more moderate solution is to strengthen the prudential supervision regulations by, for example, extending them to hedge funds or even raising the amount of deposit insurance (BIS, 1998). Experience shows, however, that such measures have not been totally effective in recent years, for the nature of risk shifts in line with the systems of protection set up, which in the opinion of some experts explains the seriousness of the Asian financial crisis: speculators are very familiar with the previous IMF interventions and adjust their strategies accordingly. Insurance simply shifts, and may even increase, the risk.

It has therefore been proposed that the risk appraisal procedures for banks and other financial institutions should also be reformed. In this case, the public authorities would be responsible for ensuring the certification and implementation of these procedures. There can be no doubt that there has been an improvement in the soundness of financial systems. Nevertheless, the example of the near-failure of Long Term Capital Management (a United States hedge fund) shows that even the most expert advice on the calculation of option values, provided by two Nobel Prize winners who won that distinction precisely for their work on option value theory, is no guarantee of success (Croff, 1999), for when market opportunities are exploited to the full their global properties change or may be affected by unprecedented changes (Rohatyn, 1999; Artus and Debonneuil, 1999).

A more ambitious and much more radical proposal was put forward in 1978 by James Tobin: taxing short-term capital at a rate which is very modest but has a cumulative effect in penalizing speculation and thus making long-term productive investment attractive again. The situation existing in the 1990s has given rise to renewed debates about such a reform (Haq, Kaul and Grunberg, eds., 1996). The traditional objection to this proposal is that there will always be tax havens to which capital will flow, even if the big industrialized countries were to agree on the simultaneous, coordinated application of such a tax. On the other hand, the example of Chile shows how a country can unilaterally penalize speculative capital or even prevent it from entering the country at all: it is quite true that international capital flows turn away from the country in the short term, but as soon as it registers strong growth with high profit rates productive capital returns. Theoretical models indicate that it is beneficial for a country to slow down short-term capital movements, because the short-term losses are amply offset by the medium- and long-term gains. Indeed, the greater stability of the capital formation process, the generation of learning effects and the reduction of uncertainty lead to more even and ultimately stronger growth (Eliasson, 1984).

At a time which is totally dominated by the financial markets' perception of the credibility of economic policies, many analysts feel that it is more reasonable to aim for transparency of capital movements (Davanne, 1998). By pooling real-time statistical data, the multinational authorities, aided by governments, could make early diagnoses of impending liquidity crises and prevent them from turning into systemic crises, the idea being that rational agents would take these data fully into account and eschew the imitative forms of behaviour which precipitate financial crises. Once again, however, financial history sheds some doubt on the sovereign nature of this remedy (Kindleberger, 1978): in the past, the sophistication of the information available to the actors on financial markets has not prevented the repetition of severe financial crises. Indeed, modern financial market theory shows that there is nothing irrational about speculation and that rational bubbles can form even under the transparency hypothesis (Orléan, 1999). A measure of this type is not useless –far from it– but it is not of itself sufficient.

Other experts have proposed that liquidity crises should be dealt with through the creation of options markets capable of preventing a transitory and accidental liquidity problem from turning first into a financial crisis and then a major macroeconomic crisis. The idea is that all debts denominated in foreign currency should be accompanied by an option, usable at the borrower's discretion, to postpone the debt's maturity by three to six months, subject to payment of a penalty. The is the "Universal Debt Rollover Option with a Penalty (UDROP)" proposed by Buiter and Sibert (1999). The beauty of such a measure is that it would not call for any public funds, unlike interventions by the IMF or national Central Banks, and it would heal the ills of the market through the extension of market mechanisms: a tendency which would fit in very well with the ideas of the 1990s and after. Unfortunately, as long as liquidity crises spread and get worse under the impact of imitative behaviour, major financial imbalances will continue to require public intervention, so that this measure would have to fit in with the variety of instruments described earlier but could not take their place.

Socializing losses through the fiscal budget is the fourth option for dealing with the bad debt buildup inherited from the 1990s. The argument put forward in favour of this approach is that, over a certain threshold, private agents' errors of management and foresight can compromise the viability of the payments system as a whole, and with it the cohesion of the domestic economy. There is nothing wrong, then, with carrying out an act of national solidarity, through the use of tax resources, to restore the dynamics of credit, investment and consumption. The Japanese example shows that these measures are highly unpopular, so that they can only be adopted when the government is very strong or the crisis is so devastating that it dispels the average citizen's reluctance to compensate some rich speculators for the mistakes they have made. Nevertheless, most governments, be they conservative or social democratic, American or Scandinavian, have had to resort to this method in order to avoid a possible collapse of the entire banking and financial system. Even so, it is reasonable to advance the moral hazard argument when this is the only measure taken by governments: when they are sure that they will not be allowed to go bankrupt, banks and financiers will gaily indulge once again in the delights of speculative bubbles.

A fifth solution would be to reorganize national institutions in order to adapt them to the needs of internationalized finance. This is a solution proposed by analysts who believe (even now!) that globalization is an irreversible phenomenon and that once the period of disturbances comes to an end the emerging markets will begin to grow again even faster than before. Consequently, they say, it is necessary right now to reform the fiscal structure, improve the quality of public infrastructure, and eliminate all the "rigidities" from industrial relations by promoting everywhere and at all times a rapid adjustment to the unforeseeable situations generated by the generalized spread of the "casino games" displayed by modern finance in recent times. In fact, there is nothing irreversible about globalization (Boyer, 1997a and b), and a change of course of the internationalization process to take account of the limits observed in the 1990s is quite probable (Epstein, 1996 and Helleiner, 1996). Moreover, it is worth recalling the argument put forward by Karl Polanyi (1946): societies run to ruin if mercantile relations permeate such a central institution as the currency and if they seek to completely dominate labour and the logic of the anthropomorphic reproduction of generations (Aglietta and Orléan (eds.), 1998). For its part, the *General Theory* long ago showed that it was futile to try to return to full employment by making wages as flexible as stock market prices. Finally, and above all, regulationist studies suggest that it was the firmness of the original commitment between capital and labour and the strict circumscription of finance which made possible such rapid and even growth after the second world war (Boyer, 1999b). Despite appearances and the relative weakness of the organizations for the defence of wages, the negotiation of a veritable "New Deal" between employers and workers must be high on the agenda, not only because it fits in with the needs of short-term adjustment but also because it must be the ongoing characteristic of a form of development which would also take account of the dynamics of social needs in each society and not just export competitiveness.

Another option open to national leaders is to set up regional integration areas. Thus, it is seen that trade does tend to increase in the three poles of the triad: this is very clear in the case of Europe and is also to be observed in the case of North America with NAFTA (a later and less vigorous movement) and also in Latin America with MERCOSUR and other trade agreements. In the Asian countries, however, it is only an embryonic phenomenon, and this has increased the seriousness of their crises, for all these countries must find outlets outside Asia, thus leading to a depressive spiral within their own area. In contrast, the establishment of the Euro received unexpected support when the 1997 and 1998 financial crises occurred: it was seen that the currencies in the Euro basket remained stable, whereas the currencies outside it suffered notable changes in their exchange rates. It is in such spaces (Europe and North America) that supranational, but not necessarily world-level, institutions can try to discipline finance and organize competition so as to maximize its favourable effects for the area as a whole. In this respect, political integration can be more effective than the establishment of a mere free trade area, as is suggested by the differences between the paths followed by Europe and Southeast Asia in the 1990s. Likewise, the tensions registered in 1999 in MERCOSUR suggest that a free trade area should include coordination of monetary and exchange rate policies, which means giving up part of national sovereignty in the interest of joint decisions. A movement which has taken almost half a century in Europe (Boyer, 1998) cannot be carried out elsewhere within the time limits demanded by the present financial globalization. This is a serious difficulty, of a political and not just an economic and financial nature, which stands in the way of the establishment of regional integration areas (Frémeaux, 1998).

States always have the option of redefining their international linkages. Some governments may rightly consider that it is finance which has destabilized national forms of organization and brought on crises. While continuing to seek their place in an international division of labour which stimulates innovation and improves production methods and standards of living, countries can nevertheless more or less radically restrict the circulation of financial capital or at least impose precise rules on its entry. Such a movement would be more or less the opposite to the "Multinational Investment Agreement" (MIA) which is being negotiated under the auspices of the OECD but has been held up by strong opposition. The measures taken by Malaysia show that the internationalization process can suffer some setbacks as a result of major crises which shed doubts on the viability of the previous form of international linkages. If the financial crisis were to get worse, this type of strategy could begin to be copied by other countries, regardless of what the advocates of the superiority of total free trade may think, although on the other hand, what has happened between 1997 and 1999 gives no indication of an impending catastrophe like that announced by countries such as Malaysia, which have tried to free themselves from short-term capital movements.

Organizing a withdrawal into protectionism, even at the cost of a rebirth of nationalism (and not only in economic matters), would be the last option that some governments might be tempted to explore, if they had not been able to carry out any of the preceding strategies successfully. The example of the period between the wars shows that some events, if sufficiently dramatic, could bring this strategy up again as a possibility, even though an *ex post facto* analysis would show that it would lead to even greater evils than those caused by international finance at its worst. In the light of these problems, the political and economic disturbances observed since August 1998 give grounds for thinking that one of the first candidates for adopting such a strategy might be Russia.

VIII

Conclusions

At the beginning of the 1990s it was fashionable to talk about "the end of history", on the grounds that the confrontation between the antagonistic social and political regimes of capitalism on the one side and communism on the other had come to an end. However, those who believed this had forgotten the extraordinary innovative capacity of capitalism and above all of finance. In the space of only a decade, internationalization and the predominance of a finance-based approach have changed the world and radically altered the situation of capitalism. The political agenda has been totally transformed, and the authorities now have a dual task: first, and above all, to "domesticate" finance and the market again and make them into means for ensuring the welfare of societies rather than as final objectives in themselves, and second, to renovate international commitments so that they will give rise to forms of growth that do not make exporting at all costs the basic mainspring of each country's economic and social growth.

It is quite true that the buoyant growth of the United States, the resurgence of the Japanese economy and the establishment of the Euro have given grounds for renewed optimism and that many analysts think that the renewed economic dynamism will make it possible to avoid the return of the financial instability of the past without making any major reforms. Nevertheless, the imbalances that appeared in the 1990s are still with us and could surge up again if, for example, the United States economy were to go into a recession. That would indeed be the touchstone of true reality: the "New Economy" on the one hand and the viability of the present international configuration on the other.

For this reason, a genuine New Deal is and must continue to be high on the world agenda.

(Original: French)

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Labour costs and *competitiveness in the Latin* **American manufacturing** *sector, 1990-1998*

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This article analyses the reduction of labour costs as a factor which helps to raise the competitiveness of industrial enterprises. It first reviews non-wage labour costs, both for workers with permanent contracts and those with only temporary contracts, or with no contracts at all, in order to show the differences that exist in non-wage labour costs according to the type of contract of the workers or their unregistered status, and the impact of these differences on the labour costs for each type of worker and the average labour costs. It then goes on to consider the evolution of labour costs in industry and the different levels they assume according to the deflator used, because of the changes in relative prices which accompanied the early years of the economic and trade openness process which has taken place in the region. It then analyses the evolution of labour costs in industry by type of contract and the changes in the average labour costs in the sector brought about by the dual strategy of reducing non-wage labour costs and changing the contract structure of industrial employment; describes the effect of exchange-rate lag on average labour costs and competitiveness, and calculates how the latter would have evolved if there had not been such a lag. Finally, some proposals are made for raising the competitiveness of labour in the countries of the region.

I

Introduction

Some of the most important changes in labour and social security legislation in recent years have been aimed at reducing labour costs. The argument has been that as labour costs are a major component in total production costs, their reduction would make it possible to lower the cost of the goods produced or the services provided, thus making the enterprises favoured by this policy more competitive.

The policy of reducing labour costs is reflected in two strategies which are sometimes applied simultaneously: on the one hand, reducing social security contributions and labour taxes –that is to say, the non-wage component of total labour costs– and on the other, encouraging the hiring of certain types of workers (especially young people without previous work experience and workers who have been out of a job for a long time) through subsidies and/or tax exemptions.

The aim of the latter strategy is to reduce the cost of hiring such workers and thus encourage their employment. In the case of young people, for example, it is necessary to weigh the relative cost of employing an inexperienced young person of lower productivity against that of employing an experienced adult worker. These relative costs are balanced if the State absorbs part of the non-wage labour cost of the worker in question (mainly the social security costs), thus reducing the labour burdens or taxes for the employer, or if the employer is exempted from all or part of the contributions he would otherwise be obliged to pay under the labour legislation.

This new approach to labour and social security legislation (which, of course, also has other aims as well as the reduction of costs) has given rise to considerable discussion. In general, employers consider that reducing labour costs, together with more flexible forms of hiring and greater mobility of workers within the firm, will make companies more competitive because they will be able to offer their products at more interesting prices and will be able to adapt their organization and labour force more easily to changes in demand.

For their part, although workers acknowledge the importance of reducing business costs they fear adverse repercussions on their income and/or on the extent and quality of protection systems, especially as regards health and pensions.

The question arises, then, as to whether it is really necessary to reduce labour costs in order to make firms more competitive. This study seeks to provide an answer to that question. For reasons of availability of information, we have limited our analysis to the manufacturing sector, and productivity refers to labour and not to the totality of the factors involved.[1]

This article is an updated and expanded version of an earlier study (ILO, 1997) and seeks to estimate changes in the level of competitiveness on the basis of variations in productivity and average labour costs. This latter aspect (average labour costs) was not taken into account in the original study, as on that occasion the labour cost analysed was that of a worker with a "permanent" contract. However, as in recent years there has been a significant increase in the demand for workers on fixed-term contracts and, even more so, for unregistered workers without any social security coverage, it was considered that the cost of an employee with a permanent contract did not properly reflect the average labour costs in the industrial sector. We have therefore estimated the average cost given by the sum of the costs of workers on each type of contract (and also of workers without any contract), weighted by the share of each of these types of worker in the overall industrial employment structure. Likewise, the data on labour productivity used here refer to the value added per hour worked and not, as in the original publication, the physical output per hour worked.

□ The views expressed in this study do not necessarily represent the official position of the ILO.

[1] Although productivity, defined in this way, refers to only a single factor, it generally displays a correlation with total factor productivity. Hofman (1996) shows that this was so in the cases of Argentina, Chile and Mexico in the period from 1950 to 1992.

II

Evolution of non-wage labour costs in the manufacturing sector

Non-wage labour costs are generally calculated as the percentage of the gross wage that the employer must pay in addition to cover the social security benefits laid down in each country's legislation. Most studies also include deferred wages in respect of bonuses ("Thirteenth month", etc.) and holidays. However, both the contributions that must be paid by the employer and the deferred wages in respect of bonuses and holidays are calculated on the basis of the legislation applicable to workers with permanent contracts, and do not take account of the fact that in some countries workers with fixed-term contracts are subject to different treatment, while in the case of workers without a contract employers do not make any –or hardly any– social security contributions at all. In this section we therefore make a distinction between the non-wage labour costs of each of these three types of workers.

1. Non-wage labour costs of workers with permanent contracts

In the countries studied, the evolution of the workers' social security deductions[2] has been as follows: in Argentina they rose from 14% of gross wages in 1980 to 16% in 1990 and 17% in 1998 (table 1). In Peru, they rose from 6% in 1990 to 19% in 1994, because of the pension system reform, but were later reduced to 11.4%. In the other countries they remained constant: 21% in Chile and between 9% and 5% in Brazil, Colombia and Mexico. It should be noted that in Chile, as in Peru, the deductions had been raised earlier because of the privatization of the pension system.

The bigger deductions paid by workers in Chile and Peru are due to pension system reform, which shifted the entire responsibility for financing the system to the workers, so that they now have to pay the contributions previously made by their employers, as well as the share they had always paid themselves under the old system. These increased deductions were offset by a proportional increase in gross wages.

On the employers' side, their overall contributions (as a percentage of gross wages) evolved as follows: in Argentina they were reduced from 59.6% in 1980 to 56.1% in 1990 and 44.8% in 1998 (table 1); in Brazil they rose slightly from 57.6% in 1990 to 58.2% of the gross wage in 1994 and have since remained unchanged at that level; in Chile they have stood at 38% since the labour reforms of the 1980s; in Colombia they went down from 47.6% in 1980 to 46.8% in 1990 but rose again to 49% in 1998, and in Peru they likewise went down from 66.8% in 1990 to 62.9% in 1994 only to rise again later to 65.6%.

In relative terms (total contributions and other costs payable by employers/costs payable by workers), contributions range from close to 40% in Peru to 27.5% in Chile. In Argentina they amount to 31% and in Brazil, Colombia and Mexico to around 35%.

The calculations of non-wage labour costs made in this article differ from the estimates made in other studies and even in previous studies by the ILO itself. There are two reasons for this. Firstly, the rates used in such areas as accident insurance, family allowances and severance pay are estimated averages, adjusted yearly on the basis of the information provided by firms and official bodies for the year before the date of the study. Consequently, as the studies are updated the rates are modified to reflect more accurately what actually occurred. Secondly, in some countries the calculation methodology used has been changed. This is so, for example, in the case of supplementary income in Chile: this is estimated to be equivalent to 19.8% of gross wages, bearing in mind that most Chilean wage-earners have a monthly income equal to twice the official minimum wage, in contrast with earlier studies in which average income was taken as being equal to the minimum wage and a

[2] The term "deductions" is used to refer to the amount deducted from a worker's gross wage to cover his labour benefits, while "contributions" refers to the amount, over and above a worker's wages, that his employer must pay for the same purpose.

TABLE 1

Argentina, Brazil, Chile, Colombia, Mexico and Peru: Breakdown of non-wage labour costs of permanent and temporary workers

Argentina

	1980	1990	1994 [a]	1998	
	Permanent	Permanent	Permanent	Permanent	Temporary
A. Gross remuneration	100.0	100.0	100.0	100.0	100.0
Net monthly remuneration [b]	97.1	95.1	94.1	91.3	
B. Worker's contributions	14.0	16.0	17.0	17.0	
Pension	11.0	10.0	11.0	11.0	
Social welfare [c]	4.0	6.0	6.0	6.0	
C. Employer's contributions	59.6	56.1	56.1	44.8	30.9
1. Contributions	43.9	40.4	40.4	29.1	17.7
Pension	15.0	11.0	16.0	9.9	5.0
Social welfare [c]	4.5	8.0	8.0	6.2	5.1
Family allowances	12.0	9.0	7.5	4.7	2.3
Unemployment fund	-	-	1.5	0.9	0.5
IPD [d]	5.4	5.4	5.4	5.4	2.8
Accident insurance	2.0	2.0	2.0	2.0	2.0
Housing fund	5.0	5.0	-	-	-
2. Other costs payable by employer	15.7	15.7	15.7	15.7	13.2
Supplementary payments [e]	8.3	8.3	8.3	8.3	8.3
Holidays	7.4	7.4	7.4	7.4	4.9
D. *Total cost (A + C)*	*159.6*	*156.1*	*156.1*	*144.8*	*130.9*
Ce/Ct [f]	37.3	35.9	35.9	30.9	23.6

Brazil

	1990	1994	1998	
	Permanent	Permanent	Permanent	Temporary
A. Gross remuneration	100.0	100.0	100.0	100.0
Net monthly remuneration	99.3	99.3	99.3	
B. Worker's contributions	9.0	9.0	9.0	
Pension	9.0	9.0	9.0	
C. Employer's contributions	57.6	58.2	58.2	37.2
1. Contributions	38.2	38.8	38.8	25.9
Social security	20.0	20.0	20.0	20.0
Ind. Social Services	1.5	1.5	1.5	0.75
Ind. Training Services	1.0	1.0	1.0	0.5
National Institute for Land Settlement and Agrarian Reform	0.2	0.2	0.2	0.1
Education	2.5	2.5	2.5	1.25
Brazilian Small and Medium-sized Enterprise Support Service	-	0.6	0.6	0.3
Length of Service Guarantee Fund	8.0	8.0	8.0	2.0
Accident insurance	2.0	2.0	2.0	1.0
Severance compensation	3.0	3.0	3.0	-
2. Other costs payable by employer	19.4	19.4	19.4	11.3
Supplementary payments	8.3	8.3	8.3	8.5
Holidays	11.3	11.3	11.1	2.8
D. *Total cost (A + C)*	*157.6*	*158.2*	*158.2*	*137.2*
Ce/Ct [f]	36.5	36.8	36.8	27.1

TABLE 1 *(Continued)*

Chile

	1990 Permanent	1994 Permanent	1998 Permanent
A. Gross remuneration	100.0	100.0	100.0
Net remuneration[b]	98.7	98.7	98.7
B. Worker's contributions	21.1	21.1	21.1
Pension	13.5	13.5	13.5
Health insurance	7.0	7.0	7.0
Accident insurance	0.6	0.6	0.6
C. Employer's contributions	38.0	38.0	38.0
1. Contributions	10.9	10.9	10.9
Severance compensation fund	8.3	8.3	8.3
Accident insurance [g]	2.6	2.6	2.6
2. Other costs payable by employer	27.1	27.1	27.1
Holidays	7.3	7.3	7.3
Supplementary payments [h]	19.8	19.8	19.8
D. *Total cost (A + C)*	*138.0*	*138.0*	*138.0*
Ce/Ct [f]	27.5	27.5	27.5

Colombia

	1988		1996	
	Permanent	Temporary	Permanent	Temporary
A. Gross remuneration	100.0	100.0	100.0	100.0
Net remuneration[b]			100.9	100.9
B. Worker's contributions			7.4	7.4
Pension			3.4	3.4
Health insurance [k]			4.0	4.0
Accident insurance				
C. Employer's contributions	47.6	29.3	52.9	52.9
1. Contributions	33.5	29.3	38.8	38.8
Health insurance [k]	4.7	4.7	8.0	8.0
Pension	4.3	4.3	10.1	10.1
Severance compensation fund	13.5 [i]	9.3	9.3	9.3
National Training Service	2.0	2.0	2.0	2.0
Accident insurance	2.0	2.0	2.4	2.4
Family allowances	4.0	4.0	4.0	4.0
Family Welfare Institute	3.0	3.0	3.0	3.0
2. Other costs payable by employer	14.1	-	14.1	14.1
Holidays	5.8	-	5.8	5.8
Supplementary payments [j]	8.3	-	8.3	8.3
D. *Total cost (A + C)*	*147.6*	*129.3*	*152.9*	*152.9*
Ce/Ct [f]	32.2	22.7	34.6	34.6

Mexico

	1980 Permanent	1990 Permanent	1994 Permanent	1998 Permanent
A. Gross remuneration	100.0	100.0	100.0	100.0
Net remuneration [b]	105.9	105.9	105.9	105.9
B. Worker's contributions	5.1	5.1	5.1	5.1
Pension	2.1	2.1	2.1	2.1
Health insurance [k]	3.0	3.0	3.0	3.0
C. Employer's contributions	40.6	46.8	48.7	48.8
1. Contributions	19.0	25.2	27.1	27.2
Pension	3.8	4.2	5.7	5.8
Health insurance [k]	5.6	8.4	8.8	8.8
Day Nurseries	1.0	1.0	1.0	1.0
Retirement	-	2.0	2.0	2.0
Accident insurance	2.6	2.6	2.6	2.6
Housing fund	5.0	5.0	5.0	5.0
Wage tax	1.0	-	-	-
Payroll tax	-	2.0	2.0	2.0
2. Other costs payable by employer	21.6	21.6	21.6	21.6
Supplementary payments	11.0	11.0	11.0	11.0
Holidays	10.6	10.6	10.6	10.6
D. *Total cost (A + C)*	*140.6*	*146.8*	*148.7*	*148.8*
Ce/Ct [f]	28.9	31.9	32.8	32.8

TABLE 1 *(Concluded)*

Peru

	1990 Permanent	1994 Permanent	1998 Permanent
A. Gross remuneration	100.0	100.0	100.0
Net remuneration [b]	113.0	100.0	108.4
B. Worker's contributions	6.0	19.0	11.4
Pension [l]	3.0	16.0	11.4
Health insurance	3.0	3.0	-
C. Employer's contributions	66.8	62.9	65.6
1. Contributions	36.8	32.9	35.85
Pension	6.0	-	-
Health insurance	6.0	6.0	9.0
Accident insurance [m]	3.0	4.0	4.0
Housing fund	6.0	6.0	5.0
SENATI (training)	1.5	1.2	0.75
CTS (severance compensation)	8.3	9.7	9.7
Family allowances	6.0	6.0	7.4
2. Other costs payable by employer	30.0	30.0	29.7
Holidays	11.0	11.0	9.9
Supplementary payments	19.0	19.0	19.8
D. *Total cost (A + C)*	*166.8*	*162.9*	*165.6*
Ce/Ct [f]	40.0	38.6	39.6

Source: Prepared by the ILO on the basis of official information.

[a] The employers' contributions for pensions, social welfare, family allowances and the unemployment fund were reduced in 1994 by 30% in Buenos Aires and by 80% in the poorest provinces. It is estimated that the average reduction was 40%.

[b] Net remuneration = gross remuneration - worker's contributions + supplementary income.

[c] Health insurance, including contribution to the National Institute of Social Services for Retired Persons (INSSJ&P).

[d] Severance compensation. The 1994 rate was assumed for 1980 and 1990.

[e] Corresponds to bonuses or extra wages.

[f] Ce = contributions and other costs payable by the employer; Ct = costs payable by workers.

[g] Average rate; maximum rate = 3.9%.

[h] Workers' participation in profits, with average wage equal to 2 official minimum wages.

[i] Includes retroactive unemployment benefits.

[j] Corresponds to bonuses or extra wages.

[k] Mexican Social Security Institute: private sector.

[l] Industrial worker enrolled in a private Pension Fund Management Company (AFP).

[m] Average. Rates range from 1.0% to 12.2%.

rate of 25% was applied. Furthermore, these calculations do not include the cost of such items as official holidays and Sundays, maternity leave, sick leave, etc., for the reasons explained in ILO (1997).

2. Non-wage labour costs of workers with temporary contracts, or with no contract at all

In three of the countries studied (Chile, Mexico and Peru),[3] the rates of contributions applied to workers with temporary contracts under the current legislation are the same as for workers with permanent contracts, but in the other three (Argentina, Brazil and Colombia) they are different. In Argentina, the non-wage labour costs for these workers averaged 30.9% of gross wages (14 percentage points less than for a worker with a permanent contract and nearly 15 points less than in 1990, when there was no promotion of temporary contracts). In Brazil, it is estimated that the non-wage labour costs for a worker with a fixed-term contract amount to 37.2% of his gross wage: 21 percentage points less than those for a permanent worker. In Colombia, the non-wage labour costs for a temporary worker have increased from 29.2% of the gross wage in 1988 (before Law 50) to 52.9% at present, bringing them up to a similar level to that of a worker with a permanent contract.

We thus see that, except in Colombia, the non-wage costs for temporary workers have remained unchanged or gone down, which (together

[3] Obviously, the costs in respect of deferred wages, length of service, severance pay, etc., are proportional to the duration of the contract.

with the fact that they receive lower wages than permanent workers) should give rise to greater demand for this type of worker. Although this has in fact occurred, it is interesting to note that there has not been an even bigger increase in the demand for unregistered workers, who receive lower wages than temporary workers and whose employers do not pay social security contributions for them.[4] As noted by Szretter (1999), the use of unregistered workers may form part of a broader strategy of tax evasion by some firms.

To sum up, then, in all the countries studied, except Chile and Brazil, there have been changes in the level of overall labour contributions, calculated as a percentage of gross wages. In Argentina thay have gone down, while in Colombia, Mexico and Peru they have increased slightly. In Chile, Colombia and Peru there is no difference between the non-wage labour costs of permanent and temporary workers, but in Argentina and Brazil the employers' contribution in respect of temporary workers is lower. In Argentina this difference is due to the established legislation, whereas in Brazil it is a matter of custom. Colombia is in a special situation, as although the rates of contributions are now similar for both types of contracts, this was not so in 1988. Law No. 50 adopted in 1990 made it relatively more expensive to hire temporary labour.

III

Trade openness and relative prices: their effects on labour costs and competitiveness

In the following analysis, we adopt the hypothesis that there will be gains in competitiveness when labour productivity rises faster than labour costs. When the labour costs are calculated in national currency, however, in order to estimate their real level it is necessary to decide what index to use: the consumer price index (CPI) or the producer price index (PPI). This decision is not devoid of importance, since in the first few years after the initiation of trade openness the two indexes evolve at different rates. The CPI grows faster than the PPI and hence the growth of real labour costs is smaller when deflated by the CPI than it is when deflated by the PPI. As workers are keen to defend the purchasing power of their wages (that is to say, in relation to the CPI), they tend to feel that the CPI does not rise sufficiently. In contrast, when making their economic calculations entrepreneurs take into account the rise in the firm's costs (including labour costs) compared with the evolution of their products' prices (the PPI), and therefore perceive that when defined in this way the growth of the index affects their competitiveness. In this situation, which occurs in the early years of the openness process, both sides –workers and employers– have opposite but equally justifiable attitudes to the evolution of real labour costs.

The change in relative prices, depending on whether they are based on the CPI and the PPI, is due to the fact that the evolution of consumer prices more strongly reflects the growth rate of the prices of non-tradeable goods and services, which are usually slower to adjust because they are less exposed to the greater outside competition generated by trade openness, whereas the evolution of producer prices is more affected by the prices of tradeable goods, which are quickly affected by trade openness and tend to come into line with international prices.

Later on, once firms have adjusted to market conditions, made improvements in their organization of production and labour, and invested in technology and staff training, the effect of competition shifts to the non-tradeable goods sector. Relative prices then begin to stabilize and the different perceptions of employers and workers on the evolution of labour costs tend to disappear.

[4] In some firms, however, the employer may pay their holidays and bonuses or other types of extra pay.

TABLE 2

Argentina, Brazil, Chile, Colombia and Peru: Employment structure for industrial wage-earners, by type of contract

	Permanent contract	Temporary contract	No contract
Argentina			
1991	67.6	2.2	30.2
1998	62.0	3.6	34.4
Brazil			
1991	67.9[a]		32.1
1996	65.4[a]		34.6
Chile			
1990			
1996	74.7	9.6	15.5
Colombia			
1988	62.7	7.4	29.9
1996	65.4	7.7	26.9
Peru			
1989	55.0	16.1	28.9
1997	25.1	37.5	37.4

Source: Prepared by the authors on the basis of national studies.

[a] Workers "with papers": includes workers with permanent and temporary contracts.

In the three countries whose trade openness processes began in the 1990s, the CPI grew faster than the PPI, up to 1993 in Argentina and Colombia, and up to 1994 in Peru (table 2). Since those dates, both indexes have tended to evolve along similar lines, and in Argentina the PPI has even grown faster than the CPI.

Real labour costs (deflated by the consumer price index) grew less than productivity in the period from 1990 to 1995, except in Chile (table 3). Thus, there were gains in competitiveness of around 10.2% per year in Argentina, 3.4% in Brazil, 4.8% in Mexico and 0.6% in Peru. If we break down labour costs between wages and non-wage costs, we see that both components grew along similar lines in Brazil and Chile,[5] but in Argentina non-wage labour costs grew less than wages, while the opposite occurred in Mexico and Peru.

However, in view of the different perceptions of workers and employers in this respect, we must also analyse the evolution of labour costs in relation to the PPI. As may be seen from tables 4 and 5, the growth in real labour costs is significantly greater when deflated by the PPI than by the CPI. In Argentina, the increase is 8.7% per year in the first case but there is a *decline* of 2.0% per year if deflated by the CPI (table 3). In Mexico and Brazil, labour costs at producer prices rise 4 times more than at consumer prices, in Peru 3 times more, and in Chile 1.6 times as fast. As a result, from the entrepreneurs' standpoint there has been a loss of competitiveness in all the countries except Mexico (table 4): a very different situation from that observed when the CPI is used, when all the countries except Chile increase their competitiveness.

All this is due to the change in relative prices resulting from the macroeconomic policies applied: on the one hand, trade openness brings with it an increase in the inflow of resources from abroad, while on the other hand there are stabilization policies using the exchange rate as an anchor. The increase in exports (mainly of primary commodities) which accompanies the openness process also helps to depress the exchange rate. This has a more rapid

[5] It should be noted that in Chile the reduction in non-wage labour costs took place in the early 1980s.

TABLE 3

Argentina, Colombia and Peru: Annual variation in Consumer Price Index (CPI) and Producer Price Index (PPI)

	1990	1991	1992	1993	1994	1995	1996	1997
Argentina								
CPI	1 344.0	84.0	17.6	7.4	3.9	1.6	0.1	0.3
PPI	798.0	56.7	3.2	0.1	5.8	6.0	2.1	-0.9
Colombia								
CPI	32.4	26.8	25.1	22.6	22.6	19.7	21.6	17.7
PPI	29.9	23.1	17.9	13.2	20.7	15.4	14.5	17.5
Peru								
CPI	7 650.0	139.0	56.7	39.5	15.4	10.2	11.8	6.5
PPI	6 534.0	96.0	50.5	34.1	10.5	8.8	11.4	5.0

Source: ECLAC.

TABLE 4

Argentina, Brazil, Chile, Mexico and Peru: Evolution of labour competitiveness in the manufacturing sector, 1990-1995

(Values in national currency, deflated by CPI and annual growth rates)

Country	Real labour costs			Productivity	Competitiveness
	Wage	Non-wage	Total		
Argentina (pesos)					
1990	0.95	0.60	1.55		
1995	0.94	0.46	1.40		
Annual variation	-	-5.2	-2.0	8.0	10.2
Brazil (reales)					
1990					
1995					
Annual variation	2.9	2.9	2.9	6.4	3.4
Chile (pesos)					
1990	5.65	2.52	8.17		
1995	6.98	3.10	10.08		
Annual variation	4.3	4.2	4.3	3.6	-0.7
Mexico (pesos)					
1990	4.98	2.33	7.31		
1995	5.21	2.56	7.77		
Annual variation	0.9	1.9	1.2	6.1	4.8
Peru (new soles)					
1990	0.21	0.12	0.33		
1995	0.26	0.16	0.42		
Annual variation	4.4	5.9	5.1	5.7	0.6

Source: Prepared by the ILO.

effect on prices in the tradeables sectors (those which are most important for producers) than in the non-tradeable ones (which are most important for the workers, in their capacity of consumers). Consequently, the evolution of labour costs and incomes is viewed differently by those concerned, while the origin of this differential behaviour actually lies outside the labour sphere.

IV

The structure of employment and labour costs, 1990-1997

Because of limitations of information on labour costs by types of contract, this section deals with only four countries: Argentina, Chile, Colombia and Peru. The hourly labour costs of permanent, temporary and unregistered workers are compared and the average labour cost is calculated from the weighted sum of the costs for these three types of workers. A calculation is also made of the reduction observed in comparison with a situation in which there were no changes in labour legislation nor in the structure of manufacturing employment by types of contract. In the light of the growth in industrial productivity over the period in question, a calculation is made of the gains and losses in competitiveness with and without changes in the structure of employment. The costs are measured in current dollars, thus making it possible to analyse the effect of exchange rate lag on them and on competitiveness, and finally the evolution of competitiveness if there had not been an exchange rate lag is estimated.

1. The structure of wage-earning employment in the industrial sector

In the period analysed, the proportion of wage-earners with permanent contracts in manufacturing went down, except in Colombia, while the proportion of workers with temporary contracts went up, as also (except in Colombia) did the proportion of workers without contracts (table 5).

In Argentina, the proportion of workers with permanent contracts went down by 5.6 percentage points between 1991 and 1998, while the proportions of workers with temporary contracts and those without any contract at all went up by almost 1.5 points and rather more than 4 points, respectively. In Peru, the proportion of workers with permanent contracts went down by some 30 percentage points between 1989 and 1997, while the proportion of temporary workers rose by over 20 points and that of workers without contracts grew by 9 points. In Colombia, however, the proportion of workers with permanent contracts increased by 2.7 percentage points between 1988 and 1996, the proportion of unregistered workers went down by 3 points, and that of workers with temporary contracts increased by only 0.3 points.

As a result of these changes in the structure of employment, wage-earning employment in manufacturing became more precarious in all the countries studied except Colombia, this being particularly marked in the case of Peru.

2. Labour costs by type of contract and average labour costs

Let us look first at the labour costs for temporary and unregistered workers, since the fact that they are lower than those of permanent workers should in theory lead to an increase in employment without a corresponding increase in lack of social protection or precarious job tenure. We will therefore analyse the contributions that employers have to pay for workers with temporary contracts and the differences in wages between permanent workers, those with temporary contracts, and those with no contract at all.

Although, as already noted, the legislation does not exempt employers from the obligation to make contributions in respect of temporary workers (except in Argentina), such contributions are smaller in absolute terms because the gross wages of these workers are lower than those of permanent workers. In 1966, temporary workers in manufacturing received 60%[6] of the wages of permanent workers in

TABLE 5
Argentina, Brazil, Chile, Mexico and Peru: Evolution of labour competitiveness in the manufacturing sector, 1990-1995
(Annual growth rates, in national currency deflated by PPI)

Country	Real labour costs	Productivity	Competitiveness
Argentina	8.7	8.0	-0.6
Brazil	12.5	6.4	-5.4
Chile	6.9	3.6	-3.1
Mexico	4.3	6.1	1.7
Peru	17.2	5.7	-9.8

Source: Prepared by the ILO.

Argentina and Chile and 64%[7] in Colombia and Peru. As the contributions payable by employers are the same percentage of gross wages, the hourly labour cost of temporary workers in industry is lower than that of permanent workers, by the same proportion as the gross wage (34% less in Colombia and Peru, and 40% less in Chile).

In Argentina, the hourly labour cost of temporary employees is 44% lower than that of permanent workers. Of this overall difference, 62% corresponds to wages and 38% to the exemption from employers' contributions (table 6).

In the light of the wage differences reported by the four countries in question (insufficient information is available for Brazil) and the partial exemption from employers' contributions in Argentina, an estimate can be made of the differences in hourly costs by type of contract (tables 6 and 7). This estimate shows that the cost of hiring a temporary worker is between 56% and 65% of the cost of hiring a permanent employee.

The potential effect of the lower cost of hiring temporary workers on the average labour costs of a firm depends on the percentage of the total number of jobs that can legally be filled with temporary workers under forms of contract promoted by the legislation. In Argentina, this percentage cannot be more than 30% in the case of firms with over 25 workers, it can be up to 50% in firms with between 6 and 25 workers, and there is no limit in the case of

[6] Other studies indicate that the average wages of temporary workers were 81.5% of those of permanent workers.

[7] These figures refer to the average wages for each group. The differences grow smaller as the workers' years of schooling increase. Thus, the average wages of workers with a university education are not significantly different, regardless of whether they have temporary or permanent contracts.

TABLE 6

Argentina, Brazil, Chile, Colombia and Peru: Hourly labour costs of workers with permanent and temporary contracts in manufacturing
(Current dollars)

	Permanent			Temporary (1-year contract)			Cost of temporary workers/cost of permanent workers
	Wage	Non-wage cost	Total	Wage	Non-wage cost	Total	
Argentina, 1998	4.57	1.96	6.53	2.76	0.87	3.63	0.56
Brazil, 1996	3.74	2.18	5.92	...	...	...	...
Chile, 1996	2.37	0.91	3.28	1.43	0.54	1.97	0.60
Colombia, 1996	1.44	0.76	2.20	0.91	0.49	1.40	0.64
Peru, 1997	1.29	0.83	2.12	0.83	0.54	1.37	0.65

Source: Prepared by the ILO on the basis of official country data and case studies.

TABLE 7

Argentina, Brazil, Chile, Colombia and Peru: Labour costs of workers with and without contracts, 1996
(Current dollars)

	With contract		Without contract	Cost without contract/ cost with contract	
	Permanent	Temporary		Temporary	Permanent
Argentina, 1998	6.53	3.63	3.01	0.83	0.46
Brazil, 1996	5.92	...	1.26	...	0.21
Chile, 1996	3.28	1.97	1.37	0.70	0.42
Colombia, 1996	2.20	1.40	0.90	0.64	0.41
Peru, 1997	2.12	1.32	1.01	0.76	0.48

Source: Prepared by the authors on the basis of national studies.

firms with less than 6 employees. In Chile, Colombia and Peru the legislation does not specify any limit on the proportion of such contracts.

Consequently, in a medium-sized firm which can fill up to 30% of its jobs with temporary workers, the use of the forms of contracts promoted by the legislation would make it possible to reduce average labour costs by around 13% in Argentina, 43% in Chile, 34% in Colombia and 38% in Peru. It should be noted, however, that in Chile this reform was introduced in 1978, so that its effect on the reduction of labour costs took place before the period studied.

3. The labour cost of unregistered workers

The non-wage labour costs of unregistered workers are lower than those of workers with contracts, not only because employers pay only a part of the legally established contributions but also because such workers' gross wages are lower.

With regard to the contributions that should be paid by the employer, it is believed that unregistered workers do receive deferred wages (such as holidays and bonuses), but there are doubts as to whether the benefits in respect of holidays and extraordinary payments are the same for both registered and unregistered workers. Szretter (1999) estimates that on average unregistered workers receive only half the deferred wages of workers with temporary contracts, i.e., 6.6% of gross wages compared with 13.2% in the case of temporary workers. For the purposes of the present study, however, we have assumed that workers without a contract receive the same benefits as workers with temporary contracts in respect of holidays and supplementary payments, which would amount to 13.2% of gross wages in Argentina, 11.3%

TABLE 8

Argentina, Brazil, Chile, Colombia and Peru: Hourly labour costs in manufacturing
(Current dollars)

	Argentina			Brazil			Chile			Colombia			Peru		
	PERM[a]	AVER[b]	DIFF[c]	PERM	AVER	DIFF	PERM	AVER	DIFF	PERM	AVER	DIFF	PERM	AVER	DIFF
1988	...	...	-	-	-	-	...	…	-	1.1	0.9	18%	...	...	-
1989	...	...	-	2.37	1.84	22%	...	…	-	…	…	-	0.96	0.81	16%
1990	...	...	-	2.25	1.73	23%	2.54	2.2	13%	…	…	-	...	...	-
1991	4.55	3.64	20%	2.32	1.77	24%	...	…	-	…	…	-	...	...	-
1996	6.33	5.04	20%	5.92	4.2	29%	3.4	2.95	13%	2.1	1.7	19%	2.2	...	-
1997	6.31	5.12	19%	5.17	3.67	29%	3.49	3.03	13%	2.37	1.92	19%	2.12	1.73	18%

Source: Country studies by ILO.
[a] Hourly labour cost of workers with permanent contracts.
[b] Average hourly labour cost of all workers in manufacturing.
[c] Difference between hourly costs.

in Brazil, 27.1% in Chile, 14.1% in Colombia and 29.7% in Peru.[8]

The gross wages of unregistered workers are lower than those of workers with permanent or temporary contracts. In the hypothetical situation assumed above, the wages of workers without contracts in the last year of the period studied would represent 94% of the wages of temporary workers and 58.3% of those of permanent employees in Argentina, 91% and 53% respectively in Chile, and 94% and 62% in Colombia, while in Peru they would be similar to those of workers with temporary contracts. In Brazil (where no information is available on the average wages of workers with temporary contracts), in 1996 the wages of workers “without papers” were 30% of those of workers “with papers”.

Thus, the cost of employing a worker without a contract would be 17% less than the cost of a temporary employee in Argentina, 30% less in Chile, 36% less in Colombia, and 24% less in Peru, while the difference would be much greater compared with a permanent employee (54% less in Argentina, 58% in Chile, 59% in Colombia, 52% in Peru and 79% in Brazil).

[8] The higher proportions in the cases of Chile and Peru are due to the assumption that workers with and without contracts both receive two extraordinary payments equivalent to the average monthly wage in Peru and annual bonuses equivalent to 25% of their gross monthly wages in Chile.

4. Average labour costs

On the basis of the labour costs for each type of contract and structure of employment in manufacturing (table 2), we can calculate the average hourly labour costs for the period studied. Thus, in 1997 such costs came to 5.12 current dollars in Argentina, 3.67 in Brazil, 3.03 in Chile, 1.92 in Colombia and 1.73 in Peru (table 8).

These average costs are between 13% and 29% lower than they would be if all workers had permanent contracts.[9] As may be seen from table 8, the difference would be 29% in Brazil, 19% in Argentina and Colombia, and 18% in Peru. Although this difference went down slightly over the last seven years in Argentina, it remained unchanged in Colombia and increased in Peru. This different behaviour is explained by the fact that although the proportion of workers without contracts or with temporary contracts increased in Argentina, there was a reduction (from 70% in 1991 to 85% in 1997) in the relative wage differential between unregistered and permanent employees.[10] In Peru, the increased difference is due

[9] This is a theoretical maximum reduction, since it is not feasible for all the workers in firms (public or private) to have permanent contracts.

[10] The evolution of wage differentials in Argentina should be viewed with caution, because “unregistered workers” may include professionals providing services to firms without being registered on the payroll. The salaries of such professionals are usually higher than the average and also grow faster.

to the fact that there were increases both in the proportion of workers with temporary contracts or without any contracts at all and in the wage differentials.

The estimated average labour costs are not only lower than those that would have been registered if all workers had permanent contracts but also lower (except in Colombia) than those that would have applied if the employment structure obtaining in the first year of the period studied had been maintained. Thus, in 1997 the labour cost would have been 5.32 dollars instead of 5.12 dollars in Argentina (3.8% higher) and 3.77 dollars instead of 3.67 dollars in Brazil (2.7% higher). Only in Colombia would they have been lower (1.89 dollars instead of 1.92 dollars (1.6% lower). This has been the main economic effect of the more flexible rules on contracts. In a context in which the exchange rate is used as an anchor for stabilization policies, such flexibility should facilitate adjustment of the labour market and enable the reduction in average labour costs, for a given level of productivity, to be reflected in higher competitiveness.

V

Labour costs, productivity and competitiveness

1. Labour costs and competitiveness

In the 1990s the average labour costs in manufacturing (in current dollars) rose by 5.9% per year in Argentina, 9.0% in Brazil, 4.7% in Chile, 8.8% in Colombia and 9.9% in Peru (table 9).

This significant increase (largely related to the exchange rate lag registered in that decade) was less than the increase in productivity[11] in Argentina (9.4% per year) and Chile (7.8%) but higher in Brazil (5.3%), Colombia (3.5%) and Peru (3.4%). Consequently, industrial productivity rose by around

[11] In terms of the gross value of output per worker, in current dollars.

TABLE 9

Selected countries: Evolution of average labour costs, productivity and competitiveness
(Annual rates)

	Cost			Productivity	Competitiveness [a]		
	With change[b]		Without change[b]		With change[b]		Without change[b]
United States, 1990-1996		2.9		4.4		1.5	
South Korea, 1990-1996		14.2		12.0		-1.9	
Germany, 1990-1996		2.1		6.2		4.0	
Argentina, 1991-1997	5.9		6.5	9.4	3.3		2.7
Brazil, 1989-1997	9.0		9.4	5.3	-3.4		-3.7
Chile, 1990-1997	4.7		...	7.8	3.0		...
Colombia, 1988-1997	8.8		8.6	3.5	-4.9		-4.7
Peru, 1989-1997	9.9		12.2	3.4	-5.9		-7.8

Source: Prepared by the ILO.

[a] Calculated through the following formula:

$$c = \frac{(1 + q)}{(1 + lc)} - 1$$

where

c = annual variation in competitiveness

q = annual variation in productivity

lc = annual variation in labour costs

[b] i.e., change in employment structure, by type of contract.

3.0% per year in Argentina and Chile but went down in Brazil (-3.4% per year), Colombia (-4.9% and Peru (-5.9%).

The growth of competitiveness in Argentina and Chile was higher than that registered in the United States and South Korea between 1990 and 1996, due mainly to the rapid increase in productivity in the two Latin American countries, while the loss of competitiveness of Brazil, Colombia and Peru (which even exceeded the corresponding loss in Korea) was due both to the rapid increase in labour costs and to the modest growth of productivity.

How would competitiveness have evolved if in 1997 the employment structure in each country had remained the same as that obtaining in the first year of the period studied? The results indicate that in Argentina labour costs would have been 3.8% higher than those actually registered, in Brazil 2.7% higher, in Peru 15% higher, and in Colombia 1.6% lower. This means that hourly labour costs would have increased more per year than they did with the change of structure in Argentina, Brazil and Peru, but slightly less in Colombia. Thus, in Argentina, Brazil and Peru industrial competitiveness would have increased 0.5%, 0.2% and 1.9% less than it actually did, respectively, while in Colombia the loss of competitiveness would have been 0.2 percentage points less (table 9).

The introduction of more precarious forms of employment made it possible to reduce labour costs because of the lower non-wage costs in Argentina and because of the lower wages for non-permanent labour in all the countries studied. Thus, Argentina was able to increase its competitiveness in spite of the fixed exchange rate and it was possible to partly offset the loss of competitiveness due to slow productivity growth and exchange rate lag in Brazil, Colombia and Peru.

The increase in labour costs in dollars was due to the increase in nominal wages in a context of exchange rate lag. Increased productivity, for its part, was due mainly to the reduction in the level of employment.[12] The evolution of competitiveness has thus been determined by the influence of changes in the employment structure and exchange rate policies on labour costs and the effect of lower levels of employment on productivity.

[12] See Amadeo, Camargo, Frenkel and Hernández-Laos, 1999.

2. Labour costs and the effective exchange rate

In the period studied, most of the countries in question displayed over-valuation of the national currency and exchange rate lags, due both to the inflow of foreign capital and to the use of the exchange rate as an anchor in stabilization policies. In others, however, the exchange rate policies applied linked the local currency to the relation between domestic and external inflation, so that the exchange rate maintained its parity and rose at the same rate as inflation, or even faster. In the latter case, there was undervaluation of the national currency or devaluation in real terms.

Real gains in labour competitiveness will occur when the growth rate of labour productivity is higher than that of labour costs and is also sufficient to offset the effects of exchange rate lag.

If we include in the analysis the effects produced by exchange rate lag, using the effective exchange rate given by the behaviour of the national currency *vis-à-vis* those of the country's main trading partners, the levels of competitiveness given in table 9 change significantly.

Let us now look at the evolution of manufacturing competitiveness after correcting the lags or advances of the effective exchange rate (tables 10 and 11).

When this is done, the competitiveness gains are reduced and the losses increase in countries like South Korea and Germany, which devalued their currencies to less than the equilibrium or parity level with the currencies of their main trading partners. In contrast, in countries like Argentina, Brazil, Chile, Colombia and Peru, which had overvalued currencies, exchange rate correction increases the gains in competitiveness by Argentina and Chile, reduces the losses of Colombia and Peru, and turns Brazil's loss into a gain.

In these circumstances, if we look at the behaviour by countries we see that in the period studied the manufacturing productivity of Argentina, Brazil, Chile, Colombia and Peru rose significantly, but not as fast as labour costs in the cases of Brazil, Colombia and Peru (table 9), so that they suffered competitiveness losses of 3.4%, 4.9% and 5.9% respectively. The situation was different in Argentina and Chile, where productivity rose faster than average labour costs, giving rise to competitiveness gains of the order of 3.3% and 3.0% respectively. If we introduce exchange rate correction, however (table 10), the gains in competitiveness would be still greater in the

TABLE 10

Selected countries: Evolution of labour competitiveness in manufacturing after exchange-rate correction

	Productivity (base year=100)	Labour costs (base year=100)	Effective exchange rate (base year=100)	Annual variation in competitiveness[a]
United States, 1990-1996	129.5	118.7	96.9	2.0
South Korea, 1990-1996	197.4	221.8	118.0	-4.6
Germany, 1990-1996	143.5	113.3	122.5	0.6
Argentina, 1991-1997	171.4	141.1	71.3	9.3
Brazil, 1989-1997	151.2	199.3	64.5	2.0
Chile, 1990-1997	169.2	137.9	87.2	5.0
Colombia, 1988-1997	136.3	213.6	64.7	-0.2
Peru, 1989-1997	130.7	212.8	91.8	-4.9

Source: Table 9 above and ECLAC for effective exchange rate.

[a] Calculated through the following formula:

$$c = \left[\frac{(1 + q)(1 + er)}{(1 + lc)}\right] - 1$$

where *c* is the annual variation in competitiveness, *q* is the annual variation in productivity, *er* is the annual variation in the effective exchange rate, and *lc* is the annual variation in labour costs.

TABLE 11

Selected countries: Variation in competitiveness of manufacturing

	With exchange rate lag or advance	Without exchange rate lag or advance
United States, 1990-1996	1.5	2.0
South Korea, 1990-1996	-1.9	-4.6
Germany, 1990-1996	4.0	0.6
Argentina, 1991-1997	3.3	9.3
Brazil, 1989-1997	-3.4	2.0
Chile, 1990-1997	3.0	5.0
Colombia, 1988-1997	-4.9	-0.2
Peru, 1989-1997	-5.9	-4.9

Source: Tables 9 and 10 above.

cases of Argentina and Chile (9.3% and 5.0% per year, respectively), the losses would be smaller in Colombia (-0.2%) and Peru (-4.9%), and Brazil's loss would be turned into a gain of 2.0%.

With regard to countries outside the region, we see that Germany's gain in competitiveness would have been smaller if it had not devalued its currency, while South Korea's loss would have been greater. In the case of the United States, its gain in competitiveness would be slightly greater if account is taken of the evolution of the dollar compared with the currencies of its main trading partners.

To sum up, the analysis made so far shows that the competitiveness of countries depends both on the decisions taken by employers and workers that affect labour costs and productivity and the macroeconomic policies applied. During the period studied, the exchange rate lag that existed in many countries of the region made nominal labour costs higher and reduced export income in national currency terms, giving rise to loss of competitiveness in most cases.

As already noted, the exchange rate policies applied have been influenced by the inflow of short-term foreign capital as a result of the opening-up of markets, as well as by the stabilization policies applied. In the case of the countries studied here, globalization would therefore appear to have had not only the well-known positive effects but also an exchange-rate effect which, so far, has adversely affected manufacturing competitiveness. Furthermore, globalization shifts the burden of domestic adjustment onto costs (especially labour costs) and productivity. The evolution of labour costs in the countries studied affects competitiveness, but this effect depends on the evolution of productivity and also on the effects of macroeconomic policies. Indeed, during the period in question these factors were more important than the evolution of wages and wage-based taxes to finance social security benefits.

The incidence of exchange rate policy on labour costs and competitiveness was clearly shown by the devaluations made by all the countries except Argentina to compensate for the effects of the maxi-devaluations effected by the Asian countries in 1997.

3. Labour costs and competitiveness in the context of the Southeast Asian crisis

The measures taken by the Southeast Asian countries to deal with the crisis that affected them as from the second half of 1997 forced Latin American firms to make greater efforts in order at least to maintain their levels of relative competitiveness *vis-à-vis* those countries.

The devaluations made by the Southeast Asian countries led to reductions in labour costs in dollar terms between the first half of 1997 and the first half of 1998 which amounted to 24.8% in Thailand, 28.1% in the Philippines, 33.1% in South Korea, 34.9% in Indonesia and 38.4% in Malaysia. This reduction in labour costs occurred in the midst of a generalized contraction of real wages due to the speeding-up of inflation in all these countries. At the same time, average labour productivity in the manufacturing sector also declined because employment did not go down in proportion to the abrupt drop in industrial production during the adjustment (ILO, 1998).

As a result of the evolution of labour costs and productivity, manufacturing sector productivity rose significantly in all the Southeast Asian countries during the first half of 1998 as compared with the same period the year before, with the gains in competitiveness ranging from 40% to 60%, except in Thailand (21.4%).

Consequently, the competitiveness of the Latin American countries would have had to increase by between 20% and 60% in 1998 merely in order to maintain their pre-crisis levels of relative competitiveness. As it was difficult, if not impossible, to make a fresh reduction in labour costs of this magnitude and it was not possible either to raise productivity by the same amount in the short term, the only possibility was to reorient exchange-rate policy: i.e., to devalue the national currency more in order to reduce costs in dollar terms.

Between the first half of 1996 and the first half of 1997 (that is to say, the twelve months before the Asian crisis) there were substantial gains in manufacturing sector competitiveness in all the countries studied except Chile, where there was a decline of 4.1% (figure 1). The increase in productivity in those twelve months (Argentina: 7.5%; Brazil: 6.1% and Peru: 4.4%) was due to the rapid growth of output per hour worked (5.4% in Peru and 7.5% in Argentina and Brazil), while labour costs rose by only 0.2% in Argentina and a little over 1.0% in Brazil and Peru. In Colombia, the 6.2% increase in competitiveness was due entirely to the reduction in labour costs in dollars because of the devaluation of the peso, since productivity rose by only 0.7%.

In contrast with the foregoing, the evolution of labour costs and productivity in the context of the Asian crisis –that is to say, between the first half of 1997 and the first half of 1998– indicates that labour costs went down in all the countries except Argentina (by 0.4% in Brazil, 1.9% in Chile, 4.9% in Colombia and 4.3% in Peru) (figure 2). Obviously, these reduc-

FIGURE 1

Argentina, Brazil, Chile, Colombia and Peru: Annual variation in labour costs, productivity and competitiveness in the manufacturing sector
(First half of 1996-first half of 1997)

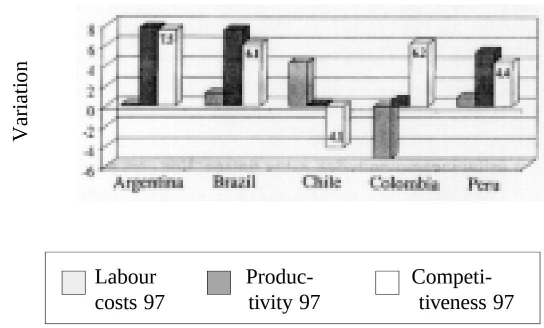
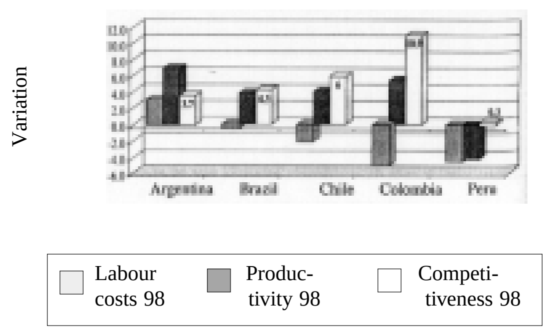


FIGURE 2

Argentina, Brazil, Chile, Colombia and Peru: Annual variation in labour costs, productivity and competitiveness in the manufacturing sector
(First half of 1997-first half of 1998)



tions –which took place even though real wages increased (except in Argentina and Peru) because the adjustment was being carried out without increasing inflation– were associated with the major (Chile, Colombia and Peru) or minor (Brazil) devaluations of the respective national currencies in these twelve months. Parallel with this reduction in labour costs in dollar terms, all the countries except Peru registered increases in productivity (physical output per hour worked): 3.9% in Brazil, 4% in Chile and 5.4% in Colombia. This caused competitiveness to rise by between 4.3% (Brazil) and 10.9% (Colombia) (figure 2). In Peru, although labour costs in dollar terms went down due to the devaluation, productivity dropped by 4%, so that the rise in competitiveness was only 0.3%. In Argentina, although labour costs increased in dollar terms, competitiveness nevertheless rose by 3.7% thanks to the 6.8% increase in productivity due to both the growth of physical output and a slight reduction in manufacturing sector employment.

To sum up, then, the increases in productivity obtained in some countries thanks to the expansion of industrial output and lower levels of manufacturing sector employment, as well as the devaluations made in other countries, which helped to reduce labour costs in dollars, made it possible to improve competitiveness in the twelve months following the onset of the Asian crisis. Nevertheless, this did not prevent a loss of relative competitiveness, because as already noted, the Asian countries increased their competitiveness even more, thanks to the reduction of their labour costs in dollar terms rather than to increases in productivity.

V

Conclusions

At least five conclusions may be drawn from the analysis made in this study. Firstly, there was a change in the structure of private sector employment in terms of forms of hiring. There was an increase in the proportion of workers with temporary contracts or no contract at all (except, in the latter case, in Colombia) and a decrease in the proportion with permanent contracts.

Secondly, in some countries the rates of contributions payable by employers in respect of workers with temporary contracts were reduced to promote the hiring of such workers.

Thirdly, as a result of the foregoing, average labour costs (calculated by weighting the labour costs by type of contract by the weight of such contracts in total employment) rose less than would have been the case if there had not been a change in the structure of wage labour and an accentuation in wage differences. Consequently, some countries obtained greater competitiveness gains than they would have attained in the absence of such changes, while others suffered less serious losses of competitiveness than they would otherwise have undergone. The only exception was Colombia, where the changes led to a slightly greater increase in labour costs than would otherwise have been the case.

Fourthly, even in those countries which registered losses of competitiveness (Brazil, Colombia and Peru), these were not due to a drop in productivity but to rapid increases in labour costs expressed in current dollars. These increases were due partly to increases in real wages, but mainly to exchange rate lags which drove up labour costs significantly. As we saw in the previous section, the correction of these lags in 1998 made it possible to reduce labour costs and thus partly compensate for the loss of competitiveness generated by the maxi-devaluations registered in the Southeast Asian countries.

Fifthly, it does not seem likely that recovery of the competitiveness lost after the Asian crisis and, more recently, the problems in Brazil, can be based on spectacular increases in productivity or on the reduction of labour costs through the promotion of more precarious forms of employment, the contraction of nominal wages, or a significant reduction in employers' contributions.[13] Consequently, competitiveness gains should be based, in the short term, on the reorientation of exchange and interest-rate poli-

[13] This does not mean that efforts should not be made to reduce or eliminate contributions which do not generate benefits for the workers, especially in the case of microenterprises or small-scale enterprises.

cies and, in the longer term, on strategies to raise productivity which involve both employers and workers.

Such strategies would affect labour policy as regards labour relations, both individual and collective. With regard to individual relations, a matter for concern are the effects of more precarious forms of employment on both the security and personal and family development of workers and on the development of their productivity potential, especially if their possibilities of participating in training and retraining programmes and activities are only limited.

It would be desirable to explore the possibility of reducing the proportion of temporary workers and providing incentives for stable employment by reducing the cost of longer-term contracts. In addition, unemployment insurance arrangements should be developed, combined with training programmes for those receiving such benefits, designed to improve the "employability" of workers and –if made compulsory throughout the period when a worker is receiving unemployment benefit– to discourage protracted unemployment.

Collective labour relations (more specifically collective negotiation) form the second area for efforts to raise productivity. It is necessary to progress from a vision of collective negotiation seen as a means for avoiding over-exploitation of workers and achieving social peace to the concept of collective negotiation as a means of arriving at undertakings between workers and employers to apply strategies that will raise productivity and share its benefits more equitably.

One such strategy could be to establish a link between wages and productivity, so that, after fixing a minimum level determined by the existing wage level, all wage increases during the agreed period must be tied to the productivity increases obtained, measured according to formulas agreed between both sides.

Another strategy negotiated between employers and workers could be to promote participation by the latter in decisions on the organization of the various stages in the production process and quality control and establish incentives for the submission of proposals for raising productivity.

Likewise, concerted training plans could be established through collective negotiation within the enterprises, which, like the other incentives, would result in productivity increases in both the short and long term.

In short, the recovery of lost competitiveness and the attainment of further advances in this respect should be based on increases in productivity rather than on cost reductions achieved through more precarious job tenure or a lower level of employment. Greater job security and the promotion of collective negotiation can help to secure sustained increases in productivity.

(Original: Spanish)

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Worker participation *in company profits* or operating results *in Latin America*

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This article analyses the systems of worker participation in company profits or operating results applied in Latin America and their capacity to meet the needs of the economic context in which companies operate. After an introduction (section I), a brief outline of variable wage systems is presented and the main features of the participation systems used in four Latin American countries (Chile, Mexico, Peru and Venezuela) are described (section II). The characteristics of these systems are then compared with each other and with those of the system adopted in Brazil since 1994 (section III). The application of these forms of participation is then evaluated, and information on the Mexican profit sharing system is presented to this end (section IV). On the basis of still rather fragmentary information, some aspects which seem important for making a preliminary evaluation of the Brazilian system are then discussed (section V). By way of conclusion, the desirability of applying such participation instruments in the new economic and labour context is analysed (section VI).

I

Introduction

Most of the Latin American countries which have legislation on financial participation by workers in their companies have systems of sharing in the profits (sometimes called gains, earnings or other terms). In principle, profit-sharing programmes consist of additional payments made to workers as a function of the achievement of a certain level of profits by their firms. Generally speaking, in these countries such systems were introduced through compulsory legislation laying down the percentage of profit-sharing, the definition of profits to be used, the workers included in and excluded from the system, and sometimes also the way in which the amount thus established should be shared out among the workers. It is therefore essentially a variable payment seeking to link a part of workers' total remuneration to the success of their companies, as measured by their profits.

Originally, at the beginning of the twentieth century, profit-sharing systems were implemented on a voluntary basis by companies which wanted to establish good labour relations and to share part of the fruits of their success with their workers (Perry and Kegley, 1990). A modest redistributive intention underlay this attitude. Later on, some countries decided to make this principle obligatory, extending these benefits to most workers. In a context of full employment and sustained growth, this distributive policy seemed in line with the economic and labour context.

In recent years, however, the situation has undoubtedly undergone substantial changes. The labour market is no longer marked by indefinite contractual relationships, but rather the rapid growth of more precarious forms of employment, and companies seem to have entered on a process of endless restructuring because of the need to maintain their competitiveness, now at international levels. We may therefore wonder if, in this new context, workers' profit-sharing continues to be a suitable instrument in the form in which it was originally formulated.

This mechanism is no novelty in the region. Chile, Mexico, Peru and Venezuela, among other countries, have various forms of legislation regulating such profit-sharing, with a common basic original objective: to express the right of workers to share in the financial results of their companies, with an obvious redistributive intention.

Departing from this predominant Latin American approach, Brazil has recently taken a different attitude to worker participation. Provisional Measure No. 794, introduced late in 1994, provides for sharing by workers in the profits or results of their companies.[1] This Provisional Measure regulates for the first time a Constitutional provision which has existed since 1946 and has been ratified in successive Brazilian Constitutions. Its terms are quite flexible: the social actors can lay down the criteria for profit-sharing through negotiation and can choose between systems linked to the company's profits, to specific results, or to mixed indicators. Since this legal instrument has now been in force for over three years, some experience has been built up in its application which could be useful for evaluating the virtues of this new approach.

□ A preliminary version of this paper was presented at the tripartite seminar on "Experiences in workers' profit-sharing", held in São Paulo in August 1997. The views expressed in this article are the exclusive responsibility of the author and their publication does not necessarily mean that they are authorized by the ILO.

[1] According to the Brazilian Constitution, in important and urgent cases the President of the Republic can adopt provisional measures which have the status of laws, but must submit them immediately to the National Congress for approval. The measures remain valid for thirty days, and if not converted into laws they lose their validity. In order to prevent this from happening, Provisional Measures may be reissued with a new number, as has occurred in the case of the measure in question so far.

II

Variable remuneration systems

Although worker participation in profits or operating results may be considered as forming part of variable remuneration systems, in addition to differences in the way they are implemented they have quite different potential and objectives, which should be clarified at this point.

Profit-sharing systems with payment in money (like all those of the Latin American countries) are fundamentally income distribution systems which, at best, increase a worker's identification with his firm to some extent.[2] In most cases, however, they merely represent an "extra cost" (although of a variable nature) in the production process. The fact that the cost is variable does, of course, represent an advantage over other labour costs, since at times of crisis, when the company's profits fall, this component adjusts itself downward automatically.

This flexibility of labour costs forms the main theoretical argument in Martin Weitzman's proposal. In his view, linking a significant part of total remuneration to company profits can lead to increased employment and a reduction in the inflationary pressures exerted by wages (Weitzman, 1984). As regards employment, linking a substantial part of remuneration to the financial performance of companies can stimulate new recruitment, as it reduces both business risks and the cost of the newly hired staff who will share in the total amount of profits fixed in advance. As regards inflation, linking part of wage increases to profits restricts the wage component of inflation.

Systems of worker participation in the company's operating results, however, can generate or stimulate changes in workers' behaviour and their use of the factors of production, with possible benefits for both the company and themselves. Through conversations between the management and the workers, measurable targets are fixed for variables which are under the control of the latter, together with a scale of rewards for their achievement. In order to increase the degree of motivation, the corresponding payments should be made as often as possible, so as to relate them clearly with improvements in performance. Programmes of this type can be aimed at stimulating individual effort (raising productivity in the strict sense), improving product quality, saving on resource use, reducing waste and lost time, reducing accidents, etc., or even promoting more than one of these aspects at the same time.

The feature of profit-sharing systems which fits in best with the present economic context is the fact that they are variable. Payments in respect of profit-sharing form part of workers' total remuneration, but unlike their basic wage or other benefits which are paid on a regular basis ("thirteenth month", holidays) or which depend on their individual characteristics (family allowances, seniority), these payments are only made if the profits effectively materialize. Otherwise, no payment whatever is made in this respect. Consequently, this variable component of total remuneration is an instrument which automatically adjusts labour costs and can give the company greater flexibility for dealing with fluctuations in demand for its products and help to obviate unnecessary dismissals of staff.[3]

Various studies have sought to determine the relation between profit-sharing and productivity. A review of the literature on this matter came to the conclusion that there is a positive albeit moderate

[2] We will not deal here with deferred-payment participation systems, which can have a positive impact on the rate of domestic saving. The fact that wage levels are mostly very low in the countries studied would make their application extremely difficult, however.

[3] The existence of a variable, automatically adjusting component may not be enough in the event of an acute crisis, however. In the Argentine motor industry, for example, more drastic measures had to be taken after the 1997 Asian crisis, even though a significant part of the workers' remunerations were of a variable nature. Thus, in addition to the cost cuts brought about by the automatic adjustment mechanism, overtime was reduced, there were suspensions and cuts in working hours, and programmes of accelerated voluntary retirement and outright dismissals were applied (Soifer and Tomada, 1999).

relation (Weitzman and Kruse, 1990), but Card (1990) found that the effect of profit-sharing on productivity would occur at the time of initiation of the programmes, so that it would be a non-repetitive effect.

At all events, worker participation in company profits does not seem to affect their motivation significantly. This would limit the usefulness of this instrument at times when organizational restructuring processes in firms need the collaboration and active participation of the workers. In this sense, worker participation in the operating results would appear to be a more suitable instrument, since in this case the variable payment is linked to the achievement of specific goals which are of interest to the firm and which have been previously agreed between management and workers. Furthermore, in a context of growing competitiveness, participation in the operating results is not limited to the mere reduction of labour costs but also seeks to improve the firm's position by making the workers participants in the formulation and implementation of the necessary changes.

Unlike profit-sharing, participation in the operating results cannot be decided at the central level, since it is only at the enterprise level that the most suitable approaches to its situation can be determined. Consequently, the authorities can only intervene indirectly by promoting the adoption of such programmes through, for example, fiscal incentives, or exempting them from some social security payments.

Box 1

MAIN DIFFERENCES BETWEEN PROFIT SHARING AND PARTICIPATION IN OPERATING RESULTS

	Profit sharing	*Participation in operating results*
Objective.	To link remuneration to the success of the enterprise. To promote identification of workers with the objectives of the firm (to increase profits).	May be designed to: Encourage individual effort. Improve product quality. Save on use of resources. Stimulate cooperation and teamwork.
Factor remunerated.	Profits.	Productivity (measured in terms of one or more indicators).
Unit remunerated.	The company as a whole, or particular production units.	Individuals or work groups.
Frequency of remuneration.	Yearly or twice-yearly.	Monthly, quarterly or twice-yearly.
Availability of rewards.	Immediate (paid in cash, without additional social security benefits for the worker). Deferred (deferred payment, with additional social security benefits for the worker).	Immediate (paid in cash, without additional social security benefits for the worker).
Main advantages.	In periods when the company makes a profit, part of the latter is received by the workers. In periods of recession, labour costs are reduced automatically, thus easing the adjustment process.	Workers have more influence and control over the results than in the case of profit-sharing schemes.
Main disadvantages.	Some important factors are not under the control of the workers (such as management decisions or macroeconomic factors).	It is sometimes difficult to determine and measure the most suitable indicators. Efforts must be made to prevent the incentives from having undesirable effects on other aspects.

Source: Marinakis (1997).

III

The profit-sharing systems of some Latin American countries as compared with the Brazilian system

As already noted, a number of Latin American countries have legislation laying down the forms of participation by workers in their companies' profits. The systems are different in various aspects, so that their effects are also different.

In Mexico, the profit-sharing system takes as its base the taxable income of enterprises, 10% of which must be shared out among the workers under this concept.[4] It is important to note that companies can not deduct losses from previous years in determining the profits to be shared among the workers. Since 1988 there has been a discrepancy between the base for determination of the workers' share in the profits and the base used for calculating income tax, because of an adjustment for inflation which was applied only in the latter case. Because of this difference, the effective share of the workers is smaller than originally provided for in the legislation.

The form of distribution is also laid down in the law. Half of the profits to be shared out among the workers are distributed according to the wages of each worker (the idea being to provide incentives for the higher-paid staff), while the other half are shared out equally among all the workers in identical amounts (the aim being to redistribute income, as in relative terms these amounts are more important to the lower-paid workers). Among the types of companies exempted from applying such profit-sharing are new companies, during their first year of operation; new companies in the mining sector during the period of prospection; non-profit-making companies, and companies with a turnover of less than 6 million pesos per year.

In Chile the "liquid profits" are used as the base for determining the workers' share in the profits.[5] The "liquid profits" are the result of deducting 10% from the amount subject to income tax (without deduction of losses from previous years) for "remuneration of the employer's own capital". Only companies which are obliged by law to present their statements of accounts are subject to this system.

Although the legislation stipulates that 30% of these profits must be distributed among the workers, the Chilean Labour Code opens up an alternative which frees companies from the foregoing requirement: the possibility of paying workers a proportion of their annual wages (25%), with a ceiling of 4.75 Official Minimum Wages per worker. This alternative permits highly profitable companies to keep the amount distributed under profit-sharing down to quite a low maximum level: workers with wages over 1.60 Official Minimum Wages would receive less than 25% of their annual wages. The workers' shares are proportional to their wages.

In practice, the predominant form of profit-sharing is this system based on a proportion of the workers' annual wages, subject to a ceiling. According to one survey, this system is used in 76% of all cases, while that involving the payment of 30% of profits is used in only 10% of the firms (Espinosa and Damianovic, 1999).

The Peruvian legislation on profit-sharing differs from that of Mexico and Chile in that losses from previous years can be deducted,[6] and it also lays down different percentage shares according to the type of activity of the firms. Thus, in mining companies, commercial establishments and restaurants the workers' share is 8% of the profits; in fisheries, manufacturing companies and telecommunications it is 10%, and in all other companies it is 5%. In Peru, too, there is a ceiling on profit-sharing, but it is quite

[4] Mexico, Ley Federal del Trabajo, Título 3º, chap. VIII, articles 117-131.

[5] Chile, Código del Trabajo, chap. V: Remuneration.

[6] Peru, Gobierno (1996).

high (18 monthly wages). As in Mexico, 50% of the total is shared out among all the workers in equal amounts, while the remaining 50% is distributed in accordance with each worker's wage. Cooperatives, non-profit-making institutions and firms with 20 or fewer workers are exempt from this legislation.

Unlike the other countries mentioned here, the profit-sharing system applied in Venezuela has both a floor level and a ceiling.[7] The floor or minimum level, which is equivalent to 15 days' wages, is applicable to all firms, including non-profit-making institutions and firms which are exempted from giving workers a share in the profits (although this may sound like a contradiction in terms). At the other extreme, there is a ceiling level differentiated according to whether the company has 50 workers or more (in which case it is four months' wages) or less than 50 (two months' wages).

In this case, profit-sharing –which is a concept that ought to mean variable payments– becomes in practice merely a further fixed cost whose value depends on the sector in which the company operates. The explicit introduction of floor and ceiling levels has undoubtedly contributed to this result. Furthermore, the size of these payments is quite significant, since although the floor level represents only 4.16% of the annual wage, the ceiling level is equivalent to 16.7% for firms with fewer than 50 workers and 33% for those with over 50.

Among the Latin American profit-sharing systems (figure 1), that of Mexico seems to be the "purest", as the payments made under this system vary according to the company's profits. In the case of Chile, the establishment of a ceiling level is designed to restrict workers' shares in the profits in companies and sectors where the rate of profit is very high (this is not so clear in the case of Peru, where the ceiling seems quite high). Instead of limiting the workers' share in these sectors by fixing a lower percentage rate, it was preferred in Chile to limit it to a certain number of official minimum wages. At the other extreme, Venezuela's establishment of floor and ceiling levels represents the distortion of an instrument which should be linked to the company's actual profits: the inherent features of the legislation mean that it is applied as though it were just another fixed payment whose size depends (within the set ranges) on the company's general capacity to pay but which is generally speaking not variable.

FIGURE 1
Profit-sharing systems

"Pure" systems	⇨	Mexico
Systems with a "ceiling"	⇨	Chile (4.75 official minimum wages) Peru (18 official wages)
Systems with both an upper and lower limit	⇨	Venezuela (Lower: 15 days'wages; upper: up to 2 or 4 months' wages)

Though the system of worker participation in profits is applied all over Latin America, and almost all the countries studied have companies, especially in the modern sector, that have systems of worker participation in the operating results,[8] Brazil is the only country in the region where the legislation offers the possibility of choosing between these two systems, which enjoy the same incentives in terms of exemptions from employers' contributions.

If we compare the Brazilian system with the other Latin American systems, we see first of all that the Brazilian system is not linked only to profits, as it is possible to choose a system of participation linked to operating results. Although the degree of participation in profits can be regulated (generally by fixing percentages), participation in the operating results cannot be regulated by the central authorities, as it is eminently within the domain of the companies (although in some cases the parties have arrived at collective agreements by branches or sectors).

Another, less important, difference is that in Brazil the authorities do not lay down any compulsory forms of distribution among the workers, precisely in order to give greater freedom to companies that choose the system of participation in the operating results. For example, if the results obtained by a

[7] Venezuela, Ley Orgánica del Trabajo, chap. III: Profit-sharing, articles 174-184.

[8] For example, an ECLAC study reports on a number of cases of participative wage systems in large Chilean firms where the variable proportion of wages is a significant percentage of total remuneration. The same study also includes some examples of Brazilian companies that were already applying such participation programmes even before the adoption of Provisional Measure 794 (ECLAC, 1992).

work group are taken as the reference value and it is desired to promote solidarity among the members of the group, the employers may prefer to make equal payments to all the workers in the group. If, however, it is desired to give priority to individual productivity, then the most appropriate form of distribution would depend on the wages earned by each worker. These problems do not arise when it is a question of sharing out the profits.

Furthermore, the Brazilian system only expressly excludes non-profit-making institutions, so that it may be described as a universal system. As Provisional Measure 794 lays down that all firms must negotiate the participation of their workers, either in profits or in the operating results, this measure can cover the most diverse types of companies –smaller, bigger; newer, older; with greater or smaller market shares; with greater or smaller profits– because in each case the company's special features will be taken into account.

This latter aspect is probably the most distinctive feature of the Brazilian system: it emphasizes the need for negotiation between the parties, whereas the other systems lay down a very clear form of calculation and application which does not allow for much discussion. In this respect, there is a very marked difference from the Chilean system, where the choice between giving workers a share in a percentage of the profits or making limited payments based on the workers' wages is entirely up to the employer, who will normally choose the option which is cheapest for his firm.

IV

Appraisal of a "pure" profit-sharing system: the Mexican system

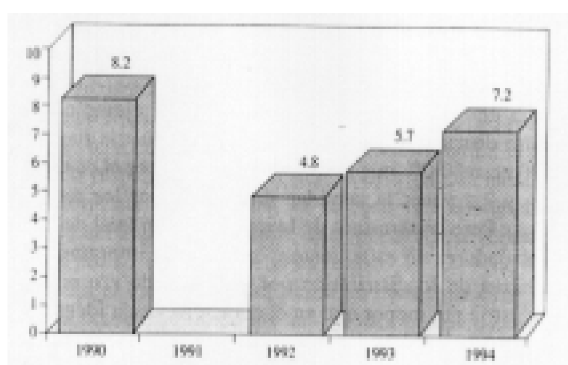
Like any other legal instrument, profit-sharing systems can only be assessed on the basis of the way they actually operate. In the following paragraphs, details will be given of some of the criteria used in 1996 in Mexico by a tripartite commission responsible for reviewing the percentage share of workers in the profits of their firms (PSP).[9] In Mexico, a commission must meet every 10 years for the sole purpose of adjusting that percentage, to which end a secretariat is set up which prepares studies based on existing or specially collected data and analyses the answers of the social actors to questionnaires designed to find out the views of workers and employers. The purpose of the commission seems rather limited, as it cannot suggest changes or improvements in the legislation or its forms of application. At all events, the criteria used by the commission can provide background information and serve as food for thought.

According to data from the Ministry of Finance on taxable profits and the share of workers in the proportion to be distributed, although the law lays down that at least 10% of the profits must be distributed, this percentage was never attained in the 1990s. The year which came closest was 1990, when 8.2% of the profits was distributed (figure 2).

FIGURE 2

Mexico: Workers' shares in profits, 1990-1994

(As a percentage of taxable profits)



[9] The information given in this section is based on the records of the commission in question.

Part of the difference between the percentage laid down by law and the share actually distributed is due to accounting discrepancies between the base used for determining income tax payments, which is adjusted for inflation, and the base for determining workers' participation, which is not so adjusted. Another part of the difference is due to under-estimation of the PSP. This appears to show that, in practice, the minimum amount of 10% of profits is not being distributed.

Data from the Institute of Statistics show that the profits for distribution differ greatly from one sector of the economy to another. Most of the PSP in Mexico has always been distributed in the industrial sector: 69% of the total in 1993 and 64% in 1995. In commerce, the PSP went down appreciably between those years, sinking from 24% to 17% of the total, while in the services sector it went up slightly (from 12% to 15%).

However, this information is not really the most appropriate, as the industrial sector is also the biggest formal-sector employer. A more appropriate indicator would therefore be the profits distributed per employed worker, that is to say, per worker in the formal segment which is obliged to report company profits. In 1994 the number of workers in this situation was 10.7 million, out of an economically active population of a little over 35 million.

The industrial sector has always distributed a larger amount per employed worker than the other sectors of the economy (table 1), and in recent years this difference has been increasing: in 1985 the amount in pesos distributed in industry was 1.5 times greater than that distributed in commerce, but in 1993 it was 3.5 times greater. There was also a trend towards convergence between commerce and services, basically because of the decline in the amount of profits distributed per worker in the commercial sector.

What percentage of total remuneration in each sector do the amounts of profits distributed among the workers represent? To take an example, in 1985 the amount distributed per worker in industry was 690 pesos (50% more than in commerce and 2.4 times as much as in services). As a percentage of the total remuneration of the workers in each of these sectors, however, the relative size of the amount distributed under profit-sharing in industry was less than in commerce and almost the same as in services, simply because the average wage in industry was much higher than in the other two sectors.

In order to evaluate the real impact of a system of participation in profits or operating results, however, it is important not only to know the amount of profits distributed per employed worker, but also to know what proportion they represent of total remuneration or of the basic wage. In 1993, for example, although the amount distributed per worker in com-

TABLE 1
Mexico: Profits distributed per worker
(In 1994 pesos)

Sectors	1985	1988	1993
Industry	690.2	812.2	713.1
Commerce	463.2	349.9	204.1
Services	293.0	211.9	207.2
Industry/commerce	1.5	2.3	3.5
Industry/services	2.4	3.8	3.4

Source: Mexico, Government (1996).

TABLE 2
Mexico: Workers' shares in profits, as a proportion of total remuneration
(Percentages)

Sector	1985	1988	1993
Industry	2.8	4.0	3.2
Commerce	4.2	4.3	2.1
Services	2.4	2.3	1.5
Total, nationwide	*3.0*	*3.8*	*2.5*

Source: Mexico, Government (1996).

TABLE 3
Mexico: Workers' shares in profits, as a proportion of total remuneration
(Percentages)

Industry	1984	1988	1991
Manufacturing	2.6	5.4	4.9
Foodstuffs	3.5	5.5	5.2
Textiles	2.6	2.6	1.6
Paper	2.6	9.0	7.8
Chemicals and petroleum products	4.3	8.0	6.2
Basic metals	1.1	3.1	3.4
Wood	1.3	2.1	2.8

Source: Mexico, Government (1996).

merce was practically the same as in services, the proportion of total remuneration distributed in this way was greater in commerce, where it represented 2.1% of total remuneration (table 2).

The percentages given in that table, which range from 1.5% to 4%, give the impression that the proportion distributed is very low. It should be noted, however, that on the one hand these average figures conceal great differences within each sector, industry or company: in manufacturing, for example, workers in the food products and chemicals branches received a larger amount in profit-sharing than the average for industry in the three years studied, while the amounts received by workers in the wood and textile industries were below the average (table 3). On the other hand, the average figures were depressed by the inclusion of workers who received little or nothing under profit-sharing because their companies did not make a profit. In view of this, the amounts distributed by companies which did make a profit in such branches as foodstuffs, paper, chemical products and petroleum products may be considered as significant, since they are estimated to come to over 10% of annual remuneration.

V

A preliminary appraisal of the Brazilian system

Although Provisional Measure No. 794 is not the definitive law, it has been applied for the last five years. There is therefore some practical experience of worker participation in profits and operating results which allows us to make a preliminary appraisal of the positive and negative aspects of the measure and the effectiveness of its provisions.

In order to make a proper appraisal of the Brazilian system it is necessary first of all to know how far employers have complied with the few compulsory provisions of this measure, for which purpose we need macroeconomic information on the situation and, to a lesser extent, information on what happens within the firms themselves.

Secondly, we need to know what happens with the aspects which are open to negotiation and whether the results are in line with those desired by the legislators, trade unions, employers and authorities. Although some aggregate data can be used for this purpose, what we really need to know is what happens at the company level.

1. Fulfillment of compulsory provisions

In order to determine the degree of fulfillment of these provisions it is important to know the number of companies (and the number of workers) which have successfully negotiated arrangements for sharing in profits or operating results; the number of companies where negotiations have not reached a successful conclusion (and, among these companies, the number where the process is under mediation and arbitration), and the number of companies which have not yet negotiated these matters.

This information, when compared with the potential universe, will show if the requirement for negotiation laid down in article 2 of the Provisional Measure is being fulfilled or not.[10] This is particularly important because the Provisional Measure does not lay down time limits for the negotiations or penalties if one of the parties refuses to negotiate. On the basis of this information, we can determine if these problems occur in particular in some specific regions, in some sector of the economy, or in some particular type of enterprise, classified according to size, for example.

Unfortunately, so far there is no source which processes all the agreements signed, but it seems reasonable to assume that the application of arrangements for participation in profits or operating results is still very limited outside the large and me-

[10] For the purposes of the Provisional Measure, physical persons and non-profit-making institutions (the only exceptions from the requirement for negotiations between the company and its workers) are not considered to be equivalent to “enterprises”.

dium-sized manufacturing enterprises of Southeast Brazil.

Another compulsory provision refers to the frequency of payment of the workers' shares. In this respect, the Provisional Measure lays down a minimum period of six months. We need to see whether this minimum frequency is being observed or if annual distribution is preferred, and we also need to see whether distribution is concentrated in some particular time of year, which could have some economic significance because of its effect on consumption.

In the case of Brazil, right from the start the authorities were concerned to ensure that payments in respect of participation in profits or operating results were not used to avoid making payments that should form part of the basic wage (thus taking advantage of the exemption from social welfare contributions). In the Provisional Measure this concern was reflected in the establishment of a minimum period of six months between payments of workers' shares, on the assumption that it would not be possible to postpone the payment of sums corresponding to the basic wage for so long. Within the broad liberty of negotiation laid down in the Provisional Measure, this requirement is one of the few that is compulsory.

However, analysis of some of the agreements on participation in profits or operating results reveals that this provision is not being complied with in all cases, as some agreements provide for frequencies of less than six months. According to a study made by the Inter-Union Department of Statistics and Socio-Economic Studies (DIEESE), based on 448 agreements signed in 1996, 6% of them provided for payment three times a year, and 2% provided for more than three such payments (DIEESE, 1996). In a non-systematic review of agreements for participation in profits or operating results, Professor Hélio Zylberstajn found that nearly 20% of them had distribution frequencies of less than six months (22% in 1995 and 17% in 1996).[11] Furthermore, it is not unusual to give advances in respect of such participation, which is equivalent to more frequent payments than those provided for in PM 794. If this practice were to become general it would undermine the financing of social services as well as reducing the role of wages proper in the economy, thus weakening the fiscal position[12] and distorting wage structures.

It would therefore appear that this is one of the aspects that should be carefully monitored as long as this provision remains in force. Another option would be to establish a maximum limit (as a percentage of the basic wage) for the amount eligible for exemption from the payment of social welfare and social security charges, while leaving the frequency of distribution of workers' shares in profits or operating results to be negotiated in each firm.

Nor is information available on the possible impact of concentration of workers' participation payments in some particular period of the year. According to the DIEESE sample, in 1996 some 750 million reales were distributed under this concept. These figures show that, if worker participation arrangements spread, the amount distributed in this way could be such as to represent an important factor at the macroeconomic level.

2. Negotiations in Brazil

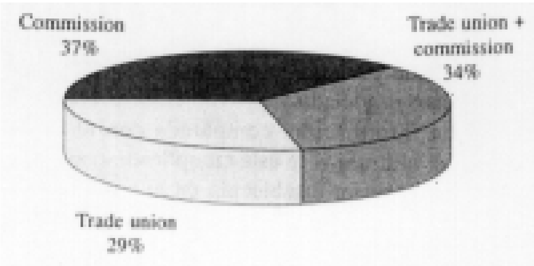
Since in Brazil the adoption of programmes for worker participation in profits or operating results is subject to negotiation between the parties, it would be of interest to know who actually carries out the negotiations. To begin with, the Provisional Measure left the representation of the workers in the negotiating process to a worker committee elected for this purpose. Only recently have the trade unions been given a role in this process, through the amendment made to PM 794 in August 1997.[13] Despite this gap in the legislation, it is worth noting that in most cases the negotiations which have taken place have in fact included the trade unions. Furthermore, in a number of cases it was the trade unions which promoted the

[11] This information was presented by Professor Zylberstajn at the seminar on experience in worker participation in company profits or operating results, held at São Paulo on 14 August 1997. The references to "Zylberstajn" made below refer to his statements at that seminar.

[12] This assertion is all the more serious because the companies which apply programmes of worker participation in their profits or operating results are generally large manufacturing enterprises which are also among the largest taxpayers. If this group of firms reduces its contributions, the fiscal impact could be very severe.

[13] "Participation in profits or operating results shall be subject to negotiation between the company and its employees, through a committee elected by the latter and also including a representative designated by the trade union for the respective category of activities" (article 2).

FIGURE 3
Brazil: Representation of workers in negotiations, 1996



holding of negotiations on worker participation, sometimes even calling strikes for this reason.

Zylberstajn found that in the agreements signed in 1996 the party negotiating with the employers was the trade union in 29% of the cases and the trade union in conjunction with the workers' committee in 34% (figure 3). Thus, the workers' committees negotiated and signed the agreements on behalf of the staff in only one-third of the cases analysed.

It would also be desirable to find out what criterion was adopted by the parties to the negotiation: participation in the profits or operating results (and which of these was preferred), or simply the distribution of a fixed amount as the workers' participation, although this amount was not linked in any way with the company's profits or the achievement of any specific results. Although this latter option is not among those envisaged in the Provisional Measure (and moreover is not in keeping with the spirit of that legislation), it may nevertheless be the result of the negotiations between the parties in a company or sector.

The aim of collecting this information is to gain an idea of the possible impact of these forms of participation on the economy. If profits are selected as the main criterion, this places more emphasis on the idea of distribution, and the workers' share will depend on the financial performance of the company. If it is decided to base payment on the operating results, this will probably represent an effort to change some forms of behaviour and thus support the introduction of improvements. Finally, if it is decided to share out a fixed amount simply in order to comply with the Provisional Measure, without taking the trouble to prepare a programme of objectives, this will merely increase labour costs without the company obtaining anything in particular in return: it does not provide support for changes or desired improvements, nor does it bring the greater flexibility offered by a variable component such as participation linked to company profits. Consequently, out of the three alternatives only that based on operating results can have ongoing effects, as the parameters can be replaced or adjusted over time, thus further improving the working performance and hence the competitiveness of the company. In contrast, the effects of systems based on company profits or a fixed payment will mainly be felt at the macroeconomic level when they are introduced, through an increase in consumption, but they will not improve the competitiveness of the company.

When the Provisional Measure was adopted, employers tended to view worker participation in company profits or operating results as an extra labour cost. There was also a general lack of knowledge of what factors could be considered as operating results and how they could be used, so that the potential of this instrument as a management tool was not clearly perceived. Furthermore, it was assumed that once the concept of payment in respect of participation in profits or operating results had been accepted, these amounts would have to be maintained as bases in subsequent financial years, which is not so, because they represent a variable component of remuneration. The list of doubts would not be complete without mentioning the mutual mistrust between the parties regarding access to information considered to be a business secret (on the employers' side) and regarding the quality of the information provided (especially in the case of financial information), on the part of the workers and unions.

What was clear from the beginning, however, was that payments in respect of participation in company profits or operating results would be exempt from social security contributions. This was a factor which encouraged employers to adopt the first programmes of this type. In the first stage, worker participation in profits or operating results was applied in the most highly unionized companies or sectors, and in most cases payments under this concept consisted of fixed sums bearing no relation to company profits or the achievement of some agreed result. Although this form of application is not in keeping with the spirit of PM 794, it is considered valid because it is the result of negotiations between the parties. According to a sample taken by the DIEESE, only 12.6% of the agreements analysed included some kind of targets (DIEESE, 1996).

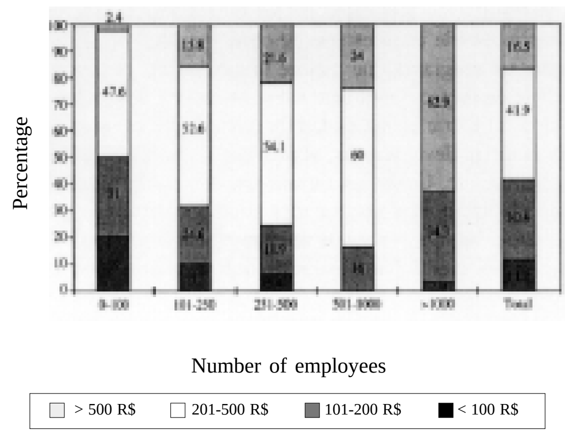
In a second stage, progress was made towards negotiations based on the establishment of targets, with corresponding scales of rewards. In his study, Zylberstajn found that there was a reduction in the number of agreements not subject to the achievement of objectives.[14] It can therefore be considered that the use of the worker participation instrument has made progress in qualitative terms, because it is now an element that can help to raise the companies' level and there is now "genuine financing" of the payments made in respect of participation in profits or operating results.

In a third stage, we need to determine the amounts distributed as a percentage of the total remuneration of the workers in question, in order to see whether there are major differences between companies of different sectors or sizes and to see if this new component of remuneration is gaining in importance or if it is greater than the "desirable" level.

On average, the size of the payments made in respect of worker participation in profits or operating results is very significant compared with the basic wage. A survey made by the Mercer MW consultancy firm, focussed on large domestic or foreign-owned enterprises, found that on average payments under this concept in 1996 were equivalent to 1.16 wages per worker, while payments by companies that gave a fixed amount averaged almost 1,000 reales (approximately US$ 1,000). It should be noted, however, that the size of payments for worker participation in profits or operating results depends partly on the size of the company (figure 4). The DIEESE sample, which covers a broader range of companies than the Mercer survey, shows this very clearly.

FIGURE 4

Brazil: Profit sharing or participation in operating results, by size of enterprise



On the one hand, the fact that the payments made are quite large is a positive element, as it means they constitute a genuine incentive for the workers. On the other hand, however, it may indicate that in some cases payments which ought to form part of the basic wage are being diverted to workers' participation payments, which are not subject to social security contributions.

VI

Conclusions

What are the aspects of systems for worker participation in profits or operating results that are best adapted to the economic context in which companies operate, and what are their shortcomings? With regard to "pure" profit-sharing systems, the aspect best adapted to the new demands of the economy is the downward flexibility of labour costs, which fits in well with short-term "defensive" strategies.[15] When there is a fall in demand which affects their profits, the first reaction of firms is to adjust their costs, and in this case the profit-sharing component adjusts automatically.

[14] This study did not cover the same group of companies in both the years analysed, so the trends identified are only an approximation to what actually occurred.

[15] Such flexibility is not displayed by, for example, the system used in Venezuela, where there is a minimum "floor" level for such payments, which have been converted in practice into fixed bonuses.

The flexibility offered by systems of worker participation in operating results, for its part, does not strictly come from a reduction in absolute costs (although it can result in a reduction in unit costs), but can take other forms. Thus, for example, a programme which improves product quality has an indirect impact on production costs by avoiding the need to remake parts, reducing returns of unsatisfactory goods, reducing customer complaints, etc. As the forms assumed by the programme will be adapted to the particular strategic needs of the firm, it is not a defensive approach but rather a medium- and long-term strategy.

How far do these different approaches fit in with the new realities of the international context? Although a defensive approach may be important at times of crisis, the demands for greater international competitiveness faced by all firms mean that a strategic approach is more important in the long run. In this sense, worker participation in the operating results can be a suitable instrument for speeding up the necessary restructuring in many enterprises, as it makes it possible to combine the achievement of a strategic goal of the enterprise with the incentive to the workers needed in order to attain that objective.

However, the difficulties involved in these programmes must not be under-estimated. It is more difficult to identify the bottlenecks in a firm and find ways of solving them than to merely apply an automatic system of partial cost reductions at times of crisis. Systems of worker participation in operating results are quite complex. The greatest care must be taken both in identifying the factor to be remunerated and in establishing the measurement/assessment parameters, the forms of sharing the rewards among the workers, and the manner of implementation. These are generally long processes, and they must be followed up very carefully.

In view of this, the profit-sharing systems imposed by law in Latin America have clear advantages in terms of simplicity. Their compulsory nature and the general application of a single sharing coefficient make their application an extremely simple process. However, it has been seen that in practice the requirements laid down in the legislation are not always complied with in full, and this sheds some doubt on the effectiveness of these systems as income distribution mechanisms.

Furthermore, the application of a single profit-sharing coefficient for companies of very different types does not seem to be a sufficiently flexible approach. For example, distributing 10% of the profits under participation arrangements is not the same for a company which dominates its market as it is for a firm which operates in an atomized market, nor is it the same for a company which is in the first stages of growth as it is for one which is already consolidated in its sector. The impossibility of adapting this system to the actual situation of each enterprise severely limits its use as an incentive system, as it is more like an established right of the workers.

What type of company could derive most benefit from the application of a programme based on participation in the operating results? Many large companies and regional transnationals are already applying some form of participation in the operating results, even though the national legislation does not promote such systems, and are using these programmes as means of improving management and labour relations. This type of system continues to be little used by medium-sized and small enterprises, however. The introduction of legislation to promote the voluntary adoption of systems of participation in the operating results (for example, by offering some fiscal benefits) could help to spread this type of programme.

It should not be thought that the mere fact of promoting participation in the operating results will lead to the adoption of systems aimed at securing improvements. The experience of Brazil shows that, in view of the difficulty of applying systems based on results, many companies began to distribute extra payments in the form of bonuses which are not, however, conditional on the achievement of any particular result. However, this initial attitude has gradually been changing as companies have gained a better understanding of the potential of participation systems. We can thus see that this is not an instrument which can be expected to work perfectly as soon as it is applied, but rather a system whose effective application requires a learning period.

Systems of participation in profits and in operating results also differ in terms of labour relations and human resources policies. Profit-sharing systems do not require much involvement of the workers or trade unions. In the case of programmes designed at the company level, such involvement may be limited to the negotiation of the percentage share, the form of distribution and other similar aspects, for which purpose a limited degree of representation of the workers will suffice. In the systems that predominate in Latin America, where the legislation lays down the profit-sharing conditions, worker involvement is virtually non-existent, or is limited to checking on the fulfillment of those conditions. This form of regulation seems typical of a paternalistic view on the part of the State.

Systems of worker participation in the operating results, in contrast, call for the direct involvement of the workers themselves and of the trade unions in various aspects of the process (from identification of the strategic variables to follow-up of their application). In this sense, the provisions of the Brazilian Provisional Measure are appropriate, since they require the parties to negotiate and agree upon the most suitable programme for each particular case. The essential need for a dialogue between the parties and transparency of the process make these programmes a valuable means of establishing more participative human resources policies and less conflictive labour relations, which are much more in keeping with the need to improve company competitiveness.

(Original: Spanish)

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Social capital and culture: *master keys* to development

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This article explores the potential of social capital and culture for contributing to economic and social development. It centers its attention particularly on the situation of Latin America: a region with serious problems of poverty and lack of equity which affect vast sectors of the population, so that it has been considered the continent with the greatest levels of inequality. It is argued here that although it is true that the integration of the questions of social capital and culture into development discussions makes the search for suitable strategies and designs more complex, it is equally true that policies based on designs which leave out such aspects have proved to suffer from serious limitations. The article first of all explores the general idea of social capital, with emphasis not so much on theoretical analysis as on the concrete presence of such capital in actual situations. It then goes on to examine social capital in action in specific Latin American cases and finally formulates some considerations on the possible contributions of culture to Latin American development.

I

The new development debate

As the twentieth century draws to a close, mankind has enormous productive forces at its disposal. The technological revolutions under way have substantially altered its potential capacity to generate goods and services, and the simultaneous advances in such fields as informatics, biotechnology, robotics, microelectronics, telecommunications, science of materials and other areas have led to qualitative leaps forward in production possibilities. At the same time, however, 1.3 billion persons cannot meet their most minimum needs and are living in extreme poverty with an income of less than a dollar a day, 3 billion are living in a state of poverty and have to survive on less than two dollars a day, 1.3 billion persons have no drinking water supply, 3 billion lack basic sanitary installations, and 2 billion have no electricity.

Attaining the sought-for goal of economic and social development is more feasible than ever in terms of technology and production potential, yet at the same time this is a far-off objective for vast numbers of people in various continents, including Latin America.

The "global village" that our planet has become, where interrelations between countries and markets are more numerous every day, also seems to be marked by an explosion of complexity, contradictory forms of evolution and heavy doses of uncertainty. Nobel Chemistry Prizewinner Ilya Prigogine has noted that most of the structures in the present world situation are dissipative, open-ended structures whose future evolution is hard to predict and cannot be explained by traditional logic (Prigogine, 1993). Morin (1991), for his part, asserts that rather than "the end of history", forecast by some analysts who consider that with the disappearance of the bipolar world history is likely to become predictable and even boring, the situation we now have before us is that from now on, the name of the future is "uncertainty".

The kind of history now under way is marked by several contradictions. Thus, while the technological knowledge available to us has multiplied our possibilities of dominating nature, mankind is giving rise to enormous ecological imbalances and endangering basic aspects of the ecosystem and its own survival. Although increased production capacity has brought the world product up to over US$ 25 trillion, social polarization has grown sharply and, according to United Nations reports (UNDP, 1998b), 358 persons have amassed more wealth than the total possessions of 45% of the world population. The disparities observed extend to the most basic aspects of everyday life. Thus, the rapid advances made in medicine have made possible a considerable increase in life expectancy, but whereas this amounted to 78 years in 1997 in the 26 richest nations, in the 46 poorest countries it was no more than 53 years. The idea of unlimited progress is being replaced by views that place greater emphasis on the likelihood of more complex problems, contradictions and uncertainties.

Within this general context, a vigorous new debate is under way on development models. In a search for more effective paths to follow in a world where the everyday life of vast sectors of the population is marred by acute unsatisfied needs and where it is estimated that one-third of the economically active population is affected by severe problems of unemployment and underemployment, previous assumptions which are not borne out by the facts are being critically reviewed and variables which were previously given little weight are now being incorporated.

In view of the situations described in the preceding paragraphs, we see that the forecasts that the application of conventional economic theories would bring stable economic progress and reduce poverty and inequality in the developing world have not been fulfilled. As a result, highly respected experts are now calling for a profound review of those theories. For example, the 1998 Nobel Economics Prizewinner Amartya Sen questions the development path usually advocated, describing it as a path marked by "blood, sweat and tears" and a development which is not only "cruel" but also highly inefficient (Sen,

□ The views expressed in this article are the sole responsibility of the author and do not necessarily represent those of the institution of which he is a staff member.

1997b), while Joseph Stiglitz, former head of President Clinton's team of economic advisers, calls for a post-Washington Consensus that will review the instruments of the original Consensus, asserting that the Latin American experience suggests that we should review, remake and expand the assumptions on development economics which we have so far taken for granted (Stiglitz, 1998). James Wolfensohn, President of the World Bank, has declared that without concomitant social development there cannot be satisfactory economic development (Wolfensohn, 1996). Various recent lines of research have concluded that it is essential to get away from economistic-type reductionist approaches and instead incorporate the political, institutional and cultural dimensions into development thinking. Enrique V. Iglesias, President of the IDB, has expressed the view that development can only be approached in an integral manner: approaches that address only a single aspect simply do not work (Iglesias, 1997a).

This context of vigorous debate on the validity of conventional economic thinking has created a favourable climate for a growing area of analysis on "social capital", one of the main lines of which is a reappraisal of the relations between culture and development.

The present study addresses the relations between social capital and the various dimensions of development, presents some Latin American examples of the mobilization of social capital, and finally explores some of the contributions that culture can make to economic and social development efforts.

II

Social capital, culture and development

The World Bank distinguishes four basic forms of capital: i) natural capital, consisting of a country's endowment of natural resources; ii) constructed capital, which is generated by human beings and includes infrastructure, capital goods, financial capital, trade capital, etc.; iii) human capital, which is determined by the levels of nutrition, health and education of the population, and iv) social capital, which is a recent discovery of development sciences. Some studies consider that the last two forms of capital are responsible for most of the economic development of nations in the latter years of the twentieth century and assert that they represent the master keys to technological progress, competitiveness, sustained growth, good government and stable democracy.

What is social capital, in the final analysis? There is as yet no generally accepted definition. This concept has only recently begun to be explored, and its identity is still being defined. In spite of the considerable areas of vagueness, however, there is an increasingly general impression that, as they begin to explore it, the development disciplines are incorporating into their area of knowledge and action a very wide range of important variables which were previously outside the conventional framework.

Robert Putnam –one of the pioneers in the analysis of social capital– said in his well-known study on the dissimilarities between Northern and Southern Italy that such capital consists fundamentally of the degree of confidence that exists between the social actors of a society, the norms of civic behaviour they observe, and the level of associativeness (Putnam, 1994). These elements show the wealth of resources and the strength of the social fabric. Confidence, for example, acts as an element that reduces potential conflicts by limiting the tendency to perceive areas of discord. Positive attitudes in terms of civic behaviour, which range from looking after public spaces to the payment of taxes, contribute to general well-being. The existence of high levels of associativeness in a society shows that it has the capacity to act in a cooperative manner, forming all kinds of networks, concerted arrangements and synergies. In Putnam's view, these factors are more frequent and deep-rooted in Northern Italy than in the South of that country and played a decisive role in the better economic performance, better quality of government and greater political stability of Northern Italy.

James Coleman, another pioneer in this field, considers that social capital exists at both the individual and collective levels. The first of these is connected with an individual's degree of social integration and his network of social contacts: it implies reliable relations, expectations of reciprocity and forms of behaviour and improves effectiveness at the private level. It is also a collective good, however. Thus, for example, if everyone in a particular neighbourhood shares tacit standards of non-aggression and concern for others, children will be able to walk to school in perfect safety and social capital will be producing public order (Coleman, 1990).

Different analysts stress different aspects. Thus, Newton (1997) considers that social capital may be seen as a subjective phenomenon, made up of values and attitudes that affect the way people relate with each other. It includes confidence, norms on reciprocity, attitudes and values which help people to surmount conflictive and competitive forms of relations and establish relations of cooperation and mutual aid. Baas (1997) says that social capital is connected with social cohesion and identification with forms of government, and with cultural expressions and forms of social behaviour which make society more cohesive and represent more than a mere collection of individuals. He considers that horizontal institutional arrangements have a positive effect in generating networks of confidence, good government and social equity and that social capital makes an important contribution in stimulating solidarity and overcoming market failures through collective action and communal use of resources. Joseph (1998) sees such capital as a vast set of ideas, ideals, institutions and social arrangements through which people can find their voice and mobilize their individual energy for public causes. Bullen and Onyx (1998), for their part, see it as social networks based on principles of confidence, reciprocity and norms on the way to act.

Taking a more critical view, Levi (1996) acknowledges the importance of Putnam's findings but believes that it is necessary to place more emphasis on the ways in which the State can foster the creation of social capital. He considers that Putnam's interest in civil associations far removed from the State derives from his romantic view of the community and social capital. Such romanticism, he feels, restricts the identification of alternative mechanisms for the creation and use of social capital and limits theoretical conceptualizations of these matters. Wall, Ferrazzi and Schryer (1998) believe that the theory of social capital needs more refinement before it can be considered as a measurable generalization. Serageldin (1998) notes that although it is generally agreed that social capital is important for development, there is no general agreement among researchers and practical scientists on the particular ways in which it contributes to development, ways of generating and using it, and ways of materializing it and studying it empirically.

While the epistemological and methodological debate continues –a debate which is perfectly legitimate in view of the enormous complexity of social capital and the fact that it only began to be studied systematically less than a decade ago– such capital continues to provide proofs of its presence and effective action, and this is the aspect on which we intend to concentrate.

A broad line of research aimed at "recording it in action" is constantly providing new evidence of the importance of social capital in development. Thus, Knack and Keefer (1997) econometrically measured the correlation between confidence and norms of civic cooperation, on the one hand, and economic growth, on the other, in a broad group of countries, finding that the former have a strong impact on the latter. Their study also indicates that the social capital made up of these two components is greater in societies which are less polarized in terms of inequality and ethnic differences.

Narayan and Pritchett (1997) have made a very stimulating study on the degree of associativeness and economic performance in rural households in Tanzania. They discovered that even in this context of great poverty the families with the highest income levels were those that participated most actively in collective organizations and that the social capital they accumulated in this way benefitted them individually and also provided collective benefits in various ways. These families: i) used better agricultural methods than those of families which did not participate, as their participation provided them with information that led them to use more agricultural chemicals, fertilizers and improved seeds; ii) had better information on the market; iii) were willing to take more risks, because the fact that they formed part of a social network made them feel that they enjoyed a measure of protection; iv) tried to secure improvements in public services and participated more actively in school affairs, and v) cooperated more actively at the municipal level. These researchers state in their conclusions that the channels they identified whereby social capital increased income, and the econometric robustness of the magnitude of the effects obtained, suggest that social capital really is capital, and not just a consumer good.

La Porta, López de Silanes, Shleifer and Vishny (1997) tried to confirm Putnam's theories in a broad sample of countries. Their statistical analyses show significant correlation between the degree of confidence existing in a society and such factors as efficiency of the legal system, absence of corruption, quality of the civil service and fulfillment of tax obligations. They consider that the results Putnam obtained for Italy are confirmed at the international level.

Teachman, Paasch and Carver (1997) tried to measure how social capital affects the educational performance of children. Using three indicators –family dynamics, links with the community and the number of times a child has changed schools– they found a strong correlation with a key performance indicator: the probability of dropping out of school. Their hypothesis is that social capital makes other forms of capital (such as human and financial capital) more productive.

The positive influence of a key component of social capital, the family, in numerous aspects has been confirmed by various recent studies. The greater the solidity of this basic social capital, the better the results, and vice versa. A broad study of 60,000 children in the United States (Wilson, 1994) showed that children living with only one of their biological parents were twice as likely to be expelled or suspended from school, to suffer from emotional or conductual problems, and to have difficulties with their schoolmates. They were also much more likely to engage in antisocial forms of conduct. Kaztman (1997) reports that, according to studies made in Uruguay, infant mortality among children born out of wedlock is much higher and children not living with both their biological parents suffer greater damage in various dimensions of their psychomotor development. Likewise, a study carried out in Sweden –in a totally different environment with much better economic conditions– shows that stable families have a positive influence on children's performance. Jonsson and Gahler (1997) show that children from divorced families have a lower educational performance. There is a loss of resources compared with those of children from stable families.

Sanders and Nee (1996) have analysed the family as social capital in the case of immigrants to the United States. Their studies indicate that the family environment creates conditions which make possible a key survival strategy for immigrants: self-employment. The family minimizes the production, transaction and information costs associated with such work, thus facilitating the appearance of family-run businesses. Hagan, MacMillan and Wheaton (1996) note that in migrations, even inside a country, there are losses of social capital, but these are smaller in families where the parents are involved with the raising of the children and the mothers carry out a protective role, but greater when the fathers and mothers do not devote themselves fully to their children.

Kawachi, Kennedy and Lochner (1997) provide some eloquent data on the relation between social capital, equity and public health. Their well-known study on Alameda County, subsequently confirmed by epidemiological studies in other communities, found that persons with fewer social contacts have a lower life expectancy than those with broader contacts. Consequently, a socially cohesive society which facilitates interpersonal contacts is a fundamental factor in public health. The authors statistically measured the correlations between social capital, as represented by confidence, and mortality in 39 states of the United States, and they observed that the lower the degree of mutual confidence among citizens, the higher was the average mortality. The same correlation was found between the rate of participation in voluntary associations and mortality: the lower the former, the higher the latter. They also introduced the degree of economic inequality into the analysis and found that the higher this degree, the lower the level of confidence that citizens had in each other. On the basis of the statistical model these researchers used, they found that for every percentage point that inequality of income distribution increased, mortality rose by two or three points over the level it ought to have registered. In order to illustrate their analysis, they used various comparative figures. Thus, in 1993, although the United States had one of the highest levels of per capita income in the world (US$ 24,680), life expectancy (76.1 years) was lower than in some nations with lower per capita incomes, such as the Netherlands (US$ 17,340 and 77.5 years), Israel (US$ 15,130 and 76.6 years) and Spain (US$ 13,660 and 77.7 years). It may therefore be asserted that more equal income distribution creates greater social harmony and cohesion and improves public health. Indeed, the societies with the longest life expectancy in the world (Sweden, 78.3 years, and Japan, 79.6 years) are also marked by very high levels of equity. These researchers therefore conclude that inequality reduces social capital and this seriously affects the health of the population.

Quite apart from the various speculations and efforts to secure greater methodological precision, valid and necessary though they may be, social capital does in fact operate every day and carries great weight in the development process. Hirschman (1984), a pioneer in these matters, has asserted something in this respect which is worthy of all our attention. He notes that social capital is the only form of capital which is not reduced or depleted with use but, on the contrary, increases: love or responsible civic behaviour are not fixed or limited resources, as other factors of production may be, but are resources that grow with use rather than diminishing.

Nevertheless, social capital can also be reduced or destroyed. Moser (1998) warns of the vulnerability of populations which are poor in social capital when faced with economic crises, noting that while households with adequate resources keep up their mutual relations, those which are poor in this respect withdraw from such relations at times of crisis because they are unable to fulfill their obligations. Fuentes (1998) shows how in Chiapas (Mexico) peasant groups which were forced to migrate suffered heavy losses of social capital, since their basic links and forms of social insertion were destroyed. Moreover, as a number of studies have pointed out, there may also be negative forms of social capital, such as criminal organizations, but their existence does not negate the immense potential of positive social capital.

Culture extends across all the dimensions of the social capital of a society, underlying the basic components of social capital such as mutual confidence, responsible civic behaviour, and degree of associativeness. The relations between culture and development are manifold, and it is amazing that so little attention has been given to them. Their importance becomes clear when we assign their due value to all these silent and invisible –but clearly active– elements involved in the idea of social capital.

Among other aspects, the values held by a society will strongly affect development efforts. As Sen (1997a) points out, the ethical codes of businessmen and professionals form part of the productive resources of society. If these codes place emphasis on values in keeping with the project of development with equity for which broad sectors of the population clamour, they will favour such development; if not, they will hinder it.

The values prevailing in the educational system, the communications media and other areas which influence the formation of values can either stimulate or obstruct the formation of social capital, which, as we have seen, considerably affects development. Chang (1997) notes that values raise the bases for the concern of one citizen for another above considerations of mere personal well-being and play a crucial role in determining whether there will be progress in terms of social networks, norms and mutual confidence. Values deeply rooted in the prevailing culture and either strengthened or impeded by it, such as solidarity, altruism, respect and tolerance, are essential for sustained development.

Culture is a key element in the fight against poverty. As UNESCO (1996) emphasizes, for the poor, their own values are often all they have to assert. Under-privileged groups have values which give them an identity of their own. Failure to respect these groups, and actions that lead to their marginalization, can be deeply harmful to their identity and may block even the best productive proposals. Their strengthening and reassertion, however, can set free enormous amounts of creative energy.

Culture is also a decisive factor in social cohesion, for through it persons can recognize each other's qualities, grow together and develop collective self-esteem. As Stiglitz (1998) notes in this respect, preserving cultural values is very important for development, as such values serve as a cohesive force at times when many others are flagging.

Social capital and culture can be formidable levers of development if the right conditions are created. In contrast, ignoring or destroying them makes the path to development much more difficult. It might be asked in this connection whether the idea of strengthening them is not something that belongs to a world of utopias: a future that is still far beyond the current possibilities of our societies. In the following section we will try to show that this is not so: that there are concrete examples where such levers have been used on a considerable scale to further development, and that there are lessons to be learned from them.

III

Social capital in action. Some Latin American examples

What happens when a sustained long-term effort is made to mobilize key aspects of the social capital of a community? What responses have been observed? What new opportunities or difficulties arise? There is a very wide range of examples under way at the international level which can provide some significant indications in this respect. Some of them have become world-famous, such as the case of the Grameen Bank in Bangladesh, which provides financial support for poor peasants and has achieved surprising results by making use of elements connected with the degree of associativeness, mutual confidence, and other dimensions of social capital. Here, however, we will concentrate on examples from Latin America which show the region's latent potential in these matters. We have selected three cases which have obtained striking results, are recognized both in their own countries and internationally as "highly successful social practices", and are constantly analysed and visited in order to see if it is possible to imitate them wholly or partially.

1. Villa El Salvador (Peru): from a sandy waste to an outstanding social experience

In 1971, several hundred poor people invaded some publicly-owned land on the outskirts of Lima. They were joined by thousands of slum-dwellers from that city. The government stepped in to expel them, but finally agreed to let them settle on a extensive sandy wasteland 19 kilometres from Lima. Those 50,000 poor people, who lacked every kind of resources, set up the Villa El Salvador there. Over the course of time they were joined by many more people, and the present population of the Villa is estimated at nearly 300,000. This case is considered to be very special in many respects. For example, the layout of Villa El Salvador is quite different from other poor settlements. The design provides for 1,300 blocks forming 110 residential groups. Instead of there being a single centre where the basic public buildings are located, the scheme is totally decentralized. Each residential group has its own centre, with communal premises and spaces for sports, cultural activities and social encounters. This favoured interaction and greatly increased the possibilities of cooperation, so that it was an organizational model based on active participation. Starting with representatives of the blocks and residential groups, the dwellers in Villa El Salvador created an organization –CUAVES– which represents the whole community and has played a decisive role in its development. Almost 4,000 organizational units were set up to seek solutions and run community affairs, in which the great majority of the inhabitants are involved: almost 50% of all those over 18 years of age occupy some kind of post in them.

In this wasteland, which lacked almost every kind of resources and was very isolated (the nearest means of access to Lima was 3 kilometres away), the inhabitants carried out a tremendous construction effort, based mainly on voluntary work by the dwellers in the Villa themselves. A survey of the situation at the end of 1989 shows that in less than two decades the inhabitants had erected 50,000 dwellings, 38,000 of them built with their own hands (68% of them with solid materials such as bricks, cement, concrete roofs, etc.), they had constructed 2,800,000 m^2 of roadways of beaten earth through their own efforts, and they had built 60 community premises, 64 educational centres and 32 community libraries, mostly with community labour and resources. In addition, there were 41 centres for integrated health, education and nutrition services, community health centres, a network of pharmacies, and a reasonably good internal road infrastructure with four main avenues and seven roads running across them. The inhabitants had also planted half a million trees.

The social achievements of Villa El Salvador were also very significant, even though its dwellers continued to be poor during this period and to suffer from serious problems of unemployment, like the rest of Lima. By 1989 the illiteracy rate had gone down from 5.8% to 3.5%, while the rates of primary and secondary school enrolment had risen to 98% and 90%, respectively: all figures that were better than the national averages and much better than in similar poor communities. In the field of health, the vaccination campaigns, which were carried out with community support and eventually covered the entire community, together with the organization of the community for preventive health care and family planning, had led to a sharp fall in infant mortality to 67 per thousand, compared with a national average of 88-95 per thousand. General mortality was also below the national average. Furthermore, there was significant progress in the installation of drinking water, drainage and electricity services, achieved in a period estimated to be 8 years less than that of other poor neighbourhoods, and there was considerable development of the community infrastructure, equipment and services, likewise faster than in other similar communities.

The enormous collective effort made has been described by the several times Mayor of Villa El Salvador, Michel Azcueta (Zapata, 1996) in the following terms: “The people of Villa El Salvador, through their efforts and struggles, have gradually built up a city from nothing, with hundreds of kilometres of water and electricity systems, roadways, schools, markets, an agricultural area, and even an industrial park, likewise achieved through the efforts of the small industrialists of the area”.

This raises a basic question: How was it possible to achieve these results, starting from the most miserable poverty, in such an unfavourable natural setting, and in the midst of the acute economic crisis that Peru, like the rest of the region, was experiencing in the 1980s, to say nothing of all kinds of other difficulties? The key to understanding these achievements –which, while they did not eradicate poverty, nevertheless improved fundamental aspects of the lives of the Villa’s inhabitants and turned it into a very different poor community– would appear to lie in elements coming under the concept of social capital.

The original settlers in Villa El Salvador were mostly families coming from the Sierra region of Peru. These Andean peasants had no material riches, but they did possess a wealth of social capital. They brought with them their ancestral culture and native traditions, together with thousands of years of experience of cooperation, communal work and solidarity. In the Villa they applied basic aspects of this culture, such as intensive community life and the coexistence of communal ownership of services that were vital to all with individual and family ownership of other things. This culture made it easier to set up this extensive participatory form of organization in which all the inhabitants were called upon to be actors in solving collective problems and which functioned smoothly thanks to the favourable historical background of Peruvian peasant culture. Intensive use was even made of age-old technical procedures, such as the leaching ponds used by the Incas: wastes were processed through a system of ponds which produced fertilizers that were subsequently used to improve green spots and agricultural production.

The importance of collective work as a way of achieving solutions, which was inherent in the culture of the inhabitants, permeated the history of the Villa right from the start. It is vividly reflected in the story of how the problem of building schools was tackled. Michel Azcueta recounts: “….. right from the start, the inhabitants organized themselves to build schools, so that the children would not lose the school year. Twelve school construction committees were formed in the first three months and work was started on the construction of a large number of classrooms, in an effort which now seems herculean and cannot be understood without an awareness of the subjective motivations behind it. Classes began to be given in classrooms with walls of reed matting, covered with plastic sheeting to keep out the winter cold, if only slightly, while the floor was beaten earth and the few bricks available were used as improvised benches for the children to sit on. These classrooms were built in collective efforts on Sundays, with a feverish enthusiasm which has left indelible memories among those who took part” (Zapata, 1996).

Thanks to these conditions, a broad and solid fabric of associativeness was created in the Villa. Organizations for young people, women and mothers were set up, as were market cooperatives, associations of small industrialists and shopkeepers, urban vigilance teams, juvenile coordination bodies and brigades, sports leagues, and cultural groups of all types. In the Villa, associativeness extended to the most varied aspects: producers who got together to buy inputs as a group, to look for machinery together and to improve the quality of their goods; over a hundred clubs for mothers, which organized and subsequently ran with exemplary efficiency 264 soup kitchens and 150 school milk programmes; young people who ran and promoted hundreds of cultural and artistic groups, community libraries, sports clubs, students' associations and social communication workshops.

The efforts of the community itself, organized on an eminently participatory basis, were responsible for all the progress that was made in such a short time. This process "sparked off" the latent social capital, which then proceeded to multiply. The creation of a whole municipality by its inhabitants, starting from nothing, generated a solid identity and heightened personal and collective self-esteem. As Franco (1992) notes, the city that was created in this way was the expression of its inhabitants. They were not merely its dwellers, but also its creators. In creating and developing Villa El Salvador they were creating themselves. Consequently, when one asks the inhabitants of the Villa where they come from, they do not answer like other settlers who have come from the interior, who name their birthplace, but say instead "I am from the Villa": the place that gave them the identity they prize so highly. The process of facing very difficult challenges and overcoming them was also a process of strengthening their self-esteem, which is the fundamental incentive for productive action. As Franco says, when one attends a fair number of community meetings and talks to the founders or leaders of the community one frequently hears expressions of collective self-confidence, assertions that the inhabitants now possess organized power, and a noteworthy faith in the community's capacity to set itself goals and unite to achieve them.

Self-esteem was also specially cultivated in the schools of the Villa, where the teachers tried to free the children from any feeling of inferiority because they came from poor families and sought to give them a sense of security so that they would not feel at a disadvantage.

The community effort to build the Villa El Salvador, which took place in the most difficult conditions, was marked and guided by certain values. The inhabitants defined their project as the formation of a community with participatory self-government. The whole effort was imbued with a collective vision centered on the promotion of community values, active participation and self-government. In 1986 Villa El Salvador officially became a municipality, but in this process it preserved all the foregoing principles. Thus, it was laid down that all municipal decisions should be based on communal decisions. Recently, with the aid of various non-governmental organizations, the newspaper "El Comercio" and other bodies, the Villa introduced a system designed to facilitate the inhabitants' participation through informatics. Under this system, the Municipal Council transmits its sessions to the Villa by closed-circuit television. Within the Villa there are computer terminals through which the inhabitants can receive information on the matters to be dealt with at the sessions and the relevant background, and they can make their views known to the Council, which also holds ongoing referendums to find out the inhabitants' views, using the same computerized system.

The experience of the Villa has won world recognition and received many awards. In 1973 UNESCO distinguished it with an award as one of the most challenging experiences in popular education; in 1987 the United Nations named it "Messenger of Peace" as an exemplary promoter of forms of community living, and in the same year it also received the "Príncipe de Astúrias" prize from the King of Spain. Pope John Paul II paid a special visit to it in 1985 and delivered an address in the Villa in which he highlighted its achievements.

It has not been possible in the Villa to solve the underlying problems causing poverty, since these have to do with factors that go completely beyond the ambit of this venture and form part of the general problems of the country at large. Nevertheless, considerable advances have been made compared with other poor settlements, and a very special profile of society has been developed. The strengthening of social capital has played a decisive role in the Villa's achievements. Invisible, silent factors that operate at the very heart of the social fabric have had a constant positive effect here. They include ongoing development of all forms of cooperation; mutual confidence among the organizing actors; the existence of a community-oriented, constructive and creative form of civic behaviour; the presence of common guiding values; the mobilization of the community's own culture; the assertion of personal, family and collective identity, and the greater self-esteem stemming from the experience itself. All these elements were boosted by the genuinely participatory model adopted by the community.

2. The Family Consumption Markets of Venezuela: the dividends paid by social capital

The question of how to reduce the cost of foodstuffs for the poorer sectors of the population has found a significant response in the city of Barquisimeto,

TABLE 1

Venezuela: Expansion of the Barquisimeto Family Consumption Markets

	1984	1990	1997
Sales units	1	87[a]	105[b]
Weekly sales of fruit and vegetables (tons)	3	168	300
Number of families served	300	20 000	40 000
Number of workers	15	400	700
Number of agricultural producers	15	100	500
Number of producers' organizations	1	n/d	18
Number of community production units	1	9	12

Source: Gómez Cálcano (1998) and data from CECOSESELA (1990-1997).
[a] Includes the whole of the state of Lara; Barquisimeto accounts for approximately half of this amount.
[b] Includes 50 markets and 55 social supply centres.

Venezuela, where the Family Consumption Markets, which began in 1983, have succeeded in reducing the retail prices of fruit and vegetables by 40% and those of other foodstuffs by between 15 and 20%, benefitting 40,000 families per week in this city of a million inhabitants. These families, which are mostly from the lower and lower middle strata, are estimated to save a total of US$ 10.5 million by buying food in these markets.

The markets involve a considerable number of civil organizations. Formally, they come under the Central Council of Cooperatives of the state of Lara (CECOSESELA), but various groups of producers, consumers' associations and small self-run enterprises take part in running them. Thus, they include 18 associations of agricultural producers, grouping together nearly 600 farmers, and 12 community production units. All these small and medium-sized farmers and food producers sell their output through the Markets, which have 50 sales points, operating in the last three days of the week, and sell 300 tons of fruit, vegetables and staple foodstuffs directly to the population every week for household consumption.

Basically, the Markets sell fruit and vegetables by kilos at a flat rate, which simplifies their operation to the maximum. Among the products they sell are potatoes, tomatoes, carrots, onions, sweet peppers, lettuce, celery, cabbages, bananas, and various local tropical products. Through their own transport facilities and sales premises they bring goods directly from small producers to the consumers, so that everyone wins: the small producers, who were among the original creators of this initiative, since they previously suffered all the problems and fluctuations of marketing, now have an assured outlet for their goods at reasonable prices, while consumers receive fresh products at much less than normal market prices.

The Family Consumption Markets have grown rapidly into the main supplier of foodstuffs and staples for the city of Barquisimeto (table 1).

As may be seen from the table, starting from a single sales point and almost no initial capital, the Markets have grown rapidly in all the indicators listed. Between 1990 and 1997 the weekly tonnage of fruit and vegetables sold increased by 78%, while the number of families served doubled.

How could such economic success and efficiency be obtained by a set of grass-roots organizations which had little or no capital yet launched out into an agricultural and food products market characterized by its strong competition and low profit margins?

It would appear that key elements of social capital lay at the roots of this success. The actors in this venture themselves say that their achievements were based on: i) a history of social and human capital formation; ii) giving priority to social rather than financial capital, and iii) some novel forms of participatory management (Ferias de Consumo Familiar, 1996).

The several hundred workers who keep the Markets and the associations linked with them going have established a system of organization which is based on cooperation, participation and horizontality and is strongly guided by a set of values.

Underlying the Markets is a conception of life which, according to the actors involved, gives priority to solidarity, personal and group responsibility, transparency in relations, the creation of mutual confidence, personal initiative, and a readiness for hard work.

This set of values is not just something that exists in a written declaration, as often happens, but is fostered systematically. An outside observer (Bruni Celli, 1996) describes the everyday dynamics of the Markets as follows: "The cooperativist values of personal growth, mutual support, solidarity, frugality and austerity, as well as of teaching others, avoiding selfish attitudes and always doing one's best on behalf of the community, are matters of continual reflection at the eight or more hours of meetings that all the workers in CECOSESELA attend every week. The large number of hours spent on meetings might be seen as a loss of productivity, but in fact they are the main means for achieving the dedication, enthusiasm and commitment of the workers in the organization".

Within the context of these values, the organizational design adopted seems to have played a decisive role in the results obtained. It is centered on such principles as the active participation of all members of the organization, fluid communication at all levels, joint analysis and learning, and continuous rotation of tasks. One of its features is that all the hundreds of workers in the organization earn exactly the same wages (57% higher than the national minimum wage). The organization has also set up a credit union which lends money at low rates and an integrated health fund. Although the wages are only modest, the members of the organization have stated that they have other incentives, such as forming part of a project with such admirable values, working in a democratic and non-authoritarian environment, and having possibilities for training and development.

The concrete organizational mechanisms of the organization include: weekly meetings of each group for assessment and planning purposes; decision-making by consensus; shared information; collective discipline and supervision; decentralized work by each group, and the rotation of tasks already mentioned earlier. In addition, there are meetings known as "get-togethers" designed to foster closer personal and social relations.

These features of the system of organization coincide with many of the recommendations of modern management science. They are conducive to what is called nowadays a "learning organization" or an "intelligent organization". The organizational model of the Markets is very flexible, and this allows them to absorb through all their "pores" information on what is happening around them, which, when shared internally, increases their capacity to react to any changes that take place. It also allows them to follow up processes as they take place, rapidly detecting any errors. The climate of confidence created among their members avoids the heavy costs of mistrust and constant confrontation which are typical of some other organizations. On the contrary, the elements of the model foster a profound sense of belonging which is a fundamental stimulus of productivity.

The Markets have successfully survived all the forecasts that they would find it very difficult to resist the problems of the market: indeed, they are now in a leading position in their market and are obliging other business competitors to try to adjust their own prices. They have become the main supplier of staple foods for Venezuela's fourth biggest city and, although they only operate locally, their operating figures show them to be one of the biggest food marketing companies in the whole country. They have shown themselves to be completely sustainable and over 15 years they have been steadily expanding their operations.

They are now giving rise to imitators in various other Venezuelan cities. The key to their excellent performance does not lie, in this case, in heavy capital investments managed according to conventional business criteria of maximizing profits or in a vertical form of management. Instead, the capital they have mobilized is essentially "social capital". They have promoted certain values that are latent in civil society; they have demonstrated the possibility of carrying out a collective project which is at once efficient in productive terms, socially useful and attractive as a context for living, and through their special style of management, which they have called "solidary management", they have heightened basic elements of the accepted concept of social capital, such as associativeness, mutual confidence and norms of behaviour which favour community life and objectives.

Local analysts such as Machado and Freites (1994) note that they have also taken advantage of the great store of social capital existing in the state of Lara, which is the Venezuelan state with the largest number of cooperative organizations. In 1994 there were 85 cooperatives in the state, 36 of them providing multiple services, as well as a dense network of non-governmental organizations (over 3,500) and numerous neighbourhood associations and other forms of social organization. We can thus see that in the state of Lara there is a whole cultural habitat that favours the development of social capital and has provided fertile ground for a project of this nature.

3. The participatory municipal budget of Porto Alegre (Brazil): expanding the existing social capital

The experiment in participatory municipal budgeting which was begun in the city of Porto Alegre in 1989 has become one of the "star" experiments at the international level and has attracted widespread attention. Nearly 70 Brazilian municipalities are now undertaking similar experiments inspired by that of Porto Alegre.

This interest on the part of other cities and countries is due to the concrete results obtained. In 1989 Porto Alegre, which has 1.3 million inhabitants, suffered from serious social problems and broad sectors of its population had only limited access to basic services. There was also an acute shortage of fiscal resources. The newly-elected Mayor decided to invite the population to cooperate in managing the investments section of the municipal budget. This time, the invitation was not mere hot air but was backed up by a complex and elaborate system to make mass participation possible. The city has been divided into 16 zones, for each of which the budgetary execution figures and future estimates are analysed and priorities are identified at the neighbourhood level, with the results being subsequently assembled and harmonized at the zonal and global levels. In addition to the zones, there is another analysis and decision-making mechanism which operates in respect of major matters of urban concern: urban development, transport, health services, leisure facilities, education and culture. The public at large, elected representatives and municipal officials take part in working groups, intermediate-level meetings, plenaries and other types of meetings held throughout the year. The budget is thus formulated from the bottom up and is finally formally adopted by the Municipal Council.

The population responded to the Mayor's invitation with what Navarro (1998) called "feverish participation". It is estimated that in 1995 100,000 people took part in the process.

The results have been surprising and have dispelled the pessimistic forecasts that the "inadmissible heterodoxy" of submitting such a highly technical and delicate matter as the budget to a popular participation process would be a failure. On the one hand, the population determined its real needs and redirected resources towards the most keenly felt problems. On the other, the whole budgetary process, which had previously been closed and impenetrable, was completely opened up for citizens at large. The fact of sharing the whole of the information with them made the whole process transparent, thus creating favourable conditions for the eradication of all forms of corruption. The public engaged in a mass exercise of social control of the preparation and execution of the investment section of the budget, which represented 15% of the total budget and in 1989/1995 amounted to US$ 700 million. Furthermore, by establishing clear rules on the nature of the decision-making process, this initiative reduced to the minimum the room for arbitrary clientage-type practices.

The fact that the budget now corresponds to priority needs, together with the improvement in its management, led to very significant results. Thus, between 1990 and 1996 the number of homes with drinking water supply rose from 400,000 to 484,000, so that it covered 98% of the population, while in the case of sewerage, whereas in 1989 only 48% of homes were connected to the sewerage system, by 1997 the proportion had risen to 80.4% (the average for the whole of Brazil was only 49%). Likewise, 167,408 persons (13% of the population) were benefitted between 1990 and 1996 by the programme for issuing official titles for land ownership in poor sectors and settlements. In the poorer areas of the city, 30 kilometres of streets were paved each year, while in the field of education primary and secondary school enrolment rose by 159% between 1989 and 1997 and the municipality established an adult literacy training programme which had 5,277 participants in 1997.

Since this system was introduced, the identification of priorities in line with real needs, together with the effects of the system as a whole, have brought about a large-scale reallocation of resources which, aided by the collective participation of the community in following up the budget execution process, has made possible the impressive achievements obtained. The population have now become a major actor in the municipal budgetary process.

The broad support among the population for profound budgetary changes has also been expressed in strong pressure for measures to make the tax system of the municipality more progressive and efficient, and major reforms have been made which have allowed tax revenue to be increased while making its collection more equitable.

All in all, there have been appreciable changes in the traditional political image of the municipality, which was previously like many others in the region: there has been a redistribution of functions between the municipality and civil society; the latter has become much more active; various forms of direct democracy have been introduced; the room for corruption has been very sharply reduced, by making the management of the public finances so transparent and closely monitored; conditions are now unfavourable for clientage-type practices, and decision-making has been decentralized.

This process has been based on the utilization of the social capital which already existed in this society, where there was a substantial tradition of community associations. These associations were actively mobilized and played a fundamental role at the various levels of decision-making that were established. As Navarro points out, a decisive factor was the political will of the Mayor to get away from the usual systems of concentration of power and instead invite the population and the associations in question to share the power with him. This invitation and the establishment of genuine participation mechanisms served to amplify the existing social capital. The capacity for cooperation increased enormously, a climate of mutual confidence was established among the actors, and strong incentives were created for constructive civic behaviour. The already existing associative culture was an essential element in promoting popular participation, while it in turn was greatly strengthened by the process, which has shown the potential that is revealed when the false conflicts between the State and civil society are overcome and they join together to work for the common good.

In Porto Alegre, social capital behaved as Hirschman (1984) forecast that it would: when more intensive use was made of it, it expanded. This was recognized by the IDB (1997), when it noted that the participation process has had an enormous impact on the ability of citizens to respond to challenges in an organized manner, as a community, and on their capacity to work together to improve the quality of the public administration and, hence, their quality of life.

4. Some lessons to be drawn from the above cases

The cases described above have had important effects, have shown strong sustainability, and have won recognition in many circles. What were the keys to their success? Although they were carried out in very different environments, can some common elements be identified in them which have significantly affected their results?

Firstly, the strategies employed have been based on the use of non-traditional forms of capital, by promoting the entry into action of forces which were latent in the social groups. In all the cases analysed, the capacity to seek solutions and implement them in a cooperative manner was brought into play; a climate of mutual confidence was built up among the actors; the existing cultures of the actors were taken as the starting point, totally respected and fostered, and a style of civic conduct based on solidarity and concern for the general good was promoted. The encouragement of these and other similar factors gave rise to community and organizational forces which were capable of carrying out extensive constructive efforts in spite of the misery originally reigning in the Villa El Salvador, the extremely small resources available for the Consumer Markets in Barquisimeto, and the limited resources and deficits in Porto Alegre.

A second common feature was the adoption of a totally non-traditional organizational design. In all three cases the basis of this design was the organized participation of the community. In a recent study (Kliksberg, 1998) we made a detailed analysis of the organizational possibilities offered by participation. In that study we noted, on the basis of the comparative analysis of different international experiences and a broad range of empirical information, that participation has considerable competitive advantages over the usual hierarchy-based designs, and we identified the mechanisms through which such advantages are generated. Indeed, participation is now an essential part of the management models of the most advanced organizations in the world.

A third distinctive feature of the three cases studied is that, underlying the mobilization of social capital and culture and the designs for open and democratic management, there was a value-based conception which was of decisive importance. Without it, it would have been impossible to solve the many difficulties encountered on the innovative and non-traditional path that was followed. The values maintained served as a continuous source of guidance and at the same time powerfully motivated the behaviour of the communities concerned and transmitted the inspiring vision of the final goals to those at whom the efforts were directed.

Other projects are being carried out in the region which, while having their own special features, follow lines like those described above to a greater or lesser extent, as well as adding new elements of their own. Their results are highly significant. Among many others, mention may be made of the EDUCO programme in El Salvador, based on the self-organization of poor peasant families to run rural schools; the school milk programmes in Peru; the role played by organized indigenous communities in Bolivia and Ecuador, and parent participation in running the schools in Minas Gerais.

It could be argued –and indeed this has been done– that projects of this type have only a limited scope. However, experience shows that although considerable difficulties have been encountered and that these projects cannot easily be extended to other environments, they can nevertheless make formidable contributions: they directly improve the quality of life of broad under-privileged sectors, they are a testbed for advanced forms of social action, and they represent an inspiring appeal to progress in this direction.

In the final analysis, mobilizing social capital and culture as active agents of economic and social development is by no means a utopian proposal: it is perfectly viable and gives effective results. There is significant past experience on which to base action. In order to carry out this mobilization on a major scale –a great challenge for the future– comprehensive policies and broad consensus between the State and civil society will be needed.

IV

It is time to mobilize the potential of culture

From the standpoint of economics, cultural activities have often been regarded as a secondary field foreign to the central line that economic growth should follow. They have often been treated in practice as a field which absorbs much-needed resources, does not generate economic returns on the investment made in it, gives effects which are difficult to measure, and tends to be poorly managed. On the other hand, there has also been a certain tendency in the field of culture itself to adopt a closed attitude and not actively seek links with economic and social programmes, which has led to a serious gulf between culture and development. This situation causes great losses for society: it seriously hinders the advance of culture, which comes to be treated as a secondary aspect which involves only expense and delivers little benefit, while at the same time it has a high opportunity cost, as it does not take advantage of all the contributions that culture could make to development processes.

In order to bridge this gulf, systematic efforts are needed. Culture is an important part of social capital, as shown both by the cases described earlier and by the many others currently under way. The crisis of conventional economic thinking has opened up an opportunity –as part of the search for a broader and more integral view of development– for the incorporation in their own right of the cultural dimensions of the latter.

Before exploring some of the possible points of interaction, a very important point should be noted. Culture can be a formidable instrument of economic and social progress, but its identity does not end there. It is not just an instrument. The cultural development of societies is an end in itself, and progressing in this field means furthering the spiritual and historical enrichment of a society and the individuals that make it up. As the Report of the World Commission on Culture and Development (UNESCO, 1996) declares, it is an end which is desirable in itself, because it gives a meaning to our existence. This aspect should never be lost from view.

The distinguished economist Françoise Benhamou makes some telling remarks in this respect: "In reality, only under an out and out economistic approach could it be suggested that expenditure on culture should be justified in the light of the tangible benefits that it can generate in return. The gains that cultural life can bring to the community do not always cover the expenditure involved.

Obviously, the justification for this expenditure should be assessed in the light of other criteria which go beyond the economic dimension". She calls for the use of different criteria to measure the "performance" of something which is, in the final analysis, one of the ultimate ends of society. She warns against the mechanical application of criteria usually employed in the economic field and the facile and erroneous conclusions that can be drawn from them, emphasizing that "It would be lamentable if, at a time when economic science acknowledges the value of the qualitative dimension of the object being appraised, economists were to insist on taking account only of the commercial results of investments in culture. Is there any reason to complain about the cost of cultural life, which is really very modest? Should we not rather see in it the image of an adult and prosperous nation?" (Benhamou, 1997).

In addition to being an end in itself, culture has enormous potential that can be mobilized for development, including that briefly described below.

1. Culture and social policies

The mobilization of culture can be a very valuable factor in the fight against poverty, which currently afflicts nearly half the inhabitants of the region. The intangible underlying elements of culture can help in many ways.

The poor do not have material wealth, but they do have a store of culture that often goes back for hundreds or even thousands of years, as in the case of the indigenous peoples. A deep respect for their culture will create favourable conditions for making use in social programmes of their accumulated knowledge, traditions, ways of linking up with nature and their natural cultural capacity for self-organization, all of which can be extremely useful.

Furthermore, consideration and due appreciation of the culture of under-privileged sectors is a key point in the crucial matter of collective identity and self-esteem. Economic marginality and poverty are often accompanied by the depreciation of cultural values. The culture of the poor is looked down upon by other sectors of society as being inferior, precarious, backward. Cultural patterns of the poor are sometimes even irresponsibly blamed for being responsible for their poverty. The poor feel that, apart from their material difficulties, they are facing a silent process of "cultural depreciation" of their values, traditions, knowledge and forms of relations. In the final analysis, depreciating their culture means weakening their identity, and a weakened identity gives rise to feelings of low individual and collective self-esteem.

A major aim of social policies should be to reverse this process and raise the collective and personal self-esteem of under-privileged groups. Stronger self-esteem can be a powerful constructive and creative force. The essential means for this is culture. The promotion of popular culture, the opening-up of channels for its expression, its cultivation among the younger generations, and the creation of a climate of genuine appreciation of its content will cause culture to grow and, together with this, will restore their identity to impoverished groups.

There are some interesting examples of actions of this type in Latin America. Among them are the energetic efforts made in Venezuela in recent decades to form popular choirs and musical groups. By dint of sustained efforts in various communities, many of them poor, groups have been set up which have brought together thousands of children and young people, mainly for the interpretation of music whose roots are in popular culture. These cultural spaces, as well as allowing their members to express themselves and grow artistically, also cause them to love and value their culture and strengthen their identity. They have also had some effects that were not originally foreseen. Thus, the systematic practice of these activities has also fostered habits of discipline, hard work and cooperation. Similar efforts have also been made on a large scale in recent times in Colombia and other countries.

2. Culture and social integration

One of the basic problems of Latin American societies is social exclusion, which severely hinders the access of some sectors to the labour and consumer markets and makes it impossible for them to integrate into society. These obstacles mutually heighten each other, thus forming regressive vicious circles.

The democratization of culture can break these circles in an important respect. The creation of cultural spaces open to the under-privileged sectors, with special stimulation for them to use them, can give rise to novel channels of integration.

Culture can also significantly strengthen the educational capital of poor communities. The region is marked by high rates of dropping out or repeating courses in primary education among such communities (almost half the children leave school before completing six school grades). Every possible effort should be made to improve this situation. At the same time, however, cultural activities could act as a para-educational system, offering informal training facilities to complement and back up the school system. This would be particularly valuable for the many adults who dropped out of school when they were young.

Culture can be an attractive and realistic framework for the integration of the great numbers of young Latin Americans who are currently neither in the labour market nor the educational system, thus forming a population group in great danger of slipping into crime. The studies on the great increase in the crime rate in the region in recent decades indicate that a growing percentage of criminals are young and display a profile of unemployment and limited education. In cultural spaces, this group can be offered alternatives that can permit them to gain a sense of belonging socially and achieve personal growth.

Culture can make an effective contribution to the most fundamental social integration institution: the family. Research carried out in recent years shows that, in addition to its decisive affective and spiritual role, the family has an outstanding influence in many other areas too. It exerts a strong influence on the educational performance of children, the formation of creativeness and capacity for constructive criticism, the development of emotional intelligence, and the acquisition of a culture based on preventive health. At the same time, it is one of the main social safety nets and the prime, fundamental framework for social integration.

In Latin America, the impact of poverty has put many families in the humbler strata of society under great stress, so that they are in a state of crisis. It is estimated that over 20% of the families in the region are headed only by the mother. In the great majority of cases, these families are very poor. Likewise, there has been an increase in the number of children born out of wedlock, which is an indicator of the reluctance of young couples to form stable families, often because their economic difficulties make it hard to maintain a family.

Cultural spaces can help to strengthen this vital institution, whose contributions to society are incalculable. Joint activity by family members in these spaces can forge stronger links among them. Likewise, families can find stimuli and responses in them, can enrich their personal situation, and can share experiences with other family groups faced with similar problems.

3. Culture and values

The values of a culture have a decisive weight in development. In recent years there has been extensive debate on the types of values which have helped countries to attain sustained growth and significant social achievements.

If the dominant values are concentrated on individualism, indifference to the fate of others, lack of collective responsibility, lack of interest in the general good, the pursuit of personal enrichment as the central value, consumerism, and similar goals, the consequent forms of conduct may be expected to cause serious harm to the fabric of society and to lead to all kinds of regressive effects, ranging from severe economic inequity –which, according to many studies, gives rise to serious hindrances to sustained economic development– to a decline in social cohesion which may even affect average life expectancy.[1] One of the visible effects of the prevalence of values that do not prize solidarity is the spread of corruption in a number of societies. As Arizpe (1998) notes: “This tendency has been largely fostered by the monotonous insistence on the idea that getting rich is the only goal that is worth while in life”.

In contrast, positive values lead in very different directions. Thus, for example, societies which have stimulated and cultivated values that favour equity and taken steps to ensure that they are reflected in their tax systems, universal coverage of health services, and good-quality education have now attained good levels in all those fields, which have facilitated their economic and technological progress and their competitiveness. Examples of such countries include the Scandinavian countries, Canada, Japan, Israel, etc.

[1] For a pioneering study on the incidence of values on everyday life and the social fabric in Chile, see UNDP(1998a). This study explores the inner world of people and the quality of their relationships with others, makes some highly important findings in terms of social capital, culture and development problems, and identifies the existence of widespread social malaise in Chilean society, due, among other things, to the weakening of personal interrelations.

Culture is the basic area in which a society generates values and transmits them from generation to generation. In Latin America, the systematic promotion and dissemination of values such as solidarity (which is deeply rooted in the local indigenous cultures), cooperation, mutual responsibility, joint concern for the collective good, the elimination of various forms of discrimination, the eradication of corruption, democratization[2] and the pursuit of greater equity (in a region which is so flagrantly unequal) would obviously help development, as well as helping to shape the profile of society.

Notable results have been achieved in this respect by societies which have consistently cultivated voluntary action among the new generations. Such voluntary action incorporates many of the above-mentioned values. It is of great educational value, produces significant economic results by adding many hours of unpaid work to programmes which are of value to society, and promotes attitudes of solidarity and cooperation. In a number of countries volunteers form a substantial percentage of the total work force in the social sector: their activities are valued by the whole of society and represent a means of attracting many young people. There are substantial contingents of volunteers, for example, in the Scandinavian countries, Canada, various Western European countries, and Israel. Faigon (1994) reports that 25% of the population of Israel carries out regular voluntary work, particularly in the social field, and generates goods and services equivalent to 8% of GDP; he notes that the bases for these results lie in Jewish culture itself, which emphasizes that voluntary service to the community is a duty, and in the systematic inculcation of solidarity-based values in Israeli schools.

The cultivation of values through culture and participation from an early age in voluntary activities and community work exerts a considerable influence on the subsequent acquisition of civic commitments by adults, conclude Youniss, McLellan and Yates (1997) in the light of recent research. There is a statistical correlation between the fact of having acted in voluntary organizations when young and subsequent involvement with society. Thus, a study carried out in the United States shows that those who had been members of 4H clubs were twice as likely, 25 years later, to be members of civic organizations, compared with those who had not formed part of such clubs, while they were four times as likely to participate in politics. Another study on graduates of secondary schools showed that 15 years later those who had taken part in extracurricular activities at school were much more likely to be participating in voluntary organizations. Such values and participation mould what the authors call a "civic identity" that encourages entry into commitments with the community and ongoing contributions to it.

An interesting experiment aimed at promoting cultural values useful to society was begun recently in Norway. On 30 January 1998 that country established the Government Commission on Human Values, which has four main purposes: i) to create an increasing awareness of values and ethical issues in society; ii) to foster a better knowledge of the development of human values in present-day culture; iii) to identify current ethical challenges in society and outline possible responses to them, and iv) to encourage the different sectors of society to take part in this debate.

The members of the Commission come from various sectors of society and belong to different generations. The aim of their activities is to ensure that value issues are at the centre of the public agenda and are analysed by both public and private institutions, that ethical dilemmas are identified and explicitly stated, and that suitable responses are sought. Among the first initiatives put into effect by the Commission is the requirement that all the schools in the country should examine how far the rights proclaimed in the United Nations Declaration of Human Rights are being applied in their areas. It is also promoting studies at the municipal level –it is seeking to decentralize many of its actions– on the tensions suffered by children and young people because of the frequent contradiction between the values imparted in the home, at school and in church and those that are given by the mass media. Another project seeks to create greater awareness with regard to responsibility, solidarity and participation, while yet another calls upon the Mayors of the various municipalities of the country to set in motion a process of deliberation at the local level to determine what the basic features of a good local community should be.

[2] See, in this respect, the studies prepared under the Regional Project on Culture and Democracy led by Saul Sosnowsky, Director of the Institute of Latin American Studies of the University of Maryland.

The cultural potential of Latin America –which is enormous, as its fertile production in so many fields of art shows– can take shape in the form of important contributions to the fight against poverty, the development of social integration, the strengthening of values in the fields of community action, solidarity and participation, and many other areas. Mobilizing this potential calls for concerted action between the State and the various organizations of civil society, which must coordinate their efforts and do their very best in order, together, to set free the enormous forces of popular cultural creativeness which are latent in the region.

There are serious shortcomings in Latin America in this respect. While some sectors make great efforts to promote culture and secure important concrete results in this way, there are other sectors which display reservations and hang back from the task of giving culture a central place on the development agenda. Thus, cultural efforts are deprived of resources, are made a preferential target for budgetary cuts, and are subjected to constant changes which deprive them of the stability needed to place activities and institutions on a firm basis. It is usually argued that culture is a kind of secondary need to be filled when other more "urgent" needs have been satisfied. In some cases, this leads to a situation like that described so well by Pierre Bourdieu: "…. the absence of culture is usually accompanied by the absence of any awareness of its absence".[3]

For these reasons, and because of these practices, society is failing to make use of one of the great forces for securing profound changes in the actual conditions of a continent which is facing such difficult challenges in fields like poverty and inequality that decisively affect the everyday life of the population.[4] The time has come to overcome these shortcomings and actively explore the many contributions that culture can make to development.

(Original: Spanish)

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[3] Quoted in Benhamou (1997).

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Building community *social capital*

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Social capital means the set of norms, institutions and organizations that promote trust and cooperation among persons in communities and also in wider society. In those formulations of the social capital paradigm (and of the neoinstitutional economics on which they are partly based) which focus on its collective manifestations, it is claimed that stable relationships based on trust and cooperation can reduce transaction costs, produce public goods and facilitate the constitution of social actors and even of sound civil societies. Community social capital is a particular form of social capital which comprises the informal content of institutions that aim to contribute to the common good. Even some of the foundational authors of the social capital paradigm have doubts about the feasibility of creating such capital in groups where it does not already exist. The peasant communities of Chiquimula (Guatemala) covered by the anti-poverty “Support Project for Small-scale Producers of Zacapa and Chiquimula” (PROZACHI) displayed a relatively individualistic culture of dependence and domination yet at the same time had a broad and dynamic repertoire of various norms, including some which could serve as a symbolic support for solidary and reciprocal practices. Chiquimula seemed to lack social capital institutions, but with the recovery of institutional practices of the past and the emergence of new contexts and opportunities for developing new group strategies it has been possible to create social capital in these communities, with external support and training, and thus turn an excluded sector into a social actor on the micro-regional scene.

I

Social capital

1. A useful conceptual tool

A vigorous debate is currently under way in academic circles and also in development agencies on the theory of social capital. This emergent paradigm aims to be a kind of unified theory incorporating concepts from different fields, such as reciprocity, social networks, participatory development and governance. It promises to be a valuable tool for the analysis and promotion of peasant-level development. The term "social capital" embraces the norms, institutions and organizations that promote trust and cooperation among persons, in communities and also in wider society. In those formulations of this concept (and of the neoinstitutional economics on which they are partly based) which focus on its collective manifestations, it is claimed that stable relationships based on mutual confidence and cooperation can reduce transaction costs (Coase, 1937), produce public goods (North, 1990) and facilitate the constitution of social actors and even sound civil societies (Putnam, 1993a).

This article analyses a particular form of social capital –community social capital– and the possibility of creating it where it does not already exist in order to overcome the poverty and political exclusion of rural communities in Latin America.

In the definition followed here, cultural norms of mutual trust and interpersonal networks of reciprocity are "precursors" of the institutions - more complex and guided by norms of common well-being- which constitute community social capital and which spring from those precursors at the level of the community or social system. Some authors consider that social capital is made up of all the interpersonal links that can activate an individual, corresponding to what were already known as diffuse self-centered networks of reciprocity, while at the other extreme the definition of community social capital (from the neoinstitutionalist standpoint) given by Putnam and North –according to which social capital is what gives rise to cooperation and civism, so that if there is civism there will be social capital– has rightly been described as tautological (Portes, 1998; Portes and Landholt, 1996).

In contrast, what we are maintaining in this article is that: i) community social capital is not an individual resource but a form of social institutionality (of the group, in this case the local community), and ii) the (explicit or implicit) participants in community social capital have the common good as their objective, even though this may not be achieved. Furthermore, unlike formal institutions for the common good (such as cooperatives, for example), which exist "on paper", community social capital is made up of norms, practices and interpersonal relations which exist and can be observed. It is the informal institutionality inside and outside the formal organizations, at the level of the community or broader social system, that determines how such organizations work in practice: what Firth (1963) called "social organization".

Although the members of the community in which community social capital exists shaer a discourse of cooperation for the common good, empirical observation is needed in order to see whether this objective is actually attained, for community social capital and interpersonal reciprocity may cause effects which run counter to the common good, as in the case of some ethnic or religious communities whose practices are exclusive or do not respect fundamental human rights.

Finally, the concept of reciprocity is a central element of the social capital paradigm. The anthropological treatment of this matter has been constructed on the basis of the classic study *Essai sur le don* by Marcel Mauss (published in 1950),[1] which had an enormous impact on that discipline from the 1950s

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[1] An English version of this essay (Mauss, 1990) is listed in the bibliography below.

on.[2] he importance of reciprocity goes beyond its presence in "diadic" relations between two persons (Foster, 1961): as a ruling principle it also extends to formal and informal institutional relationships at the community level. In his essay, Mauss notes that in pre-mercantile societies (and to a lesser extent also in our own societies, outside the ambit of the market) there are systems of exchanges based on gifts (objects, aid, favours) which must be repaid, but not necessarily immediately or always in precisely equivalent terms, unlike mercantile transactions (Mauss, 1990). In a socially delimited environment (a traditional society or most present-day peasant communities) with long-term relationships established through a large number of past interactions and a long-term perspective, relations tend to take place at the same moment between the same persons and families in all areas and all institutions of human life (religious, juridical, political, family and economic): in this sense, they are "total phenomena" (Mauss, 1990). For this reason, although reciprocity might at first sight seem to be a minor social phenomenon among many others, it is in fact the basis of social capital institutions in contexts like that of a peasant community.

2. Doubts about the constructability of social capital

Strangely enough, even some of the foundational authors, such as Robert Putnam, have doubts about the feasibility of creating social capital in groups where it does not already exist. Thus, for example, Putnam (1993a, p. 184) finally decides that "where institution-building is concerned, time is measured in decades" while the process of changing norms of reciprocity and values of civic engagement "probably moves even more slowly".

This pessimistic view reflects a belief in feedback mechanisms that constantly strengthen existing norms and forms of behaviour, bringing all socio-cultural systems to either a positive social equilibrium in which social capital is built up, or to a negative "acivic" society. According to Putnam, in the "acivic" south of Italy society was trapped for centuries in a repeated negative path in which "mutual distrust and defection, vertical dependence and exploitation ….. have reinforced each other in interminable vicious circles ….." (Putnam, 1993a, p. 181).

II

The construction of social capital in Eastern Guatemala

1. The peasant communities of Chiquimula: an empty institutional landscape?

Rural communities in Eastern and Western Guatemala are often contrasted in terms similar to the contrasts Putnam makes between the South and North of Italy. There is a widespread perception that the Mayan corporate communities in the western highlands are more oriented towards collective decision-making, whereas those in the eastern lowlands are "individualistic", with little participation in community organizations.

In the 1990s, the "Support Project for the Small-scale Producers of Zacapa and Chiquimula" (PROZACHI) was carried out for seven years in eight municipalities of Eastern Guatemala[3] with a view to significantly increasing the incomes of poor hillside farmers in an economically, ecologically and institutionally sustainable manner (IFAD, 1998). Its strategy for overcoming poverty was centered on facilitating the peasants' access to bank finance, but it also pro-

[2] Neither Putnam nor North refer to Mauss's essay, which has inspired almost half a century of empirical and theoretical work by anthropologists of a number of countries. So far, not enough use has been made of this store of anthropological wisdom in the debate on social capital.

[3] Joint project by the Ministry of Agriculture and Stock-breeding/International Agricultural Development Fund/Organization of Petroleum Exporting Countries/Netherlands. The area of action of PROZACHI covered most of the Department of Chiquimula and also included adjoining areas of two municipalities of the Department of Zacapa. As the great majority of the villages served were in Chiquimula, for reasons of simplicity we will refer to Chiquimula throughout this article.

vided support through its own team of professionals and technicians (in agricultural advisory assistance and technical training, road construction, organization and management, environmental conservation, housing improvement, participation of peasant women in development, marketing, etc.).

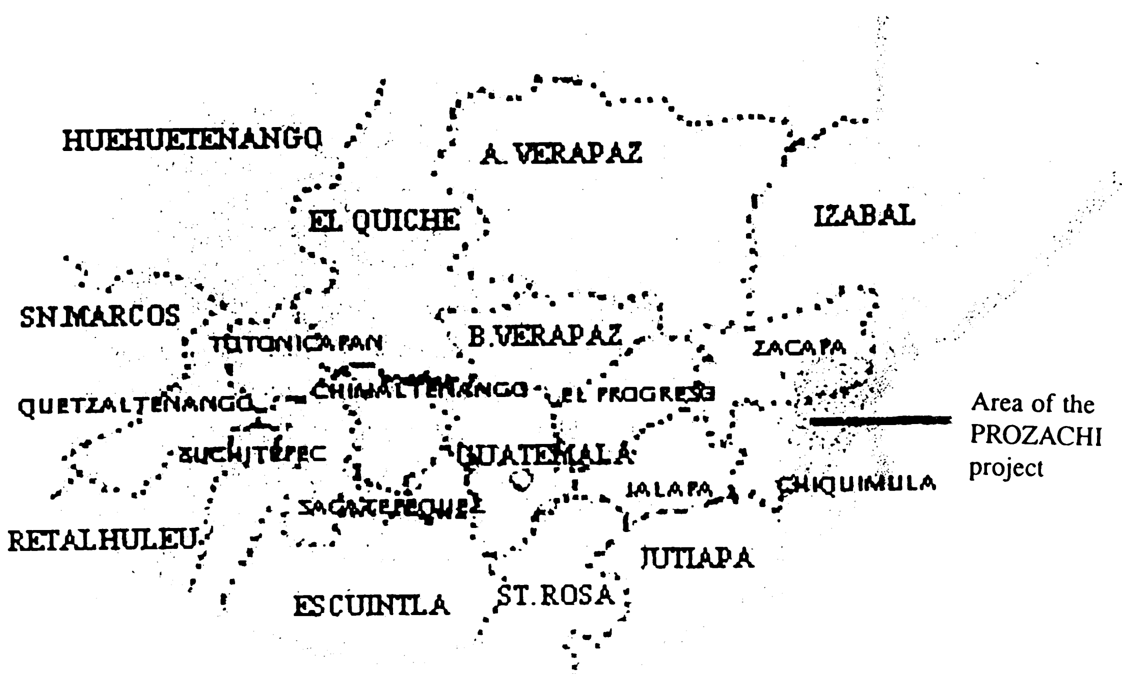
When PROZACHI began its activities in 1991, its target group –5,000 peasant families cultivating mainly maize and beans in over 130 hillside villages and hamlets– was largely devoid of significant grassroots organizations (FLACSO, 1993). There were a few civic committees, but they were mostly small factions or passive recipients of aid from charitable NGOs. PROZACHI officials were therefore pessimistic and reticent about the possibility of promoting participation by the beneficiaries in taking Project decisions: in short, this was another example of the "acivic" cultures described by Putnam.

2. Scaling down and scaling up

It was then observed, however, that the dispersed pattern of human settlement in the hillside hamlets of the PROZACHI area of influence (see maps 1 and 2) corresponded to "local descent groups": that is, networks of kin and neighbours who believe they are descended from a common ancestor (Wolf, 1996). In each village or hamlet the same surnames tended to be repeated in a large proportion of households, and some place names corresponded to the surnames of the purported founders (Durston, 1992). In these local descent groups, which are found in upland areas all over Latin America, residence of newlyweds tends to be virilocal (i.e., near the husband's parents) and interconnected multiplex ties of reciprocity based on close kinship lead to both horizontal and vertical trust and cooperation.

MAP 1

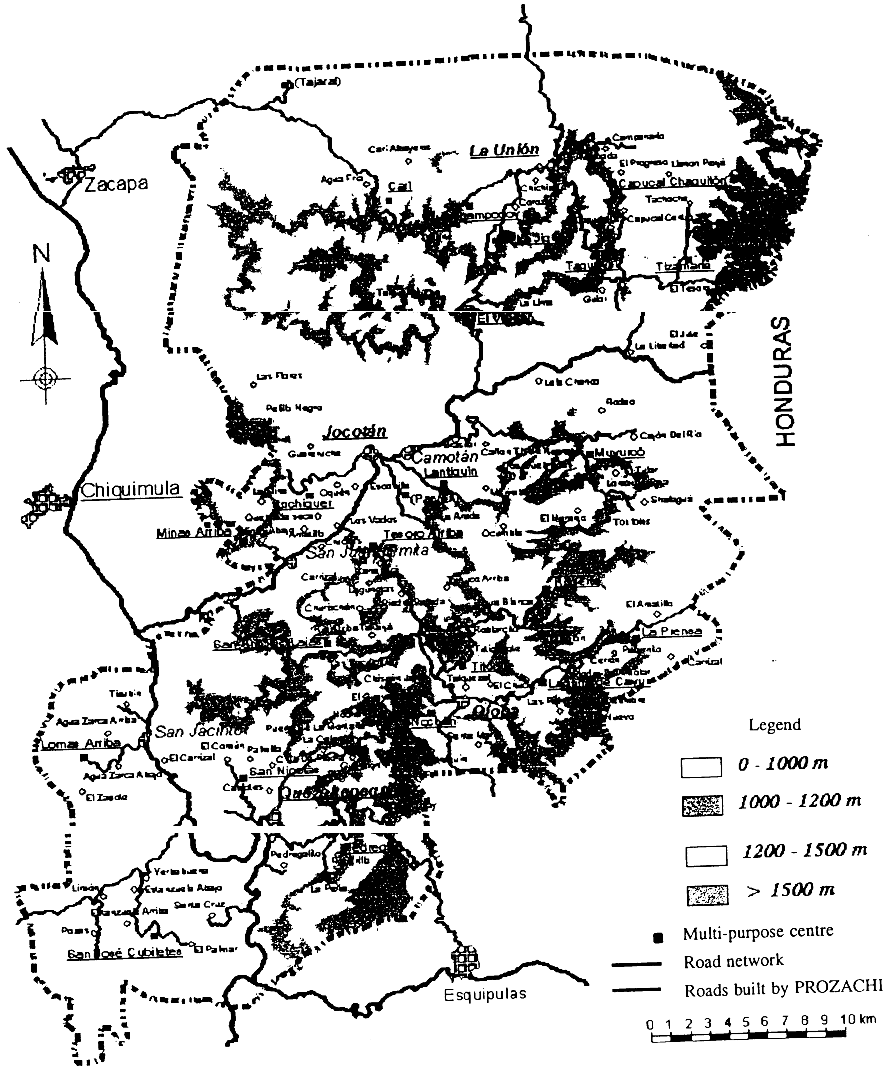
Guatemala: Location of PROZACHI's area of influence



Source: IFAD (1998).

MAP 2

Guatemala: Area of influence of PROZACHI



A Guatemalan anthropologist, Hugo Zelaya, was hired to activate work in the field of "participatory planning", and he designed a system of core groups (Grupos Núcleo) –7 to 12 households united by close neighbourhood– to participate in determining the needs and priorities of those gaining access to the services and benefits offered by the Project (see PROZACHI, 1995). Some 40 rural development promotion workers, immersed in the hillside villages, promoted house-to-house the benefits of participating in the exercise. Each core group selected two leaders to moderate their meetings and serve as liaison with PROZACHI. Over 400 core groups were formed, and became the source of proposals for modifying the annual operating plan of the Project.

The period of most intense growth of the core groups coincided with a big increase in the number of households receiving credit: from 525 in 1992 to 3,676 in 1994. Although there were several factors which combined to bring about these changes, Project staff and peasants agree that the creation of these core groups were largely responsible for this.

After three years of activity of the core groups, an assembly of their representatives proposed the establishment of coordination mechanisms at the multi-village level as a more efficient way of working. An advisory study designed a system of community councils incorporating all the committees and organized groups, building upon the previous grass-roots groundwork but largely replacing the small interfamily groups as the most frequent instances of civic participation. Initiatives by PROZACHI staff began to take a back seat to spontaneous proposals by the peasants on support for the organization and its concrete actions.

The number of specific interest groups, such as drinking water supply committees or cooperative micro-enterprises, increased by 28% between 1991 and 1998 (table 1). Over a hundred community councils and eight municipal coordinating committees were formed, and what seems even more important is that 56% of these community organizations were evaluated as having medium or high levels of self-management capability (table 2). Finally, in the first quarter of 1998 a regional* association of representatives of these rural community organizations was set up and began to play a role in the establishment of rural development priorities in the region.

TABLE 1
Chiquimula and Zacapa (Guatemala): Growth of peasant organizations at five territorial levels, 1991-1998

Territorial level	1991	1998
Local descent groups (village level)	-	440
Specific interest groups	380	487
Community level (inter-village level)	-	129
Municipal level	-	8
Regional level	-	1

Source: Support Project for Small-Scale Producers of Zacapa and Chiquimula (PROZACHI).

TABLE 2
Chiquimula and Zacapa (Guatemala): Organizational consolidation in participating communities, 1998

Area	Number of villages	Level of autonomy (Number of villages)		
		Incipient	Interme-diate	Consoli-dated
Jocotán	49	14	17	18
Olapa	35	18	13	4
La Unión	19	11	3	5
Quezaltepeque	26	14	12	-
Total	*129*	*57*	*45*	*27*
Percentgage	100	44	35	21

Source: Support Project for Small-Scale Producers of Zacapa and Chiquimula (PROZACHI).

3. Roots of social capital in Chiquimula

Looking back, there are various aspects of the social capital formation process in Chiquimula which help to explain how it was possible to construct such capital in that "acivic" region in a much shorter space than the decades foreseen by Putnam. The first of these factors was the existence of the local descent groups, which were repositories of reciprocity and precursors of the core groups.

A second factor was the shared identity of the inhabitants. Although the peasantry of Eastern Guatemala is usually conceived of as being "ladino" (non-indigenous), barely a generation ago social institutions based on Ch'ortí Mayan lineages predominated in most of the hillside communities, and the Ch'ortí language is still spoken in a number of villages. In the 1994 census, over 70,000 residents of the Department of Chiquimula identified themselves as Ch'ortí. The consciousness of these roots and the strengthening of the Ch'ortí language and culture have been furthered by the national Maya movcment since the mid-1990s (Metz, 1998). Other elements strengthening their identity is that they are all "peasants", all come from the same area, and belong to the

* Throughout this article, "region" and "regional" refer to the local, micro-regional level.

same community. Thus, while the identities of the Chiquimula hillside villagers are mixed and varied, they all see themselves as the opposite to the dominant urban dwellers, and this serves as a source of cohesion and trust among the members of the different rural communities.

The third factor was memories of the past. In the 1960s the Belgian Catholic Mission established a number of agricultural cooperatives and self-help infrastructure development committees in villages which were visited by PROZACHI three decades later. Though repressed during the late 1960s, those organizations were remembered by the peasants when discussing the pros and cons of participating in the new organizations promoted by PROZACHI.

The fourth factor was indeed the reduction of repression. In the 1990s the Army began to gradually withdraw from direct participation in political decision-making at the national level: a process that culminated with the signing of the peace accords in late 1996. In Chiquimula, the village “Comisionados Militares” and “Patrullas de Autodefensa Civil” ceased to exist as such, and the regional army base was shut down, so that the structural situation became much more favourable for peasant organizations.

The fifth factor was the initiation of the process of empowerment of peasant women. The registration of hundreds of women in the Civil Register for the first time, with the support of PROZACHI, the formation of women’s production groups, aided with credit and advisory assistance (Lundius, 1998), and their incorporation into community discussions set loose and trained human resources which had previously been excluded. These changes strengthened the process of self-diagnosis and the democratization of leadership, which are essential elements of social capital.

The sixth factor was the interaction of peasants with the rural development promoters, who lived in the midst of the villages and whose presence in the local and regional social environment was scheduled to last for several years. The promoters naturally participated in the “total service systems” and in the reciprocal relations which Mauss described. This gave rise to stable relationships, strengthened by the expectation of future interactions and by the affective links that arose from the past history of practices of mutual aid and the return of such favours at other times (see Evans, 1996). On the one hand, the personal commitment shown by the promoter to the members of the community stimulated the participation of peasants in PROZACHI’s activities, which thus gained in prestige, while on the other hand the various forms of aid given by the promoters strengthened the relations of reciprocity and solidarity among the inhabitants of the area themselves.

The above six factors contributed to the creation of social capital, but the materialization of its potential was due to the initiatives of PROZACHI and, as from March 1997, of the Social Investment Fund (FIS).[4] Firstly, training programmes were designed in order to create social capital by strengthening social skills and capabilities in the fields of diagnosis, communication and planning. By 1995, at the request of villagers themselves, over 400 organizational training “events” per year were being held. In order to do this it was necessary to adapt the available methods and materials to local conditions, to design new techniques, and to publish a series of pamphlets for group discussion.

SECONDLY, PROZACHI AND FIS gave peasants the opportunity to exercise these new-found skills and social capital associations to obtain direct material benefits from the Project and FIS. Thirdly, both PROZACHI and FIS protected the peasants’ embryonic community social capital institutions while authoritative clientelism was still present in the region and intervened when they were threatened by hostile social actors.

[4] FIS provides physical social infrastructure (mainly roads, schools and health centres) to organized rural communities without cost to them.

III

Lessons for social capital building

The analysis made here of the Chiquimula experience suggests a need for some revision of the social capital paradigm with regard to the obstacles for the construction of such capital, and these theoretical modifications have their own policy implications.

Firstly, trust and reciprocity that go beyond the nuclear household and are to be found in the local descent groups are associated with close kinship ties and long-time interaction with neigbours and appear to be found in all peasant societies everywhere (see Wilson, 1997).

Secondly, and in line with more modern game theory, the frequent repetition of exercises requiring trust and cooperation among peasants has created a growing disposition –slow and uncertain to begin with, but later faster– to cooperate reciprocally in community life (Axelrod, 1997). Confidence is built on the past, not on the future: on experience of past fulfillment which shows people's trustworthiness, not on agreements and promises for the future. In situations where past conflict had undermined trust (as in Chiquimula), these cooperation exercises have created a recent history of trustworthiness as the basis for future collaboration.

Thirdly, vertical reciprocity has proved to be a necessary part of social capital building, both inside and outside the community. Almost all social capital theorists consider that vertical reciprocity relationships represent the opposite to social capital, because they involve people of unequal power and are therefore asymmetrical. However, the distinctions between vertical and horizontal reciprocity are not so clear-cut in real life.

1. Vertical reciprocity among peasants as a basis for social capital

In the peasant communities of Chiquimula, some household heads, especially older ones, lead multi-household groups –or less clearly-defined "quasi-groups" (Mayer, 1966)– of kin and neighbours that serve to accumulate both wealth and prestige. Thus, on the one hand vertical reciprocity and factionalism are intrinsic to the interpersonal networks of peasant communities, but on the other hand the leadership based on this vertical reciprocity can be the basis for cooperation and scaling-up the organization beyond the local village level. These leaders of quasi-groups are entrepreneurs of social capital, managing the human resources of their kin and neighbours, to whom they are in turn accountable.

In Chiquimula, the social skills and cooperation practices developed in the core groups were passed on by their leaders at the regional level, where these representatives negotiated with their peers from other organizations. Ultimately, the techniques for creating cooperation also helped to scale up peasant organization. These new leaders, formed in the core groups,[5] and the regional coordinators elected from among them, also created a dense communications network within a dispersed social system in which repression had further increased isolation.

2. Clientelism and vertical reciprocity as bases for social capital

The vertical clientelism linking the hillside villages of Chiquimula with broader society did not disappear along with the direct military presence but continued to operate in an authoritarian manner, both through local bossism in party politics and through economic relations with landowners and urban middlemen. Even the potential for local social capital creation provided by the reforms aimed at the decentralization of official decision-making and resource allocation served to strengthen local caciques because of their privileged access to those resources and spaces (see Galeano and Yore, 1994). In short, the continued presence of authoritarian clientelism in the area made necessary some form of outside support for the incipient community social capital.

[5] Some 800 such groups in PROZACHI's area of influence.

However, such outside support is also a form of semi-clientelism. In this respect, the distinction drawn by Jonathan Fox between authoritarian clientelism and semi-clientelism (Fox, 1996) is highly relevant. In contrast with authoritarian clientelism, the dominant actors in semi-clientelism renounce the use of force and repression, instead furthering their interests by providing needed services to their clients or gaining their allegiance in a negotiated, shared political cause.

PROZACHI and FIS come close to Fox's definition of semi-clientelistic outside agencies. Their staff members identified with the beneficiaries and provided more democratic vertical reciprocity relations which facilitated peasants' access to growing public resources and reformist allies at the central level (see Tendler, 1997). Both these institutions contributed to the process of local and microregional democratization, and their activities were a key factor in creating the necessary conditions for the generation of peasant community social capital. At the same time, they served to strengthen the transformation of reciprocity and local identity into peasant social capital institutions and to take advantage of the changes in the national context, establishing a protective umbrella for this embryonic social capital.

Although building formal institutions for participation was part of their work, a much more important factor was their impact on informal institutions (see figure 1), which, as noted by Putnam (1993a), penetrate the formal institutions and often turn their real operation against democratic development. The introduction of semi-clientelism in a context of new opportunities weakened authoritarian clientelism. Community social capital arose from the synergy between this semi-clientelism and the precursors of reciprocity in the local descent groups; at the time it also helped to weaken authoritarian clientelism in the area, with the emergence of peasant social actors at the regional level and the resulting democratization of relationships in the region.

3. Alternative cultural repertoires and norms

In more general terms, the experience in Chiquimula suggests that some modifications should be made in the view of cultural determinism and negative social equilibria that forms part of the theoretical framework of social capital posited by Putnam and others. For Putnam, cultural norms of distrust and dependence are rigid traditions which resist structural changes in formal institutions. However, the peasants in Chiquimula proved to have a very broad cultural repertoire, with alternative norms that included not just distrust and dependence but also norms of autonomous action and accountability to their kin groups and communities.

Both North and Putnam recognize that there are feedback mechanisms between social and cultural subsystems, but the main thrust of their arguments concerning social capital is fundamentally deterministic, ascribing almost all forms of behaviour to cultural factors. Putnam draws a universal conclusion from his Italian case study, asserting that there are "two social equilibria": the equilibrium of societies rich in social capital, and the equilibrium of those characterized by distrust, betrayal and authoritarianism (Putnam, 1993a, p. 177). The essence of this model –implicitly derived from economic equilibrium theory– is that "path dependence" means the constant strengthening of these two opposing sets of norms and practices whose directions became set in the past (Putnam, 1993a, p. 179).

However, rather than being coherent and immutable sets of rules and beliefs, cultures are constantly changing and include an enormous range or repertoire (Swidler, 1986) of alternative "sentences" that are no longer used and fragments of "sentences" which are reworked and recombined daily by persons and groups because of the need to adapt to the changes that cultures are constantly encountering in their environment. These alternative norms, which were kept submerged during the period of repressive authoritarian clientelism, resurfaced when the socio-political climate changed. When some leaders continued to exhibit passive and subjugatory "path dependent" attitudes, failing to take the initiative or continuing to seek personal gain from their role of nexus with the "outside world", the communities -especially the younger members- recalled these other traditional principles to them and either brought about changes in the leaders' behaviour or, in some cases, changed the leaders themselves. The existence of these alternative cultural repertoires also explains why some changes in the social structure (in this case, the disappearance of the system of "Comisionados Militares" and the emergence of reformist national elites) led to rapid changes in the norms on cooperation and social capital.

4. Co-evolution of strategies

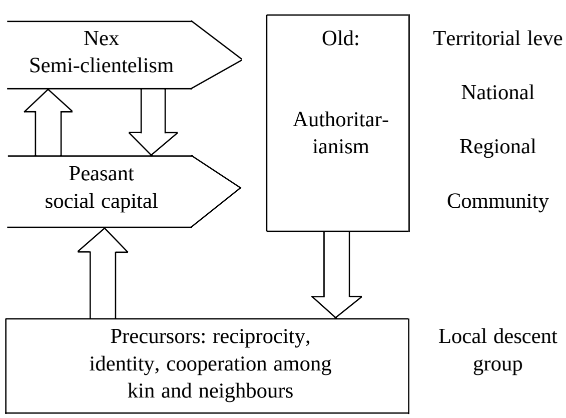
The second weak point in Putnam's argument against the possibility of rapid social capital building is the idea that "acivic" social systems always tend towards a negative equilibrium with a high degree of distrust and egoism. In Chiquimula, however, the regional socio-political system quickly ceased to be purely authoritarian and began to change into a system of semi-clientelism: into what complexity theory calls a "transition phase" to an agent-based system (Cowan and others, 1994). In this view, social systems never naturally tend towards equilibrium but instead there is a situation where the strategies of numerous agents constantly co-evolve, sometimes slowly, sometimes quickly, and social relationships and institutions "emerge" from this process (Arrow, 1994).

The systemic transition phase in Chiquimula marked the end of a period of slow change: the long period of authoritarian clientelism and repression. The new conditions gave rise to very rapid changes in the strategies and relations of both old and new actors, putting an end to path dependence and speeding up the formation of peasant social capital and its presence as a social actor in the region (figure 1).

Accelerated co-evolution of the social actors' strategies began in early 1997, when PROZACHI and FIS encouraged the formation of committees for the coordination of rural community organizations at the municipal level. Authoritarian mayors and their parties co-opted these committees through the participation of local and national government functionaries on the directorates of these committees, but in some municipalities the villagers reacted by proposing that those functionaries should be limited to an advisory role. The mayors complained about this strategy to the regional (Departmental) governor, to which the villagers reacted by boycotting the meetings of their own municipal coordination committees. Local FIS officials responded by proposing to the national government that the villagers' proposal be accepted. After this official legitimation, the villagers formed new municipal coordinating committees in which public officials were relegated to an advisory role. The mayors' strategies in response to this varied: some continued to oppose the dilution of their local control, but others allied themselves with these new social actors by providing space and transportation for their meetings. FIS began to channel its financial and technical support for social infrastructure construction directly through these more autonomous committees and community councils.

The equilibrium view of economic and social systems has been challenged by the newest versions of the theory of complex agent-based adaptive systems, applicable to a wide range of areas, from ecosystems to stock markets. This recent line of theory contains two basic challenges to Putnam's and North's dual equilibrium concept in complexity theory. Firstly, as Durlauf (1997) has pointed out, path dependence continues only until there is a new shock to the system. Such a shock may be initially small, but if it changes the opportunity structure for different kinds of actors, the resulting changes in their behaviour can end up by erasing old paths and tracing new ones. Secondly, Arrow (1994) argues that complexity theory has shown that economic and social institutions are not the result of planning or a tendency towards equilibrium but emerge from the co-evolution of the strategies of numerous agents who interact both to compete and to cooperate. A system may thus exhibit a temporary stable state until a critical mass of agents perceive change, opt for new strategies, and find ways to implement them that fit in with others' strategies. These changes in strategies can produce a phase transition in the system in which very rapid institutional change opens up new directions, as contrasted with the slow, unidirectional reinforcing changes that occur while path dependence obtains.

FIGURE 1
Chiquimula (Guatemala): Changes in the informal institutional structure in projects with peasant participation



In Chiquimula, the emergence of social capital originated in both cultural messages and structural changes. On the one hand, the pro-cooperation proselytizing of PROZACHI staff struck old but familiar chords concerning good neighbourliness and the imperatives of diffuse reciprocity, while the message of peace and democracy brought new ideas that struck against the established relations of authoritarian clientelistic structures. As a result, leaders began to take the initiative rather than waiting for orders from above, and younger persons began to reject corrupt authoritarian local "brokers", reminding them and the community of the old rule that their first loyalty should be to their own people.

Any kind of change in the balance of power among national political elites can open up the possibility of ending path dependence in authoritarian clientelistic structures. Thus, the emergence of new forms of semi-clientelism is not necessarily associated exclusively with progressive reformists, since even relatively conservative reformists can find reasons to ally with local base groups. Both such types of reformists played their part in the rapid transition that took place in Chiquimula in the mid-1990s.

The transition from an authoritarian to a semi-clientelistic system in the region involved an acceleration of social actors' reactions and the adaptation of their strategies, after an initial phase of slow change, and led to the emergence of new norms, forms of behaviour and relationships which hastened the consolidation of peasant social capital and, in essence, set up a new institutional context in the region.

This strengthening of peasant social capital was a chain of action and reaction among at least three main social actors: the provincial urban elites, outside anti-poverty agencies, and the hillside communities themselves. The history of the construction of peasant social capital in Chiquimula is also, then, the history of the creation of a new social actor and a transition from the norms, forms of behaviour and relationships typical of authoritarian clientelism to those of semi-clientelism.

Such a change was possible only because hillside village communities had already built (or rebuilt) their rudimentary social capital at the beginning of this process and could therefore intervene and adapt as social actors, reacting to the strategies of their opponents and allies alike. While not the ideal environment for peasant social capital, semi-clientelism tolerated its existence and allowed room for its strengthening and accumulation.

5. Stages in the evolution of the social actors' strategies

The co-evolution of the social actors' strategies in Chiquimula over the seven-year period studied here can be divided into four main stages:

a) Slow change with authoritarian clientelism (1991-1993)

In this first stage, clientelistic political parties and local economic elites dominated the population through authoritarian clientelistic systems, with support from the military; the anti-poverty agencies limited their actions to the technocratic provision of services to passive beneficiaries in the villages, in a relatively steady state of the regional system.

b) Incipient transition phase (1993-1996)

This stage began when PROZACHI decided to change its strategy, promoting embryonic peasant economic organizations around small production and marketing groups and encouraging grass-roots participation in project planning through the core groups, within the protected environment of Project activities and with short-term material benefits to participants.

Clientelistic political parties reacted by expressing alarm through local political caciques, but although Project personnel were sometimes changed, PROZACHI was able to continue its new activities because of alliances with national reformist groups. Hillside villagers slowly began to cooperate among themselves and cultivated an alliance with PROZACHI, which, in turn, intensified training in organizational skills at the request of the villagers.

c) Accelerated co-evolution of actors' strategies (1997)

Early in 1997 PROZACHI and FIS encouraged the formation of both inter-village councils and municipal coordinating committees for those councils.

In February and March 1997, FIS trained and supported peasant organizations in the presentation of proposals for the financing of social and productive infrastructure projects.

In April-June 1997 village organizations met to form municipal coordinating committees. Clientelistic political parties co-opted most such committees through the participation of local and national government functionaries on their directorates, to which the villagers reacted by proposing that such functionaries should be limited to an advisory role. In response, the political parties protested through the mayors to the regional (Departmental) governor, alleging that such limitations on the functionaries would be illegal. After the villagers reacted by boycotting municipal committee meetings, local FIS officials proposed to the national government that the villagers' proposal should be accepted, and a regional seminar was held by FIS, with the participation of functionaries of the Governor's office and the municipalities, to explain the benefits of this approach in the context following the signing of the peace accords.

d) Emergence of semi-clientelism (1997-1998)

In mid-1997 the village councils formed new municipal coordinating committees in which public officials were relegated to an advisory role. The mayors' strategies in response to this varied: some flatly rejected this innovation, but others allied themselves with these new social actors, providing them with transportation and premises for their meetings. FIS channeled financial support directly to these autonomous councils.

In late 1997 and early 1998 one political party requested a peasant organization's support for its mayoral candidate. The organization refused, however, because it had not participated in the process of selection of the candidate.

In mid-1998 eight municipal coordinating committees joined together to create a regional organization. PROZACHI subcontracted road repair and other services to the new organization. Local village organizations began to take more initiatives, proposing infrastructure projects and participating in school co-management schemes. A peasant leader ran successfully for a position as member of a municipal council. The regional peasant organization asked PROZACHI for the loan of its heavy road-making machinery. PROZACHI initiated a new phase (PROZACHI-2) in which local, municipal and regional peasant organizations participate in a co-management process aimed at achieving the autonomous institutional sustainability of the organizations and enterprises created between 1991 and 1998.

Thus, the rapid changes in actors' strategies in the transition phase and the resulting systemic modification are among the possible reasons for the relative rapidity with which peasant social capital was constructed in Chiquimula. Another important factor was the existence of methodologies for building community social capital which made it possible to achieve goals set intentionally. PROZACHI and FIS staff were thus able to prepare the neophyte social actors in the hillside villages in time for them to take advantage of the opportunities and challenges that emerged in the mid-1990s in Chiquimula: this standard methodology gave more rapid results than spontaneous changes or reliance on the side-effects of other kinds of public action (Putnam, 1993b).

IV

Conclusions

1. Is it possible to construct social capital?

Does the experience of PROZACHI and FIS show that it is possible to construct social capital where "acivic" norms and practices predominate? The answer depends in part on whether the achievements described above constitute social capital according to the strict definition given at the beginning of this article: i.e., institutions based on trust and cooperation that constitute economic public goods or that contribute to the civic public good. In the case of Chiquimula –although the question of economic benefit calls for further research-[6] he answer in the second case is "yes" (box 1).

First, the purposeful construction of peasant social capital achieved a (relatively) limited objective: the empowerment of hillside villagers as part of the

[6] Nevertheless, preliminary evidence indicates that access to inputs and markets, as well as productivity, improved for most peasant families. Some 200 new associative micro-enterprises were set up within the framework of PROZACHI, presumably with attendant savings of transaction costs, while market imperfections were reduced both in smallholder coffee wholesaling and in the local rural day-labour market.

BOX 1

SOME HYPOTHESES ABOUT BUILDING SOCIAL CAPITAL

– Reciprocity norms and practices exist in small local groups everywhere. Cooperation and accountable leadership are a part of most modern human cultures as a result of multilevel selection; iteration of practices previously found to be satisfactory usually leads to cooperation.
– Cultures contain changing repertoires with contradictory content. Systemic change can come from culture or from social structure. Removal or reduction of repression allows social capital to re-emerge; complex systems do not tend toward equilibrium but change constantly through co-evolution of the strategies of different actors.
– Changes in national elites produce "windows of opportunity" for the emergence of local social capital. Alliances with reformist sectors in government open the way to social capital building.
– Trust, cooperation, shared identity and reciprocity created in the community can be replicated among leaders in order to "scale up" social capital from small communities to the regional level.
– Methodologies and techniques now exist that make possible the construction of social capital intentionally, rather than as a side-product of other activities or as a spontaneous phenomenon.

effort to achieve a sustainable reduction of poverty. Second, this empowerment involved the constitution of a new social actor in the area, incorporating into civic affairs a social sector previously excluded from public decision-making, which in itself represents a strengthening of local and regional democracy in Guatemala. Third, the consolidation of peasant territorial organizations led to a rapid transition from a repressive, authoritarian structure to a semi-clientelistic system in flux, which constitutes a step forward towards the establishment of a strong regional civil society and opens the way for further advances in this direction.

The basic intention of this study has been to show how and why, in one empirical case, the theoretical proposition that building social capital from scratch is always a slow, nearly impossible task did not hold good. Analysis of this experience also suggests some possible revisions to social capital theory and some conclusions on policies and measures in the field of rural community empowerment. The suggested measures for promoting community social capital are summarized in box 2.[7]

[7] A number of the suggestions set forth in box 2 were incorporated in the design of "PROZACHI-2", a new project (1998-2002) to consolidate and ensure the institutional sustainability of peasant self-management in the area, which is being supported by the Government of the Netherlands.

2. Final remarks

In the final analysis, the stereotype view of peasant culture in Chiquimula does contain an element of truth. It is indeed a relatively individualistic culture marked by dependence and domination, yet paradoxically at the same time it is a culture with a broad and dynamic repertoire of varied norms, including some which can serve as the symbolic basis for supportive and reciprocal practices. Chiquimula seemed to lack social capital institutions, but only until the institutional practices of the past were rescued and contexts and opportunities favourable for the development of new group strategies arose.

Path dependence proved to be less of an obstacle to peasant social capital building than the cultural obstacle represented by authoritarian clientelism, since it quickly gave way to the changes brought about in the political structure by the presence of new social actors in Chiquimula and the peace accords.

Although there was an apparent absence of social capital in the hillside villages, in reality there were important precursors of cooperation which were utilized through the initial restriction of PROZACHI's activities to the local descent group level, with subsequent extension to the community, municipal and regional levels. An exercise of "social capital archaeology" revealed memories of the past successes of a previous generation.

BOX 2

MEASURES FOR BUILDING RURAL COMMUNITY SOCIAL CAPITAL

– Search for submerged norms and practices of trust, reciprocity and cooperation in local descent groups in peasant cultures apparently dominated by individualism and "familism".
– Analyse and take advantage of favourable conditions for the resurgence of social capital created by the weakening of authoritarian clientelism.
– Carry out an "archaeological dig" for social capital in order to identify previous social capital development experiences that have been repressed or discouraged, but that are preserved in the collective oral historical memory.
– Initiate social skill building in local descent groups consisting of no more than 10-15 households united by kinship, residence and practice of reciprocity. Make sure that most such groups, not just dominant factions, are represented in community-wide exercises to develop social capital.
– Provide repeated opportunities at the community level for the creation of ties of familiarity and cooperation.
– Provide "cushioning" from regional authoritarian clientelism (both political and economic) for embryonic peasant associations while the social skills of their leaders are honed and conflicts due to factionalism in the associations are overcome.
– Be alert for minor shocks to systems of authoritarian clientelism that can weaken negative path dependence and open windows of opportunity for the resurgence of peasant social capital.
– Develop rapid response capacity in projects and programmes to counteract moves by clientelistic actors in transition phases and foment strategic negotiating capabilities among peasant leaders.
– Give priority to promoting a sense of mission among project personnel in favour of the development of autonomous social capital.
– Promote open discussion of interpersonal networks that cross the boundaries between the government and civil society. Facilitate access of excluded communities to connections that provide the information and services already enjoyed by more integrated strata.
– Take steps to ensure that civic social capital in poor communities offers short-term material benefits as well as gains in terms of political empowerment.

The emergent peasant social actors, with the support of outside institutional allies, took advantage of the opportunities created by the changes that took place in the national elites, participated in the rapid co-evolution of the strategies of various local social actors, and helped to lay the foundations for a new semi-clientelistic structure in the region which was more favourable to the development of democratic and participatory civil society.

The application of the existing organizational management training methods[8] and the buffer role played by the development projects made possible the purposeful construction of social capital, in contrast with Putnam's claim that this is always a side-effect of public actions aimed at other objectives. It was the above-mentioned combination of factors which made possible the construction of peasant community social capital in Chiquimula. Regardless of whether or not this community social capital succeeds in bringing the expected benefits (savings on transaction costs, creation of public goods and the establishment of a strong civil society), it is beyond question that it was possible to create this capital in the space of only a few years.

[8] With regard to organizational management training methods, see World Bank (1997), Cruz (1996), IAF (1995), RIMISP (1996 and 1998), Rivera (1996), Toledo (1994) and Torres (1998).

The present study suggests that, out of the six factors identified as forming bases for social capital building in Chiquimula, three were of key importance: the existence of forms of reciprocity in peasant culture; the emergence of a climate of changes favourable to the formation of peasant social actors, and the internalization of community self-management capabilities.

Everything seems to indicate that there is no such thing as intrinsically "acivic" rural communities which totally lack the potential for social capital building, but such potential may be buried in past memories and in parts of the cultural repertoire which are currently in disuse. It should however be acknowledged that the particular forms of reciprocity in a community may be different from those existing in Chiquimula, which are based on kinship in relatively stable local descent groups. Even in such cases, however, there may be other forms of reciprocity, associated with other forms of kinship, which can be used as cultural and social bricks for building community social capital institutions (box 2).

Furthermore, although the changes in the political context in Chiquimula were particularly rapid and dramatic, there have been cases in other countries where seemingly minor changes have sparked off unexpectedly dynamic processes of strengthening of embryonic social actors. Any change in the configuration of the elites and the political ethos can serve as a "window of opportunity" permitting the construction of social capital.

Finally, in some cases self-management and political participation capabilities have been developed by the communities themselves, without much outside help. However, the dual function played by outside agents –as providers of the methods available in this field and as protective shields during the formation of new social actors on the local scene– is essential to allow peasant social capital to develop quickly and securely.

(Original: English)

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Technological maturity *in the world* petrochemical industry

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This article presents a methodological and empirical approach to the measurement of technological maturity in a process industry, such as petrochemicals, at the international level. The main conclusion is that the degree of technological maturity determined in the exercise may vary, depending on the indicator used for measuring the life cycle of the industry. This finding is very important because the conventional indicators of market dynamism or production do not always reflect the degree of technological maturity of an industry or sector. Since technology is a decisive factor in the degree of maturity, other variables also need to be incorporated, especially regarding the technological dimension. The methodology of the present study includes a typology for each result with respect to competitiveness, for each form of maturity, with emphasis on the role and characteristics of technology as a source of long-term competitiveness (sections II and III), using market, production and technology variables located around the life cycle of products and the value chain. In the analysis of the evolution of the petrochemical industry and its production and technological features, special emphasis is placed on two types of production processes (continuous and batch-type processes) and two types of business: commodities, and special petrochemical products (sections IV and V). After presenting the results and types of technological maturity for each variable, the correlation of the variables used is assessed (sections VI and VII). Finally, some conclusions are presented and the lines of research suggested by this exercise are outlined (section VIII).

I

Introduction

... technological change is extremely uneven over time; in each industry and economic sector and, geographically, in each region and country. The spread of clusters of broadly adaptable technological innovations is capable of giving a substantial boost to the growth of the economic system, ... however, these new "technology systems" eventually mature and tend to produce different effects on investment and employment.

Christopher Freeman, John Clark and Luc Soete

Competitive advantages are linked to the degree of technological maturity of products and processes. The latter, in turn, is connected with the know-how applied to the creation or improvement of new products, processes or production techniques, including machinery, organization and production process design. Consequently, specialization of marketing and production on mature or innovative products is a reflection of the effort made by the agents to innovate and, to a large extent, to survive or maintain their position in the international market.[1]

This article seeks to measure the technological maturity of the petrochemical industry (PCI).[2] The aim is to show that it is necessary to include technological maturity variables in order to determine more precisely the form of specialization in markets and products and the competitiveness of an industry or sector. The measurement includes both qualitative and quantitative indicators, in view of the complexity of assessing the technological maturity of an industry or economic sector.

Because of the technological changes and innovations which have taken place between its creation earlier in the twentieth century and recent years, the PCI has reached a level of technological development which justifies its description as a technologically mature industry.

However, this innovation and evolution has not been uniform or identical at the level of the different products or branches of the industry. Thus, although the PCI may be described in general as a technologically mature industry, there are products or branches in it which may be singled out as innovative.

A more detailed analysis will allow this generalization to be made more specific and contribute to theoretical analysis and the definition and application of more effective public policies.

□ The author wishes to express his thanks for the comments and suggestions made on various previous versions discussed at research seminars in CIDE, especially those of Kurt Unger and of an anonymous ECLAC referee.

[1] For more details of the relation between technological development and competitiveness see, among others, Nelson and Winter (1982), Freeman, Clark and Soete (1982), Fajnzylber (1991), ECLAC (1993), Arjona and Unger (1996) and Jasso (1997).

[2] Technological maturity is described later in this article. In the petrochemical industry, production differentiation covers a wide variety of products ranging from specialized petrochemicals to commodities.

II

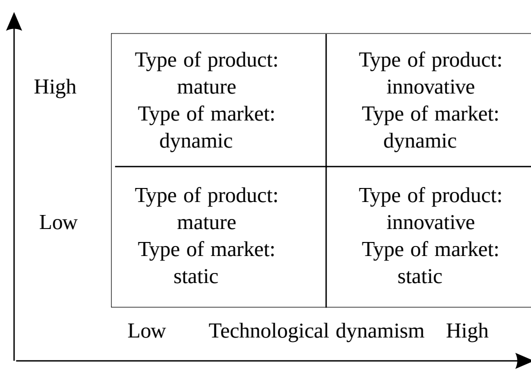
Technological maturity as a result of market, production and/or technological factors

In this article it is suggested that technological maturity should be linked to the market results and the production and technological position of each product in a given industry. The production and technological position implies a technological level which may be termed "innovative" when there is a substantial technological effort, or "mature" when this is not the case.

The position of each branch of the PCI may display an upward trend or be the same as its initial situation, in dynamic or static market segments;[3] this determines its status as mature or innovative, which is reflected in the efforts made and results obtained in terms of the market, production and technology. In the approach set forth in the present article, the measurement of technological maturity is linked with the level of technological dynamism, as reflected in the type of product –innovative or mature– and the type of market: dynamic or static (figure 1).

FIGURE 1

Technological maturity as a function of market dynamism and technological dynamism



Source: Prepared by the author.

The technological innovation process has the following features:

i) it is dynamic: that is to say, it changes with time and with the strategies and circumstances of the actors involved. This dynamism and change means that firms are guided by their perception that there are unexploited opportunities;

ii) it is differentiated, which means that its results and performance are specific to the particular characteristics and conditions of each industry, region, company or country;

iii) it is cumulative, reflecting the possibility of incorporating experience and learning to build up and create knowledge;

iv) it is capable of being appropriated, so that technological results can be protected and hence sold or kept by the innovator, who thus obtains benefits from his innovation, and

v) the circumstances and efforts of the participating actors and the networks that exist between them mean that the opportunities are different for each industry, institution, country or region.

[3] Dynamic products are those which have an above-average growth rate compared with the rest of the products and also have a high technological content.

III

Analysis of technological maturity

The technological maturity of the PCI will be measured by the share of each branch of the industry in the world market; the dynamism of the market, of production, and of patent applications; the branch's location in the production chain, and its technological characteristics.

This proposed methodology analyses the technological maturity process and determines whether, in the light of different variables for measuring such maturity, the position by products is in line with each variable.

The dependent variable is technological maturity, while the independent variables correspond to the market share, associated with the dynamism of the market, the dynamism of production, the dynamism of patent applications, the location in the production chain, and the taxonomy of the technology (figure 2).

Identification of the stage at which each product or process is located in the technological life cycle and its position in the market is an important criterion for determining the degree of maturity of products or processes (figure 3). These variables are located around the life cycle of PCI branches in an "S" or Engel curve. Analysis of the cycle is important in order to identify the type of commercial and technological specialization and the stages of innovation, maturity and decline. The products which offer the greatest growth potential (generally innovative products) are those which are at the start of the curve. The opportunities associated with each type of technology are also located in this stage of the cycle.

As products advance in their life cycle their growth trend is slower, because of the entry of new imitative competitors who tend to saturate the technological opportunities: this causes the growing maturity of the products in question, which are more and more standardized and become simple commodities (figure 3).

The degree of technological maturity is thus related with the life cycle of the product. In the initial stages of development and application of technologies, the innovations are predominantly in products and correspond above all to specialties (figure 3), but in the following stages –saturation and decline– they are mainly in processes, especially for the production of commodities.

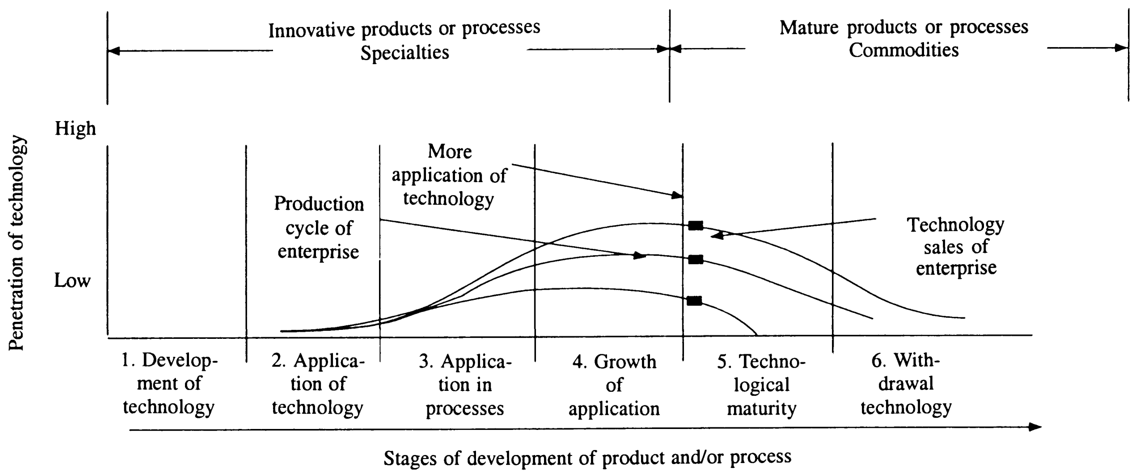
FIGURE 2

Categories and variables used for measuring the technological maturity of products or branches

Variables used	Categories	Type of technological maturity
"y" axis:		
Market share in relation with a, b, c, d and e	High or low	Comparative, market
"x" axis:		
a) Market dynamism	Dynamic or static	Market
b) Production dynamism	Mature or innovative	Product
c) Rate of patent applications	High or low	Patent
d) Production chain	Basic (commodities) or final (specialties)	Production chain
e) Technological taxonomy	Mature: supplier-dominated, with economies of scale Innovative: specialized science-based suppliers	Evolutionary

FIGURE 3

Innovation and maturity: the technological life cycle



IV

The petrochemical industry as a subject of analysis

1. The importance and definition of the petrochemical industry: its products and the production chain

It is important to study the degree of maturity of the PCI, because this industry has contributed to the birth and evolution of some of the industries that form the present techno-economic paradigm, such as those of new materials, biotechnology, microelectronics, telecommunications and genetic engineering.[4]

The PCI is defined as a set of activities consisting of 18 branches based on three-digit groups of the Standard International Trade Classification (SITC).[5]

This definition takes the PCI in a broad sense at the production level and includes its international performance (table 1). The selected set of activities includes petrochemicals which are separated out directly from petroleum in the form of products, without undergoing any changes in their chemical composition, and also other petrochemicals from intermediate stages or steps in their synthesis, before being turned into final products.

In other words, it covers the petrochemical chain from the most basic petroleum products (naphthas, aromatics, olefins and natural gas) up to special petrochemical products (table 1 and figure 4).

The term "intermediate petrochemical product" has been coined to denote chemical compositions at stages intermediate between one or more raw materials and the final marketed products[6] (figure 4).

[4] A techno-economic paradigm is a model and pattern of solutions for given technological problems, based on a selection of principles derived from the natural sciences and applied technology (Dosi, 1982).

[5] The 18 branches in question are listed in table 1 and some of them are reflected in the petrochemical chain shown in figure 4.

[6] Although some petrochemical products may be considered as chemicals, in this study we will refer indistinctly to both concepts when talking about organic chemistry.

TABLE 1
Branches of the international petrochemical industry

	Branches (SITC groups)	Name of branch
1	233	Latex, rubber, SBR, oil derivatives, etc.
2	266	Synthetic fibres, nylon, polyester, polyamides
3	334	Petroleum products
4	511	Ethylene, butylene, propylene, butadiene, benzene, xylene, toluene, styrene, cyclohexane, ethylbenzene
5	512	Alcohols, phenols and their derivatives
6	513	Carboxylic acids, anhydrides, halides
7	514	Acrylonitrile, amines, anilines
8	516	Acetaldehyde, acetone, formaldehyde, ethylene oxide, propylene oxide
9	522	Ammonia, carbon black, nitric acid, aluminium hydroxide, etc.
10	533	Pigments, paints, varnishes, etc.
11	551	Essential oils and perfume materials
12	562	Urea, ammonium sulphate, phosphates, etc.
13	572	Explosives and pyrotechnic products
14	582	PET, polyamides, polycarbonates and other resins
15	583	Polyethylene, polypropylene (PP), polyvinyl chloride (PVC), ABS-SAN, etc.
16	584	Cellulose acetate, esters, ethers, etc.
17	591	Insecticides, fungicides, disinfectants, herbicides
18	598	Plasticizers, oil additives, anti-knock preparations, etc.

Source: Prepared by the author on the basis of the Standard International Trade Classification (SITC).

This definition is useful for securing compatibility between different statistical sources and series, particularly at the levels of aggregation used by the various international classifications of trade, production and patents.[7]

2. Evolution of the petrochemical industry

At the world level, the PCI has been one of the fastest-growing industries, with high profit rates.[8] Innovatory trends in the PCI were initially observed in the innovation activities of the pioneering companies in the 1950s and 1960s, which was termed a period of "technology push". The typical innovation model was based on fundamental sciences, giving rise to new petrochemical product and process designs (figure 5).

As a result of this rapid expansion of the PCI, petrochemical companies –especially the transnationals– began to specialize in product lines in which they had some kind of market, production or technological advantage.

In their process of internationalization, these companies set up subsidiaries in oil-producing countries in order to guarantee a supply of petroleum or basic petroleum products and to serve the local market, and they reproduced the production and trading model of the parent firm in them. This internationalization strategy did not initially include major research and development activities.

In the decades in question the oil-producing companies increased their world market shares in operations with greater forward linkages in the petrochemical chain, manufacturing basic and intermediate petrochemical products and some synthetic plastics. At the same time, the chemical companies specialized in the final stages of the chain and showed a tendency to backward integration to include the manufacture of intermediate products, but without giving up the production of final goods.

This led to a process of restructuring of the PCI, in which the main petrochemical companies had built up sufficient technological capacity to occupy the position of leaders, creating a technological tradition in some products or product lines throughout the technological path.[9] This specialization and growing accumulation of production and technological capabilities has been one of the main barriers to the entry of possible new competitors or imitators.[10]

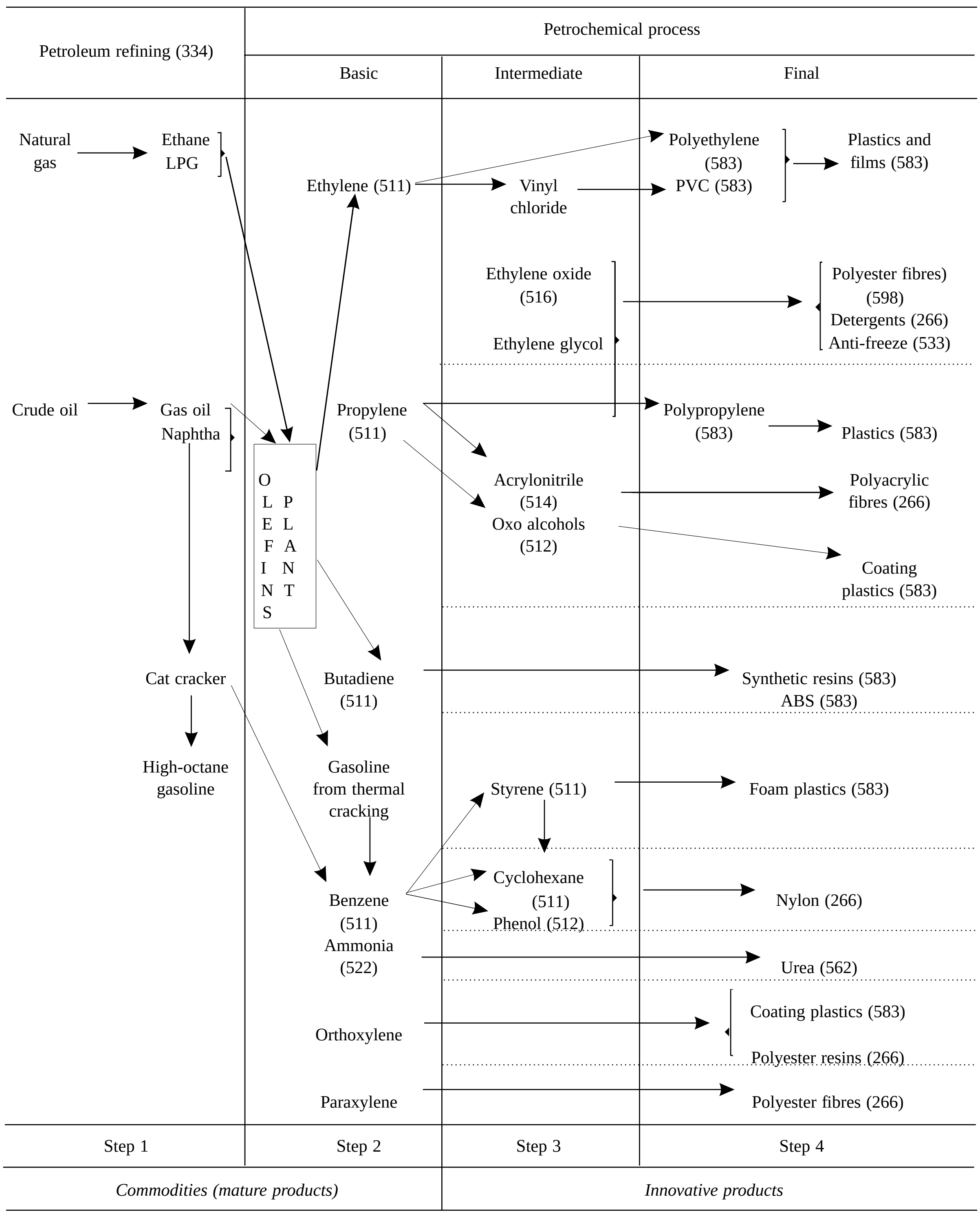
This form of competition gave rise to an arranged and oligopolistic market by the late 1960s and the 1970s. At the end of the 1970s, some 90% of world petrochemical production came from the United States, the Western European countries and Japan, which also made growing investments in the PCI of other countries.

[7] This includes compatibility of the three-digit SITC trade classifications, with United Nations (1993 and 1994) data on world production, and the classification of the United States Patent Office for patents registered in that country.
[8] Its most flourishing period was from the 1950s to the 1970s.

[9] With regard to technological tradition, see Achilladelis, Schwarzkopf and Cines (1990).
[10] Copying products or processes through reverse engineering or the consultation of patents is more complicated in the PCI than in other industries because its products have very precise physical and chemical characteristics in which the production process is of decisive importance for progressing from the prototype level to full-scale industrial volumes of production.

FIGURE 4

The petrochemical chain: products and branches [a]

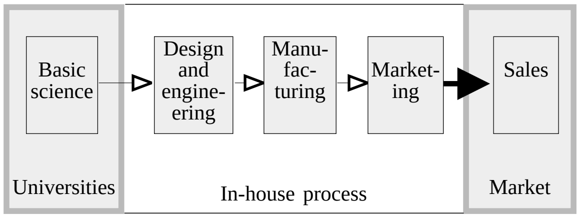


Source: Prepared by the author.

[a] The numbers in brackets correspond to some of the selected branches whose products are listed in table 1.

FIGURE 5

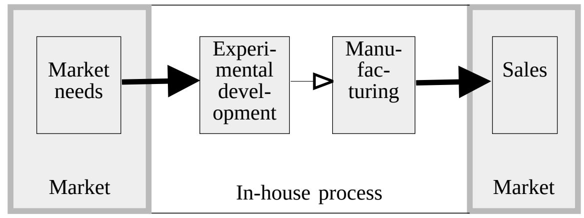
Supply push (first generation)



Source: Prepared by the author.

FIGURE 6

Demand push (second generation)



Source: Prepared by the author.

In the early 1980s, demand began to play a more important role as a force for innovation, and companies tended to make changes in their products and processes in response to market needs (figure 6).

From the mid-1970s to the 1980s, the entry of new competitors gave rise to a supplementary innovation model, midway between technology and demand pushes, which is now characteristic of innovation activities in the PCI.[11]

V

Production and technological features of the petrochemical industry

Ever since it arose early in the twentieth century, the PCI has been marked by the technological change[12] associated with scientific and technical processes in the chemical industry. The system of continuous production predominates, as do high capital-product and capital-labour ratios and marked effects of scale (Chudnovsky, López and Porta, 1994).

These features give rise to supply patterns which are highly concentrated in the producer countries: a phenomenon which is particularly marked in the case of certain developing countries and companies.

1. Continuous and batch-type production processes (thermal cracking and catalytic cracking)

The most important change in the PCI has been the transition from batch or non-continuous production processes to continuous processes. These latter processes have made it possible to apply economies of scale in the construction of the plants and in labour costs, to avoid heat losses, to facilitate the monitoring and control of chemical reactions, to reduce considerably the unit production costs of the majority of the most important chemical products, to raise quality, and to achieve greater uniformity of the products.

The new continuous production pattern became known for the first time in the dyestuffs industry. Although the first synthetic dyestuffs and innovations in this field were discovered by English inventor/entrepreneurs, by the end of the nineteenth century the lead in this field had undoubtedly been taken over by German industry (Freeman, 1974).

Thermal and catalytic cracking[13] were part of the changes made in the oil refining process. The relations between IG Farben and Standard Oil in the 1920s and 1930s marked the culmination of a process of evolutionary development which had begun in 1900-1913 with the process of cracking the heavy components of petroleum to produce gasoline.

[11] For more details of the innovation process in the industry, see Rothwell (1994), and with regard to innovation in the chemical and/or petrochemical industry see Walsh (1984), Chapman (1991), Achilladelis, Schwarzkopf and Cines (1990), Bower (1985), Freeman (1974), Gutiérrez (1988), Unger, Saldaña, Jasso and Durand (1994) and Chudnovsky and Porta (1997).

[12] Technological change is the process of changes in a product, process or production technique which involves the introduction of new aspects or the improvement of existing ones.

[13] In the 1920s it quickly became clear that any subsequent progress in the cracking process would probably be based on catalytic techniques (Freeman, 1974).

FIGURE 7

Characteristics of commodities and specialties, and differences between them

	Commodities (mature products)	Specialties (innovative products)
Type of process	Continuous-flow	Small batches
Process characteristics	Stable and controlled	New products
Marketing strategies	Standard	Differentiation
Type of competition	Prices	Technology/new products
Source of profitability	Scale of production	Low volume, high prices
Type of knowledge	Widely known	Specific
Age of equipment	Latest generation	Older generations
Knowledge base	Basic processes	Chemical engineering

Source: Prepared by the author.

The combined effect of the change to continuous processes, the increasingly large scale of operation, the use of catalytic processes, the complexity of plant design and the use of petrochemical products as basic materials gave the great chemical and petrochemical companies a dominant position in the development of new processes from the First World War onward (Freeman, 1974).

2. Commodities and specialty products as differentiated areas of business

The production and technological features described above have resulted in the PCI having two strongly differentiated areas of business (figure 7): i) commodities, with generally stable, controlled and optimized continuous-flow production processes and price-based marketing strategies, and ii) specialty products, with non-continuous or small batch processes and marketing strategies aimed at the launching of three or four new products each year.

These differences mean that the know-how associated with each of these areas of business is not complementary with the other. Non-continuous processes require specialized know-how on chemical engineering, whereas continuous processes call for know-how on basic processes, last-generation equipment, and constant efforts to optimize the processes. Thus, as the know-how required in the two fields is different, specialization in commodities does not necessarily lead to the production of specialties. In other words, there is not much room for shared know-how and savings through synergies (figure 7).

This limitation is important for understanding the weak situation of many Latin American countries, which, in general, have tended to concentrate on the first of these fields. However, there are small locally owned companies in Argentina, Mexico and Brazil which manufacture products with a higher content of innovation and research (including pharmaceutical chemicals, plasticizers and pesticides). The results of each technological opportunity are intimately linked with commercial, production and technological specialization (figure 2).

It may be concluded from this analysis that the different patterns of specialization will generally have different possibilities of technical progress and long-term growth and that it is advantageous for a country to be able to compete successfully in an industry, branch or product whose markets offer good prospects of development and involve key technologies (Arjona, 1995; Amable, 1993): i.e., those of innovative products.

VI

The initial approach: international market shares

This first indicator –the PCI's share of the international market– is combined with the indicators proposed here for measuring the technological maturity of the industry.

The initial analysis of the technological maturity of the PCI is based on the variables proposed for the indicators of revealed comparative advantages, through the indicator of the PCI's share of the international market, represented here by the imports of the member countries of the Organization for Economic Cooperation and Development (OECD).

In other words, the PCI's share is measured in relation to the OECD's imports of petrochemicals and the total imports of the OECD; likewise, the share of each branch of the petrochemical industry is measured in terms of its share in the total world market (all branches) and the world petrochemical market (only the petrochemical branches).[14]

The indicator used to measure the PCI's share in the world market is as follows:

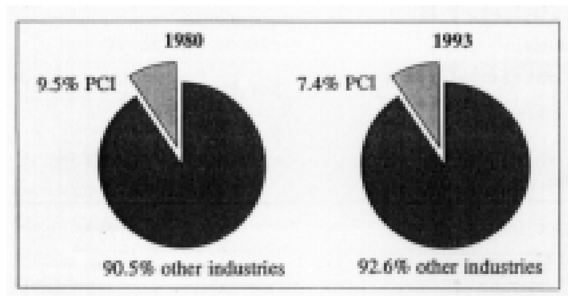
Share of PCI = Mi/Mt, where Mt = total OECD imports and Mi = OECD imports of petrochemical products.

Between 1980 and 1995, international trade in petrochemical products grew at an average rate of 7% per year (i.e., 60% faster than world production), while its share in total world imports was 9.5% in 1980 and 7.4% in 1993 (figure 8).

The growth rate of the share of world imports accounted for by the PCI as a whole went down by almost 23% over the period in question, declining from 0.5% in 1980 to 0.4% in 1993. This clearly illustrates the relative maturity of the PCI as a whole on the market side (table 2).

FIGURE 8

Share of petrochemical industry in world imports,[a] 1980 and 1993

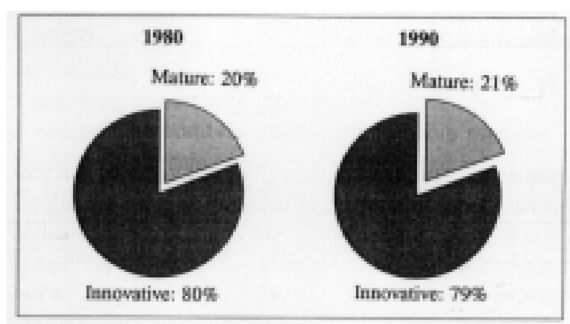


Source: Prepared by the author.

[a] As represented by the imports of the OECD countries.

FIGURE 9

Shares of mature and innovative branches of the petrochemical industry, 1980 and 1990



Source: Prepared by the author.

This increasing maturity also reflects increasing maturity in terms of the branches of the PCI: thus, the mature branches increased from 20% of the whole in 1980 to 21% in 1993 (figure 9).

There is a high degree of concentration of production, as just a few branches account for a high proportion of total production. Thus, the

[14] The data used are taken from the Competitive Advantage of Nations (CAN) model developed by the Economic Commission for Latin America and the Caribbean (ECLAC, 1994).

TABLE 2

Competitiveness of the world petrochemical industry, 1980-1993 [a]

		1980		1993	
		World market	PCI (%)	World market	PCI (%)
World petrochemical industry:					
Average		4.77	50.00	3.69	50.00
Total		9.54	100.0	7.38	100.00
Branches[b] with the largest shares (innovative branches)					
Average		0.95	9.98	0.73	9.86
Total		7.61	79.80	5.82	78.87
1	334	4.64	48.69	1.95	26.41
2	583	0.94	9.82	1.18	15.98
3	598	0.48	5.07	0.66	8.94
4	514	0.35	3.64	0.62	8.45
5	582	0.40	4.24	0.48	6.49
6	533	0.20	2.09	0.32	4.32
7	513	0.24	2.53	0.31	4.16
8	522	0.36	3.73	0.30	4.12
Branches[b] with smaller shares (mature branches)					
Average		0.19	2.02	0.16	2.11
Total		1.93	20.20	1.56	21.13
9	511	0.56	5.82	0.27	3.65
10	562	0.34	3.58	0.25	3.39
11	516	0.17	1.76	0.24	3.29
12	512	0.24	2.48	0.22	3.01
13	591	0.16	1.69	0.17	2.31
14	233	0.16	1.64	0.12	1.63
15	551	0.09	0.92	0.11	1.51
16	266	0.12	1.22	0.09	1.18
17	584	0.08	0.83	0.06	0.75
18	572	0.02	0.24	0.03	0.40

Source: Prepared by the author on the basis of ECLAC (1994).
[a] The branches are ranked according to their percentage share of world trade in 1993.
[b] Based on the Standard International Trade Classification (SITC).

three main branches accounted for 64% of the industry's share in the world petrochemical market. These branches are: i) petroleum products, ii) resins of polyethylene, polypropylene, PVC and ABS-SAN, and iii) plasticizers, oil additives and anti-detonants.

By 1993, however, this concentration tended to go down, largely because of the smaller share of the most mature basic goods –i.e., commodities, and especially petroleum products– in contrast with the increase in the share of final goods and petrochemical specialties (table 2).

VII

Results and types of technological maturity: the market and some variables

In this section, technological maturity is analysed with the incorporation of the market share variable (y axis) and five other variables (x axis), as shown earlier in figure 2.

1. Market share and market dynamism: maturity of the market

We will now analyse the dynamism of the international petrochemical market, which is different for innovative or dynamic products as against mature or non-dynamic goods: i.e., for those which grow more than the average for the total imports of the OECD between 1980 and 1993 on the international market as against those which grew less than the average.

This definition, which is based on the share of the PCI market in 1993, will represent our first identification of the maturity of the market, in which the dynamic products are the innovative ones and the non-dynamic products are the mature ones.

For the PCI as a whole, we note that the innovative branches are in the majority (10 out of 18), but the net result is negative (-23%) because the mean negative growth of the mature branches (-50%) was greater than the mean positive growth of the innovative branches (+35%) (table 3).

Another noteworthy feature is that, as we shall see below, almost all the innovative branches coincide with those that have a greater content of technology. In contrast, in the mature branches the technological content is variable, so that they include branches with high and low contents of technology.[15]

The mature branches were fewer in number (8 out of 18) and had a smaller share of the petrochemical market (44%) in 1993, although they had had the largest share in 1980 (68%).

The large share of petroleum products (group 334) is noteworthy (49% in 1980 and 26% in 1993), but this was the branch that decreased most (58%) (table 3).

The weight of the innovative branches is increasingly great. Between 1980 and 1993 their share increased by 35%, because this category contains the most dynamic branches on the market, located further ahead in the petrochemical chain. Particularly rapid growth was registered by groups 514 –acrylonitrile, amides and anilines, with 80%– and 533 –pigments, paints and varnishes, with 60% (table 3 and figure 10).

This behaviour indicates that some of the branches of the PCI are, as we already noted, in a state of maturity or are being replaced by other products. It may also be noted that the dynamism of some branches is due to the fact that they provide inputs for products which are very dynamic on the international market, such as plasticizers in the electronics and motor industries or new materials for the manufacture of information processing, robotics and telecommunications equipment.

Some branches –especially those producing petrochemical specialties– have been so dynamic that they have even been classed as part of the new techno-economic paradigm, in which the spearhead sectors have a wide dissemination and presence in other sectors.

Among the branches with high market shares (over 4%) there are six innovative branches (groups 583, 514, 582, 598, 533 and 513) but only two mature branches (petroleum products and group 522) (table 3).

The results show that most of the 18 branches studied are innovative (10 out of 18) while the remainder are mature (figure 11).

[15] This finding coincides with that obtained by Hochgraf (1983), cited in Gutiérrez (1988), for four of the five products on which he based his sample, namely, ethyl alcohol (group 512), benzene (group 511), synthetic fibres (group 266) and synthetic elastomers (group 233).

TABLE 3

Market dynamism in the world petrochemical industry, 1980-1993 [a]

Petrochemical branches[b]		Share of petrochemical branch 1980 World market	1980 PCI%	1993 World market	1993 PCI%	Growth rate 1980-1993 (%)
World petrochemical industry						
Average		4.77	50.00	3.69	50.00	-22.62
Total		9.54	100.0	7.38	100.0	
Dynamic (innovative) branches						
Average		0.31	3.20	0.41	5.59	35.01
Total		3.05	32.01	4.12	55.85	
1	514	0.35	3.64	0.62	8.45	79.72
2	533	0.20	2.09	0.32	4.32	59.68
3	516	0.17	1.76	0.24	3.29	44.73
4	598	0.48	5.07	0.66	8.94	36.33
5	572	0.02	0.24	0.03	0.40	27.73
6	513	0.24	2.53	0.31	4.16	27.24
7	551	0.09	0.92	0.11	1.51	27.06
8	583	0.94	9.82	1.18	15.98	25.89
9	582	0.40	4.24	0.48	6.49	18.59
10	591	0.16	1.69	0.17	2.31	5.43
Non-dynamic (mature) branches						
Average		0.81	8.50	0.41	5.52	-49.76
Total		6.49	67.99	3.21	44.15	
11	512	0.24	2.48	0.22	3.01	-5.96
12	522	0.36	3.73	0.30	4.12	-14.40
13	233	0.16	1.64	0.12	1.63	-23.14
14	266	0.12	1.22	0.09	1.18	-25.27
15	562	0.34	3.58	0.25	3.39	-26.78
16	584	0.08	0.83	0.06	0.75	-30.01
17	511	0.56	5.82	0.27	3.65	-51.51
18	334	4.64	48.69	1.95	26.41	-58.02

Source: Prepared by the author.

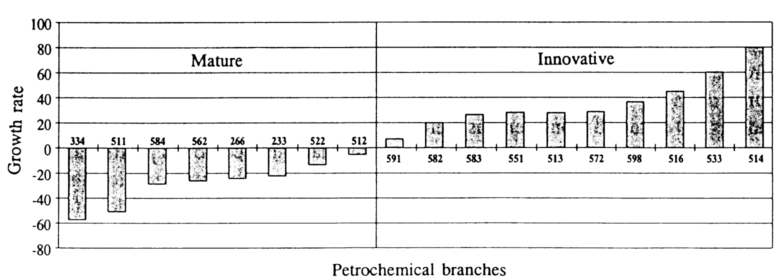
[a] The branches are ranked according to their percentage growth rates.

[b] Based on the Standard International Trade Classification (SITC).

FIGURE 10

Growth rates of market shares of some branches of the world petrochemical industry, 1980-1993

(Percentages)



Source: Prepared by the author on the basis of table 3.

FIGURE 11

Final results by type of technological maturity of PCI branches [a]

	1	2	3	4	5	6	7
PCI branches [b]	Market share (MS)	Market dynamism (MD)	MS + MD	Production	Patents	Production chain	Evolutionary
233	M	M	M	M	M	I	M
266	M	M	M	M	M	I	M
334	I	M	M	M	I	M	M
511	M	M	M	M	I	M	M
512	M	M	M	I	M	M	M
513	I	I	I	I	I	M	M
514	I	I	I	I	I	M	M
516	M	I	I	M	M	M	M
522	I	M	M	I	I	M	M
533	I	I	I	M	I	I	M
551	M	I	I	I	I	I	I
562	M	M	I	I	M	M	I
572	M	I	I	M	I	I	M
582	I	I	I	I	I	I	I
583	I	I	I	I	I	I	I
584	M	M	M	I	M	M	M
591	M	I	I	I	I	I	I
598	I	I	I	I	M	I	M

Source: Prepared by the author.
[a] M = mature; I = innovative.
[b] Based on the Standard International Trade Classification (SITC).

2. Market share and dynamism of production: maturity of production

Dynamism of production is based on the growth of the volume of world production (in metric tons) shown in the statistics of United Nations (1993 and 1994), harmonized with the SITC.

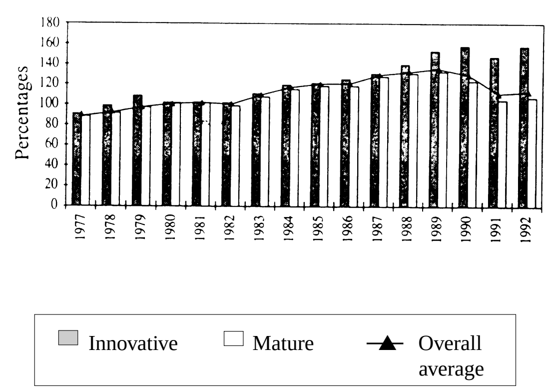
Maturity of production is defined by the growth of petrochemical products compared with the average for industry as a whole.

Innovative branches are those which had a positive mean growth rate between 1980 and 1992 compared with the average for all petrochemical branches; mature branches are those which had a negative growth rate compared with that average.

The behaviour of the PCI has varied from one branch to another. Generally speaking, the behaviour of world production (figure 12) displays well-defined analytical categories in terms of the petrochemical cycle.

FIGURE 12

Growth rates of volume of world petrochemical production, 1977-1992
(Metric tons and percentages)



Source: Prepared by the author on the basis of United Nations (1993 and 1994).

TABLE 4

Rate of patent applications in the world petrochemical industry, 1983-1994

(Percentages of number of patents registered in the United States)

Branches [a]		Products of branch	Growth rate (%)	Share (%)
World PCI				
Total			0.03	100.0
Average				5.56
Branches with a high rate of patent applications (innovative)				
Total			0.80	46.04
Average			0.08	4.60
1	582	Polyamides, PET	0.12	4.50
2	551	Perfumes and flavourings	0.10	0.29
3	533	Varnishes, pigments	0.09	4.01
4	513	Carboxylic acids	0.09	6.55
5	583	Polyethylene, PVC	0.08	6.14
6	514	Anilines, amides	0.08	3.94
7	334	Olefins	0.07	5.96
8	511	Ethylene, toluene, benzene	0.07	13.45
9	572	Explosives and pyrotechnic products	0.05	0.68
10	591	Insecticides, fungicides	0.04	0.52
Branches with a low rate of patent applications (mature)				
Total			-0.02	53.96
Average			–	6.75
11	512	Phenols, alcohols	0.02	16.32
12	584	Esters, ethers	0.02	14.70
13	266	Synthetic fibres, nylon	0.01	2.70
14	233	SBR, latex	0.01	3.27
15	598	Oil additives	0.01	2.74
16	522	Carbon black, nitric acid	–	2.78
17	516	Formaldehyde, acetaldehyde	-0.04	4.39
18	562	Urea, phosphates	-0.05	7.07

Source: Prepared by the author on the basis of data from the U.S. Patent Office.

[a] Based on the Standard International Trade Classification (SITC).

Noteworthy among the innovative branches are those manufacturing final products such as polypropylene, phenolic resins, acetates and polystyrene (groups 582, 583, 514, 598, 513, 522, 591, 584, 512 and 562).

Among the mature branches, there are many which produce basic goods such as benzene, butadiene, carbon black, ammonia, and some intermediate goods such as ethylene glycol, ethylene oxide and phenol (groups 334, 533, 266, 572, 511, 233 and 516) (figure 11).

In most of the branches the results with regard to maturity of production are similar to those for market maturity, except in the case of seven branches (groups 512, 516, 522, 533, 562, 572 and 584).

3. Market share and intensity of applications for patents: maturity in terms of applications for patents

Patents have been used as one of the technological indicators, since they reflect the results of inventiveness and changes in products and/or processes.[16]

[16] Among the indicators relating to intellectual property, one of the most accessible and useful in the case of the PCI is that regarding patents. Another potentially useful but not readily accessible indicator is that relating to "industrial secrets". With regard to the advantages and disadvantages of this indicator for measuring the process of innovation, see Griliches (1990), Dosi, Freeman, Nelson and others (1988) and Dosi, Pavitt and Soete (1990).

Patents are one of the means whereby entrepreneurs protect their inventions and innovations. This means of protection allows them to maximize their monopolistic gains from innovation by making it more difficult for potential competitors to copy or imitate them.

Patents capture and measure the first stages of a process which, through development, testing and engineering, leads from the invention itself to the complete innovation. Patents can extend over the whole product cycle, from those which protect the basic invention, through those relating to the product and process engineering, and finally a large number of patents to protect improvements and block action by competitors (Dosi, Pavitt and Soete, 1990).

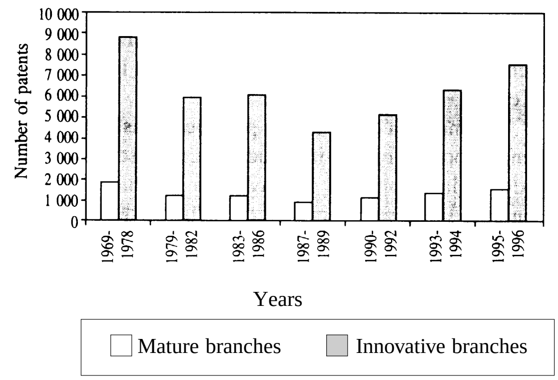
In this study, measuring the intensity of patent applications is effected by identifying the branches of the PCI in which most patents are taken out (table 4). Branches defined as innovative are those where there was positive growth in the rate of applications for patents between 1983 and 1994, while mature branches are those where growth in this rate was negative. This reflects a certain ageing of the products concerned, with prevalence of those where fewest patents are taken out: branches using technologies which have been covered for 20 years by the patents obtained. The period selected was from 1983 to 1994 in order to maintain compatibility with the periods used for studying the other variables[17] (table 4).

The results obtained between 1983 and 1994 show that the innovative branches as a whole registered a larger number of patents (four or five times more than the mature branches between 1969 and 1996). However, it has been noted that it is not necessarily the most dynamic branches in terms of patent applications which account for the largest share of patents (measured in relation to the number of patents registered in the United States), although in some cases there is indeed a strong correlation between the rate of applications for patents and market shares.

Thus, for example, some innovative branches (groups 551, 572 and 591) display considerable dynamism in terms of patent applications (rates of 0.10, 0.05 and 0.04% respectively) yet have low shares of the number of patents registered (0.29, 0.68 and 0.52% respectively). Conversely, some mature branches (groups 512, 584 and 562) account for a greater share of patents but display low levels of dynamism in this respect (0.02, 0.02 and -0.05% respectively).

FIGURE 13

Rate of patent applications of some PCI branches, 1969-1996



Source: Prepared by the author on the basis of data from the U.S. Patent Office.

This result confirms that many of the mature branches correspond to commodity producers and that although some of these branches have made changes or improvements which are reflected in patents, these are much fewer than in the innovative branches. This tendency also shows how much importance the companies have attached to intellectual protection through patents (figure 13).

The results obtained by combining patent dynamism with market share show that almost half of the PCI (8 out of 18 branches) is in mature branches (groups 598, 522, 512, 584, 266, 233, 516 and 562), while a little more than half (10 out of 18) corresponds to innovative branches (groups 582, 533, 513, 583, 514, 334, 551, 572, 511 and 591) (figure 11).

4. Market share and the production chain: maturity in the production chain

The analysis of technological maturity is further completed by determining the location of each branch in the production chain (figure 6) and in the life cycle of its products (figure 5), in order to identify the degree of maturity of the two typical lines of

[17] If we had selected a longer series this would have enabled us to determine the results in terms of maturity more precisely, since it would include innovations made before the period in question, many of which may have been the basis for subsequent developments, and it would also have made it possible to determine the radical or incremental nature of the innovations.

business of the PCI –commodities and specialties– referred to at the beginning of this article.

The petrochemical chain (figure 4) is divided in this case into two major stages. The first comprises steps 1 and 2, which involve the production of commodities and intermediate products and are marked by maturity. The second stage comprises steps 3 and 4, which correspond to final goods and petrochemical specialties such as resins, fibres and rubber inputs and are innovative products.

The further along the petrochemical chain, the greater will be the technological content. Consequently, the mature branches are those which produce commodities and are located in the first stage of the chain, while the innovative branches are those that produce petrochemical specialties and are located in the second stage.

The results show that, as we saw when looking at the previous types of maturity, most of the branches (10 out of 18) are innovative (groups 533, 582, 583, 598, 233, 266, 516, 551, 572 and 591), while the remaining eight are mature (groups 334, 513, 514, 522, 511, 512, 562 and 584). These results show that commodities or specialties may be in the innovative or mature stages, depending on the criteria used (figure 11).

5. Market share and technological taxonomy: maturity of evolution

The technological content as defined by the maturity of evolution shows the variety of forms of technological behaviour of the enterprises studied and is based on the taxonomy prepared by Pavitt (1984).

This taxonomy identifies the different levels of innovation of economic sectors and proposes four technological categories corresponding to different forms and intensities of innovation, namely: i) supplier-dominated forms; ii) "scale-intensive" forms; iii) those having a specialized supplier, and iv) science-based forms. The differences in each category vary according to the origin of the technology, the supplier-user relationship and the possibility of appropriating technological rents.

The composition of each branch with regard to these categories determines the innovative or maturity potential of each industry, taken as a whole.

In this taxonomy, the mature branches (groups 233, 266, 334, 511, 512, 513, 514, 516, 522, 533, 572, 562, 584 and 598) are those which correspond to the categories defined by Pavitt as being supplier-dominated or "scale-intensive" (figure 11).

The traditional branches, in many cases producing commodities, are to be found in this category. They are also branches which use widely available technology, make few investments in scientific and technological research, and have only limited infrastructure. There is a high possibility of imitation, so the level of appropriation is low. The means of appropriation used are brand names, product differentiation, industrial secrets and patents. These characteristics mean that there are few innovations, usually of an incremental nature, because there are few efforts or results in the field of innovation. Technological changes involve above all the machinery and equipment, or else large-scale production associated with the equipment.

The rest of the branches (groups 551, 582, 583 and 591) are the innovative ones and belong to the categories of specialized suppliers and science-based branches (figure 11).

These categories are marked on the one hand by being producers of specialized machinery, equipment and instruments and, on the other, by assimilating and applying scientific knowledge developed in the technology centres of the companies themselves or in institutions such as universities or research centres.

Innovation is mainly at the product level, and the type of technological change is primarily radical or major. The rents from the technology are generally high and are based on a very close interrelation with users. In research activities, the predominant areas are those of know-how, design, quality, patents, and industrial secrets. In both categories, the innovations range from incremental and widely disseminated developments to radical innovations, thus pointing to greater innovative activity than in the mature branches.

The results obtained in terms of maturity by combining market share with the technological taxonomy show that the performance of the PCI as a whole bears out the initial argument of this article, which emphasizes that maturity varies from one branch to another in the PCI.

The majority of the petrochemical branches (14 out of 18) have little innovative activity, as highlighted in Pavitt's taxonomy, so that the PCI as a whole is marked by relative maturity (figure 11), with most branches (14 out of 18) being mature and only the remaining four being innovative.

6. The petrochemical industry as a mature industry with some innovative branches: a summary

As a whole, the PCI is a mature industry, as reflected in its market, production and technological results. At the level of its individual branches, however, the situation in terms of maturity is not always the same, as it can vary depending on the indicator used (figure 11).

In 12 of the 18 branches studied, the variables used give complementary results in terms of maturity or technological innovation. In the remaining six branches, however, there are contradictions as regards whether they are mature or innovative. If we take the differentiation between commodities and specialties, we likewise see that there are both coincidences and contradictions with regard to the concept of maturity (figure 11).

If we take all the variables, 8 out of the 18 petrochemical branches (groups 233, 266, 334, 511, 512, 522, 562 and 584) prove to be preponderantly mature in the sense that the maturity indicator coincides in at least five variables.

The preponderantly innovative branches are in the minority (4 out of 18: groups 551, 582, 583 and 591). They have characteristics and rates typical of innovation and correspond to branches in which the innovation indicator coincided in five out of six of the variables used.

The remaining six branches out of the 18 (groups 513, 514, 516, 533, 572 and 598) may be defined as either mature or innovative, depending on the variable used.

These results show that the criteria usually applied to distinguish between mature and innovative branches do not necessarily coincide with those used by technical experts, academics or the specialized press. This also applies to the distinction between the commodity and specialty lines of business in the industry.

Finally, the direction of causality has been determined between each of these variables, in order to provide even stronger grounds for the conclusions reached. The basis for the analysis was the application of the coefficient of correlation by ranks (Spearman's index) to the quantitative variables, market share (MS), market dynamism (MD), production dynamism (PD) and rate of patent applications (PA).

Synthesis of the results in terms of market share and measurement of technological maturity shows a weak positive correlation between MS and MD (= 0.19), MS and PD (= 0.21) and MS and PA (= 0.18). These data show that although the coefficients of correlation are positive, they are different in the three cases and the case which best explains the causality is that which combines market share with production dynamism.

The index of correlation is as follows:[18]

$$r_K = 1 - \frac{6\sum d^2}{n(n^2-1)}$$

where d is the difference between pairs of corresponding ranks and n is the number of pairs.

However, it is also necessary to take into account the characteristics relating to purely technological aspects, as noted earlier for the variables relating to patents, the production chain and intensity of innovation.

VIII

Conclusions

The analysis of technological maturity must be seen as a complex and evolutionary process in which the technological dimension, in combination with the market, production and the production chain, may maintain or modify the degree of maturity.

The measurement of technological maturity varies according to the indicators used in it, and this may lead to differing results with regard to the definition of branches as mature or innovative. The criteria for defining maturity are neither clear nor

[18] The distribution in the sample is symmetrical around 0 and ranges from -1 to +1.

precise, and this highlights the importance of making them more uniform in order to be able to classify products as mature or innovative.

When only market variables or those typical of comparative advantages are taken into account for measuring maturity, differences and contradictions arise in the resulting degrees of maturity. The analysis should therefore include not only market share and production dynamism but also other variables (especially those of a technological nature) which help to explain the dynamics of the cycle.

Performance in terms of innovation in the PCI is specific to each of the branches making up the industry: that is to say, it is differentiated. The combination of the various criteria for analysing technological maturity has given different results for different branches, thus giving different types of maturity. Two types of branches have been identified in the petrochemical industry: innovative branches, which are those where technological activity is greatest but do not always obtain outstanding results in the market and are generally engaged in the production of petrochemical specialties, and mature branches, which register a lower level of technological activity, with variable market results, and are generally engaged in the production of commodities.

Combination of the different variables and indicators used (market share, share in production, rate of patent application activity, place in the production chain, and technological taxonomy) gave rise to types and states of maturity which coincided in many cases with the results for each variable analysed, with weak positive levels of correlation between the variables.

In the set of variables analysed it was found that the innovative branches, which are generally specialized, tend to have a greater presence on international markets. This result was observed in the branches located in the more advanced steps of the petrochemical chain, corresponding to goods with more technological content and greater added value. There can also be innovative branches which have poor market results, however. In this case, their market position can improve if there is a substantial demand push, or get worse if this does not exist or the other branches improve their technological situation. In other words, petrochemical specialties do not always have excellent market results, even though they generally have a favourable position in the international market.

The mature branches, for their part, which are generally engaged in the production of commodities, have intermediate market results: they may have an important presence in the market, generally in specific niches, or they can tend to be replaced by new branches. Generally speaking, they are towards the end of the production life cycle and at the beginning of the production chain, and their position in the international market is usually unfavourable.

The analysis of technological maturity can be useful for showing the form of insertion in the international economy of the leading countries and those that follow them. The leaders set the pace of international technological competitiveness, which is related in practice with the technological frontier and innovative products and processes. In contrast, the international insertion of the followers is usually in less innovative, mature, product lines and processes, generally associated with commodities.

The application of this methodology at the country or enterprise level can show how the different countries operate and their position in the economy. The division of the world market into innovative and mature branches is useful for understanding and justifying sectoral lines of competition, in terms of the market and technological results, which help to identify or strengthen the international competitiveness of a country or enterprise. It can also aid in the analysis of the respective macroeconomic configurations and hence serve as a guide in the application of forward-looking structural reforms, identifying the strengths, weaknesses and opportunities of the different types of international insertion, in mature or innovative branches.

This analysis should be complemented with an examination of the scenario represented by a system or policy of innovation at the regional and national level aimed at reducing the effects of international recessions or deterioration in the terms of trade on the mature branches, which are more seriously affected by these phenomena than the innovative branches.

In the future, maturity studies of this nature could help in the analysis of international trade specialization and the results of technological change in terms of competitiveness. The results regarding positioning would help to go more deeply into the causes and possibilities of improving or modifying the position occupied by a country or enterprise and its type of international insertion.

The foregoing suggests various lines of future research. One of these would be to apply the study of technological maturity to other economic branches.

Another would be to identify the results obtained by a country's industry at the international level and see whether they coincide with the performance of enterprises within that country.

It is important to make studies in greater depth at the enterprise level and find aspects which are not visible from the indicators and statistics at the country, industry or product level. In order to do this, the strategic performance of enterprises and their capacity for learning and developing technological skills should be analysed and then included in the examination of market and technological variables, in order to identify possible relations and common characteristics between the enterprises and institutions in question.

(Original: Spanish)

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Access to housing and *direct housing subsidies:* **some Latin American** *experiences*

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After a brief introduction, this article analyses in its second section the roles that the public and private sectors should play under a housing and housing finance policy in which the function of the State is to facilitate the development of the sector while occupying a subsidiary position with respect to private enterprise. It examines the role of direct housing subsidies within such a policy, as a means of creating effective demand for the supply of housing generated by the private sector on market terms, with special attention to the attributes of such subsidies, and it highlights the catalytic role that such a system can play in promoting saving. Section III summarizes the Latin American experience with respect to direct housing subsidy schemes, describes their main features, advantages and limitations, and details the reforms made or proposed, especially in the programmes with the longest history. Finally, section IV sets forth the main lessons to be learned from the Latin American experience, with special emphasis on the conditions and characteristics which have helped in the successful application of these schemes.

I

Introduction

In Latin America and the Caribbean, the quantitative housing deficit –defined as the difference between the number of households and the number of permanent dwellings– amounted in 1995 to 28 million units, while the qualitative deficit –defined as the number of permanent dwellings which are not satisfactory because they lack certain services– came to nearly 26 million of the existing dwellings (ECLAC, 1995). Since the region has some 118 million households, this means that one out of every four Latin American households does not have a dwelling, and if we add to this figure the number of housing units which require some type of rehabilitation, we see that almost half the households in the region are living in unsatisfactory conditions.

This statistical finding highlights not only the magnitude of the housing deficit, which affects all the countries of the region, but also the ineffectiveness of the housing and housing finance policies applied in the past. Furthermore, this heavy housing deficit is concentrated to a large extent in the lowest-income segment of the population, which, although it represents a significant potential demand, has no real possibilities of achieving a suitable housing solution, mainly because of their difficulty in gaining access to finance on appropriate terms due to their lack of sufficient purchasing power, their inability to provide satisfactory collateral for mortgage loans, and their impossibility of attesting to a stable income.

In order to improve the access of the lowest-income sectors to housing, it is necessary to make innovations in the finance policies and instruments in force in this field. This article explores ways of helping to give such sectors suitable purchasing power: that is, creating an effective demand for housing among them, and makes a conceptual and comparative analysis of the Latin American experience in the application of direct housing subsidies (hereafter "DHS") for the lowest-income sectors.

II

The economic rationale of direct housing subsidies

1. Housing policy and the roles of the public and private sectors [1]

The housing and housing finance policies applied in the past in Latin America were marked by predominant State intervention, with only very limited participation by the formal private sector. Under such policies, the State over-regulated the operation of the markets and agents involved –by establishing ceilings for the interest rates charged by housing finance systems, for example– and played a direct role in building and financing dwellings, usually by offering loans at subsidized interest rates or subsidizing the prices of the dwellings.

The results were thoroughly counter-productive, as is clearly reflected in the enormous housing deficits accumulated in the region. On the one hand, these housing construction and finance schemes did not meet the aspirations of private housing builders and financial intermediaries in terms of rates of profit. On the other hand, the active role played by the State as a builder of houses bureaucratically defined the characteristics and prices of the latter and the arrangements for allocating them, thus eliminating the functioning of the market mechanisms for the range of dwellings supposedly intended for the lowest-income sectors and thereby driving away private builders.

[1] For a more detailed analysis of these matters, see Gonzales Arrieta (1995).

Such policies also meant that the credit intended for the building and acquisition of dwellings was insufficient to cover the needs of the region (Zawadzki, 1993, p. 33). In addition, there were the unsuitable terms of access for people of low purchasing power. Together, these factors limited the size and stability of effective demand for housing and mortgage loans. As a result, private builders and financial intermediaries concentrated on serving the demand of the higher-income sectors, giving rise to a doubly perverse effect: on the one hand, the reduction of formal markets and growing inhibition of private investment in the housing sector, and on the other, the increasing prevalence of informal forms of housing construction and finance, which now mobilize a considerable volume of resources in the region (ECLAC, 1996, p. 119).

In some Latin American countries, housing and housing finance policies have registered substantial results, with annual housing production exceeding the new demand generated each year by natural population growth and the formation of new households. These countries have thus begun to reduce the accumulated housing deficit.

The housing and housing finance policy models behind such results have as their common denominator a clear political will to apply a market-based sectoral development model which is compatible with the general economic and social development scheme and is of an integral nature: i.e., provided with the instruments and resources needed to cover the housing requirements of all income-levels.

Such a model recognizes that the State alone is incapable of solving the housing deficit, so that State action must be such as to stimulate private investment. This recognition of the complementary nature of the efforts needed calls for fundamental innovations in public policy, in the instruments applied and the institutional schemes adopted. The traditional role of the State is replaced by the role of a facilitator, designed to provide incentives in terms of the recovery of costs, profit levels and stability so that the housing sector can compete with the other sectors of the economy and private investment can play a major role in housing construction and finance.

The foregoing is based on the assumption that dealing with housing needs is primarily an economic operation that has repercussions on social welfare policy. The multiplier effects of the housing sector on economic activity and employment are just as important as those of other economic sectors, if not more so: every dollar invested in housing generates a further two dollars of economic activity in other sectors, and every additional job in housing construction gives rise to two others in related activities (Mayo and Angel, 1993, p. 34).

The prevalence of conditions of profitability and competitiveness in the real estate and housing finance markets makes it possible, firstly, for the private sector to view the housing construction industry as a business option capable of competing on an equal footing with other sectors of the economy; secondly, for the savings mobilized to the housing sector to obtain positive real levels of profitability; thirdly, for mortgage loans to be recovered in real terms, thus making long-term housing finance a sustainable venture, and fourthly, for financial intermediaries to find a profitable business option in housing finance too.

However, while this model recognizes that private investment in the housing sector will only be viable if market conditions apply in the construction and financing of dwellings, it also has to be admitted that the market mechanisms do not give access to housing to those sectors of the population which do not have sufficient purchasing and payment capacity. The State must therefore also assume a subsidiary role designed to ensure equality of opportunities so that all families, whatever their economic position, will have the possibility of solving their housing problems through the market and obtaining a housing solution in keeping with their own efforts and economic possibilities. This is the context for the use of direct housing subsidies ("DHS") which, in conjunction with the efforts of the families themselves and mortgage loans on market terms, will serve to make up the capacity for the purchase of dwellings built by the private sector for the lowest-income sectors.

2. Creation of effective demand for housing through direct housing subsidies

In general terms, DHS are an explicit, once-only, non-repayable contribution given by the State to families that comply with certain established requirements in order to provide them with a purchasing power greater than that afforded by their own income. It is thus a demand subsidy, not a subsidy for supply.

The insufficient purchasing power of broad sectors of the population prevents the enormous potential demand which exists from being turned into effective demand which would stimulate investment and private housing supply. The creation of purchasing power in the poorest sectors would therefore lay the foundations for more sustained growth of activity in the housing sector.

Numerous favourable effects can be expected from DHS (Domínguez, 1994b). Thus, they expand the potential real estate market by creating effective capacity for the purchase of private housing supply and at the same time reduce the risks of housing construction, since if private builders can be sure that there will be demand backed up by purchasing power, they will likewise be sure they can sell their houses and the housing supply will be more stable in the medium term: in a climate of free competition this will lead to an improvement in the quality and a reduction in the price of dwellings. DHS also stimulate an increase in the potential market of persons seeking mortgage loans, since by reducing the amount of indebtedness needed to make up the price of a dwelling they mean that, without requiring an increase in their income, recipient families will become eligible for mortgage loans in keeping with their payment capacity. Such subsidies also give rise to a better-quality loan portfolio, since the debtors are assuming obligations that it will be easier for them to pay, while the coverage of the mortgage guarantee will provide a surplus over the debt (equivalent to the amount of the subsidy) which will be greater than the average for the portfolio.

DHS also represent the abolition of the traditional paternalistic attitude taken by the State when dealing with the neediest groups, replacing it with an approach that stimulates and complements the efforts of the families themselves, on the basis of objective and impersonal procedures. They thus strengthen the links between citizens and the State, exploit the advantages of the market economy, and allow beneficiaries to choose the solution best fitting their needs.

By turning the potential demand for housing into effective demand and furthering the functioning of the market economy, DHS stimulate a bigger supply of dwellings and of housing finance, which can facilitate the access of the population sectors with the least resources and make an effective contribution to reducing the housing deficit. These subsidies, which in the final analysis are a contribution by the State that forms part of the growing transfer to the private sector of the leading role in housing finance, have thus shown themselves to be a much more effective means of State intervention.

Why are DHS to be preferred as a means of dealing with the housing needs of the poorest sectors? Firstly, such subsidies are more equitable, since they make it possible to target the efforts more precisely on the population it is desired to benefit, and they are also progressive, because the lower the cost of the dwelling, the higher the corresponding subsidy. In contrast, indirect subsidies through the interest rates on housing loans are highly regressive, because in the absence of a system of allocating loans by prices, the mechanism that prevails is the rationing of the available resources: in this context, those who have most access to the available finance are usually the sectors with most influence or the greatest payment capacity. Such an indirect subsidy is also very inequitable: not only does it not reach the people who need it most, but also those who obtain most credit automatically obtain a bigger contribution from the State.

A second argument in favour of DHS is their greater efficiency. Interest rate subsidies distort the operation of housing finance systems because they do not ensure that the resources loaned will be recovered in real terms, thus leading to the decapitalization of the financial intermediaries and causing housing finance to diminish or disappear. In contrast, DHS are complementary to mortgage loans on market terms and do not displace them: the counterpart of direct housing subsidies should be a loan operation on those terms. Consequently, DHS are perfectly compatible with a housing finance system with positive real interest rates on both savings and loans.

The inefficiency of interest rate subsidies is also reflected in the fact that the State is unable to measure the amount of resources granted in the form of subsidies in a clear and transparent manner and, still worse, the beneficiaries do not have a full perception of the benefits they are receiving. In contrast, DHS can not only be measured precisely in order to determine the amount of fiscal expenditure involved but also –by stimulating family efforts as a requirement for becoming eligible for the subsidy– they give beneficiaries a real awareness of the benefits they receive.

Another argument in favour of DHS is that they involve a smaller administrative burden for the State and hence also a greater saving of fiscal resources. In this type of subsidy, the State's activities are limited to laying down the corresponding regulations, inviting applications, processing and selecting the applications received, and paying out the subsidies where appropriate. It does not take on long-term administrative commitments, as it does in the case of housing loans at subsidized interest rates. In this latter case, the administrative costs of recovering a loan portfolio which has deteriorated in real terms over time represent a growing burden with respect to the value recovered. It may be noted that the efficiency and efficacy of public spending made possible by the application of a system such as DHS will strengthen the amount set aside for this purpose each year in the public budget. Moreover, if DHS make possible a higher level of activity in the housing and related sectors, the State will be able to recover part or all of its outlays in this respect through the taxes generated by this greater activity.

In short, it may be categorically asserted that DHS are in no way incompatible with the market economy model, since this is an accurately targeted (non-discriminatory) system of finance which makes it possible to effectively reach the population that it is desired to benefit; it is a transparent and accurately measurable (non-hidden) system, both for the State (which knows who it is benefitting, and by how much) and for the beneficiaries (who know how much they are receiving); it does not give rise to distortions in the financial system, as subsidized interest rates do; and it does not displace the private sector from the housing market but, on the contrary, attracts it by turning potential housing demand into effective demand.

3. The importance of prior saving and its links with direct housing subsidies

Housing is perhaps the most important durable physical asset of most families, and its price is several times their annual income. The acquisition of a dwelling is normally only feasible through a long-term loan. This purchase is an important incentive for the family to save, postponing present consumption for the benefit of future consumption. In the developed countries, family savings deposited in formal financial institutions are an important source of funds for housing loans (AID, 1987). DHS can serve as an important catalyst for the formation of family savings channeled through the formal financial system.

DHS seeks to stimulate families to make an effort to save in order to gain access to a dwelling, and the typical expression of this effort should be the methodical accumulation of prior savings to supplement the direct subsidy and, when applicable, long-term mortgage loans.

No matter how small it is, prior saving is perhaps the most powerful basis for establishing a transparent and objective system of ranking applicants for DHS, which should be designed to reward the amount saved and the duration, permanence and methodical nature of the prior saving process. Furthermore, the prior saving requirement is a much easier and less costly criterion to manage and control than, for example, one based on income level. Naturally, the prior saving required for requesting and obtaining a DHS must be in keeping with the family income level, the price of the desired dwelling and the number of dependants, among other factors, in order to ensure that State aid goes primarily to the families with the lowest income. It is known from experience that the effort made by families wishing to receive a DHS should not necessarily be expressed in terms of monetary saving. It may also be useful, especially in the case of the lowest-income strata, to accept contributions in kind (such as land, materials or labour). The important thing is to get across the idea that DHS is a reward for family effort, not just a handout.

The available data also show that DHS have served to stimulate the formation of saving for housing which is channelled through the formal financial system (Domínguez, 1994a). In order for this to take place, there must be a favourable macroeconomic climate and the saving must have a positive yield in real terms over time. In inflationary situations like those which have prevailed in the recent past, housing savings in money, deposited in financial systems, have tended to be replaced by housing savings in the form of the acquisition of building sites and materials, which better fulfilled the role of a value refuge over time. Savings in the financial system must be assets which are both sufficiently liquid (subject of course to certain restrictions, in view of their methodical and contractual nature) and also secure. This latter requirement may be strengthened through State guarantees, especially for small savings, and also through the solidity afforded by a suitably regulated and supervised financial system.

In conclusion, the acquisition of a dwelling is usually the result of a private decision and reflects a long-term effort based mainly on family saving. This gives the family a leading role in the solution of housing problems. Since many sectors of the population are unable to gain access to a dwelling solely on the basis of their family savings and their capacity to repay a long-term mortgage loan, DHS can also serve to promote and reward a sustained saving effort. With this in mind, it is necessary to incorporate and maintain over time the requirement for prior saving as a requisite for being eligible for DHS.

III

Latin American experience in the application of direct housing subsidies

There are a number of Latin American countries which have direct housing subsidy programmes (Gonzáles Arrieta, ed., 1995). These instructive experiences (in Chile, Costa Rica, Colombia, El Salvador, Uruguay and Paraguay) listed in order of their length of past trajectory, will be summarized below and their main features, achievements and limitations will be noted in each case.

1. Chile

Chile is the pioneer in Latin America in the application of a system of housing subsidies of this type. In 1978 the Ministry of Housing and Urban Development (MINVU) began to use this system for the lower middle sector (dwellings costing up to US$ 13,300 at the time: now equivalent to US$ 27,200), in place of the subsidies implicit in the interest rates on mortgage loans or hidden in the sale price of building sites or dwellings. MINVU now operates a set of five housing programmes designed to serve the whole population that it is desired to aid. Each programme involves a direct subsidy paid to the purchaser of a dwelling in the form of a pre-announced non-repayable once-only contribution granted by the State to each beneficiary family that does not already own a dwelling. The DHS form part of a tripartite system of housing purchase finance: prior saving of the beneficiary family, the direct subsidy, and a long-term mortgage loan. The principles underlying these programmes are the subsidiary role of the State, the targeting of social expenditure, progressiveness, and the encouragement of saving.

MINVU grants DHS with resources from the public budget. The direct subsidies may be given in either a private or State-oriented form. The private modality consists of an endorsable certificate given to the beneficiary, who uses it to pay part of the cost of the selected dwelling, with the value of the certificate being later collected from MINVU by the vendor of the dwelling. In the State-oriented modality, which is used only for lower-cost dwellings, MINVU commissions the construction of the dwellings by tender and applies the subsidy directly to their cost, with the beneficiaries merely being informed of the details of the operation.

Table 1 summarizes the conditions of the housing programmes with a direct subsidy from MINVU. The eligibility requirements for the different programmes do not establish any differentiation according to applicants' income: it is the applicants themselves who enter a particular programme according to their aspirations, preferences and willingness to pay for a dwelling. The maximum values of the dwellings covered by the programme, the minimum saving requirements and the maximum subsidies are expressed in Development Units ("UF"): a unit of account whose value in pesos varies day by day according to the variation in the Consumer Price Index in the previous month.

The Progressive Housing Programme is designed for families living in a state of indigence and comprises two stages. The beneficiaries are selected according to the number of points they obtain: the lower their socioeconomic and housing status, the larger their family group and the longer they have been enrolled in the programme, the higher the number of points assigned to them. In this programme, which only began to operate in 1990, under the MINVU modality 100% of the subsidies approved are paid out, but under the private modality 10% of the persons granted subsidies do not make use of them within the time limit of 21 months.

TABLE 1

Chile: Values of housing, subsidies, saving and loans under the housing programmes of the Ministry of Housing and Urban Development
(Values expressed in Development Units (UF))

Programme	Maximum value of dwelling	Maximum subsidy	Minimum prior saving	Maximum loan	Other features
Progressive Dwelling, Stage 1	140	132	8	–	Collective or individual projects, carried out privately or by SERVIU [a]
Progressive Dwelling, Stage 2	70	18	5	47	Collective or individual projects, carried out privately
Basic Dwelling	230 (SERVIU) 400 (private)	140	10 (SERVIU) 20 (private)	80 (SERVIU) 100 (private)	Collective or individual projects, carried out privately or by SERVIU
Special Workers' Programme	400	90	40	Not more than 65% of price of dwelling	Collective private projects
Rural Housing Subsidy	260 (individual applications) 400 (collective applications)	150 (with building plot) 200 (in housing groups)	5 (with building plot) 10 (in housing groups)		Collective or individual private projects
Unified Subsidy, Category I	500	130-120-110	50	Up to 1,000 UF but not more than 75% of price of dwelling	Collective or individual private projects
Unified Subsidy, Category II	1,000	110-100-90	100	Up to 1,000 UF but not more than 75% of price of dwelling	Collective or individual private projects
Unified Subsidy, Category III	1,500	90-80-70	150	Up to 1,000 UF but not more than 75% of price of dwelling	Collective or individual private projects
Urban Renewal	Up to 500 500 - 1,000 1,000 - 1,500	200-190-180 (all categories)	50 100 150	Optional	Collective or individual private projects
Leasing of dwellings	Same categories as the Unified Subsidy	130 (Category I) 110 (Category II) 90 (Category III)	Methodical deposits of rent and of final payment	–	Individual private projects

Source: Ministry of Housing and Urban Development (MINVU).
[a] SERVIU = Department of Housing and Urban Development.

The Basic Dwellings Programme is aimed at families living in marginal housing conditions. In order to receive the benefits, applicants must have a certain level of prior saving and are selected according to the points system described above. This programme began to operate in 1984; the dwellings were constructed under the State-oriented modality (by tender) up to 1994, when the private modality was introduced. By definition, 100% of the subsidies approved are actually paid out. About 25,000 dwellings per year are constructed under this programme (almost 20% of the total number of dwellings built).

The Special Workers' Programme (PET), which was established in 1987, is aimed at organized groups of families and provides improved basic dwellings. The size of the subsidy given is smaller than in the following programmes applicable to higher-cost dwellings, since as there is no system of allocation on points it is possible to receive a dwelling much more quickly. The beneficiaries can apply to the banking system for a supplementary mortgage loan, but the private sector has not shown much interest in providing such loans, probably because of their relatively small amount, so MINVU guarantees access to a mortgage loan of up to 65% of the cost of the dwelling, supplied by the State-owned Banco del Estado. These loans are issued in the form of mortgage bills, which usually have a value below their nominal value when traded on the capital market. All or part of the difference is covered by MINVU, thus representing an additional subsidy with a current upper limit of about US$ 2,600 per operation.[2] Some 16,000 dwellings are financed each year through the PET, with 100% of the subsidies actually being paid out.

The Rural Subsidy System is aimed at low-income families living in localities with less than 2,500 inhabitants. It requires prior saving in the form of proof of ownership of a plot on which the dwelling can be built. In this programme, the socioeconomic and housing situation of the applicants is evaluated and the other criteria mentioned above are also applied. Around 8,000 dwellings are constructed each year under this programme, with over 90% of the subsidies approved actually being paid out.

The Unified General Subsidy Programme is aimed at middle- and lower middle-income families who do not already own a dwelling but have a certain level of payment capacity that makes them eligible for bank loans. Under this system, the State subsidizes part of the cost of the dwelling through a certificate allocated under a non-personal application system. In order to make the subsidy progressive, the programme has three categories, depending on the value of the dwelling it is desired to acquire, with three forms of application: individual, collective, and for areas of urban renewal. Applicants under this programme are not ranked in socioeconomic terms but must provide proof that they do not already own another dwelling and that they have entered into a saving plan with some financial institution. The categories of values of eligible dwellings, the corresponding minimum prior savings required, and the levels of subsidy that can be applied for are shown in table 1.

The beneficiaries have a time limit of 21 months for collecting their subsidies. The policy of MINVU has been to guarantee a loan through the Banco del Estado only for the first category of the programme. As in the case of the PET, MINVU grants these debtors an additional subsidy, with an upper limit of about US$ 2,600 per operation, when the mortgage bills have to be sold at less than their face value.[3] Once the dwelling is finished and it is transferred to the purchaser by official deed of ownership, the vendor of the dwelling can collect the value of the subsidy –for which purpose he must submit the mortgage bill to MINVU, endorsed in his favour– and the amount of the prior saving. Under this programme, MINVU has no direct involvement in the planning and execution of the housing projects. It is now permissible to use the subsidy to purchase a used dwelling, provided the operation is effected in the last nine months of validity of the subsidy. Historically, over 80% of the subsidies approved have actually been paid out. On average, over 70% of the subsidies approved correspond to category 1, over 20% to category 2, and less than 7% to category 3.

[2] Initially, there was no upper limit on this implicit subsidy because it was desired to avoid situations where the beneficiary might be exposed to market fluctuations which could prevent him from making up the price of the dwelling, but in some cases the additional implicit subsidy can be as much as twice the size of the direct subsidy, thus militating against the progressiveness of the system (Melo, 1995, p. 37).

[3] When there was no upper limit for this implicit subsidy, there were times when it was advantageous to apply for a loan even without any direct subsidy merely in order to obtain the implicit subsidy on the mortgage bills (Melo, 1995, p. 40). As from 1990, the maximum amount of the implicit subsidy was limited to 80 UF per operation, and furthermore the loan eligible for the implicit subsidy could not exceed 1,000 UF, in order to avoid or reduce regressiveness of the system.

The subsidies paid in respect of private-sector programmes, which include the Unified Subsidies, the PET and the Rural Subsidies, number approximately 50,000 per year, and between 1980 and 1996 a total of almost 850,000 subsidies had been paid. The subsidies in respect of the programmes for basic and progressive dwellings, for their part, number around 45,000 per year. Since some 120,000 dwellings per year are built in Chile at present, this means that the State plays a decisive part in the financing of approximately 80% of all the dwellings built, in proportions that range from 6% of the price for the middle-income sectors to 94% for the very poor sectors (Hermosilla, 1995, p. 21). In most cases (some 70%) direct intervention by the State is limited to providing purchasing power through a direct subsidy for demand granted through transparent and objective processes of reception and selection of applications. Thus, since 1992 Chile has been producing more new dwellings than the demand generated annually by the formation of new households and obsolescence of the existing stock of dwellings.

In short, in Chile the system of access to housing which incorporates DHS covers all the income strata in a coherent manner, facilitating the access of the neediest sectors of the population to formal (albeit somewhat rigid) solutions to their housing needs, with the State playing a decisive role. The success achieved in the application of DHS is also due to the sustainability over time of the budgetary resources earmarked for the provision of subsidies: some US$ 400 million are currently set aside for this purpose, of which over 92% corresponds to the actual subsidies and less than 8% to administrative expenses.

In the course of the operation of the system it has been necessary to make some improvements in order to secure greater efficiency and equity.[4] One of the main aspects that had to be improved was the targeting of the subsidies (Castañeda, 1990), since the programmes originally aimed at the lowest-income strata mainly benefitted the middle-income sectors, because the prior saving requirements were excessively high, the investigation of the economic situation of applicants was not effective, and the dwellings offered were relatively expensive. In view of this, special programmes were introduced to serve the middle and upper-middle income groups, while the programmes designed for the poorest sectors have sought to achieve a better balance between the minimum prior saving required, the payment capacity of the applicant, and the cost of the dwelling offered.

The original Unified General Subsidy Programme was also modified in various respects, such as the housing cost categories, the quotas per region, the amount of the subsidies, their period of validity, the possibility of collective applications, etc. Recently the Programme has been broadened to include direct subsidies deferred in time, to be used with the new system of renting dwellings with an undertaking for their subsequent purchase (leasing), aimed at those who wish to acquire a dwelling costing up to around US$ 48,000. Under this modality, the State can either grant a subsidy[5] that MINVU pays out in successive equal quarterly installments for up to 20 years, thus reducing the burden on the beneficiary's budget in respect of the rent, or it can pay it out immediately so that the beneficiary can buy a better and more expensive dwelling.

The Chilean experience is also valuable because it confirms in practice some of the advantages theoretically attributed to DHS: the granting of explicit direct subsidies not only means greater transparency but is also compatible with the principle of the subsidiary role of the State and the functioning of a market economy; the establishment of objective criteria for the selection of applicants, subject to ongoing review in the light of targeting criteria, guarantees the credibility of the system; the stratification of the subsidies by housing value categories makes it possible to ensure the progressiveness of the system; the requirement for methodical saving as a requisite for obtaining the subsidy enhances the likelihood that beneficiaries will subsequently be capable of servicing a mortgage loan, as well as representing an important stimulus for family saving; and the

[4] An increase in efficiency has been noted, because in spite of smaller fiscal expenditure it has been possible to mobilize more resources to housing, much of the construction being carried out by the private sector. There has also been a notable improvement in equity: the proportion of subsidies going to the poorest 30% of the population has more than doubled, rising from 21% in 1969 and 1980 to 50% in 1985-1986 (Castañeda, 1990, p. 176).

[5] This system of leasing can also operate without a direct housing subsidy.

possibility of collective applications has the advantage that a group form of organization tends to maintain itself in time and facilitate the fulfillment of its individual members' application commitments.

The work done in this field in Chile also shows the need to overcome two major difficulties: on the one hand, the limited willingness of the private sector to enter into the financing of low-cost dwellings, which means that the public sector must play a preponderant role in this respect, and on the other, the absence of a secondary market for low-cost dwellings of the type covered by the subsidies. It is aimed to promote such a market by permitting greater neutrality in the use of direct housing subsidies for either new or used dwellings.

2. Costa Rica

In Costa Rica, the system of direct housing subsidies, called "Family Housing Certificates", has been in operation since 1987 when the National Housing Finance System was set up. The State-owned Housing Mortgage Bank administers these subsidies, which are channelled with the backing of the Housing Subsidy Fund. The Certificates are granted by the State, on a once-only basis, to families with a monthly income equivalent to less than four minimum monthly wages of a skilled construction worker (a total of some US$ 700). To begin with, the Certificates consisted of a supplementary interest-free loan, but later on they were changed into a non-repayable grant. The Certificates are not actually delivered in the form of a certificate but in the form of documents attesting to the technical characteristics of the dwelling and the situation of the nuclear family receiving the benefits. The origin of the Housing Subsidy Fund resources applicable to the Certificates is laid down by law and includes the levying of certain taxes and a percentage of the national budget.

The maximum value of the Certificates cannot exceed the equivalent of 30 times the minimum wage mentioned earlier (i.e., some US$ 5,200). This maximum subsidy is given to families receiving an income of up to one minimum wage and is currently set at the equivalent of some US$ 4,800. In the case of families receiving between one and four minimum wages, the subsidy is granted on a partial basis in inverse proportion to the family income (table 2). As the subsidies are calculated in steps of 20, there are approximately 80 different amounts of subsidy, in line with the small differences in family income.[6] Since this maximum subsidy does not cover the maximum value of a normal low-cost dwelling (estimated at around US$ 14,072), the subsidy is accompanied by a 15-year mortgage loan granted by authorized institutions. Since 1 April 1995, the interest rate (which was previously fixed by the Housing Subsidy Bank) is fixed freely by the institutions authorized by the National Housing Finance System.

These authorized institutions classify the families applying for subsidies and determine the maximum cost of the dwelling they wish to obtain, the amount of credit to be extended, and the down payment required. The subsidy and the credit always go together in a single package administered by the authorized institution. The system only provides for individual applications. The Housing Mortgage Bank is responsible for approving and paying out to the authorized institution the amount of the subsidy for the successful applicants, subject to verification of the amounts determined by each institution.

The Family Housing Certificate programme includes various sub-programmes, and the subsidies can be used to buy a new or used dwelling, to buy a plot of land and build on it, to make improvements or repairs to dwellings, to build a dwelling on a plot belonging to the applicant and, more recently, to buy a building site.

With the present values of the Certificates, in the lowest-income category (i.e., up to one minimum wage) the direct subsidy may cover at least two-thirds of the cost of a basic housing solution, but as the maximum cost of a normal low-cost dwelling is estimated at US$ 14,072, in the case of that category of applicants the subsidy only represents a very low proportion (34%) of such a dwelling. The values of the certificates can be readjusted by the Housing Mortgage Bank up to a ceiling of 30 times the minimum wage, but in Costa Rica there are no arrangements for the automatic readjustment of the amounts of the subsidies or of the cost of a dwelling for each category. The authorities periodically raise the nominal amounts of the subsidies, but their real value usually lags behind inflation.

[6] In each case the calculation depends on the family income and is carried out according to the following formula: value of Family Housing Certificate = 1,394,000 - [336,000 x social stratum], where the social stratum is the ratio between the gross income of the family and the current minimum wage.

TABLE 2

Costa Rica: Calculation of Family Housing Certificate and supplementary credit, by income brackets [a]

(In current dollars at 31 December 1996)

Wage stratum	Gross income	Monthly installment	Capacity for indebtedness	Minimum contribution by beneficiary	Maximum Family Housing Certificate	Maximum value of housing solution
–	–	–	–	–	4 802.5	4 802.5
0.50	86.5	26.0	1 132.4	–	4 802.5	5 935.0
1.00	173.0	51.9	2 264.9	–	4 802.5	7 067.4
1.50	259.5	77.9	3 397.3	169.9	4 039.9	7 607.1
2.00	346.0	103.8	4 529.8	226.5	3 277.3	8 033.6
2.50	432.5	129.8	5 662.2	283.1	2 514.8	8 460.1
3.00	519.1	155.7	6 794.6	339.7	1 752.2	8 886.5
3.50	605.6	181.7	7 927.1	396.4	989.6	9 313.0
4.00	692.1	207.6	9 059.5	453.0	227.0	9 739.4

Source: Housing Mortgage Bank (BANHVI).

[a] The calculations are based on the following parameters:
Repayment term: 180 months.
Annual interest rate: 27%.
Ratio of installment to income: 30%.
Minimum wage: 38,116 colones
Maximum subsidy: 1,058,000 colones (equals 27.8 minimum wages).
Minimum subsidy: 50,000 colones (equals 1.3 minimum wages).
Exchange rate (interbank rate at 31 Dec. 1996): 220.30 colones per dollar

Unlike the Chilean system, the Costa Rican DHS scheme does not make any requirement for the methodical accumulation of prior saving in one of the institutions authorized by the National Housing Finance System. The beneficiary's contribution may be made in the form of voluntary saving of a minimum amount required for the basic loan, or through unskilled labour in a supervised self-build process. Families whose income is not more than one minimum wage are not obliged to make a down payment or a minimum contribution. To back up the mortgage loans granted, the National Housing Finance System has made arrangements for the rediscounting of Housing Mortgage Bank mortgages through the National Housing Fund. It is estimated that so far 45% of all the credit operations carried out by the National Housing Finance System have involved Family Housing Certificates.

From the establishment of the National Housing Finance System up to September 1996, 118,727 housing subsidies worth a total of US$ 332 million were granted, thus benefitting an equal number of families with an income of up to four minimum wages (approximately 18% of the population). Between 1990 and 1993, an average of 15,636 subsidies were granted each year. Nearly 59% of all the subsidies granted went to families living in rural areas (Monge, 1995, p. 64). Out of the total number of subsidies granted between the beginning of operations and June 1995, 42% of the applications approved were for the construction of a dwelling on a plot already owned by the applicant, 31.5% were for the acquisition of a building site and the construction of a dwelling on it, 26% were for the purchase of an existing dwelling, and 2% were for repairs or improvements.[7]

According to official sources, the total amount of resources allocated to the subsidy programme has represented an average of approximately 3% of public social expenditure since 1987. Over that period, however, the Housing Mortgage Bank has not received the whole of the resources laid down by law (3% of the national budget): it is calculated that only about 40% of that amount has actually been transferred to it.

Approximately 65% of the new dwellings built and sold each year include a subsidy component. Taking account of the subsidies granted and the transactions completed outside the system, it is estimated that in recent years it has been possible to pre-

[7] The dollar figures for each year were calculated at the average interbank exchange rate for each year.

vent an increase in the housing deficit. Since 1992, for the first time, the number of dwellings financed has covered the minimum annual needs and has made it possible to begin to reduce the accumulated deficit (Zawadzki, 1993, p. 24). Furthermore, the Costa Rican DHS programme has proportionately favoured the lowest-income groups: almost 79% of all the subsidies granted have gone to families with an income of not more than two minimum wages (US$ 350). This targetting through direct subsidies has been strengthened with time, since the proportion of certificates actually paid out to the lowest-income sectors rose from 65% in 1987 to 97% in 1996. Since the mortgage loans are linked with the subsidy, this also means that the mortgage credit provided by the authorized institutions has also reached these sectors. This is one of the most notable positive features of the Costa Rican system, since in other countries low-income beneficiaries of DHS have had great difficulty in gaining access to mortgage loans.

The Family Housing Certificates are an instrument which really has made it possible to increase low-income families' possibilities of gaining access to housing. A family with an income equivalent to three minimum wages which receives a DHS is thus provided with a purchasing power that enables it to obtain a dwelling that –without the subsidy– would only be within the reach of a family with an income of around four minimum wages. The certificates also have a progressive income redistribution impact: the lower the income level of a family, the higher the amount of the subsidy it receives and the greater the percentage increase in its purchasing power by this means (Monge, 1995, pp. 64-65).

In addition to the direct subsidy, however, up to 1995 there was also an indirect subsidy through the interest rates charged on the mortgage loans granted by the authorized institutions. The decision taken in April 1995 to free interest rates for the housing sector was designed to eliminate this indirect subsidy, thus concentrating the government's efforts on direct assistance for the neediest and doing away with this distortion in the functioning of the financial market (Arroyo, 1995, p. 49). The establishment of a requirement for methodical prior saving in order to obtain a subsidy is also under consideration, since the current absence of such a requirement is considered to be one of the main shortcomings in the Costa Rican DHS system. A requirement for prior saving would also facilitate the objective allocation of subsidies on a points system.

3. Colombia

In Colombia, the Family Housing Subsidy was established in 1991. The bodies responsible for administering and granting the subsidies are, in urban areas, the National Low-Cost Housing and Urban Reform Institute (INURBE) and the Family Welfare Agencies and, in rural areas, the Agricultural, Industrial and Mining Credit Agency. The design of the DHS system in Colombia is particularly complex (there are various institutions involved in the granting of such subsidies and multiple scales of maximum values of dwellings and subsidies), and furthermore it has undergone numerous changes since its introduction.

The Family Housing Subsidy is a once-only non-repayable contribution by the State in money or kind (land, building materials, ownership deeds, etc.). It is intended for households with an income of not more than four legal minimum wages, currently equivalent to a total of about US$ 568. The beneficiaries can choose for themselves the housing solution for which they aim to use the subsidy. When in the form of money, the subsidy is given to the body or person who provided or financed the housing solution of the beneficiary, against presentation of the certificate of sale or improvement. Subsidies are also provided in kind, either in the form of building plots belonging to INURBE or the title deeds to a considerable number of lots which were invaded before 1989. The traditional source of finance for the DHS programme is the regular central government revenue.

Beneficiaries must make a prior contribution in money or kind. Applications can be collective as well as individual. Beneficiaries are selected on the basis of a household qualification process and a points system, taking into account such criteria as family income, the value of the housing solution, the size of the prior contribution, the number of dependants in the family, etc. The subsidies must be used within 18 months of their award.

The DHS system has two branches: the first, which forms part of the Social Solidarity Network, is aimed at households with a monthly income of not more than two legal minimum wages (about US$ 284), while the second is intended to provide new dwellings for households with an income between two and four minimum wages (about US$ 568). The first-named branch is further divided into two programmes: a programme for the improve-

TABLE 3

Colombia: Maximum amounts of Family Housing Subsidy, by mode of use and population of area where dwelling is located
(Figures in dollars and Constant Purchasing Power Units (UPACs)

Type of housing solution/institution granting subsidy	Population of area where dwelling is located (number of inhabitants)		
	< 100,000	100,000 - 500,000	>500,000
A. *For households with an income of not more than two legal minimum wages*			
Integral improvement of dwelling and environment (INURBE only)	US$ 2,058 (210 UPAC)	US$ 2,058 (210 UPAC)	US$ 2,058 (210 UPAC)
Construction of dwelling on own site and improvement of dwelling (INURBE and Family Welfare Agencies) or integral improvement of dwelling and environment (Family Welfare Agencies)	US$ 2,450 (250 UPAC)	US$ 2,450 (250 UPAC)	US$ 2,450 (250 UPAC)
Acquisition or acquisition and construction of basic unit, basic unit for progressive development or minimum dwelling (INURBE)	US$ 2,450 (250 UPAC)	US$ 2,940 (300 UPAC)	US$ 3,430 (350 UPAC)
Acquisition or acquisition and construction of basic unit, basic unit for progressive development or minimum dwelling (Family Welfare Agencies)	US$ 3,430 (350 UPAC)	US$ 3,920 (400 UPAC)	US$ 4,410 (450 UPAC)
B. *For households with an income between two and four legal minimum wages*			
Improvement of dwelling or construction on own site	US$ 2,058 (210 UPAC)	US$ 2,058 (210 UPAC)	US$ 2,058 (210 UPAC)
Acquisition or acquisition and construction of basic unit, basic unit for progressive development or minimum dwelling	US$ 2,058 (210 UPAC)	US$ 2,450 (250 UPAC)	US$ 2,940 (300 UPAC)

Source: National Low-Cost Housing and Urban Reform Institute (INURBE).

ment of dwellings and their environment, including the legal accreditation of the title deeds of dwellings, and a programme for the provision of new dwellings.

The maximum values of the low-cost dwellings for which the DHS can be used are expressed in monthly legal minimum wages, are readjusted once a year, and are determined as a function of the population size of the cities where they are located and the monthly income of the beneficiary family: for families with an income of up to two minimum wages, the maximum value of the dwelling is equivalent to about US$ 12,800, while for families with an income of between two and four minimum wages the maximum value is equal to US$ 19,200. Table 3 shows the maximum amounts of the subsidies, which are expressed in Constant Purchasing Power Units (UPAC) [8] and depend on the socioeconomic situation of the beneficiaries, the type and value of the housing solution selected, and the population of the city where it is located.

In order to receive a DHS, beneficiaries must make a certain minimum contribution. The mortgage loans available are complementary to the subsidy and are generally used by households with an income between two and four legal minimum wages. Generally speaking, for this segment of families the subsidy, plus the families' contribution in money, cover 30% of the value of the dwelling and the remainder is financed with a 15-year mortgage loan.

From the inception of the DHS programme up to September 1996, INURBE, which accounts for almost half the subsidies granted in the country, approved a

[8] This is a unit established under Decree No. 1229 of 17 July 1972 as a mechanism for the monetary correction of savings and loans in Savings and Loan Corporations. At first, it was laid down that the peso equivalences of UPACs should be corrected daily in line with the index of inflation, but after successive changes in the manner of calculation of the readjustment the value of the UPAC depends basically on the changes in the market interest rate on deposits.

total of 270,932 subsidies, of which only 49% have actually been paid out. For the provision of those subsidies, US$ 486 million was earmarked and US$ 226 million was actually disbursed (46.5%). The proportion of effective disbursements of the subsidy is thus very low compared with the number and value of the subsidies approved.

The main uses of the DHS have been for the purchase of building lots with services (32%) and the improvement of existing dwellings (26%). The financing of building lots has no longer been permitted since 1994, as it was found that the granting of a subsidy did not always guarantee that a dwelling would be built. According to a study by the National Centre for Construction Industry Studies (CENAC), 90% of the dwellings technically classed as low-cost attracted this benefit, which is a clear indicator of the broad coverage of the programme. Some 80% of the total number of direct housing subsidies approved have gone to the population segment with a family income of not more than two legal minimum wages.

One of the main weaknesses in the Colombian DHS programme, however, is the very small proportion of the total cost of the dwelling covered by the subsidy: if we take the maximum subsidy established and the maximum permissible cost of the dwelling, the subsidy only covers 27% of the cost of the housing solution in the case of the lowest income strata. This situation, together with these groups' limited capacity to save and to gain access to mortgage loans, helps to explain the relatively high proportion (rather more than a quarter) of subsidies approved but never used. Furthermore, too much time elapses between the approval of the subsidy and its actual disbursement: the average length of time that an applicant has to wait to actually receive the subsidy after its approval is 14 months. An evaluation of the programme made by the authorities in 1994 (Salazar, 1995) found a number of other problems, including the fact that purchasers of dwellings with an income of 135 legal minimum wages have received subsidies without of course needing them, and that the stratum with an income between one and four minimum wages does not have effective access to credit. In spite of this, the changes which have been made have left some very typical problems of the programme untouched, such as the low proportion of the price of housing solutions covered by the subsidy, even for the sectors with the lowest incomes.

4. El Salvador

In El Salvador, a DHS system was established in 1992 called the Contributions for Housing Programme, administered and awarded by the National People's Housing Fund (FONAVIPO), which was set up in the same year. The Contributions for Housing are State contributions in cash or kind granted to the beneficiary families on a once-only and non-repayable basis. In this case, the contribution is intended basically for the improvement of dwellings and not for the purchase of completed housing, which makes it markedly different from the schemes operating in Chile and Costa Rica. The contributions are granted in the form of a certificate issued by FONAVIPO in favour of the beneficiary and negotiable only through the institutions authorized to participate in the Programme.

By law, the resources for the Programme are to come from a special fund administered by FONAVIPO and made up of the net assets of the former Urban Housing Institute (IVU), which are to be administered to turn them into cash. The law also authorizes FONAVIPO to receive budgetary items from the central government, although so far the Programme has not obtained any funds in this way.

Beneficiaries must have a monthly family income of not more than two minimum wages (currently US$ 264), their current dwelling must be below the minimum acceptable housing conditions, and they must own the building or site. Selection is carried out on a points system whose basic components are the effort made by the applicant, the value of the housing solution, the length of time the applicant has been in the system, and the family's poverty status.

The Programme currently operates under three modalities: Individual Dwelling Improvement, New Organized Settlements, and Credit for a New Dwelling, with Contribution.[9] The Individual Dwelling Improvement modality is aimed at families which own a dwelling in poor conditions of habitability, or families which own a plot of land and are living in a makeshift dwelling. The New Organized Settlements modality is aimed at families currently living in dan-

[9] Two more modalities are under consideration: Neighbourhood Improvement, and Credit for Individual Dwelling Improvement, with Contribution. The latter modality is aimed at families with some capacity to repay a loan.

gerous areas, areas subject to expropriation, areas set aside for tourism or nature reserves, or areas illegally occupied by them, and who are willing to be moved voluntarily to a plot of land which will belong to them. The Credit for a New Dwelling, with Contribution, is likewise aimed at families with an income of not more than two minimum wages, but with the difference that they do not own a dwelling or site of their own. The above modalities allow the subsidies to be used for the improvement or construction of a dwelling, part payment for the purchase of a building site (only 25% of the maximum subsidy can be used in this manner), and the improvement of housing and communal services. The Programme allows for either individual or collective applications and leaves it to the families to decide what aspect of their housing deficit they wish to cover.

The amount of the contribution is between four and twelve minimum wages, depending on how precarious the applicants' housing conditions are. If we compare the maximum value of the subsidy (about US$ 1,584) with the estimated value of a dwelling under the New Organized Settlements modality (between US$ 1,730 and US$ 1,950), we see that the DHS covers 81% or more of the cost of the dwelling. The values of the subsidies can only be changed in line with changes in the urban minimum wage, which is determined by the Ministry of the Economy. The prior saving that families with an income of up to one minimum wage and between one and two minimum wages must fulfill is 8.33% and 15% of their income, respectively. Under the New Organized Settlements modality, the required family effort consists of their willingness to be voluntarily transferred from the dangerous or illegally occupied site where they currently live to the new settlement where they will own their dwelling. Under the Credit for a New Dwelling, with Contribution modality, the mortgage loan to make up the price of the dwelling is provided by authorized institutions. Under this modality, it is possible to acquire dwellings with a cost of up to US$ 3,429; the corresponding credit can be up to US$ 1,845 (53.8%) and the subsidy up to US$ 1,584 (46.2%).

From the date when it began operations up to December 1996, the Contributions for Housing Programme has approved nearly 27,000 housing subsidies worth almost US$ 30 million. No funds have been provided from the national budget for this purpose, although the Law setting up FONAVIPO provides for this. Since 1993, when 46% of the whole Programme was achieved in terms of the number of subsidies approved and 33% in terms of the value of subsidies granted, there has been a marked slackening in the Programmes's activities, mainly because of the limited availability of resources. In its first five years of operation, 60% of the resources disbursed was for the improvement of existing dwellings, while the remaining 40% was for the New Organized Settlements modality, under which new dwellings are built. It is estimated that 75% of the subsidies granted went to families with an income of less than half a legal minimum wage (currently US$ 66), while the remaining 25% went to families with an income of around one minimum wage (currently US$ 132).

According to official sources, the Programme's contribution to the reduction of the housing deficit of the lowest-income sector of the population has been of the order of 6%. This should be interpreted in the light of the fact that this scheme does not aim to provide a finished dwelling: its impact must be measured rather in terms of the gradual improvement of the qualitative deficit affecting existing dwellings (Bertrand, 1995).

5. Uruguay

In Uruguay, DHS are provided under the Integrated System of Access to Housing (SIAV), which began in 1993. The Ministry of Housing, Territorial Planning and the Environment, set up in 1991, administers and grants DHS. The SIAV was set up under the new housing policy initiated in 1991, backed up by a loan from the Inter-American Development Bank (IDB). The DHS granted by the State to families with an income equivalent to not more than 60 Readjustable Units[10] can take two forms: the provision of an Expandable Basic Nucleus (NBE), built by private sector firms by tender, or the issue of a Direct Housing Subsidy Certificate (CSHD).

[10] The Readjustable Unit (UR) is a unit of account created in 1968 under the National Housing Act (Law No. 13.728), and its value is currently corrected monthly as a function of the variation of the average wage index. As at 31 December 1996, one UR was equivalent to 141.14 pesos (about US$ 16).

TABLE 4

Uruguay: Levels of income, subsidies, prior saving, loans and values of dwellings under the Integrated System of Access to Housing
(In current dollars at end of December 1996)

Income level	Subsidy level	Minimum prior saving	Maximum subsidy	Maximum loan	Maximum value of dwelling
0-480	NBE [a]	80	18 320	–	18 400
480-705	I	1 040	12 000	9 360	22 400
705-865	II	2 640	9 120	13 840	25 600
865-960	III	5 950	5 980	16 870	28 800

Source: Ministry of Housing, Territorial Planning and the Environment.
[a] NBE = Expandable Basic Nucleus.

The DHS system is financed from the National Housing and Urban Development Fund (FNVU), administered by the Ministry of Housing, whose main source of resources (almost 85% of the total) is a 1% payroll tax.

In order to be eligible to apply for and receive a subsidy under the SIAV, a family must fulfill two conditions: it must be enrolled in the National Register of Subsidy Applicants, which maintains updated information on the situation of the households concerned, and it must have built up a certain level of prior saving in the bank before the time limit set for the period of application in question. At present, only individual applications are permitted. The beneficiaries are selected on a points system based on two criteria: first, the saving effort made and the length of time the family has been saving, for which purpose the number of Readjustable Units saved is multiplied by a weighting factor which is an inverse function of the socioeconomic level of the family, in order to increase the probability that the poorest families will be benefitted, and second, the size of the family unit.

The type of housing solution available and the size of the subsidy that a family can obtain depend on the latter's monthly income. Families with the lowest income levels are offered a housing solution which is almost completely covered by the subsidy. As families' income levels rise, the higher is the price of the housing solution open to them, the larger the amount of prior saving required, and the smaller the subsidy they will receive. All these values are expressed in URs. The size of the complementary mortgage loan available is also directly related to the family income level (table 4).

This stratification of demand means that for families with an income of not more than 30 UR (some US$ 480) the State can provide a subsidy which covers almost the whole cost of the housing solution open to the families in question (some US$ 18,400); the remainder is covered by the required minimum prior saving. The certificate issued to beneficiaries lasts for 18 months (non-renewable), and can be used for the purchase of an Expandable Basic Nucleus dwelling built by the private sector under contract to the Ministry of Housing, the purchase of a new or used dwelling on the open housing market, the construction of a dwelling on the applicant's own site, or the acquisition of a building site and the construction of a dwelling on it.

In the case of families with an income between 30 and 60 UR (between US$ 480 and US$ 960) there are three different levels of subsidy, with the maximum subsidy representing a decreasing proportion of the maximum price of the available dwellings as the family's income bracket rises. In these cases, the desired housing solution is achieved by presenting, in addition to the Direct Housing Subsidy Certificate, a certain amount of prior saving and a mortgage loan granted by one of the private or public financial intermediaries authorized to operate under the Integrated System of Access to Housing, on terms freely accorded between the applicant and the lender. The dwellings corresponding to each income level, with maximum prices laid down by law, are built by private construction firms. The financial intermediaries can rediscount both mortgage loans complementary to the DHS and loans for financing the construction of housing projects approved by the Ministry of Housing, through the Rediscount Fund, which is also financed with resources from the National Housing and Urban Development Fund and is run as a second-tier bank by the Central Bank of Uruguay.

The Integrated System of Access to Housing identifies families with an income over 60 RU (over US$ 960) as suitable subjects for credit because of their saving and repayment capacity, so families in this sector have to make use of the market real estate and financial schemes, including among the latter the Mortgage Bank of Uruguay. The access of this sector to housing depends exclusively on prior saving and a mortgage loan on market terms.

In the first year of operation of the DHS system (1993-1994), during which three invitations for applications were made, the Ministry of Housing issued a total of 7,367 certificates, of which 68% corresponded to certificates for the acquisition of Expandable Basic Nucleus dwellings and the remaining 32% to certificates for beneficiaries in levels I to III. Bearing in mind that Uruguay is a small country, this is quite a large number of subsidies for such a short time, and it is estimated that it has made it possible to cover nearly 10% of the housing deficit which existed.

The degree of targetting in this initial period was quite satisfactory and ensured that the neediest section of the population had the greatest probability of receiving a benefit (Romay, 1995, pp. 128-129). The families in a relatively easier position had to make four times as great a saving effort as the poorest households in order to receive benefits. Thus, the households with the greatest housing needs saved for an average of nine months, while those in a better socioeconomic situation had to save for over 50 months in order to receive benefits.

Under this scheme, the Expandable Basic Nucleus dwellings make possible a quicker housing solution for a larger number of families, especially the poorest ones, and they represent an important advance in terms of the quality of life of the beneficiary families, compared with the housing solutions thrown up in makeshift settlements. Furthermore, the DHS has helped to stimulate saving through the formal financial system (Romay, 1995, p. 149). Among the weaknesses of the scheme are the fact that in practice the only financial institution that participates actively in the Integrated System of Access to Housing is the Mortgage Bank of Uruguay and that the DHS system has not been capable of stimulating a significant private supply of new low-cost dwellings, so that many beneficiaries have used the subsidy to buy used dwellings.

6. Paraguay

In Paraguay the Direct Housing Subsidy System has been formally in operation since 1992, but its real implementation began in 1995. This system was established as part of the reordering of the housing sector carried out with the aid of two loans from the Inter-American Development Bank (IDB). The National Housing Council (CONAVI), set up in 1990, is responsible for administering the DHS system.

The DHS are a once-only non-repayable form of direct State aid granted to beneficiary families in order to enable them to purchase, build or improve a low-cost dwelling. The subsidies are issued in the form of a certificate which lasts for 18 months from its date of issue and is transferred by beneficiaries to the builder of the dwelling in part payment for the latter. CONAVI pays out the certificates to vendors of dwellings or to beneficiaries who are building on their own sites.

In order to implement the system, two funds were set up, both administered by CONAVI: the Direct Housing Subsidy Fund, and the Mortgage Rediscount Fund, through which CONAVI rediscounts the mortgage loans granted to beneficiaries by the financial intermediaries. These intermediaries are any banking or financial institution regulated by the Central Bank of Paraguay or by the National Housing Bank, as appropriate, or any legally constituted cooperative authorized by CONAVI. By law, the resources of the Direct Housing Subsidy Fund can come from general budget items, domestic and foreign loans, etc.

Beneficiaries must make a prior contribution, which can consist of savings, a building site of their own, labour, or any other form of contribution laid down by CONAVI. In the case of savings, the applicant must have an account in one of the intermediaries that participate in the programme. Applicants must have a family income which does not exceed the maximum for each level of subsidy, as laid down in the established stratification, and they must not already own a dwelling. Only individual applications are allowed. The selection of beneficiaries takes account of the level of subsidy requested and the geographical area where the desired dwelling is located; the final selection is based on a points system which takes into account such criteria as the amount of prior saving, the length of time the applicant has been saving, and the size of the family group.

TABLE 5

Paraguay: Levels of income, subsidies, prior saving, loans and maximum value of dwellings under the direct housing subsidy system
(In dollars at the December 1996 exchange rate)

Level of subsidy	Monthly family income	Direct subsidy	Minimum prior saving	Maximum loan	Maximum value of dwelling	Valuation for construction	Valuation for expansion or rehabilitation
I	779-1 053	2 748	1 832	15 114	19 694	7 878	13 786
II	573-779	3 435	1 145	10 763	15 343	6 137	10 740
III	366-573	4 122	687	7 099	11 908	4 763	8 336
IV	229-366	4 809	229	4 351	9 389	3 756	6 572
V	Up to 229	5 496	115	1 832	7 328	2 931	5 130

Source: National Housing Council (CONAVI).

The subsidies granted can be used in either of two subprogrammes: the Housing Solution Acquisition Programme, which covers the purchase of new or used dwellings, and the Own Site Housing Solution Programme, which covers the construction, expansion or repair of dwellings. The Paraguayan DHS system has five levels of subsidies, depending on applicants' income, with each level being divided into the above-mentioned subprogrammes. Each of the five levels is subject to maximum levels of dwelling price and subsidy, minimum levels of prior saving, and maximum levels of mortgage credit, when this is required (table 5). These values are fixed in Minimum Wage Units.[11]

As may be noted from the foregoing, the system is progressive, not only in that the smaller the family income, the larger the subsidy and the smaller the prior saving required in absolute terms, but also in that the subsidy represents a larger proportion of the maximum cost of the dwelling. The DHS cannot exceed 75% of the cost of the dwelling. The system provides for the possibility of a mortgage loan to beneficiaries, at a variable interest rate, to make up the total cost of the dwelling. The repayment installments are adjusted automatically in line with the Minimum Wage Unit, and possible discrepancies between these two indexes will be reflected in the repayment periods.

From the inception of the system in September 1995 to November 1996 there were five invitations for applications and a total of 7,541 subsidies were approved, of which the equivalent of 16% was actually paid out. A total of US$ 32.7 million was earmarked for the payment of this number of subsidies, but only US$ 5.8 million was actually paid out (only 18% of the earmarked amount). Of the subsidies approved, 85% corresponded to the Housing Solution Acquisition subprogramme, while the remaining 15% went to the Own Site Housing Solution subprogramme. It should be noted that 60% of the subsidies went to families with an income of not more than 1.6 Minimum Wage Units (about US$ 366), while the remaining 40% went to families with an income between US$ 366 and US$ 1,053.

[11] The Minimum Wage Unit is a unit of account established under Law No. 118/90. Its value, which is fixed by the competent authority, varies according to the variation of the current minimum monthly wage in the capital of the Republic for workers in various unskilled activities. In December 1996 one Minimum Wage Unit was equivalent to US$ 229.

IV

Some lessons from the Latin American experience, and policy recommendations

The two preceding sections make it clear, both in theory and practice, how radically Direct Housing Subsidies differ from traditional subsidies (such as housing loans at subsidized interest rates and subsidized dwelling prices) and how great their advantages are in terms of equity, efficacy of the fiscal effort and efficient operation of the financial system. Having made those aspects clear, we will now outline some of the conditions and characteristics that should exist in order for the use of DHS to give good results.

1. Conditions needed for the successful application of direct housing subsidies

In order to apply a DHS system successfully it is necessary to place these subsidies in their proper perspective, as part of housing policy and as a means of giving the lower-income population access to housing.

i) The aim of DHS, with the subsidiary intervention of the State, is to give the lower-income population access to the opportunities generated by a market sectoral development model. They are therefore totally divorced from a common myth lying at the basis of housing policies: that housing is a right. If the latter idea is accepted, then it would be necessary to identify exactly who should be obliged to provide housing, and it would naturally appear that this should be the obligation of the State. However, it would obviously be impossible for the State to comply with this assumed obligation, and any effort to do so would involve the implementation of projects by the State which would minimize the efforts made in this direction by families themselves: an approach which is diametrically opposed to that fostered by direct housing subsidies. What the State is really under the obligation to do is to guarantee that all families have equal access to the opportunities offered by the market, whatever their economic situation, but on condition that the families make an effort themselves, which would be suitably rewarded.

ii) Direct housing subsidies should form part of a housing policy designed to do away with two mistaken approaches of the past: first, that the housing sector is a social sector, and second, that the housing problem can be solved by promoting massive housing construction projects. The housing sector undoubtedly does involve a problem with obvious social connotations, and the technical aspects are of considerable importance, but such approaches lead to the design of measures which prevent the sector from making use of economic resources in competition with other economic activities, since they scare off private investment, eliminate the possibilities of long-term finance and condemn the sector to a drastically reduced level of activity. DHS, in contrast, make possible a form of State intervention which creates spaces for the market economy and private investment, so that resources will flow into the sector.

iii) DHS should be an integral part of a comprehensive housing policy, not an isolated mechanism. This means, first, that the sectoral development model should be compatible with the general economic and social development model; second, that the housing policy should take account of the different needs and possibilities of all sectors of the population, in order to generate the right instruments (with their corresponding resources) for taking care of each of them; and third, that the housing policy should recognize the unavoidable need for State intervention but should at the same time promote private sector participation by creating conditions of profitability, competition and stability that will allow that sector to act as an executing agent, invest resources and assume risks.

iv) DHS can only make an effective contribution to reducing the housing deficit if saving and long-term mortgage loans for housing exist and are developed, since these subsidies are essentially a complementary and subsidiary means of gaining access to a dwelling. In order for them to be applied successfully, market conditions must prevail for financial operations relating to the housing sector, so that it is necessary to do away with all practices that lead to negative real interest rates on the housing finance markets. Interest rates are a key instrument for promoting financial saving for housing, making possible the recovery of long-term mortgage loans at their real value, and thus keeping alive financial intermediation for housing purposes.

v) Although DHS represent a special effort on the part of the State to give preferential attention to the lowest-income sectors, their application should not mean neglecting finance options for the higher income groups. The absence of such options would probably cause intermediate groups who do not have access to suitable opportunities to try to take advantage of the benefits designed for lower-income groups, crowding the latter out and leading to a deterioration in the targetting of fiscal resources. If groups with a certain amount of payment capacity find suitable options in the market, this will reduce the proportion of the population that need to be aided from the limited resources of the State.

vi) DHS are only one of the mechanisms required in order to take care of the housing needs of the lower-income population. Other complementary instruments are also required, such as the issue of legal proof of ownership for informal properties, in order to give informal dwellings commercial value and turn them into satisfactory collateral for mortgage loans, and the use of housing access mechanisms for informal sectors which are in a position to take on some long-term repayment obligations but cannot provide proof of a steady income.

vii) The benefits expected from DHS can materialize provided two basic conditions are fulfilled: sustainability of the necessary resources and credibility of the system. DHS require fiscal resources which are generally limited; consequently, once a programme of this type has been initiated it is important that it can be sustained in time in order to give stability to the demand for housing and allow private investment to develop its long-term capacity to provide dwellings in a competitive manner. It would be quite pointless to set in motion a DHS programme which creates expectations among potential beneficiaries and private investors but subsequently has to be deactivated because the resources have run out. At the same time, the system must win credibility: its operation must stimulate the functioning of the markets and must not involve any favouritism, so that it must use only procedures and criteria which are totally transparent and objective and hence leave no room for political manipulation.

2. Desirable features of direct housing subsidies

In the light of the experience of the different countries summarized above, DHS should have certain characteristics which will contribute to their efficacy and efficiency (duly adapted to the actual conditions of the area where they are to be applied, of course):

i) They should constitute a form of direct State aid designed to create purchasing power to acquire a housing solution: that is to say, they aid the demand for housing, not supply. This feature means that the subsidiary intervention of the State will be suitably targetted and not indiscriminate, thus making it possible to effectively aid the target population. It will also make it possible to attract private enterprise into the housing sector rather than driving it out, since it will not introduce price distortions into the real estate and housing finance markets.

ii) They should be non-repayable, thus recognizing that without such subsidies low-income families will not be able to acquire a dwelling solely on the basis of the opportunities provided by the market. Their non-repayable nature also saves the State the administrative costs inherent in any efforts to recover outlays. In actual fact, these outlays will largely return to the State through the greater tax revenue deriving from the direct and indirect impact of increased activity in the housing sector.

iii) They should be granted only once in the lifetime of families, which should not already be owners of a dwelling. DHS will thus be an expression of the supportive aid of the State and society for families in the poorest sectors of the population who are willing to make an effort, within their possibilities, to obtain a housing solution.

iv) They should be a complement to, and not a replacement for, the families' possibilities of saving and indebtedness, especially in the case of the lowest-income sectors. The efficacy of the subsidies will depend to a large extent on the existence and expansion of saving and mortgage loans. As some of the case studies show, the possibility of obtaining a mortgage loan to make up the cost of the dwelling has often been a decisive factor in enabling beneficiaries of the subsidy to make effective use of it. The case of Costa Rica shows the desirability of DHS being linked with a mortgage loan, whereas the case of Colombia highlights the disadvantages of a situation where the beneficiaries of subsidies cannot gain effective access to a mortgage loan, so that the effective use made of the subsidies approved is relatively low. The rediscounting of mortgages may be useful for helping the State to promote greater participation of private financial institutions in the granting of long-term mortgage loans to DHS beneficiaries, by giving faster rotation and greater liquidity to the resources loaned. One of the main problems that needs to be solved in many countries is the limited participation of the private financial sector in the provision of small housing loans.

v) They should be based on the use of clearly measurable public resources, since among other advantages this helps to give a clear perception of the efforts being made by the State in providing aid targetted on the poorest sectors. It is highly desirable that DHS should be financed from a budget item which does not make any distinctions as regards the source of the funds: in this way, the sustainability of the system will depend essentially on the soundness of the public finances of the country in question. Furthermore, their dependence on the public budget will introduce an important incentive for the efficient management of the outlays in question, since each year this will be a key element in the analysis of how the use made of these resources compares with public expenditure in other sectors.

vi) The amounts of the subsidies must be made clear to those receiving them, so as to create a full awareness among beneficiaries of the aid they are receiving from the State: something which is not always possible when State aid takes the form of hidden subsidies. Therefore, subsidies should be given in the form of actual funds (or their equivalent, such as the certificates used in some countries), thus promoting the free choice of a dwelling by the beneficiary families. When the aim is to aid the very poorest sectors, and the State is compelled to actually build dwellings for them, or when the subsidy is practically equivalent to the price of the dwelling, the State should invite tenders for the private sector to build the dwellings directly. The limited response of the private sector to the stimulus of DHS in terms of providing low-cost dwellings is another problem which needs to be solved in some countries.

vii) The subsidies should be of different amounts, in line with an established scale, as a function of the applicant's income and the cost of the dwelling, with priority being given to progressiveness (i.e., the lower the applicant's income and the lower the cost of the dwelling, the higher the subsidy), so that State aid to the poorest sectors is not only proportionately greater compared with the cost of the housing solution but is also greater in absolute terms. It is also desirable that the values of the subsidies should be expressed in units of account which determine their variation over time, especially in line with inflation, as this would make their discretionary readjustment unnecessary and protect their real value against inflation. In practice, it may prove to be somewhat complex and costly to target State aid properly on the poorest groups. Experience shows that the use of income as a key variable for determining this objective can involve considerable margins of error, so it would be desirable to take into account other items of reference, as a number of countries have done. Firstly –especially in systems designed to provide initial housing solutions rather than finished dwellings for the lowest income strata– a more objective targetting criterion would be the current shortcomings in the dwelling that it is desired to improve with the subsidy. Secondly, scales could be established which link such variables as income, cost of the dwelling, maximum subsidy and minimum prior saving, and limits could be established for the standards of dwellings that applicants can aspire to, according to their economic possibilities: this would also help to promote self-discrimination among the applicants, as it is unlikely that a family would apply for a lower-cost dwelling simply in order to obtain a larger subsidy if its economic possibilities were such as to permit it to obtain a more expensive dwelling (this hypothesis is strengthened by the very low level of housing mobility in the countries of the region). Thirdly, prior saving –as an objective means of measuring the effort made by families to attain a subsidy and a housing solution– may be given decisive weight in targetting (as in the case of Chile), while giving due weight to the fact that the lowest-income families have less capacity to save and thus placing them on an equal footing for competing with higher-income families (as in the case of Uruguay).

viii) They should be administered through transparent procedures which are fully known and understood by applicants, beneficiaries and the public at large. The criteria for selecting the beneficiaries should be objective: they should be based on measurable and impersonal factors (as for example through a points system), and should be free from all kinds of discretionality. The credibility of the DHS system, and hence its permanence in time and its effectiveness for dealing with the needs of the poorest sectors, will directly depend on the transparency of the procedures and the objectivity of the criteria for selecting the beneficiaries, which should rule out all possibility of political favouritism or influences which will discredit the system and endanger its survival. The ongoing improvement of this transparency and objectivity should be a constant part of the efforts to secure better targetting of DHS; the norms applied and the results obtained should be evaluated periodically and, if necessary, suitable changes should be made.

ix) In awarding the subsidies, emphasis should be placed on the requirement for methodical prior saving. Such saving is not only a reflection of the effort made by families to attain a housing solution but should also be an objective criterion in the allocation of subsidies (points should be given for the amount and length of prior saving, for example, among other factors). This will encourage families to be active participants in their search for a housing solution and not mere passive recipients of State handouts. In the cases studied, all the countries except one consider prior saving or some expression of family effort to be an essential requirement for seeking and obtaining a subsidy. In order to prevent the prior saving requirement from prejudicing the poorest families, there are procedures for putting them on an equal footing with higher-income families. Furthermore, the prior saving of lower-income applicants can also be expressed in kind (building plots, for example). Indeed, El Salvador has adopted an even broader interpretation of "prior saving": under the DHS system applied there, credit is given for the sacrifices involved in a poor family's willingness to leave a marginal area where they are living and move to a more orderly settlement where, however, they will have to rebuild their economic relations. Another substantial argument for making prior saving a requisite for obtaining a subsidy is that it strongly encourages an increase in the amount of savings channelled through the financial system.

x) It is necessary to define whether the DHS is to be used for acquiring a finished dwelling, obtaining an initial (expandable) housing solution, or improving an existing dwelling, and whether there should be a process of gradual improvement of the dwelling as a function of the economic possibilities of the beneficiaries. A key element in taking the final decision will be the source and amount of the resources available for the provision of subsidies. At all events, when the subsidy is to be used in the acquisition of finished dwellings it is important that the proportion of the total price of the dwelling covered by it should be sufficiently large to ensure that the subsidies approved are actually used. The provision of initial housing solutions that can subsequently be improved and expanded may also be a very useful approach, especially for the lowest-income sectors: as well as requiring fewer resources, the standard of these dwellings will be in keeping with the beneficiaries' real economic possibilities and priorities, thus avoiding later difficulties in maintaining the dwellings and continuing with their gradual improvement.

It will also be important to define whether DHS can only be used for the acquisition of new finished dwellings or whether they can also be used to buy a second-hand dwelling. If the latter is possible, this can substantially help in the formation of a secondary housing market for the low-income groups, making it easier for families who already own a dwelling and whose income has increased to sell their used dwelling in order to acquire another one which is better and more expensive. Since a very high percentage of the total housing stock of a country are used dwellings, authorization to use the subsidies to acquire either new or used dwellings would allow the lower-income sectors to begin their process of obtaining their own dwelling by purchasing low-cost used housing. This approach has recently been introduced in Chile, where the subsidies were previously for the acquisition of new finished dwellings.

Another important lesson to be drawn from the case studies is the desirability of encouraging collective, and not only individual, applications for DHS. At least for the lowest-income population, this would seem to be useful for two reasons: on the one hand, it promotes the participation of bodies that further the organization of the demand for housing and thus improve the possibilities and capabilities of the population involved in the process of applying for subsidies, and on the other hand, it brings about more effective utilization of the subsidies, since the process of seeking a housing solution through these benefits and/or mortgage loans needed to make up the cost of the dwelling is strengthened by specialized, organized technical support which helps to put the applicants for dwellings or housing credit on a more equal footing with the respective suppliers.

(Original: Spanish)

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Military expenditure *in Colombia:* **macroeconomic and** *microeconomic aspects*

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This article analyses defence and security spending (DSS) in Colombia, on the assumption that in order to gain a better idea of the effect of such spending on economic growth and the public finances it would be desirable to analyse its internal composition, since this would make it possible to infer its impact on the production of defence and security. In order to do this, various theories on the repercussions of military expenditure are reviewed and defence and security spending in Colombia is analysed on the basis of information from the Office of the Comptroller-General of the Republic. The efficiency of spending on the armed forces and the National Police is then examined, especially as regards the relations between combat and support and attack and defence, and it is shown that the military forces need to be reorganized. In the conclusions, various ways of securing savings on the defence budget are proposed. The most important of these are connected with personnel management, as payroll expenses represent 73% of total spending. The proposals made in this respect are to modify the system of pay and allowances, increase the retirement age, reduce the number of personnel and restructure the proportions between combat forces and support and administrative personnel.

I

Introduction

The armed conflict in Colombia has given rise to discussions about defence and security spending (DSS). Those in favour of such spending consider that DSS is vital for strengthening the Public Forces, that improving the security forces of the State increases the likelihood of consolidating a climate of peace and tranquillity in which the rights of the individual prevail, and that it has a positive influence on demand and employment. Its critics, on the other hand, argue that DSS is unproductive, that rather than improving the social environment it limits the public resources available for investing in areas with a greater social impact, and also that Colombia is making a disproportionate economic effort because of the current armed conflict.

Although these propositions are based on apparently incontrovertible assumptions, we will nevertheless try in this article to analyse the underlying postulates. We will begin by summarizing the debate on the effects of DSS on the economy. The basic premise of those who believe that DSS is unproductive is that any outlay in this field has negative effects on the economy and also displaces resources which would otherwise generate greater value added. In order to determine if the rationalization of DSS really gives a "peace dividend", however, we must first know what impact that spending has on the economy. In order for the rationalization of DSS to make economic sense, the benefits generated by the saving on DSS for different areas of security must be greater than the impact of DSS itself.

It may be gathered from the international studies made on military spending[1] since the 1970s that the results on this matter are not conclusive. It must be borne in mind, however, that the debate on the optimum level of DSS is not an abstract exercise, because in the final analysis the economic resources used are the means selected for achieving an objective through military action. It is therefore necessary to compare the repercussions in terms of security with the financial and economic consequences of the expenditure.

The analysis of the situation of Colombia is based on the widely held view that the effort made by Colombia to deal with the armed conflict is disproportionately large. To a large extent, this view may be due to the growing feeling that the country's objectives in terms of security seem increasingly far off, while the financial, economic and social resources devoted to their pursuit are ever greater. However, it is not enough merely to analyse DSS in the light of its possible impact on the State finances. In the final analysis, it is the internal composition of that spending which can enable us to infer its real effect on the production of defence and security, which is its ultimate objective. Examining this aspect will give us a sounder basis for our macroeconomic analysis.

We will therefore make a detailed examination of DSS in Colombia, on the basis of the reports of the Office of the Comptroller-General of the Republic. This information breaks down the resources into operating expenses and investment: that is to say, outlays on the pay and pensions of both the civil and military personnel in question, general expenditure, and outlays on military and police capital formation. In the specific case of Colombia, this item is called Expenditure on the Public Forces (EPF). This category covers all the expenditure on the military forces (including the functioning of the Ministry of Defence and other agencies involved in defence projects) and the expenditure on police forces and auxiliary military forces organized in the event of conflict. The aim of breaking down EPF in detail is to determine

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[1] In this article, military spending is equated with defence and security spending (DSS) and expenditure on Public Forces (EPF). This is because since 1950 the budget of the National Police is incorporated in the budget of the Ministry of Defence and, according to the definition of military spending used by the North Atlantic Treaty Organization (NATO), which is the definition we have followed here, the police carry out activities which require resources typical of such spending.

the line it has followed in Colombia, for which purpose its past behaviour is studied and its structural and conjunctural components are identified.

It is also noted that the costs in this sector can only be reduced if changes are made in personnel management and the administration of physical resources. Improving the way the Public Forces operate would make it possible to increase their capacity to provide defence and security. The microeconomic analysis made of the sector provides an opportunity to explore possible options for making EPF redound in higher levels of defence and security and to determine how far it can be reduced while making it more efficient.

II

Theoretical analysis of the economic impact of military spending

Since 1973 there has been a strong ongoing controversy about the impact of military spending on economic growth. Some circles maintain that such spending is unproductive, arguing that all outlays in this field have negative effects on the economy and limit the resources available for investment in areas that provide greater social benefits. Others, however, believe that military spending favours economic growth insofar as it makes a significant contribution to increasing national production capacity.

Those who argue that there is a negative relation between military spending and the economic and social development indicators assert that although such expenditure is a necessary strategy for the capitalist system it has an adverse impact on the growth rate because it leads to lower levels of investment.

Recent studies have been investigating the macroeconomic effects of military spending in the less developed countries and have found that it adversely affects growth, the balance of payments current account, saving and investment. A significant difference has also been observed between the level of military spending of military dictatorships and that of civilian governments. The studies conclude that if the security of a nation depends on economic growth, then expenditure on its military forces only seems to be buying insecurity and underdevelopment (Smith, 1977; Deger, 1986; Nabe, 1983; Ball, 1983; Leontief and Duchin, 1983; Pivetti, 1992).

Most developing nations have considerable difficulty in balancing their fiscal resources while trying to meet the growing demands of their costly armed forces. Thus, according to some analysts, a kind of military Malthusianism has been growing up: a confrontation between small annual increases in fiscal resources but soaring increases in defence costs. In many countries, the cost of providing the military apparatus exceeds their capacity of payment. For many reasons, a vicious circle has been forming since the 1970s: as the military bureaucracy grows, militarily useless but increasingly costly equipment is acquired, crowding out social expenditure and public investment and ultimately reducing the well-being of the population, while because of their lack of technical and economic capacity the armed forces find it difficult to provide real defence against outside threats, so that their central role shifts to internal repression and control of the friction between civil and military elements caused by the reduction in well-being, which finally leads to a further increase in military spending. This process generally takes place in the less developed countries (Scheetz, 1991).

In contrast, the authors who have been maintaining that the higher a country's military spending, the greater its economic growth, believe that such spending can be economically productive if it leads to a situation of national security and allows for the more effective exercise of property rights, thus stimulating private investment and hence growth. They also note that spending on military capital formation can have productive effects: some developing countries are still benefitting from transport and communications facilities constructed for military purposes.

It has thus been maintained that military spending is an item capable of providing food, lodging, medical services and training to a number of persons who would otherwise have to be maintained by the civilian sector; that –as already mentioned– it can bring forward the execution of a wide range of public works which also benefit the civilian economy, and that it can cover various special forms of scientific and technological development which would otherwise have to be carried out by the civilian sector of society (Benoit, 1973; Thompson, 1974; Frederiksen and Looney, 1982).

Finally, while it may be noted that individual studies on the effect of military spending on economic growth come to apparently contradictory conclusions, Todd Sandler and Keith Hartley conclude that –whatever the samples used, the periods analysed, or the econometric methods employed– the models based on the influence of demand generally hold that military spending crowds out investment and therefore has a negative effect, whereas the studies centered on supply aspects generally find that the effects are positive or neutral. This leads them to conclude that the net impact of military spending on growth is only slightly negative, so that the reduction of military spending alone is not a desirable way of speeding up economic growth (Sandler and Hartley, 1995, especially p. 220).

III

Hypothesis

The study of military spending is of interest to a number of different disciplines because of its effects on the level of public expenditure and on economic growth. In times of peace, or at least when the survival of values and institutions does not depend on massive use of the military apparatus, the idea is that macroeconomic considerations should govern the discussion on the desirable and possible level of military spending: that is to say, such controversies are settled in the final analysis by fiscal capacity.

It is worth exploring the reasons why the analysis of such spending is of interest, however. For economists, it is of great importance because of its impact on growth and on the macroeconomic variables. For those who make public decisions, it is essential to study this spending because of its effects on the public finances and the crowding out of resources that it can cause in other areas of central government expenditure. Few analysts have focussed on the true justification for military expenditure, however: the capacity to provide defence and security.

In view of the foregoing, discussions about the proper level of military spending cannot be productive unless they take microeconomic aspects into account. Study of the composition of military spending makes it possible to infer its real impact on the production of defence and security, while at the same time giving a more concrete basis on which to carry out the macroeconomic analysis; it is also of fundamental importance for determining future trends in military spending. If this expenditure consists mainly of payments for the remuneration of personnel, then the possibilities of reducing it go down. The opposite is true, however, in the case of investment and operational expenditure. We thus see that the possibility of making changes in military spending is inversely proportional to the proportion of payroll costs and directly proportional to operational and investment costs.

Study of the evolution of military spending in Colombia reveals that its cycles of expansion and contraction are the result of transitory equipment acquisition programmes, while salary increases and reclassifications raise expenditure levels and make them difficult to reduce. Consequently, fiscal adjustment programmes affecting the military sector risk weakening its operational capacity: the discretionality of the expenditure may mainly affect the investment and operational items and thus give rise to an imbalance between military personnel and the material resources available to it.

Therefore, although it is extremely important to analyse the impact of military spending on the economic growth and public finances of a country, such analysis will be insufficient if it does not take account of the internal composition of the expenditure, for it is this structure which makes it possible to infer the effect that the expenditure will have on the economy and the possibilities of reducing it and making it more efficient, while at the same time evaluating the effect this will have on the provision of defence and security.

IV

Defence and security spending

1. Past behaviour

A review of expenditure on the Public Forces (EPF)[2] in Colombia from 1926 to the present shows that on average the economy has devoted 1.8% of GDP to security, with a minimum of 0.5% in 1930 and a maximum of 3.6% in 1997 (figure 1). This evolution shows a cyclical pattern of expansion and contraction of the security budget, with however an upward trend over the period. A more detailed analysis (table 1) shows that in the late 1920s this expenditure averaged 0.7% of GDP. This level was maintained up to 1932, the year before the border dispute with Peru broke out. This conflict brought EPF up to one of the highest levels registered by the country: around 3%. Afterwards, over a period of four years, this expenditure was brought down to less than 1.5% of GDP. This shows that although the external conflict made necessary a big effort, this was due to transitory factors which permitted it to be rapidly reduced later (figure 1 and table 1).

In the 1940s, a somewhat remarkable situation prevailed: although the Second World War was taking place elsewhere, in Colombia the level of expenditure on the Public Forces, as a percentage of GDP, was below its historical trend level. Only towards the end of that decade and the beginning of the 1950s was there a renewed substantial increase in EPF, which rose from less than 1.1% of GDP to over 2.1%. This period coincided with important domestic events, such as the period of unrest known as “La Violencia”, due to conflicts between the political parties, and the 1953-1957 military dictatorship of General Gustavo Rojas Pinilla.

Nevertheless, towards the end of the 1950s the growth of EPF had dropped back to levels close to the historical average. In the 1960s there were moderate increases, but in 1971, with the acquisition of Mirage warplanes and automatic weapons, EPF rose to over 3% of GDP: higher than during the conflict with Peru. Subsequently, even though relatively substantial amounts of military equipment were acquired in the 1970s, average spending dropped back again to levels below the historical average.

The purchase of Urutú and Cascabel armoured vehicles, the construction of the Bahía Málaga naval base on the Pacific coast of Colombia and the runway of the Marandúa air base in the eastern lowlands, together with the acquisition of missile corvettes in the first half of the 1980s, raised the level of spending, but only slightly above the average. The acquisition of Kfir warplanes gave rise to the last increase in the 1980s, but even so the growth rate of expenditure was below the trend level.

The 1990s marked the beginning of a new pattern of behaviour of EPF in the country. With regard to investment, the Five-Year Plan was begun in 1991, supplemented with phases I, II and III of the Energy Protection Plan. The first of these plans set investment priorities, with emphasis on maintenance programmes, in order to improve the readiness and operational quality of the Public Forces. The different phases of the Energy Protection Plan, for their part, were aimed at organizing volunteer military units[3] to protect the oil and electricity sectors. The “Commotion Plan” and the “Integral Plan” were also put into effect, in 1992 and 1993, to counter the permanent offensive of the guerrilla and develop an integral war strategy to respond to the disturbances caused by the various outlaw groups. The resources provided for in these plans were for maintaining and renewing military equipment and making up shortcomings in this respect, improving the mobility of the troops, especially through the use of helicopters, and modernizing communications between the different government bodies, the military forces and the National Police.

With regard to operational expenditure, the above programmes meant the activation of a substantial number of units and the incorporation of a considerable number of personnel. Priority was also

[2] This expenditure corresponds to the amount allocated by the central government to the Ministry of National Defence, including both the resources allocated to the military forces and those for the National Police. This means that it does not take account of the contributions made by departmental, district or municipal governments, aid from other countries, or private-sector contributions.

[3] Paid non-conscripted soldiers.

FIGURE 1

Colombia: Economic effort in the defence sector, 1926-1998

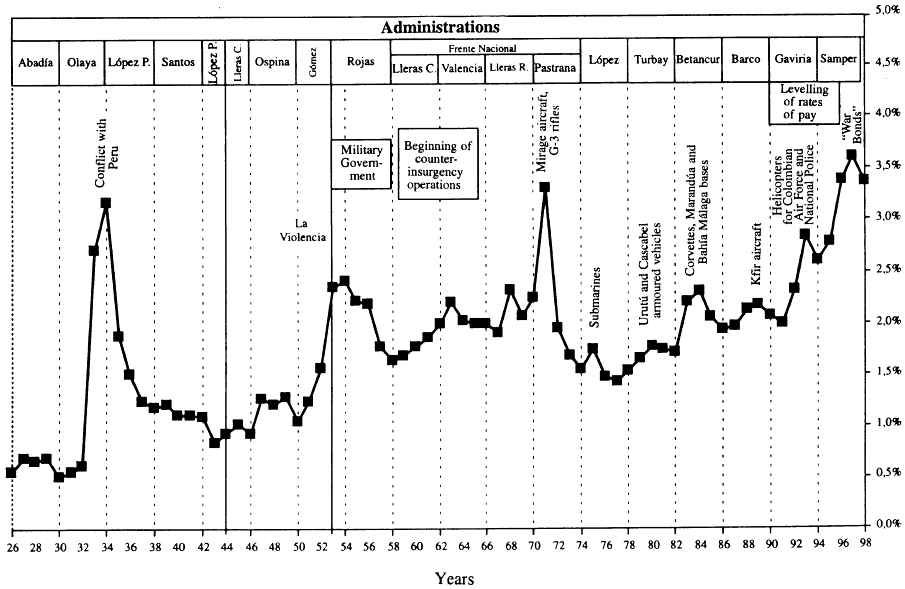


TABLE 1

Expenditure on the Public Forces (EPF) as a percentage of GDP, 1926-1998

(By decades and historic events)

Years	Periods/events	EPF/GDP (%)
Average, 1926-1998		
1926-1998	Period studied	1.8
Decades		
1926-1929	1920s	0.7
1930-1939	1930s	1.5
1940-1949	1940s	1.1
1950-1959	1950s	1.8
1960-1969	1960s	2.0
1970-1979	1970s	1.9
1980-1989	1980s	2.0
1990-1998	1990s	2.8
Historic events		
1926-1931	Period leading up to war with Peru	0.6
1933-1934	War with Peru	3.0
1939-1947	Second World War	1.1
1948-1952	"La Violencia"	1.3
1953-1970	Rojas and the National Front	2.0
1993-1998	Levelling of rates of pay	3.1

Source: Office of the Comptroller-General of the Republic and calculations by the authors.

given to increasing the budgets for general expenditure (especially the purchase of equipment and supplies), strengthening intelligence activities, developing health services and improving field rations. Lastly, with regard to personal services and transfers, pay and pensions, Law No. 1992/4 was passed, placing the pay of members of the Public Forces on the same footing.

Finally, in 1997 the economy made its biggest effort in this sector since 1926. This was due to two factors: the structural upward trend in operating expenses as a result of the levelling of rates of pay in 1992, and the investment resources obtained through the Security Bonds. These bonds, also known as War Bonds, were designed in general to meet the main needs facing the sector within the framework of a counter-insurgency strategy centered on three areas: mobility, intelligence and communications.

The evolution of EPF as a percentage of GDP in the past enables us to infer its probable evolution in the future. It should be noted first of all that throughout the twentieth century (excluding the War of a Thousand Days, a civil war which took place between 1899 and 1902) EPF has displayed an oscillating but generally upward trend. Its variations can largely be explained by conjunctural factors such as conflicts or tensions with neighbouring countries, particular acquisitions of high-cost equipment or installations, or action to deal with subversion and drug trafficking. This pattern showed a turning point in the early 1990s, however, when the levelling of the pay of active and retired members of the Public Forces added an upward structural component to EPF.

2. Effects of expenditure on the Public Forces

After having verified the historical behaviour of EPF, it is vitally important to determine its main effects on the economy. Analysis of the EPF/GDP series shows an upward trend throughout the period from 1926 to 1998 (figure 2). It is estimated that the Public Forces increased their annual expenditure by 0.023% of GDP. It is important to note that overall central government expenditure (CGE) shows the same type of behaviour: according to preliminary calculations, its average annual increase was 0.156% of GDP. Central government expenditure for other purposes (CGEOP),[4] which excludes the defence sector, grew by 0.134% of GDP annually.

[4] This expenditure also displays an upward trend, although more fluctuating, as a proportion of GDP (5.6% in 1950 and 20.8% in 1997).

At first sight, the difference between the slopes would appear to indicate that defence sector expenditure is skewed in comparison with central government expenditure for other purposes. If we compare the average annual growth rates of these series, however, we see that this is not so. As a proportion of GDP, EPF grew by 1.532%, while CGE and CGEOP grew by 1.250% and 1.245%, respectively (table 2 and figure 3).

TABLE 2

Colombia: Estimated growth rates of expenditure on the Public Forces (EPF) and central government expenditure (CGE), as percentages of GDP

(Annual averages)

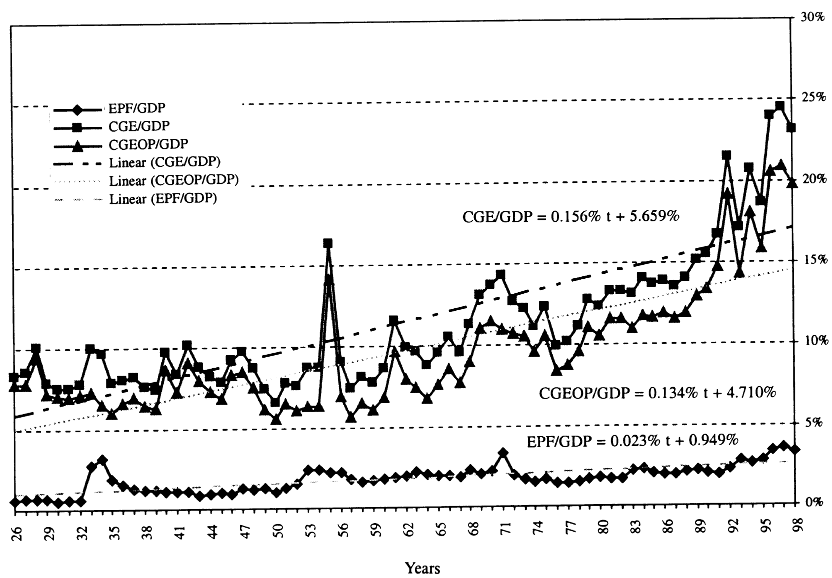
	1926-1998	1926-1979	1980-1998
EPF/GDP	1.532	1.777	3.531
CGE/GDP	1.250	0.761	3.824
CGEOP/GDP [a]	1.245	0.642	3.873
EPF/CGE	0.284	1.016	-0.294
CGEOP/CGE	-0.003	-0.119	0.049

Source: Office of the Comptroller-General of the Republic and calculations by the authors.

[a] CGEOP = Central government expenditure for other purposes (excludes EPF).

FIGURE 2

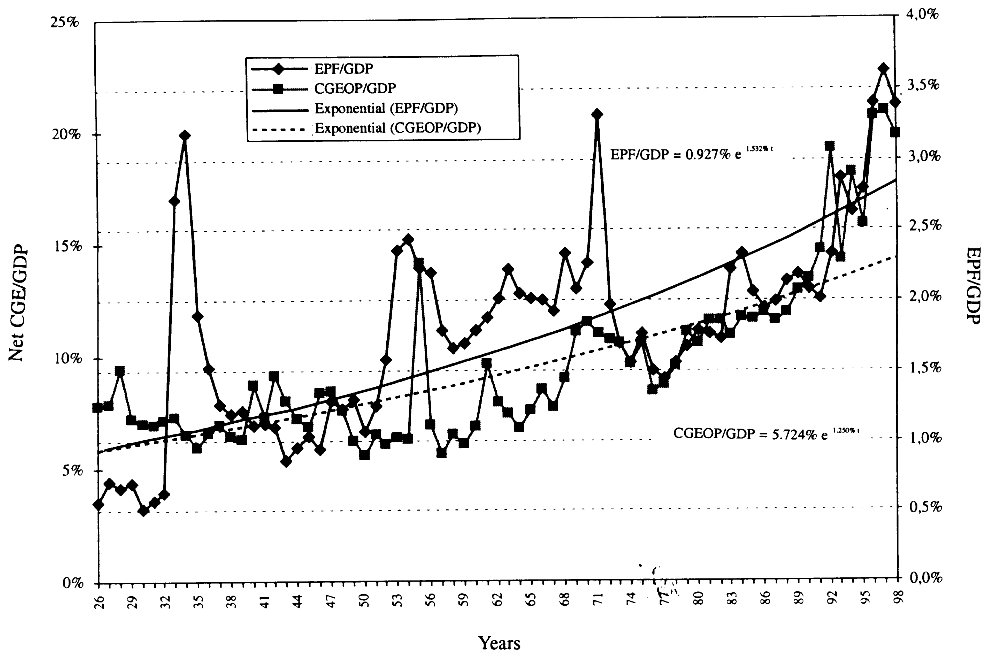
Colombia: Weight of defence sector and central government in the economy,[a] 1926-1998



[a] EPF = Expenditure on the Public Forces; CGE = Central government expenditure; CGEOP = Central government expenditure for other purposes.

FIGURE 3

Colombia: Economic weight of defence sector and central government expenditure for other purposes, 1926-1998 [a]



[a] EPF = Expenditure on the Public Forces.
CGEOP = Central government expenditure for other purposes.

This is explained by the fact that, on average, the government allocated more resources to the defence sector than to the other sectors. The average growth rate of EPF in central government expenditure was 0.284%, while that of CGEOP was -0.003%[5] (figure 4).

From the behaviour of the relation EPF/CGE, it may be inferred that the defence sector is a restriction for CGE, because it is observed that when extra resources were allocated for non-military sectors EPF also increased its share of central government expenditure. This would explain the growing share of CGE in GDP.[6]

If the central government had kept its share of GDP constant (at 11.26%, for example), then in 1998 CGEOP would have been 7.8% of GDP, not 20.9%,[7] but as the central government has been taking on greater responsibilities it has had to appropriate more resources from the economy.

What causal relation exists between EPF/GDP and CGEOP/GDP? Causality tests in the Granger sense show that CGEOP/GDP causes EPF/GDP directly (CGEOP/GDP is non-stationary and has a growth trend). Also, CGEOP/CGE (with a negative trend) causes EPF/GDP (inversely). However, there is no causal relation between CGEOP/GDP and CGEOP/CGE.[8]

Furthermore, when we analyse the average shares of either of these two variables by decades we see that there is a replacement effect.[9] Examples of this are seen in the 1930s, 1950s and 1970s (table 3). In the 1960s to the 1990s there is a complementation effect: both variables grow, but at different rates,

[5] Causality tests show that CGEOP/CGE causes (inversely) EPF/GDP.

[6] Or, on the contrary, the defence sector would be a guarantor of the new expenditure.

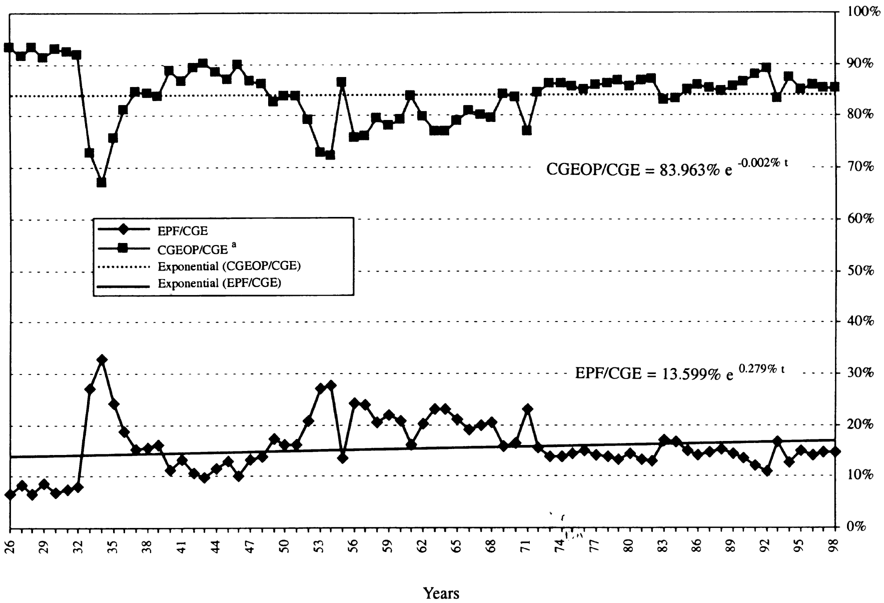
[7] As long as the EPF/CGE, EPF/GDP and CGEOP/CGE series are stationary -that is to say, they vary around the mean, or tend to be self-correcting- the CGE/GDP and CGEOP/GDP ratios have a root of 1 (they are random walks and their variances tend to infinity, making it difficult to model them).

[8] This analysis is not fulfilled for the subperiod 1980-1998, since the trend of CGEOP/CGE changes to a growth trend (maintaining the indirect relation), so that EPF should have reduced its share in GDP.

[9] A replacement effect is an inverse relation between the variables.

FIGURE 4

Colombia: Expenditure on the Public Forces (EPF) as a percentage of central government expenditure (CGE), 1926-1998



[a] CGEOP = Central government expenditure for other purposes.

TABLE 3

Colombia: Behaviour of expenditure series for central government (CGE), Public Forces (EPF) and other purposes (CGEOP), by decades
(Percentages)

Decades	EPF/CGE	% variation	EPF/GDP	% variation	CGE/GDP	% variation	CGEOP/GDP[a]	% variation
1920s [b]	7.6		0.7		8.7		8.1	
1930s	17.3	127.5	1.5	124.2	8.2	-6.2	6.7	-16.8
1940s	12.4	-28.0	1.1	-25.9	8.9	8.3	7.8	15.8
1950s	21.1	70.1	1.8	67.4	8.8	-0.2	7.0	-9.7
1960s	20.0	-5.6	2.0	11.1	10.3	16.3	8.3	17.7
1970s	15.3	-23.1	1.9	-7.7	12.0	17.1	10.2	23.2
1980s	14.7	-3.9	2.0	7.7	13.6	13.3	11.6	14.4
1990s [c]	13.8	-6.5	2.8	38.5	20.2	48.2	17.4	49.9

Source: Office of the Comptroller-General of the Republic and calculations by the authors.
[a] CGEOP = Central government expenditure for other purposes (excludes defence).
[b] 1926-1929. [c] 1990 - 1998.

which thus affect their shares in central government expenditure. This can only happen if the central government appropriates more resources from the GDP.

a) Present composition of expenditure

In the 1980-1998 period, the main component of EPF (45.2% of the total) was the “personal services” item, corresponding to payment of the personnel. The “transfers” item accounted for 26.2% and corresponds basically to payments in respect of social security, pensions[10] and severance benefits. The

[10]Allocations to retired personnel.

TABLE 4
Colombia: Composition of expenditure on the Public Forces
(Percentages)

Period	Remuneration of active and retired personnel	Operations	Investment
1980-1998	71.4	14.8	13.8
1980-1992	70.0	13.8	16.4
1993-1998	72.9	15.8	11.3

Source: Office of the Comptroller-General of the Republic and calculations by the authors.

"general expenditure" item accounted for 14.8% of the total and covers the acquisition of goods and services needed to ensure the operation of the sector,[11] and finally "investment" accounts for 13.8% of total expenditure.[12] We thus see that the remuneration of active and retired personnel (personal services and transfers) represents 71.4% of total expenditure (table 4). The increase in the personal services item reflects the increase in the number of personnel, which grew by an average of 4.2% per year between 1980 and 1998 while the population only grew by an average of 2%, so that a larger percentage of the population now forms part of the Public Forces (435 soldiers for every 100,000 inhabitants in 1980 and 641 in 1998).

Furthermore, in 1992, with the levelling of rates of pay and the amounts set aside for the payment of severance benefits, there was a considerable increase in expenditure on personal services and transfers. This was reflected in a restructuring of EPF, with investment being the variable most affected.[13]

All the foregoing was reflected in an increase in the resources allocated for the sector (figure 5), which, after having been 2.1% of GDP in the 1980-1992 period, rose to 3.1% in 1993-1998 (3.6% in 1997). Before the levelling of rates of pay, 1.4% of GDP went for the payment of active and retired personnel, 0.3% for Public Forces operations, and 0.3% for the purchase and maintenance of equipment (a total of 2.1%). In the 1993-1998 period, however, these values went up to 2.3%, 0.5% and 0.4%, respectively (a total of 3.2% of GDP).[14]

In 1997, 3.6% of GDP went to the Public Forces, broken down as follows: 2.4% for payment of personnel, 0.5% for operations, and 0.7% for investment. It is expected that in the future this sector will receive still greater resources from the economy, amounting to between 4.1% and 5.3% of GDP[15] in 2005[16] (figure 6).

b) Fiscal restrictions of the central government

With the 1991 administrative decentralization it was expected that the central government would be freed from direct responsibilities, so that its level of expenditure would go down. Contrary to what had been expected, however, the new commitments imposed on it by the 1991 Constitution caused the central government share in GDP to increase considerably, reaching 24.5% in 1997 (or 17.9% if debt service is excluded). Such an increase is not a good thing for the economy, and it needs to be reduced in the short term.[17]

If the defence sector does not change its behaviour (figure 7), then very soon the central government will have to devote a growing proportion of its expenditure to it (up to 17.2% in 2002).[18] This means that the economy will only be able to allocate a maximum of 3.5% of GDP[19] (figure 8). Between this behaviour and the projection of EPF there is a growing

[11] A discussion is currently under way in the country as to whether this investment increases the gross capital formation of the economy. In this study it is considered that the combination of the military equipment factor (arms, aircraft, field hospitals, etc.) and the human factor generates the product which satisfies the defence and security demands of society.

[12] Investment has a similar weight to that of general expenditure in most years.

[13] In 1997, the resources supplied to this sector by the War Bonds were equivalent to 1.45% of the regular budget for that year.

[14] Although greater resources have been allocated to the sector overall, the "general expenditure" and "investment" items have each fluctuated between 0.2% and 0.5% of GDP.

[15] Two econometric models were applied in which the GDP (lagged by one and four years) is the explanatory variable.

[16] Using an analysis based on a long-term series, this range increases to 6.7% and 6.8% of GDP.

[17] In the following analysis it was assumed that the level of CGE would go down by 4 percentage points of GDP in the next three years.

[18] EPF was projected by applying the error correction mechanism model to the differences between the logarithms of the variables and the adjustment coefficient of the cointegration equation (see the statistical and econometric annex).

[19] It should be noted that this level of expenditure as a proportion of GDP cannot be maintained over time because it would mean constantly reducing the share of central government expenditure in the economy, until a point where that expenditure would go exclusively to the defence sector.

FIGURE 5

Colombia: Share of expenditure on the Public Forces in GDP, 1980-1998

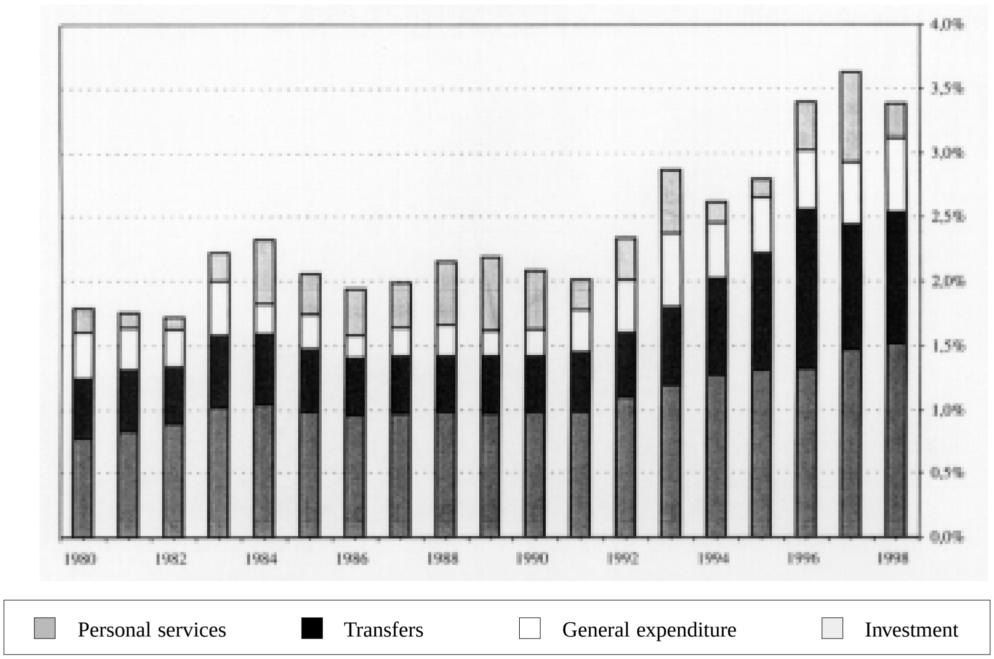


FIGURE 6

Colombia: Past evolution and future projections of expenditure on the Public Forces (EPF), as a proportion of GDP, 1980-2004
(Short-term analysis)

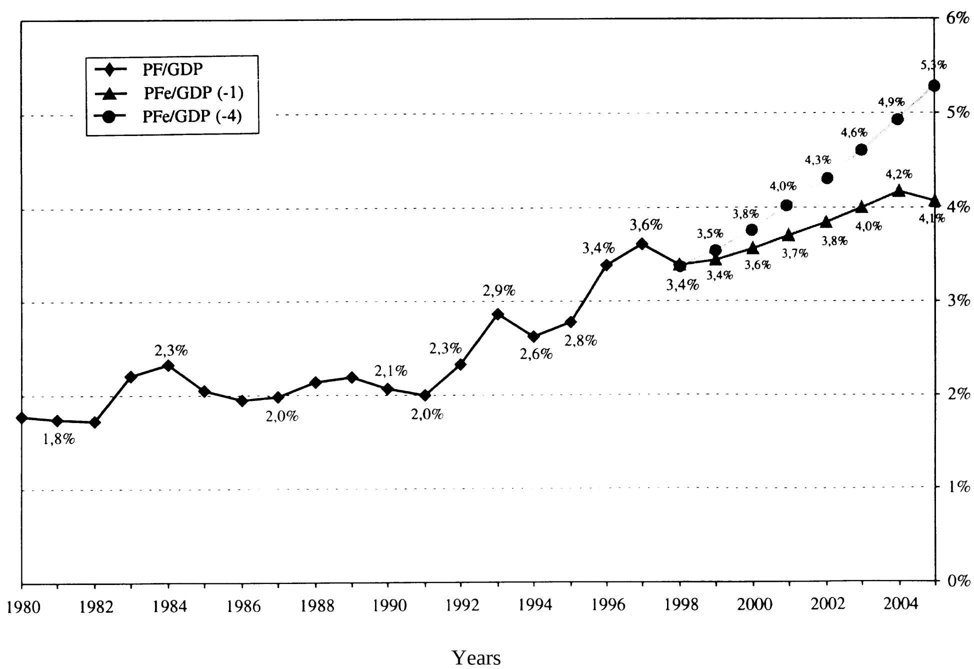


FIGURE 7

Colombia: Past behaviour and future estimates of expenditure on the Public Forces (EPF), as a proportion of central government expenditure (CGE), in the event of a cut in CGE as a proportion of GDP, 1980-2002

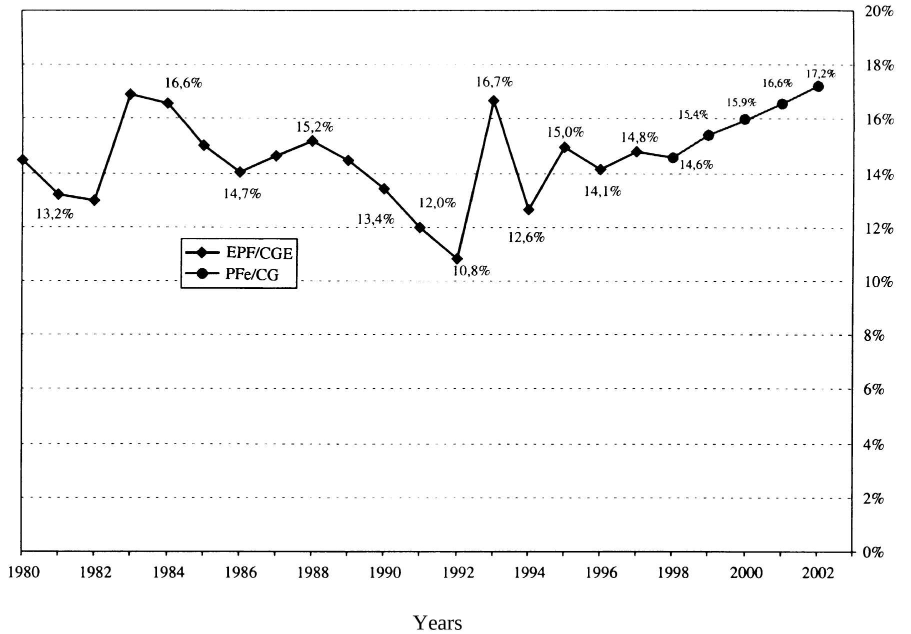
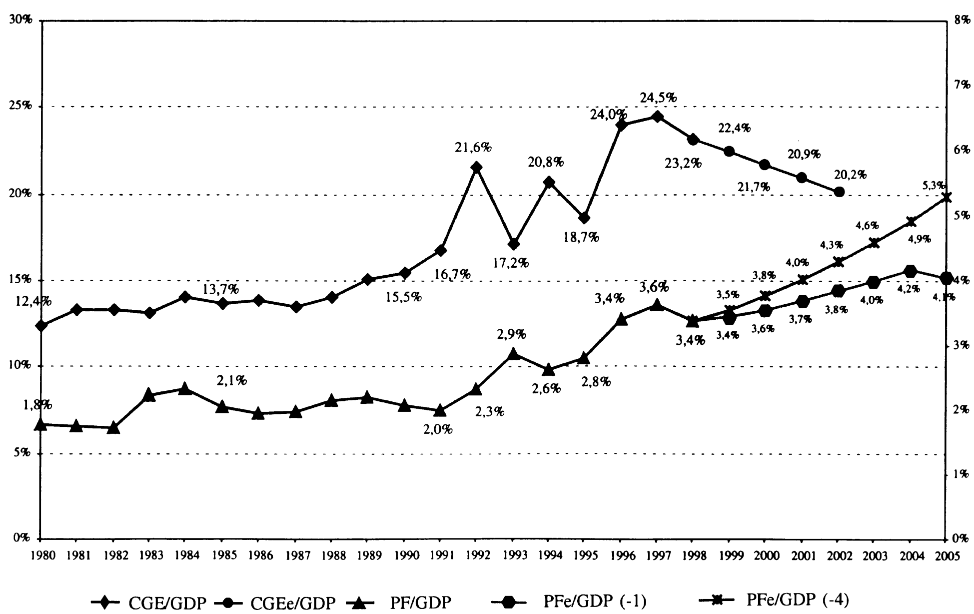


FIGURE 8

Colombia: Behaviour of central government expenditure (CGE) and expenditure on the Public Forces (EPF), as proportions of GDP, in the event of restriction of central government expenditure, 1980-2005



deficit calculated at 0% to 0.1% of GDP in 1999, 0.1% to 0.3% in 2000, 0.2% to 0.6% in 2001, and 0.4% to 0.8% in 2002.

From the econometric standpoint, there is evidence of causality between GDP and EPF. In addition, the long-term models reflect a direct relation, although this causality is not fulfilled inversely. It may be deduced from these results that EPF does not generate growth of GDP, but on the other hand it cannot be asserted that a reduction in EPF will bring an increase in GDP.

As mentioned earlier, the factor which has determined EPF growth in the past has been the purchase of equipment and installations: that is to say, the adjustment variables of the Public Forces budget have been the investment and general expenditure items. At the same time, it may be noted that although there has been an increase in the proportion of GDP devoted to EPF, these particular items have remained within relatively narrow margins. Consequently, if the growing share of payroll expenses is combined with less than proportional growth of total expenditure, the space for investment may become increasingly small in the future.

Thus, if a ceiling is fixed for EPF as a proportion of GDP, the internal dynamics of expenditure will cause payroll expenditure to crowd out investment, if the share of general expenditure in GDP remains constant.

These results highlight the need to make fundamental reforms in the defence sector in order to help reduce central government expenditure. In view of the fact that every year more personnel are incorporated into the sector, which naturally calls for more resources, then if the present trend continues the percentage of GDP devoted to the Public Forces will only cover the pay and pensions of their active and retired personnel.

V

The efficiency of military spending

Analysis of the internal composition of EPF in Colombia shows that the present structure of the Public Forces needs to be reviewed for reasons of efficiency. The plans and programmes carried out in the past were generally aimed at providing more of "the mixture as before". This has had macroeconomic repercussions because there has not been a policy on expenditure which has made it possible to keep EPF within fiscally sustainable limits.

However, rather than going more deeply into the possible impact of military spending on the economy, what is vitally important is to go more deeply into the present cost structure of the country's defence and security apparatus. As already noted, the monetary resources allocated to the sector are not necessarily reflected in greater capacity to provide security. Although the sector represents quite a heavy budgetary burden for the State, its functions are being limited by its own internal structure. Thus, in order to understand the dynamics of the sector and its macroeconomic repercussions, it is essential to analyse the microeconomic aspects of EPF.

In view of this, it would be desirable to begin the cost reduction process by making changes in the areas of personnel management and administration of physical resources. Above all, it is necessary to examine the defence and security sector by considering two aspects of fundamental importance for deciding on lines of action. The first, which is of an organizational nature, is the ratio of operational personnel to administrative and support personnel. The second, which is a matter of implementation, is the way the action of the Public Forces is applied. These two aspects determine the possibility of strengthening these forces in a context of fiscal constraints.

The combat/support ratio represents the number of men needed to provide support for one single soldier in a combat area. In Colombia, there are currently approximately eight support personnel for each combat soldier. If this ratio were substantially modified, the Public Forces would work more efficiently. International parameters indicate that this ratio should be around 3:1. A lighter and faster-moving structure would make it possible to increase fighting power.

The structure of the sector therefore needs to be reappraised. The decisions taken to reduce the administrative personnel (to a support/combat ratio of

3:1, for example) can be of two types, which are not necessarily mutually exclusive. On the one hand, the decision could be taken to apply a policy of reduction of the number of personnel, leading to a reduction of the administrative component of military units and a change in the officer/soldier ratio. This option could reduce the direct costs of military forces, but would not necessarily mean an increase in fighting power; moreover, it would involve greater indirect costs, because it would lead to the early retirement of pensionable personnel and it would be necessary to provide incentives for voluntary resignation or, at least, some viable mechanisms to link up with the labour or educational markets.

On the other hand, it could be decided to carry out a process of reorganization within the Public Forces. This would make it possible to at least double their fighting power with the same personnel. This would create a more efficient structure and reduce the growth rate of the number of personnel, at least in the medium term, which would be more in keeping with the macroeconomic fiscal constraints referred to earlier.

Let us now consider the attack/defence ratio, which is the ratio between the attacking and defending forces. Some of the main signals received by Colombian public opinion regarding the public order situation are reports of guerrilla attacks on isolated military posts, ambushes of patrols, and the occupation of towns or villages. These incidents summarize the military interaction between the Public Forces and the guerrilla. These kinds of armed encounters could therefore serve as a unit of analysis for gaining a realistic idea of the confrontation between the regular forces and the subversives.

If we compare the total number of men in the subversive groups and in the Public Forces, the balance of power would appear to lie with the latter. However, this ratio of numbers of men is no use for an objective analysis, since the combats are never between the whole of the Public Forces and the whole of the guerrilla. Guerrilla war consists precisely of avoiding a confrontation of this type. Consequently, the ratio of forces must be determined in the context of isolated combats preferred by the subversives. In these, we have seen that the guerrilla usually has greater fighting power than the Public Forces, which shows the ineffectiveness of the policy of maintaining a dispersed presence of the latter in areas of conflict. Rather than showing their presence, the Public Forces should concentrate their efforts on making preparations so as to ensure that they have a fighting potential greater than that of the illegal armed groups in these isolated areas, either by becoming more effective in defence or developing a suitable structure for attack. The decision to pursue one or the other of these objectives will depend on the region where the forces are operating, the support given by the community, and the type of outlaw armed groups present in the region.

In order to improve the combat/support ratio and modify the defence/attack ratio, it is clear that it is not necessary to increase the number of personnel, but to reorganize the existing ones. This calls for decisions on two fronts: a change in the present structure of the Public Forces so that there are more combat personnel, and a change in the present attack/defence ratio in order to establish strong points, either as a defensive force or as an offensive one. Past experience has shown that the political need for the Public Forces to show themselves throughout the national territory has been militarily inefficient and economically unsustainable.

The restructuring of the personnel of the Public Forces is a sufficient condition for reducing the pressure of this sector on fiscal resources (efficiency) and a necessary condition for improving results in the military field (efficacy). It will not be possible to improve the results unless the provision of equipment is reviewed also. It is not a question of acquiring more of the same kind of equipment, but of providing the personnel with the right equipment for the present type of combat. This improved provision of equipment must take place both in the operational and the support areas, because if this is not done it will be more difficult to transfer support personnel to combat duties.

VI
Conclusions

Analysis of the dynamics of military spending in Colombia reveals that although the State has devoted relatively few resources to national defence in the twentieth century as a whole, this expenditure increased significantly in the 1990s. Yet if we consider the principles that should justify such spending, it is clear that the Colombian Public Forces are not achieving their objectives in terms of internal security.

The Colombian State is faced with the need to improve the efficiency of the Public Forces for providing citizens with security, while at the same time reducing the cost structure of these forces. These objectives may seem contradictory, but it is politically and militarily essential for the Public Forces to recover their monopoly of the use of arms and it is economically indispensable that they should do so with a more rational cost structure. If this is not done, EPF will be truly unproductive, as the deterioration of the country's democratic institutions will continue and there will be serious imbalances in the State finances.

In the present article, we maintain that it is not enough simply to analyse the macroeconomic impact of a society's expenditure on defence and security. It is essential to go further and analyse the detailed composition of that expenditure, in order to provide a real basis for both macroeconomic and microeconomic analysis. The present composition of this expenditure in Colombia gives grounds for thinking about the difficulties that may be encountered in trying to reduce it.

It can be argued that it is little use having the public finances in order if society itself is not likewise in order. In Colombia, with the current form of expenditure on the Public Forces, it is not likely that the legitimacy of the State can be consolidated, but it is very likely that there will be a deterioration in the public finances. The projection of expenditure on the Public Forces for the immediate future reveals an explosive rate of growth which would bring it to over 5% of GDP by the year 2005.

Such results are incompatible with the required readjustment of the public finances, which calls for a radical reduction in central government spending in the short term. The present structure of expenditure is not compatible with sound fiscal policy. On the other hand, fixing a ceiling on the percentage of GDP to be devoted to the Public Forces does not represent an efficient solution to the problem of the growth in EFP unless reforms are also made in its internal dynamics; as we saw earlier, the upward trend in this expenditure, due to payroll-linked factors, would crowd out investment and operating expenditure to such a point that the available resources would only cover pay and pensions. A measure that would indeed generate savings in the budget of the Ministry of National Defence, however, would be the adoption of reforms in the following areas: i) the dynamics of the budget and the process of acquisitions, and ii) management of personnel and physical installations.

The most significant savings in the defence sector are necessarily associated with personnel management. Expenditure on this item accounts for 73% of defence and security spending. It is therefore essential to undertake a review of the whole personnel management system. In this respect, consideration could be given to such measures as: i) modifying the system of pay and allowances; ii) increasing retirement age; iii) reducing the number of personnel, and iv) changing the ratio between combat forces and support and administrative personnel.

Modifying the system of pay and allowances is the most radical recommendation, since it would involve the incorporation of Ministry of National Defence personnel into the general social security system. Although it would be the most direct solution to the structural problem, it is also the most unlikely, because of its inherent political difficulties. Reduction of the number of active personnel through early retirement programmes is the most viable option. It is also imperative to improve the ratio between combat forces and support and administrative personnel, since this is the easiest way of increasing fighting power with the current number of personnel.

In order to solve the personnel problems it will be necessary to take very far-reaching decisions, each of which will have profound political, military, economic and social repercussions. The adoption of any of these decisions will depend to a large extent on such broad considerations as the state of the economy, the political climate, public opinion or the prevailing security situation. Nevertheless, these problems must necessarily be tackled and settled in a clear manner, for the sake of the security and economic welfare of the country.

The problem deriving from the internal conflicts in the country will not be solved by reducing the budget of the Ministry of National Defence. It is an inevitable fact that military spending will continue to exist and that internal security and external defence will continue to require resources that must be provided. The country is investing in this just as a citizen invests in an insurance policy. Consequently, the coverage must be effective and must be as broad as possible.

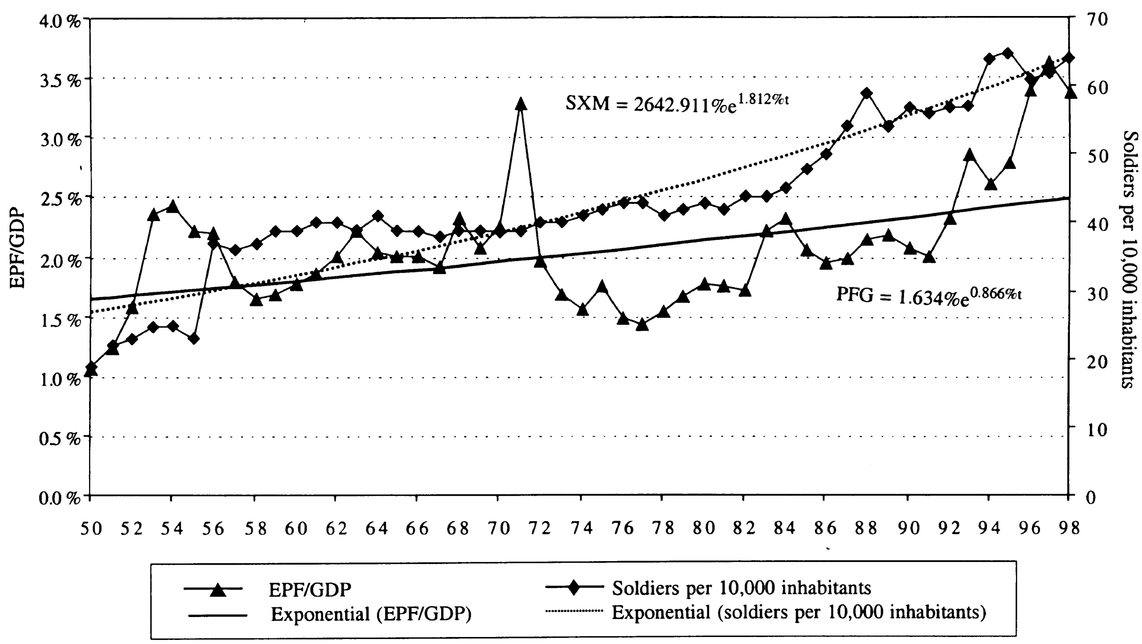
In this article we have pointed out that, because of the present cost structure of the country's security and defence apparatus, increasing the monetary resources allocated to it is not necessarily reflected in greater capacity to provide security. There are many areas where ways of multiplying the effect of each peso invested in national security could be explored. Coming to grips with the conflict, however, requires a strong political will and a determined attitude on the part of society at large, as well as the availability of material and financial resources.

(Original: Spanish)

Annex. Statistical and econometric results

FIGURE A1

Colombia: The Public Forces, as a proportion of population and GDP, 1950-1998 [a]



Source: Office of the Comptroller-General of the Republic of Colombia.
[a] PFG = Expenditure on the Public Forces as a proportion of GDP (EPF/GDP).
SXM = Soldiers per 10,000 inhabitants.

TABLE A1

Colombia: Composition of expenditure on the Public Forces

(Percentages)

	Remune-ration	Operations	Investment
1980	69.1	20.7	10.2
1981	74.4	19.1	6.5
1982	77.3	16.9	5.7
1983	71.0	19.3	9.7
1984	68.3	10.3	21.4
1985	71.7	12.7	15.5
1986	72.3	9.0	18.6
1987	71.5	11.0	17.5
1988	65.9	11.5	22.6
1989	64.8	9.3	26.0
1990	67.8	10.0	22.2
1991	72.4	16.2	11.3
1992	68.3	17.6	14.1
1993	62.8	20.3	16.9
1994	77.0	16.8	6.2
1995	79.6	15.4	5.0
1996	75.5	13.5	11.1
1997	67.3	13.5	19.2
1998	75.1	16.9	7.9
1980-1998	71.4	14.8	13.8
1980-1989	70.2	13.4	16.4
1990-1998	72.1	15.6	12.3
1980-1992	70.0	13.8	16.2
1993-1998	72.9	15.8	11.3

Source: Office of the Comptroller-General of the Republic of Colombia.

TABLE A2

Colombia: Share of expenditure on the Public Forces in GDP

(Percentages)

	Remune-ration	Operations	Investment	Total
1980	1.2	0.4	0.2	*1.8*
1981	1.3	0.3	0.1	*1.8*
1982	1.3	0.3	0.1	*1.7*
1983	1.6	0.4	0.2	*2.2*
1984	1.6	0.2	0.5	*2.3*
1985	1.5	0.3	0.3	*2.1*
1986	1.4	0.2	0.4	*1.9*
1987	1.4	0.2	0.3	*2.0*
1988	1.4	0.2	0.5	*2.1*
1989	1.4	0.2	0.6	*2.2*
1990	1.4	0.2	0.5	*2.1*
1991	1.5	0.3	0.2	*2.0*
1992	1.6	0.4	0.3	*2.3*
1993	1.8	0.6	0.5	*2.9*
1994	2.0	0.4	0.2	*2.6*
1995	2.2	0.4	0.1	*2.8*
1996	2.6	0.5	0.4	*3.4*
1997	2.4	0.5	0.7	*3.6*
1998	2.5	0.6	0.3	*3.4*
1980-1998	1.8	0.4	0.3	*2.5*
1980-1989	1.4	0.3	0.3	*2.0*
1990-1998	2.1	0.5	0.4	*2.8*
1980-1992	1.4	0.3	0.3	*2.1*
1993-1998	2.3	0.5	0.4	*3.1*

Source: Office of the Comptroller-General of the Republic of Colombia.

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Reforms to *health system financing* in Chile

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The reforms made in the early 1980s profoundly changed the structure and functioning of the health sector in Chile in both the private and the public subsectors. In spite of the considerable advances made since 1990, however, the public-private configuration resulting from those reforms has not allowed the shortcomings in terms of resource allocation and the access of the population to health services to be overcome. A proposal for reform of the sector should be aimed at developing mechanisms to raise the efficiency and efficacy of the resources allocated to it, as well as incorporating and improving solidarity-based mechanisms which will help to tackle and solve the problems of health service access afflicting a substantial part of the population. This dual challenge is by no means easy, since it is necessary to cope with growing demand in a context of shortage of resources. The article describes the Chilean financing model and proposes that the present public-private configuration of the health sector must be redefined in order to make possible greater solidarity in financing, reduce the problem of adverse selection of risks, and permit better linkages between the private and public subsectors, both in the field of financing and in the provision of health services.

I

Organization of the health sector

The reforms initiated in the early 1980s changed the structure and functioning of the health sector in Chile. In particular, the creation in 1981 of Health Insurance Institutions (Isapres) allowed the private sector to begin to play a more active role in health sector finance.

The main reforms made at that time were: i) the establishment of the National Health Fund (FONASA), a financial institution for collecting, administering and distributing State resources for the health sector; ii) the creation of Health Insurance Institutions (Isapres); iii) the decentralization of the National System of Health Services (SNSS) into 27 area health services covering the national territory, each one providing health attention through systems made up of hospitals of different levels of complexity, urban and rural outpatient clinics and rural medical aid posts, and iv) the decentralization of primary health attention.

As a result of these reforms, the Chilean health system now has a dual structure under which the public and private subsectors both carry out functions in the financing (insurance schemes) and production of health services.[1]

II

Features of the Chilean model

The main sources of finance are: i) the compulsory health insurance contributions of all dependent workers and pensioners, equivalent to 7% of taxable income; ii) financial resources from the national budget, mainly channelled through FONASA. In addition, although there are no systematic statistical data on the direct supplementary payments that users make when they use the private services, such payments to private and public suppliers have become a by no means insignificant source of funds.

One of the most outstanding features of the Chilean system is that the health insurance contributions can be paid into either of the two health systems, which operate side by side but on very different principles. Thus, contributors can choose between the public health service insurance system (FONASA) or the private health insurance schemes (the Isapres). If the compulsory contributions are paid into FONASA, the contributor and his dependants will be enrolled in the public health system. If he chooses to pay into an Isapre, the contributor forms part of the private health system.

FONASA has a dual role. On the one hand, it acts as an agency which collects, administers and allocates public resources, while on the other it acts as a public health insurance scheme representing contributors and their dependants. In its role as an insurance scheme, it operates like a traditional social security system, as the benefits supplied are not linked to the contributions paid. In principle, every beneficiary has access to the same package of benefits, whatever his level of contributions. In this sense, FONASA incorporates financial mechanisms for the redistribution of income from the richer to the poorer sectors. Together with this income redistribution, it also applies the solidarity typical of a health insurance system that serves both the healthy and the sick.

Persons classified as indigent, who cannot pay contributions, are beneficiaries of the public system

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[1] Regulation of the health system is the responsibility of the Ministry of Health, in accordance with the Health Code, which covers all matters relating to the promotion, protection and recovery of the health of the population. In addition, in 1990 the Government set up the Superintendency of Health Insurance Institutions: a quasi-autonomous public body responsible for supervising and monitoring the Isapres.

and thus part of the financial responsibility of FONASA, just like regular contributors and their dependants. Indigent beneficiaries receive free attention in the primary health care clinics run by the municipalities or, in more complicated cases, in hospitals that form part of the public system (the "institutional" modality). Contributors and their dependants can receive attention in the public health system or be treated by private suppliers through the "free choice" modality offered by FONASA, in which case they must make a co-payment from their own pocket for the services provided.[2]

The network of suppliers under the institutional modality consists of the health services belonging to the SNSS, which come under the Ministry of Health, and the local primary health clinics, which come under the municipalities. At present, around 75% of the hospital beds in the country belong to the SNSS. Under the free choice modality, beneficiaries can use the services of any private suppliers officially registered with FONASA.

As regards the private system, the Isapres act as insurance companies offering health insurance under a contract which defines the degree of coverage and types of benefits for the individual subscriber or the subscriber and his family unit (spouse, children or other dependants). These contracts operate like an individual insurance policy: the benefits offered vary according to the premium paid and the medical risk category of the insured person(s).[3] Thus, two persons paying the same contributions but belonging to different age cohorts (which mean different medical risks) receive different levels of coverage and benefits. The contracts with the beneficiaries last for one year, after which the Isapres have the right to change their coverage and cost.[4] Generally speaking, for a given level of medical risk the amounts refundable and the maximum levels of coverage increase in proportion to the premium paid.

It is calculated that there are currently over 8,000 different health insurance plans available on the market (Celedón and Oyarzo, 1998). This is because, as the contributions are predetermined by the Isapres, the latter adjust the plans they offer as a function of the contributions and medical risks of their clients.[5] As we shall see below, this multiplicity of health plans obviously has important effects on the capacity of users to choose the right plans and thus reduces the efficiency of resource allocation.

The plans offered by the Isapres must incorporate all the types of health attention offered by FONASA. What differentiates one health contract from another is the degree of financial coverage of the attention received (i.e., the size of the co-payment to be made by the user) and the inclusion of types of attention over and above those offered by FONASA. The levels of financial coverage are determined in line with scales of charges fixed by the Isapres, which do not always reflect the market value of the types of attention in question. If the gap between the prices fixed by the insurers and those charged by the suppliers widens, this increases the financial burden on the user, because of the larger co-payment he must make.

The network of suppliers of the system of Isapres consists mainly of private suppliers: either independent or contractually linked with the Isapres. Generally speaking, there is no integrated system combining the financing and supply of attention (along the lines of the Health Maintenance Organizations (HMOs) in the United States, for example); instead, the Isapres tend to reimburse the payments made by users for health attention, subject to the established ceilings of the coverage provided.

[2] Higher-income contributors who receive treatment in establishments belonging to the National Health Service must make a co-payment. Beneficiaries in group A (indigents), as well as those in group B (persons whose income does not exceed the minimum wage), are treated free in public establishments. Those who are in group C (with an income that exceeds the minimum wage by not more than 40%) must make a co-payment of 10%, while those in group D (all higher incomes) must make a co-payment of 20%.

[3] In reality, there are two types of Isapres: open and closed. Open Isapres operate like insurance companies, with the insurance provided depending on the premium paid and the individual risk category of the assured. Closed Isapres usually have contracts with well-defined groups of persons, generally trade unions or workers in the same firm, so that the medical risk implicit in the scheme offered is of a collective nature and is a function of the risk category of the group of members.

[4] In the event of disagreement, the Superintendency of Isapres is empowered to act as a binding arbitrator between the Isapres and their clients. The powers of the Superintendency in this respect are naturally limited to those laid down in the corresponding legislation.

[5] This phenomenon is due to the fact that the compulsory contribution of 7% of taxable income determines the prices of the policies in a manner which is exogenous to the insurance market, and the insurers must configure the insurance coverage offered as a function of a given price but different medical risks. The great variety of plans is therefore due partly to the mixed public-private nature of the current situation.

III

Coverage and financing of the health system

In 1997 the public health subsector represented approximately 2.7% of GDP while the Isapre subsector represented 1.7%[6] (table 1). As regards population coverage, in the same year approximately 64% of the population was covered by FONASA and 26% were members of Isapres.[7]

In the financing of the public health subsector, the relative importance of the fiscal contribution has been growing in recent years, so that in 1997 it represented 50% of FONASA's income. As a proportion of GDP, this contribution has practically doubled since the first administration of the Democratic Coalition (the "Concertación"), rising from 0.7% in 1989 to 1.3% in 1997 (table 1).

The compulsory health insurance contributions are the second source of finance of the public subsector. Although their relative weight went down slightly in the 1990s, in 1997 they represented 32% of total income, which, together with the fiscal contribution, accounted for nearly 82% of total finance, the remaining 18% being made up of the co-payments by FONASA beneficiaries and other revenue.

In the Isapre system the main source of finance is the contributions (premiums) paid by members, which accounted for an average of 93% between 1990 and 1997. Most of the remainder –an average of approximately 4% of total income between 1990 and 1997– is made up of the sale of voluntary plans supplementary to the plans purchased with the compulsory contributions. The fiscal contribution reflects the subsidies received by Isapre members, especially the "extra 2%" subsidy.[8]

In spite of the efforts made by the public subsector –public health expenditure practically doubled in real terms between 1990 and 1997– the difference with the private subsector in terms of expenditure per beneficiary continues to be substantial. Thus, in 1989 the expenditure per beneficiary in the Isapre system was three times that of FONASA, though this difference had been halved to 1.5 times in 1997.

The levels of contributions also display big differences between the public and private subsectors. In 1989 the average contribution in the Isapres was seven times the average for FONASA, and in 1997 it was still four times greater.

If we look at the distribution of the population between the public and private subsectors by income levels (table 2), we see that in the first four quintiles of the income distribution scale most persons are members of the public system. Only in the fifth quintile (the richest 20% of the population) is there majority membership of Isapres. This tendency has been maintained throughout the 1990s.

With regard to distribution by age groups (table 3), we see that as the age groups rise the people in them tend to be mainly concentrated in FONASA. Even among the richest 20% of the population, after the age of 50 most people likewise tend to be in FONASA.

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[6] As this figure does not include co-payments made in the private sector it underestimates global expenditure on health. Different estimates place total spending on health at between 5 and 6% of GDP.

[7] The calculations of coverage are based on the number of contributors under Law No. 18.469, which in 1997 meant some 9,382,000 persons in the public system and some 3,882,000 in the Isapres, representing altogether 90% of the population. The remaining 10% comprises persons belonging to insurance systems with smaller coverage, such as the armed forces and the police, and persons who do not have any health insurance.

[8] Among the subsidies granted to persons enrolled in the Isapres is the extra 2% subsidy established in 1986. This subsidy cannot exceed 2% of a member's taxable income and is granted as a supplement to low-income members whose 7% contribution is not enough to acquire a private health insurance plan. It should be noted that this subsidy is being seriously questioned and its elimination is currently under discussion.

TABLE 1

Chile: Financing and coverage of health systems, 1984, 1986 and 1988-1997

	1984		1986		1988		1989		1990		1991	
	Isapres	FONASA	Isapres	FONASA	Isapres	FONASA	Isapres	FONASA	Isapres	FONASA	Isapres	FONASA
Sources of financing (% of GDP)	0.4	2.9	0.7	2.4	0.9	2.1	1.2	2.1	1.4	2.1	1.5	2.2
Fiscal contribution	...	1.2	...	0.9	...	0.8	...	0.7	-	0.8	-	0.9
Contributions	0.4	0.9	0.6	0.9	0.9	0.8	1.1	0.9	1.3	0.9	1.4	0.9
Co-payments	...	0.4	...	0.3	...	0.2	...	0.2	...	0.2	...	0.2
Other revenue	...	0.3	-	0.3	-	0.3	0.1	0.3	0.1	0.2	0.1	0.3
Sources of financing (% of total)	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Fiscal contribution	...	42.6	...	38.0	...	37.1	...	33.6	3.2	37.8	3.1	41.8
Contributions	100.0	33.0	94.4	36.3	98.7	37.2	94.9	43.1	91.2	42.9	91.6	39.0
Co-payments	...	12.4	...	12.5	...	10.3	...	8.9	...	8.1	...	7.2
Other revenue	...	12.0	5.6	13.2	1.3	15.5	5.1	14.5	5.6	11.2	5.2	12.0
Sources of financing (1990=100)	18	87	35	83	58	94	84	99	100	100	115	112
Fiscal contribution	...	99	...	84	...	92	...	88	100	100	113	124
Contributions	18	67	36	70	63	81	87	99	100	100	116	102
Co-payments	...	134	...	129	...	120	...	108	...	100	...	99
Other revenue	-	93	34	97	12	128	73	125	100	100	108	120
Average expenditure per beneficiary (1997 pesos per beneficiary)	134 142	37 868	102 104	36 714	118 058	40 882	128 617	43 193	129 115	44 217	123 139	50 633
Average contribution (1997 pesos per contributor)	356 156	25 762	276 874	28 129	286 759	34 273	319 003	43 111	309 711	45 144	288 455	48 480
Beneficiaries (% of total population)	3.1	83.4	7.5	79.0	11.4	77.6	13.5	76.0	16.0	73.9	19.2	71.2

	1992		1993		1994		1995		1996		1997	
	Isapres	FONASA	Isapres	FONASA	Isapres	FONASA	Isapres	FONASA	Isapres	FONASA	Isapres	FONASA
Sources of financing (% of GDP)	1.6	2.4	1.8	2.6	1.8	2.7	1.8	2.5	1.8	2.7	1.7	2.7
Fiscal contribution	0.1	1.1	0.1	1.2	0.1	1.2	0.1	1.2	0.1	1.3	-	1.3
Contributions	1.5	0.9	1.6	1.2	1.7	1.2	1.7	1.2	1.7	1.3	1.6	0.9
Co-payments	...	0.2	...	0.2	...	0.2	...	0.2	...	0.2	...	0.2
Other revenue	0.1	0.3	0.1	0.3	0.1	0.4	-	0.3	-	0.4	-	0.3
Sources of financing (% of total)	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Fiscal contribution	3.3	43.8	4.7	45.7	4.6	46.8	4.5	48.0	3.8	48.7	2.6	49.4
Contributions	91.9	35.7	90.6	34.2	91.9	32.4	93.6	31.8	93.9	31.6	95.3	31.6
Co-payments	...	6.9	...	6.9	...	6.5	...	6.6	...	6.6	...	6.7
Other revenue	4.8	13.6	4.7	13.3	3.5	14.3	1.9	13.6	2.3	13.1	2.1	12.3
Sources of financing (1990=100)	133	131	154	147	167	162	184	173	196	187	197	202
Fiscal contribution	138	153	228	179	243	202	258	221	233	243	160	265
Contributions	134	109	153	118	169	123	189	129	203	138	206	149
Co-payments	...	111	...	125	...	132	...	142	...	153	...	168
Other revenue	113	158	119	169	95	202	62	209	76	216	71	220
Average expenditure per beneficiary (1997 pesos per beneficiary)	122 338	61 561	123 607	71 075	124 824	78 974	133 617	80 690	142 669	86 956	142 858	92 842
Average contribution (1997 pesos per contributor)	284 212	54 697	282 194	62 502	287 187	67 534	309 998	71 850	322 934	78 121	316 606	85 284
Beneficiaries (% of total population)	22.1	67.5	24.8	64.8	26.2	63.3	26.5	65.1	26.4	64.5	26.5	64.1

Source: Superintendency of Isapres, *Boletín Estadístico*, various issues, and FONASA, *Boletín Estadístico*, various issues.

TABLE 2

Chile: Distribution of population, by type of health insurance and income
(Percentage coverage)

	Quintile 1			Quintile 2			Quintile 3		
	Public system	Isapres	Rest[a]	Public system	Isapres	Rest	Public system	Isapres	Rest
1990	85.0	2.8	12.2	78.6	6.5	14.9	69.6	11.3	19.1
1992	83.3	4.9	11.9	74.5	11.8	13.8	64.4	17.5	18.1
1994	85.7	5.9	8.4	75.3	13.8	10.9	64.6	22.3	13.1
1996	84.2	5.4	10.4	71.2	14.6	14.2	59.5	23.3	17.3

	Quintile 4			Quintile 5		
	Public system	Isapres	Rest	Public system	Isapres	Rest
1990	57.6	21.6	20.8	36.8	41.2	22.0
1992	50.8	28.6	20.6	29.1	47.4	23.5
1994	48.8	34.4	16.8	31.0	51.4	17.6
1996	44.3	35.2	20.5	26.5	55.2	18.3

Source: CASEN Surveys for 1990, 1992, 1994 and 1996.
[a] Rest = Armed Forces, Private Individuals, Other Systems and Don’t Know.

TABLE 3

Chile: Distribution of population, by type of health insurance, age and income

	Quintile 1				Quintile 2				Quintile 3			
Age	Public system	Isapres	Armed Forces	Rest [a]	Public system	Isapres	Armed Forces	Rest	Public system	Isapres	Armed Forces	Rest
00-20	85.4	5.5	0.4	8.7	69.9	16.6	3.8	9.7	54.4	28.0	4.8	12.8
21-50	81.8	6.1	0.4	11.8	67.6	16.4	3.1	13.0	54.4	26.6	3.5	15.6
51-64	87.3	2.9	0.4	9.4	81.8	6.0	1.5	10.7	72.4	12.1	2.6	12.9
65 or more	89.5	0.8	0.5	9.2	91.1	1.1	0.9	6.9	89.4	1.6	2.2	6.8
Total	*84.2*	*5.4*	*0.4*	9.9	*71.2*	*14.6*	*3.1*	*11.0*	*59.5*	*23.3*	*3.7*	*13.5*

	Quintile 4				Quintile 5			
Age	Public system	Isapres	Armed Forces	Rest	Public system	Isapres	Armed Forces	Rest
00-20	36.6	42.7	5.5	15.2	19.1	66.1	2.6	12.1
21-50	37.9	40.4	4.5	17.2	21.8	60.1	2.5	15.6
51-64	59.6	20.3	7.2	13.0	37.1	39.8	6.3	16.9
65 or more	79.4	5.9	6.1	8.7	55.5	21.8	9.8	13.0
Total	*44.3*	*35.2*	*5.3*	*15.2*	*26.5*	*55.2*	*3.8*	*14.6*

Source: CASEN Survey, 1996.
[a] Rest = Private Individuals, Other Systems and Don’t Know.

As older people represent higher medical risks, the logic of private insurance schemes will naturally cause the insurance companies to discriminate against this class of insurance risks, either by charging higher premiums or by reducing the levels of coverage. This phenomenon is known in the economic literature as “cream skimming” or skimming off the cream. Such risk discrimination not only affects the elderly but also anyone who has a higher risk of falling sick (such as relatively older persons or those suffering from chronic ailments) and poorer persons. These kinds of people represent “bad risks” for private insurance schemes. In this sense, as the Isapres are acting as casualty insurance agents in a highly deregulated market, they tend to behave in a manner that encourages such discrimination.

The existence of a solidarity-based insurance system such as FONASA, which acts as a “lender of last resort”, together with the capacity of the Isapres to skim off the cream, means that under the Chilean model access to health services is determined by income levels and levels of medical risk. In this context, FONASA tends to concentrate those with the lowest incomes and the highest medical risks, while the Isapres attract people of high income and low health risk. This segmentation of the population produced by the way the current public-private structure operates in Chile adversely affects the equity of the system, since the levels of per capita expenditure and average numbers of cases of medical attention per beneficiary differ significantly between the two subsectors (Larrañaga, 1997).

IV

The public subsector

As noted earlier, public expenditure on health has increased significantly in the 1990s. Thus, between 1990 and 1997, in real terms, this expenditure increased by 100% and the fiscal contribution grew by 164%, rising from 0.8% to 1.3% of GDP (table 1).

In spite of these high growth rates of expenditure, however, there are still serious deficits as regards the public sector’s capacity to provide health services for the population, and moreover most of the health services belonging to the SNSS have problems of finance and manning.

The main item in public health expenditure is wages and salaries, which came to 40% of the total in 1997 (table 4). Unfortunately, under the current rules the wages and salaries of public employees are not directly linked to productivity and performance criteria, but rather to seniority, which means that pay increases do not necessarily correspond to improvements in the health services. Investment expenditure, for its part, increased from 3.6% of total expenditure in 1989 to 9% in 1994 and 7% in 1997. Although this expenditure is indispensable, and also unavoidable in view of the state of the SNSS health services at the end of the 1980s, it is also true in this case too that not all the expenditure on infrastructure is automatically reflected in improvements in the services provided.[9]

One of the main aims in the reforms made in Chile has been to improve the efficiency and global management of the available resources. In view of the chronic scarcity of financial resources affecting the health sector, better resource allocation is crucial for coping with the growing demands.

In the public subsector, efforts have been made to increase resource allocation efficiency through decentralization policies and changes in the payment and budgeting mechanisms of hospitals and primary attention centres.

The processes of decentralization of the SNSS and primary health attention begun in the 1980s were supplemented in 1994 by the law on personnel regulations for the municipalized health services. As well as trying to improve the labour situation of these workers, this law sought to establish management commitments between the area health services and the municipalities regarding the coverage of health activities.

[9] It should be noted, however, that improvements in the infrastructure and level of equipment make it possible to increase the quality of the treatment provided, which does affect the average number of days of hospitalization and the possibilities of treating certain ailments.

TABLE 4

Chile: Public expenditure on health, 1980-1997

(As a percentage of total expenditure)

Year	Remuneration	Consumer goods and services	Investment	Current transfers[a]	Social security benefits[b]	Other expenditure	Total expenditure
1980	35.0	19.9	3.6	6.0	25.9	9.6	100.0
1981	35.8	18.2	2.6	6.7	28.9	7.8	100.0
1982	34.3	20.3	2.3	8.0	29.7	5.4	100.0
1983	34.2	22.3	0.8	6.2	28.0	8.5	100.0
1984	35.0	22.6	1.7	8.2	25.9	6.6	100.0
1985	35.4	23.0	2.3	7.2	26.3	5.9	100.0
1986	35.8	22.6	1.6	6.7	25.9	7.4	100.0
1987	36.1	25.3	2.1	9.3	20.1	7.1	100.0
1988	34.6	27.5	3.0	6.6	21.3	7.1	100.0
1989	33.3	26.0	3.5	12.3	19.0	5.8	100.0
1990	32.1	26.7	2.6	12.1	17.5	9.0	100.0
1991	33.4	28.0	2.9	12.2	16.4	7.1	100.0
1992	33.5	26.2	9.4	11.4	15.5	4.0	100.0
1993	37.0	24.5	8.0	10.6	15.0	4.8	100.0
1994	37.7	24.1	8.8	9.2	14.5	5.7	100.0
1995	39.2	25.2	8.0	9.3	14.7	3.5	100.0
1996	39.3	25.6	7.4	9.5	15.1	3.1	100.0
1997	39.9	24.9	6.5	8.9	15.6	4.3	100.0

Source: Department of Marketing, FONASA.

[a] Current transfers = National Supplementary Nutrition Programme + Unified Family Allowance Fund.

[b] Social security benefits = Subsidies + curative medical care + compensation payments.

Traditionally, the transfers of resources from FONASA to the public health establishments (which cover around 90% of the financial needs of those establishments) have been based, on the one hand, on past budgets, mainly to cover the payment of wages and salaries, and on the other, on a system of billing for services rendered introduced in 1978 and designed to cover expenditure on goods and services. Investment resources are allocated from the central level according to discretionary and rather unclear criteria (Lenz, 1995).

This manner of distributing resources tends to foster serious inefficiency in their allocation and management. As the budgetary inertia rewards higher expenditure and punishes saving (because this would lead to future budget cuts), there are increased incentives for increasing expenditure, regardless of considerations of quality and appropriateness. The system of payment and budgeting affects the quality and cost of the services provided.

International experience reflects a growing consensus on the disadvantages of retrospective payments.[10] Most countries have tried to progress towards resource allocation formulas linked with criteria of efficiency and efficacy. Among these systems are per capita payment, payment per health episode, and diagnosis-related payment (Lenz and Muñoz, 1995).

In the case of Chile, the changes in the mechanisms for the transfer of financial resources have followed this trend. In the establishments belonging to the SNSS, the system of billing for services rendered has been changed through the introduction of systems of prospective payment or payment by results. Experiments are currently being made in the use of diagnosis-related payment (DRP) and prospective payment for services (PPS).

The DRP system is being applied in secondary and tertiary-level establishments in about 17 of the 27 area health services belonging to the SNSS. This system involves the payment of a predetermined amount depending on the diagnosis and currently

[10] Such payments include payments for services rendered, payments based on past budgets, and payments per day of attention.

covers 26 of the most frequent types of attention. For those types of attention which do not have a predetermined DRP value, the PPS system of payment for the attention actually given is used. This system covers the less frequent types of attention and those cases where the original diagnosis made on admission subsequently involves other types of attention.

In spite of the efforts to introduce mechanisms such as DRP and PPS, the systems of resource allocation in the public health subsector continue to operate in a bureaucratic and very inflexible manner. This is mainly because between 70 and 80% of the resources are still allocated on the basis of past budgets and are used primarily to finance wages and salaries in labour contexts where there is little flexibility.

For the financing of primary health attention, it has been proposed that the system of billing for services rendered in municipal establishments should be replaced by a per capita system of payment.

The system of billing for services rendered in municipal establishments in force since 1981 operates in a similar manner to the system of billing for services rendered. The payments are made on the basis of a list of the types of attention given in municipal establishments. Because of the volumes of claims for payment made by the municipalities, a ceiling was established for the maximum amount of such claims in each region. The regional ceiling is in the hands of the Intendente (governor) of each region, who is empowered to define ceilings for each of the communes (sub-regional divisions) under his jurisdiction (Lenz, 1995).

It is currently being proposed that the system of billing for services rendered in municipal establishments should be replaced with a system of prospective per capita payments. The amount of resources transferred per beneficiary would depend on whether the municipality was urban or rural and on its level of poverty. This scheme, which is currently in operation in 310 communes, makes it possible to link the transfer of financial resources more clearly with the volume of treatments or consultations given and the economic and social conditions of the municipality, thus having a positive effect on equity.

V

The private subsector

Since the system of Isapres was set up in 1981 its population coverage has grown rapidly. As from 1994 it stabilized at around 26% of the population, and in 1997 it accounted for 64% of total health insurance contributions, equivalent to 1.3% of GDP (table 1).[11]

Although the Isapres have tried to expand their universe of beneficiaries towards middle-income sectors, their members still tend to be concentrated in the higher levels of the income distribution scale (table 2). Even so, the average real taxable income of the members of open Isapres went down by 31% between 1984 and 1997: from 442,605 pesos to 305,061 pesos at December 1997 prices (table 5).

As already noted earlier, the Isapres act as individual risk insurance companies. Unlike FONASA, the rules on contributions or the purchase of insurance from these institutions do not include solidarity-based mechanisms in matters of finance.[12]

The foregoing reflects the fact that equity is not one of the objectives of the Isapre system. The arguments put forward in favor of the establishment of Isapres were based upon the pursuit of efficiency. It was maintained that the introduction of market mechanisms for both the provision of services and financing which would facilitate and stimulate the capacity of users to make a choice would increase efficiency in resource allocation in the private subsector, with the challenges in terms of equity and solidarity being left in the hands of the public subsector.

[11] In 1998, for the first time since they were set up, the growth rate of the Isapres' portfolio was negative: in June of that year the number of beneficiaries of the system went down by 0.6% compared with the same period of the preceding year.

[12] They do, however, display the type of solidarity typical of risk aggregation mechanisms: i.e., between the healthy and the sick.

TABLE 5

Chile: Evolution of average real taxable income of Isapre members, 1984-1997
(In December 1997 pesos)

Year	Type of Isapre		
	Open	Closed	*Total, whole system*
1984	442 605	495 240	*452 418*
1985	336 392	431 760	*350 142*
1986	341 911	502 865	*364 365*
1987	305 990	456 471	*321 788*
1988	319 764	455 990	*332 755*
1989	311 725	475 954	*326 208*
1990	300 593	476 640	*314 807*
1991	287 043	486 070	*300 545*
1992	281 768	501 854	*294 298*
1993	275 126	507 368	*286 254*
1994	272 804	505 150	*282 442*
1995	294 247	514 123	*302 608*
1996	308 504	534 654	*317 060*
1997	305 061	519 334	*312 782*

Source: Superintendency of Isapres, *Boletín Estadístico,* various issues.

International experience, like that of Chile, shows that the imperfections in the health market mean that efficiency gains are not ensured simply through the free play of supply and demand.[13]

One of the main elements in the problem of efficiency (and of course of equity) is the incentive for risk selection in insurance markets. If the profits of the insurers are closely related with discrimination of risks ("skimming off the cream"), it is unlikely that they will have much incentive to seek major gains in efficiency. On the contrary, they will be encouraged to avoid accepting high-risk clients rather than promoting improvements in their resource management.

In the case of Chile, the current public-private structure, together with a highly deregulated market, has permitted and encouraged cream skimming and the existence of substantial cross-subsidies, as we shall see below.

Another problem associated with individual insurance markets is the high cost of administration and sales. The high cost of the latter is due to the need to compete for clients in a market of highly homogeneous products which differ little from each other. In Chile, although the share of administration and sales costs has been going down it is still high. In recent years, administration and sales costs have stabilized at around 20% of total costs (table 6).

In order to bring in greater regulation and supervision of the Isapre system, in 1990 the Superintendency of Health Insurance Institutions was set up. This institution is responsible for enforcing the rules on contracts between the Isapres and users laid down in Law No. 18,933. This law also lays down arbitration procedures for dealing with and settling disputes between the Isapres and contributors and/or beneficiaries.

In 1995 these rules were amended through Law No. 19,381, mainly with the objective of improving the regulatory capacity of the Superintendency and providing greater protection for users. Among other things, the amendments made: regulate and standardize the information that the Isapres and the Superintendency must provide to users; regulate the price system for the elderly; regulate exclusions applied in the contracts and lay down rules on pre-existing ailments; regulate the way surpluses of contributions must be managed, through individual savings accounts for the workers involved; and establish a reference list of types of treatment, based on the FONASA list (Celedón and Oyarzo, 1998). In 1997 a "primer" was established to facilitate comparisons between different health plans.

[13] Among the market flaws are the uneven access of suppliers and users to information and the problems of moral hazard, adverse selection and "cream skimming". Public insurance systems, on the other hand, have problems of free riders.

TABLE 6

Structure of expenditure of Isapres, 1984-1997

(In millions of pesos of each year)

Isapre system as a whole	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997
Operating costs	4 710	8 092	16 023	27 686	42 181	66 329	98 902	142 206	192 272	247 737	297 947	353 219	414 332	449 168
Reimburse-ments	3 077	5 177	10 914	19 362	30 551	46 759	69 790	102 812	142 784	187 708	224 614	267 326	311 399	...
Direct medical attention	210	691	1 138	2 059	1 426	1 897	2 423	4 167	5 773	6 624	6 793	6 746	7 359	...
Preventive medical examinations	34	71	260	92	118	127	415	359	491	591	753	1 017	1 082	...
Total benefits provided	*3 321*	*5 939*	*12 312*	*21 513*	*32 095*	*48 784*	*72 628*	*107 338*	*149 048*	*194 924*	*232 160*	*275 089*	*319 840*	...
Incapacity benefits	1 099	1 467	3 190	5 473	8 764	15 138	22 076	31 777	39 144	47 927	58 563	68 715	82 975	92 868
Other costs	290	686	521	700	1 322	2 408	4 199	3 091	4 081	4 886	7 223	9 415	11 517	13 354
Administra-tion and sales costs	2 394	2 916	5 277	8 262	11 115	15 959	26 089	34 495	44 622	60 888	73 479	88 127	98 276	105 490
Publicity	158	139	280	270	357	579	939	1 276	1 659	1 958	2 376	2 601	3 184	3 068
Remunera-tion	944	937	1 965	3 047	4 669	6 020	9 843	13 010	16 779	23 609	29 117	33 739	36 805	38 894
Commissions on sales	470	576	984	1 695	1 844	3 354	5 105	6 522	7 748	10 808	13 835	17 791	22 175	27 334
Other ex-penditure	822	1 264	2 047	3 250	4 245	6 006	10 202	13 687	18 436	24 513	28 169	33 996	36 111	36 194
Total ex-penditure	*7 104*	*11 008*	*21 300*	*35 948*	*53 296*	*82 288*	*124 991*	*176 701*	*236 895*	*308 625*	*371 444*	*441 346*	*512 660*	*554 658*
Operating costs as a percentage of total expenditure	66.3	73.5	75.2	77.0	79.1	80.6	79.1	80.5	81.2	80.3	80.2	80.0	80.8	81.0
Administra-tion and sales costs as a per-centage of total expenditure		26.5	24.8	23.0	20.9	19.4	20.9	19.5	18.8	19.7	19.8	20.0	19.2	19.0

Source: Superintendency of Isapres, *Boletín Estadístico,* various issues.

In general terms, all these measures have been aimed at securing greater transparency of the insurance plans offered by the Isapres, but they have not been able to overcome the problem of risk discrimination or “skimming off the cream”.

5. Fiscal aspects

Fiscal considerations were an important factor in the decision to make reforms in the health sector. The incorporation of the private sector is aimed not only at improving the efficiency of health service management but also at making it possible to transfer part of the expenditure costs traditionally borne by the public health subsector to the private subsector. It is hoped that the private subsector will be capable of financing and providing health services for part of the population which has depended in the past on social security and the public subsector.

For this to occur, the reforms must be capable of shifting not only the financing but also the demand for health services to private suppliers. Otherwise, the State would have to cover the same health costs, but with a lower level of income. The possibility of securing significant shifts in demand from the public to the private subsector is limited by the interaction of two factors: i) the low income levels of a large part of the population, in contrast with the upward trends in the cost and the complexity of health attention, and ii) the practice of risk discrimination.

A configuration of the mixed public-private health system which does not shift demand to the private subsector forces the public subsector to make heavy expenditure to cover the population of lower income and higher risk, while, because of the reforms, a substantial part of the resources obtained from the compulsory health insurance contributions tend to go to the private subsector.

The reform process begun in Chile in the early 1980s provides some useful lessons on this effect of the public-private combination. It is observed that after the reforms the amounts of financial resources received by the public and private sectors are similar, but the private subsector covers only about 26% of the population, whereas the public subsector is responsible for 60% of it, made up furthermore of people with lower incomes and higher medical risks, so that while the demand for health services has not gone down, there has been a decline in the financial resources from the corresponding compulsory health contributions.

The unequal distribution of the risk portfolio between the private and public subsectors as a result of an unsuitable public-private mix is not the only source of pressure on the public budget. Faulty design of the institutional and regulatory framework can give rise to problems of cross-subsidies, which arise when beneficiaries of the private subsector make use of public clinics and hospitals but that subsector does not pay the public subsector for all the cases treated. In Chile, this cross-subsidy has been estimated at around 15 billion pesos per year: close to 4% of public health expenditure and to 2.7% of the total expenditure of the Isapres.

VI

Challenges of the reforms

The reform experiences which may be observed in the region and elsewhere reflect particular features of the actual situations involved. There are, however, some common elements which define their general thrust: i) separation of the functions of financing and providing health services; ii) an increase in users' capacity to select suppliers and, in some cases, insurers; iii) promotion of competition among suppliers and among insurers, and iv) stronger regulatory and supervisory mechanisms.

Although the reforms applied in Chile do incorporate several of these elements, the mixed health system which arose from the reforms displays serious problems of efficiency and equity. The public-private combination tends to give rise to serious cases of inequity as regards access to services and their quality, as well as problems of efficiency and resource management at both the public and private levels.

One of the main challenges facing the Chilean system is that of transforming the current public-private combination, which calls for the restructuring of the systems of financing and provision of health services.

On the financing side, the main tasks still remaining to be done are to introduce solidarity mechanisms into the rules on contributions to the private health insurance system and to design instruments to discourage risk discrimination. This discrimination is encouraged by the fact that private health risk insurance exists side by side with a solidarity-based public health insurance system and that there are few regulatory instruments in the Chilean health market.

The need to maintain solidarity of financing in schemes which compete with each other has been a concern of many health system reform processes. In the Latin American context the experience of Colombia is worthy of note, while in Europe that of the Netherlands is likewise noteworthy. Both these systems form part of organizational schemes that pursue what is termed "managed competition". Some proposals have been put forward along these lines for Chile (Aedo, 1997; Larrañaga, 1997).

The challenge that must be met is how to reconcile the existence of risk insurance with mechanisms designed to secure solidarity in financing: i.e., how to ensure that the health insurance contributions paid by subscribers are not determined by their level of medical risk, in circumstances where the income received by the insurance companies is adjusted according to their risk portfolios, in order thus to reduce the incentive for the insurers to concentrate on the low-risk population.

Generally speaking, health systems based on managed competition schemes tend to be organized on the basis of a solidarity fund responsible for distributing subsidies to offset the differing individual risks, so that each member contributes as a function of his income and the insurance companies receive payment as a function of their risk portfolio. The solidarity fund is the body responsible for compensating the insurers for the differences that may exist between their risk portfolios.

In addition to establishing a solidarity fund, it is also necessary to introduce such instruments as mandatory health insurance, to define basic health packages, to regulate the cost of the insurance premiums and to ensure serious supervision and regulation by the authorities in general. The aim of a basic or integrated package is not to reduce the levels of coverage of the insured persons but to ensure a similar level of health service coverage for all, regardless of their contributions. It is also useful for making insurance plans more homogeneous and helping to determine the scales of prices for medical attention.[14]

These instruments must form part of a regulatory scheme which promotes competition. They are not forms of regulation designed to avoid such competition but seek instead to overcome the market flaws typical of a competitive environment.

The application of mechanisms theoretically designed to combat the problem of "cream skimming" does not guarantee that this phenomenon will indeed be brought under control, for the lack of the necessary institutions in imperfect health markets makes this problem difficult to counter.[15]

In the provision of health services, the public-private configuration also gives rise to problems of inefficiency and poor resource management. Firstly, the very limited interaction between public and private suppliers has led to inefficiency in global resource allocation. Secondly, in spite of all the efforts made to improve allocation mechanisms within the public subsector, this subsector still suffers from a bureaucratic structure, with serious rigidities in the way it handles financial transfers to the area services of the SNSS, so that there is little incentive to improve the efficiency and efficacy of expenditure.

International experience shows that, in view of the asymmetry of information and the difficulty users have in processing the information needed to make a proper choice of their suppliers, there is a tendency to adopt systems which restrict the free choice of suppliers. These systems are based on the concept of a "gatekeeper": a family doctor who makes a first diagnosis and then if necessary directs the patients to more specialized services. In order to avoid problems of collusion between these family doctors and the suppliers of specialized services there must be a high degree of competition among such doctors.

VII

Conclusions

The reforms begun in the early 1980s in Chile have significantly changed the structure of the health sector, combining the public and private subsectors for the financing and supply of health services.

Among the main issues that need to be addressed are, on the one hand, the need to create solidarity-based financing mechanisms in the context of the private insurance schemes and, on the other, the need to avoid the risk discrimination which takes place in the Isapre system. Although the latter is an inherent problem in risk insurance, it tends to be encouraged by the design of the current public-private configuration.

The effects on equity deriving from the introduction of the system of insurance schemes in the health market depend more on the nature of the contribu-

[14] This is without prejudice to the right of individuals to acquire broader coverage, in terms of the types of attention covered or the quality of their hospital accommodation, by taking out voluntary insurance plans.

[15] After the reform of the health insurance system in the Netherlands, the difficulty of implementing the system of risk-adjusted payments has led to the insurance companies only taking responsibility for 3% of the difference between their real costs and the costs used to define the risk-adjusted per capita payments. The remaining 97% is reimbursed retrospectively by the solidarity fund, through a system of compensation for losses.

tions and the rules governing them, as well as on the degree of deregulation of the market, than on whether those schemes are public or private.

In this connection, there are examples, both in the international context and in the region itself, of what is called “managed competition”. These cases, unlike the Chilean model, seek to introduce private insurance systems with elements of solidarity-based financing, in order to avoid the problem of risk discrimination.

Nevertheless, one of the objectives of the Chilean system in the short term is to strengthen the capacity of the Superintendent of Isapres to develop prudential regulation instruments for the private insurance market. These instruments would make it possible to rationalize the supply of medical insurance, since the current diversity of such supply gives rise to many problems in terms of efficiency. The high levels of expenditure on administration and sales displayed by the Isapre system are also frequently questioned. Although this expenditure has tended to go down somewhat, it is still felt to be relatively high.

Because of the lack of a fluid and transparent relationship between the public and private suppliers, the supply side of the health service market has become segmented, thus giving unsuitable incentives for the development of the supplier institutions.

This segmentation of supply has given rise to cross subsidies due to the services which are rendered by the public sector to Isapre beneficiaries but are not reimbursed to that sector by the Isapres. Because of the high cost that these subsidies involve for the public sector, they must be eliminated in order to achieve a more efficient system of insurance and services. It may be noted that the efforts made by FONASA to improve its data bases have enabled it to tackle this problem to some extent, by increasing the capacity of the public services to collect charges from users who are members of the Isapre system.

In the public health subsector, reforms have been made in order to promote the allocation of resources on the basis of results and performance (the DRP and PPS systems). These efforts are still only very recent, however, and cover only a small percentage of public resources, as nearly 70% of the budget is for the payment of wages and salaries. One of the challenges which remains to be solved is that of giving the SNSS greater labour flexibility and a scale of remuneration based on productivity.

It is also important to strengthen FONASA’s capacity to act as a supervisory agency for users of the public system and to improve its performance in its roles as collector and allocator of resources and as a health insurance system.

Finally, in order to make reforms in health systems it is essential to have the necessary political consensus. In the case of Chile, apart from the diagnostic studies made of health sector dynamics it has not been possible to establish a political consensus that would allow vigorous progress in the substantive reforms needed by the system. In view of the complexity of the technical and value-related aspects of the sector, such a consensus is important not only for initiating reform processes but also for ensuring that they have lasting effects.

(Original: Spanish)

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Recent ECLAC publications

Periodical publications

Latin America and the Caribbean in the world economy, 1998, LC/G.2038-P, United Nations publication, Sales No. E.99.II.G.3, ECLAC, Santiago, Chile, March 1999, 227 pages.

The 1998 edition of *Latin America and the Caribbean in the world economy* is divided into four parts.

Part One, which deals with the international situation (chapters I and II), describes the main current trends in the global economy and their impact on the region's trade; it also studies the evolution of the main economic spaces: the European Union, NAFTA, the incipient Free Trade Area of the Americas, and the recent decisions adopted in the Asia-Pacific Economic Cooperation forum (APEC). This evolution directly or indirectly affects the access of the region's products to their main markets.

Part Two, which is devoted to Latin American and Caribbean trade and trade policy in the 1997-1998 period (chapters III, IV and V), deals with the trade and trade policies of the countries of the region from June 1997 to August/September 1998, makes an assessment of export promotion instruments which are compatible with the multilateral trade rules, and analyses the composition of the trade deficits of the region in the 1990s.

Part Three (chapters VI and VII) analyses the concept of regional convergence and describes the main stages observed in the regional integration process between June 1997 and August 1998.

Finally, Part Four (chapters VIII and IX), which deals with some aspects of trade and trade policy, compares the experience of East Asia and of Latin America with regard to industrial and trade policies and analyses the environmental protection policies of the United States and their influence on the exports of some Latin American countries.

Statistical Yearbook for Latin America and the Caribbean, 1998, LC/G.2043-P, United Nations publication, Sales No. E/S.99.II.G.1, ECLAC, Santiago, Chile, February 1999, 778 pages.

The 1998 edition of the *Statistical Yearbook for Latin America and the Caribbean* contains a selection (updated to the beginning of December) of the main statistical series available on the economic and social evolution of the countries of the region. It reflects the systematic work of the ECLAC Statistics and Projections Division to homogenize the figures and make them internationally comparable.

There are no changes in the structure of the *Yearbook* compared with the 1997 edition, but there are substantial differences in its content, since the base year for the regional macroeconomic series and the set of indicators and indexes provided has been changed to 1995. Slight modifications have continued to be made in the tables making up the chapters on Social Development and Welfare and Social Conditions, thanks to better use of the available household surveys. The layout of the tables in the chapter on the Balance of Payments continues to follow the analytical guidelines set forth in the fifth edition of the Balance of Payments Manual published by the International Monetary Fund in 1993.

Once again, the efforts made to ensure that the present edition is available to users as quickly as possible are worthy of acknowledgement.

Part One of the *Yearbook* contains derived economic and social indicators (growth rates, proportions or coefficients) which present a summary view of each area of interest and constitute valuable background information for use in specialized studies. This set of indicators includes those used in the periodical regional appraisals of the Latin American and Caribbean development process made by the ECLAC Secretariat.

Part Two presents the historical series which, as they are in absolute values, can be used for a wide variety of purposes. Most of the statistical tables contain figures on the same subject, set out in a way which facilitates comparisons between countries and between individual countries and the regional totals or averages. Only the balance of payments and national accounts tables are an exception to this, since they are set out by countries.

In most of the tables the countries are listed in alphabetical order, with the exception of those for which no data are available or the amounts are zero or extremely small.

The indicators in Part One of the *Yearbook* generally correspond to the years 1980, 1985 and 1990 and to each year between 1992 and 1997. When the data are not completely up to date, the last year available for each country is given. Some of the indicators based on census data are only given with respect to the years when the censuses were effected in the countries in question. In Part Two, both the national statistical series and the regional estimates give figures for 1980, 1985, and each of the years between 1989 and 1997.

In view of the excellent reception given to them by users and the good level of approximation attained in previous editions, the *Yearbook* continues to contain preliminary estimates for its year of publication (in this case, 1998). This reflects an effort made in the last two months of each year to inform the international community of the macroeconomic evolution of the countries of the region in the period studied. In this connection, the following clarification is called for: because of the different closing dates, in some cases the historical figures for the last year in the tables of the *Yearbook* may show slight differences with respect to those of the *Preliminary Overview of the economies of Latin America and the Caribbean, 1998*, because of the different dates on which the information was obtained in these publications.

Centroamérica, México y República Dominicana: Maquila y transformación productiva (Central America, Mexico and the Dominican Republic: The in-bond assembly industry and changing production patterns), LC/G.2047-P, "Cuadernos de la CEPAL" series, No. 85, United Nations publication, Sales No. S.99.II.G.20, ECLAC, Santiago, Chile, July 1999, 190 pages.

The exports of the Central American countries, Mexico and the Dominican Republic have increased significantly in the 1990s. This is reflected in the fact that their share in the imports of the Organization for Economic Cooperation and Development (OECD) countries has grown at a similar rate to that of the Southeast Asian countries. More detailed analysis of the export profile of the countries in question shows that their success in external markets has been marked by the evolution of in-bond assembly activities.

The main question asked in the ECLAC proposal “Changing production patterns with social equity” is whether export success is based on the incorporation of technical progress, or, in other words, whether what has been achieved is authentic competitiveness. In this study, the answer to this question is sought through analysis of a survey of 60 in-bond assembly operations in the region. The design of the survey and the field work were carried out by the ECLAC Subregional Headquarters in Mexico in 1997.

The survey and its analysis give grounds for concluding that in-bond assembly activities do indeed permit the incorporation of technical progress, with the most important learning process taking place in the field of business and labour organization. Among the in-bond assembly firms surveyed in the region, a strong presence of modern management systems was noted –work teams, total quality programmes and workers’ suggestion programmes, etc.– but even so the in-bond assembly industry is above all a set of activities making intensive use of unskilled labour and taking advantage mainly of the abundant supply of low-cost labour.

Although the in-bond assembly industry in Mexico differs considerably from that of Central America and the Dominican Republic, there are nevertheless some common features, such as the marked orientation towards the United States market and the intensive use made of unskilled labour. However, the differences in types of production and the longer history of the Mexican assembly industry make it somewhat different from the other countries in terms of the transfer of technology.

Training is of prime importance in the assembly industry. The need to comply with high standards of quality, the short delivery times and the flexibility required in production as a result of the new world trends in this field call for skilled personnel and workers trained under the firm’s own systems. In this respect, there was consensus among the assembly firms of the countries studied regarding the great importance that assembly activities have had as a factor in the training of workers, technicians and management staff. Links between the assembly firms and local training and higher educational institutes were also observed.

With regard to process and product technology, the learning processes are more limited. Transnational corporations use a turnkey policy in the field of technology under which activities relating to the core technology are carried out abroad. Although in some cases local skilled personnel have come to play a fairly important technological role in the production process, in most of the firms in the sample the specifications come from abroad and learning only takes place by way of adaptations and incremental improvements.

On the other hand, in locally-owned assembly firms which do not subcontract 100% of their assembly activities, some interesting processes of generation of positive externalities through their subcontractor status were observed.

The study concludes with a brief outline of the role of national innovation systems in absorbing the technology transferred which raises some fundamental questions: for example, whether the countries of the region have the resources which are essential in order to take advantage of the know-how acquired through assembly activities and further improve it.