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96

THE SIXTIETH ANNIVERSARY OF ECLAC AND THE THIRTY-SECOND OF THE CEPAL REVIEW

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ECLAC thinking in the *CEPAL Review* (1976-2008), **André Hofman and Miguel Torres**

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The economic returns to education in Mexico: a comparison between urban and rural areas, **Juan Luis Ordaz-Díaz**

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SIXTY YEARS WITH LATIN AMERICA AND THE CARIBBEAN

ALICIA BÁRCENA
Executive Secretary

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The *CEPAL Review* was founded in 1976, along with the corresponding Spanish version, *Revista de la CEPAL*, and is published three times a year by the United Nations Economic Commission for Latin America and the Caribbean, which has its headquarters in Santiago, Chile. The *Review*, however, has full editorial independence and follows the usual academic procedures and criteria, including the review of articles by independent external referees. The purpose of the *Review* is to contribute to the discussion of socio-economic development issues in the region by offering analytical and policy approaches and articles by economists and other social scientists working both within and outside the United Nations. The *Review* is distributed to universities, research institutes and other international organizations, as well as to individual subscribers.

The opinions expressed in the signed articles are those of the authors and do not necessarily reflect the views of the organization. The designations employed and the way in which data are presented do not imply the expression of any opinion whatsoever on the part of the secretariat concerning the legal status of any country, territory, city or area or its authorities, or concerning the delimitation of its frontiers or boundaries.

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Explanatory notes

The following symbols are used in tables in the *Review*:

… Three dots indicate that data are not available or are not separately reported.

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

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

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

(.) A point is used to indicate decimals.

(/) A slash indicates a crop year or fiscal year; e.g., 2006/2007.

(-) Use of a hyphen between years (e.g., 2006-2007) indicates reference to the complete period considered, including the beginning and end years.

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

Introduction

In the year just ending, ECLAC marked its sixtieth anniversary with a variety of activities. These included seminars in Santiago and Mexico City to review the main contributions made by the Commission and its most influential intellectuals, in thought and action, to the development of the region. The *CEPAL Review* has been published continuously, in Spanish and English, throughout the last 32 of those 60 years of fruitful labour, and now forms an invaluable collection of 96 issues containing approximately a thousand articles.

The *CEPAL Review* has thus become an effective medium of academic communication for hundreds of social scientists in Latin America, the Caribbean and other Spanish- and English-speaking areas. Thanks to the insightful and original work presented in the *Review* over the years and to the continually increasing quality of its articles, the English-language version of the *Review* is now listed in the Social Sciences Citation Index (SSCI) published by Thomson ISI and the Journal of Economic Literature (JEL) of the American Economic Association.

The range of issues covered by the *Review* in the course of the past 30 years has expanded from a purely economic focus to encompass a wide spectrum of social issues, in line with editorial policies which are consistent with the principal mandate of ECLAC: the constant quest for deeper knowledge, understanding and analysis and the formulation of proposals to promote integrated development in Latin America and the Caribbean, combining academic excellence with a critical, comparative view of economic, social and environmental realities. Lastly and most importantly, ECLAC must be able to provide the countries of the region with the support they need and with forums in which they can discuss public policy design and implementation. These analyses have pointed up the fact that development needs to be rethought both by the region and for the region. The *Review* will therefore continue to broaden its thematic horizons in order to address the principal trends of today's knowledge-based world. In so doing, it will seek to achieve the necessary coverage and treatment of important emerging development issues, such as environmental sustainability, democratic governance, the entry of new and important stakeholders into the world economy, the worsening of global crises and a critical look at the dominant paradigms of political economy, as well as their implications in terms of gender, youth, ethnicity and land use. Efforts will also be made to encourage the publication of articles on countries which have been underrepresented and by authors from such nations.

These changes will pose new challenges, which is why the *Review* is adopting a new editorial and organizational approach. An Editorial Board is being created, to be headed by Osvaldo Sunkel, who will be assisted by André Hofman as the new editor of the *Review* and Miguel Torres as its technical editor. This new editorial team will be taking the publication forward to a new stage in the coming year, and the changes they are planning to make will be announced in due course.

As with any process of change, the beginning of this new stage signals the ending of the old one. This ninety-sixth issue of the *CEPAL Review*, which we have dubbed the "transition issue", will therefore mark the culmination of three highly productive decades with the inclusion of a special section entitled *ECLAC at sixty and the CEPAL Review at thirty-two*.

The additional material, which precedes the nine articles making up this issue of the *Review*, is being offered to the reader for two main reasons.

First, it is meant to commemorate the main contributions and achievements of the *Review* in its 32 years of existence, particularly as regards the dissemination of ECLAC thinking about economic and social development in the region.

The second objective is to pay a well-deserved tribute to the past editors of the *CEPAL Review*:

Raúl Prebisch, who founded the *Review* in 1976 and was its editor until 1986; Aníbal Pinto Santa Cruz, whose editorship ran from 1987 to 1995; and Oscar Altimir, who headed up the *Review* between 1996 and 2008.

To achieve the first of these objectives, André Hofman and Miguel Torres have written an essay entitled "ECLAC thinking in the CEPAL Review (1976-2008)", a wide-ranging survey of articles published over that period which reflect the evolving thought of the institution and the contribution made by its most distinguished experts. The essay highlights important concepts and contributions developed by such economists and social scientists as Raúl Prebisch, Aníbal Pinto, Celso Furtado, Osvaldo Sunkel, José Medina Echeverría, Fernando Henrique Cardoso, Víctor Urquidi, Fernando Fajnzylber and many others. This survey revisits ideas that are central to ECLAC thinking, such as the concepts of development styles, peripheral capitalism, sustainable development, structural heterogeneity, social cohesion and changing production patterns with social equity. These theoretical constructs have allowed ECLAC to develop its core ideas within a framework of *continuity and change* and thus to present the essential results of its work from a structuralist and neostructuralist perspective.

To fulfil the second objective of this section –that of honouring the three former editors of the *CEPAL Review*– a selection of articles published by them in earlier issues has been included. This selection opens with "Towards a theory of change", by Raúl Prebisch, published in Issue No. 10 of April 1980. It continues with a paper by Aníbal Pinto, "Styles of development in Latin America", which appeared in the publication's inaugural issue in 1976. It is completed by Oscar Altimir's "Income distribution and poverty through crisis and adjustment", published in Issue No. 52 of the *Review* in April 1994.

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ECLAC thinking in the *Cepal Review* (1976-2008)

André Hofman and Miguel Torres

This article examines the role of the CEPAL *Review* in disseminating the thinking of eclac and other currents of analysis concerned with the problems of development. To this end, it examines some of the large collection of articles published in the *Review* between 1976 and 2008, concentrating on those that most clearly address the permanent concerns of eclac (growth and technical progress, poverty and social inequity, sustainable development, and democracy and citizenship) and grouping them by the editorial team in charge when they were published: Prebisch-Gurrieri, Pinto-Lahera and Altimir-Bajraj. It concludes by presenting and briefly analysing essays published at various times in the CEPAL *Review* by Prebisch (1980), Pinto (1976) and Altimir (1994).

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I
Introduction

In its 60-year existence, ECLAC and its most distinguished intellectuals have been able to disseminate their thinking through a large number of periodical or special publications. An example of the former is the *Economic Survey of Latin America and the Caribbean*, the longest-standing of all ECLAC annual publications, which began life at practically the same time as the institution itself and now has 60 issues to its name.[1] Particular highlights are the 1948 edition, which presented a long-term overview of the regional economy, and that of 1949, in which Prebisch, then at the helm of ECLAC, set forth his and the institution's views on technical progress, terms of trade and, in general, the factors holding back the region's development.[2] In view of the growing tendency for the *Economic Survey* to concentrate on the immediate macroeconomic situation and on long-term macroeconomic analysis,[3] however, other ECLAC periodicals were brought out to cover situations and outlooks in other areas no less central to the region's economic and social development, among them the *Social Panorama of Latin America*, *Latin America and the Caribbean in the World Economy*, *Foreign Investment in Latin America and the Caribbean* and the *Statistical Yearbook for Latin America and the Caribbean*.

Nonetheless, on top of this varied range of institutional reports on the different aspects of regional performance, many of them dealing with current trends, the Commission has succeeded over the last 32 years in publishing a huge volume of ideas and arguments of a more academic character and with particular emphasis on the structural aspects of development, and these have been well represented among the articles of the *CEPAL Review*. Sometimes issuing from within the institution, sometimes presenting the work of independent authors or representatives of other organizations within or beyond the region, the articles in the *Review* have succeeded, thanks to a rigorous policy of editorial independence, in exploring a wide array of issues, regional and national situations and theoretical and methodological approaches, as richly diverse as the Latin America and Caribbean region itself.

In view of the huge stock of intellectual capital built up by our publication, the purpose of the present article is to examine the main events in its existence and touch upon its main contributions to ECLAC thought. Accordingly, sections II, III and IV offer an extensive (albeit not exhaustive) survey of those articles that best represent the thinking of our institution, with certain departures and occasional references to authors who, whether independently or from within other institutions, have investigated the problems of development from positions that are not necessarily similar to or wholly in agreement with those of ECLAC.

These three sections deal with three clearly marked stages in the history of the *CEPAL Review*, each bearing the stamp of one of the editorial partnerships that have successively run it since its foundation. Thus, section II surveys the most important articles selected for publication by Raúl Prebisch and his technical editor, Adolfo Gurrieri; section III does the same for the period in which Aníbal Pinto Santa Cruz was editor and Eugenio Lahera technical editor; and section IV looks at more recent contributions, published during the editorship of Oscar Altimir, when Reynaldo Bajraj was managing editor.

Lastly, section V offers a critical review of three essays published at different times by the *CEPAL Review*, each written by one of its three sometime editors, Prebisch, Pinto and Altimir. These essays are reprinted in full in this issue of the *Review*, after the present article.

[1] See ECLAC (2008a, chapter V) for a more detailed review of this publication's history.
[2] See ECLAC (1949) and ECLAC (1951), respectively.
[3] The snapshots of the economy provided by the *Economic Survey* in mid-year are supplemented in December of each year by the economic situation reports contained in the *Preliminary Overview of the Economies of Latin America and the Caribbean*.

II

The Prebisch-Gurrieri years (1976-1986)

The *CEPAL Review* was inaugurated in 1976, initially appearing twice a year. The first issue was published in the first half of that year.[4] It replaced the *Economic Bulletin of Latin America*, published from 1956 until the first half of the 1970s.[5]

As Bielschowsky (1998) summarizes it, the issue which preoccupied ECLAC in the 1970s was that of "development styles", in an international context characterized as far as the region was concerned by dependency, dangerous and excessive borrowing and inadequate export capacity. The analyses of those years were built around ideas that centred on growth strategies, their links with the production structure, patterns of distribution and power structures. They also laid great stress on the need for the region's economies to move towards a pattern of industrialization that reconciled the domestic market with the export effort. Where policy implications were concerned, the thrust of the argument was the need to "ensure the viability of the style most likely to lead to social homogeneity" and "strengthen industrial exports" (Bielschowsky, 1998, p. 23).

In short, that decade saw the further development of the ECLAC ideas of the mid-1960s which emphasized a stronger role for the social dimension of development and its close relationship to economic issues, and in which the problems of poverty and income distribution were beginning to take on greater and greater importance. The beginnings of ECLAC thinking on development and the environment also date from this time.

These, then, were the main ideas in ECLAC thinking when the inaugural period of the *CEPAL Review* began. Its first editor was Raúl Prebisch, very ably seconded by the Argentinean sociologist Adolfo Gurrieri as technical secretary. In his much-discussed article "Five stages in my thinking on development", Prebisch (1984) said of the fifth of these stages that it "really started when, after many years of rewarding international service, I was able to free myself of executive responsibilities. cepal put me in charge of its *Review*, where I resumed my theoretical pursuits in a series of articles that formed the basis for my *Capitalismo Periférico* (Peripheral Capitalism). This was the fifth and probably last stage of my thinking in development matters."

Raúl Prebisch stayed on as editor of the *Review* from 1976 until the last days of his life. He died in April 1986. In those ten years of his editorship, the *Review* published Prebisch's last thoughts on the nature of peripheral capitalism and numerous articles of his on the development styles that dominated ECLAC debate in the second half of the 1970s. The first half of the 1980s was when the region experienced the effects of the debt crisis that was to trigger Latin America's "lost decade". In that context, ECLAC priorities became more oriented towards immediate trends, so that adjustment and its shocks, the restoration of growth and the social cost of macroeconomic stabilization became the institution's main analytical and policy concerns.

The *CEPAL Review* was fully engaged with these debates. It published a large number of studies dealing with the financial crisis of the 1980s, and indeed some that warned of the crisis before it happened. In an important paper, Devlin (1979) laid out the points of convergence and divergence between the goals of commercial banks and those of developing countries. In a regional context of cheap borrowing, Devlin sounded a note of scepticism about the incentives of lending institutions and creditor countries, questioning how well interests were aligned between the two groups of agents and implicitly highlighting the risks of insolvency that could arise in the region as a result.

After that article, and once the crisis had been unleashed, there was no lack of opinion and analysis in the pages of the publication. Among the most important articles were those of Iglesias (1983) and Massad (1983). In the former, the then Executive Secretary of ECLAC argued: "In 1982 Latin America

[4] In 1979 the *CEPAL REVIEW* was to become a thrice-yearly publication, and it continues to be published regularly in April, August and December each year.

[5] The *Bulletin* was a twice-yearly publication. It updated and added to the picture of the Latin American economic scene provided by the Commission's annual economic surveys. It also published special articles on a variety of more structural issues in the region's economy, along with informative and methodological notes (see ECLAC, 1974, edition notice).

found itself in the throes of the worst economic crisis that had befallen it since the Second World War and, probably, the gravest since the dark years of the Great Depression." After conducting an analysis of key macroeconomic variables (growth, unemployment, inflation and external sector imbalances), he added that what had happened that year "in the Latin American economies…is a particularly useful step towards understanding the nature and causes of the serious economic crisis affecting the region, knowledge of which in its turn is indispensable for proposing measures whereby to cope successfully with the situation".

Following a similar line to Devlin (1979), Massad (1983) examined the real cost of external debt servicing, demonstrating the existence of a cost difference between borrowers and lenders. He put forward an alternative method for measuring the real cost of debt service and offered a brief analysis of the factors determining it.

Another important subject of discussion during those testing years were the first rounds of debt rescheduling negotiations. Devlin (1985) analysed the results of these rounds, proclaiming "the decline of the orthodox procedures". The starting point for that paper was the acknowledgement of the worsening borrowing conditions faced by the region during the first rounds of negotiations (1982-1983), and it sought to use the concept of a bilateral monopoly to explain why these then improved in the 1984-1985 round.

Even as it published numerous articles on the debt crisis, however, in this first stage of its existence (as in the two subsequent) the *Review* never lost its concern to air ideas bearing upon the long-term development debate, many of which also drew on ECLAC thinking.

On the subject of airing ECLAC thinking in the pages of the *Review*, it should be recalled that ECLAC celebrated its thirtieth anniversary during that first stage, in 1978. In anticipation of that event, a year beforehand the *Review* published an article describing the evolution of ECLAC ideas and their relationship to other schools of thought: the classic text by Cardoso (1977), "The originality of a copy: cepal and the idea of development".

In that paper, Fernando Henrique Cardoso set out by examining the foundational ideas of Prebisch and ECLAC regarding development and the question of why they created "such an uproar" (Cardoso, 1977, p. 11), which he did by summarizing the main aspects of Prebisch's notion of the centre-periphery system. He then "relates them to other doctrinaire and academic positions which have also found echoes in the region". The article also analyses the way in which these ideas "modelled development policies and adapted themselves to new situations". It goes on to relate ECLAC thinking to new approaches that emerged in the 1960s and 1970s "relating to the 'malignant' style of development, structural dependency and 'another development'" (Cardoso, 1977, p. 7). Cardoso's conclusion in this paper is that, transcending the shifts in ECLAC thought as it took in the new global changes and drew on other theoretical contributions, the institution was able to retain and show the relevance of the essential core of its thinking: the structural factors in underdevelopment, the importance of technical progress to increase productivity and thus raise the long-term growth rate, and the potential for this to generate greater and better conditions for well-being in the Latin American periphery.

As regards specific topics in the long-term development debate, the *Review* was a veritable hothouse of ideas, with well-known intellectuals and economists from the region publishing articles that laid the groundwork for major studies and keynote ideas that were to have great resonance in the academic and political debate. As Torres Olivos (2006) puts it, these were the years in which, for example, Fernando Fajnzylber was analysing long-term growth experiences and industrialization strategies in economies outside the region, seeking to establish a parallel with what was happening in Latin America. It was in fact in issue 15 of the *CEPAL Review* that he laid out his thinking on the export industrialization of South-East Asia (Fajnzylber, 1981). That article and others analysing the situation of the advanced capitalist economies were important inputs for two of the author's most influential concepts: "curtailed industrialization" and the "empty box" (Fajnzylber, 1983 and 1990).

At that time, too, Celso Furtado was trying to establish the cultural dimensions of development. His initial approach treated culture as a set of parts whose interactions possessed a certain degree of consistency. Besides this idea, he argued that culture was a dynamic system and thus subject to continuous change, which in turn affected every aspect of the social order, including the economic one. Development should therefore be understood as an enrichment of the cultural system. In other words, development and culture are interdependent and development consists in enhancing people's creative capacities by generating cultural innovations. Notwithstanding this, Furtado distinguishes two processes of creativity. From one come innovations in the sphere of what he calls "material culture", represented by technical progress and accumulation. From the other come innovations arising in the sphere of "non-material" culture, which means all the ideas and values progressively constructed by society. Development via "material culture" is achieved by generating additional economic surpluses that open up wider options to members of the community. The ideas about accumulation and innovation (and especially the role of surpluses) in material culture which he set out in his 1978 book *Criatividade e dependencia na civilização industrial* were also summarized in issue 6 of the *CEPAL Review* (Furtado, 1978).

Nor, in that first phase of the *Review*, was there any lack of ECLAC contributions written from the standpoint of development sociology. At a time of difficulty and upheaval in the region's political history (especially in the Southern Cone, and most particularly Chile), ECLAC and its *Review* addressed the international political situation and in that context, dominated by the Cold War, conducted an in-depth analysis of the link between development and democracy. According to Rodríguez (2006), this was an issue of concern in Prebisch's thinking about peripheral capitalism, which laid stress on the new underpinnings of democratic consolidation in the societies of the periphery; in Cardoso's theories about social movements and the demand for democracy; and most particularly in Medina Echavarría's vision of renewal for the form and substance of democracy. Two articles by the last of these authors articulated his ideas in the *CEPAL Review*. In the first of them, the Spanish sociologist described the different political paths the region might take in response to the détente then imminent between the two great hegemonic powers of the time (Medina Echavarría, 1976), while in the second he examined the future of the Western democracies, particularly in Latin America (Medina Echavarría, 1977).

As we said at the start of this section, this phase of the *Review* was marked by the debate about development styles, from both an economic and a sociological standpoint. The economic approach is dealt with in greater detail in section V of this article. For now, we shall concentrate on the sociological approach. Bielschowsky (1998) describes the role played by the inaugural issue of the *CEPAL Review* in publicizing ideas about development styles. In particular, that first issue contained the important articles of Graciarena (1976) and Wolfe (1976). The first of these contained a critical analysis of the various notions of what constituted development styles, with an emphasis on those oriented towards unifying development approaches. It also highlighted the contribution made by the social sciences to the development style concept, considering aspects such as education, health care and social security, among others. Wolfe's article, meanwhile, deals with the different development approaches, examining and questioning the goals and means often employed in the debate. The author tries to "suggest an existential conception of development, which is viewed as an unceasing effort to impose a rational form based on a particular set of values on an actual situation which does not readily lend itself to this". With that end in view, the article finally "distinguishes the main criteria which have been used to define the ends and means of development (the utopian-normative, the technocratic-rationalistic and the socio-political approaches)", culminating in an analysis and criticism of the behaviour of "agents of development".

While these authors contributed from a social science standpoint to a comprehensive, multidisciplinary concept of development and its styles, it is also important to consider the efforts made to bring the environment and sustainable development into the debate. The contribution made to this debate in the pages of the *CEPAL Review* crystallized in an article by Osvaldo Sunkel that set out to explore the links between development styles and the environment in Latin America (Sunkel, 1980). The article offers a description and systemic interpretation of the developments that have occurred around the region in relation to the environment and the development process. Thus, within a broad conceptual framework, Sunkel "analyses the global changes which have occurred in recent decades, with particular attention to the different types of effects which industrialization, agricultural modernization and urbanization have produced on environmental factors and how these in turn have had repercussions on the possibilities and limits of development" (Sunkel, 1980, p. 17).

The last issue published during Raúl Prebisch's editorship was number 28, in April 1986. After his death, Adolfo Gurrieri remained in charge of the publication as technical secretary from April that year until December 1987. Following that transition period, a new team took over at the *Review*, thus bringing to a close a prolific first stage in which many of the classic authors of ECLAC and Latin American structuralism contributed to the production and discussion of ideas through its pages.

III

The Pinto-Lahera years (1987-1995)

The Chilean economist Aníbal Pinto took over the *CEPAL Review* in time for its thirty-third issue, published in December 1987, and he was seconded throughout his editorship by the Chilean political scientist Eugenio Lahera in the capacity of technical editor. Having edited the first eleven issues of the economics review *Pensamiento Iberoamericano*, Pinto took over the *CEPAL Review* in the closing years of the 1980s. In the region, the main political development was the restoration of democracy, especially in South America. Economically, the effects of the crisis were still being felt by the Latin American countries, especially the social cost of the adjustment resulting from macroeconomic stabilization policies and debt renegotiation (Bielschowsky, 1998). From a broader global perspective, the background to events in the region were the closing stages of the Cold War and the advent of a new international order increasingly dominated by neoliberalism as the theoretical and practical underpinning of the structural reforms that were to take place in all the region's economies in the 1990s.

In that regional and international context, the internal ECLAC debate centred on the adjustment process and its social impact and on the reformulation of the organization's ideas about regional development, carried out as far as possible (as Rosenthal put it) in accordance with a logic of "continuity with change" (Rosenthal, 1988).

In the late 1980s, this process and the emergence of renewed approaches to development led to the gestation of the idea that was to dominate ECLAC thinking and actions from the 1990s to the present day, namely the concept of changing production patterns with social equity and the development of the so-called neostructuralist approach in the debate among ECLAC and Latin American intellectuals. Also analysed were more specific development issues such as poverty and income distribution, the gender dimension, the environment and sustainable development. All this was in addition to the more traditional aspects of the institution's economic thinking relating to long-term growth, but with increasing efforts to focus analyses more on microsectoral aspects.

All these topics, and many of the academics working on them, left their mark in the pages of the *CEPAL Review*. Regarding macroeconomic issues, particularly those relating to the effects of the crisis and future prospects, mention should be made first of the work of González (1988), whose subject is macroeconomic development policy in the context of the adjustment. Eyzaguirre (1989) explores the more specific effects and challenges of the debt crisis, analysing the behaviour of saving and investment in a context of external and fiscal constraint. Mortimore (1989) looks at the subject from more of a microeconomic standpoint, studying the behaviour of lending banks in the region, while in the same issue of the *Review*, Devlin (1989) takes a more comprehensive approach and depicts the dilemmas facing the region as a consequence of external borrowing. The plans implemented by the economies of the region to overcome the crisis by pursuing adjustment with growth were subject to the twofold conditionality imposed by the leading international financial institutions, the International Monetary Fund (IMF) and the World Bank. Meller (1989) analyses this cross-conditionality and argues for better coordination between the programmes backed by one and the other of these institutions. Ramos (1989), meanwhile, examines the new currents of macroeconomic theory from "the North", highlighting the debate between "neoclassical" and "neo-Keynesian" thinkers.

Where microsectoral analysis is concerned, perhaps the most important of the articles published in this period dealt with the problems of the agricultural and food sector. Issues such as the impact of adjustment on this sector, sectoral policies and macroeconomic planning, the sectoral analysis conducted by ECLAC itself, food security and the social dimensions of rural life are aspects addressed on many occasions by different authors in these pages.[6]

The emergence of the idea of changing production patterns with social equity, based in part on the earlier analyses of Fajnzylber (1983 and 1990), meant that the industrial sector, regarded as the main vehicle for technical progress, was restored in the ECLAC debate to the place of importance it had forfeited in the wake of neoliberal criticism in the harshest years of the debt crisis. Nonetheless, the "new industrialization" which this approach called for entailed a recognition first and foremost of the need for competitive trade liberalization and the development of complementarities with the primary and service sectors. Unsurprisingly, the *CEPAL Review* left a record of these ideas in articles such as one by Fajnzylber (1988) which drew a parallel between industrialized and developing nations in order to analyse the evolution of international competitiveness and production restructuring (and the lessons that could be learned from this) and the embodiment of technical progress. Lahera (1988) and Willmore (1989) are equally forthright on this same subject of production transformation and technical change. In the same area, but with particular reference to Ecuador, mention should be made of the article by Hofman and Buitelaar (1994) analysing that country's comparative advantages and its prospects for long-term growth. Regarding sectoral complementarities, Kuwayama (1989) deals with the technological potential of the primary export sector. Other important contributions in that period include those of Peres (1993 and 1994) and Rosales (1994), authors who deal with competitiveness policies and industrial policies. Another key idea to have emerged from the changing production patterns with social equity approach is the concept of "open regionalism" as a trade integration option, a subject explored by Fuentes (1994). Still on the subject of integration, Rosenthal (1993) seeks to answer two very important questions (among many others). How do the integration schemes of the region's countries differ from those attempted in the 1960s and 1970s? And what are the best instruments for promoting robust intraregional integration?

Other key elements of this approach were institutional change and an appreciation of democracy as a vital habitat for effective change in society and the productive economy. In the first case, Fajnzylber (1991) set out his arguments about the role of institutional change in changing production patterns with social equity while, in a similar vein, Lahera (1990) explored the relationship between the State and this transformation. In the second case, a large number of articles set out to explore the role played by democracy in changing production patterns with social equity. Mention may be made here of a paper by Enzo Faletto exploring the links between culture and democratic awareness, and another addressing the specificities of the Latin American States (Faletto, 1988 and 1989), as well as a remarkable study by Graciarena (1988) on democracy and development and one by Wolfe (1990) on social structures and the entrenchment of democracy in the early 1990s. A very important aspect of democracy, and one that would become highly significant in the 1990s and 2000s, is citizenship. In an outstanding article on the subject, Calderón, Hopenhayn and Ottone (1994) synthesized the ECLAC notion of changing production patterns with social equity from the cultural standpoint.

The position of ECLAC in the 1990s was that promoting equity was not just an ethical imperative of development but also a key growth variable, which put the institution at variance with neoclassical arguments identifying trade-offs between growth and equity. As the issue of distribution was brought clearly and powerfully to the fore by the changing production patterns with social equity approach, it became possible to flesh out the social aspect of the ECLAC view of development. In this broader approach, greater weight was given not only to matters associated with income distribution, but also to a comprehensive approach to poverty. Furthermore, from the perspective of these two subjects, which are closely linked in the socio-economic history of the region, new, more specific issues emerged and were treated in depth, enriching the thinking and recommendations of ECLAC over the last 20 years. They include concern about social policies, failings and disparities in the region's labour markets, the gender dimension (which is closely linked to inequity and substandard working conditions) and youth as a subject of social policy.

In this second stage (and, as we shall see, even more so in the third), the *CEPAL Review* published

[6] See López Cordovez (1987), Harker (1987), Ortega (1988), Schejtman (1988) and Dirven (1993).

a great many articles on subjects of this kind. Among the most important of the papers that set out to describe and measure the scale of inequity and poverty as structural factors in regional underdevelopment were those of Altimir (1990 and 1994), Feres and León (1990) and Wolfe (1991). Of those dealing with the general dimensions and criteria of social policy, particular mention should be made of Durston (1988), Franco (1989), Sojo (1990), Rodríguez Noboa (1991), Cohen and Franco (1992) and Hopenhayn (1992). Some particularly impressive studies of gender, youth and ethnicity are those of Krawczyk (1990 and 1993), López and Pollack (1989), Arriagada (1990 and 1994), Almeras (1994) and Durston (1992 and 1993). Among articles on work and the labour market, lastly, mention should be made of Tokman (1988), Guerguil (1988), Infante and Klein (1991), Calderón (1993) and Rosenbluth (1994). One study was particularly groundbreaking because of its subject-matter and the importance this was to acquire in the current decade. We refer to the issue of social protection in Latin America and the paper by Uthoff (1995) on reforms to pension systems in the region.

As Torres Olivos (2006) points out, the idea of changing production patterns with social equity was extended in an important way when it was linked to the environment, natural resources and sustainable development generally, although these subjects were in fact introduced in earlier research by Sunkel and other ECLAC staff members in the 1970s. In relation to the environment and sustainable development, mention should be made of the analysis of natural disasters and their socio-economic impact carried out by Jovel (1989), the outline of an effective environmental policy provided by Bustamante and Torres (1990), the environmental accounting approach in Gligo (1990), policy options for reducing urban pollution (Durán de la Fuente, 1991), the paper by Valenzuela (1991) with the suggestive title "The polluter must pay", dealing with the use of Pigovian taxes as an environmental policy instrument, the article "Participation and the environment" (Tomic, 1992) and the paper by Gligo (1995) on the situation and prospects of sustainable development in the region. Regarding the problems of natural resources in the region, some major articles include one by Dourojeanni (1994) on water resources and two by Sánchez Albavera (1993 and 1995), the first of which brings into the debate the situation of natural resources in the region in the early 1990s while the second deals with the link between globalization and energy sector restructuring in Latin America.

Lastly, mention must be made of a debate that took place in the late 1980s and early 1990s and that gave rise to what became known as neostructuralism. The debate associated with this concept grew out of the work of Fernando Fajnzylber and the ECLAC concept of changing production patterns with social equity. The ideas comprised in that concept (which stresses the role of technical progress, proposes a new form of industrialization that takes account of linkages and interactions with other production activities and gives a central place both to equity and to the quest for a truly competitive role in the international economy) inspired a number of intellectuals and students of ECLAC thinking to integrate traditional and new ideas in an analytical framework denominated neostructuralism. This framework came to include the emerging issues on which the institution has brought its thinking and action to bear over the last 20 years. Thus, ECLAC neostructuralism, as it is known, has brought sharper relief and more closely targeted analysis to thinking about the environment and sustainable development, inequity and poverty, trade integration and competitiveness and production development.

The *CEPAL Review* has published a great many articles dealing with neostructuralism. Mention should be made first of the work of Ffrench-Davis (1988), which draws a contrast between neostructuralism and neoliberalism, both in theory and in their application to public policy design. Following that same logic of parallels, Sunkel (1989) offers a comparison between neostructuralism and institutionalism, with a view to exploring the scope for cross-fertilization between the two schools of thought. Lastly, Sunkel and Zuleta (1990) conduct another comparison between neoliberalism and the neostructuralist approach, but this time looking ahead to the coming challenges of the 1990s and asking whether the policies recommended by one and the other doctrine would or would not contribute to a resumption of growth and development in the region.

During this stage in the history of the *Review*, the huge intellectual contribution made by its editor Aníbal Pinto over a long professional career was honoured and acknowledged in various ways. In particular, he received doctorates *honoris causa* from the State University at Campinas (Brazil, 1989) and the National Autonomous University of Mexico

(1991) and he was awarded the National Humanities and Social Sciences Prize by the Government of Chile in September 1995, just months before his death. Besides all these tributes, we cannot forget the tremendous contribution Pinto made as editor of the *CEPAL Review*, where he played a leading role in the renewal of the ECLAC thinking he so greatly influenced.

IV

The Altimir-Bajraj years (1996-August 2008)

After Pinto's death and the April 1996 publication of issue 58, which was overseen by the Executive Secretary of ECLAC, Gert Rosenthal, with Eugenio Lahera acting as technical secretary, the editorship of the *Review* was taken over by the Argentinean economist Oscar Altimir, who held this position until August 2008. During that period the publication made some major advances in terms of wider distribution, increased contact with the academic world outside ECLAC and a broadening of its editorial line. From 2003 onward, Altimir was assisted by the work of the Argentinean economist Reynaldo Bajraj as managing editor. Both Altimir and Bajraj had successful careers in important ECLAC staff positions, with each at different times holding the post of Deputy Executive Secretary of the Commission. Their accumulated experience has contributed greatly to the achievements of the *CEPAL Review* in recent years.[7]

Many of the articles published during this stage incorporated leading-edge analytical tools (econometric analyses, computable general equilibrium models, more refined sectoral analyses, etc.), and as a result our publication has been listed since December 2007 in the Thomson ISI Social Sciences Citation Index (SSCI).

These major advances have translated into improvements in the quality of the material published and into a stronger editorial line, based on unqualified academic and intellectual independence. As regards the subject-matter of the *Review*, an appropriate balance has been maintained between economic issues, long-term development approaches and socio-political subjects.

Before turning to the most important articles published on these recurring topics of investigation, we should highlight four major milestones in the history of the *CEPAL Review*: the publication in October 1998 of the special issue to celebrate the fiftieth anniversary of the institution, the commemoration of the centenary of Raúl Prebisch's birth in issue 75, the publication since 2002 of the papers presented by leading intellectuals at the annual Raúl Prebisch Memorial Lecture and, in 2005, a special edition, in French translation, of articles published in the *CEPAL Review* between 1995 and 2004.

As we have already mentioned, ECLAC commemorated its fiftieth anniversary in 1998, and to mark it the *Review* brought out a special issue in October of that year, containing some thirty articles by the most respected experts dealing, from an insider's or outsider's viewpoint, with the history of ECLAC thinking and action. One important article in that issue was the paper by Bielschowsky (1998), which is frequently cited as a key source on the development of that thinking. Katz (1998) discussed the lessons and challenges of the technical learning process in the context of a traditional area of ECLAC thought, the region's industrial development. The importance attached by the Commission to globalization since the late 1990s (in other words, since José Antonio Ocampo became Executive Secretary), was expressed in the special issue by the articles "La globalización y la gobernabilidad de los países en desarrollo" by

[7] Oscar Altimir's connection with ECLAC goes back to the mid-1960s, and he has held high-level positions: Director of the Statistics and Quantitative Analysis Division (1976-1983), of the ECLAC/UNIDO Industry and Technology Division (1984-1988) and of the Economic Development Division (1989-1993); between 1994 and 1996 he was Deputy Executive Secretary of the Commission. Reynaldo Bajraj's association with ECLAC began in 1976 and he held various posts at the Latin American and Caribbean Institute for Economic and Social Planning (ILPES): Economic Policy Expert, Director of the Research Programme and Director of the Advisory Programme. In 1987 he was appointed Director of the Latin American Demographic Centre of the United Nations (CELADE) and between 1997 and 2003 he held the post of Deputy Executive Secretary of ECLAC.

Bouzas and Ffrench-Davis (1998), "América Latina y la globalización" by Aldo Ferrer (1998) and a study by Di Filippo (1998) examining the centre-periphery concept in the light of the 1990s. Other important essays in this issue include that of Assael (1998) on the challenge of equity in the region and two studies on the obstacles to regional integration. The first of these was by Sunkel (1998) and it raised the question of whether integration was functional to development objectives. The second was by Urquidi (1998) and carried out a historical review of "integration incidents" in Central America and Panama during the 1950s.

The year 2001 was a significant one for ECLAC and its *Review*, as it marked the centenary of Raúl Prebisch's birth. It seemed a good time not only to pay tribute to him but also to commemorate his contributions to development thinking. Accordingly, issue 75 of the *Review* devoted a section of more than 100 pages to material dealing with his work. This tribute began with a hitherto unpublished interview with Prebisch by Pollock, Kerner and Love (2001) and continued with an essay in which Ocampo (2001) connected certain key ideas in Prebisch's thinking with the Latin American development agenda for the new century. The tribute section also included papers by Rodríguez (2001), O'Connell (2001) and Gurrieri (2001), the last of whom set out to present Prebisch's early thinking, and by Cortés Conde (2001), a historical essay on the years in which Prebisch worked in different positions within the Argentinean government, especially at the Central Bank. The section concluded with papers by Dosman (2001) and González (2001), the first on State-market relations from the standpoint of Prebisch's evolving "manifesto" and the second focusing on the industrialization process in Latin America as viewed by Prebisch and ECLAC, in contrast to the corresponding processes in the United States (from the perspective of Alexander Hamilton) and Germany (Frederick List) and a more general case as seen through the neoclassical prism of John Stuart Mill.

In August 2001, as part of the events surrounding Prebisch's anniversary, ECLAC inaugurated the lecture bearing his name, which was delivered for the first time by Celso Furtado. In 2002, it was the turn of Professor Joseph Stiglitz, winner of the Nobel Prize in Economics, to give the second Raúl Prebisch Memorial Lecture, which dealt with the evolution and impact of reforms in Latin America. Since then, the *CEPAL Review* has published every single lecture up to 2007 in article form. Thus, we can cite the article by Stiglitz (2003) already referred to, one by Cardoso (2004) analysing the interactions between politics and economic development, Ricúpero (2004) on the continuing relevance of Prebisch's ideas, Rodrik (2005) on economic diversification, Iglesias (2006) on the role of the State and economic paradigms in Latin America, and Halperin (2008), containing the most important aspects of the remarkable paper on the historical context of ECLAC which he delivered at the 2007 Raúl Prebisch Memorial Lecture.

In 2005 the *CEPAL Review* marked a major milestone when it brought out a special issue comprising a compilation of articles published between 1995 and 2004, but now translated into French. This was tremendously significant because it allowed the *Review* to present the French academic and political world, historically linked to the origins and mission of ECLAC, with a wide array of high-quality papers hitherto accessible only to English-speaking and Ibero-American readerships. This ECLAC project was supported by French international cooperation agencies and academic institutions, via the French Ministry of Foreign Affairs and the Institut des Hautes Etudes de l'Amérique Latine.

The special French-language issue contained a collection of 10 of the articles published in the *Revista de la CEPAL* and the *CEPAL Review* during the period indicated, plus two essays by the French academics David Dumoulin Kervran and Jean-François Deluchey. One deals with environmental conservation policies in our region in situations of internationalization and convergence in political styles (Kervran, 2005) and the other analyses the history and future prospects of internal security schemes in the Latin American countries (Deluchey, 2005).

The other ten essays naturally reflect the main research areas of ECLAC and its *Review*, including the macroeconomics of development, technical change and long-term growth, the sociodemographic aspects of development and various other topics centring on the public finances and on integration and trade.

We shall now discuss some of the articles included in the French edition, with reference however to the original Spanish or English versions. A remarkable article in this collection is the one in which Ocampo (1999) argues that the international financial reform agenda should be broadened in at least two senses: it should not confine itself to preventing and resolving crises and "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".

Another essay worthy of notice is the one in which Klein and Tokman (2000) set out to analyse the impact of globalization on the labour market and social stratification. While acknowledging the consensus on the benefits that would accrue from globalization to the nations of the world, the authors express doubts about the potential net benefits of this, and particularly the distribution of these benefits. Still on the subject of globalization, Frenkel (2003) analyses the financial and currency crises that affected Latin America in a context of increasingly globalized capital.

In the light of globalization and within the analytical framework of endogenous growth theory, Escaith (2001) examines the case of small economies in Latin America and the Caribbean. From the perspective of sectoral production development, Katz (2000) studies structural change and productivity in the region's industrial sector during the 1970-1996 period. Along similar but more general lines, spanning the different production sectors, Pérez (2001) "puts forward an interpretation of development as a process of accumulation of technological and social capabilities dependent upon taking advantage of successive and different windows of opportunity", which he believes to be determined by technological revolutions originating in the advanced economies.

One interesting proposal, this time issuing from a combination of macroeconomic analysis and consideration of the social aspects of development, is set out in the article by Stallings and Weller (2001) which deals with developments in the labour markets of Latin America and the Caribbean during the 1990s and stresses the importance of employment as the cornerstone of social policy in the region's countries.

Education and human capital accumulation policies are closely tied to the social and working world, as they aid the development of individual capabilities and increase the availability and quality of jobs, especially for the young (ECLAC, 2008b). In 1992, the changing production patterns with social equity approach was extended to numerous subject areas. When Fernando Fajnzylber still played a guiding role, education (and knowledge) was viewed as a linchpin of this change (ECLAC/UNESCO, 1992). An important contribution was made to this work by the education expert Juan Carlos Tedesco, along with many other professionals. Ten years after this interinstitutional effort, Tedesco and López (2002) examined the challenges facing secondary education in Latin America, emphasizing coverage and quality at this level of education.

Besides the articles thus included in the special French-language issue, this third stage in the history of the *CEPAL Review* saw the publication of other interesting papers based on the thinking of ECLAC itself and the work of other social scientists in the region. With regard to the former, there was the essay by Ocampo and Parra (2003) analysing the evolution of the terms of trade between commodities and manufactures. Setting out from Prebisch and Singer's seminal theory about the long-run deterioration of the terms of trade (a key idea in the thinking of Prebisch and ECLAC in the 1950s) and using time series econometrics as an analytical instrument, Ocampo and Parra determined the trend behaviour of 24 commodities, concluding that "the far-reaching changes that the world economy underwent around 1920 and again around 1980 led to a stepwise deterioration which, over the long term, was reflected in a decline of nearly 1% per year in the aggregate indices of real raw material prices".

Macroeconomic topics were well represented in the *Review* in this period, both from a fiscal perspective and from that of financial and real cycles and long-term growth. We shall touch on just a few of these productions, as it is beyond the scope of the present article to cite them all. Mention should be made first of Heymann (2000), who analyses the relationship between macroeconomic shocks, expectations and policy responses. Martner (2000) examines the role of fiscal stabilizers. Morley (2000) explores the distributive effects of growth and structural reform in Latin America in the 1990s. Moguillansky (2002) analyses investment and financial volatility in the region in the 1990s; using econometric analyses, this author concludes that while capital inflows into the region's countries had positive effects, they were offset by the negative effects of the volatility associated with them. Ibarra (2004) conducts a historical survey of the adoption of reforms imported as part of the different "models which have guided the international economic order". In this macro perspective, the latest ECLAC analyses of the sustainability of economic growth have pointed to the need to reduce real volatility, something that highlights the importance of the role that might be played by regional financial institutions. It is these links, in fact, that are analysed in Machinea and Titelman (2007).

In the last three years, fiscal policy analysis has made a comeback in the pages of the *Review*. Thus, Paunovic (2005) addresses the sustainability of public debt in the region; Jiménez and Tromben (2006) study the rise in non-renewable natural resource prices (between 2003 and 2007), the boom in the public finances resulting from this and the implications for fiscal policy; Ocampo (2007) deals with the macroeconomics of the economic boom; and Aldunate and Martner (2006) examine social protection from the standpoint of fiscal policies.

Where the political, social and demographic aspects of development are concerned, Hopenhayn (2001) discusses traditional and emerging forms of citizenship; Sojo (2001) analyses health management reforms in the region; Schkolnik and Chackiel (2004) study the region's most disadvantaged sectors in relation to the fertility transition; and Saraví (2004) deals with urban segregation and public space in Argentina after the 2001 crisis, focusing especially on younger segments in enclaves of structural poverty. Again from a demographic perspective, Dirven (2004) explores the dynamic of rural non-farm employment (RNFE) since the 1990s and the different factors determining this, arguing that "location, and the various 'distances' that go with it, are a vital determinant of RNFE". The essay by Rodríguez (2005) on Chile, informed by demographic considerations, raised an issue of great importance that was returned to in later ECLAC studies: reproduction in adolescence. Another issue of social concern, particularly in view of its public policy implications, is one dealt with by Villatoro (2005), who summarizes the Latin American experience with conditional cash transfer programmes.

Labour issues have always been an object of study and analysis for social policy. Because of the importance of labour as a factor of production and a source of long-term growth, and because of its dual nature (since what is at issue is both the transformative power of human action in the production process and the right of individuals to this means of subsistence and well-being), employment and the labour market, particularly in the way they relate to social protection, have always been staple topics in the *CEPAL Review*, where they have been examined from the standpoint of both demand and supply.

Essays that have explored this field include one in which Vergara (2005) analyses the occupational dynamic of Chile at the industrial plant level, with emphasis on the job creation and destruction processes. The demand for labour is studied using econometric panel techniques, specifically generalized methods of moments (GMM). Using this theoretical and methodological framework, the author finds evidence that job creation is procyclical and job destruction countercyclical. The results also show that trade liberalization increases job churning.

Using a more supply-centred approach, Carlson (2002) analyses the link between educational attainment and the likelihood of obtaining work (employability) and employment income in certain countries of the region. Using the methodology of calculation of returns on human capital investment, differentiated by education level and sex, the author finds, as might be expected, that the returns on this investment are positive and concludes that public policy needs to set out to create a more competitive workforce by increasing the quality and quantity of human capital and ensuring that this is better placed to cope with the powerful competition resulting from globalization.

One very singular aspect of the labour market failings of Latin America and the Caribbean has been the problem of youth employment. Weller (2007) analyses the difficulties encountered by young people seeking work and argues that youth unemployment affects not just the well-being of this section of the population, but also some key long-term development factors.

Still on the subject of labour, lastly, in this third stage the *CEPAL Review* succeeded in disseminating the Commission's main positions and proposals in respect of social protection and pension systems.

Two papers by Mesa-Lago (1996 and 2004) are to the fore here. The first analyses the position of international and regional bodies vis-à-vis the pension system reforms in a number of Latin American countries during the 1990s, while the second evaluates structural reforms to these systems over a broader timeframe, comparing three types of reforms applied in twelve of the region's countries. Jiménez and Cuadros (2003) analyse pension system coverage and argue that this needs to be expanded. Two papers of fundamental importance for the ECLAC position on social protection are those of Uthoff (2002 and 2006). The 2002 paper addresses the vital link between labour markets and pension systems, while that of 2006 analyses the reforms to these systems in relation to welfare gaps. Titelman and Uthoff (2003) examine the role of insurance in social protection. Recalling that health-care systems and policies have always been linked to pension systems, Titelman (1999) studies health-care financing reforms in Chile, 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".

To sum up, at the conclusion of this third stage the cepal Review has become a forum for a broad spectrum of development topics with a movement away from more generalist approaches to more specific ones using analyses that have increasingly been enhanced by more refined analytical instruments and methods, placing most of the articles published close to the knowledge frontier and meeting the highest standards of intellectual rigour and independence.

V

The ideas of Prebisch, Pinto and Altimir in the *CEPAL Review*

This last section will discuss the three essays that follow this article, illustrating the major events and individuals that have shaped the history of the *CEPAL Review*. The purpose of presenting these essays, written by Prebisch, Pinto and Altimir, respectively, and all published at one time or another in the *Review*, is to mark and place in perspective the theoretical contributions made by the editors of the *Review* in its pages.

The first of the essays is Raúl Prebisch's "Towards a theory of change" (Prebisch, 1980), the last in a series of articles in which Prebisch set forth his latest thinking on peripheral capitalism (Prebisch, 1976, 1978 and 1979).[8] In his 1976 article he set out his vision and critique of the capitalist model prevailing in the economies of the periphery, in that of 1978 he discussed the structure and crisis of the system and in that of 1979 he reflected on the neoclassic outlook of economic liberalism. The essential object of those three articles, besides offering a critical analysis of the capitalist model in the periphery, was undoubtedly to demonstrate theoretically the inability of neoclassical orthodoxy to interpret this model correctly. Setting out with a summary of these aspects, in "Towards a theory of change" Prebisch outlined policies which might be used to change the system (and whose underpinnings included values from both liberalism and socialism), placed democracy at the heart of change and, lastly, discussed economic aspects of change, drawing on concepts that had been present in the whole of his output since the pioneering studies of the late 1940s: technical progress, patterns of demand, the production structure and the specific properties of peripheral capitalism.

At the time, this essay by the first editor of the *Review* promised and indeed caused controversy; however, it deserves a thorough rereading in the light of the critical situation in this first decade of the twenty-first century, when the underpinnings of orthodox macroeconomics are weakening in the face of the real possibility of a global financial crisis which many economists are likening to the Great Depression of the 1930s. In the ocean of uncertainties humanity is currently traversing, it is enlightening about the need for the Latin American peoples to transform their production and consumption patterns and their societal relationships so that they can reduce their vulnerability to the cyclical crises of capitalism, while at the same time remedying the structural failings this model has always displayed in the peripheral world:

[8] These studies formed the basis of his last book (Prebisch, 1981).

inequality and poverty, inadequate diversification of production, slow and volatile growth and the depletion of the rich reserves of biodiversity that are a feature of our continent.

The essay by the second editor, Aníbal Pinto, entitled "Styles of development in Latin America", addresses an issue which arose in the 1970s but remains as relevant as ever in the current phase of globalization (Pinto, 1976). This essay deals with the economic characteristics that go to make up a development style. Pinto begins by defining the concept of style, which basically alludes to the way a society is organized by means of a particular economic system to resolve three essential issues: what, how and for whom to produce. Two sets of key characteristics are therefore conjoined in the idea of a development style. First, there are factors of a structural type such as (i) the organization of production, (ii) the sectoral structure of output and employment, (iii) embodied technical progress and (iv) the pattern of participation in the international economy. Structural factors (i), (ii) and (iii) can clearly be traced back to an earlier concept, introduced by Pinto himself and one of the most important contributions of his career, that of "structural heterogeneity" (Pinto, 1970). Second, there are the dynamic factors that go to form a development style and that chiefly concern the characteristics of demand, namely its level and composition and, underlying these, the distribution of income.

This essay is so relevant today that it richly deserves to be reread, for the same reason as Prebisch (1980) does. The answers that are not provided by orthodox approaches of any hue, the worsening of social inequalities around the world, specialization, environmental deterioration and the threat of global warming are objective realities that require production methods to be rethought and societies organized on the basis of inclusive and sustainably prosperous development styles. Using the approaches of Pinto and other students of development styles to revitalize these debates may provide a very useful basis for new thinking about pressing issues like this one.

Our third editor, Oscar Altimir, has also published articles in the *CEPAL Review*, particularly before taking up the editorship. He has specialized for over thirty years in two of the structural factors most characteristic of Latin American underdevelopment, poverty and income distribution. His quantitative and analytical contributions represent an invaluable resource that has influenced both ECLAC specialists and the academic world outside. Many of these contributions were made in publications produced by the Commission and by academic bodies. All the articles he has published in the *CEPAL Review* have dealt with poverty and income distribution in Latin America and the Caribbean (Altimir, 1981, 1990, 1994 and 2002).

The essay of Oscar Altimir's that we discuss here is entitled "Income distribution and poverty through crisis and adjustment". As the title indicates, it deals with the effects of the 1980s crisis and the macroeconomic stabilization measures taken then on income distribution, and with the way all this affected poverty. Strictly speaking, what is analysed are first the distributive cost of the crisis and adjustment, and then the distributive effects of the recovery and the resumption of sustained growth in the early 1990s. Using quantitative comparisons of 10 countries in Latin America, Altimir studies changes in income distribution and in certain important macroeconomic indicators, such as the inflation and growth rates. He also compares income distribution before and after adjustment.

As well as being an outstanding example of the wide range of poverty and income distribution studies produced at ECLAC, Altimir's paper got two major things right. The first is that it anticipated early in the 1990s a fact that has been borne out with the passage of time: while short-term growth and lower inflation have a poverty mitigation effect, growth without better distribution (i.e., without progress towards the goal of changing production patterns with social equity) means that poverty declines more slowly over the medium and long term. The second criticism that has been proved right concerned the traditional methods and new forms of public policy, now heavily influenced by the reforms called for in the Washington Consensus. Altimir argued that these would tend to increase inequality.

These pessimistic conjectures have been proved abundantly right in a world where there are huge and growing asymmetries in the distribution of wealth and where enormous masses of people live in poverty. Altimir's study is therefore highly relevant, especially in the face of an imminent global recession. Both poverty, which remained high even in years of strong regional growth (2003 to 2007), and persistent inequity could be worsened by the immediate effects of the crisis and by the distributive costs that could arise from the adjustments necessary for macroeconomic stabilization. The paper is the occasion for profound reflection, especially from the legal and regulatory point of view, on long-term development and the design of public policies to mitigate the structural factors in underdevelopment, which call for the same determined approach as is now being seen in the application of the many short-term stabilization policies being used by the world's governments and international financial organizations in an attempt to salvage the global banking system and speculative capital.

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C E P A L R E V I E W 9 6 • D E C E M B E R 2 0 0 8

KEYWORDS

Capitalism

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Towards a theory of change

Raúl Prebisch

With the present article the author rounds off the series he began with "A critique of peripheral capitalism" (published in *Review* No. 1), and continued with "Socio-economic structure and crisis of peripheral capitalism" (No. 6) and "The neoclassical theories of economic liberalism" (No. 7). While in all the preceding articles his main concern was to offer a critical interpretation of the functioning of peripheral capitalism and to show the inability of neoclassical theory to comprehend it in depth, in this one he seeks to trace the lines along which that system should be changed.

After recalling the basic features of his critique of how capitalism works in the periphery (chapter I), he sketches the criteria by which the process of change should be guided and which, *in toto*, constitute a synthesis of central values of socialism and liberalism (chapter II). He then goes on to pose certain inevitable questions as to the political conditions of change, through which he reaffirms the value of democracy as the ideal foundation for a harmonious society (chapter III). The next chapters (IV and V) are devoted to completing the presentation of his ideas via the analysis of problems of change linked to technique, demand, the structure of production, the specific features of peripheral capitalism, etc. In the final chapters he slightly shifts his angle of approach in order to deal, on the one hand, with the role of centre-periphery relations in change (chapter VI); and on the other hand, with the present crisis in the centres and its repercussions on the periphery (chapter VII); ending with a few reflections on ethics, rationality and foresight (chapter VIII).

His central ideas will give rise to controversy, not only because of their provenance, but also because they pivot upon the vexed questions of appropriation and social use of the surplus. But the writer is convinced that the present crisis will not be overcome with superficial measures; if it is to be surmounted and a developed, democratic and equitable society is to be built up, the process of change will have to strike at the very roots of the system.

Raúl Prebisch

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Part One

I

The dynamics of peripheral capitalism

I think it desirable to begin this new article –the last lap in the difficult task I have set myself– with a summary of the interpretation of peripheral capitalism set forth in earlier papers. I invariably refer to Latin American capitalism as a whole, disregarding certain inter-country differences which, important though they are, do not invalidate the essential significance of that interpretation.

In this summary I have sought to answer some well-aimed criticisms directed at the first draft of the present article, as well as at those which have preceded it.[1] I believe I have thus cleared the way for discussion of the outlines of a theory of change.

1. The fruits of technical progress and the flaws in the system

Peripheral capitalism is exclusive and conflictive: two major flaws which are aggravated by the centripetal character of capitalism in the developed countries, the inconsistency of its relations with the periphery and the effects of its hegemony.

The internal origin of these defects is to be found in the mode of appropriation and distribution of the fruits of the increasing productivity that results from the penetration of the technology of the centres into the heterogeneous social structure of the periphery, widely different from that of the centres themselves.

This process is dominated by the interplay of power relations.

The lion's share of the fruits in question is retained in the shape of a surplus in the upper strata of the social structure, thanks to the power accruing to them from the concentration of the means of production in their hands.

This unequal distribution of income in favour of the upper strata incites them to premature imitation of the consumption patterns of the centres, which, moreover, are by no means criticism. The privileged-consumer society which grows up in this way signifies a considerable waste of capital accumulation potential, with which is combined the siphoning-off of income by the centres –especially through the transnational corporations–, thanks to their technical and economic superiority and their hegemonic power.

The consequent insufficiency of capital accumulation, in respect of both physical goods and education of human beings, and the explosive growth of the population, explain in essence why the system cannot intensively absorb the lower strata of the social structure. This constitutes the exclusive tendency of the system.

With the increasingly pervasive penetration of technique, structural changes supervene which are manifested in the formation of the middle strata, both in the sphere of the market and in that of the State.

2. Twofold pressure on the surplus

In the sphere of the market, with the advance of the democratization process, the main body of the labour force acquires trade-union and political power, which enables it to secure a share in the surplus, either directly or through the social services provided by the State.

The State in its turn contends for a share in the surplus with a view to absorbing a steadily increasing proportion of the labour force, chiefly from the traditional middle classes, which, like the other workers just mentioned, acquire trade-union and political power. Thanks to this last, the employment of labour to expand State services, including the social services, is generally marked by a good deal of spurious absorption of manpower that is not really needed. The State taps part of the surplus in order to cope with this situation and to cover the purchase of goods and services in the market, in the fulfilment of its functions.

[1] Some of these criticisms and comments are published at the end of the present article, while the remainder will appear in the next number of this *Review*. I have found them helpful and enlightening, and should like to express my gratitude to their authors. Furthermore, as always, Aníbal Pinto has given me the benefit of his keenly perspicacious opinions. And Adolfo Gurrieri has lent his patient and intelligent collaboration by discussing the development of my ideas with me and making highly positive suggestions.

As a result of this twofold pressure on the surplus from the sphere of the market and from that of the State, imitation of the consumption patterns of the centres is gradually extended to the middle strata, although much less intensively than in the case of the upper strata.

Thus, income distribution basically results from a changing interplay of power relations, as alterations take place in the social structure with the march of technical progress.

3. The dynamic mechanism of the system

Thanks to the surplus and to the capital accumulation permitted by the system largely to meet the consumer requirements of the upper strata, these latter control the dynamic mechanism of the system. The system operates regularly as long as the surplus continues to be enlarged by successive productivity increments, despite the twofold pressure for shares in it.

These pressures are governed by no regulatory norm whatever, so that if they become intense, they compress the surplus to such an extent that in the end accumulation suffers, and so does the evolution of the privileged-consumer society. It is then that the conflictive phenomena of the system supervenes. Enterprises react by raising prices in order to re-establish the dynamic of the surplus, and this is followed by a counter-reaction on the part of the labour force, provided it has sufficient power, with the consequent wage increases. Thus an inflationary spiral is triggered off: a new type of social inflation which is superimposed upon and aggravates the effects of other factors.

This is how the crisis of the system begins in the later stages of development, when the play of power relations gains great momentum with the unrestricted advance of the democratization process.

The tendency to this type of crisis does not arise, of course, in countries where the social structure is unfavourable to democratization or where the changes in this structure make for a democracy in form rather than in substance.

4. The structural surplus

The first thing to recall is the structural significance of the surplus. If the fruits of technical progress are concentrated in the upper strata, this is because most of the workers whom capital accumulation makes it possible to employ do not succeed in pushing up their wages correlatively with their increasing productivity. The explanation lies in the regressive competition of the labour which stays in lower-productivity layers of technology, or is unemployed. All that happens is that a part of the fruits of technique is transferred to the limited proportion of the labour force which, mainly by virtue of its social power, has been able to acquire the ever-greater skills demanded by the new techniques.

The surplus does not peter out as a result of inter-enterprise competition, but is retained, circulates and increases because of the expansion of demand which, given the nature of the production process and its monetary requirements, precedes the appearance of the final products. This anticipatory expansion of demand prevents prices from falling as productivity rises.

The social inequality inherent in peripheral capitalism has its roots in the mode of appropriation of the surplus, without which the system could not function, since the privileged-consumer society –its outstanding manifestation– has, as we have seen, a peculiar dynamic of its own. Its ceaseless imitation of the patterns of consumption of the centres and the corresponding capital accumulation can be achieved only by virtue of the growth of the surplus.

If the twofold participation in the surplus referred to above has positive effects in certain phases of development, it ultimately comes up against the resistance of the privileged-consumer society, which jibs at conceding shares in the surplus beyond a certain limit; and this is the starting-point of the crisis.

The dynamic in question does not admit of superficial rectifications. Rather do the serious problems it poses call for another and substantially different dynamic. They call for the transformation of the system.

What can explain why the twofold participation in the surplus cannot be carried beyond this critical limit? Why should it not be possible for the income of the labour force to grow at the expense of privileged consumption? The reply is categorical. It cannot do so without detriment to the dynamics of the system; and this is precisely what happens.

The fact is that if the sharing-out of the surplus proceeds beyond the critical limit, not only is privileged consumption compressed but also the capital accumulation largely earmarked for its satisfaction. And there is no mechanism in the system to offset the diminution of this latter. The twofold participation of the labour force in the market sphere and of the State is not accompanied by an accumulation process to replace that of the privileged strata. At best, any such accumulation would be consumptive, not reproductive. Accordingly, accumulation is adversely affected, and so is the growth of the surplus deriving therefrom.

Nothing is farther from the intentions of the upper income strata than to change the system. Their reaction is quite different: they will do all they can to revive the growth of the surplus, thus launching the inflationary spiral, which gains considerable impetus if and when the lower strata join in the struggle for participation.

5. Trade-union and State responsibility

When the crisis of the system enters upon and pursues its course, emphasis is usually placed on the responsibility of the trade unions. But very important too, and sometimes paramount, is the responsibility of the State, when it increases its share in the surplus without due regard to economic viability. The reason for this lies not only in the political pressure exerted by the labour force to obtain social advantages, but also in the State's own dynamic, which leads it continually to expand its services and its absorption of personnel (military expenditure included.)

Fiscal orthodoxy gradually becomes ineffectual as these forms of State participation are intensified. In reality, even if the hypertrophic growth of expenditure is covered by taxation, as the critical limit of the system is approached, and still more so if this limit has already been passed, the taxes in question become largely inflationary when in one way or another they affect the labour force and this latter has enough power to recoup itself by means of pay increases.

Ideas applicable to outdated situations still persist. In the early phases of development trade-union power is non-existent or very slight; and the labour force is incapable of defending itself against the tax burden it is called upon to bear. In such conditions, the dominant political power of the upper strata enables them largely to evade their own tax responsibilities as a way of safeguarding the surplus.

Taxes are not inflationary in this case. And if inflation then occurs, it is because they are not being brought into service to cover excess expenditure. In these circumstances the rules of the game are very clear-cut: to increase taxation in so far as expenditure cannot be restricted. This is the golden age of fiscal and also monetary orthodoxy.

6. The use of force

Private appropriation of the surplus is arbitrary. So is the struggle to share in it. The greater the power enjoyed, the bigger the share obtained; and this arbitrariness is aggravated as the inflationary spiral pursues its course. The intent to re-establish the dynamics of the surplus by raising prices proves a mirage, inasmuch as the counter-reaction of the labour force immediately ensues. Accordingly, accumulation and the formation of new surpluses –that is, the very stuff of redistribution– is adversely affected. And when these effects are produced they weaken the system's capacity to absorb the increase in the labour force and the manpower vegetating in the lower layers of technology.

The political power of the upper strata, which seemed to be declining with the march of democratization, once again bursts on to the scene, and the next step is the use of force, which makes it possible to break down the trade-union and political power of the disadvantaged strata, so that the dynamics of the surplus may be successfully re-established.

Let me recall what I have already said in another paper[2] with respect to the productivity increment resulting from the lavish exploitation of certain non-renewable natural resources. In this case the surplus can continue to increase, and nothing untoward will occur, despite the intensity of the twofold pressure for shares in it. The crisis of the system is accordingly deferred, but not indefinitely.

It is important to stress that when the power of the upper strata is predominant in the social structure, the trade-union and political power of the labour force is inadequate or nonexistent, and the State keeps its expenditure within moderate limits, development crisis are of a different kind.

In the more advanced stages of development, if the holders of military power are not necessarily under the dominion of the economic and political power of the upper strata, one is tempted to ask why they intervene to serve the privileged-consumer society. Here undoubtedly a complex set of factors comes into play. But the fundamental explanation lies, in my opinion, in the fact that given the nature

[2] "Biosfera y Desarrollo", a report presented at the Seminar on Development Styles and Environment, CEPAL/UNEP, Santiago, Chile, November 1979.

of the system no other criteria for getting it back into working order are available. For, as has already been remarked, its dynamic mechanism, namely, the capacity for capital accumulation, without which no impetus could be given to development, is in the hands of the upper strata. So there is nothing for it but to let them carry on, even if, apart from the political cost, the social cost is enormous.

The income of the labour force has to be squeezed not only to feed accumulation, but also so that the exorbitant State expenditure referred to can be covered, in so far as corrective measures are not viable, by non-inflationary means. Herein lies the aberration of the system.

It will not be superfluous to reiterate here what I have already emphasized in earlier articles. The system heads for a crisis when, under the impulse of the democratization process, the power of the labour force is strengthened, while at the same time the functions of the State are expanded: in other words, when the twofold pressure for participation in the surplus becomes increasingly severe.

7. Economists in face of the outcome of the crisis of the system

There is something poignant about the situation of those economists with a sense of social justice who share the responsibility for a policy of this kind with the new political protagonists entering the scene in consequence of the use of force. They have to resign themselves to adopting the obsolete rules of monetary and fiscal orthodoxy, since they have no others within their reach.

I say economists with a social sense, for there are also some who in the full tide of neoclassical euphoria have become convinced of the need to sacrifice the labour force because it has not been capable of respecting market laws. The free play of these laws must be re-established by suppressing the power of the labour force outright; and this not without a certain satisfaction in wielding the rod! Only in addition the power of the upper strata to appropriate and increase the surplus is likewise re-established.

I should be sorry to make no mention here of yet other economists who hold prudently aloof from so disconcerting a scenario. Some cherish the hope that the institutional recovery which one day will come about may give them a chance to recommend redistributive measures consistent with their ideologies, or, perhaps, a monetary and fiscal policy free from the bonds of dogma; whereby they lay themselves open to the vicissitudes of a new political cycle and to a new frustration.

Others, again, are awaiting their opportunity to transform the system. Only the transformation they advocate is not the one I am proposing to set forth here.

8. In default of a new option

The use of force supervenes because there appears to be only one alternative to the option advocated by the neoclassical economists, namely, that of transferring the ownership and management of the means of production to the State: an alternative which is based, in the last analysis, on a political regime radically different from democratic liberalism. In both cases recourse is had to authoritarianism. In the one, to a conjunctural authoritarianism which sanctifies the social inequity of the system; and in the other, to a structural authoritarianism stemming from a concept of social equity.

There does not seem to be another option, combining this concept of social equity with vigorous development, popular participation and the advance and consolidation of the democratization process.

9. The neoclassical option

The use of force makes it possible to follow certain neoclassical principles, although suitably trimmed to accommodate dominant interests, and not always skilfully applied.

Moreover, under the aegis of these principles measures are taken that differ widely according to the countries concerned and the aptitude of those who adopt them, whether they concern internal development or relations with the centres. The results also vary a great deal, with respect both to the rate of development and to relations with the centres. But over this diversity a common denominator prevails: the aggravation of social inequality.

Neoclassical reasoning, of course, is based on the regulatory action of personal interest under a system of free competition. It will be useful to recall the argument in question. Driven by the powerful motive of personal interest, in their economic activity the owners of the means of production select the techniques and capital investments that offer the highest productivity and the biggest profits. But the interplay of competition reduces profits until they are wiped out, and all that is left is the entrepreneurs' remuneration for their work as such. The conclusion is patent. The whole community benefits if the forces of the system are granted free play.

In our preceding articles we have tried to show that this is not so; for, far from the system's tending towards the elimination of profits, they increase, and are perpetually retained by the owners of the means of production in the shape of a surplus, thus giving impetus to the privileged-consumer society. This structural phenomenon of the surplus has been overlooked by the neoclassical economists. And for this reason above all, their arguments are hopelessly divorced from the realities of the periphery.

Similarly, the facts uncompromisingly belie the notion of a spontaneous trend towards full and efficient utilization of productive resources. These economists fail to note the squandering of accumulation potential; nor do they observe the waste of manpower, especially in the lower strata of the social structure. Faced with the immense harm done to the biosphere under the full operation of market laws, they impute it to exogenous factors which have no bearing whatever on the virtue of their principles.

Where is that 'invisible hand' which was to assign those productive resources wisely, and equitably disseminate the fruits of development?

10. Economic liberalism and political liberalism

Over and over again we have endeavoured to show that this is not how peripheral capitalism works. It promotes concentration of economic power and distributional inequity. And the concentration of economic power brings in its train that of the political power of the advantaged strata.

It is true that in the course of the democratization process the sharing capacity that the labour force gradually acquires tends to counterpoise the power of the privileged strata, as well as that of the State. But the evolution of the crisis finally culminates in the use of force. Thus democratic liberalism breaks down, while the ideas of economic liberalism flourish –an adulterated liberalism which, far from bringing with it the dissemination of the fruits of development, flagrantly consolidates social inequity.

Obviously the Latin American region of the periphery has not yet succeeded in establishing democratic liberalism on a firm footing; we are all too familiar with its vicissitudes, its promising forward strides and its painful setbacks. But the past cannot account for everything. New and complex elements make their appearance as changes take place in the social structure through the agency of technique. The use of force acquires a significance different from that attaching to it in other days: it involves the aforesaid absolute divorce between democratic liberalism and economic liberalism.

What is the essential concept of democratic liberalism? To prevent the arbitrary concentration of political power at the expense of the liberties and rights of the individual and of his social and political participation. Economic liberalism, in its turn, means distributing the fruits of development to the whole community and thus disseminating economic power, in full consonance with the political objectives of democratic liberalism. Both sprang from a common philosophical source; nevertheless, in peripheral capitalism they become mutually contradictory. The use of force enables economic liberalism to be re-established –in accordance with the neoclassical option– at the cost of the relentless sacrifice of political liberalism. And both forms of liberalism come to grief under that other option which consists in transferring the management of the economy to the State.

II

Outlines of change

1. A synthesis of socialism and liberalism

In embarking upon this outline sketch, I must make my goal perfectly clear. I am seeking a synthesis between socialism and liberalism or, if preferred, a version of socialism based on the freedom of the individual and on new patterns of social coexistence.

Socialism, inasmuch as the State will have to shoulder one responsibility of fundamental importance, among others: the responsibility of democratically deciding how social use is to be made of the surplus in order to accumulate the fruits of technical progress much more intensively and distribute them equitably.

And liberalism, in so far as the discharge of this responsibility must be compatible with the exercise of economic freedom, both because of what it means in itself and because it is essential to political freedom and to the human rights inherent therein.

This synthesis of socialism and liberalism is the new option which I am proposing to explore in these pages.

In doing so I wish to state expressly that I am not drawing my inspiration from certain currents of European social democracy –especially important in the Federal Republic of Germany– in which enlightened Latin Americans think a solution for our problem is to be found.

It is true that some European countries have attained the utopian ideal of widespread dissemination of the fruits of development. The problem is no longer that of accumulation –which, after a lengthy process, they have largely resolved– but one of continuing to forge ahead and progressively arrive at new patterns of management and social participation.

In the periphery we need to resolve the problems of accumulation and distribution at one and the same time. And we cannot, like the countries referred to, invoke the so-called social market economy, because the social structure underlying the market in the Latin American region of the periphery is fundamentally different from that of the countries which have attained a high degree of development.

At the other extreme of European socialism lies Marxism-Leninism. In the Soviet Union an enormous and deliberate effort has been made in respect of accumulation and equitable distribution. The demands of the doctrine in question, the historical conditions in which this great social experiment was launched, and the unfavourable constellation of international forces amid which it has had to pursue its course, have there combined with ideological considerations to build up a regime in which State ownership and management of the means of production has consequences that are incompatible with the aspirations of democratic liberalism and its inherent values. For me this is of definitive significance. I am averse to this system –great as is my respect for what has been achieved– on political grounds as well as on others of an economic nature.

I shall dwell later on the weighty reasons I have for thinking on these lines. Here I must utter a value judgement which nothing could induce me to renounce. It is not enough for a system to permit of social equity and vigorous development; it must also be compatible with the prevalence of certain principles which have gradually crystallized in the uneven course of democratic liberalism. They are a legacy which we have inherited from Western civilization, whose full significance is never better felt and understood than when those principles are violated and eclipsed.

Let us therefore shake off an intellectual dependence which clouds our view of our own problems. This calls for explicit statement of our objectives, and, above all, for clear-cut emphasis on the values by which they are inspired.

The social objective is obvious. The distributional disparities of a structural character in peripheral capitalism are extremely serious, and must be corrected through the social use of the surplus. This is the objective of equity, which could not be lastingly attained without a higher rate of capital accumulation, in respect not only of physical goods but also of education of human beings.

This last is of great importance, since apart from the structural inequalities there are others of a functional nature which derive from the differences in individual capacity to meet the increasingly complex requirements of technique. The acquisition of the necessary skills is strongly influenced by the social power inherent in the position of the individual in the structure of society. At the same time, the correction of structural disparities would be incomplete indeed unless, by virtue of an intensive educational effort, the great differences in social power were progressively smoothed away. On no other basis could functional inequalities be justified.

Income distribution must be dynamic if it is to be lasting; accordingly, it necessitates vigorous development. Although in the centres it has become the fashion to consider the possibility of calling a halt to the dynamic impetus, in the periphery we are still a very long way from attaining such conditions as would make it possible to enter upon a phase of this kind. Decidedly, the growth rate of the product must be speeded up; its composition, however, must not be the same, but needs altering to meet the requirements of social equity. And also the demands of the biosphere.

This endeavour to step up growth poses a dilemma whose vital significance cannot be bypassed.

We have referred to it in passing. Will it be necessary to transfer the ownership and management of the means of production to the State in order to secure the social use of the surplus? and can this be done without detriment to personal freedom?

An integral and inseparable part of personal freedom is economic freedom. Here we come upon a value judgement whose scope must be defined. When in the exercise of this economic freedom the urge to consume acquires exaggerated proportions it must inevitably end by eroding other human values. Would this trend have to be repressed? Would that be the work of the omnipotent and omniscient State? The solution must spring from those essential rights of the individual and from his membership of the social community. Persuasion, not coercion. But persuasion of a very different order from that exerted by the formidable interests which are the motive power behind the consumer society.

Persuasion and creative participation, from the classroom to the mass communication media.

Why not use those media to formulate and propagate human values which conspicuous consumption is smothering? Why should not new motivation emerge to stay economic interest from penetrating deeper than is essential for the economic efficiency of the system?

The human values in question are of transcendent importance. It is not our province to enlarge upon them now. In the vastness of Latin America there will be others better qualified to speak of them. But the transformation of the system will have to create the right conditions for these values to spring up and bear fruit. And also for the rescue of certain ethical principles which are foundering in the tides of market forces.

They are principles essential to social cohesion, without which the new system would run the risk of disintegrative instability. And those principles could not be imposed by State coercion.

2. Social use of the surplus

It has already been shown in the appropriate context that the private use of the surplus lacks collective rationality and is ultimately the source of major flaws in the system. Its rationality pertains essentially to the limited scenario of the privileged-consumer society.

Consequently, the State must determine how the surplus will have to be used in order to attain the economic and social objectives of change. To fulfil these objectives the rate of capital accumulation must be speeded up as intensively as possible in order that the increment in the labour force may be employed in conditions of increasing productivity, together with the manpower in the lower layers of technology and that part of the active population, mainly in the middle strata, which the system spuriously absorbs, largely because of the insufficiency of capital accumulation.

The social use of the surplus will make it possible to imbue the new system with a dynamic fundamentally different from that characterizing peripheral capitalism.

I shall now proceed to explain in what the social use of the surplus consists, presenting my ideas somewhat schematically, since I shall confine myself to expounding them in broad outline in order to facilitate critical analysis. Consequently, I am not proposing to go into aspects which, albeit important, would distract attention from what I consider to be of paramount significance. In any event, I hope to have the opportunity of dealing with them in some other study.

The social use of the surplus is a way of meeting the need for the State to establish an impersonal and collective accumulation and distribution discipline, compatible with the exercise of economic freedom within the play of market forces.

Under this accumulation discipline, all enterprises would be expected to increase the amount of the surplus devoted to accumulation, at the expense of consumption on the part of the owners of the means of production.

Furthermore, accumulation would also have to be increased at the expense of consumption by those who carry executive responsibilities and by personnel of enterprises who, thanks to their skills, spontaneously obtain a share of the surplus in the higher strata and the upper fringe of the middle strata.

While all enterprises would have to step up their capital accumulation, redistributive responsibilities would be incumbent only upon those in which most of the surplus derives from their concentration of a large proportion of the means of production. Medium-sized and small enterprises would therefore be responsible for accumulation alone.

Part of the surplus in the large enterprises would be distributed not only to their own labour force but also to the manpower working in all enterprises as a whole. Thus the distributional disparities of a structural character would gradually be corrected.

And thus too the private and social consumption of the labour force could be increased, at the expense of the consumption of the privileged strata.

The distribution struggle which at present distorts the operation of the system would then have been replaced by a discipline based on consideration of social equity that were compatible with the economic efficiency of the new system.

All that would remain would be functional pay differentials. As their capacity, experience and skills increased, individuals would climb above the rest to higher rungs on the ladder of responsibilities and remunerations. This indispensable social mobility calls for appropriate training patterns so as gradually to do away with the differences in social power.

In addition to this method of encouraging individual productivity, others are conceivable in relation to the entire personnel of each enterprise and to the growth of its surplus.

3. Ownership and accumulation of capital

The time has now come to speak of the ownership of the capital which mounts up as the surplus accumulates. It should first be recalled that the major evils of the system do not derive from ownership in itself, but from private appropriation of the surplus and the concentration it brings in its train. There are three possible approaches susceptible of combination in different ways:

– distribution of the new capital among the labour force;
– accumulation mainly in the hands of those owning the means of production;
– accumulation by the State.

The first approach implies assigning the labour force an increasing share in the responsibility for accumulation. This growing capital accumulation on the part of the labour force would gradually pave the way for its management of the large enterprises, which would thus become self-managed enterprises if and when it held a majority of the shares.

The second method, relating to compulsory accumulation by the present owners of the means of production themselves, would give them greater interest in the operation of the enterprises than in the preceding case, but would also strengthen concentration of capital in the upper strata. With the disappearance of the owners, however, the capital accumulated could be partly redistributed to the labour force, and in this way the redistribution of successive surpluses would be initiated. These too would become self-managed enterprises, although the process would take longer than in the former instance. In all this pragmatic consideration are of great importance.

Let us now look at the third system of accumulation, whereby the mew capital would belong to the State. Not all enterprises would be socialized, but only the large ones. This would counteract the trend towards private concentration, and although the political power thus accruing to the men at the top would be considerable, it would not be unassailable, as in the case of total socialization. This is a point to which I shall revert in the appropriate context.

Moreover, this partial socialization, unlike general socialization, would be compatible with genuine political plurality. Party strife, however, might have very serious effects on the life of enterprises. There is no need to imagine these effects; suffice it to observe what is actually happening –with a few exceptions– in our countries. Directors of State enterprises are not generally chosen on the basis of efficiency criteria but in the light of political interests. And this fact, in addition to the spurious absorption of personnel, is prejudicial to the surplus, which sometimes may even be wiped out or converted into losses.

Obviously these adverse effects could be mitigated, if mot warded off altogether, were it to be decided that the personnel of State enterprises should participate in their management. The regime would thus incorporate certain elements proper to the self-managed enterprise.

Attention must mow be turned to another important facet of capital accumulation when it is undertaken by the labour force. Whatever resources deriving from the surplus were devoted to this purpose would mostly be retained in the same enterprises from which they originated, in order to cover the expansion of these or the formation of new enterprises; with the remainder, the State would also promote the creation of new enterprises or would support the expansion or improvement of some already existing, especially those of small and medium size.

It should be reiterated that the distribution of capital to the labour force would mot be of effected enterprise by enterprise, in accordance with the accumulation corresponding to each one, but among all enterprises as a whole, and in conformity with impersonal norms.

In addition to this participation in capital. a recommendable incentive to efficient operation would be to distribute to the personnel of each enterprise a proportion of any surplus in excess of certain limits.

4. Distribution complications

The social use of the surplus is only the starting-point for thorny distribution problems. To understand the nature of these difficulties it is necessary to bear in mind the heterogeneous composition of the labour force and the power relations which it generates, in contradistinction to what is usually assumed in some limes of reasoning inspired by the mistaken notion of social duality.

For the purposes of our exposition a schematic distinction may usefully be drawn between the following structural groups, in accordance with the analysis presented in earlier articles.[3]

– the labour force which, largely thanks to its social power and also by virtue of its experience, possesses the more and more demanding skills called for by the penetration of technique. It is found mainly in the upper strata and also at the higher levels of the middle strata, and spontaneously obtains a share of the increase in the surplus without the necessity of trade-union power, although it habitually resorts to certain combinations in order to boost its income, sometimes exceptionally fast;
– the wide range of economically active population in the middle strata which, despite the possession of skills –easily acquired, however, and inferior to those mentioned in the preceding sub-paragraph– needs trade-union and political power in order to share in the surplus under the existing system.

This labour force from the middle strata is active both in the sphere of the market and in that of the State. And the interests of the two spheres are sometimes coincident and at others divergent, according to differences in trade-union and political power;

– the labour force in the lower strata, with little or no redistributive power; and
– the increment in the labour force.

It is not superfluous to recall that an increase in the rate of capital accumulation is necessary above all in order to absorb at rising levels of productivity the manpower from the lower strata and the personnel, chiefly from the middle strata, spuriously absorbed in State employment, as well as the increment in the labour force. Upon this the social efficiency of the new system essentially depends.

This increased accumulation, however, poses very serious problems. We have already pointed out that the surplus must be redistributed to the labour force and that part of it would take the form of new capital.

Obviously, there would be no reason to include in the redistribution process either the higher strata of the labour force or the upper middle strata which at present spontaneously obtain a share in the fruits of increasing productivity. What is more, the responsibility for accumulation, which is incumbent upon them too, should be borne at the expense of their own consumption.

In contrast, the accumulation effected by the rest of the middle strata, as they reaped the benefit of the distribution of the surplus, would be achieved without reducing their former level of consumption, which would be more likely to improve in a measure compatible with accumulation requirements.

These accumulation requirements should not be extended to the lower strata: among them considerations of immediate consumption could be allowed to prevail over the need to accumulate capital. It is easy to understand how this can be justified. Dynamic income distribution is a process which takes a fairly long time, so that some response would have to be made to the immediate pressure of the private and social consumption of these lower strata.

Hence it is obvious that the transformation of the system might be largely frustrated if consumption pressures made it impossible to meet the demands of collective rationality, in relation both to the growth of capital and to its social composition.

5. Incentives

Moreover, this frustration might go so far as seriously to jeopardize the dynamics of the new system if the pressure of consumption reached the point of impairing the system's economic efficiency. Considerations of social efficiency cannot be

[3] It is not my intention at the moment to offer a detailed analysis of the structure and the wide diversity of interests which come into play within it. I have confined myself to mentioning the social groups which are of great importance in power relations and therefore in the distribution struggle.

overstressed to the detriment of economic efficiency. This brings us to the incentives already mentioned. The penetration of technique demands of the labour force an increasing range of skills, from the highest to the humblest. Incentives are needed –and opportunities too– to acquire such skills and make full use of them in economic activity.

With respect to incentives, an unfortunate confusion generally exists, which needs clearing up. An increase in productivity is the result of a combination of two elements, namely: the technical innovations which take concrete shape in capital goods, so to speak; and the skills called for by technical progress. Participation in the fruits of this increasing productivity by the possessors of such skills –including entrepreneurial qualifications– constitutes an incentive indispensable to the dynamics of any system, although in peripheral capitalism it is usually carried to excess.

The surplus is a different matter: i.e., that part of the fruits of productivity which is not spontaneously transferred to the labour force because of the heterogeneity of the social structure. Its appropriation by the owners of the means of production might be supposed to constitute an indispensable incentive to stepping up capital accumulation and thus obtaining new productivity increments.

If the surplus were used essentially in this way, there might be a measure of pragmatic justification for its private appropriation. But that does not happen, owing to a countervailing incentive: the incentive to consumption in imitation of the life styles of the centres.

Recourse must therefore be had to the social use of the surplus in order to resolve the accumulation problem. But how can that part of the fruits of productivity which corresponds to the entrepreneurial activity of the owners of the means of production be distinguished from the part corresponding to the surplus proper?

The neoclassical economists had managed to clear up this question with great conceptual finesse: at the system's point of equilibrium profits are wiped out, and all that remains is the remuneration of the entrepreneurs; so the surplus disappears.

But this is not the case, since profits, far from vanishing, go to form and swell the global surplus. Consequently, the problem has only an empirical solution. It is true that in enterprises there would appear to be a clear distinction between earnings and profits. But the earnings concerned, especially in the higher strata and the upper middle strata, are influenced by the surplus, and it would only be possible to separate these two elements empirically.

In brief, the dynamics of the new system requires, on the one hand, incentives to productivity, and on the other, accumulation as an inescapable condition for redistribution of the surplus to the labour force.

Nor must it be forgotten, from another point of view, that in the skills made necessary by the penetration of technique there is generally a substantial content of social power. The solution does not lie in underrating (or politically attacking) their possessors, but in progressively eliminating that social power, by offering to all, and especially to those who are vegetating in the lower layers of productivity, adequate opportunities for training and social mobility.

It is worth while to lay yet further stress on so significant an aspect of the question. Income redistribution will gradually smooth out social disparities of a structural character, but functional disparities will continue to make their appearance. The problem consists in getting rid of the residual element of privilege contained in these latter, rather than arbitrarily smothering incentives.

I hope all this is plain and simple. But in any event, it must be recognized that redistribution which is at once equitable and dynamic is a difficult matter, owing to the interplay of immediate interests. And I say immediate, because there is an unquestionable convergence of long-term interests. This convergence could be reached only after a more or less lengthy period of transition: but it is precisely this transition period which is of interest to study. We cannot fall back on the neoclassical –and also the Keynesian– economists' hackneyed resource of passing from one point of equilibrium of the system to another without noticing the changes which take place between the two positions.

6. The State and power relations

In discussing the operation of the present system we remarked that its dynamic mechanism was in the hands of the upper strata, where most of the means of production are concentrated. Under a new system the control of this mechanism will be transferred to the State, by virtue of its fundamental responsibility for the social use of the surplus. We likewise said that in order to discharge this responsibility the

State does not need to assume the ownership of the means of production, but is merely required to determine how the surplus is to be used in order to attain the objectives of change. But what State? How is the State to override the play of power relations if, apart from its own dynamics, it functions largely in consequence of those relations?

As long as power relations make it possible to maintain the dynamic potential of the surplus –based on social inequity– it is almost inconceivable that those who primarily appropriate the surplus will be disposed to give it up on the basis of a democratic consensus. But with the advent of the crisis of the system, its economic distortion and social disintegration, the democratic power of the middle and lower strata might be able to prevail over the power of the upper strata and transfer control of the dynamic mechanism of the system to the State. This is an option which might also offer itself to those who use force to avert disruption: in that case it would be used to change the system rather than to maintain it. And if things were otherwise, the option would still be open when circumstances made it possible to return to institutional normality. This normality, however, would be exposed to the risk of a new crisis unless it were based on the transformation of the system and of the State itself.

For the purposes of this transformation, new rules of the game are needed to guide the action of those responsible for implementing democratic decisions on the social use of the surplus. They too are politicians, and motivated by their immediate political interests. Their power cannot be discretional: it must be exercised subject to rules of the game that are consistent with the economic and political objectives of change.[4]

[4] Here the old rules of monetary operation are pertinent. They meant that considerable power was given to the monetary authority, but in line with norms institutionally established by the political organ of the system. And those who were invested with executive responsibility in the political organ also had to keep their influence over the monetary authority within bounds. This regulatory system generally worked efficiently as long as the power of the upper strata made it possible to handle the dynamic mechanism of the system without major upheavals. But this is no longer the case when the middle and lower strata acquire considerable power to share in the surplus. The rules of the game then turn out to be inoperative or, worse still, counterproductive.

7. Planning the use of the surplus and institutional mechanisms

The new and complex functions thus assumed by the State will entail significant changes in its institutional mechanisms. Supreme intervention will be called for, aimed at achieving what cannot feasibly be brought about through the operation of the market, and differing widely from the countless ways in which the State at present intervenes, in many cases because it has not had at its disposal the institutional machinery to determine how the surplus should be used.

In order to meet the requirements of a collective rationality that the system lacks at present, the State will have to determine how the surplus is to be shared out among accumulation, consumption and State services. The incompatibility between these various purposes becomes increasingly marked, of course, in the more advanced phases of the system and leads to its crisis.

Accordingly, these different ends must be reconciled. But what are the criteria in the light of which the State will have to act? To what extent will it have to aim at raising the rate of accumulation?

I do not hesitate to assert that upon this last the success of the process of change mainly depends, since the rate of accumulation is an essential factor in dynamic income distribution. To that end, the absorption of the lower strata, of the labour force from the middle strata which has been spuriously integrated into the system, and of the population increment must be speeded up.

What are the dimensions of this task of labour absorption? How far will the rate of accumulation have to be raised in order to attain this objective by a given deadline?

These are questions that are very hard to answer, for the greater the effort made to increase the rate of accumulation the fewer the resources that can be earmarked for the early improvement of the private and social consumption of the disadvantaged labour force. The same problem arises –and looms very large– in connexion with the amount of the surplus that the State will have to appropriate in order to expand its services.

The social use of the surplus entails constricting the consumption of the privileged strata to serve the above-mentioned ends; for this purpose a substantial part of the surplus and of the income of the strata in question would have to be tapped. A very tricky problem, this, since accumulation and distribution requirements must be weighed against the incentive needed by those at present carrying directorial and executive responsibilities in enterprises, and those who will have to take their place as progress is made towards the social enterprise. This relates particularly to the distinction between surplus and entrepreneurial remunerations, which, as we have already said, will have to be determined by pragmatic considerations in default of accurate criteria.

Lastly, once the new rate of accumulation has been fixed, how is responsibility to be shared out between the upper strata and the rest of the social structure as the surplus is redistributed?

The merest glance at the aspects of the question that have just been presented, not to mention others that for the sake of brevity have not been dealt with, suffices to take in the complex tasks which the State will be called upon to perform. These tasks will have to be carried out at two closely related levels: the technical level and the political level. At the technical level, the different aspects of the social use of the surplus will have to be analysed in quantitative terms, and various alternatives will have to be put forward as to ways of using it so as to serve the objectives of change: a task whose results must be transmitted to the political level, where the pertinent decisions will have to be adopted.

I am stressing this last point, because, while the tasks to be undertaken at the technical level are of great importance, we must not be seduced by the allurements of authoritarian technocracy. The fundamental decisions are political, not technical. In order to adopt them, however, it is impossible to dispense with the contribution of technical expertise; nor can those on whom political responsibilities are incumbent override the independence of those carrying technical responsibilities in so far as the preparation of their analyses and the presentation of their alternative proposals are concerned.

From the combination of tasks on the two levels should emerge the plan for the social use of the surplus. Thus planning will acquire a meaning that at present it lacks, since the private appropriation of the surplus inexorably leads to disturbances which preclude the exertion of deliberate and rational influence on the factors of development.

It is enough to propound this idea here without prematurely entering into details. All that need be added is that planning for the surplus will have to be extended over a number of years in order to achieve a reasonable degree of stability in the fulfilment of its objectives. Stability, not rigidity, since, apart from any contingencies which may make it inevitable to modify the implementation of the plan, it would not be possible to freeze the emergent power relations of the different social groups, in which the changes that are taking place in the social structure find expression.

Nor will we go very deeply in this preliminary outline into discussion of the institutional mechanisms to which the State will have to resort in order to discharge its responsibilities respecting the social use of the surplus. Suffice it to mention here the mechanisms relating to the above-mentioned planning tasks, to the participation of different social groups on a consultative basis, to the adoption of the pertinent political decisions, and to the supervision of plan implementation. It should also be recalled, in the light of CEPAL texts, that however great the extent to which the problem of accumulation and distribution may have been resolved, planning is necessary to enable the State to take farsighted determinations with respect to certain highly important changes in the structure of production which elude the operation of market forces.

From another standpoint, the State will have to establish norms for the social use of the surplus, both as regards accumulation and with respect to the share in it obtained by the labour force as redistribution takes place. These norms must be linked to the tax regime and the changes which would have to be introduced into it in order to ensure the compatibility of different objectives.

As already pointed out, a substantial share of capital accumulation would correspond to the same enterprises in which it was generated, and a part of it to other enterprises or to new ones. Here the State will fulfil promotion functions of great dynamic significance, for which it will need, of course, a mechanism to channel financial and technical resources and encourage technological research.

Much could be said on these and other subjects, but to do so would mean overstepping the bounds of the preliminary outline of change to which this article must be confined. However, in recognition of the criticisms which have been expressed in connexion with the structure of production, there will be room in due course for discussion of indispensable measures to correct certain distortions in accumulation and consumption, whether by altering the price system or in other impersonal ways.

In addition, a wide field for discussion is opened up on which I must abstain from entering, both to avoid exceeding the scope of my exposition, and because it concerns matters outside my province. I refer particularly to the constitutional regime for the surplus, that is, to the basic principles which should govern its social use and the necessary institutional mechanisms, the legal provisions relating to these latter, and the political handling of the plan and its possible modifications. It would also be necessary to establish the legal regime and the responsibility of the State respecting those enterprises in which part of the surplus would have to be accumulated.

These reflections on the State lead to a conclusion which needs emphasizing. Changes in power relations, in the structure of political power, are an indispensable but by no means a sufficient condition for the transformation of the system. It is necessary to know the object and the manner of that transformation; in short, a theory of change is required.

Nor, in turn, will it be enough to construct such a theory, if no change takes place in the structure of political power.

The democratic option in question can be glimpsed, although it has not yet been formulated; we must zealously search for it. I hope it will be a synthesis of socialism and liberalism –a liberalism springing from its original philophical fountainhead.

8. Enterprises in the process of change

We shall not explore this issue either, but it does seem desirable to mention the changes that would have to take place in enterprises as a result of the social use of the surplus. In the light of what has already been said in the context of accumulation and of what we shall go on to say, the enterprises that would exist could be divided into the following categories:

– small enterprises in which accumulation and management would remain in the hand of their owners;
– medium-sized enterprises in which part of the accumulation would begin gradually to be effected for the benefit of the labour force as a whole, while their management would still be the responsibility of the owners;
– large enterprises, including any resulting from the growth of those of medium size. In this case progressive accumulation in the hands of the labour force would clear the way for self-management;
– enterprises whose capital would belong to the State;
– foreign enterprises.

It is worth while to dwell briefly on the implications of this entrepreneurial plurality.

There is no reason for surprise at the special treatment of small and medium-sized enterprises, in view of what has been said of the significance of ownership of the means of production. What is of fundamental importance is to prevent their concentration, since that gives rise to the concentration of the surplus and, in turn, to a new process of concentration of capital. This objective will be attained through the social dissemination of capital throughout the labour force in all enterprises as a whole.

On the other hand, from the standpoint of the dynamics of the system and the incentives required to keep it going, the capital of these small and medium-sized enterprises ought as far as possible to be accumulated in the hands of their owners. It must be recalled, however, that after a certain point the surplus in such enterprises would begin to be distributed to the labour force.

The importance of accumulation on the part of the personnel of enterprises goes far beyond a redistributive operation. The dissemination of the new capital would gradually place a larger proportion of the ownership of the means of production in the hands of the personnel. A time would thus come when the latter would acquire a majority of shares that would allow it to assume the management of the enterprises, converting them into self-managed enterprises, independent both of those in whose hands capital used to be concentrated, and of the State.

This is a point of vital importance. Self-management is the concern of large enterprises whose technical and economic complexity demands a strong sense of responsibility in the choice of those who are to form their boards of directors, which, in their turn, will have to appoint the holders of executive posts. Different ways of making the selection are conceivable. One of them, perhaps the most advisable, would be to form three estates carrying equal weight: that of the high-ranking personnel (directors and technical experts); that of middle-rank employees and skilled workers; and that of lower-rank employees and unskilled workers. The representatives of these three estates would form the board of directors of each self-managed enterprise, on which the State would also be represented when it had contributed resources for the enterprise's expansion or rehabilitation.

These representatives, together with those of the present owners, would participate in proportion to their share in the capital, whose social composition would gradually change as described above.

The motives justifying State ownership of enterprises are common knowledge. They relate, above all, to those activities whose very nature precludes their competing in the market; to cases in which the dimensions and technical complexities of the activity make State promotion important; and to the purpose of counteracting the penetration of foreign enterprises in decisional fields which are the exclusive province of the country itself.

But we also know that the results achieved by public enterprises are not always positive. Hence the desirability of giving their personnel a share in their management, in combination with representatives of the State. Moreover, there would be no reason to debar the labour force from acquiring shares in the capital of such enterprises.

Foreign enterprises pose a special problem with regard to accumulation. For, in contrast to what happens in the case of a country's own enterprises, part of the surplus is used outside the national jurisdiction. This fact and other considerations make it advisable to establish a special regime. Among such considerations it must be borne in mind that the changes in demand brought about by the social use of the surplus will enforce certain adjustments in the operation of these enterprises which will favour their transfer to national ownership.

In all this the State will have to act in the light of a strictly selective criterion, both as regards the establishment of new enterprises and with respect to the takeover of ownership by the country's own nationals, once the technical and economic capacity for running the enterprises under a self-management system had been built up.

9. Distortions in the social use of the surplus

Whatever the extent to which the new system is based on a significant change in the structure of political power, it will not mean that the effects of the structural heterogeneity of the labour force will have been overcome. A long time will have to go by before relative social homogeneity is attained.

In the meantime, the new system will not be immune from dangerous pressures which could weaken the regime of social discipline in respect of accumulation and distribution, with very serious political consequences.

Under the new institutional regime, no social group would be able to improve its share in the surplus by its own decision alone. I am not of course referring to differences corresponding to individual contributions to the production process, that is, to differences of a functional nature, but to those whose origin is structural. The share in question could only be altered in accordance with the organic procedure established, subject of course to any modifications which it might become necessary to introduce. For an improvement in one social group's relative participation in the surplus would be detrimental to that of the other groups, unless it were secured at the expense of accumulation; the same might be said of the share in the surplus directly or indirectly appropriated by the State.

Note the fundamental difference from the existing system, in which these various pressures are exerted without regard to their subsequent incidence and, if they go beyond a certain point, their inflationary effects.

Such would be the rationality of the new system and its elemental need for planning. But planning, despite its rationality, will not suffice in itself to contain disruptive pressures. How can the various immediate interests be reconciled with one another and their compatibility with accumulation requirements likewise be ensured?

I am far from cherishing a mechanistic illusion. The wisest and most farseeing constitutional provisions are always exposed to risks of distortion and violation. But there are ways of re-establishing their regular operation, perhaps with certain reforms recommended by experience; and the same might be said of the institutional regime for the surplus. The power of certain social groups might overstep its bounds and secure political decisions which would have perturbing effects on the new system; or the system might suffer the consequences of populist irresponsibility. But in accordance with new rules of the game the exact social incidence of such aberrations would be ascertained, and there would also be known means of bringing the institutional regime for the surplus back into working order; another great difference from the present system, in which there are no rules of the game that can hold the inflationary spiral in check.

However, not very much imagination is needed to discern the consequences of persistent irregularities in the course of which the groups with most political power would end by undermining the very foundations of the new system. Thus events might provoke the use of force, either to impose the aforesaid rules of the game, or to bring about by authoritarian means a return to peripheral capitalism, or to enforce structural authoritarianism by establishing an omnipotent State through the transfer of the ownership and management of the means of production.

I say this in all frankness because I do not suppose myself to have found an impregnable solution. I am very well aware of the great obstacles that will have to be surmounted. This is not a matter of formulas which, once adopted, will produce their beneficial effects by themselves. Strong conviction will be needed, both to arrive at a new system and to overcome the formidable obstacles which will present themselves in the course of its operation.

But is there any other way? A way which will enable vigorous development and equitable distribution to be combined with individual freedom? If there were, if this discussion pointed to it, I should not hesitate to follow it, retracing all the toilsome road I have travelled up to now.

10. The social use of the surplus and the degree of development

From all that I have said so far it might be thought that my arguments relate only to the countries at a more advanced stage of development, in which the democratization process is becoming incompatible with the system of accumulation and distribution.

But this is not so. In reality, I have placed the emphasis on such cases, not only because of the importance attaching to them, but in order to reveal the prospect that lies ahead of the other less developed countries, if they do not profit in time by the experience of those that have advanced farther.

It is true that very marked differences exist. In countries where industrialization is incipient the proportion of the labour force working in agriculture and in other low-productivity activities is very high; so too, usually, is the rate of population growth. Consequently, the problem of absorption presents itself on a relatively very large scale. How can it be faced if the surplus in the nascent industrial sector is tiny?

There is nothing for it but to resort to the real or potential surplus from agriculture and other sources of primary production. True, this is also necessary in countries with a higher degree of development; but there surpluses also exist in industry and in other technically advanced activities.

In the less developed countries in question, the two land tenure situations mentioned in chapter IV are to be found: estates that are technically well-run and others that are not. In the case of the former the surplus must be tapped with a view to its social use; whereas in that of the latter the surplus has first to be created, by enforcing in one way or another their more efficient exploitation. In both cases part of the surplus appropriated must be used not only in agriculture but also to give impetus to an indispensable industrialization process.

The same might be said of non-renewable natural resources, where usually a disproportionate amount of the surplus is transferred to the centres.

These are problems by no means easy to resolve, but a solution will have to be found if a country is to develop vigorously on a basis of distributional equity.

In any event, the experience of the more developed countries shows that if in such circumstances no attempt is made deliberately to influence accumulation and distribution, a course will have been followed that inevitably culminates in the exclusive and conflictive phenomena with which we are so deeply concerned.

Sooner or later the democratization process will begin to gain momentum, or to recover if a collapse should have occurred. And whether the movement is spontaneous or violent, it is essential to beware in time of the risk that is run if the process is primarily oriented towards immediate forms of distribution and dynamic requirements of decisive importance are disregarded.

And thus we come back to the same fundamental problem that is common to all, whatever the stage of development reached: the problem of accumulation, especially of reproductive capital, so that dynamic income distribution can be placed on a firm footing.

If the movements inspired by concern for social equity do not face up to this problem, democratization is risking self-destruction.

Differences in degrees of development mainly affect those who will undertake accumulation and the aims they are to pursue. Of course, where industrialization is incipient, accumulation will have to be effected in small and medium-sized enterprises in the hands of their owners. It is these enterprises that in the course of time will evolve in the direction of more advanced technical methods and larger scales of production. Through the social use of the surplus it would be possible to give technical and financial support to the initiative shown by entrepreneurs; unquestionably a very important role for the promoter State.[5]

III

The political art of change

1. Changes in the structure of political power

Obviously, the transformation of the system –whether the point at issue is the socialization of the surplus or that of the means of production– cannot come about without fundamental changes in the composition of political power. It is true that these changes occur as the social structure gradually alters. Political movements set afoot by the increasing power of the middle strata, with the eventual addition of that of the lower strata, gradually strengthen the capacity of these social groups to obtain a share of the surplus. But they are essentially distributional movements, which never have and probably never could have got to the bottom of the problem. In reality, the belief has prevailed that in this way the inequity of the system would gradually be corrected and the risk of radical solutions would thus be warded off.

It can now be seen more clearly that distributive democracy tends to bring destruction upon itself by provoking the use of force.

To put it plainly, the option of socializing the means of production has been confronted with no other option capable of securing a majority consensus and thus averting the use of force. I do not count, of course, the neoclassical option, which is based on flagrant suppression of the democratic process.

The use of force cannot be indefinitely kept up. As experience shows, force wears itself out with the passage of time, new leaders assume the responsibility of exercising it and popular aspirations to political freedom and equitable distribution grow and multiply. And unless channels for the re-establishment of institutionalism are opened up, the system is increasingly exposed to violent confrontations.

At all events, I cannot discuss political strategy without exceeding the aim pursued in these pages, and, perhaps, because it is not within my competence to do so. Furthermore, strategy must take into account the conditions really prevailing, in respect of both internal development and relations with the centres. The difficult task I have set myself is different: what is to be done when, whatever the strategy adopted, a composition of political power favourable to the transformation of the system has been achieved?

A change in the political structure is an essential but not a sufficient condition. And I have endeavoured to answer this question by exploring a new option which might combine, as I have said elsewhere, vigorous development, social equity, and participative democracy accompanied by respect for the essential rights inherent in it.

In the course of this exploration my particular intention has been to study the phenomena that occur at the more advanced stages of peripheral development. I consider that sooner or later they are bound to appear in other countries, in view of their special conditions. But in the meanwhile political crises in these less developed countries are of a different nature.

They are countries in which the way has not yet been cleared for democratization, either because of the opposition put up by the dominant power of the upper strata in whose hands a large proportion of the land and capital is concentrated, or because

[5] This is not the place to enter upon a discussion of the possible applications of the capital accumulated, but what it does seem worth while to stress is the potential significance of State intervention in foreign trade. Here again the experience of the past can teach a useful lesson.

Not only import substitution is a necessity, but also the encouragement of exports. Asymmetry in industrialization will have to be avoided. It is true that this largely depends upon the attitude of the centres, which, as we are all well aware, have not been characterized by their openness, if I may be allowed to reverse the usual application of the term. In view of this fact, it is all the more essential to press with renewed energy along the promising path of reciprocal trade.

the process is slowed down or halted by the various forms of co-option or manipulation which characterize a democracy in appearance, where external forms prevail over genuine substance.

Can the inhibition or adulteration of the process be indefinitely kept up? Can the system withstand increasing aspirations towards democracy and social equity? Supposing the reply were in the negative, and an important change in the power structure of the countries concerned were to supervene: What should be done? How could the illusions of a merely redistributive democracy be avoided, so as to prevent a repetition of the same process as in the more developed countries? The answer cannot be the same as in their case, although neither is it fundamentally different, as will be seen in due course.

Let us now return to the countries where democratization has made some progress. Notwithstanding the ideological differences which characterize political pluralism under a democratic regime, there are generally areas of agreement as to forms of direct and immediate redistribution and as to the expansion of State services, in which the paramount need for accumulation is disregarded. Nevertheless, accumulation, as we have repeatedly stressed, is the only way of securing dynamic income redistribution, and, therefore, a lasting improvement in the lot of the disadvantaged strata.

2. The political solution of the crisis

When the crisis of the system becomes acute, however, an irreconcilable rift is opened between those who still adhere firmly to a genuinely democratic ideology and those who profess other ideologies with a substantially different political significance. These discrepancies are too well known to justify a digression into hair-splitting discussion of the use of words, although they end by becoming an insurmountable obstacle to a political solution of the crisis backed by a majority consensus.

Important as this obstacle is, it is not the only one. Political movements that maintain the inescapable need for an omnipotent State, based on a single disciplined party, which can dissolve the power of the private owners of the means of production and take over the management of these, have at their disposal a well-knit doctrine of change which they propose to put into practice; but the same is not true of those other movements of a democratic character. Among them there is frequent talk of a society which is neither capitalist nor socialist, and although these movements are inspired by the idea of distributional justice, they usually abstain from making a determined attack on the very source of the major defects of the system, i.e.; private appropriation of the surplus.

All this is profoundly serious and disconcerting. It is not surprising that in these circumstances an attempt is made to blame the politicians for not finding ways and means of resolving the crisis of the system. The responsibility, however, is one which those of us who hold forth about development must share, and in the highest degree, since we have been incapable of contributing to the search for a new option.

We have offered no such new option, either to democratic movements inspired by the ideal of social equity, or to those who resort to force in a not always successful endeavour to put the system back into regular working order. We can hardly be surprised when these latter, swept along by circumstances, and also by certain doctrinal preferences, succumb to the lure of simplicity as held out by the formulas of economic liberalism. And since the trade-union and political power of the labour force has violated market laws, with the ensuing disruption and social disintegration of the system, it must be suppressed in order to contain the inflation which is responsible for these evils!

Herein lies our fundamental problem. It is essential to offer a new option to democratic movements in order to forestall this grave eventuality in time: whether democratization is resolutely pushing ahead where it has been unable to develop, or whether it is being revived where it had been suppressed.

In such cases there would no longer be the option of an economic liberalism which can be maintained only by the use of force. And the lack of a new option could lead to serious capitulations on the part of those who, motivated by deep-rooted aspirations to social equity, might allow themselves to be seduced by the illusion that transfer of the ownership and management of the means of production to the State is the best way of fulfilling these aspirations without sacrificing democratic plurality.

Very striking, moreover, is the social ferment seething in the Church. And it is easy to understand the tribulations of theologians and believers who, deeply distressed by the spectacle of tremendous social inequality, seem to be prepared to compromise up to a point with ideologies of change whose underlying philosophy would appear irreconcilable with the spiritual power of the Church. They do not need to do this. I hope they will consider the ideas which are set forth in the present article. While writing it, I have been profoundly impressed by this recent declaration on the part of John Paul II: All private property carries a social mortgage.[6] Is this mortgage perhaps the social use of the surplus?

Furthermore, why should not this new prospect be put before the military authorities too? We have repeatedly referred to the use of force with a view to introducing economic liberalism without changing the bases of the system. However far it may be true that those responsible are not necessarily concerned about the political cost, which some consider transient and inevitable, if not acceptable, it is common knowledge that in the end many of them are disconcerted by the social consequences of an adulterated economic liberalism –consequences which are protracted if not aggravated with the passage of time.

Is not surprising, therefore, that after a phase of euphoria –fostered by some external evidence of admiration– there should be growing dismay at the serious social implications of this type of development, apart from its huge political cost.

Thus events act as a spur to increasing aspirations towards a return to normality, with certain institutional adjustments. But it is necessary to get to the bottom of the problem. Normality of course entails restoring the redistributive power of the labour force. How, then, is the development of a new political cycle to be avoided? How would it be possible to hold in check the conflictive tendencies deriving from a new inflationary spiral, or from the intensification of one that had not been successfully extirpated? How can the exclusive tendencies of the system be counteracted, which, far from being attenuated, are usually aggravated under a regime of force?

Schooled by their frustrating experience, the armed forces might perhaps be interested in considering other options, such as that set forth here; with a view, however, not to imposing them, but to understanding the significance of any democratic movements proposing to put them into effect.

In default of the other options referred to, no one can affirm that the course of events may not incline the armed forces too to overcome certain doctrinal objections –hitherto apparently very powerful– to the option of socializing the means of production.

3. Political significance of socialization

The new option described in the foregoing pages is based on the social use of the surplus. The mere mention of this idea turns one's thoughts in the direction of the socialization of the means of production, since it is from them that the surplus derives. This would seem to be a condition logically imposed by the transformation of the system.

But I think otherwise; and these are my reasons. The socialization of the means of production and their management by the State has very serious political consequences, quite as important, in my opinion, as its economic effects, or even more so. Socialization is indissolubly linked to a political regime which is substantially at variance with the values that have guided and continue to guide Latin America's strivings after a representative and participative democracy in which basic human rights are fully respected.

I am conveniently placed to speak bluntly about the consequences to which I refer, inasmuch as I am very far from having defended peripheral capitalism in my earlier work. I have criticized it not only from the economic but also from the social and political standpoints. Accordingly, when I oppose the socialization of the means of production, I must not be taken to do so for the sake of exalting the virtues of that capitalism, much less to condone its social inequity.

Be this as it may, both the socialization of the means of production and the process of change that I am advocating impugn private appropriation of the surplus. The social use of the surplus is the starting-point common to both, but the roads to be followed subsequently are very different.

To place the management of all the means of production in the hands of the State bestows

[6] See his opening address at the Latin American Episcopal Conference, 28 January 1979. The Pope also explicitly states the evangelical mission of the Church in face of social inequity in the following terms: it must preach, educate individuals and communities, form public opinion, guide those who are responsible for their peoples. It will thus be working for the benefit of society, in which this Christian and evangelical principle will ultimately bear fruit in the shape of a more just and equitable distribution of goods, not only within each nation, but also in the international world in general, preventing the stronger countries from using their power to the detriment of the weaker.

Those who shoulder the responsibility for public life in States and nations must understand that internal peace and international peace will only be ensured if a social and economic system is in force that is based on justice.

unassailable power on the men at the top, however they may have got there. That is where the lines of command start. And the way of life of the labour force, or rather of the whole population, their income, their promotion, the reward of merit, depend in the last analysis upon summit decisions. And in all this account is taken not only of personal capacity but also of militant loyalty to the system.

Ideological unity is an essential element in this loyalty and in the stability of the system. And the ideology in question is not one that is fed by the free and spontaneous expression of thought, but one which emanates from those who carry the responsibility of power and feel the need to strengthen it by diverse means. Accordingly, there is no room for fundamental dissidence which may jeopardize ideological unity, party discipline and the cohesion of the system: a cohesion which might be impaired if the exercise of freedom of expression were to overstep certain bounds, or if artistic and literary creation and intellectual activity were to deviate from the channels mapped out from above. This is the cohesion inherent in and imposed by the system, which allows of no other manifestation of authority.

It is understandable, therefore, that the spiritual authority of the Church should be deemed incompatible with the omnipotence and omniscience of the State.

This requirement of cohesion in doctrine and praxis is binding even upon those at the summit. For if any of them disagree over weighty questions, they incur the disapproval of the rest, which is a very serious matter, for those who lose status in these internal disputes have not the alternative of expending their efforts in the sphere of private activity, which simply does not exist. Thus the indefinite protraction of the leaders' term of office, however long it may be, becomes an important factor of enforced unity. Stability of the system and gerontocracy!

In addition, the hierarchical links in the chain of decision and vigilance make it possible to nip in the bud the slightest sign of substantial nonconformity. The system has its own internal logic, and exceptional firmness of mind is needed to refuse to comply with its adamantine requirements.

4. The vitiation of the market

Furthermore, State ownership and management of the means of production is inseparable from a radical change in the nature of the market, since what is to be produced and consumed depends ultimately upon a central authority. Thus the market loses its political significance, which transcends its economic importance. I am not going to idealize peripheral capitalism in this respect either; nevertheless, to whatever extent the course of development may bring in its train an increasing concentration of economic power, the margin of individual freedom is still quite wide. Otherwise the trade-union and political power of the labour force could not have grown up with the advance of democratization. The only thing is that when that power interferes with the dynamics of the surplus, the use of force permits its suppression.

As I maintained in my earlier articles, the major defects of the system lie neither in the market itself nor in the economic freedom on which it is based. They arise out of the social structure and the power relations which pervert the social efficiency of the system through the arbitrariness of distribution and the insufficiency of capital accumulation.

It is true that under a strongly authoritarian system the concept of the economic freedom of enterprises and individuals –an essential factor in economic efficiency– is not ruled out. But if this freedom were to become genuine, the dominant nucleus would lose an element of cohesion indispensable to the stability of the system and to its own continuance in power.

What is more, if economic liberty exists and entrepreneurs are free to use their own initiative, and if these entrepreneurs emerge from within the enterprises themselves and not from among those in whose hands political power is concentrated, how could they be prevented from aspiring to freedom of expression and participation in political decisions? How far would it then be possible to separate political freedom from economic freedom? Would not the logic of the system call for repression of the political liberty of those who, having acquired economic freedom, expressed discrepancies with that system or with the way in which it works? Could economic freedom be insulated from these effects?

5. Political pluralism and socialization

Let us now pause a moment to interpolate a word on doctrine. In the scientific theory of Marx –which must be distinguished from militant Marxism– doctrine is an integral part of the superstructure, which is decisively conditioned by the basic structure of the system. Changes in the structure, as the forces of production develop, promote changes likewise in the superstructure. There are no ideologies of permanent value.

I wonder, therefore, whether the changes that have been taking place in the structure have not something to do with the new currents of ideology which are springing up in other latitudes, and to which a circumstantial and temporary value is sometimes attributed, rather than a lasting significance. At all events they should be considered within a broader doctrinal context.

In these new currents political pluralism is explicitly accepted, in contradistinction to the hitherto dominant concept of the dictatorship of the proletariat, however it may be defined. Pluralism is a *sine qua non* of democratic liberalism. And I do not understand how the latter can be reconciled with an omnipotent State which concentrates in its hands the ownership and management of all the means of production. If democratic change is really the aim pursued, the new currents of thought must not shirk frank discussion of this problem.

6. Some initial political risks in the process of change

What I am undertaking in these pages is persuasive action. I want to bring it home to my readers that there is an option for change compatible with democracy and requiring thorough exploration. Should the findings of this exploration be positive, that would be only the first step towards inspiring and promoting broad political movements which could result in a majority consensus.

Subsequent events, however, might vitiate certain basic elements in the process of change to such a point as to jeopardize the existence of the new system.

Among these elements I should like to mention the collaboration of the present owners of large enterprises who are efficiently performing the task of directing them. In our countries this entrepreneurial work on the part of the owners is still important. They must be given not only the opportunity to go on with it but also adequate incentives to do so, although it is true that they will no longer have the surplus at their disposal, since control of that dynamic mechanism of accumulation will be handed over to the State. But the owners would continue to earn interest on the capital accumulated in the same way as any part of the labour force that accumulated new capital. They would also receive the remuneration due to them for their entrepreneurial activities, and other incentives linked to the global productivity of the enterprises.

If, in spite of this, stubborn opposition to the new order of things was still put up, those who carried political responsibility in the new system might be induced to transfer all the means of production to the State. Thus, instead of a gradual change in the composition of the capital of large enterprises until their management passed into the hands of the labour force, there would have been a sudden switch-over to State ownership and management.

It is readily understandable that serious distortions would be entailed by such a modification of some of the basic elements in the new system. It would not be only the large enterprises that were affected. We have already explained that medium-sized enterprises would increase their capital accumulation in the hands of their present owners. But as their dimensions approached those of the large enterprises, they would run the risk that, precisely because they had accumulated more capital, they would be exposed to the transfer of their capital and management to the State. This would weaken the impulse to growth, of so much importance in the new system.

The effects of this kind would be equally serious, or even more so, if no attention were paid to the necessity of granting special incentives to the executives, technical staff and other members of the personnel of large enterprises. Their collaboration is of the greatest importance in itself; and much more so in default of that of the owners. If they were dispensed with out of excess of political zeal, it would take time to fill the gap. And then incentives would have to be offered similar to those which had previously been withheld.

Taking an unflinchingly realistic view, I must recognize that the great initial difficulties –not only internal, but also international– attendant upon the process of change might lead those responsible for it to a measure of authoritarianism: a conjunctural authoritarianism, perhaps, but in any event profoundly regrettable. Strong conviction would be needed to prevent it from becoming structural authoritarianism. Undoubtedly, in the face of obdurate opposition, the transfer of the ownership and management of the means of production to the State would be a formidable instrument of supreme authority of a structural character. And the way would have been barred, perhaps for an unconscionable length of time, to democratic progress.

IV

Technique, demand and structure of production

1. Consequences of unequal distribution

In my critical analysis of peripheral capitalism it was largely to the unequal distribution of the fruits of technical progress that I attributed the major flaws in the system. The aim of the social use of the surplus is to correct these flaws, as has been shown in the foregoing pages.

There are two main ways in which unequal distribution influences the structure of production. On the one hand, it casts demand into a mould which is wasteful of physical capital and labour; and, on the other hand, it promotes a certain selection of techniques, and therefore certain patterns of accumulation, which also represent a waste of productive resources. To the best of my belief, the system of accumulation and distribution that I am advocating will enable these deficiencies in the structure of production to be largely set right.

But that would not be enough, for the penetration of the technique of the centres into a peripheral social structure very different from theirs brings with it certain unfavourable effects on the efficient use of capital, which could not be counteracted under the aegis of the new regime, but would necessitate deliberate State intervention in the structure of production.

I have been rightly criticized for having shelved these adverse consequences, as well as others deriving from the erroneous choice of techniques, in my anxiety to stress the paramount influence of the system of accumulation and distribution which characterizes peripheral capitalism.

In reality, I have had no difficulty in taking into account the phenomena to which these criticisms refer, since I have discussed them in former articles in this *Review* and in other earlier publications. Accordingly, in the present chapter I should like to present a succinct and coherent version of those interpretations and to underline their significance.

I note that in all this there may be something more than a mere matter of theoretical emphasis, since I should not be surprised if the influence of these phenomena affecting the structure of production were to encourage a certain trend in favour of the State's taking it into its own hands, via the socialization of the means of production. In my view, from the standpoint of the social use of the surplus the socialization and management of these means by the State is not acceptable, for basically political reasons which I have already set forth in the appropriate context, apart from its economic consequences. For it would undoubtedly mean endowing the State with a power so considerable as to be incompatible with the conservation of essential freedoms.

If this is so, it would hardly be possible to resort to socialization, not in this case to resolve the problem of accumulation and distribution, but to remedy deficiencies that might persist in a new system, despite the social use of the surplus. I maintain that the State has other means of correcting them at its disposal.

2. Reproductive and consumptive techniques

In order to understand the changes that take place in the structure of production in the course of development the meaning of the duality of technique must be recalled: on the one hand there are the techniques which aim at increasing productivity; and, on the other, those mainly geared to the diversification of goods and services.

I have applied the term `reproductive' to the capital required for the first group of techniques, inasmuch as the productivity increment obtained by their means enables capital accumulation to be increased, with further productivity increments as a result, and so on in succession, in a process which has multiplier effects on employment.

The diversification techniques also necessitate capital, not, however, to boost productivity but to obtain more efficient goods and services, of better quality, or designed to satisfy aspirations after different life styles and conspicuous consumption, as well as social prestige and ostentation of wealth.

These diversification techniques cannot develop without the reproductive techniques. It is the productivity increment and the corresponding increase in income brought about by these latter that spur the progress of the diversification techniques, so that the growing demand generated by the income in question may be stimulated and tapped.

It would indeed be pointless to go on lavishly producing the same goods and services beyond certain limits, by virtue of the improvement in productivity. On the contrary, diversification allows the income increment to be expended on a ceaseless display of new and better goods in ever-increasing quantities.

Accordingly, the progress of diversification techniques is the logical consequence of their close combination with reproductive techniques in one and the same production process. Thus the proportion of diversification techniques in the composition of capital tends to rise.

Because the fruits of productivity are so unequally distributed, the use of diversification techniques develops more intensively than it otherwise would. Thus the proportion of consumptive capital increases to an exaggerated extent, at the expense of reproductive capital. And this is of considerable importance in peripheral capitalism.

This social waste of capital is one of the major factors in the exclusive tendency of peripheral capitalism. There are cases in which productivity has increased remarkably by virtue of the introduction of new layers of technology, but the fruits of this productivity increment, owing to their unequal distribution, are largely earmarked to satisfy the diversified consumption of the privileged strata, to the detriment of the social integration of the lower strata.

3. The consumer society and accumulation

One of the criticisms that have been addressed to my account draws attention precisely to cases in which the privileged-consumer society has developed to a notable extent and nevertheless a high coefficient of capital accumulation has been achieved. Accordingly, there is not an insufficiency of capital, we are told.

The insufficiency is to be seen, however, in reproductive capital. This state of affairs is aggravated when the suppression of the trade-union and political power of the labour force allows real wages to be squeezed for the benefit of higher social strata. These strata can then still further increase their diversified consumption and their accumulation of consumptive capital.

Let us recall in passing what we have said in earlier articles. A considerable part of this accumulation of consumptive capital corresponds to conspicuous investments in costly housing on the part of the upper strata, as well as to certain State investments which are immune from considerations of economic viability.

It is not enough, therefore, to observe that the rate of accumulation has risen; it is also necessary to ascertain what is being accumulated.

Here I have another remark to make before leaving this aspect of the question. If the object of development is not only economic efficiency but also social efficiency, consumptive accumulation should be kept in a proper relationship to reproductive accumulation. But unequal income distribution pushes demand in the direction of diversified goods and services which necessitate increasing consumptive accumulation. This means using capital in short supply, notwithstanding the fact that there is capital accumulated and consequently capacity available for the production of similar goods, although with less advanced techniques and a lower degree of diversification. This deviation of demand leads to waste of the capital invested in these lower-quality goods, and to an increase in consumptive capital investment, while reproductive capital is socially insufficient.

Clearly, however, in the course of the development process these inferior techniques will ultimately pave the way for more advanced diversification techniques, as has generally happened in the case of capitalist development in the centres. But this process is prematurely anticipated in peripheral capitalism.

Some pertinent considerations still remain to be added with respect to demand and the structure of production.

It is an all-too-familiar fact that the mass communication media, so closely linked to the privileged-consumer society, resort to every available form of collective suggestion in order to spread consumption of diversified goods. And thus they persistently seek to penetrate downwards into the social structure, propagating at its lower levels the attractive image of certain goods which the upper strata are dropping as they adopt the new patterns in which imitation of the centres constantly finds expression. Needless to say, the abuse of credit perpetrated in these collective suggestion campaigns generally plays a very active role.

The transnational corporations, of course, carry a great deal of responsibility in the promotion of imitative consumption. But I incline to believe that even without them the privileged-consumer society would have developed, owing, above all, to distributional inequality, as we have seen so often. The vigour of our imitative genius must not be underrated!

Unquestionably, if the privileged-consumer society lost importance, the mass communication media and the transnational corporations would witness a marked restriction of their field of action. But some exaggerated forms of diversification might possibly survive which would adversely affect reproductive accumulation.

Accordingly, the State would have to intervene deliberately by resorting to taxation, that is, by raising the prices of the goods in which this tendency to certain consumer extravagancies chiefly makes itself manifest.

But let there be no misunderstanding. It is true that I frankly encourage State intervention for accumulation purposes or in questions of health and the necessary defence of the biosphere. Just as taxes and subsidies are justifiable when they are used to influence the structure of production in respect of foreign trade, that is, where the market is not efficacious.

Apart from this, however, I consider it essential to guarantee the freedom of the individual to pursue his own preferences as regards consumption, as likewise in the vast range of human activities, so long as he does not encroach upon the freedom of others. How, then, can one justify the State's overruling such preferences and making the individual's decisions for him? What reason would there be for it to take the structure of production into its own hands in order to fulfil this authoritarian intention? Or for it to apply a wide range of taxes so as to invalidate those preferences?

4. Accumulation alternatives

Let us now look at another aspect of the penetration of technique into the social structure. Income distribution also influences the choice of technical alternatives and, through that mechanism, the structure of production, favouring combinations of capital and labour which are at variance with the absorption of manpower.

It is a well-known fact that the techniques which have their origin in the centres signify a flat contradiction: they economize in labour which is plentiful and require intensive use of capital which is in short supply. Here in CEPAL, I believe, we were among the first to analyse this anomaly, as early as the beginning of the 1950s?[7]

This erroneous choice of techniques, with the corresponding waste of capital, is mainly attributable to a distortion of relative prices. I have maintained elsewhere that interest on capital and wage levels are not consistent with the assumptions of neoclassical theories and their conception of equilibrium. At bottom, we are up against the phenomenon of the surplus which those theories overlook. Thanks to the surplus, enterprises have to resort to the market for only a part of their accumulation requirements, so that the rate of interest is lower than it would be otherwise. Furthermore, wage levels are not what the market spontaneously determines, but are considerably influenced by the struggle of the labour force to obtain a share in the surplus, both through their political and through their trade-union power.

In reality, during the period of almost thirty years that has elapsed since we drew attention to these phenomena, the technological alternatives in question would not seem to have been put forward, save in a very partial and limited fashion.

In the meantime, there has been a great deal of talk about how price levels can be reached that more satisfactorily reflect reality. Something has been said of taxes on capital goods or subsidies for the employment of labour as a more appropriate response to the available supply of these factors of production. Ideas of this kind, and others, have not prospered, I suspect because insufficient progress has been made in respect of technological alternatives in which the centres have no immediate interest.

There is another form of waste of capital that is encouraged by the distortion of relative prices. In countries like ours, where capital is in short supply, it is a striking fact that factories generally work on the

[7] See *Theoretical and practical problems of economic growth* (E/CN.12/221), Santiago, Chile, mimeographed text, May 1951. (Published in Spanish in the series of texts commemorating the Twenty-fifth Anniversary of CEPAL, Santiago, Chile, 1973.)

basis of a single shift, when they could arrange two or three. The blame must not be laid on price distortions alone, however, but also on other obstacles standing in the way of this more efficient use of capital. As in such cases it would be difficult, if not impossible, to resort to support prices, various measures have been discussed by which the advantageous use of capital might be promoted.

Lastly, other criticisms urge that as new layers of technology are introduced which are of higher productivity than those that preceded them, the fall in prices leads to the liquidation of the enterprises affected, with the consequent loss of capital. This is an argument which is fairly often put forward. But how far is the phenomenon peculiar to peripheral capitalism?

I am inclined to think that the general problem is of another sort, since, as we have already shown, prices do not fall as productivity rises. I do not believe price competition is frequent in cases like these. In the dynamics of development new investments are directed towards taking advantage of the growth and diversification of demand, rather than towards forcing enterprises with higher costs out of the market. Thus the investors can reap the profits for themselves instead of scattering them through a fall in prices. The way to capture the market is not by this means, but by supplying new and better goods.

However, I leave open the possibility that evidence to the contrary may appear. In any event, I wonder whether in that case it would be necessary to resort to the price system or other appropriate modes of intervention, or to fall back on State management of the means of production.

Even on this last assumption, however, it would be a moot question whether the intervention would have to be effected through instructions from the top or whether recourse would also be had to the price system and the play of market forces, in order to moderate the increasing bureaucratization which is arousing so much concern everywhere, the socialist countries being no exception to the rule.

5. The price system

I should now like to venture upon a brief digression. As soon as mention is made of the possibility of using the price system for purposes such as those referred to above, the risk is incurred that this may be held to smack of neoclassicism. No such thing.

In reality, neoclassical theories have completely annexed the price system as if it were the exclusive province of their lucubrations. It certainly is the quintessence of their arguments as to the system's tendency towards equilibrium, if it is not upset by artificial interventions. But the price system existed throughout long centuries of precapitalism. There can be no other explanation either for the Emperor Diocletian's famous edict, or for the admonitions of the Thomists in the Middle Ages. It happens, however, that the neo-classicists have dogmatically enthroned it as the supreme regulator of the economy.

In order that the price system may perform this regulatory role, the neo-classicists do of course accept certain interventions, with a view to correcting the so-called imperfections of the market. To this end they resort to taxes whereby those imperfections can be rectified, as in the case of those misguided selections of technique to which we referred in the appropriate context.

This path, however, could take one too far, as, for instance, when the price system is advocated as a means of protecting the environment. Can it possibly be said that the serious deterioration which the environment has been suffering is due to market imperfections? Would it not be more accurate to speak of the harmful consequences of the unrestricted play of market laws?

There are also some neoclassical economists who recognize that market laws do not resolve the serious problems of income distribution in the centres. If they were to take a more careful look at the periphery, they would see that here market laws do not resolve the vitally important problem of capital accumulation either. If this is the case, what becomes of the role of supreme regulator of the economy that is assigned to these laws?

Neoclassical theory disregards the social structure and its changes, as well as the power relations which accompany these, and their considerable significance in connexion with income distribution. How could it be expected, therefore, to impugn the privileged-consumer society?

V
The specificity of peripheral capitalism

1. Imitative capitalism

The question might now be asked, why a theory of change? Would it not be possible to reproduce in the periphery the capitalist development of the centres?

A few decades ago there may have been some justification for this persistent illusion. There is none now. It is fading –the illusion that we could develop in the image and likeness of those countries where welfare has spread to the masses (although not altogether) and democratization (although not without defects) has vigorously forged ahead.

What differentiates our imitative capitalism from the innovative capitalism of the developed countries? We have tried to explain this in our articles. And now, before dealing with relations with the centres, it seems desirable to underscore the specific features of capitalism in our countries, which are really of fat importance.

It should be recalled that we have characterized peripheral development as a process of irradiation and propagation from the centres of techniques, consumption patterns and other cultural manifestations, ideas, ideologies, and institutions. All this in a fundamentally different social structure. Therein lie the contradictions from which the great internal defects of peripheral capitalism arise.

This imitative process is carried on under the time-honoured aegis of the hegemony of the great developed countries, principally the United States, and is set in motion by a capitalism whose centripetal character was and still is of outstanding significance, inasmuch as it is the origin of the marked contradictions which also manifest themselves in centre-periphery relations and which aggravate the major defects of peripheral development.

The next chapter will be devoted to this latter subject, while here we shall briefly review the specific features referred to above, recalling what has been said elsewhere.

The specificity that characterizes the peripheral social structure relates mainly to technique and consumption, the degree of development and the democratization process, land tenure, the formation of the surplus, and population growth.

2. Technique and consumption

Owing to the great heterogeneity of the social structure, the fruits of the penetration of technique are appropriated mainly by the privileged strata. I do not deny, of course, that the same thing happened during the historical evolution of capitalism in the centres. The difference lies in that, owing to this form of distribution, consumption patterns are adopted in the periphery which developed gradually in the centres, as capital accumulation allowed technique to penetrate more and more deeply into the social structure. In the periphery, in contrast, we are imitating these consumption patterns when accumulation is not sufficient to fulfil its labour-absorbing function; and this situation is aggravated inasmuch as the centres siphon off income by virtue of their technical and economic supremacy and the weight of their hegemony. This point must be clearly understood. The specificity lies not so much in the imitation of the consumption of the centres, which, strictly speaking, is a worldwide phenomenon, but in the dimensions which this phenomenon is acquiring in the periphery, thanks to the flagrant inequality of income distribution. To put it another way, the specific feature is the privileged character of the imitation.

This becomes more marked because the technical progress of the centres is not favourable to technical alternatives that are better suited to peripheral conditions, whence results one of the most serious contradictions of imitative development: a situation that makes it all the more necessary to exploit to the utmost the potential of the surplus.

3. Degree of development and democratization

Furthermore, the democratization process made its breakthrough in the centres when considerable capital accumulation had already been achieved. Whereas peripheral democratization is evolving before capital accumulation can meet the dynamic requirements of development; moreover, its bias is essentially distributional, and also conflictive.

It should be noted that I am not deploring a premature democratization process, but stressing the serious consequences of our having devoted attention to immediate questions of distribution while bypassing the indispensable requisite of capital accumulation.

An additional factor is the tendency to disproportionate expansion of State services, which is also largely due to the various forms of distributional pressure and spurious absorption of labour. But it must not be forgotten that this is generally combined with the heavy pressure exerted by military expenditure; it is not surprising; therefore, that State expenditure represents a proportion of the product that in the developed countries it took a long time to attain.

4. Land tenure

From another standpoint, it is beyond question that the prevailing system of land tenure has been and still is a stubborn obstacle to development, as CEPAL has so often pointed out. In the industrial centres this obstacle was removed at an early stage, with favourable social and technical consequences. But this is not the case in the periphery, where industrialization is superimposed on a land tenure regime which acts as a brake on the penetration of technique and productivity, to the detriment of development. This is another specific feature of peripheral development which we will go on to examine.

In the context of the structure of production, reference was made to the diversification of demand. This relates above all to industrial goods and skilled services; but not to agriculture, where diversification is very limited. Demand, then, increasingly veers towards the aforesaid goods and services, prejudicially to agriculture. And employment tends to shift to the diversified activities. Thus the share of agriculture in the structure of production and in employment declines. This trend towards the displacement of labour sharpens as productivity rises.

But this is not all. Regressive income distribution and insufficient capital accumulation, by which the lower strata chiefly suffer, account for the fact that demand for food products is relatively weak, despite the manifest under consumption.

This often leads to frustration of the favourable effects that might attend increased productivity; there is not enough demand to absorb the larger volume of goods. And the consequent trend towards a deterioration in the internal terms of trade discourages the expansion of production.

Here, then, one of the most flagrant contradictions of the system is to be seen. Unequal distribution displaces the growth of demand towards increasingly diversified goods, at the expense of those that are less diversified or in which diversification is slight or non-existent, such as agricultural commodities.

If the accumulation potential of the surplus were thoroughly exploited, demand and the structure of production would assume a different guise, to the benefit of the less privileged social strata.

However, it is not all a question of demand. The land tenure system which characterizes the structure of production, needless to say, is of paramount importance where concentration prevails in the form of latifundia. As generally happens in Latin America, the inordinately large land rent ensured by the very extent of the property owned makes many landowners indifferent to the possibilities opened up by technical progress, especially in respect of yields. For the same reason they are more attracted by mechanization, since they do not need to devote as much time to the land as the application of biological techniques requires.

It is true that in recent decades the use of these techniques has been spreading, with noteworthy effects on productivity. But the large landowner who is reluctant to adopt them sees that nevertheless the value of his property is rising by virtue of its greater potential capacity. This is a very important feature which also characterizes urban land: the appreciation of land value through the work of others, apart from population growth.

A moment's thought should be given to the contrast with physical capital that this represents, in order to understand the position of agriculture more clearly. The owner of physical capital who fails to avail himself of technical progress does not see the value of his possessions rise; quite the contrary, since in the end he is jostled out of the market by entrepreneurs who are more alert to the advances of technique.

It would seem, as has just been noted, that perceptible progress has been made in Latin America in respect of agricultural productivity. But as one of the major failings is progressively eliminated another comes to the fore. Undoubtedly, with the diffusion of technical progress in agriculture the surplus is increasing; and this is a good thing. But unfortunately the excessive amount earmarked for the privileged-consumer society and for transfer abroad has negative effects on capital accumulation.

Moreover, the agricultural surplus is crystallized –if I may be permitted to use the term– in the value of the land. And this aggravates the concentration of wealth.

Thus agriculture displays very special characteristics. If technical progress is not introduced the surplus is less than might be obtained. And if it is introduced and the surplus increases and is used for the purposes of conspicuous consumption, accumulation potential is wasted. In both cases the effects on absorption of labour and income distribution are frankly unfavourable.

These effects are more serious still when mechanization is introduced and the opportunities of accumulation represented by the resulting increase in the surplus are thrown away. Even though mechanization may meet strict criteria of economic efficiency, this neglect of accumulation possibilities precludes the employment of the displaced labour force and the contribution that might have been made to the absorption of labour whose productivity was low, by virtue of the multiplier power of reproductive capital. Consequently, to the waste of accumulation potential is added a waste of human potential, whether it is left redundant in the rural areas, or goes to swell the ranks of the poor in the cities.

This remark is also of concern to those who adduce the argument that mechanization cannot be introduced in small farms in support of large estates. But where are the people thrown out of work to go? A blind eye is turned to the other side of economic efficiency. Moreover, it should be taken into account that in small and medium-sized farms yields per unit of land are usually higher than in latifundia, especially if the technical action of the State is effective. This is a socially efficient way of keeping labour in the rural areas until the acceleration of development –the transformation of the system– makes it possible to resolve this serious problem in depth.

5. The euthanasia of the surplus

Let us now turn our attention once again to the surplus, upon which our theoretical explanations have pivoted. Its appropriation is certainly not a phenomenon peculiar to the periphery, but is common to all capitalism; here too, however, the specificity of the periphery is evidenced. It is worth while to pause for a moment at this point, since the matter is of considerable import.

We have basically accounted for the structural phenomenon in question by the regressive competition of the labour force which remains in lower-productivity layers of technology, when newer and higher-productivity layers of technology are superimposed upon these.

The consequences of this phenomenon merit careful thought. Thanks to the capital accumulation which the surplus permits, in the centres technique has penetrated in depth, and by absorbing lower-productivity labour from the lower strata, has spontaneously relieved the system of some of the regressive competition which prevents the labour force from improving its wages correlatively with the rise in productivity.

Thus the surplus would tend to diminish and finally disappear as the heterogeneity of technique gradually became less marked. In this way a degree of development is conceivable in which the whole of the labour force would be employed in higher layers of technology, using the most advanced techniques available at any given moment. By then the surplus would have been wiped out because the system would have been deprived of a major source of productivity increments, apart from the growing pressure exerted on it by the intensive expansion of State services.

Nevertheless, another important source would still remain: the successive innovations from which increases in productivity would derive.

As the system approached homogeneity, euthanasia of the surplus would ensue, and the neoclassical economists would be able to rejoice in the illusion that the ideal phase had been attained in which competition between entrepreneurs would rapidly do away with the fruits of those successive productivity increments, through wage increases. Moreover, they would be able to point out what favourable effects had been produced by the unrestricted play of market forces, with no need for trade-union and political power. But the illusion might be very fleeting, since the euthanasia of the surplus would pose a serious accumulation problem. There is indeed, nothing in the system which could spontaneously lead the labour force to compensate with its own capital accumulation for what could no longer be done by the upper strata.

This digression affords us a better understanding of the structural and essentially dynamic nature of the surplus. In short, it is a question of a historical category in the development of capitalism.

The periphery, of course, has a long way to go before it reaches this situation, owing both to its great structural heterogeneity and to the waste of accumulation potential. This wastage makes it exceedingly difficult to absorb the lower strata and those middle strata of the labour force that find a niche in the system by spurious means. Here is yet another element in the specificity of the periphery.

And as we have explained elsewhere, in the periphery the twofold pressure on the surplus exerted by the State and the labour force tends to bring the system, much sooner than to a distant phenomenon of euthanasia, to a critical phase; for when this double pressure damages the dynamic mechanism of the system to the detriment of capital accumulation and the privileged consumption of the upper strata, the system reacts with a rise in prices, which inevitably leads to an inflationary spiral. And the spiral, of course, is not accompanied by a new regime of accumulation. I do not say that the centres are exempt from this trend, but there it generally occurs in different conditions.

6. Specificity of population growth

When the technical advances which protect and prolong human life bring down the rate of mortality in the centres, the changes in their social structure, and the psychosocial consequences which these changes bring in their train, are also favourable to a fall in the birth rate. Whereas the rapid penetration of the same techniques into the periphery takes place within a social structure where high birth rates tend to prevail. Hence the population explosion of the last four decades.

This is another specific feature of the periphery. It sometimes severely aggravates the problem of insufficient capital accumulation, as regards both the absorption of labour and the investment that needs to be made before the new labour force reaches the age of productive activity.

7. Poverty and the structure of production

What was said above of agriculture helps to explain the problem of poverty in a general context of development: another specifically peripheral characteristic. For poverty looms large, alike in rural areas and among the social groups that have shifted to the towns.

In face of this poverty problem, we are witnessing a certain amount of ferment in connexion with one of those catchwords that are so seductive. It has been given currency, this time –perhaps mistakenly, in my view– not in the empty rhetoric to which we economists of the underdeveloped world are of course prone, but by some of the northern countries. Thence we are now being exhorted with apostolic zeal to combat poverty and satisfy the `basic needs' of the population. The poverty persisting in the developed world has been somewhat belatedly discovered, and we are being shown that this execrable social scourge exists in our countries too!

No heed is paid, of course, to CEPAL, and I really do not know which is preferable: that it should go unheeded or that it should be credited with what it has never said or proposed, as is frequently done. Its studies are unknown in the centres, or are known at second or third hand, through spokesmen who are not always well-intentioned and are often contemptuous of our ways of thinking. CEPAL has long been drawing attention to the persistence of poverty and the inescapable need to raise the rate of capital accumulation in order to employ the lower strata at higher levels of productivity and income.[8] In other words, it has advocated dynamic income distribution, as we have explained elsewhere.

What happens, however, is that those who are proposing to eradicate poverty generally put forward their formula without explicitly stating how it is to be applied. Is there to be a simple and direct redistribution? Could the problem of social equity be resolved without affecting the system? It is understandable that this may be feasible in countries where over a long period of time a great deal of capital has been accumulated, while poverty, in contrast, exists on a relatively small scale. But in the peripheral countries, where conditions in this respect are strikingly different, it is unwarrantable to shirk the necessity of raising the rate of accumulation as rapidly as possible. And we have already seen that beyond a certain limit this is not compatible with the dynamics of the privileged-consumer society.

If, on the contrary, the proposal is that distribution should be dynamic, if the need for a transformation of the system is recognized, it will be necessary to say so and to say so outright. And this does not appear to be the case.

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[8] See *Towards a dynamic development policy for Latin America* (E/CN.12/680/Rev.1), United Nations publication, Sales No. 64.II. G.4. (Published in Spanish in 1963.)

Be this as it may, the ingenuity of the promoters of this formula is devoted mainly to discussing what needs must be met in order to eliminate poverty. And clearly their enthusiasm has already gone so far along this generous path as to compile a long list of basic needs of the human race, not only those inherent in poverty.

I recognize, however, that there are some who do get a little closer to the tangible facts and acknowledge the need for changes in the structure of production. But beyond this they do not go, perhaps imagining that these changes will come about in one way or another, especially if responsibility for the structure of production is assumed by the State.

I apologize, however, for not presenting here an eloquent chapter on basic needs. Presumably I too could bring some ingenuity to the task; but I prefer to expend mine, perhaps because I cannot afford to waste it, on criticizing the system and suggesting how it might be changed.

Moreover, I maintain that individual needs should not be regimented, because regimentation inevitably means authoritarian enforcement. I have voiced elsewhere my concern in this connexion. And now, more than ever, my overmastering preoccupation is with the essential concept of the freedom of the individual, bounded only by the rule of not encroaching on the freedom of others; but in the context of a new system.

I sometimes think –if I may be excused a touch of misgiving– that some of those who offer such formulas to the periphery from the centres do so in order to evade the problems of the new international economic order. Why listen to all this disturbing rhetoric, instead of mounting a direct attack on poverty? Would it not be easier to hand over a few funds for the purpose?

It would be unfair, however, to maintain that everyone thinks on these lines. There are some who sincerely believe in this solution for the problem of poverty; while others, without harbouring illusions, consider that only by this means, using the image of the under-nutrition, disease and ignorance that are rife in the periphery, will it be possible to awaken the slumbering ethical conscience of the centres.

Let it be assumed for a moment that by virtue of some such benevolent magic poverty could be eradicated without the need to accumulate more capital in order to absorb the lower strata at rising levels of productivity. At best, the exclusive tendencies of the system would have been precariously corrected, but not its conflictive tendencies. Rather might these latter be aggravated.

True, there are fortunate countries which have another kind of magic in their hands: abundant financial resources deriving from their non-renewable natural wealth. If instead of being squandered in the privileged-consumer society these resources were devoted as far as possible to capital accumulation, the problem of poverty could be effectively combated. And a higher proportion of the surplus might be earmarked for the satisfaction of immediate consumer pressures. But experience attests that opulence, as well as shortage of resources, is perturbing to the rationality of development.

The distinction –of such importance– between the exclusive and conflictive tendencies of the system should always be borne in mind. For the crisis of the system is generated not so much by the pressure of the lower strata with little or no redistributive power, but by the middle strata that have progressively increased their capacity to obtain a share in the surplus. Clearly, if the lower strata too acquire redistributive power, the inflationary spiral is intensified, with all the ensuing effects.

Accordingly, there are two evils to be attacked: two evils that are closely interlinked and cannot be arbitrarily separated. Yet some devote their entire attention to poverty and others to the inflationary spiral; it all depends upon the prism through which they look. And all alike refrain in general from penetrating to the deep-lying roots of the evils in question. I suspect that if they did so, they could not escape the incontrovertible conclusion that the system must be changed.

8. Specificity and the process of change

In the light of what we have just briefly set forth, pursuing the lines followed in our earlier studies, there is every justification for this anxiety to explore new paths in peripheral development.

We have made a decided break with neoclassical teachings; nor do we find the key to our process of change in Marxist theory. For the former, the problem of accumulation resolves itself of its own accord through the unrestricted play of market forces. And for Marx, accumulation was a spontaneous and systematic result of capitalist development. The periphery had no place on his intellectual horizon.

Deliberate accumulation on the part of the State was, however, a dominant concern in the praxis of the socialism of Lenin and Mao: a socialism essentially based on the socialization and State management of the means of production. In this there was a measure of authenticity, correspondent with the intention of arriving at a socialism adapted to the objective conditions of a reality different from that postulated by the Marxist critique of capitalism; but on political bases very unlike any we should wish to accept in this part of the world.

There is also an inescapable need for authenticity in the periphery's process of change; that is precisely why we have stressed the specificity of the existing form of capitalism.

At all events, we must once again be wary of another imitative illusion. There is much to be learnt from the experience of others, of which advantage can be taken to reach a synthesis between socialism and liberalism. Such a synthesis would be the periphery's response to the specificity of its process of change.

Part two

VI

Centre-Periphery relations in the process of change

Significance of the present chapter

The dream of developing in the image and likeness of the centres that beguiled the imitative capitalism of the periphery has never come true; this has already been shown in our preceding articles. Neither have the great social disparities been gradually smoothed out –on the contrary, they have become more profound– nor has democratization made any progress: yet another hope frustrated.

What is more, the capitalism which it was sought to imitate is passing through a serious crisis which, because of its structural character, is much more complex and harder to cure than the great depression of the 1930s. Its repercussions on the periphery have already begun to make themselves felt. In our relations with the centres there has been a resurgence of pertinacious problems to which CEPAL has given priority from the time of its earliest writings.

These problems seemed to have vanished into thin air during the long-drawn-out boom years which preceded the present crisis in the centres. They were years of exceptional development in the centres themselves and also in the periphery, where, as we have so often pointed out, the prosperity of the privileged-consumer society was impressive.

The centres, and in particular the chief dynamic centre of capitalism, associated themselves more and more closely with this type of development based on flagrant social inequity. They resolutely played their cards in its favour. But as often happens in boom periods, attention was diverted from the basic problems, namely, the great contradictions in centre-periphery relations.

This situation can no longer subsist in face of the crisis in the centres. It is clearly out of our power to shed much light on the nature of this crisis, but we should like to point out certain factors that play a part in it so that its repercussions on the periphery may be better understood. First, however, the basic problems in relations with the centres will be briefly reviewed.

Capitalism in the developed world has been and still is centripetal. The concept of its power of expansion throughout the world scenario is a myth. However great the initiative and drive of its entrepreneurs may have been, it did not spontaneously carry industrial development to the periphery in the days of outward-directed growth. Industrialization was started deliberately by the periphery itself; it was a necessary result of the crisis in the centres. And this inescapable requisite of the periphery's development is being met with a time-lag so great as to give rise to a number of problems deriving from the disparity between the structure of production of the periphery and that of the centres. These problems primarily concern:

– the innate tendency towards external disequilibrium which acts as brake on the development of the periphery;

– the economic fragmentation of the periphery; and
– the considerable differences in economic and technological power which characterize the phenomena of peripheral dependence under the time-honoured hegemony of the centres.

The crisis in the centres is also the crisis of a development ideology which, from the chief dynamic centre of capitalism, has spread to the periphery, and in particular to Latin America. This chapter would be quite incomplete if we did not end it with a few remarks which, besides being relevant, are timely in face of regrettable deviations and backward steps in development policy and relations with the centres.

The centripetal character of capitalism

1. Deliberate industrialization and CEPAL's ideas

My assertion as to the centripetal character of advanced capitalism will not fail to cause surprise, since this, like other development phenomena, eludes the grasp of conventional theories. It is fundamentally imputable to the centres' retention of the fruits of their technical progress. These fruits, as well we know, do not spread to the rest of the world through a fall in prices as productivity improves. For better or for worse, capitalist development would have been entirely different if this retention had not taken place.

Whatever may have been the internal distribution of the fruits of technical progress, the demand generated by the growth of income in the dynamics of development operates in the centres themselves, except for that fraction which is diverted to the purchase of primary commodities from the periphery. Moreover, the periphery's corresponding export earnings are also converted into demand for industrial goods from the centres.

These industrial goods are being constantly diversified by virtue of technical progress and the investment connected with it. There is no incentive to place this investment in the periphery rather than in the centres themselves, where the process of diversification is stimulated by the expansion of demand.

Thus, the longer the time that goes by, the greater become the differences between the structures of production in the centres and in the periphery, with important effects on development.

We were saying earlier that peripheral industrialization was not the spontaneous result of capitalist expansion in the centres: initially, the periphery was compelled to resort to industrialization in order to produce technically simple goods which could not be imported owing to the crises by which the centres were affected (two world wars and the Great Depression between them).

Until then, in reality, it did not suit the immediate interest either of the centres or of the dominant groups in the periphery for the latter to embark on domestic production of goods that it imported at prices lower than would have been the cost of producing them at home.

In those times of crisis which imposed import substitution it was impossible to think seriously of exporting manufactures; but as the industrialization process gradually gained momentum, the need for doing so became clearly apparent. Perhaps we in CEPAL were the first to stress this necessity.[9]

2. The centres' reluctance to accept exports from the periphery

CEPAL has more than once recognized the periphery's responsibility for having concentrated all its effort

[9] Thus, in a study published in 1961, attention was drawn to the "excessive channelling of industry towards the domestic market", as a result of the "development policy pursued in the Latin American countries and of the lack of international incentives to exports of industrial goods from the region".

"Development policies have been discriminatory as regards exports. Assistance has been given –through tariffs or other restrictions– to industrial production for internal consumption but not to industrial production for export. The production of many industrial goods has thus been developed at a cost far above the international level, when they could have been obtained with a much smaller cost differential in exchange for exports of other industrial products which might have been produced more profitably. The same could be said of new lines of primary commodities for export and even of traditional export commodities within certain relatively narrow limits." See CEPAL, *Economic development planning and international co-operation* (E/CN.12/582/Rev.1), United Nations publication, Sales No. 61.II.G.6, pp. 14 et. seq. (Published in Spanish in the series commemorating the Twenty-fifth Anniversary of CEPAL, Santiago, Chile, 1973.)

In another study it is added that "protection has, of course, been essential in the Latin American countries. But it has not been applied with moderation, nor has there generally been a policy laid down rationally and with the foresight which is essential for the alleviation, if not the prevention, of balance-of-payments crises". And it is subsequently remarked that "the closed industrialization fostered by excessive protectionism, as well as the unduly high customs tariffs applied to some staple agricultural commodities, have created a cost structure which makes it extremely difficult for Latin America to export manufactured goods to the rest of the world". See *Towards a dynamic development policy for Latin America, op. cit.*, pp. 71 and 72.

on import substitution, without paying sufficient attention to exports of manufactures. But at the same time stress was laid on the responsibility of the centres, and it was asserted that to have placed production for export on an equal footing with import-substituting production for the home market would have not been enough. In the large centres, measures would have had to be adopted to facilitate imports of certain industrial goods from the developing countries, thereby giving these countries a greater capacity to import precisely those products for which cost differentials are bigger. In this way, an appropriate division of labour would have developed in the industrial field, widely different from the traditional pattern of trading primary commodities against manufactured goods.

Yet neither did the centres encourage exports of manufactures from the periphery, nor did the periphery itself determine to launch a policy definitely favourable to such exports until the exceptional rate of development attained by the centres, in the course of the 1960s, showed the possibility of doing so.

The advanced countries' prosperity had repercussions not only on the periphery's external sales of primary commodities, but also, and above all, on its exports of manufactures. In some cases, the latter developed at high speed and import substitution policy was not merely weakened, but actually repudiated.

During those years the centripetal tendency of capitalism was in some degree obscured, but it did not disappear. The periphery's strenuous export effort has not reached the centres to the extent called for by increasing import requirements and debt servicing.

The periphery has had barely a marginal share in the centres' voluminous and growing flow of industrial trade, which a clear-cut liberalization policy encouraged. Its new industrial exports to the centres, largely handled by the transnational corporations, either involve mainly goods in which innovations are no longer such, having been left behind by technical progress, or else are confined to parts of up-to-date goods in whose case the transnationals take advantage of the prevailing low wages, with no intention, however, of introducing advanced forms of integrated industrialization.

It is understandable that the transnational corporations, spontaneously incited by their own interests, as has been remarked elsewhere, should prefer to invest in the centres themselves, where the aforesaid ceaseless innovations have their origin, and where increasingly diversified demand is concentrated.

But the periphery could send to the centres technically less advanced goods in respect of which it is acquiring competitive capacity and has shown its ability to export them through the endeavours of its own enterprises. But liberalization policy has not been extended to these goods; quite the contrary.

All this bears on the present stage of peripheral development. But it by no means signifies that given a new industrialization policy the periphery could not tackle production and export of goods of increasing technical complexity. Such is the dynamics of development.[10]

Hence there is a blatant paradox in centre-periphery relations. In the Kennedy Round, as in the Tokyo Round, decisions have been adopted to liberalize trade in those products in which the periphery lacks comparative advantages for the time being owing to the technical and economic superiority of the centres, which is manifested chiefly through the transnational corporations. And the goods that escape liberalization –defended by various forms of protectionism– are the manufactures (and primary commodities too) in respect of which the periphery does enjoy comparative advantages, or easily could do so through its own enterprises' efforts.[11] And new manifestations of inveterate protectionism are emerging in the industrial centres.

Nothing of any importance has been done in the centres, then, during their spells of prosperity,

[10] This is the thesis that Hector Sosa develops in a study in course of preparation for the *CEPAL Review*.

[11] A recent appraisal of the Tokyo Round ends with the assertion that the results of the tariff reductions have been very meagre, whether they are measured by the fall in customs revenue that these reductions would bring about or by the increase that they would have caused in the developed countries' imports from Latin America if they had been in force since 1976. Similarly, the centres still maintain a tariff scaling which lays a heavier burden on final goods than on raw materials –particularly ores, hides and skins and textile fibres– as well as a vast and tangled network of non-tariff barriers. Lastly, while the six Codes of Conduct and the reform of the General Agreement itself clarify the rules of international trade, at bottom all they do is to confer institutional sanction on the practices already applied by the developed countries. See Pedro Mendive, "Evaluación de los resultados alcanzados en las negociaciones comerciales multilaterales (Ronda Tokio) hasta el 30 de octubre de 1979", CEPAL, mimeographed text, January 1980; and, by the same author "Protectionism and development: New Obstacles of the centres to international trade", in *CEPAL Review*, N.° 6, Santiago, Chile, second half of 1978.

to encourage imports from the periphery. It is common knowledge that the system of preferences established after long years of negotiation has proved of little significance because of the serious limitations it involves.

To all this must be added the adverse effects of the crisis through which the centres are now passing. The growth rate of peripheral exports has fallen, and although their volume is still relatively large, it is far from enough to allow the rate of development to rise again, if we are to avoid an exacerbation of the exclusive and conflictive tendencies of the system, which would have very serious social and political consequences. These are knotty problems to resolve, in view, moreover, of the need to boost exports still further in order to cover the higher cost of petroleum without indefinite recourse to borrowing from abroad.

3. The disparity in structures of production

To obtain a complete grasp of the nature of these problems it is worth while to examine them from the standpoint of the structure of production.

It has been explained elsewhere that development brings with it changes in the composition of demand, thanks to the increase in productivity and per capita income; to meet these changes, the structure of production also has to be modified. And here two vitally important options present themselves: to develop the structure of production in such a way as to satisfy part of the expansion of demand through trading exports against imports, or to gear it to producing at home instead of importing.

Clearly, the choice of the option that is more expedient from the economic viewpoint depends above all upon the attitude of the centres, apart from the periphery's own trade policy decisions.

The attitude of the centres was of course negative in the times of crisis that fostered the industrialization of the periphery. It has already been shown, and can bear repeating, that the periphery was inevitably obliged to resort to import-substituting domestic production. And it is a fact fully attested in the CEPAL studies that as a result the Latin American countries were able to keep up a rate of development which exceeded the growth rate of their exports to the industrial centres. The higher cost of import substitution was more than offset by the much bigger increment in the product. This was the economic justification of import substitution, which, as we observed before, could have been of greater importance if a more rational policy had been pursued.

I do not say it is just the same situation that is now confronting the periphery in consequence of the rate of development of the centres –so much lower now than in the days of buoyancy– and the stronger emphasis on protectionism. The periphery has learnt to export, and some of these exports do go to the centres. But, as we have already noted, their volume is a long way below what is required, especially if development is speeded up.

There has been a significant change in the structure of production, but it is far from enough. And in so far as the centres refuse to accept more imports from the periphery, the latter will also have to gear its structure of production to satisfying by means of import substitution the requirements that cannot be met through trade.

The inference is obvious: in this crisis, as in others of more distant date, the centres have forced and still are forcing the periphery to resort to import substitution.

The difference between this crisis and those of the past lies in the fact that it is now possible to combine the import substitution drive with the effort needed in order to continue expanding exports of manufactures.

The way in which the two types of effort are combined depends primarily upon the attitude of the centres with respect to these industrial exports from the periphery. If the endeavour to increase them were to encounter serious obstacles, either because of the centripetal tendency of developed-world capitalism or because of the other unfavourable factors mentioned above, the only solution open to the periphery would be to give its structure of production a more decided slant towards import substitution, in order not to restrict its own rate of development, or to develop more rapidly than would otherwise be possible. It is difficult to say whether the transnational corporations might in the event help to counteract the centripetal tendency by exporting advanced goods to the centres; they have not hitherto done so on any impressive scale, albeit they have played an important role in respect of exports to peripheral countries. And they might do much more still in this direction if import substitution were undertaken at the regional level, a point to which we shall revert in due course.

This situation, together with the siphoning-off of peripheral income, explains how it is that while at first the transnational corporations help to correct external disequilibrium through import substitution, later on they are more apt to aggravate it, in relations with the centres when the amount transferred abroad in the shape of their profits and other payments exceeds their new capital contributions, while at the same time the possibilities of further substitution are gradually being exhausted.

Nor are these the only ways in which income is siphoned off; there are others deriving from the technical and economic superiority of the centres and the weight of their political power.

The disparities in the structure of production of course have their origin in the time-lag in peripheral development due to the centripetal tendency of capitalism in the advanced countries. Two important points need stressing in this connexion.

The first relates to the income-elasticity of the centres' demand for primary imports from the periphery. This elasticity is relatively low, but for a few exceptions. And the periphery's effort, in the days of outward-directed growth, to expand its exports beyond the limit set by the development of the centres was –as it still is– exposed to the risk of 'a deterioration in the terms of trade.

To this congenital weakness in primary exports is added their great external vulnerability, since cyclical movements in the centres are transmitted to such exports more intensively than in the centres themselves.

The low income-elasticity referred to also affects the centres' own primary production. And this has led them either deliberately to restrict production, as in the United States, or to restrict imports, as in the European Economic Community. Since these possibilities are not open to the periphery, the tendency towards a deterioration of the terms of trade has caused production to be slowed up, almost always spontaneously, at the expense of the greater surplus that might have been obtained if a larger proportion of the fruits of technical progress could have been retained in the periphery.

That is why, in the days of outward-directed development, and in so far as the centres did not welcome industrial exports from the periphery, import-substituting production was the only road open for development. There was no other way of counteracting the trend towards external disequilibrium generated by the great difference between the above-mentioned relatively low income-elasticity of the centres' demand for primary exports from the periphery, and the relatively high income-elasticity of demand in the periphery for the constantly-diversified industrial exports from the centres.

This is a transitory phase of development; but it is a transition that takes a long time. Conceivably, changes in its structure of production may enable the periphery to approach progressively nearer to external equilibrium of a structural character. This depends, in the last analysis, upon a favourable attitude on the part of the centres and upon import substitution at the Latin America level, as well as on trade with other peripheral countries.

There is certainly no lack of economists in the centres who, even setting aside these structural phenomena in centre-periphery relations, point out the advantages of importing less advanced goods against exports of more advanced goods characterized by a high level of productivity per worker. But these rational considerations do not suffice for the adoption of policy decisions to modify the structure of production both in the centres and in the periphery. What is more, during those years of booming development in the advanced countries, any unemployment that might have occurred in industries adversely affected by competition from the periphery could have been compensated by employment in those other industries and activities which were growing at an exceptional rate. It was thought preferable, however, to employ labour from less developed countries, a move which subsequently turned out to have some sort of rationality too, although the form it took was not very humane: dismissal and repatriation of these workers when the rate of development dropped.

4. Comparative advantages

In the light of these observations, fresh consideration should be given to certain theses which, like that of comparative advantages and trade reciprocity, are often put forward afresh without reference to the great disparities between the centres and the periphery in respect of the structure of production.

In face of the phenomena of centripetal capitalism and its reluctance to liberalize trade in those industrial goods where the periphery has the comparative advantages in question, the only course open to the latter is that of import substitution. But this substitution must satisfy considerations of economic efficiency. How could their recommendations be followed up? Needless to say, import-substituting domestic production, particularly during a certain initial phase, represents a higher cost than imports would, which is a comparative disadvantage. Accordingly, considerations of economic efficiency suggest that the objects of substitution should be those goods in which the comparative disadvantage is least. That is, the direct disadvantage, for, as was pointed out in the relevant context, this disadvantage is more than offset by the increase in the product.

The situation in this respect differs widely from one country to another; there are some relatively small countries which could, for example, develop certain agricultural export lines without detriment to their terms of trade, especially in the case of commodities for which, on account of their special attributes, there is a steady demand in the centres. Some industrial goods, too, have this particularity.

Similar cases may also arise in larger countries, but there is no reason to suppose that this is a general rule, and that such exports could support a growth rate high enough to do away with the flaws in the prevailing type of development.

5. Trade reciprocity

While the centres do not acknowledge the comparative advantages of the periphery, they harbour some theorists who are returning to the attack on import substitution, with the old thesis of trade reciprocity as their weapon. According to this thesis, any liberalization of' imports from the periphery should be accompanied by similar liberalization of the latter's imports from the centres. The tendency to external disequilibrium in peripheral development attributable to the disparity in elasticities is still disregarded. And worst of all, these ideas, which might he supposed to have been discredited by the elucidation of development phenomena, are once again dominant in certain sectors in our own countries.[12]

In view of these ideas of CEPAL, which have lost no jot of their validity, it is surprising that in Latin America tariffs should actually have been lowered and industries exposed to ruinous competition from abroad, in the hope that the centres may decide to practice reciprocity by liberalizing imports from the periphery. I greatly fear that this is a hope which will be indefinitely deferred!

All this is only too well known in CEPAL. And if I recall it now, it is to bring back into touch with reality some of our economists who live in an aseptic world in which they hatch their learned lucubrations. For instance, they talk about the internationalization of production and external openness. Excellent, but let the centres be the first to begin! Long years of struggle, mainly in UNCTAD, have not succeeded in altering their restrictive attitude. Do those economists perhaps suppose it possible to move the centres to compassion with the spectacle of industries that are closing down because of external openness?

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[12] It seems appropriate, therefore, to recall what we said in 1963:

"The peripheral countries are in a position diametrically opposed to that of the major centres with respect to trade reciprocity. The great industrial centres export manufactured goods for which demand increases sharply as income rises in the peripheral countries, whereas these latter export primary commodities for which the upward trend of demand is more gradual as income rises in the major centres."

"Thus the great centres have no need to engage in import substitution from this point of view, since the trade disequilibrium with the peripheral countries tends to be positive in their case; in other words, exports are in excess. On the other hand, the trend towards a negative imbalance in the peripheral countries compels them to resort to substitution within the present pattern of trade in order to avoid a deficit in their balance of payments."

"Moreover, if the major centres, for other reasons which may or may not be justified, embark on substitution with respect to imports from the peripheral countries, they aggravate this disparity in international demand. On the other hand, import substitution by the peripheral countries with respect to items from the major centres tends to reduce the disparity and thus to make development possible."

"This basic inequality calls for a revision of the concept of reciprocity accepted until now, for if the great centres reduce or abolish their customs tariffs, the peripheral countries can increase their exports to them. And if this happens, the imports of the peripheral countries will also increase, in view of the buoyancy of demand for the goods concerned..."

"To require a developing country to grant equivalent tariff concessions would hamper its industrialization, to the obvious detriment of its economic development."

It was next explained that the idea of implicit reciprocity did not imply that nothing should be done about correcting abuses of protectionism. Quite the contrary... "the customs tariffs in force for the rest of the world must gradually be lowered, both in the light of economic expediency and to ensure that industry is constantly encouraged by external competition to narrow the gap in productivity *vis-à-vis* the major centres."

"A reform of this kind obviously cannot be carried out where an increasing bottleneck exists. Relief must come rather from the external sector, in the shape of a speeding-up in the tempo of the export trade. In other words, a rational customs tariff must be part of an international plan to expand trade on new bases. Tariff reform cannot be a prelude to such a policy, but must stem from it." It should be borne in mind that this was written before UNCTAD came into being.

See *Towards a dynamic development policy for Latin America, op. cit.*, pp. 73-75.

That there are certain industries which must either step up their productivity or disappear, is not open to question; they are industries which in view of their considerable comparative disadvantage ought never to have been established. But it would be a grave mistake to demolish them before increased accumulation of reproductive capital and a rise in the rate of development have made it possible to reabsorb the labour thrown out of employment. This is a problem of proper timing. Advances must first be achieved in the structure of production, either towards exporting or towards import substitution, with due regard to comparative advantages or disadvantages; and then the abuses of protectionism must be thoroughly set to rights. We must not destroy until we can build better.

6. Economic fragmentation of the periphery

In the centres the change in structure of production has been brisk and continuous. But no country has attempted intensive production of everything required to meet the endless variations in demand: on the contrary, there has been a division of labour between the diverse advanced countries accompanied by a remarkable growth of trade, under the stimulus of incessant technological innovations. This has been the dynamic significance of the two liberalization rounds which were mentioned above.

Yet the establishment of rational forms of division of labour among the peripheral countries has been beyond their capacity. In so far as it has not been possible for them to export enough to the centres, each country has developed its industrial production without troubling about trade with the rest. For that reason it is essential that import substitution should be tackled at the Latin American level.

Ever since it published its first studies –in the early 1950s, and prior to the establishment of the European Common Market–, CEPAL has drawn attention to the trend towards exhaustion of the easier forms of import substitution and the necessity of moving on to technically more complex production calling for markets much broader than the watertight compartments of the individual country markets.

Hence originated the idea of a Latin American Common Market, based both on the progressive reduction of tariffs and other restrictions, and on industrial specialization agreements concerted by the governments.

The common market idea was opposed at first by the centres, and in particular by the United States. Influenced by their immediate interests, they did not realize the dynamic significance of this Latin American undertaking.

In the end they accepted it, but they objected to specialization agreements, on the grounds that these deprived the transnational corporations of their freedom to decide what best suited their interests.

I am inclined to think that this was an adverse factor, but what did most to discourage progress towards the common market was the trade boom brought about by the exceptional rate of development of the centres. I am referring not only to the periphery's trade with the centres, but also to trade among the various peripheral countries, which was powerfully stimulated by the repercussions of the development process aforesaid.

Now the same import substitution problem is once again rearing its head in the Latin American scenario. I do not suppose for a moment that recourse should be had to the original formulas; too much water has flowed under the bridges! We must profit by the lessons of experience and arrive at formulas which, *inter alia*, may ensure the equitable distribution of advantages alike for the more developed countries of the region and for the less developed and those at an intermediate stage.

The economic fragmentation of our countries must be brought to an end. This is another of' the manifestations of the time-lag in their development caused by the centripetal nature of capitalism; each of the peripheral countries made its contribution to the supply of primary commodities separately from the rest. And when industrialization supervened as a result of the crisis in the centres, we were not capable of breaking down the old centre-periphery pattern by means of a rational division of labour.

This pattern still largely governs inter-Latin American relations. To change it becomes essential now that the myth of the unlimited expansion of capitalism has again been dispelled. Moreover, even if the centres were to pursue a more favourable policy towards peripheral imports, we could hardly pour into their markets all the exports required to satisfy the dynamic exigencies of' development and the transformation of the system.

7. Hegemony and dependence

The time-lag with which the periphery embarked upon its integrated development –based on industrialization– is strikingly reflected in the economic and technical superiority of the centres, particularly the chief dynamic centre of capitalism. And that superiority has economic and political effects between which a distinction should be drawn, although the two are closely related and evolve under the hegemony of the centres.

This hegemony affects the peripheral countries in different ways and degrees, as the centres exert themselves to promote and defend their economic, political and strategic interests. And in its direct exercise the centres have powerful instruments to use: financial, economic and technological co-operation, as well as military aid.

The transnational corporations, apart from pursuing their own objectives, are usually effective agents of this hegemony. The centres promote their penetration into different branches of domestic activity in the periphery; and the transnationals, in their turn, support in one way or another the hegemonic interests of the centres. Where their own interests are concerned, the transnational corporations wield a twofold influence. They exercise it both in the centres and in the periphery; on the mass communications media, on the political movements which support the system and on the governments. And in the centres there is, in addition, a whole constellation of interests which have an impact on the periphery and its governments.

All this goes to form the notorious relations of dependence, in degrees of intensity that differ according to the countries' ability to defend their autonomy. Dependence makes a peripheral country do what otherwise it would not, and refrain from doing what otherwise it would. And its bargaining capacity is limited.

Dependence is never more strikingly apparent than when a peripheral country acts in a manner counter to the centres' hegemonic interests, especially that of the leading centre. All the aforesaid constellation of interests is then mobilized against it, and it is penalized by measures of one sort or another which in the past –and not so very long ago at that– have culminated in military operations.

There are some economists and sociologists who extend the concept of dependence to all centre-periphery relations. There would be no harm in this if they were to analyse clearly the Different implications of the centripetal nature of capitalism, as we have tried to do in the preceding pages. Often, however, this does not happen; which is why I have exerted myself here to shed further light on its consequences, at the risk of repeating what has been said in other studies.

Furthermore, some have gone so far as to maintain that dependence, however it may be interpreted, is responsible for underdevelopment. Translated into our idiom, this means that the poverty of the broad masses excluded from development must have been generated by the action of the centres.

Nothing is gained in the field of theory, or in that of praxis either, by assertions of this sort; which by no means implies that they are not efficacious in political indoctrination.

A distinction must be drawn between the existence of poverty and its persistence. When the technique of the centres began to penetrate into the periphery's export activities, much of the population was living in poverty, and this poverty has gradually diminished with the spread of technique to activities in other fields. But the fruits of that technique, instead of being fully capitalized, have served to promote the privileged-consumer society and the siphoning-off of income by the centres, thus giving rise to the exclusive tendency of the system, the explanation of which need not be repeated here. Hence the persistence of poverty, aggravated by rapid population growth.

The centres and the existing relations of dependence do not create poverty, but because of the centripetal nature of capitalism they do help to make it last. It might be said that this happens precisely because the myth of the worldwide expansion of capitalism has never become a reality. If it had, very serious harm would undoubtedly have been done to the autonomy of the periphery, shaky though this may be as things are.

Again, the periphery has not lacked believers in the possibility that the transnational corporations might turn the myth into fact. But of course this has not happened, owing, once again, to the centripetal tendencies of capitalism. As we have said before, at the international level there are no factors that spontaneously lead to the counteraction of these trends. The transnationals have a different outlook, and they could not be expected to change their attitude on their own accord in order to help the periphery to carry technique deeper into its social structure.

But is the periphery itself doing this? Is it making thorough use of the capital accumulation potential deriving from its technical progress in order to absorb at rising levels of productivity the lower strata that are vegetating in a state of penury? The interests of the fortunate members of the privileged-consumer society stand in the way.

The inference is conclusive: the mere interplay of private interests, however legitimate they may be, could never change the limited dynamics of the privileged-consumer society or the centripetal character of capitalism. These are, at bottom, largely structural problems which call for major political decisions both in the centres and in the periphery.

But the centres are passing through a crisis which makes it much more difficult for them to adopt such decisions; and the same thing is happening in the periphery. In the next section we shall attempt to single out the main elements in this crisis.

VII

The crisis of capitalism in its leading dynamic centre and its repercussions on the periphery

1. A preliminary survey

The present crisis of capitalism is very complex, and harder to resolve than the great depression of the 1930s.

It is, in my opinion, a crisis which the very vigour of capitalism has brought about. Capitalism has overreached itself; if has overflowed its own banks, and has not yet discovered how to channel development back into its regular course.

I have endeavoured to understand these phenomena, which, apart from their enormous importance for the centres, have severe repercussions on the periphery. I am looking at them from the periphery, at a distance, and my interpretation is open to errors which, I hope, will be no worse than those often perpetrated by some who, speaking from the centres, pronounce incautious judgements on the periphery.

Prior to the difficulties of recent times, there was an exceptional rise in productivity and the global product in the United States, whose repercussions made themselves internationally felt. This fact, however, incorporated an element of falsity, since the productivity in question had been mainly achieved by virtue of techniques which depredated non renewable natural resources and which, in addition, caused a serious deterioration of the environment. The natural capital of the biosphere was being gradually swallowed up.

Growing requirements in respect of consumption, investment and State expenditure accompanied this increase in the product, while its allocation was not guided by any criterion of compatibility. Moreover, largely because of the inflation stemming from state expenditure, these requirements came to outstrip the growth of the product, and have been covered at the expense of the product of the rest of the world, in exchange for currencies which have internationally propagated inflation; and to all this have been added the effects of the upswing in the cost of petroleum.

The rectification of this element of falsity in the dynamics of development will call for large-scale investment which, despite its positive ecological and social significance, will not bring with it new increases in productivity. Thus average productivity will decline.

This downward trend will combine with that already occurring both because of the organic evolution of the system and because of certain investments which, by reason of their nature and volume, were also depressing productivity.

The system is faced with an incontrovertible reality. The illusion of a prosperity achieved at the expense of the biosphere has vanished; and so has the illusion of the limitless power of the dollar.

That the system has immense vitality is beyond question. But a transition period would be needed, at present of indeterminate length, to introduce major adjustments in it with a view to remedying its distortions.

Both technique and capital accumulation will need to be reoriented. But to generate capital when productivity is falling poses a new and difficult problem for capitalist development: a problem which becomes more serious still if inflation is to be eliminated.

There will be no escaping a reduction of the rate of consumption, in a country accustomed to its constant expansion. But it would seem that as yet no clear awareness exists of what the hard facts will enforce.

Nor is this all. Over and over again I wonder whether the current accumulation and distribution mechanisms are adequate for the solution of those problems. All the more, inasmuch as the evolution of the system was already showing symptoms of disturbance.

We will now enlarge upon the ideas which have just been so briefly set forth.[13]

2. Exceptional productivity at the expense of the biosphere

It is now possible to obtain a clearer insight than before into the capitalist development of the centres. The exceptional impetus of the last few decades, up to recent times, was the effect not only of impressive technical progress, but also of the irrational exploitation of natural resources, especially energy, which, in turn, markedly influenced the orientation of techniques; whence the above-mentioned element of falsity, with its dramatic implications for the world.

In all this a role of decisive importance has been played by the hegemonic power of the centres, especially the United States, in the periphery of the world economy. The petroleum-exporting countries were not strong enough to make a stand against the centres' hegemony, although they had long been clearly aware that the non-renewable resource in question was being squandered; but any attempt on their part to restrain this insensate exploitation would have come up against tough opposition.

The exporter countries could concertedly restrict the expansion of production only in a international conjuncture which enabled them to acquire power themselves and so face up to the power of the centres.

A little thought will show the irrationality in the use of petroleum resulting from the application of new techniques and the profit incentive of the oil firms was propagated throughout the whole system. The low cost of petroleum considerably influenced technological research, channelling it towards extremely abusive forms of utilization of this non-renewable good, as well as of other natural resources; all this being fostered by the unequal distribution of the fruits of the increasing productivity of technique, given the nature of the social structure and the changes in it.

But this is not the whole story. It is only in recent times that technological research has concerned itself at all with the harm inflicted by technique on the environment. Such is the ambivalence of technique: its immense contribution to human welfare by virtue of the continuous increase in productivity, and, at the same time, its serious effects on the biosphere.

Philosophists and humanists have been devoting themselves for some time past to the psychosocial implications of technology, but economists have generally been unwilling to take its ambivalence into account in their interpretation of development phenomena. They have regarded it as an exogenous element like the political, social and cultural aspects of reality. In their concern for a peculiar doctrinal asepsis, they have withstood the incorporation of these elements, and of their mutual interrelationships, into the dynamics of development.

3. Requirements incompatible with the growth of the product

We were saying that in the chief dynamic centre of capitalism the product, notwithstanding its exceptional rate of growth, had not been sufficient to meet requirements which were competing with one another for an increasing share in it. These requirements derived from the growing volume of domestic and foreign investment, from the boom in private consumption and from the considerable expansion of State services, including social services and military expenditure.

This increase in State expenditure was to a great extent inflationary. The State, for understandable political reasons, was reluctant to step up taxation, preferring to resort to monetary expansion in order to cover the fiscal deficit. Even if it had done so, however, the consequences would have still been largely inflationary. If the additional tax burden had fallen, in one way or another, on the labour force, it would have tried to recoup itself by wage increases at the expense of the economic surplus, and that would have entailed a rise in prices. Enterprises would have defended themselves similarly if taxes had been

[13] In the following pages I have made use of part of the paper on "Biosfera y desarrollo", *op. cit*.

levied directly on the surplus, to the detriment of capital accumulation.

In any event, the inflationary financing of the deficit caused prices to rise; and the subsequent wage adjustments considerably intensified the inflationary spiral which had already been developing to a moderate extent. And to all this has now been added the fresh impetus given to inflation by the energy crisis and the protection of the environment.

These various pressures have been eased, however, thanks to the fact that part of the inflationary expansion of demand due to the fiscal deficit could be satisfied by increasing imports: that is, at the expense of the gross product of the rest of the world. The dimensions of this situation, aggravated as it has been by the growing volume of petroleum imports and the considerable rise in their value, have been appreciably affected by the regressive income distribution which has accompanied inflation. There has been a boom in imports of those goods which are in greatest demand among the social groups favoured by inflation, principally to the detriment of the consumption of those social groups which have less redistributive and defensive power.

This growth of imports in excess of exports and other external resources has been the most important factor in the United States' chronic balance-of-payments deficit. To this must be added the transnational corporations' investments abroad, in so far as they have not been covered by the enterprises' own external profits.

To put this in another way, the expansion of state expenditure has not been covered at the expense of consumption –except for the consumption of the disadvantaged social groups– but has been superimposed upon it and on private investment. And the consequent excess of demand in relation to the domestic product has spilled outwards, and has been met with imports.

4. Organic decline in productivity

To understand the decline in productivity which takes place in the advanced stages of capitalist development, the two ways in which it is manifested must be taken into account: the technological innovations which are continually incorporated into the system, on the one hand; and, on the other, the improvement in productivity which occurs as a result of the displacement of labour from lower-productivity occupations to others where productivity is higher.

As capital accumulation in the shape of physical goods and education of human beings increases, the proportion of the labour force employed at lower levels of productivity progressively decreases. In other words, there is a trend towards homogenization of technique and productivity, with significant effects on income.

The operation of this tendency will bring down the average productivity of the system unless the rate of productivity of the new capital accumulation necessitated by the innovations is stepped up. This improvement would be needed to offset the effect of the homogenization of technique.

But there is something much more important. As has been explained elsewhere, the productivity increment stemming from the accumulation of reproductive capital encourages the ceaseless diversification of goods and services via the accumulation of consumptive capital. The techniques concerned, while they do not increase productivity, improve the efficiency of the goods and their capacity to satisfy new requirements or considerations of social status and conspicuous consumption.

These techniques, like the corresponding accumulation, are closely combined, of course, with those that improve productivity, but as this happens the proportion of consumptive capital gradually increases, prejudicially to reproductive capital. This is a logical consequence of the organic evolution of the system: there would be no sense in increasing productivity if it meant continually adding to the available supply of the same goods and services, since obviously this reduces the rate of productivity.

Consequently, the rate of average productivity decreases both because of the effects of the homogenization of technique on the displacement of labour, and because a steadily increasing proportion of the labour force is thus displaced and is diverted, along with the corresponding capital accumulation, into satisfying the more and more decided bent of demand towards the diversification of goods and services in which efficiency is heightened rather than productivity.

It is sometimes said that the fall in average productivity is due to the progressive increase in the proportion of skilled services in relation to goods; this is true, but it does not suffice to account for the phenomenon. For, as has just been shown, there is also an increase in the proportion of goods which are diversified and in which techniques improves efficiency rather than productivity.

It was stated above that diversification is a consequence of the growing productivity of the system; but considerable influence is also exercised by the distribution of' the fruits of productivity. Thus, the social strata favoured by distribution tend to increase their demand for diversified goods and services much more intensively than the disadvantaged strata, whose demand is concentrated on goods where diversification is slight. This state of affairs is aggravated by the regressive effects of inflation, and sharpens the downward trend in the average productivity of the system.

Lastly, to all this must be added a very important factor: capital accumulation for the purpose of producing weapons of war. Obviously, this type of accumulation also contributes to the decline of average productivity, although it must no be forgotten that innovations in armaments technology have greatly influenced other innovations in the system.

If we have dwelt on this subject, although somewhat schematically, the reason lies in its great importance for understanding the incidence of the decline in productivity on the economic surplus, which represents the dynamic mechanism of the system; and also for grasping the complexity of the major adjustments which the crisis of the system necessitates, especially in the leading centre of capitalism.

5. The surplus and the decline in productivity

In the discussion of peripheral capitalism we have attributed paramount importance to the structural phenomenon of the surplus, which has also made its appearance in the historical development of capitalism in the centres. But in these latter, the trend towards homogenization noted above gradually reduces the surplus formed by successive productivity increments. The steeper this trend, and the greater the concomitant decrease in the proportion of the labour force occupied at lower levels of technique, the stronger becomes the workers' spontaneous ability to obtain better pay.

But at the same time the labour force has been developing its trade-union and political power, so that its pressure on the surplus steadily increases. Similarly, direct or indirect pressure on the surplus is also exerted by the intensive development of State services. Thus the surplus is subject to the effects of two opposite movements: on the one hand, new productivity increments, and, on the other, the twofold pressure of the State and the labour force. There is nothing in the system to regulate this double pressure.

This being the case, a stage is reached in the evolution of the system at which the twofold pressure in question prevents the surplus –especially that pertaining to the upper strata in the social structure– from playing its dynamic role. For the combined pressure of the State and the labour force is detrimental to the capital accumulation and the consumption of the strata referred to, notwithstanding further increases in productivity. Sooner or later the enterprises where these strata prevail raise their prices, in order to reanimate the growth of the surplus or, alternatively, of their profits, if in this skeleton outline of a complex phenomenon I may be allowed to identify profits with the surplus.

When the labour force acquires a great deal of trade-union and political power, as has happened in the centres, the rise in prices is followed by wage increases. This is the meaning of the inflationary spiral.

I am inclined to think that the spiral which was developing in the United States before the fiscal deficit became very large was the consequence of the phenomena described. In the foregoing argument we have preferred to sacrifice rigour to simplicity.

6. The requirements of the crisis and the accumulation and distribution regime

Everything suggests that in the leading centre, as in the others, the growth rate of productivity and the product will sink appreciably lower than in those years when it was exceptionally high. Accordingly, there will be a period of transition, after the major adjustments required in the system, as to the duration of which it would be unsafe to hazard an opinion. It may be, however, that important technological innovations, or full utilization of recent ones, may push up productivity again without those elements of falsity that we indicated at the outset.

But the progressive elimination of these elements of falsity calls for heavy investment. A new type of accumulation in respect of energy and protection of the environment will then proportionally increase in relation to reproductive accumulation. While this .is a form of accumulation of enormous importance, it will not immediately raise the productivity of the system; on the contrary, it will accentuate the downward trend of the rate of average productivity and of the growth rate of the global product.

Let us consider the incidence of these facts. The fall in the growth rate of the product will inevitably enforce a correlative decline in the rate of consumption, for if instead of this the rate of accumulation were reduced the product would decrease more rapidly still.

This adverse effect on consumption would pose a difficult social and political problem. Which social groups would be affected by these adjustments? What mechanisms has the system to put them into effect?

First and foremost, it should be borne in mind that investment relating to the biosphere represents a higher cost per unit of product, which the enterprises will transfer to prices. Petroleum prices have soared in immediate response to the increased cost of imports, and a similar upward trend will be progressively reflected in an appreciable rise in the cost of new sources of energy. Accordingly, given the power of the labour force, wage increases will ensue, with the consequent endeavour on the part of enterprises to protect their surplus by raising prices yet again. Will there be any way of avoiding this?

Clearly, if the labour force had only incipient trade-union power, or none at all, there would be no reason for this further rise in prices to supervene, with the consequent initiation or increase in the momentum of the inflationary spiral. The spiral is, in reality, the result of a confrontation of powers. Monetary policy can prevent it only if the unfavourable effects on employment produced by a restriction of the money supply weaken the trade-union and political power of the labour force and the play of market forces brings down wages. I do not think that this is the case in the United States, where the said trade-union and political power, despite unemployment, strives to offset the rise in prices with wage increases. What is more, wages will follow an upward trend, if the incidence of petroleum is combined with the operation of other factors that force up prices, among them the inflationary effects of subsidies to the unemployed and of other State expenditure. This is the new phenomenon of stagflation, an unmistakable symptom of the changes that have occurred in power relations.

The problem could be temporarily resolved if the labour force were to refrain from compensating for the rise in prices with wage increases. That would be the aim of those who advocate some kind of social pact. But consider what this means. This sacrifice of income, with the consequent constraints on consumption, would be endured in order to enable the privileged social strata to continue stepping up their own accumulation. Could this conceivably be a lasting solution?

Clearly, if the labour force were to offset these unfavourable effects by its own accumulation, the accumulation process would continue; the same might be said if the State were to fulfil this compensatory role. But obviously that is not how the system functions.

From these explanations a conclusion of the greatest importance can be drawn, and should be emphasized. The machinery for appropriation and retention of the surplus constituted a rational response to the dynamic requirements of the system in a social structure in which the economic, social and political power of the upper strata was virtually unchallenged. But it is no longer rational when, as a result of the changes in the social structure, the trade-union and political power of the labour force develops and gains strength, and State services are considerably expanded.

Moreover, this machinery does not seem designed to enable enterprises to absorb the aforesaid higher production costs by cramping their surplus, for therein lies the dynamic mechanism of the system, as we have said elsewhere. Unquestionably a very sensitive mechanism, and also of great importance because of the political power of those who have it in their control, and who mainly belong to the upper strata.

I have no possible means of quantifying the dimensions of this complex problem. Perhaps they are not disproportionate in relation to the high level of personal consumption in the United States; but this is only one factor in the problem, since the consumer society, which has spread throughout the whole of the social structure, although with wide disparities, has gained remarkable momentum. But this impetus will be impossible to keep up, at any rate during a very difficult transition period.

Difficult, not only because of the internal factors that come into play; for the euphoria generated by the consumer society in question and the large scale of State expenditure have been attained not merely thanks to the exceptional increase in productivity –which has been followed by a marked decline– but at the expense of the product of the rest of the world, as we have already pointed out. This is linked to another of the great illusions which is now being dispelled: the might of the dollar. The time has come to deal with this question.

7. Reflections on the might of the dollar

The crisis in the leading dynamic centre of capitalism is also a crisis in the financial ascendancy of the United States, finding dramatic expression in the depreciation of the dollar, the use of which as an international currency has signified a great advantage and an enormous responsibility for the United States.

The great advantage is that of seigniorage, i.e., the benefit resulting from the creation of its own currency in response to the development of world trade. This implicitly involved responsibility for regulating the issuance of that currency in the light of internationally meaningful as well as internal considerations.

This responsibility was fairly effectively discharged prior to the inflation caused mainly by the fiscal deficit. But in the end the deficit has disrupted the whole international monetary system, and on top of this have come the effects of the rise in petroleum prices. And seigniorage has turned into that gigantic transfer to the United States of part of the increase in the world product to which reference was made in earlier pages of this same chapter.

The serious implications of the use of the dollar as an international currency had long been perceived. An eminent Yale professor, Robert Triffin, drew attention to them with admirable persistence.[14]

In the United States the illusion of the almighty dollar held sway. Perhaps it was partly on account of this illusion that recourse was had to internal monetary expansion to cover the colossal expenditure on the war in Vietnam which was superimposed on the heavy social expenditure of President Johnson's "Great Society". The notorious unpopularity of the war made it difficult to resort to borrowing or taxation to finance it. In fact, what was the point of doing so, if instead of casting the whole burden of its cost on domestic consumption, the issuance of dollars made it possible to appropriate part of the product of the rest of the world at no expense?

Outside the United States, then, there was an overwhelming flood of dollars. Great international liquidity was what it was called at the time: a euphemism which certainly does nothing to mitigate the serious consequences of this state of affairs.

But matters did not stop there, since the dollars thus floating multiplied their inflationary effects in the Eurodollar market. Dollar deposits in favour of countries with a surplus were used to issue loans to other countries, so that to their original deposits new ones were added, with the result that the inflationary pressure was exacerbated.

These operations seem similar to those that occur within a country as the result of an increase in the money supply issued by the Central Bank. There is a great difference, however, for whereas the latter has the means of regulating the multiplier effects of this initial issue of money, no such regulatory mechanism exists in the Eurodollar market.

Thus matters have reached the pitch of a veritable monetary aberration, which, besides producing the effects referred to above, vitiates internal monetary policy.

It must be admitted, however, that not everything has been negative in the Eurodollar market; Eurodollars have played a useful role in helping to cope with the external disequilibria resulting from the sudden upswing in petroleum prices. As the International Monetary Fund was not prepared to meet requirements of such unwonted size, the countries affected obtained financing from the Eurodollar market. Thus they were able to avoid restricting imports of other goods essential for the maintenance of their economic activity.

Recourse was also had to this market's facilities by the socialist countries of Eastern Europe, in which military expenditure absorbs a considerable proportion of the global product. In the Soviet Union, for instance, this proportion is estimated at between 12 and 13%, that is, about twice the corresponding percentage in the United States. Obviously such figures are incompatible with the very widespread aspiration to increase the population's consumption and the necessary investment. Accordingly, these countries have resorted to the Eurodollar market.

It is certainly paradoxical that the inflation largely brought about by the military expenditure of the United States has helped to ease, in some measure, the financing of the same type of expenditure in the socialist sphere.

At all events, the United States has continued to launch dollars into the world in order to deal with the aggravation of its external deficit resulting from the rise in petroleum prices. This preference

[14] See "The international role of the dollar", *Foreign Affairs*, Vol. 57, No. 2, Winter 1978-1979, an article in which Professor Triffin, in face of the international monetary chaos, expresses his regret at the evidence that his timely and severe warnings went unheeded.

is readily explicable, since if it had resorted to the Eurodollar market it would have had to pay interest on its loans, like the other debtor countries. In any event, this further issue of money and its multiplier effects have increased inflationary pressure at the world level.

There can be no doubt that this monetary expansion was essential to avert serious world contraction, but neither is it open to question that the funds thus created could have been withdrawn from circulation, not in the form of deposits as in the Eurodollar market, but by investing them in international securities which would have averted the multiplier effects of the original expansion. However, the International Monetary Fund was not prepared for operations of this kind either.

Obviously, such operations would be stopgaps, maintained only until the deficit countries could expand their exports sufficiently to cover the increase in the cost of their petroleum imports.

From another standpoint, the United States has urged the need for countries with a surplus to increase their imports from it in order to assist in the correction of its deficit. For this to happen, the countries in question would have had to expand their credit on the basis of their augmented monetary reserves, and this would have accentuated the effects of the inflation of external origin. It is understandable, therefore, that the pursuit of a cautious monetary policy should have been thought preferable. Otherwise, the countries with a surplus would have returned to the United States dollars that had previously left it. But just as the exodus of these dollars alleviated the internal inflationary pressure by spreading it outwards, their conversion into demand for imports would have intensified it. Whereby a very old truth is confirmed: the only way to cure the effects of inflation caused by a fiscal deficit is to prevent it!

It has just been remarked that the countries with a surplus had opted for a restrictive monetary policy. In its endeavour to curb inflation the United States has had to follow suit. In both cases the growth of the product that could otherwise have been achieved is being sacrificed. This is the counterproductive dynamic effect of having covered the fiscal deficit by inflationary means: the aggravation of its incidence on a product which is shrinking!

In any event, there can be no doubt that the increasing severity of inflation in the United States not only steadily amplified the internal inflationary spiral but externally touched off the petroleum spiral. The original increase in petroleum prices was of course influenced by the inflation that had already been developing. The price rise intensified this inflation and the deterioration in the international value of the dollar. Thus oil prices were eroded again, and so was the value of the considerable dollar holdings of the petroleum exporters. And this, of course, led the latter to raise prices yet again. It can thus be seem that just as the capacity of the labour force to recoup itself from the adverse effects of inflation pushes up the internal spiral, so the power recently gained by the oil-exporting countries enables them too to recoup them selves and so give impetus to the international spiral.

8. Incidence of the crisis on the periphery

The non-petroleum-exporting peripheral countries are severely affected by the rise in oil prices as well as by the inflationary increase in the prices of their imports from the centres.

It would be difficult for them to recoup themselves for this deterioration in their terms of trade by raising the prices of their exports, subject as these are to a relatively low income-elasticity of demand at the international level.

Accordingly, the periphery will have to step up its effort in the field of exports of manufactures, where it has acquired well-attested ability. But it would be idle to hope that this would suffice to counteract the resurgence of the trend towards external disequilibrium, now aggravated by the fall in the growth rate of the centres and the recrudescence of protectionism on their part.

In face of this situation, import substitution has once again become inevitable, as it was during other crises in the centres, especially in the Great Depression. It is not a question of doctrinal preferences, but a necessity imposed by the international circumstances.

For obvious reasons of economic viability, import substitution should not continue in those watertight compartments which CEPAL has been impugning since its earliest days. Now more than ever is it essential to conduct the process rationally at the Latin American level and on a basis of formulas for trade with other developing countries.

But all this takes time, and in the meanwhile the external imbalance will still have to be faced. Clearly, continued recourse to borrowing in the

Eurocurrency market is not the best solution; but there is no other, as long as the petroleum-exporting countries fail to adopt compensatory measures in favour of the countries hardest hit by the high oil prices –a step that has long been canvassed. In reality, the proportion of petroleum consumed by these countries is not very large, albeit that would not excuse them, if compensatory arrangements were to be introduced, from adopting stringent energy-saving measures.

The adverse implications of all this for the periphery cannot be exaggerated. Its rate of development has declined, although less than it would have done without borrowing. The days of prosperity when the annual growth rate averaged more than 7% have come to an end.

It must be remembered, however, that even this rate was insufficient from the dynamic standpoint. A recent CEPAL analysis[15] maintains that in order to absorb the increment in the labour force a rate of 7.5% would be necessary. So the tendency to exclude from development the broad masses relegated to the lower strata of the social structure would still persist; and the conflictive tendencies of the system would be exacerbated.

What is the significance of these phenomena? Truly grave, which makes the social use of the surplus a yet more imperative need. But there is no room for illusion as to the possibility of so radical a change, since the tasks of doctrinal persuasion and political preparation are bound to take a fairly long time. However, in any event, it would seem inevitable to restrict privileged consumption, not only in order to increase capital accumulation, but also to lighten the incidence of external price increases on the broad masses of the population. This objective could hardly be attained by intensifying inflation!

It must be borne in mind, however, that as long as the trend towards external disequilibrium is not counteracted the effort to increase capital accumulation might be at least partially frustrated. It is not enough to accumulate more; there must also be a possibility of using the resources concerned for imports of capital goods which, at least for the time being, could not be obtained through peripheral trade.

In the light of these considerations, the need for financial resources from abroad for accumulation purposes is obvious. No very meaningful co-operation can be expected of the centres during the transition period which will be required to overcome the crisis. On the other hand, Eurocurrency loans cannot indefinitely take the place of financing from the international credit institutions. Such institutions, particularly if certain reforms in them are introduced, might constitute an appropriate mechanism for channelling large volumes of financial resources accruing from petroleum which are at present used in the Eurocurrency market or revert to the centres.

Little progress has been made in channelling these resources into the periphery, either via the credit institutions or directly through investment placed by the petroleum-exporting countries themselves.[16] This would be the best way of ensuring that funds would revert to the centres, in the form of payment for imports of capital goods effected by the periphery with the resources in question: a three-cornered reversion.

In this connexion, additions may be expected to certain proposals for setting up multinational enterprises among Latin American countries, petroleum-exporting countries and other developing countries; these multinationals might play a very important role in collective import substitution, especially in respect of capital goods and intermediate goods of some technical complexity. This would open up the possibility of advantageous participation on the part of the centres, in accordance with appropriate rules of the game.

9. The process of change in the periphery and relations with the centres

From all that has been said it is clear that even if the forces of democracy were to succeed in transforming the system in the periphery, they would be powerless to change on their own account the nature of relations with the centres. It is not enough to demonstrate the incongruity of these relations and their adverse effects on the periphery. Perhaps in the end the disasters overtaking the biosphere may convince the centres that the exercise of their hegemonic power and the free play of economic forces at the international level are intensifying the exclusive and conflictive tendencies

[15] Latin America and the New International Development Strategy: goals and objectives" (E/CEPAL/L.210), Santiago, Chile, mimeographed text, 1979.

[16] At the time of writing, news is being cabled of important decisions which the petroleum-exporting countries would seem to be prepared to adopt.

of development in the periphery, with very serious political consequences; but the periphery lacks the power to do so. Power it certainly has to disrupt, but not to transform!

Only a long-term view could lead the centres to face up to their world responsibilities; they might play a supremely important role in the process of change. Accomplishing it is the business of the periphery: accomplishing it and deciding how to do so. But the centres for their part could make a notable contribution to the success of the transformation and also –plain speaking is called for here– to its political significance.

But what interest could the centres have in performing this role? They have played their cards in favour of the privileged society, almost invariably prompted by their short-term interests. Now they see evidence that the basis of this type of development is social inequity. And perhaps they may also be bringing themselves to believe that in the advanced stages of development the privileged-consumer society can only be maintained by the real or potential exercise of force.

Social equity, genuine democracy and unequivocal respect for human rights are values that have struck deep root in the centres, after many historical vicissitudes. It is understandable therefore that signs of anxiety and disconcertment should be shown when those great human values are trifled with in the periphery. But this does not prevent the transnationals from displaying their skill in accommodating themselves to such political apostasies, if not actually exalting the merits of a complete eclipse of democracy!

VIII

Ethics, rationality and foresight

1. Human welfare: privilege and utopia

For the first time in life on this earth the prodigious development of technique offers us immense potentialities for human welfare –and human dignity too–, which are not unattended by pernicious effects. We are on the brink of the materialization of a utopia; yet these potentialities are being wrecked by the ambivalence noted earlier and by the privilege inherent in the social structure of the periphery, as well as in its patterns of linkage with the centres.

It is the privilege that has existed from time immemorial: throughout the long history of the human race, the fortunate life of the few has always been based on the wearisome toil and the social subjection of the many, barely alleviated by a rudimentary technique, evolving in the past at a snail's pace.

In reality, given those conditions, no substantial results could be expected in respect of income redistribution; nor, of course, a dynamic redistribution. Poverty seemed unassailable. And one may wonder whether western civilization would have flourished as it did without inequality. Did not Plato and Aristotle, and so many others, defend slavery? Without inequality, could the splendour of art and literature, of philosophy and science, ever have flashed out so vividly, in brilliant though fleeting episodes of human talent?

Be this as it may, the significance of privilege has radically altered, since it now represents a formidable obstacle to the materialization of that utopia of human welfare; a stumbling-block in the way of access for all to the conquests of culture; a bar to the exaltation of the abundant creative talent which is going to waste because of the social relegation of the disadvantaged.

2. The ethics of development

This is the privilege of the surplus. To whom does the surplus pertain? There is no scientific reply to this question, for the answer is ethical. By virtue of its origin and nature, the surplus belongs to the whole community and should serve the collective interest.

Without a measure of ethical consensus political movements in the direction of change will never acquire lasting vigour. But neither could they attain their objectives without rationality –a rationality ultimately imposed by the evolution and ambivalence of technique.

Two centuries of belief in the regulatory virtues of market laws have also helped to smother the ethics of development. It is forgotten that Adam Smith was a professor of ethics before he wrote his monumental work; and indeed, in all his arguments there is an underlying ethic, as there is in the neoclassical doctrine which has followed after him. All this has come to nothing.

3. Joint responsibility

In its efforts to bring about a change in its relations with them, the periphery generally invokes the moral responsibility of the centres. But ethics is indivisible. And we are far from having recognized our own moral responsibility in face of the social unrest of peripheral development. Nothing solid can be achieved without a joint acceptance of responsibilities.

Let us speak frankly: under the impulse of their hegemonic power, the centres cultivate their own immediate economic, political and diplomatic interests, but they are basically lacking in ability to take the long-term view, in farsighted concern for the future, in self-restraint in the exercise of their power.[17]

Want of foresight with respect to energy resources has had dramatic consequences. Will this crisis teach people to think ahead in the exploitation and use of other natural resources?

Will the centres have learnt to set limits to their hegemonic power? Have they fully realized that this is essential if their own interests are not to be doomed to suffer?

It is the reckless exercise of that power and an inconceivable lack of foresight that have led to international monetary chaos.

Similar attitudes have also prevailed in relations with the periphery. Will there be nothing for it but to await a succession of crises before these attitudes undergo any change? Do the centres hope to weather the social storm that is brewing in the periphery?

All these vast and anxious questions, of profound world significance, are causing leaders perplexity and disquiet. And the ability to steer a course amid the tide of events seems to have been lost: that gifted leadership which has always been called for in the major vicissitudes of history.

What is to be done? Those who have the theoretical responsibility for shedding light on the path and discussing solutions can find no answer.[18]

The periphery's responsibility is likewise immense. I do not believe, however, that we are as yet prepared to carry out a major task of transformation, whence the ultimate significance of the present article. If it succeeds in giving rise to discussion in depth, if it leads to more searching examination of what the facts mean, and to consideration of how we ought to act on them in order to attain the major objectives of development, it will have served the purpose for which it is intended.

Needless to say, this is not our business alone. The effort at enlightenment and persuasion must also be extended to those in the centres who are earnestly seeking a response to the problems of the world of today: a world very different from that of yesterday, by reason both of the great possibilities it offers and of the great risks it presents. Possibilities and risks alike we must confront without delay, undaunted by the image of the past. For upon us too a clear moral responsibility is laid by participation in this great human adventure of development; in the realm of thought at least, if we can no longer play our part on the scene of action.

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[17] Nothing important, nothing really constructive has been done since the developing countries began, two decades ago, to take a firm stand *vis-à-vis* the developed countries. The latter, with a few shining exceptions, have been at one in adopting negative attitudes.

It is understandable, therefore, that in the course of my international experience I have been increasingly dominated by grave concern: concern at witnessing how events are running adrift.

[18] See a letter from K. Galbraith to the *New York Times* of 7 May 1979.

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The discussion of styles of development has been complicated by the improper use of this and other associated terms. In order to avoid misunderstandings, this article starts by examining the concepts of system and structure and on this basis, goes on to define a style of development as "the way in which human and material resources are organized and assigned within a particular system with the object of solving such questions as what goods and services to produce; how; and for whom". More specifically, it notes two sets of features of such styles: (a) those which make up the structural basis of the production apparatus, especially the sectoral structure of the product and employment, the various technological strata, and the predominant type of external relationship, and (b) the dynamic elements of the system, which are revealed by analyzing the level and composition of demand and its underlying basic factors, namely the level and distribution of income. These two sets of features are closely linked by a circle of mutual cause and effect.

The article does not limit itself to a conceptual explanation: on the basis of statistical data it also describes the prevailing economic styles in Latin America, the fundamental problems which beset them, and the possible options for solving these.

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Editor of the *CEPAL Review*

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I

General concepts[1]

In view of the growing interest in "styles of development" and the discussions that have arisen about them, there is some danger that old discussions and problems may be revived under new slogans, adding little of substance and perhaps even accentuating misunderstandings or serving as the basis for sterile exercises.

Accepting the foregoing and taking it as a useful warning should not be carried to the extreme of disparaging the whole subject and the efforts that have long been made to elucidate it, however. It is a well-known fact that important changes in meaning and approach usually begin with what seem to be or are considered as purely formal or semantic modifications. A case in point is the transition from the concept of growth to that of development, where the conceptual difference between them took time to crystallize. The concept of development has since been the subject of continual re-interpretations which have still not jelled into a new term that adequately expresses them. The only expressions which have so far come into general usage are an extension ("social" or "integrated" development) and a caricature ("developmentalism") which give little more than the restricted or insufficient concept of growth, with some additional critical considerations on dependence and long-term prospects.[2]

Be that as it may, the fact is that the term "style" is used in very different ways and this leads to confusion.

Before attempting or recalling any definition, it would seem best to place the subject within a specific historical context.

Let us first of all investigate the origins –which, incidentally, are relatively recent– of the interest shown in this matter. It is common knowledge that the discussion stems from widely differing sources.

In the first place, it derives from the growing dissatisfaction with the quality of life and the deterioration of the environment in the industrialized or post-industrial societies. The extensive and varied literature existing on the subject renders any digression in this respect unnecessary.

Secondly, the same and other arguments are reproduced to a lesser but definitely growing degree in the semi-industrialized economies (in Latin America, for example), which are just becoming aware of the problems involved in continuing their progress towards the point reached by the advanced countries, and are beginning to suffer the effects of the process.[3]

Criticism is also prevalent in many countries (mainly in Asia and Africa) which have not reached the threshold of the industrial society and in some cases are still far from doing so. Here, the discontent is fed by a combination of fairly explicit and rationalized elements, such as the discouraging view of the Western industrialized model, the idea that this pattern threatens or is antagonistic to deep-rooted cultural values which are worth preserving, and the awareness that the reject scheme is neither feasible nor capable of solving their cardinal problems.

In other words, concern about the "style of development" is shown by those who are sick and tired of the "affluent society", those who –while half way to reaching that state– criticize the presumed desirability of that goal and, lastly, those who have no desire to reproduce the rejected model or have little or no chance of doing so.

The first comment that may be made on this state of affairs is that it represents a complete change of

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[1] In writing this article the studies by Marshall Wolfe and Jorge Graciarena which appear in this same publication were also taken into account. While it is obviously necessary to integrate the various approaches and to forge ahead along those lines, it also seems certain that it would be useful to have some division of labour in this effort, at least at the present stage of the discussion. Accordingly, this article deals mainly with economic approaches, and there is therefore no room for disparaging references to economism (however broad) or to the sociologism or politicism of other approaches.

The information on which this article is based was prepared with painstaking care, but also with imagination, by the economist Santiago Jadue, of the CEPAL Economic Development Division.

[2] It is worth noting that although developmentalism became the facile and favourite target of many authors, few took the trouble to investigate and explain its meaning. A conspicuous exception is Luciano Marting in *Industrializaçao e desenvolvimento*, Editora Saga, Rio de Janeiro, 1967.

[3] The word "advanced" is not used in any ironic sense here, since the industrialized economies are undoubtedly advanced in terms of the development perspective guiding them and of the objective fact that they have achieved a high degree of "freedom from want" (actual or potential).

view compared with past habits. Generally speaking, as an international economy and society was gradually coming into being, the prevailing criterion was that the patterns of evolution and progress for all nations should be those established by the more advanced and dominant communities, which, in the words of the Communist Manifesto, tended to transform the world in their own semblance and image.[4]

Now, however, the discouragement and pessimism of some is matched by the hostility and resentment of others, despite the irrefutable fact that the international economy and the economies of the industrialized capitalist countries in particular have lived through a quarter century of uninterrupted and exceptional material growth.

In other words, criticisms of the prevailing style are emerging and spreading in circumstances notably different from those existing at the time of the eclipse or decline of other great established orders –the Roman Empire, the feudal system, etc. This fact gives the present crisis a unique significance which has not been properly clarified. Nor, incidentally, is there any real basis for the parallels repeatedly drawn between the present situation and the depression of the 1930s.

A fact which is less often considered but is of prime importance in the discussion of these concerns is that they and the consequent criticisms and reservations are limited to a fairly restricted, although broadening, social context. That is to say, everywhere the broad masses are excluded from the discussion, be they in the central countries, the semi-industrialized countries, or those on the periphery. What is more, if their feelings on these points could be ascertained, it seems fairly obvious that the overwhelming majority would be inclined to "suffer" the ills of the affluent consumer society rather than remain in their present situation, or, in the case of the masses in the central countries, to risk all they have so recently and laboriously achieved for the sake of a different and uncertain style or mode of development.

Even though it may be open to misunderstanding, this point must be emphasized in order both to determine the nature and depth of the aforementioned concerns and to comprehend the vital importance of fully exploring alternative courses that would have the support and understanding of the broad masses.

Approaching the matter from a different angle, it is quite easy to agree with various writers –among them my colleagues Wolfe and Graciarena– about the confusion surrounding the terminology and concepts used in the discussion. Styles, models, systems, structures, patterns, profiles, etc. are either currently used as though they were synonymous terms, or else the differences between the words and their special meanings are not strictly defined. I myself, for example, must confess that in a preliminary version of this study I used the words "system" and "style" indiscriminately.[5]

I do not think it would be either feasible or appropriate to venture a series of tentative definitions of each of these and other terms used. Let us instead take a different course and endeavour to identify three basic concepts which are interlinked in the discussion.

The first is that of the *system*, which for our purposes and in very general terms we shall associate with the two main opposing forms of organization coexisting in the world today: capitalism and socialism.[6]

The basic features of the two models are well known. They differ above all in institutional organization and in sociopolitical structure, but from the standpoint which interests us here the basic contrast is the relative importance of public and private expenditure, in terms of both consumption and investment. In the capitalist system, the composition and dynamics of demand are *primarily* linked with market forces in the area of *private* consumption and investment, and with the rate of return on the allocation of resources. In the socialist system, the main elements are decisions by the

[4] In the introduction to the document entitled "Technical progress and socio-economic development in Latin America: General analysis and recommendations for a technological policy" (ST/CEPAL/C.53/L.2, November 1974), this question was referred to in the following terms: "It is common knowledge that two main currents which appeared and prevailed in the nineteenth century and which still reflect rival views today –what we could call the liberal and the marxist currents– shared the conviction that industrial capitalism would spread *urbi et orbi*, replicating in outline the central economies. Naturally, both outlooks differed greatly with respect to the social costs of transformation and its later aims, but both and it is worth repeating, looked to the revolution of production forms and mean –in fact, technical progress– to open the way to finding solutions to the material, institutional, and cultural impediments which bog down the precapitalist communities, or were won over by the preliminary phases of the evolution of the system".

[5] A. Pinto, *Notas sobre estilos de desarrollo en América Latina* (CEPAL/DE/DRAFT 103), draft for suggestions and comments, December 1973.

[6] For the purposes of this study it is not really important that, as many contend, in terms of "pure" paradigms neither "capitalists" nor "socialists" are actually such.

State (or the Plan) regarding investment and *public community* consumption.[7]

In line with this concept and the comments at the beginning of this study, it is well known that for some people dissatisfaction with and criticism of the existing style or situation are merely effects or necessary concomitants of the procedures and contradictions of the capitalist system. Obviously, this would seem to imply, in contrast, that the second system was immune from all the problems generated by the first.

Although the reservations and difficulties attributable to the two systems are clearly not identical,[8] the number of those supporting such an extreme over-simplified view has decreased considerably. Conversely, there are more and more people who think that there are some questions which go beyond this dichotomy, e.g., problems of the environment, urban agglomeration, the dissatisfaction of youth, etc.

Following a different approach, a second important category derives from the classification into industrialized countries and under-developed or developing countries. The essential difference here is in *structure* and consequently, in manner of operation and in place and relationship (dominant or subordinate) in the world scheme.

From this standpoint, it seems clear that the concern about styles is primarily linked with the implications of the industrialized community, both when fully arrived at industrialized status and when half way there, in both capitalist and socialist systems.

In the developing economies the problems are more in the nature of the elementary question of survival, once again in both the capitalist and socialist systems. In both these situations, however, there is also a common feature, as already indicated: the conviction held by some that the continuation or reproduction of the developed industrial model is undesirable or impracticable, or both.

These perspectives are both relevant for purposes of this study and should be combined. We thus have, from the outset, a difference of *system* and another of *structure*, enabling us to identify four types of basic situations, viz.:

(a) industrialized capitalist
(b) developing capitalist
(c) industrialized socialist
(d) developing socialist.

As everyone knows and past experience has shown, there can be widely differing individual situations within these system-structure contexts.

As regards the first group, it is hardly necessary to refer to the contrasts in the development and present profile of the industrialized capitalist economies such as the United Kingdom, the United States, Canada, Denmark, France or Switzerland.

Nor is it necessary to describe the differences between the experiences of these countries and those of such developing capitalist communities as Greece, India, Egypt, Mexico or Nigeria, and between the features characterizing the latter countries and distinguishing them from one another.

This is also applicable to the socialist world. Although they belong to the same "system", there are some notable distinctions, both between the more industrialized countries –the Soviet Union, Czechoslovakia, the German Democratic Republic– and between these countries and China or their sister countries in Europe (Bulgaria or Romania).

This is not the time or the place to go more deeply into the causes of these differences. Let us merely note that they are influenced by such important questions as the quantitative and qualitative endowment with material and human resources (compare the Soviet Union with China, the United States with Japan, India with Brazil, Argentina with Mexico, Rumania with Albania, etc.); historical and cultural background (old and new civilizations); external ties (dominating entities, subsidiaries such as the former British dominions and former colonies); degree and type of political and social organization and participation, etc.

Taking all this into account, and for the purposes of this study, the point here is that in these contexts of system and structure, owing to a variety of significant factors, widely differing specific *styles* manifest at all levels of social life may be discerned within each of those broad groups. Later on we shall consider the economic meaning of the concept from the angle of the situation in Latin America.[9]

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[7] In 1970, the Soviet Union spent 23 per cent of the national income on education, health and cultural activities of various kinds. See Y. Komarov, "The service sphere and its structure", *Problems of Economics*, vol. XVI, N° 3, New York, July 1973.

[8] For example, some questions such as unemployment, stability, the allocation of resources in accordance with elementary needs, etc., are features of the capitalist rather than the socialist system. Others, such as the degree of openness and political participation, dynamism and technological innovation, etc., are more typical of the socialist régimes.

[9] See the reasons for this "methodological reduction" in footnote 1.

From this point of view, therefore, I agree to all intents and purposes with one of the definitions suggested by J. Graciarena,[10] according to which a *style* is “the specific and dynamic modality adopted by a system within a particular context and at a particular moment in history. On the other hand I disagree with his statement that “this proposition relates to a structure (or social formation) rather than a style”. To my mind, his reference to a “context” should be taken precisely to apply to the structural fact of the developed-developing complex referred to above.

Within this general meaning of the term there are various possibilities regarding the scope and content of the propositions with respect to styles.

In the most restricted sense, these possibilities take the form of options *within* an existing system and structure, but involving more or less significant changes in different directions in the predominant style, depending on the prevailing values.

This, in my view, was the main line of the pioneering attempt made by the Venezuelan Centre for Development Studies (CENDES) under the guidance of Oscar Varsavsky, following up work initiated in the time of the well-known economist Jorge Ahumada.[11] The three styles discussed in the CENDES study (“consumer”, “authoritarian” and “creative”) were assumed to be compatible with the general framework of Venezuelan society. In the words of that study, “in the hypotheses used there is no discontinuity or sharp change of policy which could bring about revolutionary situations or revolts”.

A second possibility is that criticism of the prevailing style and the search for possible alternatives involves or requires a change in the basic setting of the process. This could mean that it is considered essential to change the *system*, i.e., to replace a capitalist system by a socialist system, or viceversa.[12]

It seems fairly clear that this second possibility (and its different combinations) transcends the conceptual frontiers of the term “styles”. On the other hand, the first or stricter meaning of the term considerably limits the substance and even the attractiveness of the word.

This reflection does not detract from the importance of this approach, and it does help to clarify its meaning and place *vis-à-vis* others relating primarily, as noted above, to the institutional or political context.

Continuing with this digression, it is useful to consider the possible relations between those categories or approximations.

Of course, it is possible to visualize a basic situation which hypothetically admits various options as regards styles, i.e., to return to Graciarena’s definition, one that permits various “specific and dynamic modalities” within “a system in a particular context at a particular moment in history”.

To illustrate this situation, let us take some developed capitalist economies such as the Scandinavian countries. It is conceivable that in those and other similar countries there may be a fairly broad margin for introducing appreciable changes in the prevailing style. In fact, several of them have been adopting long-term measures to combat serious problems of the industrial civilization, such as pollution and urban congestion. In others, such as the United States itself, there are also potential conditions for seemingly marginal changes which could, however, have a far-reaching impact on their mode of development. Suffice it to consider, for example, the projections of a radical change in the system of relative prices as a result of the rise in the cost of petroleum, the cheapness of which up to 1974 gave a special character to the use and allocation of production resources.

Much the same might be said about the situation of some developing economies which, either because of their production potential or because of the greater flexibility of their institutional and social frameworks, allow fairly significant changes in their style of growth.

The same speculations could be made in the light of the particular situations of various countries operating under the socialist system.

In other circumstances, however, the radius of action is far more limited or simply non-existent, so that the possibilities of modifying the prevailing style are very remote unless changes take place in the institutional and structural base. From this point of view, China’s experience is one of the most impressive. Few doubt that the change in the political system after the war was a key factor in overcoming many acute and long-standing problems.

Moreover, China’s rejection of the classic development scheme of the industrial economies

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[10] This does not mean that I reject his other suggestions on the subject.

[11] See CENDES, “Estilos de desarrollo”, in *El trimestre económico*, Nº 144, Fondo de Cultura Económica, Mexico City, October-December 1969.

[12] This calls to mind a widely-published article by P. Sweezy, *“Transición pacífica del socialismo al capitalismo”*, on the experience of Yugoslavia.

has been another major factor in defining its unique style, in contrast to the capitalist system and the other socialist systems which basically follow the industrial community model, although they give it their own particular stamp.

Naturally, however, this does not mean that China's experience can be reproduced under other conditions, as is sometimes so ingenuously contended.

From the operational standpoint and from that of the real or potential opportunities for change, it is imperative to take these different situations into account.

From a strictly economic angle, the term "style of development" may be taken to be the way in which human and material resources are organized and assigned *within a particular system* with the object of solving such questions as what goods and services to produce, how, and for whom.

The reciprocal influences between "for whom" to produce and "what" to produce are fairly obvious, as also are the links between them and the question of "how" to produce. In any case, it may safely be assumed that the most important factor in the global response to these questions is "for whom" to produce. As will readily be understood, it is not a case of absolute options but rather of relative preferences as regards the social distribution of the main components of the product: an aspect which can be of considerable importance, as we shall see later.

The tendencies of the production system to benefit the social groups in differing proportions should be evaluated from an angle which will take into account the dynamics of the process: i.e., the fact that it is a cumulative phenomenon which gradually strengthens the tendencies toward greater or lesser inequality.

From an economic point of view, a style may be classified according to two kinds of closely interrelated factors. The first are structural factors, which reveal the way in which the production apparatus has been organized from the standpoint of the economic resources and the structure of supply. It is a static perspective, but of fundamental importance since it represents the framework of the system at a given moment.

The other class of factors includes those which are vital for the operation or dynamics of the system: those which "drive" it. They are associated with the level and composition of demand and with its basic factor, the level and distribution of income.

At the risk of repetition, emphasis must be placed on the interrelationship of these factors. Those which "drive" or infuse dynamism into the production structure are obviously conditioned by the conformation of that structure, *whose relative rigidity in the short term has a significant effect on the operation of the motive forces*. These, in their turn, constantly influence the production structure and either favour change in it or further accentuate its features.

II

The structural base

The relevant data are presented for Latin America as a whole and for two contrasting cases of countries which represent variations of the "general style", *mainly on account of the stage of development reached.*

Table 1 shows the conformation of the structures of production and employment in the region in 1970.[13] The distinctive features are well known and there is no need to dwell on them, except in two respects. The first is the still very high participation of agricultural employment –a generic sign that the development of the forces of production is still at an incipient stage– which is ultimately reflected in the per capita product or income.[14] The prevailing style (and its alternatives) rests on this basic reality. The second important feature for our purposes is the disparity between the shares of the various sectors in the product and employment, which is another of the factors determining under-development and simultaneously influencing the conformation of the style of growth.

[13] For further information on the subject, see "Trends and structures of the Latin American economy in the 1960s", *Economic Survey of Latin America, 1970* (United Nations Publications, Sales N°: E.72.II.G.1).

[14] About 500 dollars in 1970, which is appreciably higher than in other developing regions.

TABLE 1

Structure of product and employment, 1970

	Latin America		Argentina		Nicaragua	
	Structure of employment	Structure of product	Employed population	Gross domestic product	Employed population	Gross domestic product
Agriculture, forestry, hunting and fishing	43.7	16.4	15.3	14.8	46.4	29.0
Mining and quarrying	1.2	4.1	0.7	1.8	0.6	1.1
Manufacturing	12.7	24.6	22.1	35.7	12.0	15.9
Construction	6.0	3.5	6.6	5.2	3.7	4.1
Electricity, gas, water and sanitary services	0.5	2.0	7.6	9.6	0.6	2.4
Transport and communications	3.8	6.2			3.4	5.4
Trade and finance	9.0	22.0	15.5	18.7	10.9	19.0
Other services	23.1	21.2	32.2	14.2	22.4	23.1
Total	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*

Source: CEPAL, on the basis of official statistics.

These data permit a first approach to the questions of "what" and "how" to produce. The composition of the product and the levels (and disparities) of sectoral productivity indicate the true situation in these respects.

Table 1 also includes the figures for two variations of the regional situation. The contrast between the profiles of Argentina and Nicaragua is all too eloquent, as regards both the sectoral proportions and the relationships between employment and product. The spectrum of Argentina is at once more "developed" and more "balanced", this latter if consideration is given to the shares of the important agricultural sector. It does, however, show marked disparities under the headings of "other services" and "manufacturing" in both these respects. While employment is shown to be excessive in "other services", the opposite is the case in "manufacturing". In contrast, Nicaragua's system is more "homogeneously under developed".

The production structure can also be analysed from another standpoint, on the basis of technological strata, thus revealing the sharp disparities between the standards of productivity of economic activities. This, of course, represents the much-discussed problem of structural heterogeneity, which has a clear influence on the questions of "what" to produce, "how" and "for whom".[15] Table 2 contains the estimates on technological strata for Latin America as a whole, for Argentina and for Central America.

Beginning with the overall table for the region, it can be seen immediately that while only quite a small part of the population is employed in the modern sector (a little more than 12 per cent), this sector accounts for more than half of the goods produced.[16] As we shall see later, certain goods (and services) which directly or indirectly satisfy certain types of demand are produced primarily or exclusively by this sector.

The mining and manufacturing sectors are those which occupy the most important place in the modern area, and particularly the former, because of the big exporting establishments so characteristic of it. In agriculture, in contrast, the poor absorption of labour in its modern sector is very marked and is responsible for the disparity among the variables chosen.

At the other end of the scale is the so-called primitive sector, which still accounts for more than a third of regional employment although its contribution to the material product is only 5 per cent.[17]

[15] As regards structural heterogeneity, see *Economic Survey of Latin America, 1968* (United Nations publication, Sales Nº: E.70.II.G.1), and A. Pinto, "Naturaleza e implicaciones de la "heterogeneidad estructural" de la América Latina", *El trimestre económico*, Nº 145, Fondo de Cultura Económica, Mexico City, January-March 1970.

[16] Services have not been included, owing to the limitations attached to the concept of productivity in this respect. However, activities in that sector show equal or even greater inequalities. Productivity in the modern sector would be equal to average productivity in the developed countries, and may be estimated at between 12,000 and 15,000 dollars per worker.

[17] The primitive sector covers mainly subsistence agricultural activities and part of handicraft production. If services are included, of course, it accounts for a high proportion of unskilled workers. Its annual, productivity per worker would probably be around 300 to 400 dollars.

TABLE 2

Latin America: conjectural breakdown of employment and product by technological strata at the end of the 1960s

	Latin America				Central America				Argentina			
	Modern	Intermediate	Primitive	Total	Modern	Intermediate	Primitive	Total	Modern	Intermediate	Primitive	Total
Total Product												
Employment	12.4	47.7	34.3	100	8.1	33.6	55.0	100	21.3	65.8	5.3	100
Product	53.3	41.6	5.1	100	42.6	48.0	9.4	100	58.6	40.5	0.9	100
Agriculture												
Employment	6.8	27.7	65.5	100	5.0	15.0	80.0	100	25.0	57.0	18.0	100
Product	47.5	33.2	19.3	100	43.9	30.6	25.5	100	65.1	32.3	2.6	100
Manufacturing												
Employment	17.5	64.9	17.6	100	14.0	57.4	28.6	100	25.6	70.6	3.8	100
Product	62.5	36.0	1.5	100	63.6	30.4	3.3	100	62.1	37.5	0.4	100
Mining												
Employment	38.0	34.2	27.8	100	20.0	60.0	20.0	100	50.0	40.0	10.0	100
Product	91.5	7.5	1.0	100	57.2	40.0	2.8	100	77.8	21.6	0.6	100

Source: CEPAL, *La mano de obra y el desarrollo económico de América Latina en los últimos años*. E/CN/12/L.1.

As another look at table 2 shows, a large share of agricultural employment (65.5 per cent) and no mean proportion of agricultural production (almost 20 per cent) are associated with the primitive sector. It seems clear that this is the source of a sizeable share of rural self-supply production. This is not so in the case of manufactures, for in this sector its share is only about 1.5 per cent of the product, although it accounts for almost 18 per cent of industrial employment.

The intermediate sector is the most "balanced" from the point of view of the employment/product ratio.[18] This sector accounts for almost half of the jobs offered and a little more than 40 per cent of the product. It plays a particularly important part in manufacturing activities, since it employs 65 per cent of the industrial labour force and accounts for more than a third of the product. Its share in mining production is very small, even though more than a third of the workers employed in that activity work in this sector. Therefore, of all the sectors considered, this one has the worst employment/product ratio.

Study and comparison of the figures for Argentina and Central America show different situations and features.

Taking an overall view, it is easy to see the great importance of the modern sector in Argentina, particularly from the employment figures. The respective table for Central America shows a much higher degree of imbalance, for a significantly smaller part of the labour force (8 per cent compared with a little more than 21 per cent in Argentina) produces much of the overall product (42.6 per cent compared with 58.6 per cent in Argentina).

Taking the opposite approach, it can be seen that in Argentina the primitive sector is of very limited importance, whereas in Central America no less than 55 per cent of total employment and 80 per cent of agricultural employment are accounted for by this sector.

This is not the place to go into further detail on the structural features of the Latin American economy, but this part would be incomplete without reference to some aspects of Latin America's external position or its external "relationships", which are of great importance for the study of development styles.

Reference should be made in particular to the openness of the Latin American economies. This shows the extent to which they are part of the scheme of the international division of labour. As everyone is aware, the region's export and import coefficients are relatively low:[19] a situation for which

[18] Thus, of course, the activities in this sector show a level of productivity close to the national average: in absolute terms, about 2,500 dollars per worker.

[19] For information on this subject see "Tendencias y estructuras de la economía latinoamericana", *op. cit*.

the bigger countries are largely responsible, since these coefficients range from approximately 10 per cent for Brazil, Mexico and Argentina, to more than 30 per cent for some Central American economies. The great majority of the countries increased these coefficients over the past decade, and the region became even more open during the first three years of the 1970s.

Other events have led to a sharpening of this trend and helped to create a different structural situation. During the 1960s, the importance of external financing in reducing the ever increasing deficit on the trade balance and current account increased.[20] At the same time, the external relationship was also strengthened through the constantly increasing importance of transnational enterprises in the economies of the region.[21]

The changes which occurred in the composition of exports and imports are yet another factor.

As regards exports, there was a small but noticeable decrease in the degree of concentration on the export of primary products in the 1960s,[22] while the share of manufactured products rose.[23] It should be borne in mind that in 1970 approximately 36 per cent of the region's exports of manufactures were produced by transnational enterprises.

As regards imports, the most important change, although it was not a spectacular one, was the drop in the share of consumer goods (from 21 per cent in 1955 to 16 per cent in 1968) and the corresponding increase in capital goods.

Of course, these overall changes for the region conceal many national variations. Such variations have been much more important in the larger economies (Mexico, Brazil and Argentina), but similar trends –and therefore the same structural adjustments– are to be found in almost all the Latin American countries.

Lastly, these countries are heading in several basic directions which are of key importance for the matter under study. In particular, there is a tendency towards the strengthening of what has come to be called the "internationalization" or dependent incorporation of the regional economies. This path has a few features which are different from those of the old model of "outward-looking growth", since emphasis is placed on greater diversification of exports and, especially, on the "internalization" and transfer through transnational enterprises of production and demand patterns (or consumption patterns), forms of technical progress, marketing and financing, etc., prevailing in the developed capitalist centres.

It is scarcely necessary to stress the enormous significance of this process for the development style or, looked at from another point of view, for the vital questions of "what", "how", and "for whom" to produce.

III

The functioning of the style

The dynamics of the style –that is to say, the motivating or change-producing forces which accentuate or modify its basic profiles– are just as important as its structural base or even more so.

Although there is little information on the subject, some figures have been collected here on Latin America, and in some cases on specific national variants, from which certain major features can be seen.

Table 3 shows the growth rates of the principal industrial groupings. Subject to a few exceptions and reservations, they give us an idea of the

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[20] Total external financing (excluding Venezuela, which is a special case) increased from 6,600 million dollars in 1950-1959 to 13,850 million in 1960-1969 (see "Tendencias y estructuras de la economía latinoamericana", *op. cit.*).

[21] Overall figures are not available tor the percentage of regional production or country production accounted for by transnational enterprises, but it is easy to show their predominance or even monopolistic position in many major lines of durable consumer goods (especially motor vehicles) and capital goods.

[22] Between 1955 and 1968, the share of the main export product dropped from 62 to 50 per cent, while that of the three mean products dropped from 80 to 65 per cent (sea "Tendencias y estructuras de la economía latinoamericana", *op. cit.*).

[23] These represented approximately 2.5 per cent of the total in 1955. By 1970 the figure was in the region of 10 per cent, and they increased in the second half of the 1960s at a rate of more than 20 per cent per year.

TABLE 3

Latin america: growth rates of the manufacturing sector by industrial groupings
(Cumulative annual average rate for the period 1960-1971)

	Average Latin America	Argentina	Brasil[a]	Mexico
Food, beverages and tobacco	4.8	3.7	7.6	5.8
Food products except beverages	4.6	3.1	7.9	5.7
Beverage industries	4.9	5.7	6.3	6.9
Tobacco industry	4.3	4.9	7.1	4.5
Textiles, wearing apparel and leather industry	4.1	2.0	7.1	7.2
Wood and wood products, including furniture	2.9	3.8		4.8
Paper and paper products; printing and publishing	7.4	5.9	7.5	8.2
Chemicals and chemical, petroleum, coal, rubber, and plastic products	9.0	7.9	13.1	9.2
Industrial chemicals	9.9	13.3	13.6	12.8
Other chemical products		6.6		7.8
Petroleum refineries	6.4	6.3	10.6	
Petroleum and coal products		15.4		
Rubber products	7.3	6.9	13.9	6.5
Non-metallic minerals, except petroleum and coal products	7.0	7.1	12.1	8.7
Basic metal industries	8.8	8.7		8.8
Metal products, machinery and equipment	9.5	6.9	13.2	11.9
Metal products, excluding machinery and equipment	8.3	8.4	18.4	9.0
Machinery except electrical		5.3	17.9	14.1
Electrical machinery, apparatus, appliances and supplies	10.4	5.8	12.7	11.5
Manufacture of transport equipment	10.2	7.4	23.5	13.1
Motor vehicles	13.5	10.4		15.4
Other manufacturing industries	8.2	3.0		7.7
Total manufacturing industries	*6.8*	*5.6*	*12.2*	*7.8*

Source: CEPAL, on the basis of official figures.

[a] 1967-1971.

global dynamics, since they reflect indirectly the performance of the primary and tertiary sectors.[24]

A look at the data for the region for the period 1960-1971 immediately shows that the figures for each individual grouping fluctuate considerably with respect to the average growth rate of the industries as a whole (6.8 per cent). In general terms, the rate is lower for the so-called traditional activities, where non-durable consumer goods industries predominate; it is close to or exceeds the average in the case of intermediate activities, and it more or less easily exceeds it in the case of the basic metal industries, particularly those connected with heavy durable goods: appliances, motor vehicles, etc.

The figures describing trends in Argentina, Brazil and Mexico confirm similar tendencies, which are less pronounced in the first of the countries mentioned but are particularly marked in Brazil. For this country the period 1967-1971 was chosen, both because the longer term covers highly dissimilar periods, and because these years of active and sustained growth at the end of the decade clearly bring out the sources of dynamism of the existing style. In the case of Brazil, as we can likewise see from table 3, the average overall rate of 12.2 per cent is made up of quite a high rate of expansion in "traditional" activities (around 7 per cent) –a feature which cannot be overlooked– but extraordinarily

[24] The primary sector provides the necessary inputs, while the tertiary sector will follow to some extent the expansion of the industrial groupings. The inclusion of primary production for direct consumption (after deduction of exports and inputs) would strengthen rather than change the sense of the table in question, since its rate of growth was lower. On the other hand, the table is obviously of less importance for the less industrialized countries, where the composition of imports is of greater importance.

high rates in the basic metal industries, particularly as regards heavy durable goods.[25]

The picture which emerges is not a surprising one and it was anticipated or implied by many analyses. The usual explanation of these trends is also very well known, namely, that they are due (almost tautologically) to the different income elasticities of the demands for goods and services.

The most important thing to do, however, is to ascertain the source of this income elasticity: i.e., to determine the groups in which demand originates and the size for demand for the different classes of products.

In other words, the unequal rates of growth of the industrial groupings provide an approximate indication of the tendencies of the system or style as regards what is to be produced. The next question is to find out to which groups these efforts are directed, since these are the economic mandants in this matter: in other words, "for whom" is the system producing (primarily or exclusively) the various goods.

In table 4 an attempt is made to provide an approximate answer to these questions, bearing in mind the participation of the different income strata in the total consumption of the main items, listed by type –foodstuffs, clothing, housing, services, durable goods.

Without going into details, it is nevertheless possible to bring out some principal relations.

[25] It is essential to make a distinction between activities devoted to capital formation and those devoted to the production of durable consumer goods (despite all the difficulties that drawing such a distinction implies) if more light is to be thrown on the subject. The same could be said of a breakdown of the items of current consumption into mass consumer goods and other types of goods with more limited uses, such as certain food or textile products.

TABLE 4

Latin America: share of different population strata in total consumption, by type of consumption, around 1970[a]

Type of consumption	Population strata			
	Poorest 20%	Poorest 50%	20% below the richest 10%	Richest 10%
Food, beverages and tobacco	5	23	29	29
Meat	2	12	34	41
Cereals	8	32	24	19
Other foods	5	25	28	28
Beverages and tobacco	5	22	29	30
Wearing apparel	2	14	32	42
Clothing	2	13	32	44
Footwear	3	16	32	36
Housing[b]	2	15	29	44
Transport	1	5	25	64
Personal care[c]	2	15	31	41
Domestic service	–	1	16	82
Other personal services	1	4	25	67
Recreation and amusement[d]	–	3	20	75
Durable goods	1	6	26	61
Motor vehicles (purchase)	–	1	13	85
Houses and apartments (purchase)	2	9	29	54
Furniture	2	5	16	74
Electrical and mechanical appliances	1	5	37	50
Total	*3*	*15*	*28*	*43*

Source: CEPAL, estimates based on national surveys.

[a] Estimated average on the basis of data from Argentina, Brazil, Chile, Colombia, Honduras, Mexico, Paraguay, Peru and Venezuela.
[b] Housing includes: rents, textile articles for the home, fuels, electricity, gas, water and household goods.
[c] Personal care includes: toilet articles, drugs and medicines, medical services, hair dressing and suchlike.
[d] Recreation and amusement includes: holidays and tourism, recreation, newspapers and magazines, dues to social clubs and suchlike.

Using the shares of the strata represented by the poorest 50 per cent of the population and the 10 per cent in the highest income bracket as benchmarks, it is immediately obvious that the share of the first group is invariably lower than that of the second, except in respect of the consumption of cereals, and it becomes progressively smaller in respect of dearer goods and more skilled and costly services. In contrast, the 10 per cent of the population in the highest income bracket account for a very large share of such goods as motor vehicles (85 per cent), recreational activities (75 per cent), domestic services (82 per cent), appliances (50 per cent), clothing (44 per cent), meat (40 per cent), housing (44 per cent), etc.

If we add to the consumption of this bracket that of the 20 per cent of the population in the next lower income bracket, it will be seen that their joint consumption amounts to between 75 and almost 100 per cent of the total in a number of cases, particularly those of the higher-priced durable consumer goods.

The figures for Argentina and Honduras (see tables 5 and 6) show, as might be expected, less marked and more acute versions respectively, of the regional table. The share of the upper bracket is consistently lower in Argentina, and conversely that of the lower half is consistently higher. From the point of view of total consumption, the 30 per cent in the highest income bracket account for 56 per cent of consumption in Argentina as against 73 per cent in Honduras.

Furthermore, if we take some key items in modern consumption patterns, it will be seen that the expenditure of the poorest 50 per cent of the population on electrical and mechanical appliances hardly amounts to 3 per cent of the total in Honduras, whereas the corresponding figure for Argentina is 25 per cent. In the case of motor vehicles, however, the

TABLE 5

Argentina: share of different population strata in total consumption, by type of consumption, around 1970

Type of consumption	Population strata			
	Poorest 20%	Poorest 50%	20% below the richest 10%	Richest 10%
Food, beverages and tobacco	9	32	26	21
Meat	9	33	26	20
Cereals	11	37	25	18
Other foods	9	32	26	22
Beverages and tobacco	7	27	29	23
Wearing apparel	5	20	28	31
Clothing	4	18	29	34
Footwear	6	26	28	24
Housing[a]	8	28	27	26
Transport	3	15	32	40
Public	5	23	29	29
Private (operation)	1	7	34	51
Personal care[b]	8	30	27	27
Domestic service	2	6	26	61
Other personal services	2	13	28	40
Recreation and amusement[c]	3	14	28	44
Durable goods	2	12	27	47
Motor vehicles (purchase)	-	5	27	60
Houses and apartments (purchase)	1	7	29	53
Furniture	1	6	20	70
Electrical and mechanical appliances	5	25	26	24
Total	*6*	*25*	*27*	*29*

Source: CEPAL, estimates based on national surveys.

a Housing includes: rents, textile articles for the home, fuels, electricity, gas, water and household goods.
b Personal care includes: toilet articles, drugs and medicines, medical services, hairdressing and suchlike.
c Recreation and amusement includes: holidays and tourism, recreation, newspapers and magazines, dues to social clubs and suchlike.

TABLE 6

Honduras: share of different population strata in total consumption; by type of consumption, around 1970

Type of consumption	Population strata			
	Poorest 20%	Poorest 50%	20% below the richest 10%	Richest 10%
Food, beverages and tobacco	6	18	29	35
Meat	3	9	30	52
Cereals	9	25	25	25
Other foods	6	18	30	35
Beverages and tobacco	7	21	33	27
Wearing apparel	5	13	28	46
Clothing	5	13	27	47
Footwear	5	13	30	44
Housing[a]	4	12	30	46
Transport	2	6	28	60
Personal care[b]	4	12	30	45
Domestic service	-	-	17	82
Other personal services	2	5	23	67
Recreation and amusement[c]	1	3	14	81
Durable goods	3	8	23	61
Motor vehicles (purchase)	-	-	5	94
Houses and apartments (purchase)	4	12	26	49
Furniture	3	8	25	58
Electrical and mechanical appliances	1	3	28	66
Total	*5*	*14*	*28*	*45*

Source: CEPAL, estimates on the basis of national surveys.

[a] Housing includes: rents, textile articles for the home, fuels, electricity, gas, water and household goods.
[b] Personal care includes: toilet articles, drugs and medicines, medical services, hairdressing and suchlike.
[c] Recreation and amusement includes: holidays and tourism, recreation, newspapers and magazines, dues to social clubs and suchlike.

poorest half of the population is of little significance in Argentina, since the acquisition of such goods is concentrated in the highest bracket (60 per cent), although of course, the corresponding figure for Honduras is much higher: 94 per cent.

Although they are not strictly comparable, the tables on the rates of expansion of industrial activities and on the social distribution of various consumer goods are sufficiently clear and indicative to be used as a basis for a well-known assumption: that the more dynamic elements of the productive apparatus are interrelated and depend *mainly, and sometimes entirely*, on the demand of the groups situated at the peak of the distributive structure. In other words, *given the level of average income in the region and in the individual countries*, if the present style of development is to work and progress, then income and expenditure must be concentrated in those strata, so as to sustain and increase demand for the favoured goods and services. If this is done, then the productive apparatus will adjust itself primarily to the satisfaction of such demand.

IV
Some questions and options

The situation described raises a few questions which can be put in the form of two alternatives:[26]

a) the style persists and in time gradually brings other social strata into the acquisition of the new consumer goods, until their use is widespread;
b) the style persists, but without promoting a steady and substantial integration of sizeable groups, which continue to be marginal consumers of these goods and, furthermore, remain in conditions of poverty as regards the satisfaction of their vital needs.

The first option copies the process of the central capitalist economies. The differences in this respect have been brought out in many studies, and this is not the place to repeat them.[27] At all events, the "special case" of Argentina indicates that large-scale marginalizations in not an obligatory feature of the Latin American experience (the problem is dealt with later at the regional level). However, it is clear that a basic question of deadlines is involved. A gradual incorporation which might have taken a century or many decades in the past in the central economies does not seem viable in current circumstances unless politico-social restrictions are applied, although this latter possibility cannot be overlooked in the light of certain regional experiences.

Some of the remarks made above also hold good for evaluating the second option. In this option, the prevailing style leaves aside important sections of the population located in marginal rural areas and on the periphery of the cities, so that in absolute and even perhaps in relative terms, the number of non-participants remaining in a state of abject poverty increases.

Without going into the specific viability of this option in the short or long term, it is clear that it is not acceptable in terms of the professed values of the international community.[28]

To probe deeper into the subject, some figures on income distribution in the region and on the changes which have taken place between 1960 and 1970 may be useful (see table 7). Although the documentation is admittedly unsatisfactory, the trends and relations which they reveal do seem to be close to the facts.

When the information on the participation of the various strata in total income is studied, several aspects stand out. On one hand, the share of the poorest 20 per cent dropped slightly and that of the poorest 50 per cent hardly varied. At the extreme –and in contrast to what is usually believed to be the case– the strata representing the 10 and 5 per cent in the highest income brackets showed a moderate drop. There was an increase, however, in the share of the stratum corresponding to the 20 per cent immediately below the richest 10 per cent from 24.6 to 28 per cent. In reality, this last-mentioned group and the group corresponding to the 30 per cent above the poorest 20 per cent are the only groups which improved their relative position.

From these points of view, therefore, it could be argued that there is a slight deconcentration of income from the social peak to the benefit of the groups in the middle and upper-middle brackets. On the other hand, there is the drop in the share of the poorest stratum.

The foregoing picture must be completed with a view of the absolute magnitudes, which clarifies and modifies some of the assumptions made in the previous paragraphs.

As may be seen from table 7, per capita income in the region is estimated to have increased by some 27 per cent between 1960 and 1970, which would represent 95 dollars at 1960 prices in absolute terms.[29]

[26] A further obvious possibility which is particularly applicable to the relatively less developed countries, namely, that the style does not work, has not been left out through ignorance or underestimation, but because it is felt that for these countries the external variable is much more important.

[27] Among others, see another study by the present author: "Concentración del progreso técnico y de sus frutos en el desarrollo latinoamericano", in *El trimestre económico*, 125, Fondo de Cultura Económica, Mexico City, January-March, 1965.

[28] See CEPAL, "Report on a unified approach to development analysis and planning. Preliminary report by the Secretary-General" (revised text of the Spanish version of document E/CN.5/477 of 25 October 1972, presented at the 23rd Session of the United Nations Social Development Committee).

[29] Between these years the domestic depreciation of the dollar was almost 32 per cent.

TABLE 7

Latin America: per capita income in 1960 dollars and changes in the shares of the different socio-economic strata in total income of the region

Socio-economic strata	Share of each stratum in total income		Per capita income[a] (1960 dollars)		Rice in per capita income		Total rise by all strata (millions of 1960 dollars)	Rice of each stratum as percentage of total rise
	1960	1970	1960	1970	Percentage	1960 dollars		
Poorest 20%	3.1	2.5	53	55	3.8	2	107.6	0.4
Next 30%	10.3	11.4	118	167	41.5	49	3 919	15.4
Poorest 50%	13.4	13.9	92	122	32.6	30	4 025	15.8
Next 20%	14.1	13.9	243	306	25.9	63	3 359	13.2
20% below the top 10%	24.6	28.0	424	616	45.3	192	10 237	40.3
Top 10%	47.9	44.2	1 643	1 945	17.7	292	7 785	30.7
Top 5%	33.4	29.9	2 305	2 630	14.1	325	4 332	17.1
Total	100.0	100.0	345	440	27.5	95	25 406	100.0

Source: CEPAL, estimates on the basis of national surveys.
N.B.: The average distribution for Latin America in 1970 was estimated on the basis of information from Argentina, Brazil, Chile, Colombia, Honduras, Mexico, Paraguay and Venezuela.

[a] Per capita personal income.

This average or global change meant very different things for the different strata. Thus, the smaller percentage increases of the two groups in the highest income brackets represent absolute improvements of 325 dollars for the 5 per cent at the top of the income bracket structure and 292 dollars for the top 10 per cent. For the 20 per cent immediately below the top 10 per cent, the big relative increase of 45 per cent represents 192 dollars in absolute terms, which is double the overall gains of all strata taken together (95 dollars).

Taking a look at the other levels of the distribution pyramid, the first thing which strikes one is the stagnation, at a very low level of income, of the poorest 20 per cent. Even the poorest 50 per cent only increased their income in absolute terms by 30 dollars, thus reaching in 1970 a level of barely 122 dollars per year, and again in this case the increases of the group (30 per cent) above the poorest 20 per cent must be taken into account.

If these striking features are examined in the light of these notes, it is easy to see their influence in the forces behind the system or the style of development.

With this in view, calculation has been made of the increase in personal income which has taken place during this period and which amounts to the sum of 25,406 million dollars: an increase of 27 per cent with respect to 1960. From a limited point of view –namely, leaving aside other items such as retained profits and government savings– this sum represents the principal expansion factor of the market and of overall domestic demand.

How was this greater purchasing power distributed among the social strata under consideration?

As the last columns of table 7 show, almost a third of the increase (31 per cent) went to the top 10 per cent, and this share increases to 71 per cent if the following 20 per cent are included.

The poorest half, in contrast, only appears to have received a 16 per cent of the total, and almost the whole of the poorest 20 per cent at the base of the pyramid failed to benefit from this increase.

If the increase obtained by the next 20 per cent is added to that of the strata making up this bottom half, the 70 per cent of the population is estimated to have had a 29 per cent increase in income: a figure which is lower than that received by the richest 10 per cent (31 per cent).

From another point of view, considering the absolute figures, it may be said that the expansion of the market attributable to the highest 30 per cent amounted to some 18,000 million dollars and that of the remaining 70 per cent to only 7,400 million.

These figures clearly show in which strata the income increases in the period under study were concentrated, and it is obvious that this trend corresponds roughly to that which occurred in the allocation of resources –translated, as we have seen, into different rates of expansion of the productive activities. It is worth repeating that "what to produce" has had to be brought in line with "for whom to produce".

An even clearer picture can be gained if we look again at the absolute figures for income and link them to the main items of consumption. In this respect, and in the light of the figures in table 7, some reasonable assumptions can be made.

First, it is clear that at the *regional level* approximately one-half of the population have an average per capita income of some 120 dollars per year and therefore, have great difficulties in satisfying their most elementary needs. Among them, the poorest 30 per cent are probably below any "poverty line" that could be drawn,[30] while the remaining 20 per cent, whose income approximates to 200 dollars per year, are probably situated only just above it.

The upper crust of this sector, together with the 20 per cent of the population situated immediately above it, whose average income is about 300 dollars, has surely already entered the market for basic low cost industrial products and a range of cheap urban services. On the other hand, this group can only gain access to durable goods and more skilled services at considerable sacrifice, or by reducing their consumption of essential goods. Neither the shares nor the absolute increases of these strata show significant changes at this stage.

As already stated, it is a very different matter when we look at the changes which took place in the position of the 20 per cent below the richest 10 per cent. Both their share and the absolute increase in per capita income (approximately 45 per cent over the decade, thus raising this stratum above the 600 dollar mark) are of obvious importance. In fact, this stratum absorbed 40 per cent of the overall increase in income, amounting to more than 10,000 million dollars (see table 7).

It seems reasonable to think that the members of this stratum have crossed the threshold of the market for durable goods. If we take another look at table 4 it will be seen that this group accounts for 37 per cent of the consumption of electrical and mechanical appliances, 30 per cent of the purchases of housing and related expenditure, 32 per cent of the consumption of footwear and clothing, etc. However, their access to more expensive durable goods such as motor vehicles (only 13 per cent) is still limited, although their participation in the used car market is probably increasing steadily.[31]

Without repeating what has been said about the highest strata in the system, some of the assumptions made may be reviewed.

On one hand, the concentrating bias of the prevailing style is beyond doubt and is clearly seen from the increases in per capita income, in absolute income, and in market potential. From this point of view it appears obvious that there is a circle of cumulative causality, in that this bias in income distribution influences the orientation of the productive system and strengthens or entrenches a given supply structure. Such a structure, in its turn, calls for a corresponding distribution scheme. In view of the level of average income and the social destination of the most dynamic lines of production, this scheme will inevitably tend towards the concentration of income, thus completing the circle.

On the other hand, however, this style seems less exclusive than is sometimes argued. Available data suggest that it has succeeded in widening its supporting base in the upper-middle levels (the 20 per cent below the top 10 per cent) and that it has even brought about positive changes in the better-placed sectors of the poorest half of the population, although in absolute terms their incomes continue to be very low (see table 7).

The third aspect worthy of consideration is the obvious marginalization and deplorable living conditions of a fair part of the population –at least a third– which is undoubtedly situated below the abject poverty line. This gives rise to the basic question as to the value of the prevailing style, in other words, whether its functioning offers possibilities or not for raising substantially, within a reasonable period of time, the standard of living of those suffering from the highest degree of ethical, social, and political deprivation.

[30] The average income of this 30 per cent of the population probably hardly exceeds some 70 dollars. The Economic Development Division of CEPAL is working on the identification, from different points of view, of "the poor of Latin America", by country, activities, rural/urban distribution, etc. It may be noted that in some studies the "poverty line" is set as low as 50 dollars per capita per year. See *Redistribution with growth: An approach to policy* by the Institute of Development Studies of the University of Sussex and the Development Research Centre, World Bank, Washington, D.C., August 1973.

[31] In Argentina, their share in the purchase of motor vehicles is 27 per cent; in Honduras, it is only 5 per cent. See tables 5 and 6.

V

The meaning of critical poverty

Before going into the possibilities which the prevailing style offers for tackling the problem of abject poverty, an approximate idea of what the term means may be useful. In order to gain such an idea, a study has been made of the regional situation as regards some basic consumer goods –foodstuffs (meat, cereals and others) and clothing (including footwear)– and this situation has been compared with the average levels obtained in Argentina.

As may be seen from table 8, the standards of consumption of at least 70 per cent of the Latin American population differ greatly from the figures for Argentina, except in respect of cereals, where the figures reflect the unbalanced diet prevailing in large sectors of the region. In contrast, the consumption figures for the third stratum (the 20 per cent in the income bracket immediately below the top 10 per cent) are close to the Argentine average, and those of the group in the highest income bracket considerably surpass it.

Table 9 continues the exercise of appraising the magnitude of the increases which would be necessary to reach the levels of Argentina and of establishing

TABLE 8

Per capita consumption of food, clothing and footwear in Argentina and in the different population strata of Latin America, 1970
(1960 dollars per capita)

		Latin America			
	Argentina	Poorest 20%	Next 50%	20% below the richest 10%	Richest 10%
Food	317	42	133	251	515
Meal	81	4	19	71	172
Cereals	29	16	39	47	74
Other	207	22	74	133	269
Wearing apparel	93	6	25	85	221
Clothing	69	4	17	63	172
Footwear	24	2	8	22	49

Source: CEPAL, estimates on the basis of national surveys.

TABLE 9

Latin America: increases in food, clothing and footwear needed to achieve per capita consumption of such articles at least equal to average consumption of them in Argentina in 1970

	Necessary percentage increases over present availability of each item	Share of total increase corresponding to the different population strata			
		Poorest 20%	Next 50%	20% below the richest 10%	Richest 10%
Food	90.9	34.3	57.4	8.3	–
Meal	118.1	32.9	61.0	6.1	–
Cereals	-15.6	43.0	-85.0	-58.0	–
Other	125.4	31.2	56.4	12.5	–
Wearing apparel	99.0	32.9	64.1	3.0	–
Clothing	101.7	32.3	64.5	3.2	–
Footwear	91.1	34.7	62.5	2.8	–

Source: CEPAL, estimates on the basis of national surveys.

in what proportion they should be distributed among the groups for each group to attain this objective.

The size of the increases needed is immediately obvious; except in the case of cereals, the consumption of the different items would have to double or nearly so. It goes without saying that the greatest increases would have to be concentrated in the poorest 20 per cent.

The next 50 per cent would also have to receive a somewhat higher share than that corresponding to their share of the population, however, particularly as regards clothing and footwear.

Lastly, table 10 shows the rates of growth which would have to be attained over different periods of time (five, ten and fifteen years) for the population of the region to reach the levels of consumption desired.

Undoubtedly the effort required is a big one. In order to attain the objective in question within a period of five years, expansion rates beyond the possibility of any system would be required, and even if this period were extended to ten years, considerable strain would be put on the productive system.[32]

These growth requirements, which are far from encouraging any simplistic optimism, are associated with urgent needs in other fields of major importance to social welfare, such as health, education and other community services, which also call for huge resources if the situation of abject poverty is to be radically changed.

At the same time, to put things on a realistic plane, it should be realized that the average levels of consumption in Argentina are very high, both compared with those prevailing in the region and also compared with hypothetical subsistence consumption targets.

According to a recent study,[33] if these targets are to be achieved and abject poverty eliminated, the lowest income of the poorest 50 per cent of the Latin American population should be at least 238 dollars (at 1970 prices) per capita per year: a sum which would enable this stratum of the population to satisfy their minimum needs of clothing and food. Around 1970, actual income was 73 dollars per year for the poorest 30 per cent of the population and 122 dollars for the poorest 50 per cent.

Table 10

Latin America: annual accumulative growth rates of food, clothing and footwear production necessary for the region to achieve within five, ten and fifteen years a minimum per capita consumption of such articles equal to the average for Argentina in 1970

	5 years	10 years	15 years
Food	16.7	9.6	7.3
Meal	19.8	11.0	8.2
Cereals	-0.4	1.2	1.8
Other	20.5	11.4	8.5
Wearing apparel	17.6	10.0	7.6
Clothing	18.0	10.2	7.7
Footwear	16.7	9.6	7.3

Source: CEPAL, estimate on the basis of national surveys.
N.B.: These rates were calculated on the assumption of a 2.9 per cent annual increase in the population of Latin America.

In view of the foregoing, table 10 was prepared, which shows the per capita income of the different strata in 1970, with projections for 1980, the target being to raise minimum per capita income to at least 238 dollars per year. In order to make the outlooks clearer, two hypotheses were made. The first assumes a modification of the 1970 distribution structure, whereas the second assumes no change in the structure.

In the first case, in order to achieve the desired consumption with a rate of increase of average per capita income of 3 per cent per year –similar to the rate recorded in the 1960s– the income of the poorest 30 per cent of the region's population would have to increase at a rate of 12.5 per cent per year, while for the poorest 50 per cent the rate of increase would have to be 6.9 per cent. For this to be possible, the relative shares of each stratum in total income would have to be changed.[34] As may be seen from section IV of table 11, this would involve only quite modest changes in the shares of the sectors situated in the upper half of the distribution pyramid, and these would moreover be compatible with absolute

[32] On this point, see table 3 and in particular the growth rates of traditional industries in Brazil. Even bearing in mind that these also include goods consumed above all by high-income groups, at existing expansion rates it would take more than 15 years to reach the levels indicated.

[33] See "La alimentación en América Latina dentro del contexto económico regional y mundial", (preliminary version), a document prepared by the CEPAL/FAO Joint Agriculture Division for the thirteenth FAO Regional Conference for Latin America, August 1974.

[34] It should be borne in mind that such changes would not necessarily mean monetary transfers from one group to another. They could also be brought about through material transfers financed, of course, through fiscal and monetary channels.

TABLE 11

Latin America: per capita income by strata in 1970 and projections for 1980 on the assumption that minimum per capita income will reach at least 238 dollars per year, which is the average per capita spending on food and clothing of the 30 per cent of the population with incomes higher than the mean
(1960 dollars and annual growth rates)

	I Per capita income in 1970	II Hypothesis I 3% annual increase in the average per capita income of the region		III Hypothesis II Retaining the 1970 distribution structure		IV Percentage share of each stratum in total income	
		Per capita income	Annual rate 1970 - 1980	Per capita income	Annual rate 1970 - 1980	Hypothesis I	Hypothesis II
First 30%	73	238	12.5	238	12.5	12.0	8.3
First 50%	122	238	6.9	238	6.9	20.1	13.9
Next 20%	306	381	2.2	595	6.9	12.9	13.9
20% before the top 10%	616	767	2.2	1 200	6.9	26.0	28.0
Top 10%	1 945	2 424	2.2	3 794	6.9	41.0	44.2
Top 5%	23 630	3 277	2.2	5 130	6.9	27.7	29.9
Total	440	591	3.0	860	6.9	100.0	100.0

Source: Column I CEPAL, estimate on the basis of national surveys.

increases in their income between 1970 and 1980. Thus, for example, although the share of the richest 10 per cent of the population would drop from a little more than 44 per cent to 41 per cent, their income would increase from 1,945 dollars in 1970 to 2,424 in 1980.

The situation is different if we assume that the 1970 distribution structure is to be maintained, as assumed in the second hypothesis. In this case, for the poorest 50 per cent to reach the minimum level established, per capita income would have to increase annually by almost 7 per cent –more than double the historical rate– which is of course beyond the realm of reasonable possibility.

In other words, if an objective more modest than that indicated in the previous exercise is fixed, the target aimed at would not be excessively ambitious if in one way or another an appreciable but not radical transformation could be made in the distribution structure. Although this is not the place to develop this subject, it should be noted that the foregoing clearly shows that, as far as average per capita income is concerned, the elimination or substantial reduction of abject poverty is not a utopian ideal. And it is even less so if the problem is looked at from a realistic point of view, i.e., bearing in mind the degree of development of the production potential and the different possibilities of using and allocating such potential.

At all events, however, the problem cannot be solved without a considerable mobilization and reallocation of human and material resources.

VI

Options

The above statement is confirmed to some extent by the exercises which have been carried out using a numerical model in a joint project undertaken by the Economic Development Division and the Economic Projections Centre of CEPAL.[35]

On the basis of the prevailing growth style, a fairly dynamic rate of expansion (7 per cent per year), and a background typical of an economy similar to that of Brazil (and to some extent, therefore, of the region as a whole), an attempt has been made to show what would occur towards the end of the century as regards some basic features, among them employment and income distribution, which are closely interrelated.

As far as employment is concerned, the proportion of the labour force which is unemployed or employed in backward strata (the primitive stratum and the lower part of the intermediate stratum) would drop from 53 to about 45 per cent between 1970 and the end of the century, although its size in absolute terms would double. The composition of this group would undergo a marked change, becoming more urban than rural.

The consequent differences in productivity would become more pronounced, and by the end of the period productivity in agriculture and traditional services would only amount to a quarter of the national average and a much smaller fraction of the productivity of the modern stratum.

This concentration of technical progress (and its effect the absolute or substantial marginalization of a large sector of the system) is matched symetrically as regards the distribution of its fruits.

As indicated in a study quoted earlier,[36] "the insight into the distribution of income which can be obtained from the model follows directly from the employment structure and its evolution... There is some improvement, but the basic imbalance remains. By the end of the century there has been some upward shift in the relative composition of the labour force: the low income group declines to less than half of the total, the middle group is marginally larger and the high income group is considerably larger, accounting for about one sixth of all income recipients".

Thus, the point raised previously crops up once again: namely that while the style admits of or involves a certain degree of "deconcentration" or "levelling up", it involves above all the absolute or considerable marginalization of an appreciable proportion of the "poorest half".

In order to define the foregoing aspects more clearly, a summary exercise was carried out which appears in table 12. Here, two hypotheses are put forward with respect to policies which might be proposed for reducing the degree of heterogeneity of production characteristic of the Latin American structure or, looked at from the opposite point of view, for promoting a definite movement towards the homogenization of that structure. For this purpose a long-term view is taken from 1970 to the year 2000.

The first hypothesis is the more radical. It involves the disappearance of the primitive or subsistence stratum and the reduction of the intermediate stratum. In this way, the share of the modern stratum in employment would increase from 15 to 70 per cent, while the proportion of the production of the product generated by this stratum would increase from 57 to almost 76 per cent. The economy in question would therefore show a very high level of homogeneity and modernization by about the year 2000. For this to be possible, the overall economy and the modem stratum would have to grow rapidly (at rates of 7 and 8 per cent, respectively) and the average productivity of the modern stratum would continue to be that of 1970, although the average productivity of the system as a whole would increase by 4.4 per cent per year.

Obviously, this picture is very different from the real possibilities. At the same time, it should be borne in mind that, even in this extreme or utopian version, it does not involve, as has sometimes been thought, any suggestion of a technological holdup or freeze, since the productivity of the economy

[35] See in particular CEPAL, *Un modelo para comparar estilos de desarrollo o políticas económicas optativas*, E/CN.12/907, 1971 and "Different development models or styles", Economic Bulletin for Latin America, Vol. XIX, Nos. 1 and 2, 1974, United Nations publication, Sales Nº: E. 75.II.G.2.

[36] "Different development models or styles", *op. cit.*, pages 45 and 46.

TABLE 12

Latin America: projection of productivity sectors to the year 2000, on the basis of a trend towards greater homogeneity in the economy

	Percentage structure				Product per employed person (1960 dollars)		Annual average growth rates (1970-2000)		
	Employment		Product						
	1970	2000	1970	2000	1970	2000	Employment	Product	Product worker
Hypothesis A									
Primitive sector	35	–	4.7	–	210	–	–	–	–
Intermediate sector	50	30	38.1	24.3	1 200	4 400	1.0	5.4	4.4
Modern sector	15	70	57.2	75.7	6 000	6 000	8.0	8.0	0.0
Whole economy	100	100	100.0	100.0	1 500	5 500	2.6	7.0	4.4
Hypothesis B									
Primitive sector	35	9	4.7	1.5	210	900	-2.0	3.0	5.0
Intermediate sector	50	37	38.1	24.4	1 200	3 900	1.5	5.5	4.0
Modern sector	15	54	57.2	74.1	6 000	7 700	7.0	8.0	1.0
Whole economy	100	100	100.0	100.0	1 500	5 500	2.6	7.0	4.4

N.B: In hypothesis A the primitive sector is absorbed by the modern sector, whose labour force increase by 8% annually while its product per person employed remains unchanged.

as a whole increases, as we have seen, at the very high rate of 4.4 per cent. Moreover, as far as the modern stratum is concerned, the fact that its *average* productivity would be maintained does not exclude the possibility that within this unchanging global level there could be branches or enterprises which would increase their efficiency at much more rapid rates: even at rates more rapid than that of the growth of the overall economy.

The second hypothesis postulates more moderate changes. It assumes that in the year 2000 the subsistence stratum will still contain almost 5 per cent of the active population, but thanks to the decrease in its size, its per capita product will have increased from some 200 to some 900 dollars per year. The intermediate stratum, for its part, would have a greater role to play in absorbing some of those displaced from the subsistence economy. Thus, as is evident, the modern stratum would become more important as a source of employment and would also have a greater possibility of increasing both its average productivity (1 per cent per year) and that of top priority branches or enterprises.

These exercises, it must be stressed, are neither prophecies nor programmes. Between them and the concrete reality of the near and more distant future stand the actions of society (on both the domestic and external levels) and, from a more specific point of view, the economic and social policies followed. In other words, they are and will be only as valid as the assumptions on which they are based, which are by definition changeable.

VII
Some vital questions

In any event –going back to the initial theme– this discussion leads us inevitably to the essential question of the possibility of introducing the changes which are considered to be desirable, necessary and historically viable in the light of material circumstances and within a given period of time. Put in other words, closer to those used in the discussions we all know so well: Is it a question of changing the *style* of development or must the *system* also be changed.[37]

It is clear that we cannot provide an answer to the question. Further, we do not believe that there can be any answer which is valid for all times and places and which does not specify the concrete terms in which it holds good. From this point of view it seems obvious that, while certain changes in a prevailing style may imply or require radical changes in institutional and political parameters –i.e., in the system– there are others which fit within an existing framework, although they will always call for some review and adjustment of it. The historical experience to which we referred in the first section provides many different examples of this.

Furthermore, the same experience also shows us that replacing one system by another does not mean the disappearance of all the problems of the former style, although it can indeed bring new ones with it, to the distress of "utopian ideology". But this alone does not disprove the need for or advisability of such a change.

From a more specific point of view, and thinking of Latin America and its problems, I would make so bold as to argue, for example, that there are a number of countries which could eliminate or substantially mitigate abject poverty within a reasonable period of time, without a total transformation of the existing system being necessary, although it would of course have to undergo marked changes in its structure and operation.

The situation of other countries is different, but even in respect of these it should be borne in mind that in quite a few cases the problem is not just that of changing the system but also of dealing with aspects of major importance or complexity regarding such matters as resource endowment, economic size, native cultures which are difficult to "modernize" or activate in the context of traditional structures, etc.

In the final analysis, only by trial and error will it be possible to find the answers to each situation and to each desired change in the existing style.

[37] For a different approach, but one which is still relevant to these problems, see the author's study *Inflación: raíces estructurales*, and particularly the article "Heterogeneidad estructural y modelos de desarrollo reciente de la América Latina" (pp. 104 and following), Fondo de Cultura Económica, Mexico City, 1973. See also the study by A. Pinto and A. Di Filippo, "Nota sobre la estrategia de la distribución y la redistribución del ingreso en América Latina", in *Distribución del ingreso* by Alejandro Foxley (compiler), Fondo de Cultura Económica, Mexico City, first edition, 1974.

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and poverty through crisis and adjustment

Oscar Altimir

This article analyses the costs in terms of income distribution of the crisis and adjustments of the 1980s, as well as the effects of the subsequent recovery and resumption of sustained growth patterns. This analysis is based on comparable pairs of estimates of income distribution and poverty prepared by ECLAC for the ten largest and predominantly urban countries of the region. The method of analysis consists, on the one hand, of comparing the changes in distribution and in the macroeconomic and labour market variables during similar macroeconomic phases in the course of the adjustment process in different countries and, on the other hand, of comparing the income distribution situations in each country before and after the adjustment. It is concluded that although economic recovery and the reduction of inflation are relieving poverty situations, medium-term growth without an improvement in income distribution will cause the process of reducing poverty to be excessively prolonged, and there are grounds for believing that the new form of operation and the new rules followed by public policy in these economies may involve still greater inequalities as regards income distribution.

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Editor of the CEPAL *Review*

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I
Introduction

Most Latin American countries are painfully recovering from the protracted crisis they suffered during the 1980s and from the traumatic adjustments they had to undergo in order to extricate themselves from it and to lay the bases for a new phase of sustained growth.

The net transfer of resources to the region, which before the crisis represented more than 2% of its GDP, suddenly became negative. Between 1982 and 1989, the Latin American countries' net export of capital was equivalent to almost 4% of their aggregate GDP. The turnaround in the net transfer of resources was thus tantamount to a permanent pressure of 6% on domestic resources during this period.

After the external adjustment and recession that brought the regional per capita product down by 10% between 1980 and 1983, most Latin American economies wavered between recession and inflation, muddling through the debt tangle and its domestic sequels for most of the decade. At its close, per capita product was still at the 1983 level and real national per capita income was 15% lower than in 1980. In 1991-1993, however, growth has been steadier, there have been signs of a reanimation of private investment along with the return of significant capital flows, the trend towards price stabilization has become generalized, and most of the huge fiscal adjustments of the previous years have held fast.

Although in some cases stabilization processes still display some fragility, most Latin American economies are now working on new foundations. These are characterized by a firmer orientation towards exports (whose volume has, in many cases, at least doubled during the past decade), trade liberalization, fiscal austerity, more prudent management of monetary policy, and greater reluctance to resort to State regulation of economic activity.

For the poor and lower-middle income groups, the severe economic crisis of the 1980s involved damaging declines both in real income and in access to and quality of social services.

Almost all countries experienced acute redistributions of income among households during the crisis decade, in most cases with regressive net outcomes at the end of the decade. At the same time, regressive changes in relative incomes and the fall of real per capita income during the first half of the decade, when most economies suffered recessionary adjustments, or had only just begun to recover, led to significant increases in absolute poverty, which only in a few cases were partially reversed with the stabilization and growth processes of more recent years.

Economic recovery and the abatement of inflation are bringing relief on the poverty front, but there are increasing grounds for suspecting that the new modality under which the economies are functioning and the new rules of public policy involve greater income inequalities and more precarious employment situations than in the past, in a certainly tighter fiscal environment.

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II
The approach adopted

1. The date base on income distribution and poverty

Income distribution statistics in Latin America are of varied reliability and are not directly comparable with each other.[1] Among the many factors distorting their comparability, underestimation of income affects differently both income levels and their concentration. In order to somehow sidestep this obstacle, the analysis of changes in the relative distribution of income is based on pairs of available estimates (see table 1), selected for being similar –and, therefore, apparently comparable– with regard to the concept of income, the technique for

TABLE 1

Latin America (10 countries): Changes in income distribution in selected period

Country	Period	Source	Coverage[a]	Income concept[b]	Changes in concentration (%)		Changes in shares of income groups (% of total income)		
					Gini coefficient	Ratio of top 10% to lowest 40%	Lowest 40%	Middle 50%	Top 10%
Argentina	1970-1974	Altimir (1986)	MA	HI	4	9	-0.7	-0.7	1.4
	1974-1980	Altimir (1986)	MA	HPCI	10	28	-2.1	-1.2	3.3
	1980-1986	ECLAC (1991b)	MA	HPCI	11	27	-1.5	-3.2	4.7
	1980-1989	Psacharopoulos *et al* (1992)	MA	HPCI	17	47	-2.9	-3.0	5.9
	1985-1990	Beccaria (1991)	MA	HPCI	…	33[c]	-1.4d	-3.4[e]	4.8
Brazil	1979-1987	ECLAC (1991b)	MA	HPCI	4	32	-2.3	-1.3	3.6
			RU	HPCI	7	9	2.7	-5.5	2.8
	1979-1989	Psacharopoulos *et al* (1992)	N	HPCI	7	28	-1.3	-2.4	3.7
	1987-1989	Hoffman (1992)	U	IR	8	31[f]	-2.1[g]	-2.8[h]	4.9
	1987-1990	Hoffman (1992)	U	IR	2	9	-1.0	-	1.0
	1987-1990	ECLAC (1991b;1993)	MA	HPCI	-6	-18	0.4	6.3	-6.7
			RU	HPCI	1	53	-5.1	5.2	-0.1
Colombia	1978-1988	Londoño (1990)	N	IR	-1	-3	-0.2	0.3	-0.5
	1980-1986	ECLAC (1991b)	MA	HPCI	-3	-12	0.2	0.8	-1.0
			RU	HPCI	-5	…	0.4	3.0	-3.4
	1980-1989	Psacharopoulos *et al* (1992)	U	HPCI	-9	-27	1.9	3.2	-5.1
	1986-1990	ECLAC (1991b;1993)	MA	HPCI	-2	-1	-0.4	2.7	-2.3
			RU	HPCI	-9	-2	1.9	1.4	-3.3
Costa Rica	1981-1988	ECLAC (1991b)	MA	HPCI	7	22	-1.5	-1.6	3.1
			RU	HPCI	14	3	-1.9	-3.2	5.1
	1981-1989	Psacharopoulos *et al* (1992)	N	HPCI	-3	-10	1.4	-1.9	0.5
	1988-1990	ECLAC (1991b;1993)	MA	HPCI	-6	-13	1.1	1.1	-2.2
			RU	HPCI	-6	-15	0.4	3.0	-3.4

(continued)

[1] See Altimir (1987) for a review and discussion of the reliability of income measurements from different types of surveys in Latin America and their comparability problems.

TABLE 1 *(concluded)*

Country	Period	Source	Coverage[a]	Income concept[b]	Changes in concentration (%)		Changes in shares of income groups (% of total income)		
					Gini coefficient	Ratio of top 10% to lowest 40%	Lowest 40%	Middle 50%	Top 10%
Chile	1968-1974	Heskia (1980)	MA	HI	-10	-23	2.0	1.8	-3.8
	1974-1980	Heskia (1980), Riveros (1985)	MA	HI	21	60	-2.8	-6.2[h]	9.0[i]
	1981-1983	Riveros (1985)	MA	HI	2	14	-1.1	-0.5[h]	1.6[i]
	1968-1983	ECLAC (1979), Rodríguez (1985)	N	HI	23	38	-1.6	-6.2	7.8
	1969-1978	Ffrench-Davis, Raczynski (1987)	MA	GH	…	54[j]	-4.9	-1.6[h]	6.5[i]
	1978-1988	Ffrench-Davis, Raczynski (1987)	MA	GH	…	23[j]	-1.9	-1.7[h]	3.6[i]
	1987-1990	ECLAC (1991b; 1991c)	U	HPCI	-2	-3	0.4	-0.4	…
Mexico	1977-1984	ECLAC (1988), Lustig (1992)	N	HI	-9	-41	2.8	0.7	-3.5
	1984-1989	Lustig (1992)	N	HI	…	28	-1.4	-3.7	5.1
Panama	1979-1989	Psacharopoulos *et al* (1992)	N	HPCI	16	66	-3.5	-2.8	6.3
Peru	1985-1986-1990	Psacharopoulos *et al* (1992)	MA	HPCI	2	5	-0.7	0.5	0.2
Uruguay	1973-1979	Melgar(1981),	MA	PHI	32	100	-4.7	-8.3	13.0
	1979-1981	Melgar (1981), Melgar-Villalobos (1987)	MA	PHI	-2	-4	-1.2	6.3	-5.1
	1981-1986	ECLAC (1991a; 1991b)	MA	HPCI	7	20	-1.2	-2.4	3.6
	1986-1989	ECLAC (1991a; 1991b)	MA	HPCI	-9	-19	1.4	3.1	-4.5
			RU	HPCI	-7	-12	1.5	0.1	-1.6
	1981-1989	Psacharopoulos *et al* (1992)	U	HPCI	-3	-7	0.8	-0.2	-0.6
Venezuela	1981-1986	ECLAC (1991b)	MA	HPCI	8	19	-2.5	-1.7	4.2
			RU	HPCI	18	46	-2.6	-3.1	5.7
	1981-1989	Psacharopoulos *et al* (1992)	N	HPCI	3	8	-0.4	-1.3	1.7
	1986-1990	ECLAC (1991b; 1993)	MA	HPCI	-4	-7	0.8	-0.4	-0.4
			RU	HPCI	…	3	…	-0.6	0.6
	1987-1989	Márquez-Mukherjee (1991)	N	HPCI	6	11	-0.2	-3.5	3.7
	1989-1990	Márquez-Mukherjee (1991)	N	HPCI	-4	-14	0.9	1.8	-2.7

[a] MA: metropolitan area; RU: remaining urban areas; U: urban areas; N: nationwide.
[b] HI: household income; PHI: primary household income; HPCI: household per capita income; HE: household expenditure; IR: income of recipient.
[c] Ratio of top 10% to lowest 30%.
[d] Corresponds to lowest 30%.
[e] Corresponds to middle 60%.
[f] Ratio of top 10% to lowest 50%.
[g] Corresponds to lowest 50%.
[h] Corresponds to middle 40%.
[i] Corresponds to top 20%.
[j] Ratio of top 20% to lowest 40%.

TABLE 2

Latin America:[a] Estimates of poverty and indigence in 1980, 1986 and 1990

Area	Poberty[b]						Indigence[c]					
	1980		1986		1990		1980		1986		1990	
	Millions	%	Millions	%	Millions	%	Millions	%	Millions	%	Millions	%
	Households											
Nationwide	24.2	35	32.1	37	37.0	39	10.4	15	14.6	17	16.9	18
Urban	11.8	25	18.7	30	22.7	34	4.1	9	7.0	11	8.7	13
Rural	12.4	54	13.4	53	14.3	53	6.3	28	7.6	30	8.2	30
	Persons											
Nationwide	135.9	41	170.2	43	195.9	46	62.4	19	81.4	21	93.5	22
Urban	62.9	30	94.4	36	115.5	39	22.5	11	35.8	14	44.9	15
Rural	73.0	60	75.8	60	80.4	61	39.9	33	45.6	36	48.6	37

Source: 1980 and 1986: ECLAC, 1991 to 1990: ECLAC, 1992a.

[a] 19 countries. Based on data for: Argentina, Brazil, Colombia, Costa Rica, Guatemala, Mexico, Panama, Peru, Uruguay and Venezuela, for 1980 and 1986, and also for Chile, Honduras and Paraguay for 1990.
[b] Corresponds to household per capita income below poverty lines equivalent to twice the country-specific minimum food budgets, which range from 22 to 34 dollars of 1988 per person per month, for urban areas.
[c] Corresponds to household per capita income below the value of the country-specific minimum food budgets used to draw the poverty lines.

measuring income and the geographical coverage of the surveys used to collect the data, as well as the units and criteria used by the respective authors in processing or adjusting the survey data.[2] However, in many cases proven or assumed differences in any of these aspects invalidate the possibility of going beyond these pair-wise comparisons and simply pooling estimates.

The poverty estimates for the 1980s (table 2) are those produced by ECLAC (1991a and 1992a). They are the result of cutting estimated distributions of households by per capita income, previously adjusted for income underestimation,[3] by means of country-specific poverty lines representing minimum normative budgets of private consumption based on minimum food budgets that adequately cover nutritional requirements.[4] The poverty lines used for different years of the 1980s were held constant in real terms: a criterion that is acceptable for a period of recession and recovery.[5]

The present paper uses only headcount ratios as the poverty measure, which are available for several years of the past decade, for each country considered.[6] These are given in table 3, which also includes the incidence of extreme poverty or destitution, defined as the proportion of households with a per capita income less than the value of the minimum food budget.

[2] For a detailed compilation of the income distribution statistics available for each country and the selection of comparable pairs, sea Altimir (1992). In particular, the manner of selection based on the similarity of data and their treatment makes it possible to compare Gini coefficients –and calculate their variations, as is done in table 1– which have been computed on the basis of similarly grouped data.

[3] For the method of adjustment applied, see Altimir (1987), and for the details of the adjustments see ECLAC (199la).

[4] See ECLAC (1991a) for details on these country-specific minimum food budgets and how they were set. Minimum food baskets were drawn on the basis of the composition of food consumption of those strata of households that in each country attained with some latitude the minimum nutritional requirements, although such reference baskets were adjusted to those minima as well as to mean national availability of each foodstuff and were freed of high-price-per-calorie or nutritionally superfluous items. Therefore, the criterion to establish the minimum food baskets was one based on habits, taking into account availability and cost, rather than one of minimum-cost, taking into account availability and habits, as used in Altimir (1979) in order to obtain estimates for the 1970s.

[5] For a discussion of the case for shifting poverty lines during periods of economic growth, see Altimir (1991).

[6] ECLAC (1991a) also includes estimates of the poverty gaps, but only for 1986.

TABLE 3

Latin America (10 countries): Incidence of poverty and indigence in the 1980s
(Percentage of households)

	Poverty			Indigence		
	Urban areas	Rural areas	National level	Urban areas	Rural areas	National level
Argentina						
1980	7	16[a]	9	2	4[a]	2
1986	12	17[a]	13	3	6[a]	4
1990	19[b]					
1991	15[b]					
Brasil						
1979	30	62	39	10	35	17
1987	34	60	40	13	34	18
1990	39	56	43	17	31	20
Colombia						
1980	36	45[a]	39	13	22[a]	16
1986	36	42	38	15	22	17
1990	35	12				
Costa Rica						
1981	16	28	22	5	8	6
1988	21	28	25	6	10	10
1990	22	25	24	7	12	10
Chile						
1980	32[c]	41[c]	33[c]			
1987	37	45	38	13	16	14
1990	34	36	35	11	15	12
Mexico						
1977	32	10				
1984	23	43	30	6	19	10
Panama						
1979	31	45	36	14	27	19
1986	30	43	34	13	22	16
1989	34	48	38	15	25	18
Peru						
1979	35	65[a]	46	10	38[a]	21
1985/86	45	64	52	16	39	25
Uruguay						
1981	9	21[a]	11	2	7[a]	3
1986	14	23[a]	15	3	8[a]	3
1989	10	23[a]	15	2	8[a]	3
Venezuela						
1981	18	35	22	5	15	7
1986	25	34	27	8	14	9
1990	33	38	34	11	17	12

Source: ECLAC (1991a; 1991b; 1992a).

[a] These estimates should be considered “educated guesses” based on relevant but indirect information.
[b] Author’s estimate, based on Beccaria and Minujin (1991).
[c] Author’s estimate, based on Pollack and Uthoff (1987). See Altimir (1991).

These estimates actually build up national measures of poverty from urban and rural estimates. However, it should be borne in mind that headcount estimates for rural areas are of considerably shakier quality than those for urban areas. On the one hand, the norms used to draw rural poverty lines have an unavoidable urban bias, in spite of taking into account urban-rural differences in prices and consumption. On the other hand, available measurements of rural incomes and of their distribution are usually even less accurate than those of urban incomes from the same survey. Finally, some of the rural estimates are no more than educated guesses based on relevant but indirect data (Altimir, 1991).

The set of countries considered in this paper includes the major Latin American nations as well as some others for which comparable inequality and poverty measurements are also available both at the beginning of the decade and at some later point in time. It excludes predominantly rural countries, such as Guatemala and Honduras, for which poverty estimates were also produced by ECLAC, because the method of analysis used here and the variables on which it rests capture mainly urban phenomena. The mere dimensions of rural poverty according to those estimates (affecting four-fifths of the rural population and representing at least three-quarters of all the poor) both underline the irrelevance of an urban-centered analysis and suggest that poverty measurement and analysis in such cases should be based on surveys, poverty yardsticks and explanatory variables more closely applicable to rural conditions.

In this data base, income generally measures household disposable cash income,[7] including both primary income (wages and salaries and entrepreneurial income) and other monetary income (pensions, transfers, rentals, interest, etc.) after direct tax payments. It therefore excludes imputed income from public goods and services provided free of charge or heavily subsidized and, hence, the redistributive effects of such public expenditure. These income measurements do not capture the incidence of indirect taxes on real income, either.

[7] Income in kind and imputed income, such as receipts from family subsistence activities or rent of owner-occupied dwellings, is either explicitly excluded or so poorly measured as to be considered excluded in most of the surveys in the data base, which are labour or income surveys. Only a minority of them are income and expenditure surveys, which may somehow measure such items (sea Altimir, 1987).

2. The method of analysis

The above caveats should warn us not to confuse the map with the actual territory. Although our ultimate concern is with changes in social stratification and with disentangling those changes that are permanently reshaping Latin American societies from those related to peoples' transitory accommodation to hard times, we are able here to focus only on aggregate changes in the relative distribution of welfare and the incidence of poverty, leaving out changes in the composition of households and in their economic strategies, including their ways of participating in the labour market.

Moreover, the analysis is limited to changes in the distribution of private income, and it excludes the distribution of social incomes (that is to say, those accruing to households in the form of public goods or subsidies), focusing instead on the distributive results of peoples' participation in the productive process and of their institutionalized entitlements. This focus leaves in the shadows the immediate redistributive consequences of social policies implemented through public expenditure (though not the results of entitlements to social security payments) but captures both the short-term effects of economic policy on the distribution of income and the more mediate and eventual influences of public policy on the structure of income, mingled though they may be with structural changes quite beyond the influence of policy.

With these limitations, I have tried to assess the *distributive costs* of the crisis and adjustments, which are more than the "social costs" sometimes measured as losses in aggregate welfare, but are far less than the total social costs, if we recognize that the social structure is more than just the distribution of welfare and that living conditions are not only determined by income.

Evaluating the specific nature of the costs is another matter. The distributive changes recorded by available income distribution measurements incorporate the effects of adjustment, institutional changes involving policy reform and underlying restructuring processes, as well as those of failed adjustment and the acceleration of inflation. However, since the crisis of the 1980s is the counterpart of an epoch-making transformation of Latin American development, the measured distributive losses are attributed to the changes –including the periods of instability and inflation, failed policies or policies involving overadjustment– that have marked such processes in some countries.

The focus is not on the interaction of macroeconomic variables (which has been analyzed elsewhere),[8] but on the relationships between changes in income distribution and poverty and the processes of adjustment, policy reform and structural mutation underlying the changes in those macroeconomic variables.

However, neither the depth nor the characteristics of the restructuring of production are adequately revealed by changes in the set of macroeconomic variables used, and their permanent distributive consequences can only hinted at by considering distributive situations after stabilization and adjustment.

On the other hand, the association of distributive changes with policy reforms poses methodological and time-related problems. Economic policy reforms generally oriented towards facilitating or promoting sustainable growth on the basis of freer trade and private investment may have a share in the short-term effects on income distribution caused by the package of stabilization and adjustment policies through which they have been implemented. Moreover, some of these effects may have been imposed by the political economy of reforms designed to cause such desired advances to take root. In the longer term, reforms may have negative distributive effects if a trade-off between growth and more equitable income distribution is observed or is to be expected on the basis of the pattern of growth promoted by the particular reforms undertaken. Whether economic restructuring promoted by these policy reforms and by the new structural circumstances involves more unequal distribution of income is a matter whose full empirical verification can only take place after the long-term deployment of their effects. For the moment, we can only consider what appear to be the "normal" or more or less "stable" distributive structures once each economy regains a sustained growth path.

Even though the distributive costs of external adjustment, stabilization, fiscal adjustment and economic restructuring are intertwined, the characteristics and sequencing of policy packages certainly make a difference in terms of the magnitude and duration of distributive losses (see for example García, 1991). However, the income distribution and poverty estimates in our data base are too scanty to give more than very broad hints in this regard.

Moreover, in many instances the periods of analysis imposed by the availability of data include adjustment or stabilization policies, followed by their failure and the acceleration of inflation, thus encompassing the distributive costs of both kinds of processes.

The basic assessment criteria I have used in this study are, on the one hand, to compare distributive changes and changes in macroeconomic and labour market variables during similar macroeconomic phases in the course of the adjustment process in different countries and, on the other hand, to compare the distributive situations before and after adjustment in each country.

Consequently, the analysis is carried out for different phases of the macroeconomic evolution of each economy during the 1980s, the underlying hypothesis being that different relationships between distributive changes and macroeconomic changes may prevail during instability, recession, recovery and growth close to the production frontier. In view of the scarcity of distributional measurements for each country and the lack of uniformity as to their correspondence with similar macroeconomic phases, this inhibits us from attempting a formal econometric exercise.

In the selection of macroeconomic variables, both their availability and their analytical relevance were taken into account. The implicit conceptual model links changes in inequality with variations in: real national per capita income,[9] the real exchange rate as a proxy for relative prices, public consumption expenditure at constant prices[10] as a proxy for government employment and real wages, inflation, real urban wages and urban labour underutilization (i.e.: urban unemployment and informal employment). Changes in urban poverty are, in turn, related to variations in real per capita income, inequality and

[8] See, for example, Bianchi, Devlin and Ramos (1985; 1987) and ECLAC (1986).

[9] That is to say, the per capita product after net factor payments and the effect of terms of trade variations; therefore, this variable incorporates the direct (i.e.: accounting) effect of external shocks represented by changes in the terms of trade and in accrued interest on the foreign debt.

[10] That is to say, public consumption expenditure at current prices deflated by the GDP deflator. This is different from public consumption expenditure in real terms as estimated in the national accounts, which in Latin American practice reflects, at best, government employment.

the real minimum wage. Changes in rural poverty, on the other hand, are linked to changes in real per capita income, agricultural product and the real exchange rate.

There are a number of measurement limitations that hinder a rigorous association between observed changes in income distribution and poverty and observed changes in macroeconomic variables. Foremost among them is the fact that observed income distributions from household surveys of the type generally used for these estimates (i.e., those including questions on labour) measure incomes in a specific month of the year, whereas measures for most of the relevant macroeconomic variables are made available on a yearly basis, with quarterly data being much more difficult to obtain. Moreover, the years for which income distribution or poverty measurements are readily available do not always correspond to relevant phases of the conjunctural movements of the economy (which in many cases have been numerous and often of different direction) or to periods when a specific policy package was in force.

The analysis of associations between distributive changes and macro variables focuses on the distribution of income and poverty in urban areas, with only a summary analysis of changes in rural poverty. There are various reasons for disaggregating the analysis. Firstly, as noted above, income distribution and poverty measurements at the national level incorporate or mix urban and rural measurements of very different degrees of reliability or accuracy, making the "constant bias over time" assumption less tenable. Also, however, most macro variables available have a different relationship with either urban or rural incomes (e.g.: the exchange rate) or a tenuous or remote relationship with rural incomes (e.g.: unemployment or informal employment), or almost no bearing at all on them in the short run (e.g.: urban wages); hence, analysis based on aggregate income distribution or poverty at the national level blurs their differential explanatory value.

Furthermore, for some countries or periods only measurements for urban areas are available. To be sure, this is a hindrance for distributional analysis. However, it is a less serious problem than in other developing regions, since in most of the Latin American countries considered more than 60% of the population is urban (more than 80% in the Southern Cone countries and Venezuela) and less than half the poor are rural (20% or less in the Southern Cone and Venezuela).

Finally, the distributive changes of the 1980s are also assessed in the context of the previous trends of the 1970s (i.e., before the crisis), when different growth processes were in place and –in some countries– policy reforms were undertaken.

III
The record of the 1970s

1. Inequality

Analysis of changes in income distribution and growth in the main countries of the region during the 1970s (Altimir, 1992) suggests, as summarized in table 4, that:

i) Even if they had very different degrees of income concentration at the beginning of the decade, countries which experienced disrupted growth, such as Argentina, Chile or Peru, suffered significant increases in inequality;

ii) In countries (such as Costa Rica or Uruguay) which had moderate average per capita growth rates (between 2% and 3%) over the decade and in which income concentration, at its beginning, was at an intermediate level, there was a deterioration in the distribution situation;

iii) Three countries (Colombia, Mexico and Venezuela) which had solid average sustained per capita growth rates (over 3% per year), significantly reduced their previously high (Gini coefficients over 0.5) income concentration;

iv) In contrast, the high and sustained per capita growth rate (close to 6% per year) of Brazil during the 1970s was not accompanied by a reduction in the very high income concentration (Gini coefficient of around 0.6) established during the previous decade.

TABLE 4

Latin America (10 countries): Growth rates and changes in income distribution and incidence of poverty in the 1970s

Countries	Changes in income concentration[a]	Changes in incidence of poverty		
		Nationwide	Urban	Rural
Slow growth (<1%)				
Argentina	I	M	I	D
Chile	I	I	I	I
Peru	I	D	I	D
Moderate growth (2-3%)				
Costa Rica	I	D	M	D
Panama	...	M	I	D
Uruguay	I		I	
Rapid growth (>3%)				
Brazil	M	D	M	D
Colombia	D	D	D	D
Mexico	D	D	D	D
Venezuela	D	D	D	D

Source: Altimir (1992).

[a] I: Increased; M: Maintained similar level; D: Decreased.

2. Poverty

Changes in the incidence of absolute poverty depend on growth of average real income, changes in the distribution of income, and also the stance regarding the change in poverty norms over time.[11] Using comparable estimates of the incidence of poverty for 1970 and around 1980, with poverty lines both constant and shifting oven time (Altimir, 1992), the following highlights emerge for the sample of countries (see table 4):

i) Argentina, Chile and Peru, a group of countries with increasing inequality and low and unstable growth during the decade –as a consequence of economic shocks and institutional disruptions– registered either discouraging or downright dismal results on the poverty front. In Argentina the incidence of poverty at the national level may have increased only slightly and in Peru it may even have decreased, if the respective "educated guesses" about the decrease in rural poverty are accepted, but in both countries urban poverty tended to increase. In Chile, there was a virtual explosion of poverty in both urban and rural areas.

ii) In the two countries which experienced moderate growth and increasing inequality (Costa Rica and Uruguay), urban poverty either remained unchanged or increased, with rural poverty deceasing or remaining about constant, respectively.

iii) Those countries which attained high rates of per capita growth and decreasing inequality (Colombia, Mexico and Venezuela) showed significant reductions of absolute poverty, both in urban and rural areas.[12]

iv) Brazil's intense growth resulted in the reduction of poverty, even in spite of the lack of improvement of the relative income distribution; however, if some shifting of the poverty line is accepted, to allow for the possible effects of such a growth process on the prevailing style of

[11] Contrary to the widespread fashion of using poverty lines constant over time in real terms, there is a strong argument for shifting even *absolute* poverty lines over time, in a context of growth and societal progress (sea Altimir, 1991).

[12] Even if the poverty lines were shifted because of high growth, poverty would still have gone down, although to a lesser degree.

living, the incidence of poverty in urban areas would have remained more or less constant.

v) The incidence of poverty in rural areas showed a downward trend during the 1970s in almost all of the countries considered, irrespective of the rate or stability of their growth, with the marked exception of Chile.

vi) Rural-urban migrations, which were particularly intense in the 1970s, may have been more important than the improvement of economic conditions in rural areas in explaining the absolute reduction in the number of rural poor in Argentina, Brazil and Venezuela. In contrast, the latter factor has been more important than migrations in reducing absolute rural poverty in Colombia, Mexico and Panama and in bringing down the incidence of rural poverty in Costa Rica and Peru. In Chile, rural-urban migrations merely cushioned the general rise in the incidence of poverty.

IV

The 1980s: a review of ten countries

Income concentration and poverty increased in the urban areas of almost all Latin American countries during the 1980s, as is evident from tables 1 and 3. Colombia is the only clear exception, while Mexico and Costa Rica appear to have cushioned to some extent the distributive deterioration caused by the adjustments of the decade, and Panama only suffered when it was affected by political and international conflicts. Brazil, which already had a high degree of inequality, also suffered relatively less additional deterioration. Chile, Argentina and Uruguay experienced severe distributive losses during different phases of their reform and adjustment processes of the last two decades, and their record of the 1980s has to be considered in this context. Peru and Venezuela also suffered heavy distributive losses, from different combinations of shocks and policy failures. The changes in income concentration[13] and urban poverty in each country and period are compared with the changes in relevant macroeconomic and labour market variables summarized in table 5.

The exceptional case is *Colombia*, where all available data show an improvement of income distribution during the decade: between 1978 and 1988 there was a relatively slight reduction of income concentration among wage-earners (Londoño, 1990), while between 1980 and 1986 there was a significant decrease in the share of the upper decile of households, mainly in favour of the middle strata; moreover, up to 1990 that improvement deepened, favouring also the lower four deciles of households. However, the incidence of urban poverty in 1990 was roughly similar (around 35%) to the 1980 and 1986 marks.

These results are roughly consistent with the initial conditions before the crisis, the macroeconomic trends of the period and the traditionally prudent style of Colombian economic policy. When the systemic financial crisis of the 1980s broke, Colombia was not heavily indebted; adjustment did not take place until 1984-1985, and even then the policy followed was a gradual one, deliberately aimed at minimizing wage and employment losses. In fact, during the rest of the decade economic policy included job creation and sustaining wages among its objectives (García, 1991).

In 1986, when the country's comparatively mild external adjustment had just been completed, real per capita income was already 5% higher than in 1980 and real wages were 12% higher. However, urban unemployment was 4 points (i.e.: almost a half) higher than in 1980 and 2% more of the

[13] Even reliable income distribution measurements are not able to capture income received by the country's residents from assets held abroad. Capital flight during the initial years of the crisis has been substantial, particularly in Argentina, Mexico and Venezuela (see Cumby and Levich, 1987). With the yields current at the time, property income on assets accumulated abroad by the private sector of those countries may have represented around 3% of household disposable income in Argentina and Mexico and as much as 5% in Venezuela. These proportions have most likely increased the share of the upper decile or quintile in total household income, adding to the changes recorded in table 1 for the first half of the decade. Similarly, the later fall in international interest rates and related yields should have been reflected in an inverse change (of about half the size of the previous one) in the "total" (i.e.: from domestic and foreign sources) share of the upper-income groups.

TABLE 5

Latin America (9 countries): Changes in macroeconomic and labour variables and in income distribution in different phases of the 1980s

Countries	Periods	Macroeconomic variables[a]			Labour market[b]						Changes in income distribution[c]	
		RNIpc	REER	INF[d]	MW	RMW	UNAL	NALI	UU	GEpc	Concentration (Gini coefficient)	Urban poverty
I. Periods of recessionary adjustment to external shocks												
Argentina	1980-1983	-23	77	I	-1	37	10	1	81	-19	I?	I+?
Brazil	1979-1983	-13	26	I	-18	-5	20	24	8	-7	M	I
Colombia	1980-1983	-5	-12	D	8	7	12	9	21	7	D	M?
Costa Rica	1980-1983	-26	40	I/D	-18	-1	12	12	42	-30	I?	I+
Chile	1981-1983	-22	34	I	-11	-19	32	5	111	-8	I	I
Mexico	1981-1984[e]	-12	40	I	-30	-32	12	7	36	-14	I?	I?
Peru	1982-1984	-12	14	I	-25	-20	32	31	35	-22	…	I+
Uruguay	1981-1986	-19	55	I	-13	-14	...	...	60	-14	I	I+
Venezuela	1981-1986	-30	51	…	-19	6	24	6	78	-21	I	I+
II. Periods of recovery after external adjustment												
Argentina	1983-1986	…	…	D	8	7	10	8	19	24	I	I?
Brazil	1983-1987	19	13	D/I	37	-23	-11	-1	-45	42	I	D
Colombia	1983-1986	10	67	I	4	6	4	-2	18	-3	D	M
Costa Rica	1983-1988	8	15	I	8	16	-4	8	-25	11	I?	D?
Chile	1983-1987	12	72	…	-3	-27	-25	-16	-37	-23	I	…
Panama	1982-1986	10	…		16	13			26	-3	…	M?
Peru	1984-1987	16	…	D/I	40	-3	-15	-7	-46	28	…	D?
Uruguay	1986-1989	13	12	M/I	6	-12	…	…	-20	-20	D	D
Venezuela	1986-1989	-6	52	I	-38	-15	-5	4	-20	-20	I	I
III. Periods of recession due to domestic imbalances												
Argentina	1986-1989	-13	34	I/H	-19	-62	14	8	36	...	I	I+
Brazil	1987-1989	-1	-31	I	-11	-1	-6	-6	-11	17	I	I
México	1984-1987	-8	44	I	-16	-17	21	36	-32	-20	I?	…
Panama	1986-1989	-22	…		-1	-1	…	…	61	-22	I?	I
Peru	1987-1990	-30	-49	I/H	-69	-64	…	…	73	-58	I?	I
IV. Periods of disinflation and recovery												
Argentina	1990-1991	5	-24	D	-7	39	…	...	-13	…	…	D
Mexico	1987-1989	2	-11	D	-2	-16	9	14	-7	-10	I?	…
V. Periods of growth after recovery												
Colombia	1986-1990	4	31	I	-5	-5	-13	-7	-25	20	D	D
Costa Rica	1988-1990	…	-4	D/I	2	5	-4	1	-14	20	D	I
Chile	1987-1990	18	5	I	11	27	-15	1	-45	-3	D	D
Venezuela	1989-1990	10	4	D	1	-5	2	…	8	-9	D	…

Source: Changes in macroeconomic and labour variables: ECLAC and PREALC. Distributive changes: tables 1 and 3.

[a] RNIpc: real national per capita income; REER: real effective exchange rate; INF: inflation.

[b] RW: real urban or industrial wages; RMW: real minimum wage; NALU: non-agricultural labour force underutilization (per active person), equal to NALI+UU; NALI: Non-agricultural labour force in informal activities (PREALC definition); UU: urban unemployment rate; GEpc: real per capita government consumption expenditure.

[c] I: increased; I+: greatly increased; D: decreased; M: maintained; "?" indicates most likely presumption for the phase (see text) in the context of changes observed in table 1 and 3 for a longer period.

[d] I: increased; D: decreased; M: inflation rate was maintained; H: entered into hyperinflation.

[e] This period includes a transient recovery.

urban labour force (i.e., 27% of it) was employed in informal activities. The 1986/1990 period has been one of growth with stability, of sorts, for the Colombian economy, though the macroeconomic situation deteriorated somewhat in 1990. Real per capita income expanded more than 4% over the period, with exports, public consumption expenditure and private consumption leading the expansion. Unemployment correspondingly decreased (by more than 3 points) as did the importance of informal employment, while real wages increased slightly up to 1989 and decreased significantly only in 1990.

In *Mexico*, available measurements show a significant decrease in inequality, accompanied by a reduction of poverty at the national level, between 1977 and 1984, and a subsequent deterioration between 1984 and 1989: a period during which the government's policy stance radically changed (Lustig, 1992). The 1984 observation falls in the midst of the first adjustment and stabilization programme, at a time when a moderate economic recovery from recessionary adjustment was taking place (Lustig, 1992). However, real wages had dropped almost 30% in two years, and per capita public consumption expenditure had decreased 14%. It is likely that the improvement in concentration with respect to 1977 (quite apart from the ever-present possibility that the two measurements are not comparable) conceals a deterioration from a substantially better distributive situation reached during the period of vigorous growth (6% a year) prior to the crisis, particularly in urban areas.

Be that as it may, there is evidence of an increase in inequality between 1984 and 1989, when the Mexican economy was recovering to a moderate rate of growth with inflation under control, after absorbing an oil shock (real per capita national income was still 7% lower than in 1984), and in a period when fiscal discipline and policy reforms were progressively gaining ground. Over this time-span, per capita public consumption expenditure was reduced more than 30% in real terms and urban real wages declined a further 26%. At the same time, unemployment dropped to levels below those registered during the oil boom and informal employment increased 10 points, to more than 30% of the non-agricultural labour force. Both developments, consistent with the remarkable flexibility of real wages, must have cushioned the impact on the incomes of poor and lower-middle households (Lustig, 1992).

Costa Rica has been traditionally characterized by political and economic stability and the adjustment of its economy during the 1980s was significantly aided by official transfers from the United States. Nevertheless, the distribution of urban incomes worsened between the beginning and the end of the decade, although the improvement of rural incomes may have helped to maintain the previous concentration of income at the national level.[14] The deterioration that took place between 1981 and 1988 was only partially reversed during the subsequent two years, and this reversal favoured the middle strata more than the poor. Consequently, urban poverty increased significantly between 1981 and 1988 and also advanced a little more up to 1990.

There is evidence that impoverishment was acute during the recessionary external adjustment of 1981/1982, while later stabilization and recovery in 1983/1986 brought absolute poverty down to levels close to those registered prior to the crisis (Trejos, 1991). At least, this is what appears to have happened at the national level; real devaluation may have increased the incomes of the rural poor, as argued by Morley and Alvarez (1992), while the real rise of wages in formal activities after the adjustment may have improved the situation of the lower-middle strata. On the other hand, the deterioration of real incomes in informal activities –which had expanded– may have increased the number of the urban poor.[15]

In the subsequent period, marked by policy reform (especially trade liberalization) and unstable expansion, the available evidence indicates a relative stabilization of the incidence of poverty at the national level (Trejos, 1991; ECLAC, 1992a), but also –as already indicated– a tendency for urban poverty to increase, in the context of a reduction of real wages, a gradual decline in real per capita income, and relative stability of the real exchange rate. On the other hand, the expansion of public

[14] Morley and Alvarez (1992, tables 7b and 7c) argue that the real devaluation that was required for external adjustment presumably increased agricultural wages after 1981, although the bulk of the devaluation occurred in that year. They also note that between 1981 and 1989 rural nominal incomes in the lower deciles of the national distribution increased more than those of urban households in the same deciles.

[15] Morley and Alvarez (1992, table 7h) note that among urban households there was a sharp deterioration of nominal wages in non-basic services compared with industry between 1981 and 1986.

consumption expenditure in real terms (20% per capita) must have helped the observed improvement of the relative position of middle income groups.

The external shocks that set off the crisis in other Latin American countries had a delayed and milder impact on the economy of *Panama*, which only suffered a brief stagnation of economic activity in 1983/1984. In spite of a 23% rise in real per capita income and a 14% increase in real wages, between 1979 and 1986 urban poverty fell only slightly, to less than 30% of households. The political crisis cum international conflict that pushed the Panamanian economy into recession in 1988/1989, however, brought real per capita income to 5% below the 1979 level –although this was not so with real wages–, reduced per capita public consumption expenditures more than 20% and forced up open unemployment of the urban labour force by 10 percentage points. As a result, the concentration of income significantly increased, as did poverty, which spread to 34% of urban households.

The already highly unequal income distribution of *Brazil*, which had not improved even during the previous decade of high growth, worsened further during the 1980s. The inequality of the distribution of household income remained relatively stable during the 1981-1983 recession and later recovery and improved slightly and briefly in 1986, in the climate of growth and temporary stability created by the Cruzado Plan. Between that year and 1989, however, with the acceleration of inflation and the beginning of the present recession, income concentration increased, though there is evidence (Hoffman, 1992) that in 1990 inequality of household income improved somewhat.

Consequently, the distribution of income in 1989 was more concentrated than in 1979, and poverty affected 5% more of urban households, while real national per capita income and industrial wages remained at about the same level as at the end of the previous decade, but unemployment had risen by more than 3 percentage points, as also had informal employment. On the other hand, expansion of public consumption expenditure (55% growth in per capita terms between 1979 and 1989) must have helped to cushion the relative deterioration of the middle-income groups. The fall of economic activity and incomes in 1990, which was accompanied by a 20% real reduction of industrial wages, increased urban poverty by 4 additional points, to almost 39% of households.

External shocks and policy reforms under the authoritarian rule of the Pinochet regime, along with the ensuing instability and low average growth, caused major changes in income distribution and poverty in *Chile* during both the 1970s and the 1980s. Income distribution suffered significant deterioration: not only was the short-lived redistribution that lasted up to 1974 reversed but the distributive pattern of Chilean society underwent a complete change.

By 1980, after the recovery from a deep recession (per capita GDP was only 6% higher than in 1970), the implementation of a radical trade liberalization programme, the reversal of agrarian reform, and institutional reforms that allowed for greater labour market flexibility but also for labour repression (Ffrench-Davis and Raczynski, 1987), the upper decile of households was receiving at least five points more of total income than in 1968, to the detriment of the shares –and real incomes– of both the middle and lower strata. Real wages were still more than 10% lower than in 1970, 17% of the labour force was unemployed and 28% was in informal activities. Absolute poverty virtually exploded, both in urban areas –from 12% in 1970 to around 28% in 1980 and in rural areas, bringing the incidence of poverty at the national level to about 30% of the households (Altimir, 1991).

During the 1982-1983 crisis, the existing inequality was further aggravated –although perhaps only marginally, compared with the turn around of the previous period– and urban poverty increased still further.[16] The deterioration may have continued until 1987, when real per capita income and real wages were respectively still 12% and 5% lower than in 1980, per capita public consumption expenditure had shrunk more than 30%, and unemployment still affected 17% of the labour force, although the share of informal activities had been reduced. Under those circumstances, urban poverty had risen by about 4 points (14% on a per capita basis) and the distribution of income had further concentrated in favour of the upper quintile, whose share of expenditure increased by almost 4% of the total with respect to 1978, to the detriment of the middle and lower strata, the latter having suffered a relative greater loss.

[16] Pollack and Uthoff (1987) estimate that absolute poverty increased by 8 percentage points (from 40% to 48%) in Greater Santiago.

Only between 1987 and 1990, with the Chilean economy reaching full utilization of its capacity and progressive reforms of the labour laws, did the distributive picture improve somewhat. Real per capita income increased 18%, real wages 11% and unemployment was reduced by almost 6 points, to about 7% of the labour force. At the same time, urban income concentration decreased slightly, in favour of the lower income groups, and urban poverty was reduced by 2 points, while rural poverty decreased more significantly, bringing the incidence of poverty at the national level to less than 35% of households.

Major distributive changes have also taken place in *Argentina* since the 1970s, under successive spells of economic instability and political disruption. After a military regime came to power in 1976, policy reforms were introduced to liberalize prices, trade and the financial market, but not employment and wages (which were repressed for most of the period). Economic activity followed a stop-go pattern in the context of a situation of high inflation, in spite of the explicit anti-inflationary policy stance which permeated three successive programmes (Canitrot, 1981).

Between 1970 and 1980 income concentration significantly increased: the upper decile of households enlarged its share of total income by almost 5 points, while the lower strata lost almost 3 points. Urban poverty increased by 2 points, to 7%. Most of this deterioration, however, took place after 1974.[17] In 1980, real per capita income was roughly similar to the 1974 level and real wages in manufacturing were still 14% lower than in that year, though unemployment was very low.

The sizeable fluctuations in economic activity, the magnitude of the external shocks and ensuing adjustments, and swings in relative prices associated with high and accelerating inflation during the 1980s were accompanied by movements of the relative distribution of income, although these were perhaps not as intense as the macroeconomic ebb and flow (Beccaria, 1991). By 1986, income concentration had further increased with respect to 1980, involving a dramatic change from the beginning of the 1970s: the share of the upper decile had grown about as much as it had in the previous decade, but this time at the expense mainly of the middle-level strata. Urban poverty had increased 6 points (i.e., almost doubled), to more than 12% of households. Although the economy was recovering under a successful stabilization programme, real per capita income was 22% below the 1980 level, unemployment was 3 points higher, and informal employment 2 points higher; on the other hand, real wages were 6% higher than at the beginning of the decade.

After 1986, the acceleration of inflation and the fall in real wages were accompanied by a further deterioration of relative income distribution, which reached its high point in 1989; with the burst of hyperinflation and recession reaching its trough, concentration stood at its peak. In 1990, income concentration among individual recipients receded to the still high level reached in 1988 (Beccaria, 1991). Between 1986 and 1990, poverty may have spread to an additional 6% of urban households (an increase of more than 50% on a per capita basis) and the situation improved only in 1991, when prices stabilized and economic recovery began.

Uruguay is the other Southern Cone country in which policy reforms were already undertaken in the 1970s, under authoritarian rule, with significant distributive consequences. Starting in 1974, the financial market was liberalized and price controls were gradually eliminated, while wages continued to be administered, and as from 1979 a trade liberalization programme was put into effect. The 1973-81 period was one of relatively high growth (3.4% per capita a year); nevertheless, the distribution of income deteriorated sharply between 1973 and 1979 –at the expense of both the middle and lower strata– improving somewhat later, but only to the benefit of the middle income strata. This evolution closely followed that of the relationship between real national per capita income and real wages: the former increased 12% between 1973 and 1979, while the latter dropped 32%, and between 1979 and 1981 real income expanded 4% but real wages rose about 17%. On the other hand, urban poverty increased by 4 percentage points (40% on a per capita basis) between 1970 and 1981.

External shocks and ensuing adjustments slashed real per capita income by 19% between 1981 and 1986; real wages fell 8% and unemployment increased 4 points, while per capita public consumption expenditure was reduced more than 30%. Income concentration increased yet again, and urban poverty expanded by 5 additional percentage points, to 14%

[17] See Altimir (1986) for the evolution of income distribution and Beccaria and Minujin (1991) for the evolution of absolute poverty during the period.

of households. As a result of economic recovery and later stagflation, real per capita income in 1989 was 13% higher than in 1986 and real wages were 6% higher, while unemployment had decreased 2 percentage points. Consequently, the distribution of urban incomes: improved and urban poverty decreased by 4 percentage points. Thus, at the end of the decade, the relative distribution of income and the incidence of absolute poverty were roughly similar to those at its outset, while real wages were substantially lower and unemployment somewhat higher than in 1981.

Continuing deterioration of real national income in *Venezuela* between 1980 and 1986, caused by the fall in oil revenues, and the ensuing reduction (around 20%) of real wages and per capita public consumption expenditure were accompanied by a significant worsening of the distributive situation. Between 1981 and 1986 urban poverty increased 7 percentage points (almost 40% on a per capita basis) while the relative distribution of income also became more unequal.

Economic policy failed to adjust to the fall in oil prices in 1986; external and fiscal imbalances widened and the rate of inflation trebled. The orthodox stabilization programme implemented at the beginning of 1989, along with the first trade and price liberalization measures of a programme of policy reform, brought a recession and sharp falls in public consumption expenditure and real wages, while previous gains in employment were reversed and informal activities expanded. Consequently, poverty increased[18] and income distribution apparently "equalized downwards". The rise in oil earnings caused by the Persian Gulf conflict in 1990, and ensuing public expenditure in 1991, fuelled an extraordinary –and unsustainable– expansion of economic activity. This, however, was mainly to the advantage of the upper-middle strata; urban poverty in 1990 was still 9 percentage points higher than in 1986 and 16 points higher than in 1981 (i.e., almost double). On the other hand, there is evidence indicating that by 1991 –at least at the national level– poverty may have receded somewhat.[19]

The worsening income distribution in the urban areas of *Peru* in the 1970s was aggravated during the 1982/1985 crisis and external adjustment, in a climate of increasing violence. By the end of 1985 and the beginning of 1986, when the economy was recovering under the drive of an unsustainable heterodox stabilization programme implemented by the newly elected García government, real national per capita income and real wages in the private sector were still 9% and 5% lower than in 1979, while an additional 10% of the non-agricultural labour force was employed in informal activities (thus reaching more than 40%). At that time, urban poverty still affected 45% of urban households: 10 percentage points more than in 1979.

Although there are no comparable observations for later years, there is some evidence that by 1990, in the midst of hyperinflation and economic collapse, poverty may have expanded by more than half with respect to 1985/1986, and it worsened still further in 1991, when the Fujimori government put into effect the present stabilization programme.[20]

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[18] Marquez (1992) estimates that, at the national level, poverty affected 28% of households in 1985, 32% in 1987 and 41% in 1989.

[19] Marquez (1992) puts the incidence of poverty at the national level in 1991 at 35% of households, compared with 41% in 1989, a point when it was no doubt higher than in 1990.

[20] See Figueroa (1992, table 2) and Abugattas and Lee (1991, table 4). On the other hand, comparison of the distribution of Lima households by size of per capita consumption expenditure, on the basis of the 1985/1986 and 1990 surveys of the standard of living (Psacharopoulos *et al.*, 1992), shows little increase in inequality between the two observations; this may reflect another case of "downward equalization" by recession, with the real consumption of the poor falling by almost 7% a year and the real consumption of the richest decile by almost 6% a year.

V
Rural poverty

For most of the countries in our sample there is evidence of a decrease –however slight in some cases– of the incidence of rural poverty in the course of the 1980s, thus somehow at least inertially continuing the trend towards abatement of rural poverty that was manifest in the previous decade. The only clear exceptions are Panama and Venezuela, where that trend appears to have reversed by the end of the 1980s, and possibly Argentina, for which a slight increase of rural poverty has been estimated. Chile is a special case, since the rural impoverishment of the 1970s continued well into the following decade, only to be reversed in the latter years (table 3).

Those exceptional increases are associated with falls in real per capita income, but the reverse does not hold true: of nine recorded spells of rural poverty reduction, this coincided with an increase in real national per capita income in only four cases;[21] in the remaining five rural poverty decreased along with declines in real national income. In contrast, there is a close association of rural poverty reduction with expanding agricultural output, which holds good in eight of the nine cases, suggesting that peasants somehow share in general rural prosperity. In contradiction to conventional wisdom, however,[22] the association is weaker with

TABLE 6

Latin America (8 countries): Changes in rural poverty and in relevant macroeconomic variables in the 1980s
(Percentage change over each period)

Country	Period	Changes in rural poverty[a] *(per cent)*	Changes in macroeconomic variables *(per cent)*		
			Per capita real national income	Agricultural GDP	Real exchange rate
Argentina	1980-1986	4	-23	12	75
Brazil	1979-1987	-3	4	41	43
	1987-1990	-6	-7	–	-38
Colombia	1980-1986	-7	5	11	47
Costa Rica	1981-1988	-3	-5	18	-6
	1988-1990	-10	–	10	-4
Chile	1980-1987	11	-13	33	89
	1987-1990	-19	18	14	5
Panama	1979-1986	-4	23	11	–
	1986-1989	11	-22	7	–
Peru	1979- 1985-1986	-2	-9	12	-9
Venezuela	1981-1986	-3	-30	23	51
	1986-1990	12	3[b]	1	59

Source: ECLAC.

[a] Taken from estimates in table 3.
[b] 1986-1989: -6%.

[21] Brazil (1979-1987), Colombia (1980-1986), Chile (1987-1990) and Panama (1979-1986).
[22] At least, this is true if no allowance is made for time lags between real devaluation, reallocation of resources to tradeables, ensuing expansion of agricultural output, and eventual participation of peasants and labourers in such expansion.

real devaluation of the exchange rate, since it is observed in only four of the cases, and in most of them with low parameters (table 6).

All this suggests that, in the absence of major institutional reform,[23] slow-moving structural changes in the rural milieu affect the process of reduction of rural poverty more than short or even medium-term changes in macroeconomic variables, although these may be able to slow down or even temporarily reverse such a process.

These slow-moving changes are in part reflected in the continuous transfer of rural poverty to the urban areas through migrations. In the 1980s, these have been less intense than in the previous decade, but they were nevertheless substantial. In most of the countries, rural-urban migrations were the main force sustaining the trend towards the reduction of poverty in rural areas, although they may not have been sufficient –as they had been in the 1970s– to prevent an absolute increase in the rural poor.

VI

Transient and permanent changes in income distribution

In order to shed some light on whether and to what extent changes in inequality during the decade of crisis and adjustments may be permanent, it is crucial to consider the different macroeconomic phases through which the Latin American countries have passed and the structural circumstances in which each of them is situated at present, as well as the nature and depth of policy reforms undertaken. Changes in macroeconomic and labour variables and distributive changes in selected periods corresponding to different macroeconomic phases of the 1980s are summarized in table 5.[24]

1. Income distribution and poverty in different phases of adjustment processes

Recessive adjustment to external shocks at the beginning of the decade has had adverse effects on inequality and devastating effects on urban poverty all over Latin America. Income concentration certainly increased in Argentina, Chile, Uruguay and Venezuela and perhaps also in Costa Rica and Mexico, while in Brazil inequality apparently remained unchanged through the rapid adjustment of 1981-1984 (Hoffman, 1992). In all these cases urban poverty increased during the adjustment, along with underutilization of the urban labour force[25] (which rose by between 10% and 20%, depending on the country) and there were sizeable falls in real per capita income, real average wages[26] and real per capita public consumption expenditure.

Colombia stands out as an exception, partly because of its lesser initial debt burden. The economy went through a smooth external adjustment –even with real currency appreciation– with reduction of inflation, which allowed for real rises in minimum and average wages, and even for the real expansion of per capita consumption expenditure. Such was the background for the probable improvement of income distribution and the lack of aggravation of absolute poverty. Although Panama also underwent a mild adjustment in 1982-1984, with rising real wages but an increase in unemployment, in this case there is no indication of the distributive changes over that period.

[23] Such as agrarian reform, as in Peru, or its reversal, as in Chile, both in the 1970s.

[24] The intervals between measurements of poverty (table 3) or income distribution (table 1) usually cover more than one phase of economic evolution; in these cases, the changes in distribution shown in the table are also based on the evidence referred to in the text.

[25] The indicator of underutilization of the urban labour force used here is the sum of the rate of open (urban) unemployment and the proportion of the non-agricultural labour force engaged in informal activities, estimated by PREALC.

[26] In Argentina, however, real wages recovered and the minimum wage increased sharply in 1983, at the end of the disintegrating military regime, even with accelerating inflation. In Chile, real average wages (in formal activities) rose up to 1982, in a context of moderate inflation, high labour underutilization (almost half of the non-agricultural labour force) and a new labour regime that gave the labour market total flexibility (García, 1991).

The recovery after external adjustment only brought relief on the poverty front in certain countries. In Brazil, it may be associated with the cumulative rise in real per capita income (close to 20%) and real wages (37%), and with decreasing labour underutilization, in spite of a probable increase in inequality.[27] If Peru also experienced a slackening of urban poverty during this phase –which is not known for certain, but is likely– this may have been due to a similar configuration of changes in the level of activity and the labour market. The decrease of poverty in Uruguay –along with inequality– and perhaps in Costa Rica and Panama, and the possible maintenance of its already limited incidence in Colombia, are also associated with changes in income and the labour variables in the same direction but to a less spectacular extent.[28]

In contrast, recovery in Argentina, Chile and Venezuela was accompanied by further increases in urban poverty, although for different reasons. In Argentina, the unsteady and only partial recovery and the increase in unemployment and informal labour apparently outweighed the modest rise in real wages and the temporary abatement of inflation. In Venezuela, too, until 1989, the recovery had been partial and subject to adverse external shocks, with accelerating inflation, while shrinking (-38%) real wages and per capita consumption expenditure (-20% in real terms) outweighed the very modest decrease in labour underutilization, providing the background for increases in inequality and urban poverty. In the case of Chile, complete labour market flexibility allowed for a deterioration in equity in the medium-run; the 1983-1987 recovery was vigorous and underutilization of the labour force decreased significantly (although it still remained at more than a third of the urban labour force), but real wages and per capita public consumption expenditure barely held steady, in a context of moderate and roughly constant inflation, while both inequality and absolute poverty increased.

Those countries which again plunged into recession, after recovering from external adjustment, due to pervasive internal imbalances, additional external shocks and accelerating inflation combined with stabilization efforts, experienced further increases in inequality and absolute poverty.

In Argentina and Peru such imbalances drove the economies to hyperinflation, and in Brazil to the brink of it; real incomes and wages plunged and labour underutilization increased, as also did absolute poverty and income inequality. Argentina's emergence from hyperinflation in 1990 stopped the fall and even brought some marginal improvement in inequality, although it did not prevent a further increase in poverty. The acceleration of inflation in Brazil took place along with some economic expansion and further increases in per capita public consumption expenditure, albeit with stagnating real per capita income and falling real wages; however, the 1990 stabilization package brought about disinflation with recession, which apparently increased poverty still further.

External shocks in 1985-1986 and stabilization efforts in Mexico also led to a new recessionary spell; the increase in informal activities and the drop in real wages suggest that there may have been a further increase in urban poverty and that –jointly with the fall in per capita public consumption expenditure– part of the observed increase in inequality up to 1989 may have taken place during this period. Panama's deep recession of 1988-1989, triggered by political and international conflicts, increased urban poverty and possibly also inequality.

The two cases of stabilization and recovery from high inflation and recession in the late 1980s (Argentina in 1990-1991 and Mexico in 1987-1989) included moderate increases in real income and in the utilization of the urban labour force and also moderate reductions in real wages. In the case of Argentina, urban poverty decreased from the high level of incidence attained during the previous spells. In the case of Mexico, however, there is no evidence of a similar abatement of poverty or of a decrease in inequality.

In almost all of the few observable instances of sustained or even unsustainable growth after recovery, such circumstances brought about an improvement of the relative income distribution and some decrease in urban poverty. Only in Costa Rica in 1990 was there a rise in urban poverty, with the acceleration of inflation and particularly the elimination of subsidies and the increase in public service rates. In both Colombia and Chile inequality and poverty decreased; in the latter case the rises in

[27] However, the conspicuous increase in real per capita public consumption expenditure (42%) must have improved the relative position of some middle-income strata.

[28] Mexico's brief and mild recovery in 1984 did not significantly alter the results of the previous recessive phase, although "the very circumstances that triggered it contributed in part to its demise" along with worsening terms of trade in 1985 (Lustig, 1992, pp. 34-36).

real incomes and wages were more substantial, but in Colombia there was an expansion in real per capita public consumption expenditure. In Venezuela, there are indications of a reduction of income concentration in 1989-1990, in spite of falling real wages and increasing unemployment.

2. Permanent changes in income concentration

Let us consider first the countries that have already attained a stage of full-capacity growth. Colombia is the only one in which income concentration at that stage is actually lower than before the crisis, but in Costa Rica in 1990 urban inequality was only slightly higher than in 1981. In both countries, real wages and per capita public consumption expenditure were higher than at the beginning of the decade (table 7).

In Chile, in contrast, after regaining a medium-term growth path, the income structure is significantly more concentrated than before the crisis and certainly much more than the relative income distribution prevalent at the end of the 1960s, before the socialist-populist experiment and the authoritarian structural reforms of the 1970s (see table 1). This, in spite of an almost recovered real wage. Also in Venezuela, income concentration is higher than before the crisis, after recovery evolved into rapid albeit unsustainable growth; in this case, both real wages and per capita public consumption are substantially lower than before the crisis.

Although they were not yet on a full-capacity growth path in 1989, Mexico and Uruguay were approaching the culmination of their respective recoveries; at that stage, income inequality had nearly returned in both cases to pre-recession levels.[29] In Mexico, this occurred in spite of drastic reductions of real wages and public consumption expenditure, whereas in Uruguay both variables were more moderately eroded.

TABLE 7

Latin america (10 countries): inequality, urban poverty and macroeconomic variables at the end of the 1980s, relative to pre-crisis levels
(Indices)

Country	Year	Base year	Macro phase[a]	Application of significant policy reforms	Inequality (Gini coefficient)	Urban poverty (incidence)	GDP	RNIpc[b]	RGCpc[c]	NALF[d]	RW[e]	RMW[f]	REER[g]
Argentina	1990	(1980=100)	D&R	Recent	113	205	93	69	...	88	77	40	185
Brazil	1990	(1979=100)	RDDI	Partial	108	130	127	97	158	98	85	55	89
Colombia	1990	(1980=100)	SGAR	Partial	91	96	135	110	125	99	106	108	192
Costa Rica	1990	(1981=100)	SGAR	Yes	103	138	128	95	115	103	102	134	90
Chile	1990	(1981=100)	SGAR	Yes	113	107	126	104	69	108	96	76	240
Mexico	1989	(1977=100)	D&R	Yes	100?	>95	147	106	76	89	54	41	111
Panama	1989	(1979=100)	RDDI	No	116	111	116	95	99	...	108	93	
Peru	1990	(1979=100)	RDDI	Recent	...	190	94	72	62	...	36	24	40
Uruguay	1989	(1981=100)	RAEA	Yes	98	109	100	92	86	...	93	76	173
Venezuela	1990	(1981=100)	UG	Recent	110	188	105	72	68	93	48	63	240

[a] D&R: Disinflation and recovery; RDDI: Recession due to domestic imbalances; SGAR: Sustained growth after recovery; RAEA: Recovery after external adjustment; UG: Unstable growth.
[b] RNIpc: Per capita real national income.
[c] RGCpc: Per capita real government consumption expenditure.
[d] NALF: Index of the proportion of the non-agricultural labour force employed in formal activities (opposite of NALU (under-utilization of non-agricultural labour force per active person)).
[e] RW: Real urban or industrial wages.
[f] RMW: Real minimum wage.
[g] REER: Real effective exchange rate.

[29] However, if pre-recession (i.e., around 1981) inequality in Mexico was even lower than the level observed in 1977, as suggested earlier, post-recovery inequality would have been somewhat higher than that previous mark.

The countries that were still labouring under recession and instability at the end of the 1980s (Argentina, Brazil, Panama and Peru) showed degrees of inequality substantially higher than those prevailing before the crisis. Stabilization and recovery in Argentina only brought some improvement of income inequality, but this nevertheless remained high compared with the pre-crisis level, which was substantially higher than that prevailing before the disruptions of the 1970s. On the other hand, in the spells of recovery after external adjustment, income distribution improvements –where they existed– only took place along with real wage increases, as outlined above; these are less likely during the stabilization processes still faced by Brazil and Peru and have not occurred during the current Panamanian recovery.

Consequently, one should not expect significant equity improvements in these countries as a consequence of stabilization and recovery. Indeed, full deployment of policy reforms and associated adjustment measures –particularly on the fiscal front– may still bring a medium-term increase in income inequality. Furthermore, if the experiences of Colombia and Chile are taken as examples, all these, countries can only expect a modest reduction of income inequalities later, when they attain a sustained growth path.

In sum, "normal" distributive patterns in the coming phase of sustained growth, when this materializes in most Latin American countries, once they have recovered from the crisis and its sequels, completed structural adjustments, and deployed policy reforms, tend to be more unequal –at least in the urban areas– than those prevailing in the last stages of the previous growth phase, during the 1970s.

Only Colombia, Costa Rica and Uruguay –and, just possibly, Mexico– have managed to restore their previous degrees of inequality (table 7). It is no accident that this should have happened in countries in which social justice values have traditionally imbued institutions, objectives of equity have been quite consistently incorporated in policy design throughout the adjustment phase, and both adjustment and policy reforms have been approached gradually and pragmatically.[30] This suggests that the tendencies that increase inequality of primary earnings (before the eventual corrections involved in public social spending) can be positively corrected by economic policy design and implementation.

VII
Prospects for poverty alleviation

Even without any significant changes in the relative distribution of income,[31] absolute poverty will be reduced by economic growth; and this will take place more quickly –at least in economists' estimates– if constant poverty lines are used, or more sluggishly if shifting poverty yardsticks are deemed normatively more appropriate.

The record of the 1970s, outlined earlier, shows urban poverty decreasing only in rapidly growing economies which either maintained or reduced their concentration of household income. In Colombia, Mexico and Venezuela, where equity improved, the reduction of urban poverty showed elasticities of -0.5 to -1 with respect to the increase in real per capita income and of -0.4 to -2 with respect to real wages. In Brazil, where there was no significant improvement in income concentration, such elasticities were much lower (table 8).

Recession and recovery in the 1980s left most Latin American countries with a sometimes markedly higher incidence of poverty in urban areas than before the crisis. Only Colombia and possibly Mexico were able to end their respective recovery phases with less urban poverty than before the recession, in both cases because of a decrease in inequality (table 7).

Available poverty estimates seldom permit a sharp differentiation between periods of recession

[30] The gradual approach has been abandoned in Mexico in the last phase of the reform process, but it must be borne in mind that this phase has coincided with the preparations for the incorporation of the country into the North American Free Trade Agreement (NAFTA), a strategic leap forward which, when fulfilled, will radically change the structural conditions of the Mexican economy and, among them, its distributive structures.

[31] Including, to be sure, the absence of changes in either the composition of households and their work and resource utilization strategies, which is a highly artificial assumption.

TABLE 8

Latin America: Changes in urban poverty and their relation with changes in income concentration and real income in different periods

Country	Period	Changes in income concentration[a]	Percentage variation				Elasticity of urban poverty in relation to:		
			Urban population	RNIpc[b]	RW[c]	RMW[d]	RNI[e]	RW	RMW
1. Growth periods in the 1970s									
Brazil	1970-1979	M	-14	67	48	-1	-0.2	-0.3	14
Colombia	1970-1980	D	-21	44	17	27	-0.5	-1.2	-0.8
Mexico	1970-1984	D	-30	31	15	-20	-1.0	-2.0	1.15
Venezuela	1970-1981	D	-30	71		-3	-0.4	-0.4	10
II. Periods of recession and recovery in the 1980s									
Argentina	1980-1986	I	71	-23	7	47	-3.1	10	1.5
	1986-1990	I	52	-15	-22	-64	-4.0	-2.4	-0.8
	1990-1991	...	-22	5	-7	39	-4.4	3.1	-0.6
Brazil	1979-1987	I	13	3	19	-27	4.2	0.7	-0.5
	1987-1990	I	15	-6	-29	-26	-2.5	-0.5	-0.6
Colombia	1980-1986	D	–	5	12	13	–	-0.1	–
Costa Rica	1981-1988	I	31	-5	16	27	-6.5	1.9	1.1
Chile	1980-1987	I	14	-13	-5	-31	-1.1	-2.8	-0.5
Mexico	1977-1984	D	-6	14	-34	-40	-0.4	-0.2	0.2
Panama	1979-1986	I	-3	23	14	-6	-0.1	-0.2	0.5
	1986-1989	...	13	-22	-1	-1	-0.6	-13	-13
Peru	1979-1986	...	29	-7	-5	-39	-4.1	-5.8	-0.7
Uruguay	1981-1986	I	56	-19	-13	-14	-3.0	-4.3	-4.0
	1986-1989	D	-29	13	6	-12	-2.1	-4.8	2.4
Venezuela	1981-1986	I	39	-31	-19	6	-1.3	-2.1	6.5
	1986-1990	D	32	3	-41	-19	9.4	-0.8	-1.7
III. Growth periods in the late 1980s									
Colombia	1986-1990	D	-3	4	-5	-5	-0.7	0.6	0.6
Costa Rica	1988-1990	D	5	-2	2	5	-2.8	2.5	1.0
Chile	1987-1990	D	-8	18	11	27	-0.4	-0.7	-03

Source: Table 5.

[a] M: Maintained similar level; D: Decreased; I: Increased.
[b] RNIpc: Per capita real national income.
[c] RW: Real urban or industrial wages.
[d] Real minimum wage.
[e] Real national income.

and those of recovery. When they do, the beneficial effects of recovery on poverty appear weaker than the negative effects of the previous recession. In Uruguay, the elasticity of poverty with respect to real income in the 1986-1989 recovery was -2, while during the recession it had been -3. In Argentina, disinflation plus recovery abated poverty as elastically (-4) as recession had increased it, but the recovery itself was then very incipient. In Venezuela, on the other hand, the completion of recovery did not prevent poverty from widening still further.

In other instances (Brazil 1979-1987, Costa Rica 1981-1988, Chile 1980-1987 and Peru 1979-1986) the culmination of the recovery phase left the economy with a greater degree of inequality and a higher incidence of urban poverty. In Costa Rica, not even sustained growth after 1988 was able to prevent the increase in urban poverty, as a consequence of price deregulation (table 8).

In most cases, real wages at the end of the recovery process were lower than before the crisis, which helps to explain the weaker effect of recovery on poverty. Although in Argentina and Brazil, at the culmination of the respective heterodox stabilization programmes, and in Costa Rica real wages were higher, that fact appears to have been offset by other factors which increased inequality and, particularly in the first case, by the fall of real per capita income. In Colombia and Panama, in contrast, higher real wages have reinforced the effect of the recovery of real income in preventing an increase in urban poverty. This was not so, however, in Mexico, where real wages in 1984 were substantially lower than before the crisis (table 8).

On the other hand, the few observable growth spells at the end of the 1980s (Colombia 1986-1990 and Chile 1987-1990) show elasticities with respect to real per capita income (-0.7 and -0.4, respectively) similar to those recorded in the 1970s in rapidly growing economies where income inequality was decreasing. Only in Chile, however, has poverty reduction been more elastic with respect to real wages than to real incomes, as had happened in all cases in the 1970s (table 8).

Rural-urban migrations will continue to exert pressure on the ability of the economies to alleviate urban poverty. If the experience of the last two decades (Altimir, 1991) is any indication of what might happen, in the relatively less urbanized countries with a high incidence of poverty in the rural areas, the migrating rural poor may swell the ranks of the urban poor at a rate equivalent to an absolute increase of 1.3-2.0 % a year.

To sum up all this evidence, it is likely, on the one hand, that countries accomplishing their recovery into full-capacity growth will undergo a change in their ability to reduce urban poverty in the short run, requiring relatively more expansion of economic activity than in the recovery phase for each percentage point of poverty reduction. On the other hand, medium-term growth with no improvement of income inequality would permit only a slow process of poverty abatement: slower than in the cases of high growth and equity improvement of the 1970s, and slower than during recent growth spells in Colombia and Chile, when income distribution also improved.

VIII
Conclusions

After overcoming the difficult period of the 1980s, Latin American countries are entering into a new era of potential growth under a different pattern of development and a new style of State intervention. The adjustments to absorb both exogenous changes, those required in order to adapt to resource availability and utilization, and the structural changes still under way have caused most Latin American societies to suffer more unequal distribution of income and a higher incidence of poverty among their people. The few exceptions are the result of deliberate and persistent concern for equity in economic policy design and implementation. Moreover, the prospects for poverty alleviation through growth alone, without improvement of the relative distribution of incomes and vigorous social policies, appear so limited as to be disheartening and seem likely to be counterproductive for social integration and, ultimately, for sustained growth (ECLAC, 1990).

Given the unlikely prospect that primary earnings will become less unequal, even if there is deliberate concern for this in economic policy, the improvement of equity and particularly the abatement of absolute poverty will have to lean much more on social policy and its effectiveness. With fiscal resources reduced or still constrained by the debt burden, however, the scope for welfare transfers will be restricted to no more than the provision of a basic social safety net, with preference being given to social expenditures that can be considered as investment in human resources.

Eventual gains in equity of income distribution will depend on the spread of productivity improvements and their actual appropriation by households. The structural transformations underway tend to increase the productivity of capital and total factor productivity, thus enhancing labour productivity in the economy at large. However, for income distribution to improve on the basis of differential productivity gains three developments are required. First, employment in formal or modern activities must be extended, along with productivity increases, to a larger proportion of the labour force, thus absorbing underemployment. Second, those productivity increases must be effectively translated into proportional wage rises. Third, the capital per worker in the labour force remaining in the informal, small business and traditional sectors of the economy must increase dramatically.[32]

In order to attain these objectives it is necessary, as well as raising the productivity of capital in general, to increase the skills of the different segments of the labour force, while at the same time restructuring the availability of skills so as to enhance the technological capabilities of the productive system at large. For this purpose, and in order to ensure long-term progress, heavy investment in human resources (education, training and retraining, nutrition and health) must supplement investment in fixed capital (ECLAC, 1992b). Indeed, there are some grounds for substituting investment in human capital for investment in physical capital, in so far as a greater contribution to total factor productivity can be expected from the former, in a long enough term.

Fulfilling these requirements involves substantial amounts of investment resources, partly originated and handled in the marketplace, but also partly raised and allocated by the State. At the same time, in order for higher skills to be reflected in workers' income, pay structures must meet the double challenge of being at the same time institutionalized and flexible.

The efficient absorption of capital by the underemployed, effective widespread access to the acquisition of skills and their efficient application to production, and correspondence between contributions to productivity and earnings all call for substantial organizational improvements at the company level and profound institutional reforms in public policy.

Abating structural poverty follows the same lines as general improvements in income distribution but poses different obstacles that must be overcome if policies are to be effective. On the one hand, the physical capital required may be lower than in modern activities, but the skills gap is greater. On the other hand, effective public policies are more demanding in terms of organizational requirements and institutional creativity. Finally, the remedies must address the whole vicious circle of circumstances that reproduce poverty from one generation to another.

Strategies for equity improvement must take these differences into account. The usual way in which social policy is designed –which actually restricts access mainly to the strata above the poverty line, for which such policies may be more easily implemented, and thus leaves the poor to fend for themselves– may lead to further progress for a segment which is already integrated into society and actually endorse the disintegration of the poorer strata into a segregated underclass. At the other extreme, a unilateral strategy focusing only on the poor may further weaken the low and middle strata of the population, where a rich reservoir of skills, social cohesion and political dynamism is located. What is required is a "two-tier" strategy that recognizes the differences between the poor and the non-poor working population in terms of potential, response and deterioration of life styles and aims at integrating both universes into a single dynamic society.

[32] The capital for those remaining in such activities should perhaps be doubled, but even so this would demand much less capital than the amount required for each job created in the more modern or larger-scale activities.

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KEYWORDS

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A historic turning point. Political change and the socio-institutional situation in Latin America

Fernando Calderón

"Irremediably and in the sight of all, the traditional 'consistency' of Latin America is now being lost. (…) This raises two essential and unavoidable questions. First, what are the foundations of the new structure which is superseding the old one and was contained within it from the earliest stages of its decomposition? Second, where is the ultimate basis for the prise de conscience *that, with the advent of the new economic cycle, is disclosing the physiognomy of the immediate future?"*

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Latin America is going through a time of political crisis, reconfiguration and change in which the relationship between institutions and equity will be crucial to future democratic governance. In particular, this crisis and this reconfiguration are first and foremost sociocultural in nature. Politics and political actors would be in no position to resolve politico-institutional problems if they were not capable of confronting society's problems, particularly those of equity and poverty. This article synthesizes and reviews a number of socio-historical trends, formulates some observations aimed at illustrating and disaggregating its main findings, considers the medium-term outlook and suggests a road map for improving democratic governance in Latin America.

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I
Introduction

The purpose of this paper is to synthesize certain socio-historical trends in Latin America that are critical to the outlook for democratic governance, and to see what lessons can be drawn from them.

Following a period of major structural reforms and democratic transition, Latin America is beginning a new cycle in its history. This is particularly apparent in the member countries of the Regional Project for Political Analysis and Short- and Medium-Term Scenarios (PAPEP), which are considered here.[1] This recent experience has created a climate of disappointment and dissatisfaction, but has also generated great expectations of change and progress under democracy, which society still perceives as the most acceptable form of government. Dissatisfaction is conjoined with the emergence of more critical and independent citizens associated with new public spaces of participation, conflict and dialogue.

The organizing idea behind this study is that Latin America is going through a period of political crisis, reconfiguration and change in which the relationship between institutions and equity will be crucial to future democratic governance. The progress made on these two fronts, with their specific international and local economic contexts, will largely determine the prospects of the current reconfiguration offering a route towards renewed democratization and development.

It is also argued that this crisis and reconfiguration are primarily sociocultural in nature: politics and political actors will be in no position to resolve politico-institutional problems if they are not capable of confronting society's problems, particularly those of equity and poverty.

A fundamental question is how to go about constructing politico-institutional options for resolving these problems. Or, to put it another way, how politics and democratic institutions will process the changes being experienced by Latin American societies in a context of rapid globalization.

This article examines socio-historical trends and offers some observations that are intended to illustrate and disaggregate its main findings. It also discusses medium-term prospects in the form of basic scenarios and formulates a proposal for improved governance in Latin America that includes a basic road map of the aspects to which most attention needs to be paid.

II
Socio-historical problems and challenges

Of all the various problems and challenges facing the different Latin American countries, it has been possible to identify some that affect democratic governance and that constitute frames of reference for short- and medium-term political scenarios. The main ones will now be examined.

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[1] PAPEP is part of the UNDP regional strategy on democratic governance in Latin America, and is intended to strengthen that governance. The main activities of the Project include preparing reports on current economic conditions and short- and medium-term scenarios (see http://www.papep.org for further information).

1. Crisis situations and politico-institutional risks

The crisis situations and politico-institutional risks that many Latin American countries have been experiencing are affecting the development of democracy, altering the region's political profile and indicating a need for new types of linkage between institutions and society at large.

So far this century, over 30% of Latin American democracies have experienced acute politico-institutional crises affecting their key institutions (presidency and legislature).[2] Taken together, these situations of acute crisis and of risk or near-crisis make it plain that consolidating the Latin American democracies is a difficult process whose success is not assured. Furthermore, a number of Latin America's best-consolidated democratic regimes are passing through periods of "soft" socio-political reconfiguration.[3]

Unrealized expectations among the population at large are an empirical factor that is crucial to the relationship between institutions and society, since they can trigger episodes of ungovernability if combined with fragile public institutions and poor economic conditions.[4] These situations reveal the weaknesses of Latin American democracies and the risks they face and will probably carry on facing. To contribute to the consolidation of democracy in Latin America, it is therefore necessary to reach a better understanding of the nature of political change and the prospects it opens up, before going on to look for solutions that can help bring about democratic development.

2. The limits of representation and intermediation systems

Politico-institutional problems are associated with the limits of representation systems and a widespread mistrust of institutions, particularly political parties and intermediation mechanisms generally (figure 1). The emergence of thoughtful, critical and independent citizens and demands for local participation, recognition of indigenous movements and gender equity are factors that can reconfigure systems of representation.

Institutional problems stem from the limited ability of party political action to represent society institutionally. This translates into crises of political representation and intermediation. The slogan "Out with the lot of them!" heard in Argentina, the October 2003 crisis in Bolivia and the demands of the so-called "Outlaws' Rebellion" (Rebelión de los Forajidos) in Ecuador are examples of widespread disenchantment with politics and political parties in the region. According to the *Latinobarómetro Report 2006*,[5] 58% of Latin Americans believe that there can be no democracy without political parties, but just 22% trust them.

In some countries the crisis of representation is being made more complex by the manifestations of multiculturalism, especially among indigenous peoples, given the traditional inability of institutional systems to represent them. These peoples are demanding participation and change throughout much of Latin America, and political systems are being substantially modified as a result, especially in Bolivia, Ecuador, Guatemala and Peru.

Continuing institutional constraints on women's participation are another feature of many Latin American countries. Gender inequality is the outcome of a set of mutually reinforcing cultural

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[2] Since the beginning of the twenty-first century, at least six countries have experienced crises of this nature: Paraguay (2000), Peru (2000), Argentina (2001), Venezuela (2003), Bolivia (2003 and 2005) and Ecuador (2000 and 2005). Of these eight situations, six ended in the downfall of the president of the day (Fujimori in Peru, De la Rúa in Argentina, Sánchez de Lozada and Mesa in Bolivia and Mahuad and Gutiérrez in Ecuador), either because the legislature removed them from office or because they resigned. One crisis involved the military and culminated in the removal from office of Cubas Grau as President of Paraguay and the murder of a vice-president, and the last was an unsuccessful coup d'état against]President Chávez of Venezuela. There were other political crises that came close to, but stopped short of, the kind of extreme situations described. They include those of Nicaragua (late 2004 and early 2005) and Honduras (early 2006).

[3] Uruguay is an example. As Moreira (2006) puts it, Uruguay is not in crisis; however, "the arrival of the left in government marks a turning point which, in much the same way as crises, provides an excellent window of opportunity to initiate a public debate encompassing our different positions and attitudes towards the country".

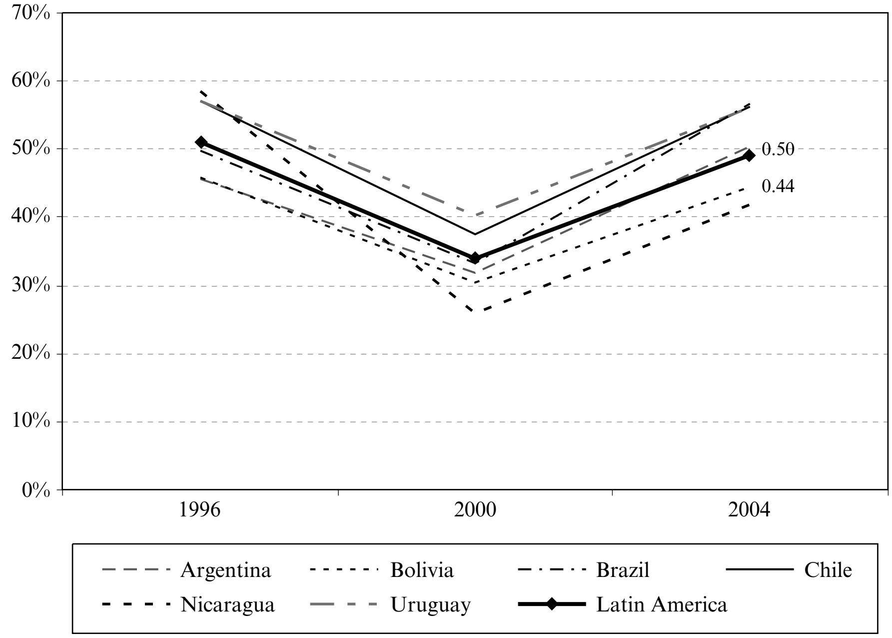
[4] An analysis by González (2006) empirically demonstrates the relationship between institutional shortcomings (judicial-legal effectiveness index) and unrealized expectations (per capita gdp growth in 1975-2003), revealing a moderate but significant association between these two variables. The seven countries that experienced acute political crises display negative outcomes for the two variables, while the three "consolidated" countries (Chile, Costa Rica and Uruguay) are at the opposite extreme.

[5] The *Latinobarómetro Report* appears in the bibliography of this article under the name of the organization that publishes it, the Corporación Latinobarómetro.

FIGURE 1

Latin America: trust in State institutions, 1996, 2000 and 2004

(Percentages)



Source: prepared by the author using data from Corporación Latinobarómetro (various years).

and political inequalities. These affect women's access to property rights, wealth and education, restricting their ability to participate in labour markets and power structures generally. Despite the progress made by women in terms of public policy and political participation,[6] politico-institutional actors still find it difficult to process changes and demands on a basis of gender equity. This has adverse effects on the quality of democracy and democratic governance.

Lastly, divides between subnational regions (territories) in Latin America appear to be widening. New conflicts and strains are arising between the global, local and national levels. Subnational regions are now seeking their own forms of democratic legitimacy, autonomy within their countries and a direct link with globalization; these demands and aspirations translate into economic tensions, with political and electoral consequences, and sometimes into major politico-institutional crises. These are clearly on display in Bolivia (between the altiplano and the lowlands), whose elites believe that subnational regional factors are among the main components of the crisis. But there are many other countries where subnational divides (coast-uplands or north-south) are expressed politically. Another source of strain here is the emergence of a new institutional order.

3. Demands for greater State involvement and more citizen oversight

In different ways and to varying degrees, there have been new demands in the political sphere, first, for greater State involvement in the management of development and the expansion of democratic institutions and, second, for greater citizen oversight over the public authorities.

Large sections of the population are calling for a new relationship between the State and

[6] Empirical data show that the political involvement of women has increased in the countries studied, although it remains low. While Argentina, Bolivia, Brazil, Ecuador, Honduras, Mexico, Panama and Peru have established quotas laying down a minimum level of female participation (between 20% and 40%) in party lists for elections to the legislature, only in Argentina does female participation in parliament exceed 30%. In the other countries the percentage ranges from 23% (Mexico) to 6% (Honduras) (ECLAC, 2006a).

the economy whereby the State works for social integration and equity at the same time as bolstering the economy in a context of globalization. According to the *Latinobarómetro Report 2005*, an average of only 31% of the Latin Americans interviewed believed that privatization was advantageous. The *Latinobarómetro Report 2006* asked where the responsibility for wealth creation lay, using a scale of 1 to 10 where "1 = the State has to produce wealth" and "10 = private enterprises have to produce wealth"; a medium-high level of support for State control among Latin Americans emerged, as the average score for the region was 4.1. In Argentina, interviews with members of elites and public opinion surveys revealed a shared desire to reshape relations between businesses and the State: 28.5% of those surveyed said that the State should intervene to ensure that the benefits of economic growth were fairly distributed, while 45.6% expressed a wish to see providers of public services return to State ownership and 44.7% said they should remain in private hands but with greater State oversight (UNDP Argentina, 2005). Similarly, over 70% of Bolivians expressed a desire for the State to become more involved in the gas business (UNDP Bolivia, 2004). In general, all the national studies carried out revealed a desire for greater State ownership in the interests of democratic governance.

It is also likely that this demand for greater State involvement is related, first, to the need for greater human security, an issue that increasingly affects the day-to-day lives of citizens,[7] and second, to a rise in anomic behaviour by excluded social groups, especially youths, reflecting the limits of social cohesion and a degree of social breakdown.

At the same time, there are demands for coordination between citizens and the State with a view to introducing mechanisms for greater citizen participation, as well as demands for the consolidation of State institutions in the interests of public service and State unity. The issue of accountability, which concerns public policy transparency, information and citizen oversight mechanisms, comes up in round after round. The demands for a transparent, independent and institutionalized judiciary reveal that this is a real touchstone for the population, something that is clearly reflected in the Corruption Perceptions Index produced by Transparency International (table 1).

TABLE 1

Latin America (13 countries): Corruption Perception Index scores, 2005

(In descending order)

Country	Position	Score
Chile	21	7.3
Uruguay	32	5.9
Colombia	55	4.0
Brazil	62	3.7
Mexico	65	3.5
Panama	65	3.5
Peru	65	3.5
Argentina	97	2.8
Honduras	107	2.6
Nicaragua	107	2.6
Bolivia	117	2.5
Ecuador	117	2.5
Guatemala	117	2.5

Source: prepared by the author using data from Transparency International.

4. The problems of inequality and poverty

These problems are at the heart of socio-economic trends and may be the factors that most influence both democratic governance and the development of new political options in the countries studied.

The structural reform policies applied by the countries of Latin America resulted in a WHOle array of socio-economic changes that altered the configuration of the different national societies. One of their most significant effects was to make social differentiation processes increasingly complex, something that has affected the quality of social reproduction in its different forms.

Even as social differentiation processes have resulted in growing disparities between developing and industrialized countries (Latin America remains one of the world's most unequal regions, and inequalities and differences between nations are actually on the increase), developing countries are characterized by persistent and in some cases widening internal divides in most aspects of life. In many of them, the income share of the wealthiest 20% of the population has increased, while that of the poorest 20% has held

[7] According to World Health Organization (who) data, the murder rate was 16.7 per 100,000 inhabitants in 1991, but 27.5 in 2000. Information available at http://www.who.int/violence_injury_prevention/violence/world_report/en/annex.pdf.

steady or declined (table 2).[8] Various social indicators also reveal profound disparities between the sexes, subnational regions, socio-economic classes and ethnic groups.

Where gender disparities are concerned, there are still large pay gaps between men and women with the same number of years of completed education (table 3). On average, women earn approximately 80% as much as men. The adverse effects of this wage inequality may have been intensified by the increase in the number of women household heads.

Social differentiation is also revealed by the large disparities between countries in the proportion of people living in indigence, which has substantial implications for governance. At one extreme (Bolivia, Guatemala, Honduras and Nicaragua), indigence affects over 30% of the total population, whereas at the other (Chile, Costa Rica and Uruguay) indigence levels are below 10% (ECLAC, 2007).

TABLE 2

Latin America (13 countries):[a] personal income concentration, 1990 and 2005
(Percentages)

Country	Poorest 20% of the population			Wealthiest 20% of the population		
	1990	2005	Change	1990	2005	Change
Argentina[b]	4.1	3.5	-0.6	54.9	57.2	2.3
Bolivia	1.3	1.5	0.2	61.2	64.4	3.2
Brazil	2.1	2.4	0.3	66.8	65.5	-1.3
Chile	3.5	3.7	0.2	60.6	60.4	-0.2
Colombia	3.7	2.9	-0.8	57.8	63.0	5.2
Ecuador[b]	4.8	3.8	-1.0	51.9	56.3	4.4
Guatemala[c]	2.7	3.7	1.0	62.7	59.3	-3.4
Honduras	2.4	2.4	0.0	65.7	62.4	-3.3
Mexico	3.9	3.7	-0.2	58.7	57.6	-1.1
Nicaragua	2.1	2.5	0.4	61.3	61.7	0.4
Panama	2.8	2.5	-0.3	60.0	58.2	-1.8
Peru[d]	3.0	3.8	0.8	57.9	55.2	-2.7
Uruguay[b]	5.1	4.8	-0.3	51.9	50.7	-1.2

Source: prepared by the author using data from ECLAC (2007).

[a] Selection criterion: the member countries of PAPEP were included (Argentina, Bolivia, Ecuador, Honduras, Nicaragua, Panama, Peru and Uruguay) along with others deemed relevant for reference and comparison purposes.
[b] Urban areas.
[c] 1990 and 2002 data.
[d] 1997 and 2003 data.

TABLE 3

Latin America (13 countries):[a] ratio between men's and women's wages, by years of study completed, around 2004
(Percentages)

Country	Year	Total	13 years of education and over
Argentina	2004	86.6	76.6
Bolivia	2002	74.4	64.2
Brazil	2003	76.7	61.9
Chile	2003	81.7	69.0
Colombia	2002	89.2	80.0
Ecuador	2002	83.7	72.9
Guatemala	2002	82.4	87.0
Honduras	2002	82.8	68.7
Mexico	2004	82.1	69.6
Nicaragua	2001	83.0	71.9
Panama	2002	82.7	71.4
Peru	2003	77.4	70.8
Uruguay	2002	80.8	66.8

Source: prepared by the author using data from ECLAC (2006a).

[a] Selection criterion: the member countries of PAPEP were included (Argentina, Bolivia, Ecuador, Honduras, Nicaragua, Panama, Peru and Uruguay) along with others deemed relevant for reference and comparison purposes.

Poverty in the Latin American countries is not homogeneous but is socially and culturally differentiated, as can be seen from the variations in poverty levels by geographical area, gender and ethnic origin. In 2005, 39.8% of Latin Americans were below the poverty line, but if rural areas only were taken the proportion increased to 58.8% (figure 2).

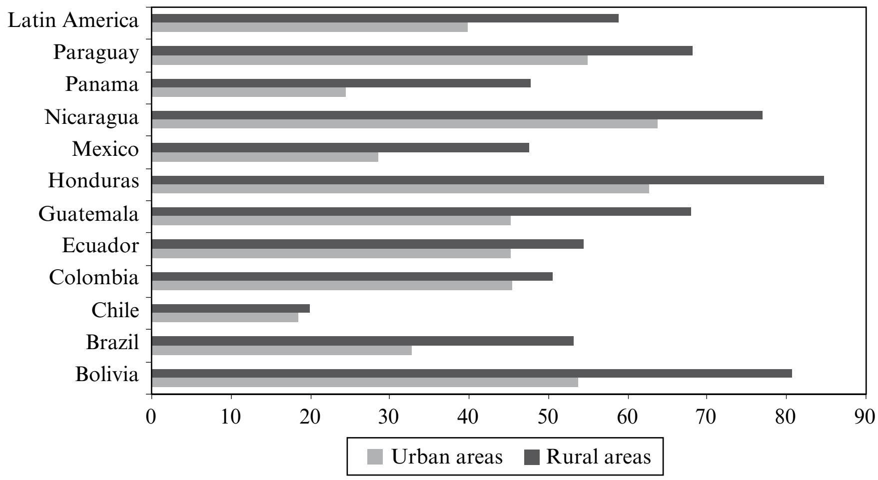
Furthermore, as Buvinic and Roza (2004) argue, gender and ethnic origin interact to produce an even greater degree of social exclusion. In consequence, the education levels of indigenous women are much lower than those of non-indigenous women. Over 50% of indigenous girls in Bolivia and Guatemala have left school by 14 (Arias and Duryea, 2003). In Bolivia, Peru and Guatemala, indigenous women are more likely to be working for low pay and in the informal sector (Duryea and Genoni, 2004). This adverse interaction is compounded by another factor, geographical location, since indigenous peoples tend to live in rural areas with higher levels of poverty than urban areas.

[8] Between 1990 and 2005, the Gini coefficient fell in Brazil, Colombia, Guatemala, Honduras, Mexico and Uruguay, held steady in Chile, Nicaragua and Panama and increased in Argentina, Bolivia and Ecuador. Furthermore, in 2005 only Uruguay qualified as a country with a low level of inequality, while many of the region's countries display inequality levels that are high or, in the case of Argentina, Brazil and Honduras, very high (ECLAC, 2007).

FIGURE 2

Latin America (11 countries):[a] proportion of people living in poverty in rural and urban areas, 2005

(Percentages)



Source: prepared by the author using data from ECLAC (2007).

[a] Selection criterion: the member countries of PAPEP were included (Argentina, Bolivia, Ecuador, Honduras, Nicaragua, Panama, Peru and Uruguay) along with others deemed relevant for reference and comparison purposes.

To be effective, governance and public policies aimed at combating poverty need to take the heterogeneity and complexity of inequality and poverty itself into account. Other factors in the relationship between governance and social inequality are people's subjective perceptions, the willingness of society to change the situation, the frustration of a more educated population's expectations, the limitations in the behaviour of elites that do not guide their societies but only dominate them and, most especially, the dynamic of old and new socio-cultural conflicts. Confronting the issue of poverty and inequity means first and foremost empowering societies and States to generate policies that enhance the civic capabilities of the poorest and most excluded. Meanwhile, the poor and/or excluded themselves should be seeking to turn their needs into demands that are expressed in the political system and generate results. What seems to be at stake in the management of democratic governance, then, is the ability to manage changes already in progress.

5. Thwarted expectations

A crucial factor in the relationship between politico-institutional change and social change is the growing frustration of people's expectations, the result of the severe problems of inequality and poverty already described interacting with higher levels of education and greater access to traditional and new communications media (table 4). The result is societies that are better educated and more exposed to cultural consumption but lack the resources to meet the demands this exposure gives rise to. This leads to thwarted expectations and is probably one of the main sources of the conflict and dissatisfaction that complicate the task of democratic governance.

In this context, citizens are no longer satisfied with political programmes (which are perceived as unfulfilled) or with the options made available by a promising market economy. They are tending to be more realistic, critical and informed and to have a clearer notion of their own independence and freedom of action.

6. Poor leadership by governing elites

One factor that contributes to institutional crises is poor national leadership by governing elites.

It would appear that alterations and structural limitations in social and political leadership, particularly among groups at the top of the power

TABLE 4

Latin America (13 countries):[a] indicators of technology use, 1990 and 2002
(Per 100 inhabitants)

Country	Telephone lines and mobile phones			Personal computers			Internet users		
	1990	2004	Change	1998	2004	Change	1996	2004	Change
Argentina	9.3	58.1	48.8	5.5	8.2	2.7	0.2	16.1	15.9
Bolivia	2.8	27.0	24.2	0.8	2.3	1.5	0.2	3.9	3.7
Brazil	6.5	59.8	53.3	3.0	1.7	7.7	0.5	12.2	11.7
Chile	6.7	83.6	76.9	6.3	13.9	7.6	0.7	27.9	27.2
Colombia	6.5	40.1	33.6	3.0	5.5	2.5	0.5	8.9	8.4
Ecuador	4.8	39.1	34.3	1.9	5.5	3.6	0.1	4.7	4.6
Guatemala	2.1	34.0	31.9	0.8	1.8	1.0	0.0	6.0	6.0
Honduras	1.7	15.7	14.0	0.8	1.6	0.8	0.0	3.2	3.2
Mexico	6.6	53.9	47.3	3.7	10.7	7.0	0.2	13.4	13.2
Nicaragua	1.3	16.8	15.5	1.9	3.5	1.6	0.1	2.2	2.1
Panama	9.3	38.8	29.5	2.7	4.1	1.4	0.2	9.5	9.3
Peru	2.6	22.1	19.5	3.0	9.7	6.7	0.3	11.6	11.3
Uruguay	13.4	49.4	36.0	9.1	13.3	4.2	1.9	21.0	19.1
Latin America	6.4	50.1	43.7	3.4	9.1	5.8	0.3	11.9	11.6

Source: prepared by the author using data from ECLAC (2007).

[a] Selection criterion: the member countries of PAPEP were included (Argentina, Bolivia, Ecuador, Honduras, Nicaragua, Panama, Peru and Uruguay) along with others deemed relevant for reference and comparison purposes.

structure, are contributors to the low institutional profile of most Latin American countries. There must be a question mark, then, over the ability of elites to develop the kind of national vision and practice needed to resolve socio-institutional problems as part of a comprehensive governance approach.

Again, the perceptions of elites are a particularly important factor when exploring the evolution of democratic governance. The interviews conducted by PAPEP with 206 business, political and social leaders reveal a broad consensus in these groups that the problems of poverty and institutions are the main challenges facing democracy in Latin America. The information obtained by the PAPEP Regional Observatory indicates that: (i) about 50% of the elites in Argentina, Brazil and Mexico consider that poverty and inequity are the recurrent causes of the problems of democracy in the region; (ii) most European elites believe that the region's main problem is its bad income distribution and structural poverty; and (iii) elites in the United States have divided views, with 47% believing that institutional failings are Latin America's main challenge and 44% casting poverty and inequality in this role (Observatorio Regional PAPEP, 2006-2007).

Public opinion is at one with the elites in considering that poverty and inequality affect the functioning of democracy in Latin America. According to the *Latinobarómetro Report 2005*, on a scale of 1 (poorest) to 10 (richest), the average score Latin Americans give themselves is 3.66. The *Latinobarómetro Report 2006* finds that more than 66% of Latin Americans believe their countries to be governed by a few powerful groups who act in their own interest. Indeed, in Ecuador, Guatemala, Nicaragua and Panama less than 20% of inhabitants believe that their country is governed for the benefit of the whole population. Elites in Argentina, meanwhile, are only partially attuned to citizens' perceptions since, unlike these, they are somewhat reluctant to prioritize the fight against poverty in the light of events in recent years.[9] In Honduras, the disrepute into which elites have fallen particularly affects judges, whom 51% of Hondurans consider untrustworthy, and deputies in the National

[9] Only 17% of business leaders consider poverty to be the country's main problem, while 30.2% of the Argentineans surveyed mentioned unemployment and poverty as the two aspects the country most needed to improve (UNDP Argentina, 2005).

Congress, mistrusted by 71% of the population (UNDP Honduras, 2005).

In Latin America, cultural tendencies that have traditionally characterized elites (lack of austerity and solidarity and a lack of proportion between ends and means) seem to persist, and would account for the unequal distribution of power and for these public perceptions. However, the behaviour patterns of elites have also been changing, or new elites with different cultural tendencies have emerged. Better knowledge of changes in the composition, forms of socialization and tendencies of elites would make it possible to improve the accuracy of political mapping, which is a key to diagnosing democratic governance trends in the region.

7. The growth and fragmentation of social conflict

Broadly speaking, social conflicts in Latin American societies have increased and intensified, but they have also fragmented. In some cases these are conflicts of reaction and protest, while in others what is at work are new sociocultural forces that are configuring new political options. These conflicts reveal how difficult it is for institutions and the State to achieve integration, recognition and social progress. What seem to be emerging are new political maps oriented not by a single reference point but by several more limited yet powerful ones. These societies might be said, then, to be polycentric.

Citizens have sought other channels to express their demands and their dissatisfaction with politics, including alternative organizations with the capacity to defy and thereby weaken the State, and organized street protests. A number of these protest movements have come together in alternative political projects, such as the Movement to Socialism (MAS) in Bolivia, or in support of progressive forces in several of the continent's countries. Anomic behaviour can also be seen, especially among young people, aimed against an order that they do not recognize and that has no place for them.

To sum up, institutional problems and those of inequity and poverty are mutually reinforcing, as well as being affected by the existing social situation. This seems to represent a severe constraint on democracy in Latin America and to suggest some very intractable scenarios. This is why it is so vitally important to link social reform with politico-institutional reform to improve democratic governance.

8. Spaces of communication

Spaces of communication, whether the traditional ones or the new electronic networks, are an ever more important factor when it comes to understanding the scope and agendas of political power and change. Political and sociocultural actors participate and take decisions in these spaces and governance cannot be understood without them.

One development of particular importance is the mediatization of politics by television and, more recently, by horizontal methods of communication such as the Internet, mobile telephony and others. The arena of expression or representation of politics is increasingly media-dominated and the main characteristic of the media is that they are the space in which power is expressed. In the region, according to data from the *Latinobarómetro Report 2006*, television and radio are among the most trusted institutions: 69% and 64% of those consulted, respectively, claim to trust them; furthermore, television is the most heavily used information medium, with 83% of Latin Americans getting their news from television in 2006.

In fact, 65% of 231 Latin American leaders interviewed in consultation rounds named the media as being among the most powerful institutions in the region (UNDP, 2004). In Bolivia, the media, and especially television, are having a growing impact on the way politics is conducted (UNDP Bolivia, 2004). During the Outlaws' Rebellion in Ecuador (April 2005), tens of thousands of families were called out on to the streets of Quito by e-mail and mobile phone, leading to the resignation of President Lucio Gutiérrez. Generally speaking, it is the media arena that determines the dynamic of political representation systems and creates the conditions for institutional legitimacy in the region; it also points to the emergence of an audience democracy, an issue that requires further investigation and analysis.

III
Basic governance scenarios

Developments in the world economy between 2005 and 2007 were favourable, particularly for Latin America, which enjoyed a positive growth rate (about 5% in 2006) with a modest slowdown in 2007 (ECLAC, 2006b), owing to a fall-off in the pace of world economic activity, higher oil prices and the incipient subprime crisis, which was to unleash the global recession that has spread across the world this year. The moderation of growth was accompanied by regional convergence around the average growth rate of Latin America and the Caribbean. Two categories of countries can be established: (i) those with exceptionally high growth rates in 2004 (Argentina and Uruguay), which were to grow at a rate closer to the average, and (ii) those with below-average growth rates that year (Bolivia), where growth would pick up.

The region's economic activity was largely driven by external demand. Latin America's terms of trade improved, and this was particularly true of countries exporting oil, gas or metal ores (such as Bolivia, Chile, Peru and the Bolivarian Republic of Venezuela). In an optimistic scenario, the prices of coffee and sugar are expected to remain at their present high levels, as are remittances sent by migrants to their home countries.

The economic growth outlook is relatively favourable or less negative for the region over the medium term. However, whatever growth is attained will not generate greater social equity on its own, nor will it automatically feed through in a desirable way to policy and institutions. The question must be, then, how this growth will affect the socio-institutional dynamic, how the orientation of economic growth will stimulate dynamics of social equity, and what role the national State will play.

The different political forces are offering different approaches to integrating social demands and popular pressure. In this context, it is possible to envisage four general policy approaches and three types of governance scenario.

1. General policy approaches

To group these approaches, the following typology has been prepared on the basis of the political characteristics predominating in the region.[10]

(i) *Conservative modernization:* modernization of the party system, restoration and reinforcement of authority, institutional reform to connect actors and systems, relegitimization of authority on the basis of incontrovertible shared values, moral order associated with market expansion and ideological association with the United States.

(ii) *Practical reformism:* renewal and refashioning of the party system, secularism, alliance-building, quest by the State for a form of institutional management combining economic growth with inclusiveness, modern party system and pragmatic relationship with the United States.

(iii) *Popular nationalism:* quest for political hegemony, central role for the State in the organization of development and democracy, mass mobilization, charismatic leadership legitimized by democracy, primacy of redistribution over production, anti-imperialism.

(iv) *Neo-developmentalist indigenism:* expanded political participation and deliberative democracy, strong social and indigenous movements, State that negotiates with transnational enterprises and pursues inclusiveness, and egalitarianism and moderate anti-imperialism.

Given these approaches, we need to consider how the following issues are addressed. How are the demands of society dealt with and how is wealth distributed? What is the right way to operate in conditions of increasing social activism, especially in countries with substantial natural resources? How can democratic political control be exercised

[10] This typology is qualitative and is based on speeches by political leaders, party manifestos and election results.

over the whole State apparatus? In short, how can growth be combined with institutional change and the distribution of power?

2. Scenarios

In an ideal scenario, a virtuous interaction would be achieved between social reform and institutional change, with strong conflict prediction and management capabilities; the result would be progressive governance and sustainable economic dynamism. In a second scenario, a continuation of the status quo, there would be a continuing divide between the social and institutional spheres; only the political and social reforms indispensable for a minimum of economic governance would be implemented, and conflict anticipation and management capabilities would be variable. In a third scenario, outbreaks of social unrest, the fragmentation of conflicts and institutional breakdown could conceivably lead to situations of social chaos, economic crisis and a retreat from democracy; conflict anticipation and management capabilities would be very poor.

In reality, the likelihood of the different scenarios depends on the political capacity of national actors to combine domestic change with participation in global change. They may find themselves in something resembling one of the three scenarios described, with institutional factors, equity-poverty and the innovation capacity of actors in the political system combining in different ways. They may attach different levels of importance to each component and will differ in their political development. Some will give priority to institutional advances and will seek to reduce poverty, while others will try to improve equity without attempting much on the institutional front. Others still may look for particular one-off combinations. Thus, combinations will vary depending on the political actions and approaches that prevail in the region.

Scenarios are subject to constant change and risk. The way risks are turned into opportunities and uncertainty (inherent in modern change) is coped with will undoubtedly help to determine which political paths the society concerned may be in a position to follow. The existing institutional basis and the progress made with equity and poverty reduction are other important factors underlying political developments. Likewise, the strength and quality of citizen participation will have a critical influence on the quality of change. The more citizens are empowered to make choices or create alternatives by accepting risk, the better the prospects of a virtuous evolution. In short, the quality of the political structure that is created will be a decisive factor.

The medium-term scenarios set out in a variety of national studies prefigure the trends likely to be displayed by the countries of the region that are part of PAPEP.[11]

IV
A road map for a democratic governance agenda

The historic turning point Latin America has now reached offers new potential to combine economic opportunity with measures that can strengthen the ability of political and sociocultural actors to initiate a new cycle of democracy and development on the basis of more and better social equity. The political options are varied and the challenge ahead is to understand the changes now taking place and act upon them in the light of the new tendencies in society, the economy and politics. A new form of citizenship is arising in all the countries and there are new types of linkage between society and the State. It seems likely that there will be a redistribution of power in society.

Any agenda for action on democratic governance ought to include the aspects described below.

(i) *Restore and enhance political ethics based on equity and respect for institutions*. There is a need to promote a political culture that values the public good, in association however with rigorous policies

[11] See www.papep.org for further information.

for oversight of public activities. Accordingly, it is important to strengthen citizen oversight and the development of independent institutions with specific powers of judicial investigation, and even to allow audits by international organizations such as Transparency International.

(ii) *Link policy renewal to changes in society (new social structure, new intercultural reproduction mechanisms, new patterns of socialization, development of the network society, strategic importance of migration, etc.) and also to the new problems and challenges of globalization*. This means rebuilding society's political management capabilities, strengthening political and sociocultural actors, enhancing the capacity for autonomous and independent analysis (in universities, academic centres and other institutions) with a view to preparing short- and medium-term proposals, encouraging deliberation processes, creating shared options, establishing new grammars of conflict (i.e., new languages with different and more complex rules) and orienting renewal towards results that legitimize political action itself. In short, there is a need for agendas that focus on managing policy renewal. No political party on its own has the resources to guide development. The new social complexity requires polycentric coordination, a network of negotiations and agreements, and progress beyond a purely electoral form of democracy, while recognizing the intrinsic value of this. The renewal of political parties cannot come solely from within the party system but has to be based on a new relationship between State and society.

(iii) *Propose new forms of representation and participation to restore confidence in the party system and the institutions of democracy*. This means bringing cultural recognition issues into the institutional process, which in turn means recognizing historical forms of self-government and especially interculturality in all areas of public life and creating institutional mechanisms (indigenous or subnational regional assemblies, etc.) with specific rights within the institutional structure of the State. It also means accepting public representation and deliberation as a form of self-organization that promotes new channels of participation both for particular issues and geographically for subnational regions. It seems essential to connect social and multicultural participation with local governments and those of subnational regions in order to strengthen civil society in these spheres and enhance territorial autonomy, while maintaining the principle of subsidiarity and the unity of the State. This involves the use of electronic communication as a tool for open access to public information, as a means of consultation, interaction and debate, and to ensure equality of opportunities. To this end, it will be necessary to expand the use of electronic communications in the community and make more equipment and public funding available to facilitate democratic participation by citizens. Innovative ways will also have to be found to provide public financing to civil society institutions in order to strengthen civic participation and activity. Of fundamental importance here is for civil society and the State to work in coordination for the common good. However, civil society is not to be confused with a political party or a programme of government: it cannot have a comprehensive strategy for social change. Any aspiration for a social or cultural actor or a political programme to monopolize the public space means denying that space to the diversity and freedom which is essential if civil society itself is to be able to expand. There is a need to strengthen the autonomy of individuals and civil society as the best defence against hegemony or absolutism of any kind. The challenge, then, is to include and try to combine the different actors, interests and orientations in new spaces of deliberation and participation that generate a new civic and political culture and promote options for democracy and development.

(iv) *Increase the State's power of action*. In a renewed conception of development, the market and the State can work alongside each other in the interests of society and for the provision of public goods. This has been demonstrated recently by the new approaches and actors of politics and development. The reorganization and renovation of the State must encompass at least three aspects:

— Participation in global markets is governed by the systemic competitiveness paradigm; what matters is not the competitiveness of one firm or another, but the country's ability to organize and manage its affairs so that economic and non-economic factors are coordinated. Competitiveness entails a coordinating role for the State in the different processes of systemic competitiveness.
— The weight of the market and its disaggregating tendencies give the State a primordial role as a guarantor of social cohesion. Reformulation of the welfare State and development policies is a vital step towards viable development.
— The law-governed State encompasses autonomous

citizen action since what it is, ultimately, is a democratic State capable of speaking for and bringing together the citizen community. It is essential to increase the powers of action of a legitimate State capable of participating in globalization in the name of society and in constant relation with it. The State's capacity to create social cohesion will allow economic growth, distributive policies and development policies to be coordinated as the interests of the nation require in pursuit of greater social justice and poverty reduction. It is essential to regenerate State institutions, which in turn means strengthening a society independent of the State whose form must be determined by each country's particular historical situation. In summary, it seems vital to enhance the capacity and legitimacy of the State so that it can take on and effectively perform the role of an agent of development and democracy. Over and above the technical assistance function, this State leadership can be manifested in the consistency given to the country's programmes by a comprehensive intersectoral vision; the need for coordination through specific programme areas and institutional jurisdictions; the incorporation of transparency mechanisms in management practices and accountability mechanisms for the public authorities and for private-sector actors and civil society organizations; and public-private coordination for development, with programme and project implementation and the adaptation of policies and instruments to different national situations and to the challenges raised by the centre-municipalities relationship.

(v) *Associate advances in equity with the strengthening and renewal of the institutions of democracy*. There is a vital need for virtuous interaction between equity and institutions, on the basis of common social values and goals. Equity means first and foremost the practical recognition of equality for all and the final eradication of the patronage and class-based discrimination which are so common in the political life of Latin America. It is important to promote a practical political culture associated with institutional mechanisms to punish discrimination based on ethnic origin or gender or directed at migrants or other minority groups. Equity means not just correcting unequal distribution but also considering the demands and attitudes of citizens, with a view to recognizing and altering situations of inequity to which a variety of social groups are subject. Thus, the structural problem of poverty and inequality in Latin America needs to be understood as a political problem and addressed by measures to encourage the poor and excluded to turn their needs into demands that are heard by the institutional system.

(vi) *Strengthen the capabilities of today's more autonomous and active citizens*. It is very important to reinforce and legitimize the practice of an active and autonomous citizenship, with better informed citizens whose autonomy and freedom are more firmly rooted and who are better able to speak out and find a hearing. Political parties can no longer impose themselves without listening or govern without convincing, and they are increasingly having to respond to demands for truthfulness, transparency and civic respect. Given the emergence and consolidation of a citizenry of this nature and the development of new spaces of political deliberation, it is becoming essential to renew today's systems of political representation and action.

(vii) *Appreciate the importance of the new media in the configuration of the public space*. Latin American societies are increasingly interconnected. Citizens obtain information and take positions on matters of public interest by following the debates that take place in open forums, particularly the media and the new information technologies. Citizens listen and make themselves heard, furthermore, via public opinion and its connection with the media. While there are obvious tendencies towards private control of public communication, it seems vital for citizens to develop technological capabilities that allow them to engage in new forms of participation and communication through mobile phones, blogs, the Internet and other means. Modern information and communication technologies are powerful agents of a new kind of personal, participatory and interactive communication. Electronic communication can make it easier to debate, form opinions and spread ideas. It would be helpful to formulate policy proposals that opened up new forms of civic participation and citizen oversight of the actions of public institutions and that were submitted to public debate through these communication systems that are increasingly penetrating people's daily lives. The future of democratic governance is bound up with the transformation of traditional public spheres into interactive communication systems. It is hard to combat the politics of scandal or conspiracy by placing restraints on the media: what is needed is to foster debate and reduce corruption. To attain these goals it is essential to improve media access to sources of information on corrupt practices and thereby discourage these, to give statutory protection to journalists, and to find ways of regulating media practices in collaboration with the media themselves.

(Original: Spanish)

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KEYWORDS

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Spatial distribution, internal migration and development in Latin America and the Caribbean

Jorge Rodríguez Vignoli

An examination of the links between migration and development using census micro data for 15 Latin American countries reveals that: (i) internal migration is diminishing, which was not foreseen in the specialist literature, (ii) internal migration, while apparently helpful for individuals and beneficial for successful regions, erodes the human resources of poorer regions, and (iii) as a result of increasing urbanization, urban-urban migration is replacing rural to urban migration as the predominant flow and other types of migration are on the increase, an example being intrametropolitan migration which, unlike the traditional kind, is driven by residential and not occupational factors. Where policy is concerned, the governing principle is freedom of movement within a country's borders, without restrictions or resettlements. Governments have to resort to incentives and indirect measures if they wish to influence migration decisions; however, local measures and regulations do influence intrametropolitan migration choices.

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I

Introduction

Latin America and the Caribbean have undergone major transformations in the past 30 years, several of them associated with migration within countries, i.e., internal migration. The present article examines some trends in this migration over the last 25 years and attempts to relate them to national and subnational development processes and to the living conditions of the population.

As used here, the term "internal migration" refers only to changes of residence that involve the crossing of a predetermined subnational geographical boundary, be this politico-administrative, socio-ecological or of some other kind (Macció, 1985). In the general context of internal migration, which takes on many different forms, this study concentrates on movements between administrative divisions (major and minor), between urban and rural areas, and between cities. Most of the information presented was obtained by processing census micro databases in REDATAM format.[1]

II

Frame of reference

The ultimate purpose of this paper is to review some of the current debates on internal migration and contribute to them with some new information on Latin America, obtained by processing the migration modules of census micro data. Accordingly, the aim of this section is not so much to present a unified theoretical framework as to put the debate in context by seeking to identify the contending positions and arguments.

1. Internal migration and economic and social development

Ever since Ravenstein (1885), the predominant view has been that material progress stimulates migration because it results in a greater choice of transport methods and routes and lower travel costs (Aroca, 2004; Greenwood and Hunt, 2003; Cardona and Simmons, 1975).

While this is still the hegemonic view (Van der Gaag and Van Wissen, 2001), a study by Zelinsky (1971) raised some early doubts about the possibility of predicting internal migration by reference to economic and social development. Zelinsky argued that the relationship between the two was complex, since in the long run economic and social development favoured certain types of internal migration but discouraged others. The result is theoretical ambiguity about the relationship between development and the intensity of internal migration.

These doubts have been reinforced recently by new arguments. Some of these are that: (i) development tends to reduce disparities between different territories in a country, thereby attenuating one of the main causes of internal movement, (ii) development reduces movement costs, with the result that internal migration is replaced by international migration and commuting, (iii) development increases family incomes and thus makes it easier

□ This study is a revised version (with less empirical content but an expanded frame of reference and final policy analysis) of a paper presented by the author at the Expert Group Meeting on Population, Distribution, Urbanization, Internal Migration and Development held by the Population Division of the United Nations Department of Economic and Social Affairs at United Nations Headquarters in New York from 21 to 23 January 2008. Neither this article –which systematizes and summarizes several years' work supported by institutions such as the Inter-American Development Bank (IDB) and the United Nations Population Fund (UNFPA)– nor the original paper necessarily reflects the institutional position of CELADE-Population Division of ECLAC. The author is grateful for the comments of an anonymous reviewer, which were extremely useful in the drafting of this final version, and of course accepts responsibility for any omissions, limitations or failings.

[1] CELADE-Population Division of ECLAC computer program which is used to process hierarchical census and other databases and has a great capacity to operate at different geographical levels. Available at www.eclac.cl/redatam/.

to purchase a home, which is a powerful incentive to stay in one place, (iv) one feature of today's development is the appearance of virtual spaces, and the ability to be present somewhere without physically travelling there is a factor working against migratory movement, and (v) development usually promotes urbanization and as this proceeds, rural to urban migration runs its course, with lower migration the direct result (Van der Gaag and Van Wissen, 2001). In short, there is an ongoing debate about the long-term quantitative trend of migration and the relationship between migration and development, on which this article will attempt to shed some empirical light.

2. The relationship between internal migration and development

Territorial socio-economic inequalities are the main trigger for migration flows, from which it follows that countries with greater internal heterogeneity ought to have more migration.

Since the factors differentiating one subnational territory from another are numerous, it is necessary to identify which of them might be exercising the greatest influence on internal migration flows. The predominant theory (Rosenzweig and Stark, 1997; Lucas, 1997; Todaro, 1980) highlights the impact of employment and income gaps and argues that individuals will decide to emigrate if they calculate that the higher income expected from the move will compensate for the costs of migration. Potential migrants can also be expected to consider the likelihood of obtaining work in the place of destination, as described by Todaro (1969) in his classic model. Consequently, another working hypothesis about this relationship is that internal migration flows ought to go from less developed regions, where incomes are lower, to more developed, higher-income regions.

The dominant theory has been criticized from various sides. It neglects the issue of push factors at the place of origin, which limit the scope for an informed, rational choice of destination (Lall, Selod and Shalizi, 2006; Villa, 1991). It overlooks many causes of migration distinct from the desire to maximize income, such as moves undertaken for residential reasons, i.e., to find better surroundings or daily living conditions by moving to a more comfortable home or a more pleasant area, or to reduce commuting times (Rodríguez, 2004a). It ignores the fact that average wage and unemployment levels at potential destinations may be irrelevant in cases of contract migration (Aroca, 2004), especially if the migrants concerned are specialized workers, in which case they usually earn above-average wages.

There are also a number of specific situations in which the dominant theory fails. One of them is that of regions undergoing colonization, whose attractiveness does not depend on better living conditions or above-average wages but on their natural resource endowment, on expectations of rapid gains and, in many cases, on policies that encourage immigration. Another example are regions that have recently made economic progress, having perhaps set out from relatively low development levels to position themselves successfully in the global economy, and that now have dynamic labour markets that make them a magnet for migrants. A third case is that of metropolitan regions undergoing suburbanization or "concentrated deconcentration", i.e., those where emigration to nearby districts is tending to create extended metropolitan areas (Pinto de Cunha, 2002; Rodríguez, 2002); despite having above-average development indices, these regions lose population because of a lack of space, worsening quality of life or urban policies and regulations. A fourth case, which is the other side of the same coin, is when emigrants from metropolitan areas move to places that have few resources but are near enough to these areas for regular contact with them.

3. The contribution of migration to national convergence or divergence of human resource endowments

Considering the above hypothesis, which postulates a positive relationship between development and attractiveness to migrants, and bearing in mind the age and educational selectivity of internal migration (a subject that will be analysed further on), it can be affirmed that internal migration flows tend to entrench differences between territories in terms of their sex and age structure and the availability of human resources, which means that migration cannot be expected to be conducive to regional convergence within countries. This is not to rule out the hypothesis of territorial convergence within countries that follows from neoclassical economics. This should be examined on the basis of specific territorial economic indicators; some recent studies which have conducted this exercise suggest that what is actually taking place in the region is a process of territorial socio-economic divergence within countries (ILPES, 2007).

Empirical analysis of the role played by migration in the evolution of territorial inequalities can take many varied forms. At the more complex end are general or partial equilibrium economic models; at the other end, comparisons of the socio-economic profiles of migrants and the local population. The results set forth in this article were obtained using a specific procedure developed by the Latin American and Caribbean Demographic Centre (CELADE)-Population Division of ECLAC, and have been presented in several publications since 2004 (Rodríguez, 2004b).

4. Changes in internal migration patterns and characteristics as a result of urbanization

Urbanization influences the scale and configuration of internal migration flows in a variety of ways. One of these is arithmetical, since as a country approaches 100% urbanization the relative importance of migration from countryside to city tends to decline. Conversely, the progress of urbanization leads to the predominance of migration between and within cities. By contrast with the past, furthermore, the predominant direction of movements between cities is no longer necessarily towards the largest. For different reasons (higher cost of living and lower quality of life, the decentralization of production, the spread of service networks to the rest of the urban system and other factors), the largest and most populous metropolises have become less attractive, so that migration between cities may be a force for demographic deconcentration and, in particular, for diversification of the urban system and an increase in the relative weight of medium-sized cities.

The urbanization of Latin America and the Caribbean does have a connection with the region's development, although less so than in countries that are now industrialized (Martine and Rodríguez, 2008). In practice, the region's urbanization has taken place within a context of low incomes, limited resources and institutional failings. Furthermore, the primary and agricultural sectors of the region's economies have been the engines of growth in recent years, leading to suggestions that the migratory attractiveness of rural areas could be restored. However, the evidence available suggests that living conditions are still worse in the Latin American countryside than in the cities. It is therefore likely that net immigration into urban areas will persist, and the present study will attempt to demonstrate this.

5. Organizing hypotheses

The present study has been organized around hypotheses derived directly from the earlier sections in this frame of reference. These hypotheses are as follows:

(i) The scale of internal migration ought to be increasing as a result of economic and social development.

(ii) Internal migration relates in ever more complex ways to the subnational development process. While the direction of migration can still be anticipated from disparities in development between subnational areas, there are a number of exceptions that call the robustness of that relationship into question.

(iii) Given the still predominant direction of flows (see previous hypothesis) and its age and educational selectivity, migration is unlikely to diminish territorial inequalities.

(iv) Migration is very likely to contribute to the creation of territorial poverty traps in areas that have historically struggled in socio-economic terms.

(v) Migration from the countryside to cities is still eroding rural population growth but is a decreasing factor in urban growth.

(vi) The region's large cities are experiencing genuine net out-migration and not merely "concentrated deconcentration".

After reviewing these hypotheses in its different sections, this article will lay out some policy implications suggested by the findings of the research.

III

Internal migration and development in Latin America and the Caribbean: hypotheses and evidence

1. Is internal migration on the increase?

Table 1 presents migration levels and tendencies by migration type. While internal migration levels may appear high at first sight,[2] they are considerably lower than those of the United States. As for trends, it transpires that the stock of internal migrants in the region is stable or slowly rising, but there has been a decline in the internal mobility rate,[3] which is the important variable when it comes to ascertaining the trend. Since developments in Brazil and Mexico have greatly influenced this outcome, figure 1 presents national situations as regards migration in the last five years between major administrative divisions (MADs), confirming that the internal mobility rate has tended to decline in most of the countries. Further research is required to account for this trend. It is safe to say, however, that it is not due to any lessening of socio-territorial inequalities within the countries, as they remain very marked in the region (ILPES, 2007).

This finding does not mean there is no relationship between development levels and internal mobility. Indeed, the relationship is positive and statistically significant in a cross-cutting analysis, since less developed countries tend to have markedly lower levels of internal mobility. Thus, it may be that after a certain threshold development ceases to stimulate internal migration, but on the whole the figures support the contention that development facilitates mobility within a country.

TABLE 1

Latin America and the Caribbean: internal migrants by migration type, 1990 and 2000[a]
(Percentages)

Census round	Absolute or lifelong migration		Recent migration (within the last five years)	
	Major administrative division	Minor administrative division	Major administrative division	Minor administrative division
1990	17.5	34.2	5.1	12.6
2000	17.7	35.2	4.0	8.7

Source: special processing of census micro databases, 18 countries in 1990 and 20 in 2000 (not all of them have data for all four types of migration).

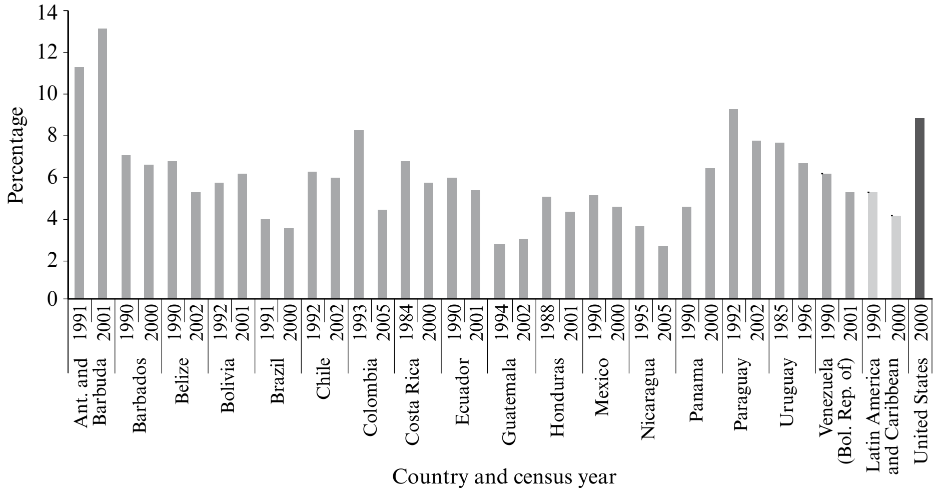
[a] Generally speaking, the internal migration tables created by processing census micro data require certain filters. Some are obvious and have thus been applied to all tables in this article. Thus, people who fail to provide one of the answers needed to construct the migration matrix are excluded. Again, since this essay only analyses internal migration, all the tables exclude people normally resident abroad. In the case of absolute migration, people born abroad are excluded, while in the case of recent migration, people living in foreign countries five years before the census date are excluded. Lastly, other filters are specific to particular migration types. Thus, all the tables dealing with recent migration exclude under-fives.

[2] The author recognizes the limitations affecting comparisons of indicators of internal migration intensity across countries (Bell, Rees and Wilson, 2005; Xu-Doeve, 2005; Van der Gaag and Van Wissen, 2001) and therefore suggests that the results be reviewed and analysed with caution.

[3] I.e., the proportion of the population aged 5 and over who changed residence in the five years prior to the census.

FIGURE 1

Latin America and the Caribbean and the United States: rate of recent internal mobility[a] between major administrative divisions, countries with censuses available from the 1990 and 2000 rounds



Source: ECLAC (2007) and United States Census Bureau.

[a] Five years before the census.

2. Are internal migration flows following the expected pattern and running from less developed to more developed areas?

The evidence available shows a statistically significant positive relationship in most of the region's countries between subnational development, as measured by the human development index (HDI) calculated by the national offices of the United Nations Development Programme (UNDP) for the MADs of their respective countries, and attractiveness to migrants, as measured by the net internal migration rate (table 2).

However, the correlation is weak and in several countries not significant, which means a closer examination is required. This can be carried out using the quadrants in diagram 1, which allow MADs to be classified by their attractiveness to migrants[4] in the 1990 and 2000 round of censuses. Without going into a case-by-case analysis, inspection of

[4] Using the net migration rate as derived from the question about people's MAD of residence five years prior to the census. The categories are (i) inward (net migration positive in both censuses), (ii) outward (net migration negative in both censuses), (iii) upward (net migration negative in the first census and positive in the second) and (iv) downward (net migration positive in the first census and negative in the second).

TABLE 2

Latin America and the Caribbean (selected countries): simple linear correlation between the human development index and the net internal migration rate at the major administrative division level, censuses from the 2000 round

Country and year, indicator and reference year, number of major administrative divisions (MADs) with data			Index of simple correlation between the indicator and the net migration rate (p value in parentheses)	
Argentina, 2001	HDI 1996	24 MADs	0.407	(0.0242)[a]
Bolivia, 2002	HDI 1994	9 MADs	0.619	(0.0378)[a]
Brazil, 2000	HDI 1996	27 MADs	0.451	(0.0091)[a]
Chile, 2002	HDI 1998	13 MADs	-0.01136	(0.5147)
Colombia, 2005	HDI 2000	24 MADs	0.414	(0.0222)[a]
Cuba, 2002	HDI 1996	14 MADs	0.770	(0.0006)[a]
Ecuador, 2001	HDI 1999	15 MADs	0.650	(0.0044)[a]
Guatemala, 2002	HDI 1995-1996	22 MADs	0.442	(0.01972)[a]
Honduras, 2001	HDI 1996	18 MADs	0.697	(0.0006)[a]
Mexico, 2000	HDI 1995	32 MADs	0.408	(0.0102)
Nicaragua, 2005	HDI 2000	17 MADs	0.055	(0.4170)
Panama, 2000	HDI 2000	12 MADs	0.484	(0.0554)
Paraguay, 2002	HDI 2000	18 MADs	0.133	(0.29936)
Uruguay, 1996	HDI 1991	19 MADs	0.063	(0.60097)
Venezuela (B.R. of), 2001	HDI 1996	23 MADs	0.0686	(0.3780)

Source: migration rates: special processing of the census micro data concerned; socio-economic data: national human development reports and official subnational statistics; p value of the correlations: http://home.clara.net/sisa/signif.htm.

[a] Index significant at 95% (p value < 0.05).

DIAGRAM 1

Latin America and the Caribbean (18 countries): classification of major administrative divisions by internal migration status in the censuses of the 1990 and 2000 rounds[a]

Antigua and Barbuda

	Gaining population NMR (+) 2001-1996	Losing population NMR (-) 2001-1996
NMR (+) 1992-1987	St. John's Rural, St. George's, St. Peter's	
NMR (-) 1992-1987		St. Phillip's, St. Paul's, St. Mary's, St. John's City, Barbuda

Barbados

	Gaining population NMR (+) 2000-1995	Losing population NMR (-) 2000-1995
NMR (+) 1991-1986	St. Peter, St. Philip, Christ Church, St. James	
NMR (-) 1991-1986	St. George, St. Thomas	St. Michael, St. John, St. Joseph, St. Andrew, St. Lucy

Belize

	Gaining population NMR (+) 2001-1996	Losing population NMR (-) 2001-1996
NMR (+) 1992-1987	Cayo District	Belize District
NMR (-) 1992-1987	Stann Creek District	Corozal District, Orange Walk District, Toledo District

Bolivia

	Gaining population NMR (+) 2001-1996	Losing population NMR (-) 2001-1996
NMR (+) 1992-1987	Cochabamba, Tarija, Santa Cruz, Pando	Beni
NMR (-) 1992-1987		Chuquisaca, La Paz, Oruro, Potosí

Brazil

	Gaining population NMR (+) 2000-1995	Losing population NMR (-) 2000-1995
NMR (+) 1991-1986	Amazonas, Roraima, Amapá, Tocantins, Espirito, Santo, São Paulo, Santa Catarina, Mato Grosso, Goiás, Distrito Federal Rondônia	Pará, Sergipe, Mato Grosso do Sul
NMR (-) 1991-1986	Rio Grande do Norte, Minas Gerais, Rio de Janeiro	Acre, Maranhão, Piauí, Ceará, Paraíba, Pernambuco, Alagoas, Bahia, Paraná, Rio Grande do Sul

Chile

	Gaining population NMR (+) 2002-1997	Losing population NMR (-) 2002-1997
NMR (+) 1992-1987	Valparaíso, Tarapacá	Atacama, Metropolitana de Santiago
NMR (-) 1992-1987	Antofagasta, Coquimbo, Lib. Gral. Bernardo O'Higgins, Los Lagos	Maule, Bío Bío, la Araucanía, Aisén, Magallanes y la Antártica

Colombia[b]

	Gaining population NMR (+) 2005-2000	Losing population NMR (-) 2005-2000
NMR (+) 1993-1988	Bogotá, Risaralda, Valle, Bolívar, Atlántico, Casanare, Cundinamarca,Guajira, Arauca Quindío	
NMR (-) 1993-1988	Antioquia, Santander, Meta	Boyacá, Caldas, Cauca, Córdob, Chocó, Huila, Magdalena, Nariño, Sucre, Tolima, Amazonas, Caquetá, Cesar, Norte, Santander, Putumayo, San Andrés, Guaviare, Vichada

Costa Rica

	Gaining population NMR (+) 2001-1996	Losing population NMR (-) 2001-1996
NMR (+) 1984-1979	Alajuela, Cartago, Heredia, Limón	
NMR (-) 1984-1979		San José, Guanacaste, Puntarenas

Cuba

	Gaining population NMR (+) 2002-1997	Losing population NMR (-) 2002-1997
NMR (+) 1981-1976	La Habana, Ciudad Habana, Matanzas, Cienfuegos, Ciego de Ávila, Camagüey, Isla de la Juventud	
NMR (-) 1981-1976	Sancti Spíritus	Pinar del Río,Villa Clara, Las Tunas, Holguín, Ganma, Santiago de Cuba, Guantánamo

Ecuador[c]

	Gaining population NMR (+) 2001-1996	Losing population NMR (-) 2001-1996
NMR (+) 1990-1985	El Oro, Guayas, Pastaza, Pichincha, Galápagos, Sucumbíos	Morona Santiago, Napo, Zamora Chinchipe
NMR (-) 1990-1985	Azuay, Cañar	Bolívar, Carchi, Cotopaxi, Chimborazo, Esmeralda, Imbabura, Loja, Los Ríos, Manabí, Tungurahua

Diagram 1 (*continues overleaf*)

Diagram 1 *(concluded)*

Guatemala

	Gaining population NMR (+) 2002-1997	Losing population NMR (-) 2002-1997
NMR (+) 1994-1989	Guatemala, Sacatepéquez, Peten	
NMR (-) 1994-1989	Chimaltenango, Escuintla	El Progreso, Santa Rosa, Sololá, Totonicapán, Quetzaltenango, Suchitepéquez, Retalhuleu, San Marcos, Huehuetenango, Quiche, Baja Verapaz, Alta Verapaz, Izaba, Zacapa, Chiquimula, Jalapa, Jutiapa

Honduras

	Gaining population NMR (+) 2001-1996	Losing population NMR (-) 2001-1996
NMR (+) 1988-1983	Atlántida, Cortés, Francisco Morazán, Islas de la Bahía	Colón, Comayagua, Yoro
NMR (-) 1988-1983		Copán, Choluteca, El Paraíso, Gracias a Dios, Intibuca, La Paz, Lempira, Ocotepeque, Olancho, Santa Bárbara, Valle

Mexico

	Gaining population NMR (+) 2000-1995	Losing population NMR (-) 2000-1995
NMR (+) 1990-1985	Aguascalientes, Baja California, Baja California Sur, Campeche, Colima, Chihuahua, Guanajuato, Jalisco, México, Morelos, Nuevo León, Querétaro de Arteaga, Quintana Roo, Sonora, Tamaulipas, Tlaxcala	
NMR (-) 1990-1985	Coahuila, Hidalgo, Yucatán	Chiapas, Distrito Federal, Durango, Guerrero, Michoacán, Nayarit, Oaxaca, Puebla, San Luis Potosí, Sinaloa, Tabasco, Veracruz Llave, Zacatecas

Nicaragua

	Gaining population NMR (+) 2005-2000	Losing population NMR (-) 2005-2000
NMR (+) 1995-1990	Atlántico Norte, Managua, Río San Juan	Jinotega
NMR (-) 1995-1990	Masaya, Granada, Carazo, Rivas, Nueva Segovia	Madriz, Estelí, Chinandega, León, Matagalp, Boaco, Chontales, Atlántico Sur

Panama[d]

	Gaining population NMR (+) 2000-1995	Losing population NMR (-) 2000-1995
NMR (+) 1990-1979	Panama	Bocas del Toro, Darién
NMR (-) 1984-1979		Coclé, Colón, Chiriquí, Herrera, Los Santos, Veraguas

Paraguay

	Gaining population NMR (+) 2002-1997	Losing population NMR (-) 2002-1997
NMR (+) 1992-1987	Alto Paraná, Boquerón, Canindeyú, Central	
NMR (-) 1992-1987	Presidente Hayes	Alto Paraguay, Amambay, Asunción, Caaguazú, Caazapá, Concepción, Cordillera, Guaira, Itaipú, Misiones, Ñeembucu, Paraguarí, San Pedro

Uruguay

	Gaining population NMR (+) 1996-1991	Losing population NMR (-) 1996-1991
NMR (+) 1985-1980	Canelones	Artigas, Cerro Largo, Montevideo, Rivera, Rocha, Treinta y Tres
NMR (-) 1985-1980	Maldonado, San José	Colonia, Durazno, Flores, Florida, Lavalleja, Paysandú, Río Negro, Salto, Soriano, Tacuarembó

Venezuela (Bolivarian Republic of)[e]

	Gaining population NMR (+) 2001-1996	Losing population NMR (-) 2001-1996
NMR (+) 1990-1985	Lara, Anzoategui, Aragua, Barinas, Carabobo, Cojedes, Miranda, Nueva Esparta, Amazonas	Bolívar
NMR (-) 1990-1985	Delta Amacuro, Mérida, Monagas, Yaracuy	Apure, Falcón, Guarico, Sucre, Táchira, Trujillo, Zulia, Distrito Capital, Portuguesa

Source: prepared by the author on the basis of MIALC data, special processing of census micro data, online processing of the 2005 Colombian census and data sent by the National Statistical Office (ONE) of Cuba.

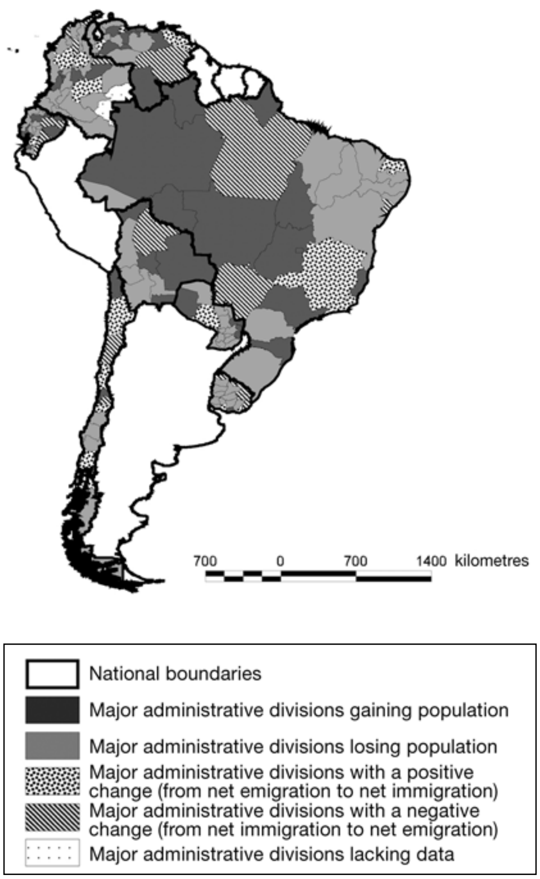
[a] NMR = net migration rate.
[b] No information is available on the major administrative divisions (MADs) of Guainia and Vaupes in the 1993 census.
[c] No information is available on the Orellana MAD in the 1990 census.
[d] No information is available on the MADs of Comarca Kuna Yala, Comarca Emberá and Comarca Gnobe Bugle in the 1990 census.
[e] No information is available on the MADs of Vargas and Dependencias Federales in the 1990 census.

these quadrants reveals a set of MADs that do not conform to the usual relationship between development and migratory attractiveness. A number of these exceptions can be explained by additional factors, suggesting that there is indeed scope for theoretical prediction and analytical modelling, provided specific conceptual frameworks are used. These anomalous MADs whose migratory behaviour might be explained by factors other than their degree of development include: (i) regions undergoing colonization, (ii) regions that have recently progressed economically, (iii) "metropolitan" regions undergoing suburbanization and/or deconcentration and (iv) regions close to metropolitan ones that are undergoing suburbanization.

Until the 1980s, the attractiveness of colonization regions largely derived from policies to promote them (ECLAC, 2007; CELADE, 1984). Now, however, such policies are almost non-existent, either because they have been hit by public-sector financial constraints, or because their results were judged to have been poor, or because they were criticized for being too unmindful of people's rights, or because their adverse environmental consequences became an issue. In some countries, the eclipse of colonization programmes has turned the area concerned into one of net emigration, as has happened, for example, in the Aisén Region in the south of Chile and Beni in Bolivia; a number of others have maintained their attractiveness, however, examples being eastern Bolivia, Ecuador and Paraguay, the Brazilian Amazon and the far south of Argentina (maps 1 and 2). This suggests that an abundance of natural resources, especially land, and expectations of rapid gains are pull factors

MAP 1

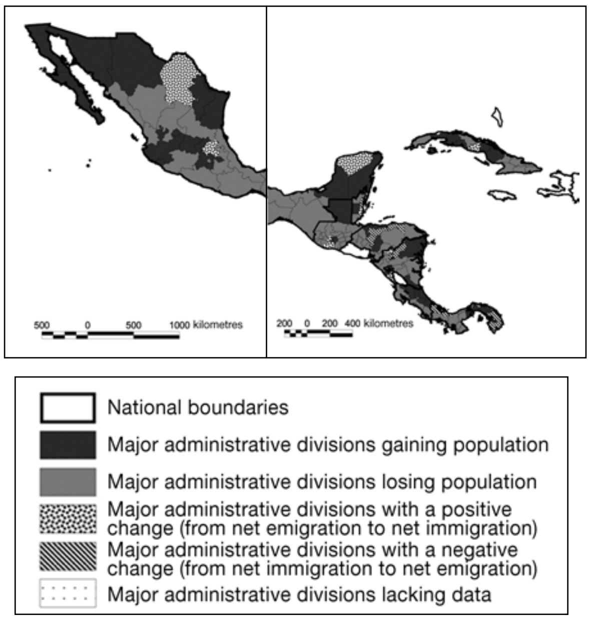
South America (selected countries): major administrative divisions by migration status, based on censuses from the 1990 and 2000 rounds



Source: CELADE-Population Division of ECLAC, using rates obtained from the MIALC database and information supplied by the countries.
The boundaries on this map do not imply official endorsement or acceptance by the United Nations.

MAP 2

Mexico, Central America and the Caribbean (selected countries): major administrative divisions by migration status (1990 and 2000 census rounds)



Source: CELADE-Population Division of ECLAC, using rates obtained from the MIALC database and information supplied by the countries.
The boundaries on this map do not imply official endorsement or acceptance by the United Nations.

that can outweigh some more traditional ones such as wages and living conditions.

In regions of recent economic progress, wages and living conditions may actually be below the national average because they have started from a low base. However, these regions are distinguished by rapid job creation and good prospects, which in turn generate expectations of personal and regional progress. The dynamic of production, and thus of migration too, is closely tied to the world economy as their vigour is usually due to successful participation in global markets thanks, for example, to primary products from fisheries and forestries in the Lakes Region of Chile; to tourism in the Mexican state of Quintana Roo; to industry in the Argentine province of San Luis; or to remittances in the province of Azuay in Ecuador (maps 1 and 2). In future, the economic dynamism of these MADs may lead to high wages and good living conditions, so that their attractiveness will cease to be an anomaly. Since this attractiveness depends critically on world markets, however, they could turn into anomalies again in the event of world recessions that affect external demand for their main product, but in a different way from now: they would be wealthy but crisis-hit regions and thus potential net out-migration regions.

The other two types of anomalous MADs represent two sides of a single underlying process: the suburbanization of metropolises. As land for residential use in city centres runs out, cities spread sideways. This is a complex process that can take many different forms. In Latin America, it has traditionally been manifested in rapid growth on the outskirts of metropolises, where the low price of land or its availability for settlement has attracted immigrants, most of them poor, from other parts of the country or from within the metropolises themselves. As a result of such peripheral growth and of suburbanization in particular, the MADs containing the main city in a number of countries (e.g., Buenos Aires in Argentina, the Federal District in Mexico, Montevideo in Uruguay, the Capital District in the Bolivarian Republic of Venezuela) have experienced net emigration, despite having the best pay and living conditions indicators in their respective countries (maps 1 and 2). This behaviour is actually due in large part to an extrinsic factor, namely the fact that these MADs cover a relatively small area, so while the cities they contain covered only a small part of them in the early twentieth century, rapid growth over the past 100 years has overflowed their boundaries and urban sprawl has spread to neighbouring MADs. Precisely for this reason, the latter have come to exercise a very powerful migratory attraction (maps 1 and 2) that contrasts with their rather poor pay and living conditions.

Thus, any review of the relevant migratory behaviour in the case of metropolitan MADs should take account of all the MADs affected by the urban sprawl of the metropolis. For operational purposes, this means analysing migration at a more disaggregated level (e.g., that of municipalities), and this will be done further on to ascertain whether metropolitan emigration is still taking place once the effect of suburbanization is considered. If it is, the areas that have traditionally been the most developed will have become areas of net emigration. This might be because their relative development position has been worsening (in which case there would be nothing anomalous about this behaviour, assuming outflows are going to areas that are now more developed) or because different factors have come to the fore, a prime example being quality of life, the quest for which appears to be playing a key role in internal migration flows.

In summary, better living conditions are still one of the most potent magnets for migrants. However, these conditions, which are the outcome of a long process, may become misaligned with economic dynamism and job creation, which are more volatile, making the combinations of factors to be considered in migration decisions more complex. Furthermore, the scope for benefiting from economically buoyant or socioculturally attractive local areas without living there has increased owing to suburbanization and long-distance commuting. Thus, the relationship between living conditions, area of residence and migration is more complex than it used to be and can no longer be described merely in terms of a functional transfer of population between disadvantaged and well-off areas, as it could when migration from the countryside to cities was the rule.

3. Does internal migration narrow or widen territorial disparities?

The first effect of migration on the origin and destination areas is seen in the size of their populations. Generally speaking, it tends to contribute to the convergence of population growth between subnational areas since, as already seen, inward migration regions tend to be the most developed, to be further advanced in the demographic transition and thus to have lower natural population growth. But the impact of migration is also qualitative. Depending on their characteristics, migrants may alter the population profile in both the origin and the destination area. Consequently, migration is a decisive influence on sociodemographic disparities between subnational territories. For example, if women migrate to areas with a larger proportion of men, subnational disparities in sex composition will be moderated.

Considering the existing evidence for a persistent positive relationship between development and migratory attractiveness, and bearing in mind the historical selectivity of internal migration in Latin America by age, sex and education level (Rodríguez, 2004a), whose continuing relevance will be examined later on, internal migration would be expected to enlarge territorial differences in sex and education level composition. This is because there is a cumulative disparity in both attributes, owing to earlier migration and the economic and social development process. Thus, the most developed regions have a lower proportion of males and higher levels of education. And since they continue to be net recipients of migration flows in which women and people with above-average education predominate, migration will accentuate territorial disparities in both attributes. In the case of the age structure, this can be expected to heighten disparities in the burden of child-rearing, since net emigration from less developed areas is mainly of young people, which raises the proportion of children in those areas.[5]

The procedure for empirically assessing this hypothesis was devised by CELADE and has been expounded in a variety of publications since 2004 (Rodríguez, 2007, 2004a and 2004b; ECLAC, 2007). The main idea is to take the matrix of flow indicators (derived from the recent migration matrix), compare the marginals[6] and use the difference to deduce whether migration had a (net and exclusive) upward or downward effect on the attribute. As it is beyond the scope and aims of this essay to study the situation of every MAD,[7] a synthetic indicator was used to show how this effect impacts on territorial disparities. This indicator is the simple correlation coefficient between the net and exclusive effect of migration and the starting level of the attribute affected (masculinity, age structure, education level). If there is a positive correlation between the net and exclusive effect of migration and the starting value of the attribute, it can be concluded that migration is widening territorial differences, as MADs with higher starting levels of the attribute (five years before the census) would tend to see greater increases in it as a result of migration. A negative correlation, on the other hand, would show that migration was tending to close territorial gaps. Table 3 shows these correlations for selected countries in the region (those for which the data needed to carry out the calculations were available).

First, in the great majority of countries migration between MADs generally widens territorial disparities in the proportion of children. The marked prevalence of positive coefficients suggests that those MADs with the highest initial proportion of children (typically the poorest) are the ones where that proportion increases most on average as a result of migratory exchanges with other MADs. The mechanism whereby this effect is produced is indirect, as already indicated, as it is the large-scale departure of young people, rather than the arrival of children, that increases the proportion of children under the age of 15 in such MADs.

Migration between MADs also accentuates disparities in the territorial distribution of the population by sex. Already shaped by migration flows, particularly those from rural to urban areas, this distribution has long displayed a fundamental imbalance: a female majority in the most urbanized MADs, which have traditionally been poles of attraction. According to the ratios shown in table 3 (most of which are significant at 95%), recent migration has entrenched inequalities. A positive sign indicates that in MADs with a higher initial proportion of men, that proportion has tended to increase as a net and exclusive result of migration.

[5] The proportion of children is generally higher in less developed regions, as fertility tends to be higher there.

[6] The marginals of an origin-destination matrix are the vertical and horizontal totals of the cells, which identify current residents and past residents. One of the marginals represents the attribute at the time of the census, i.e., the effect of actual migration, and the other represents the same attribute, but with the territorial distribution it would have had if migration had not occurred in the reference period. The comparison is between a current observed situation and a counterfactual scenario. The key assumption in the procedure is that the attribute is constant over time (with variables such as sex, for instance) or that variations are common to the whole population (with variables such as age).

[7] For a more thorough analysis, readers are referred to chapter IV of the *Social Panorama of Latin America 2007*, which deals with this subject of internal migration in the region (ECLAC, 2007).

TABLE 3

Latin America and the Caribbean (13 countries): correlations between selected sociodemographic variables and changes in these as a result of recent internal migration, censuses from the 2000 round[a]

Country	Simple correlation between the starting level of the indicator and the exclusive net effect of migration on the same indicator				
	Average age	Percentage of children	Percentage of older adults	Masculinity ratio	Average years of education (ages 30-59)
Argentina, 2001	-0.27	*0.61*	-0.04	*0.64*	0.02
Bolivia, 2002	0.26	-0.32	*0.67*	0.17	*0.85*
Brazil, 2000	-0.05	0.00	*0.47*	*0.46*	-0.02
Chile, 2002	0.08	0.18	*0.61*	*0.78*	*-0.71*
Costa Rica, 2000	-0.19	0.42	0.35	0.27	0.06
Dominican Republic, 2002	-0.43	*0.80*	0.20	*0.92*	-0.16
Ecuador, 2001	-0.27	-0.13	0.43	*0.47*	*-0.55*
Guatemala, 2002	*-0.67*	0.21	-0.21	*0.48*	-0.04
Honduras, 2001	-0.32	*0.62*	*0.44*	*0.43*	*-0.70*
Mexico, 2000	-0.17	0.29	*0.5*	0.19	-0.22
Panama, 2000	-0.34	-0.24	0.23	*0.87*	0.31
Paraguay, 2002	-0.11	0.26	0.17	*0.84*	-0.38
Venezuela (Bol. Republic of), 2001	0.19	*0.49*	*0.46*	*0.36*	0.14

Source: prepared by the author using data from the Database on Internal Migration in Latin America and the Caribbean (MIALC) and procedures as described in the text.

[a] Coefficients significant at 95% have been shown in italics.

Lastly, the ratios for attributes related to human resource skills are less conclusive. Although they are mainly of negative sign, suggesting that migration helps to reduce territorial disparities in education levels, in only three cases are they significant at 95%, and in one case the ratio is positive. In any event, the evidence does not suggest that migration might contribute to a more balanced territorial distribution of skilled human resources.

4. Does emigration from chronically poor areas worsen the situation there?

Chronically poor MADs tend to be areas of out-migration and to be grouped geographically, forming one or more vast subnational areas that clearly lag the rest of the country in socio-economic terms (maps 1 and 2). Typical examples are north-east Brazil, western Bolivia, south-central Chile and southern Mexico.

Table 4 presents a summary for six countries in the region whose depressed subnational areas are relatively easy to identify. Going by the most recent census, individual results are given for each administrative division in these areas (a few that recorded positive net migration are excluded). The migration to which these poor subnational areas are subject systematically remodels the age structure to their disadvantage, as the tendency is for the working-age population to decline, increasing the representation of children and older adults. Thus, emigration increases the demographic dependency ratio among the population of these depressed areas, which aggravates their already difficult situation yet further. In addition, the migration experienced by the great majority of the MADs studied tends to reduce the average level of schooling, eroding already scarce human capital.

While emigration may provide a way out for the migrants themselves, then, it worsens the situation of these regions and has adverse effects on those who remain in what are now territorial poverty traps.

5. Is there still a rural exodus?

In the 2000 census round, only four of the region's countries (Brazil, Nicaragua, Panama and Paraguay) included questions that can be used to directly estimate rural to urban migration and thus identify the four potential flows between city and countryside.

TABLE 4

Latin America and the Caribbean (six countries): net migration rate and net and exclusive effect of internal migration on the age and education structure of the population in major administrative divisions (mads) forming part of subnational territories that have historically been depressed and experienced net emigration

(Rates per thousand and effect expressed as percentage point change in the attribute)

North-east Argentina (2001)				
Net emigration MADs	Net migration rate (per thousand)	Proportion of children	Proportion of older adults	Education level of household heads
Salta	-0.91	0.69	0.70	-0.082
Jujuy	-2.09	1.30	1.05	-0.735
Tucumán	-0.27	0.04	0.29	-0.006
Santiago del Estero	-1.40	0.87	0.71	-0.143
North-east Brazil (2000)				
Net emigration MADs	Net migration rate (per thousand)	Proportion of children	Proportion of older adults	Education level of household heads
Maranhão	-6.88	0.77	2.52	-0.248
Piauí	-4.06	1.32	1.83	-0.657
Ceará	-0.72	0.47	0.57	0.599
Paraíba	-3.92	0.82	1.86	-0.173
Pernambuco	-3.21	0.49	1.14	-0.072
Alagoas	-5.70	0.40	2.61	-0.033
Sergipe	-0.61	0.31	1.13	-0.063
Bahia	-4.50	0.42	1.95	0.081

Bolivian altiplano (2001)				
Net emigration MADs	Net migration rate (per thousand)	Proportion of children	Proportion of older adults	Education level of household heads
Chuquisaca	-6.27	0.76	1.73	1.724
La Paz	-3.11	0.14	0.20	-0.393
Oruro	-8.88	2.38	2.94	-2.268
Potosí	-14.76	1.67	3.34	-2.168
Ecuadorean sierra (2001)				
Net emigration MADs	Net migration rate (per thousand)	Proportion of children	Proportion of older adults	Education level of household heads
Carchi	-13.13	2.91	2.27	-1.9833
Imbabura	-1.89	1.08	0.85	0.23049
Cotopaxi	-5.13	1.40	0.99	-0.2953
Tungurahua	-1.79	0.94	0.20	-0.2927
Bolívar	-15.16	3.67	2.36	-3.0228
Chimborazo	-9.01	1.91	2.56	0.15052
Loja	-9.30	2.47	2.30	-0.5514

South-central Chile (2002)				
Net emigration MADs	Net migration rate (per thousand)	Proportion of children	Proportion of older adults	Education level of household heads
Del Maule	-0.42	1.73	1.22	0.19
Bío Bío	-2.21	1.15	1.18	-0.46
Araucanía	-0.48	1.66	1.19	0.25
Southern Mexico (2000)				
Net emigration MADs	Net migration rate (per thousand)	Proportion of children	Proportion of older adults	Education level of household heads
Oaxaca	-4.24	0.79	1.68	0.039
Guerrero	-6.42	0.36	2.14	-0.149
Chiapas	-2.85	0.69	0.99	-0.268
Puebla	-1.14	0.28	0.37	0.068
Veracruz	-6.89	1.66	2.98	-0.971

Source: prepared by the author using MIALC data (censuses from the 2000 round) and procedures as described in the text.

TABLE 5

Latin America and the Caribbean (four countries,[a] population aged 5 and over): direct estimates of recent migration between urban and rural areas, 2000 census round[a b]

Country and census	Current area of residence	Area of residence five years earlier		
		Non-migrants at the MIAD level[b]	Urban	Rural
Brazil, 2000	Urban	111 027 460	10 775 021	3 244 288
	Rural	24 965 713	2 168 599	1 161 891
Nicaragua, 2005	Urban	2 109 103	67 567	338 008
	Rural	1 744 706	119 443	64 210
Panama, 2000	Urban	1 297 825	152 089	74 836
	Rural	832 551	40 798	29 741
Paraguay, 2002	Urban	2 175 943	248 014	31 361
	Rural	1 734 786	91 592	53 867

Source: prepared by the author on the basis of specially processed census micro data.

[a] The censuses of these four countries include questions that allow this figure to be estimated.
[b] Brazil and Paraguay record rural to urban migration in minor administrative divisions (MIADs), whereas Nicaragua and Panama do not.

Table 5 summarizes the results. As might be expected from the high level of urbanization in the region's countries, the data show migration between urban areas predominating.[8]

The figures confirm, meanwhile, that counter-urbanization is not taking place, as there is still a net transfer of population from countryside to city,[9] while flows from city to countryside are mainly the result of suburbanization (Guzmán, Rodríguez and others, 2006) and urbanization in the countryside (Ferras, 2007), so that the "return to the countryside" hypothesis is not borne out in these countries.

Migration between rural areas tends to be the least significant in volume. This is partly due to advancing urbanization, the decline of colonization programmes and the depletion of the agricultural frontier in many countries. It is perhaps being underestimated, however, owing to the seasonal nature of many flows that are not captured by censuses. Whatever its level, this form of migration deserves special attention because of the severe impact it can have on the environment, particularly in the case of movements towards agricultural or settlement frontiers (Reboratti, 1990; Pinto da Cunha, 2007).

Given that there are direct estimates for only four of the region's countries and that the results appear inconsistent in two of these, the use of indirect procedures provides a fuller picture of the net balance of rural to urban migration.[10] The figures in table 6 are based on the application of the indirect procedure known as "survival ratios". A number of conclusions can be drawn from the results. First, all countries in the region continue to register net rural emigration. Second, this migration is no longer the main source of urban population growth, as its share in that growth fell from 36.6% in the 1980s to 33.7% in the 1990s.[11] Third, the situation varies greatly between countries: predictably enough,

[8] With the exception of Nicaragua, where the rural to urban migration flow is the largest. There is good reason to conclude that this movement was overestimated by the Nicaragua census, however, as it does not tally with other sources such as the 2001 National Survey on Living Standards (ENNV) or with the moderate pace of urbanization in the country between 1995 and 2005.

[9] The exception is Paraguay where, according to the question that was used, the countryside gained more than 60,000 people as a result of internal migration in the 1997-2002 period. This finding has been called into question by the organization responsible for the census, however (Sosa, 2007).

[10] These estimates are orders of magnitude and not precise figures, as they are based on procedures whose assumptions are not robust. What they provide, furthermore, is the net rural to urban population transfer rate, which combines the net rural-urban migration balance with the reclassification of localities. The latter usually means rural localities being "upgraded" to urban status as a result of population growth, so these results tend to be overestimates.

[11] Figures compatible with other studies (United Nations, 2001). This finding does not rule out rural to urban migration still being the driving force of urbanization, given the greater natural growth in the countryside (ECLAC, 2005 and 2007).

TABLE 6

Latin America and the Caribbean: net rural-urban migration of population aged 10 and over and urban population growth, 1980 to 2000

Country	Net rural-urban migration		Growth in the urban population aged 10 and over		Relative impact of rural-urban migration on urban growth	
	1980-1990	1990-2000	1980-1990	1990-2000	1980-1990	1990-2000
Argentina	1 248 867	829 981	4 146 455	3 414 868	30.1	24.3
Bolivia	565 718	341 525	882 210	1 174 625	64.1	29.1
Brazil	9 167 628	9 483 867	22 868 322	26 856 555	40.1	35.3
Chile	146 535	382 623	1 447 011	1 939 951	10.1	19.7
Colombia	–	–	–	–	–	–
Costa Rica	82 656	338 002	194 507	717 006	42.5	47.1
Cuba	735 083	370 110	1 525 671	918 531	48.2	40.3
Dominican Republic	218 172	553 575	709 784	1 096 408	30.7	50.5
Ecuador	647 934	612 251	1 341 021	1 598 897	48.3	38.3
El Salvador	294 277	–	535 196	–	55.0	–
Guatemala	226 021	824 486	525 724	1 384 850	43.0	59.5
Honduras	258 003	303 742	501 918	685 610	51.4	44.3
Mexico	3 997 266	4 183 486	12 108 257	13 103 802	33.0	31.9
Nicaragua	139 920	–	484 649	–	28.9	–
Panama	113 677	234 038	292 298	432 624	38.9	54.1
Paraguay	280 103	296 914	504 441	652 302	55.5	45.5
Peru	1 001 406	–	2 990 661	–	33.5	–
Uruguay	83 300	34 446	233 238	132 306	35.7	26.0
Venezuela (Bolivarian Republic)	735 042	847 392	3 171 190	4 235 917	23.2	20.0
Total	*19 941 608*	*19 636 438*	*54 462 553*	*58 344 252*	*36.6*	*33.7*

Source: author's calculations, using the intercensal survival ratios procedure.

the significance of rural to urban migration for urban population growth tends to be higher in less urbanized countries. Fourth, in terms of the rural population itself, the net transfer from countryside to city is far from negligible (figure 2). Indeed, in some countries, such as Brazil, emigration from the countryside could still be described as a mass exodus, given the proportions of the total rural population involved.

6. Cities and their attractiveness to migrants: concentrated deconcentration?

This article has already looked at the deconcentration of urban systems now taking place in Latin America (Rodríguez, 2008). The present section will conduct a more detailed analysis, focusing on the three largest cities in 10 Latin American countries. To add value to the analysis, a distinction is drawn between the indigenous and non-indigenous populations so that specific migratory patterns can be identified for each group.

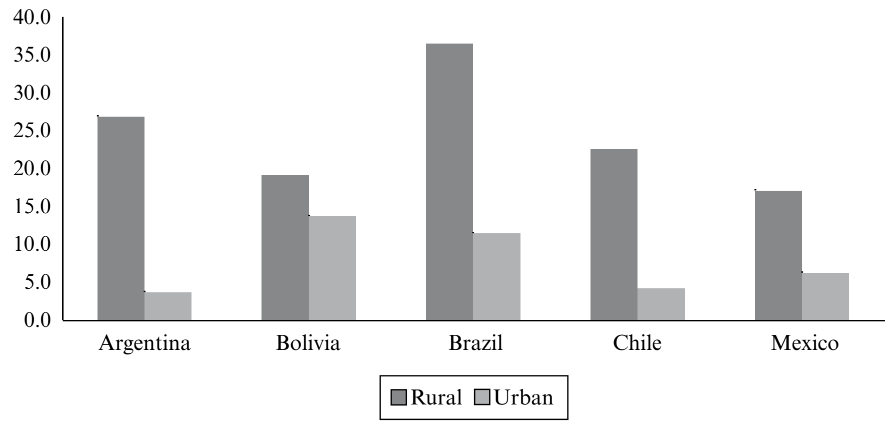
The results shown in table 7 demonstrate that this top segment of the region's urban systems remains attractive, with most of its components continuing to register net immigration. In countries such as Bolivia, Ecuador, Honduras, Panama and Paraguay (in almost all of which the percentage of the population living in cities is below the regional average), the most populous city (or the two most populous) still exercise a powerful draw, so that they continue to exhibit macrocephalous or bicephalous tendencies.[12] However, one city in three registers net emigration, which suggests that this situation (unheard of in the region before the late 1980s) could be gradually spreading among the countries' main cities.

In particular, most of the region's metropolises (cities with 5 million inhabitants or more) have been

[12] In these latter cases, the index of primacy may be declining, but the concentration of the urban system in the two largest cities may be increasing.

FIGURE 2

Latin America (five countries): ratio between net rural-urban migration in 1990-2000 and the rural and urban populations in 1990
(Percentages)



Source: author's calculations, using the intercensal survival ratios procedure.

experiencing net emigration, several of them since the 1980s. Among other factors, this turnaround appears to be due to diseconomies of scale and the redirecting of public and private investment (UNFPA, 2007; Montgomery, 2004; Henderson, 2000), difficulties of governance and the proliferation of urban problems such as public safety issues, traffic congestion and pollution. Nonetheless, these cities continue to receive strong inflows of immigrants; what has changed is that they have lost much of their ability to retain their existing populations.

As the above may be directly related to the "concentrated deconcentration" hypothesized, with people emigrating to nearby areas as part of a process of suburbanization or the creation of low-density cities or city-regions (Diniz, 2007), flows issuing from metropolises were divided into two components, one of migrants going to nearby destinations ("near migration") and another of migrants going to more distant destinations ("far migration") (table 7). The main conclusion from this exercise was that "concentrated deconcentration" only appeared to be operating in the metropolises of Brazil, as net emigration from Greater São Paulo and Greater Rio de Janeiro was indeed exclusively due to people moving to other municipalities in the same state, while both conurbations continued to gain population as a result of net migration from other states. In all other countries, cities experiencing population loss evinced net emigration to both near and far destinations or the latter alone, meaning that deconcentration was real and not just apparent. However, the migratory patterns of several large cities that are still attracting migrants fit the concentrated deconcentration hypothesis and are apparently a manifestation of ongoing suburbanization. This is the case with Guatemala City and Quito, for example.

Lastly, the negative or positive sign of net migration tends to be the same for indigenous and non-indigenous groups, which suggests that the push and pull factors of cities usually have no ethnic bias. However, cities where there are differences associated with ethnic origin include La Paz and Cochabamba, Tegucigalpa, Mexico City, Guadalajara and Asunción. The situation in the Bolivian and Mexican cities is particularly striking, not only because of the size of the indigenous population in the two countries, but because all the cities concerned are losing non-indigenous population while gaining indigenous population. This is obviously increasing the proportion of indigenous people in these cities; perhaps more importantly, indigenous people are taking up residence in cities that are no longer attractive to non-indigenous people. The reasons for this two-way movement and the implications that stem from it should be the subject of further research, which could be undertaken as part of a further-reaching effort to identify and define the links between migration and social segmentation in metropolitan areas (Rodríguez, 2007).

TABLE 7

Latin America (10 countries): internal migration indicators for the three main metropolitan conurbations, censuses from the 1990 and 2000 rounds

(Number of people and rates)

Country and year	Metropolitan conurbation[a]	Indigenous				Non-indigenous				Total		
		Net migration	Rate (per 1,000)	Net ner migration	Net far migration	Net migration	Rate (per 1,000)	Net ner migration	Net far migration	Net migration	Net ner migration	Net far migration
Bolivia,2001	La Paz	12 212	2.9	23 961	-11 749	-6 978	-3.8	3 140	-10 118	5 234	27 101	-21 867
	Santa Cruz	24 279	17.9	-338	24 617	21 532	7.0	2 110	19 422	45 811	1 772	44 039
	Cochabamba	752	0.6	-1 159	1 911	-2 528	-3.0	-1 242	-1 286	-1 776	-2 401	625
Brazil, 2000	São Paulo	-164	-1.1	-747	583	-231 657	-2.9	-339 707	108 050	-231 821	-340 454	108 633
	Rio de Janeiro	435	3.1	-175	610	-29 854	-0.6	-49 505	19 651	-29 419	-49 681	20 262
	B. Horizonte	311	4.3	89	222	61 886	3.4	42 691	19 195	62 197	42 780	19 417
Chile, 2002	Santiago	-411	-0.5	-947	536	-49 306	-2.1	-30 945	-18 361	-49 717	-31 892	-17 825
	Valparaíso	231	5.4	24	207	8 927	2.5	1 361	7 566	9 158	1 385	7 773
	Concepción	-387	-5.4	-46	-341	-7 438	-2.5	711	-8 149	-7 825	665	-8 490
Costa Rica, 2000	San José	-78	-2.6	-13	-65	-13 849	-2.8	229	-14 078	-13 927	216	-14 143
	Heredia	6	2.1	5	1	4 442	5.4	-2 265	6 707	4 448	-2 260	6 708
	Cartago	28	36.8	8	20	2 874	3.9	644	2 230	2 902	652	2 250
Ecuador, 2001	Quito	5 005	28.6	-592	5 597	18 198	3.0	-29 157	47 355	23 203	-29 749	52 952
	Guayaquil	3 068	23.9	31	3 037	41 068	4.3	11 609	29 459	44 136	11 640	32 496
	Cuenca	714	49.1	147	567	11 322	9.4	2 968	8 354	12 036	3 115	8 921
Guatemala, 2002	C. Guatemala	10 666	14.4	-3 028	13 694	489	0.1	-28 459	28 948	11 155	-31 487	42 642
	Quetzalten	1 007	3.8	681	326	98	0.4	216	-118	1 105	897	208
	Escuintla	-152	-6.7	-9	-143	-2 556	-5.2	-561	-1 995	-2 708	-570	-2 138
Honduras, 2001	Tegucigalpa	-219	-12.7	-32	-187	11 671	3.2	1 218	10 453	11 452	1 186	10 266
	San Pedro Sula	181	3.7	-42	223	6 708	3.1	-11 439	18 147	6 889	-11 481	18 370
	La Ceiba	258	6.7	-10	268	1 089	2.1	203	886	1 347	193	1 154
Mexico, 2000	Mexico City	1 137	1.7	1 226	-89	-72 063	-1.0	17 596	-89 659	-70 926	18 822	-89 748
	Guadalajara	41	1.1	-46	87	-14 719	-1.0	-8 256	-6 463	-14 678	-8 302	-6 376
	Monterrey	1 965	52.9	-2	1 967	40 656	3.0	-148	40 804	42 621	-150	42 771
Panama, 2000	Panama City	8 101	67.7	161	7 940	74 220	14.5	5 979	68 241	82 321	6 140	76 181
	Colón	270	17.3	8	262	1 499	2.1	2 105	-606	1 769	2 113	-344
	David	651	62.2	287	364	266	0.5	5 402	-5 136	917	5 689	-4 772
Paraguay, 2002	Asunción	-219	-12.7	-32	-187	11 671	3.2	1 218	10 453	11 452	1 186	10 266
	C. del Este	88	200.0	11	77	-2 257	-2.4	-1 861	-396	-2 169	-1 850	-319
	Encarnación	4	20.0	-2	6	-3 592	-8.7	-1 213	-2 379	-3 588	-1 215	-2 373

Source: special processing of the census micro database.

[a] Definition of metropolitan area derived from the Database on Spatial Distribution and Urbanization in Latin America and the Caribbean (DEPUALC), available at www.eclac.cl/celade/depualc/. Population aged 5 and over living in the country five years before the census and with valid answers to the questions about usual place of residence and place of residence five years earlier.

IV
Policy implications

Until the 1990s, identifying policies and programmes to influence internal migration in different countries of the world and the region was fairly straightforward. This was because the public agenda focused on two forms of migration (from countryside to city and to areas of colonization) for which a range of instruments and measures were available. These policies generally fell into two types, direct and indirect. The former exercised control over where people lived and settled, and included provisions prohibiting people from moving to or away from certain places, restrictions on certain types of movement and compulsory resettlement. The latter aimed to influence the push or pull factors of particular places, usually by improving living conditions, offering specific incentives or stimulating job creation in areas experiencing population loss (Oberai, 1983). Colonization programmes, which were so important in the region during the twentieth century, fell somewhere in between: while in principle they were not coercive, they aimed at massive resettlement via population movements directed and in some degree controlled by the authorities (Oberai, 1988). Lastly, a wide range of public policies had the potential to affect migration decisions, if only because they involved the territorial allocation of resources, investment and equipment.

This description does not imply that these policies had unanimous support or were only applied in one way. Furthermore, the foregoing list is not to be taken as meaning that these policies were successful; indeed, there are numerous examples of failures, unmet goals and expectations, and collateral damage (Martine and Rodríguez, 2008; UNFPA, 2007; Henderson, 2000; CELADE, 1984).

This unfavourable evidence cast doubt over these policies and undermined confidence in them, particularly once the economic and social crisis of the 1980s had broken out. The growing dearth of fiscal resources, the discrediting of large-scale public initiatives and the urgency of other economic and social issues resulted in the progressive abandonment of major territorial population redistribution programmes, to the point that by the mid-1990s they were almost extinct.

Now, however, there is a renewed interest in public-sector interventions relating to territorial issues (ILPES, 2007) and thus to population mobility. This is partly because governments are still dissatisfied with the spatial distribution of their populations and the persistence of situations deemed problematic, including acute regional inequalities, diseconomies and difficulties of various kinds in larger cities and the continuing depopulation of historically poorer areas (United Nations, 2008). It is also due, however, to the appearance of new issues, such as changes in subnational regional economies as part of the globalization process, the creation of ever more complex city systems, the emergence of extended metropolitan areas and the growing visibility of residential segregation.

However, the international normative framework for action in the field of migration is substantially different from the one that existed up until the 1980s. This framework was redefined at the International Conference on Population and Development held in Cairo in 1994, whose Programme of Action contains a specific chapter on "Population distribution, urbanization and internal migration" (http://www.unfpa.org/icpd/icpd-programme.cfm). Although this chapter continues to emphasize some earlier themes, such as more balanced spatial distribution of population and a lessening of push factors, particularly those driving migration from countryside to city, it partakes of the spirit of the Programme of Action, which is one of respect for human rights when it comes to population policymaking. This is made explicit by the first action proposed in this chapter, which reads: "Governments formulating population distribution policies should ensure that the objectives and goals of those policies are consistent with other development goals, policies and basic human rights." Generalized as it is, this first action establishes three key points: (i) the tendency of action on migration is not predetermined, since it plays a supporting role in a development process that is politically guided; (ii) action on migration cannot be taken in isolation but must interact with other official measures; (iii) action on migration cannot run counter to the exercise of human rights.

It is easy to see that this last point deals a heavy blow to direct internal migration policies. Because freedom of movement within a country's borders is a right recognized in the Universal Declaration of Human Rights, limitations on such movement or resettlement measures (particularly when coercive) can be upheld only if there are other rights involved, or public prerogatives with clear legal backing. Although there are still countries that exercise administrative controls on internal movements, perhaps the best known being the Hukou system in China (Chan, 2008), the tendency is towards abolition of policies of this type, at least where movements between regions, cities or urban and rural areas are concerned.

Meanwhile, the diversity of internal migration in the region today stands in contrast to the clear predominance of rural to urban migration on the public agenda until the 1990s. This diversity of internal migration significantly expands the range of policies, programmes and measures available to act upon it. For example, the interventions relevant to labour migration between regions, which have come to the fore again in parallel with the renewed vigour of regional development policies (ILPES, 2007), are different from the interventions that can usefully be applied to intraurban movements or those that have an impact on urban-rural migration. Consequently, and although this may appear to contradict our earlier assertion about the abandonment of direct migration policies, normative and administrative instruments can now be essential when it comes to acting upon certain types of migration, such as intrametropolitan migration.[13]

It is clear, then, that the growing diversity of internal migration calls for greater knowledge, accuracy and judgement on the part of policymakers, who must choose their interventions on the basis of the type of migration they are seeking to influence. In any event, strategies must adhere to the principle of combining the exercise of the right to migrate within the country under the best possible conditions with efforts to combat the kinds of territorial discrimination that tend to create poverty traps. The four pillars of the internal migration strategies that need to be followed are incentives for individuals and companies, geographical allocation of infrastructure and public services, use of territorial land use planning and economic regeneration instruments, and proper understanding and management of the unforeseen migratory effects of different social policies.

A clear example of this are urban recovery and resettlement programmes in city centres. To attract immigrants to these, decision-makers and technical experts have a huge range of instruments at their disposal, ranging from the economic (subsidies) to the social (location of services) and the administrative (amendment of land use regulations). This obvious advantage has a negative side, however, in that these instruments were not designed to influence intrametropolitan migration but to organize the city and optimize its functioning, and these remain the core strategic goals. Consequently, if migratory forces are very strong then using these instruments to counteract them may generate imbalances that eventually result in costs for the city and its inhabitants (rising land prices, overcrowding, congestion, urban sprawl and residential segregation). Having policy instruments is one thing, ensuring that they do no harm is another.

While using specific policies in an effort to halt advancing urbanization or rural to urban migration has proved unsuccessful, and in the view of many specialists ill-advised and unhelpful (UNFPA, 2007), redirecting migration flows between cities continues to be a goal for many countries that consider their population to be overly concentrated in the main city and that, on the basis of recent studies (ILPES, 2007; UNFPA, 2007; Cohen, 2006; Guzmán, Rodríguez and others, 2006; Davis and Henderson, 2003), believe that a solid, dense and diversified urban network is conducive to national development. However, there is an ongoing debate about the effectiveness of the programmes implemented to reduce such concentration. The natural idea of promoting some cities to the detriment (if only by omission) of others must pass several tests. It must benefit national development, be consistent with or at least not run counter to an economic dynamic defined by the market (both national and global), be acceptable

[13] A recent study based on the variegated experience (between states and between countries) of the United States has found, in essence, that local regulations shape the physical configuration and peculiarities of cities, towns, counties and whole regions. Zoning, overarching regulatory plans, infrastructure financing, urban restraint and moratoriums and limits on building permits can favour low-density urbanization and metropolitan decentralization, or can encourage a more compact type of urbanization. They can also have a direct impact on the socio-economic composition of the local population, opening or closing off access to renters and people on low incomes (Pendall, Puentes and Martin, 2006, p. 6).

to local stakeholders and respect individual rights. Clearly, the limitations on the freedom of action of the public authorities in this area derive from many sources.

Lastly, it is worth voicing a warning about public policies whose design fails to take account of their effects on population mobility. Policies that have such effects include those dealing with housing and transport, which have direct and sometimes almost mechanical consequences for residential movements, particularly within cities or between cities and their surrounding areas. These effects must be taken into account when such policies are formulated. Going one step further, they can be designed to exert a desired influence on migration and mobility, obviously without neglecting their natural goal of providing good-quality transport links and living environments for the population.

(Original: Spanish)

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KEYWORDS

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International finance and development: opportunity or threat?

Jorge García-Arias

The volume of assets traded on international financial markets has reached gigantic proportions. The question must arise, then, as to whether international finance might play a decisive role in the provision of stable resources in the quantities needed to fund development. This article analyses the function that international finance might perform and that it actually has performed, focusing specifically on the analysis of private capital flows, official development assistance and external borrowing. It concludes that there need to be far-reaching structural reforms in the workings of the international financial system and in development financing instruments and mechanisms if these are to be placed at the service of long-term development goals.

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I

Introduction

Even the most unsophisticated analyses of international financial statistics reveal a huge disparity between the amount of assets circulating in international financial markets and the volume of such assets destined for the financing of development activities. For example, the latest official data show that assets worth US$ 3.2 trillion are traded on the currency market each day, giving a range of between US$ 832 trillion and US$ 1,000 trillion during 2007 in that market alone (BIS, 2007). Meanwhile, the leading providers of official development assistance donated a little over US$ 100 billion in such assistance between them in 2007 (OECD, 2008), whereas the most rigorous studies of the subject estimate that at least a further US$ 50 billion would be needed each year to achieve the main long-term development objectives (Atkinson, 2005).

The astonishing scale of transactions in international financial markets is the outcome of a long process of international financial liberalization which has been intensifying the interconnections between national banking, monetary and financial systems and leading to the de facto emergence of a global financial space to which they are being subordinated. This process, in turn, is a consequence of a radical overhaul of the system for regulating financial operations and overseeing capital movements that began with the opening of the Euromarket in the late 1950s, gained irresistible momentum in the 1970s and intensified in the following two decades.

This phenomenon of financial globalization is the outcome of a complex process that can be characterized by a number of elements, including an increased technical ability to develop advanced financial relationships, the integration of national markets and local agents into a more global market, a blurring of the traditional distinctions between financial institutions of various kinds and the businesses and markets they serve, and the emergence of banking and financial conglomerates of global proportions.[1]

At the same time, financial globalization has consolidated two kinds of asymmetries of immense importance: first, a situation in which a clearly hegemonic currency of reference, the dollar, underpins all financial and trading relationships,[2] and second, an apparently democratized global financial market with innumerable small agents interacting freely within it, although a more detailed analysis reveals a clearly oligopolistic market in which a very small number of agents control the bulk of the resources channelled through it and there is clear evidence of herd behaviour among them (García-Arias, 2006).

This process of financial internationalization and liberalization, which had its theoretical roots in the first fundamental theorem of welfare economics (FTWE) and the efficient-market hypothesis (EMH),[3] was meant to produce a win-win situation for all international actors. In general, capital would flow from highly developed countries (where it was in surplus and thus lower-yielding) to emerging countries (which were capital-deficient, so that returns on this factor were higher); this would speed up growth in the recipient countries and both the providers and recipients would benefit, as each would have greater opportunities of financial diversification. This general framework of potential benefits was supplemented by some more specific

[1] For a detailed analysis see, for example, Palazuelos (1998).

[2] The hegemonic role of the United States in this context of financial globalization is not manifested solely in the central role played by its currency. It also translates, for example, into the ability to implement economic policies that other economies would be unable to sustain, such as running twin deficits (current account deficit and fiscal deficit) and attracting external resources (partly to finance these twin deficits) on a scale that affects the availability of resources for other economies and thus the financing of development.

[3] In general, the fundamental theorem of welfare economics is concerned with efficiency in the real economy and the efficient-market hypothesis links financial markets to macroeconomic fundamentals. In combination, they reflect a situation in which economic efficiency depends on liberalized factor, financial and goods and services markets and the smallest possible public sector. Financial liberalization (like other kinds) must necessarily be beneficial insofar as it would remove distortions affecting the free play of market forces, such distortions being, it is argued, inherently inefficient. See García-Arias (2002b) for a theoretical analysis.

ones, such as increased competitiveness and efficiency in the system, international diversification of investment portfolios, higher expected returns, lower risk and much else.

This idyllic, mythological view of the operation of liberalized capital markets was suspended, to say the least, following a proliferation of studies calling it into question and empirically identifying problems representing serious cause for concern. The main problems include the unequal growth in opportunities for lenders and borrowers, the shifting of net resources to more developed countries, the enormous volatility of capital flows to countries with lower rates of development, the increased fragility of the international financial system owing to the intensification of currency, banking and financial crises and the increase in excessive borrowing from abroad.[4] All this has been compounded by problems relating to both the origins (illegal activities, money-laundering) and the destinations (financing of illegal activities, tax havens) of this gigantic volume of capital.

In short, international finance could undoubtedly make a huge contribution to the growth and development of all the world's economies and to the well-being of humankind. There are difficulties, however, arising from the origin of the capital, its type, the way it circulates and its destination.

Thus, the many challenges thrown up by the financial internationalization and liberalization process have generated a major debate about the need to rethink this process and, above all, to modify the international financial architecture.[5]

From the development point of view, however, the main problem is that this process has not led to adequate capital flows being channelled to developing economies, let alone the least developed. There is a need, then, to analyse the relationship, not always an idyllic one, between these two phenomena: international finance and development.

II

International finance and development

1. The situation at the turn of the century

Until the early twenty-first century, international capital flows to developing countries had a number of distinctive characteristics (Ocampo, 1999a). First, institutional and private capital flows followed divergent trends: whereas the former were tending to diminish, the latter had been growing over the medium term.

Second, the different types of private capital flows differed enormously in terms of stability: whereas foreign direct investment (FDI) held up well during crises, private-sector financial flows showed marked volatility and contagion effects. In contrast to the dynamism of private capital flows, meanwhile, official development financing (and especially its main component, bilateral assistance funds) showed signs of aid fatigue, declining in real terms over the decade.

Third, private capital flows went mainly to middle-income countries, a trend only partly offset by the redistributive effects of public-sector financial flows at the world level.

Lastly, the volatility of private-sector financial flows, and the extent to which they were concentrated in middle-income countries, ended up by generating exceptional financing needs that were unprecedented in scale. This exceptional financing went to just a

[4] It is beyond the scope of this essay to analyse these matters in detail. See Agüera Sirgo and García-Arias (2000) for a more in-depth analysis of the promises and realities of this process of financial liberalization and internationalization.

[5] While the idea of reforming the international financial architecture is variously understood by different authors, we normally include under this heading (the list is not necessarily exhaustive) aspects relating to: (i) improved transparency and accounting standards, (ii) increased self-regulation and/or external supervision, (iii) modification of capital account management mechanisms, (iv) alterations in the choice of exchange-rate regimes, (v) the design of national economic policies and those proposed by international economic organizations, (vi) the provision of international liquidity and (vii) lender of last resort mechanisms and international bankruptcies and defaults. The issue has been intensively studied in the economic literature, with exponential growth in the last decade. The present paper obviously does not set out to expound the different contributions and approaches to the issue, but the interested reader may consult Caballero (2003), Eatwell (2002), Eichengreen (1999), Griffith-Jones, Gottschalk and Cailloux (2003), Kenen (2001) and Ocampo (1999b), among many others.

few emerging economies. Consequently, financing from the International Monetary Fund (IMF), including that provided under the Enhanced Structural Adjustment Facility, displayed a marked countercyclical tendency in relation to private capital flows and went only to a small number of countries, which were required to comply with economic policy requirements (structural adjustment) too well known to need recounting here.

In this state of affairs, while the volatility and contagion characterizing private capital flows were undoubtedly problematic, so were the exclusion of the poorest countries from these flows and the reduction of the bilateral assistance on which they largely depended. Reform of the international financial structure therefore had to provide solutions to all these problems. Furthermore, the excessive borrowings of many developing countries, especially the poorest, continued to place severe constraints on their development potential.

In this context, the heads of State and government meeting at the International Conference on Financing for Development in Monterrey, Mexico under the auspices of the United Nations adopted a resolution to deal with problems of this nature: the Monterrey Consensus (United Nations, 2002).

2. The Monterrey Consensus

The Monterrey Consensus is built on the idea that international development cooperation needs to be treated as a task for developed countries and underdeveloped and/or developing countries (UDCs) alike.

More specifically, in this alliance each UDC accepts that it has primary responsibility for its own development and that it must (i) improve its internal governance, (ii) fight corruption, (iii) implement policies and investments conducive to growth and employment and (iv) maximize the domestic resources available to finance additional development strategies. For their part, the developed countries agree that those UDCs which adopt transparent, credible and well-designed development strategies should receive maximum support in the form of (i) greater development assistance, (ii) a more development-oriented international trade system, (iii) debt relief or forgiveness measures and (iv) an increase in private-sector development financing. Lastly, the international institutions standing behind the Consensus agree (i) to act more consistently, (ii) to coordinate and cooperate on the planning of their activities and the implementation of international development policies and (iii) to modify the structure and functioning of the international financial system to help achieve these goals.

To this end, the Monterrey Consensus distinguished six main aspects relating to development: (i) the mobilization of local financial resources in the UDCs themselves, (ii) the use of international trade as a development tool, (iii) flows of international private capital into UDCs, (iv) official development assistance, (v) external borrowing and (vi) the international financial system and its relationship to development financing.

Although the first two of these are certainly crucial components of a holistic approach to development financing, strictly speaking they are outside the sphere of international finance on which the present essay focuses. Again, as already suggested, it is clear that the general architecture of the international financial system needs to be modified for the purpose, among others, of turning financial liberalization into a dynamic force for development. In any event, the rest of this paper will concentrate on issues related to private capital flows, official development assistance (ODA) and external borrowing.

III

International private capital flows

In theory, private capital flows can play a very important role in the development of the recipient countries. As we have noted, however, the empirical evidence indicates that in recent decades these flows have not only been limited, volatile and highly reversible (being subject to herd behaviour and contagion effects), but have tended not to go to the poorest countries.

Although instability, volatility and herd behaviour are inherent features of financial markets, both national and international, not all types of capital exhibit them in equal measure. Specifically, FDI is far more stable than other forms of capital (such as portfolio investment and bank lending).

Again, the international markets do not bear the whole responsibility for this situation. The financial systems of recipient countries also differ from those of more developed countries in ways that increase their vulnerability. These differences are as follows:

— the inability of many UDCs to issue debt obligations denominated in their own currencies, particularly long-term ones (the "original sin", according to Eichengreen, Hausmann and Panizza, 2003); this lies behind a whole range of weaknesses in national financial systems, as it ties them, essentially, to the dollar.
— differences in the development level of their financial systems and capital markets, resulting in limited availability of long-term financial instruments in these markets.
— the small size of these countries' domestic financial markets when compared to huge international financial markets.

The recent history of international capital movements includes three waves of private capital into UDCs. The first two occurred in the 1970s and 1990s.

— In the 1970s wave, rapid growth in bank lending to developing countries (as the enormous external surpluses of oil-producing countries were recycled and national and international financial markets were deregulated) was cut short by the debt crisis in Latin America (and other economic regions).
— The 1990s wave, dominated by FDI and portfolio investment flows, particularly into the countries of South-East Asia, was halted by the currency and financial crises suffered by those countries at the end of the decade,[6] which then spread to Russia and Latin America.

The third wave began in 2003 and has continued until the present, as a result of improved economic conditions in the UDCs, strong global economic growth and a consistent policy of low interest rates in the developed countries.

This third cycle of renewed capital flows to UDCs is different, however, from the two earlier ones (Ocampo, Kregel and Griffith-Jones, 2007). Specifically, in 1997-2005 there was a net transfer of resources from UDCs to developed countries, essentially owing to the huge quantity of reserves being built up by developing countries (especially in South-East Asia) as insurance against future financial crises (like the one which had come to pass as this paper was being revised). Furthermore, capital flows became increasingly concentrated on UDCs in East and South-East Asia, and most particularly China, at the expense of Latin America.

Against this general background of renewed private capital flows into UDCs, the main concern of the latter is not just to know whether they will be sufficient to finance their development, but also to know whether they will be reasonably stable or, as has consistently been the case, highly volatile and reversible.

The first thing to be grasped here is that, as mentioned earlier, not all private capital flows (i.e., FDI, portfolio investment and bank lending) exhibit the same volatility.

FDI has three main components: investment in capital goods, local profits reinvested locally and intra-firm lending. In the latest cycle, FDI, and especially that destined for capital goods, has become the main source of external financing and has proved throughout history to be far more stable than other international flows. It also has other advantages, not least that it increases the productivity of recipient countries because it is accompanied by the transfer of technology and know-how and facilitates access to international markets for goods and finance.

Nonetheless, FDI does have some drawbacks. For example, its ties to the local economic structure tend to be very limited, it exacerbates trade deficits and it restricts competition and venture capital investment in the destination countries.

While there is intensive debate about the actual scale of the benefits from FDI and the time lag with which destination countries receive them, the economic literature is generally at one in agreeing that the net balance is positive, but with huge differences between and within countries.

In this latest cycle the benefits have clearly increased, which is encouraging, particularly because capital goods investment is accounting for about two

[6] See García-Arias (2002a) for a detailed analysis of the Asian crises.

thirds of total FDI (World Bank, 2004). Furthermore, some changes in the composition and destination of investment have been detected. The most striking is its rapid growth in the service sector, chiefly owing to the expansion of transnational enterprises in this segment in UDCs, often because of privatization. Although the anticompetitive behaviour characteristic of transnational enterprises usually has adverse consequences when local competition rules are lax, FDI in the tertiary sector has had different effects in the various economic areas to which it has gone. For example, the push of FDI into the service sector in Latin America appears to have had a crowding-out effect on local companies (Agosin and Mayer, 2000). Much the same has happened in the Latin American banking sector, although this orientation of FDI towards financial sectors seems to have generated more positive effects in South-East Asia (Asian Development Bank, 2004) and in eastern European countries (Weller, 2001). Another important aspect of FDI is the growth in South-South flows, which particularly benefit lower-income and less developed UDCs. Nonetheless, an overview of FDI reveals a problem: 75% of it goes to just 10 countries.

In view of all this, UDCs could apply a range of measures to increase the contribution made by FDI to their development, including: devising policies to strengthen ties between foreign and local firms; favouring exports with a high level of value added and the transfer of know-how, skills and technology; giving foreign firms incentives to invest in training; and creating a favourable domestic economic climate by means of infrastructure and training investments, transparent codes of conduct and regulatory stability.

Portfolio investment, meanwhile, tends to be procyclical and highly reversible and volatile. For years (in the two earlier waves) it was the main source of international private capital inflows into UDCs, peaking in 1996. From then on it fell off sharply as a result of the Asian currency and financial crises and the contagion from these, before recovering in recent years. Although its effects can be devastating in the event of a rapid reversal, it is still the main source of debt financing in UDCs, especially in Latin America.

Where bank lending is concerned, this can contribute to some extent to development, especially if it is linked to international trade. It is supplied by banks, financial and non-financial institutions, official export agencies, regional development banks, private insurers and specialist firms.

Its share increased strongly until the 1997 crisis; indeed, it bore much of the responsibility for that, basically by driving a boom-bust cycle (García-Arias, 2002a) and intensifying the herd behaviour of agents (García-Arias, 2006). Its role, particularly in the case of commercial lending, is of particular importance for low-income countries that have difficulty accessing other types of financing in international markets. This being the case, it would be advisable to encourage official export agencies and regional development banks such as the Inter-American Development Bank (IDB) and the Asian Development Bank to play a countercyclical role by guaranteeing and underwriting lending of this type.

IV

Official development assistance

1. The traditional sources of official development assistance

Official development assistance (ODA) still plays an essential role in supplementing the resources of UDCs, particularly in the case of very poor economies that find it especially hard to attract private capital. After peaking at 0.5% of the gross domestic product (GDP) of the most developed countries in the 1960s, however, this assistance fell to a historic low of 0.22% of GDP in the run-up to the agreements of the United Nations Millennium Summit. The Monterrey Consensus restates the traditional goal of raising the level of assistance to at least 0.7% of donor country GDP (of which at least 0.15%-0.2% should go to heavily indebted poor countries (HIPCs).

In 2007, ODA from the main donors, i.e., the 22 member countries of the Development Assistance Committee (DAC), exceeded US$ 103 billion, although this was 8.4% less than in 2006. This assistance represented 0.28% of the combined GDP of the countries on the Committee (OECD, 2008).

The fall in ODA after 2005 is due, paradoxically, to the type of assistance items that gave rise to the large increase that year. Thus, external debt forgiveness operations accounted for some US$ 23 billion at a time when the total increase was somewhat over US$ 26 billion. Discounting debt forgiveness operations in 2005, ODA would have risen by only about 9% on the previous year in current dollars. Given the exceptional character of these assistance packages centred on debt forgiveness (and, to a much lesser degree, on emergency assistance after the devastating 2004 tsunami along the coasts of East and South-East Asia), this rate of increase was never likely to be sustained.

In valuing the amount of official development assistance, it needs to be borne in mind that, according to the data available, some US$ 50 billion dollars a year of extra ODA is needed to achieve the most urgent development goals (United Nations, 2001). For example, ensuring universal primary schooling would require an extra US$ 10 billion or so a year, halving extreme poverty some US$ 20 billion more a year and reducing maternal and infant mortality US$ 12 billion a year (HM Treasury, 2003). This leads to the conclusion that ODA levels have generally been inadequate.

Furthermore, while its total value began growing in the late 1990s, official development assistance presents some major problems:

(i) *Its composition*. Changes in the composition of ODA have made this type of assistance less likely to be effective in attaining sound development objectives. The reason is that the three components which have grown most in recent years are debt relief, emergency aid and technical cooperation. Although these all fulfil important functions, emergency aid is not designed to achieve long-term development goals and the real financial impact of technical cooperation is small, even though it may provide major development benefits. Where the attainment of development goals is concerned, therefore, ODA has been declining as a source of financing for recipient countries. This situation is particularly plain in the case of heavily indebted poor countries, since if emergency aid and debt relief are discounted, official development assistance has fallen by almost 50% since the start of the Millennium Development Goals programme (Ocampo, Kregel and Griffith-Jones, 2007).

(ii) *Its volatility.* Investment and assistance flows need to be reasonably stable over time if long-term development goals are to be effectively attained. However, ODA flows have evinced a clear cyclical tendency associated with business cycles in the donor countries, their ideological, political or cultural affinity with recipient countries and changes in their development policies. This situation is made particularly serious by the fact that ODA in turn has a procyclical effect (Pallage and Robe, 2001; Bulir and Hamann, 2003): falling assistance levels lead to severe fiscal adjustments in the recipient countries (public spending cuts and revenue-raising measures), compounding the effects of the cut in assistance funding.

(iii) *The conditions attached to it.* Not only do donor countries impose specific conditions on recipients, but these are usually accompanied by a requirement for these countries to be members of the International Monetary Fund (IMF) and comply to a reasonable extent with its structural adjustment programmes. Failure to comply with IMF requirements produces a double blow: both IMF assistance and ODA funds from donor countries are forfeited.

(iv) *Its geographical concentration.* ODA is largely confined to a few recipient countries, which are those that have implemented structural reforms with the blessing of the international financial organizations and are seen by donors as efficient administrators of aid.

Again, it needs to be understood that there is no conclusive empirical evidence showing ODA to be effective at reducing poverty and stimulating growth and development. Numerous studies have found that this type of assistance works well only when it goes to countries that apply "sound policies", by which are meant those of the Washington Consensus (World Bank, 1998; Burnside and Dollar, 2000; Collier and Dollar, 2001). Other papers, conversely, put the findings of these studies down to problems with the econometric specification of the models (Hansen and Tarp, 2000; Beynon, 2003), and even find evidence that assistance enhances growth irrespective of the "political environment" (Morrissey, 2001). Some indeed conclude that it is not "sound policies" but other variables such as economic vulnerability, the existence of external shocks (Collier and Dehn, 2001), the presence of conflicts (Collier and Hoeffler, 2002) or even geographical factors (Dalgaard and Hansen, 2001) that significantly influence the effectiveness of such assistance.

Nonetheless, the issues of good governance, institutional change and the implementation of orthodox policies continue to dominate the debate.

In any event, donor countries are increasingly concerned about issues relating to the effectiveness of their assistance. In 2003, the High-Level Forum on Harmonization was held in Rome, followed by the High-Level Forum on Aid Effectiveness in Paris, with a view to drawing up a plan of action to harmonize donors' assistance policies and practices and procedures, both among themselves and with recipient countries.

Another interesting element of ODA is what has been called South-South cooperation, i.e., the fact that some UDCs donate development assistance to other UDCs. While the leading donor has traditionally been Saudi Arabia, followed by the United Arab Emirates and Kuwait, other nations such as China and the Republic of Korea have begun to participate and their weight is growing. These countries basically concentrate on technical cooperation or consultation and coordination forums, usually in specific economic or sectoral areas (one example is the IBSA Dialogue Forum, involving India, Brazil and South Africa).

2. Innovative development financing instruments

In recent years, owing mainly to the political difficulty of attaining the 0.7% goal for ODA as a share of donor country GDP, a number of non-traditional development financing proposals have appeared. They are very diverse, but in all cases the aim is to rapidly increase the volume of financial resources going to the development of poor countries with a view to maximizing the likelihood of the Millennium Development Goals being met by 2015.

In its S-24/2 resolution of 1 July 2000, the United Nations General Assembly itself called for a rigorous analysis of advantages, disadvantages and other implications of a heterogeneous assortment of "new and innovative sources of funding, both public and private". The European Commission has also promoted study and debate in relation to these new development financing sources (Commission of the European Communities, 2005).[7]

This assortment of innovative development financing tools contains very heterogeneous proposals, but some of the main ones are: (i) platforms for issuing new financial instruments that can be used to advance development funding, such as the proposed International Finance Facility (IFF) or the issuing of new special drawing rights at the IMF, (ii) donations to public-private alliances and global funds, (iii) measures to give migrants' remittances a greater impact on development, (iv) global taxes (on certain financial transactions, the arms trade, emissions of polluting gases or air tickets) and (v) a world lottery.

The International Finance Facility is a development financing mechanism proposed by the United Kingdom (HM Treasury, 2003) that would allow aid disbursements to be prefinanced under a borrowing plan guaranteed by the participating States with a view to doubling current assistance flows so that the Millennium Goals can be met. This instrument would provide a new source of stable, predictable financing and would work as follows: first it would accept irrevocable formal multi-year commitments of future contributions from donor countries, which would be its shareholders; then it would issue bonds on the financial markets, repayment of which would be guaranteed by the donors' commitments. Being fully backed, these bonds would enjoy the highest credit rating, meaning that funding could be raised at interest rates lower than those the UDCs would have to pay if they borrowed themselves; lastly, the revenue generated by the bond issue would be distributed to developing countries in the form of donations, never loans. Furthermore, the funds would be "earmarked" for specific countries, programmes or projects determined by the donor countries, which could also set conditions for disbursement of the aid.

Special drawing rights (SDRs) are international reserve assets issued by the IMF to supplement the official reserves of member countries. They are allocated in proportion to each member's quota in the Fund and also act as an international unit of account, and their value is based on a basket of key international currencies. SDRs represent a potential claim on the freely usable currencies of IMF members. Holders of SDRs can obtain these currencies in exchange for their SDRs in two

[7] Some steps have been taken in this direction, since the United Nations has financed and published a study of the subject by well-regarded world specialists in development financing (Atkinson, 2005).

ways: first, through the arrangement of voluntary exchanges between members; and second, by the IMF designating members with strong external positions to purchase SDRs from members with weak external positions. Only governments, central banks, the IMF and a few other official holders can own SDRs. The allocation of SDRs provides each member with a free asset on which net interest is receivable and payable at the same rate. Consequently, if a member's SDR holdings rise above its allocation, it earns interest on the excess; conversely, if it holds fewer SDRs than allocated, it pays interest on the shortfall.

A proposal for a special one-time allocation of SDRs was approved by the IMF Board of Governors in September 1997 through the proposed Fourth Amendment of the Articles of Agreement. This allocation would double cumulative SDR allocations to SDR 42.9 billion. Its intent is to enable all members of the IMF, old and new, to participate in the increase in SDR reserves on an equitable basis. However, the Fourth Amendment has not yet come into force because the necessary consensus among IMF members has still to be achieved. The first requirement is thus to obtain the political support needed for approval. Subsequently, the developed countries (which hold 60% of quotas) could reach an agreement to place their allocations at the disposal of developing countries or multilateral funds that are in a position to carry out countercyclical lending appropriate to UDC needs.

Migrants' remittances, which World Bank figures put at some US$ 200 billion in 2006, can be important to development, essentially for two reasons: (i) they are usually less procyclical than other private capital flows, making them a more stable and predictable financing source; (ii) remittance income tends to be spent on things like food, housing and basic services, thus providing an alternative social security network for UDCs. Since intermediation and transfer costs for remittances are substantial, any significant reduction in these would have a direct impact on the struggle for development. In view of this, the most important concrete objectives must be to lower sending costs and encourage physical and human capital investment and the use of banking services in the countries receiving remittances.

Where public-private alliances and global funds are concerned, the idea is to create stronger tax and economic incentives for private giving so that savers become involved with the system of solidarity financing, thereby providing support for the economic initiatives of partners and of natural or legal persons currently excluded from the banking system. Specifically, consideration is being given to the establishment of new mechanisms to encourage consumers, producers, philanthropists and bankers to contribute to international solidarity measures. One example of such mechanisms is the use of labelling that identifies donors and of payment methods that act as intermediaries in these operations (credit cards, for example).

Again, monetary and financial assets are traded in large, deep, liquid markets, many of them operating globally. International financial transactions (involving currency and securities) thus represent an attractive and highly dynamic tax base, whence the idea of taxing them.

Very low tax rates (0.1%-0.2% in the more ambitious proposals, 0.01%-0.02% in the more moderate ones)[8] could yield large revenues, provided they are applied in a reasonably coordinated way between the main financial centres. Furthermore, these taxes could help to correct externalities if they put a stop to transactions considered to be of zero or negative utility from the standpoint of market efficiency because they produce excessive price volatility.[9]

The effect of such a tax on investment decisions would probably be very slight compared to the effect of other measures or the impact of prudential regulation on the portfolio decisions of many financial organizations and intermediaries.

Taxes on financial transactions are often criticized from the standpoint of economic efficiency. It is complained that they would raise the costs and reduce the volume of transactions; that they would artificially alter the time horizon of investors at the expense of the short term; that they would reduce market liquidity and could thereby contribute indirectly to higher volatility; and that by their very nature they would give rise to cascade effects. It is also argued that their real impact cannot be known or foreseen and could be much greater than the theoretical burden of the tax; that their incidence would be arbitrary and would give rise to a risk of double taxation (particularly in the case of

[8] See Nissanke (2005) for a detailed analysis of proposals.

[9] Currency operations are seen as a special case; one possible objective of a tax on currency transactions would be to combat speculation and help stabilize exchange rates (Agüera Sirgo and García-Arias, 2000).

transactions conducted through intermediaries or mutual funds); and that there would be a high risk of evasion. Nonetheless, the latest contributions to the debate (Nissanke, 2005) seem to have shown that there are technical mechanisms for establishing this tax and minimizing distortions from it. Clearly, the only obstacle remaining is a political one (Agüera Sirgo and García-Arias, 2000).

In the economic literature there have been a variety of proposals for taxing different activities that generate negative environmental externalities, e.g., so-called Pigovian taxes or, when they relate to protection of the environment, environmental taxes. Of all these proposals, the one that has received most attention is a tax on greenhouse gas emissions (most particularly CO_2). This area of environmental taxation, which is beyond the scope of the present essay, may be the one that has generated the most publications in recent years.[10]

Some conclusions about these innovative financing instruments (Atkinson, 2005) should be set out here:

(i) the only two global taxes capable of generating enough revenue to meet the budgetary objective in question (an extra US$ 50 billion or so annually) are a tax on international financial transactions and a tax on CO_2 emissions. Both are technically feasible and would have a limited impact on efficiency and output.

(ii) given that technically and politically viable tax rates are at the lower end of the possible range, there is little chance of them yielding a double dividend. There will surely be no option but to choose between development financing instruments and instruments for dealing with negative externalities.

(iii) there are alternatives to global taxes: the extra resources needed could be raised just by implementing the International Finance Facility so that the required 0.7% of developed country GDP was spent on development cooperation.

(iv) advance estimates of the overall economic impact of the different policy instruments can only be approximate. Until these measures are implemented it will be impossible to ascertain their true impact and the total benefits and costs associated with them.

Of the measures proposed, only three innovative initiatives have been tried out: a tax on airline tickets, the International Finance Facility for Immunisation (IFFIm) and advance market commitments (AMCs), designed to ensure there will be viable markets in future for vaccines or drugs currently being researched (Olivié and Steinberg, 2007).

In 2004, France, Chile and the United Kingdom proposed the creation of a national (not global) tax on airline tickets. At the Conference on Innovative Development Financing (Paris, February 2006), Brazil, Congo, Côte d'Ivoire, Cyprus, Gabon, Jordan, Luxembourg, Madagascar, Mauritius, Nicaragua and the United Kingdom supported the proposal and undertook to create the tax in the medium term, but without setting a specific deadline. Some 20 countries have now given their support to the initiative. The resources raised will be managed by UNITAID (an organization created in September 2006 as part of the World Health Organization) with a view to improving access to treatments for HIV-AIDS, malaria and tuberculosis in UDCs at below-market prices. Although the amount raised is not expected to be great (about US$ 450 million a year), for the first time it has been shown that, with political will, it is possible to design and implement innovative taxes internationally.

The International Finance Facility for Immunisation, mentioned above, was created because there was not enough agreement to implement the IFF proposal (the basic stumbling blocks being governance, the use of funds and levels of leverage). This being so, the decision was taken to set up a kind of scaled-down IFF to finance a major vaccination programme.

Accordingly, all the new funding raised will be used to finance health programmes, particularly vaccinations. This is because there is a consensus that vaccination is linked to global public goods with high long-term yields and that failing to act (vaccinate) would undermine the growth and development potential of the UDCs. The project, which began operating in November 2006 and will generate US$ 4 billion a year up to 2015, is being financed by Austria, Brazil, France, Germany, Italy, Spain, Sweden and the United Kingdom, and by the Bill and Melinda Gates Foundation. The resources raised by donations from these contributors will be managed and distributed by the Global Alliance for Vaccines and Immunization (GAVI), whose participants include the World Bank, the World Health Organization (WHO), UNICEF, the

[10] See Sandmo (2005) for an excellent evaluation of the scope for generating development financing revenue from environmental taxes, and for a review of the literature on the subject.

Bill and Melinda Gates Foundation and a number of donor and recipient country governments. The donations are earmarked for purchasing vaccinations and distributing them to 72 countries with annual per capita income of less than US$ 1,000, which will accelerate compliance with a number of Millennium Development Goals in lower-income countries by directly reducing child mortality and improving maternal health and indirectly reducing poverty and improving education.

Where AMCs are concerned, the goal is nothing less than to alter the structure of incentives for large transnational pharmaceutical companies so that these invest more in researching and producing drugs and vaccinations to cure or prevent diseases that are hugely prevalent in UDCs. The development of these drugs and vaccinations will take an enormous amount of investment, and the poverty of the countries affected by these evils means there is no guarantee of there being a market in which to sell them. In view of this, in February 2007 a number of countries (Canada, Italy, Norway, Russia and the United Kingdom) and the Bill and Melinda Gates Foundation donated US$ 1.5 billion to promote research into a vaccine against pneumococcus disease. Although this measure has been criticized for not focusing on the search for a vaccine against malaria or HIV-AIDS, it may provide an empirical demonstration of the effectiveness of this type of system, with a view to its future implementation.

V
External borrowing

Borrowing from abroad has traditionally been a way for UDCs to supplement and enhance their domestic resources. Since all borrowing entails the payment of interest, however, these countries have been faced with growing debt service requirements which have impaired their growth prospects and required repeated restructuring or renegotiation of their borrowings (debt crises).

Given that debt servicing absorbs a large proportion of the official assistance and private capital flows received by UDCs, the Monterrey Consensus established that reducing or eliminating this cost was a very important additional source of development financing. Naturally, lower debt has to be accompanied by policies to mobilize the domestic resources of the recipient countries and to channel the resources freed from the burden of debt towards the attainment of long-term development goals. Again, total or partial debt forgiveness will only be effective if the borrowing carried out by these countries from that time on is kept at sustainable levels and is within their economic capacity to repay.

A historical analysis of the evolution of UDC borrowing reveals an especially dramatic situation: while most countries began to reduce their debt burden in the 1990s, the poorest and most heavily indebted countries saw that burden increase. Consequently, the Heavily Indebted Poor Countries (HIPC) Initiative was implemented in 1996 with a view to reducing these countries' debt levels, renegotiating their Paris Club loans and allocating the resources thus liberated to development objectives.

Although the HIPC Initiative initially covered a period of three years, an extension was agreed in 1999 (the Enhanced HIPC Initiative). This ended in 2006 after benefiting 29 countries, having been extended from 2004. Nonetheless, the World Bank and IMF have drawn up a list of a further 11 countries that qualified as of 2006 for a process of debt forgiveness and restructuring similar to the HIPC Initiative.

In the 1996-2006 period, the effects in the 29 countries were moderately positive. Taken all together, the current value of their debts fell by two thirds (in 2005, debt service accounted for 2.5% of GDP in these 29 countries). Debt service as a proportion of exports declined on average from 16% in 1996 to 8% in 2005. Furthermore, some of the savings have indeed gone on development spending; for example, taking all 29 countries together, public spending on poverty reduction programmes rose from 6% of GDP in 1999 to 9% in 2005.

Despite the relative success of the HIPC Initiative, however, the large social spending commitments of these countries have exceeded the resources freed up by it, leading them to continue increasing their level of debt.

In view of the persistence of external debt problems, new initiatives have been arising to palliate them. For example, a United Kingdom initiative, the Multilateral Debt Relief Initiative (MDRI), proposes a 100% reduction in debt servicing and a swap of debt for credits granted by the international financial institutions. Canada has made a similar proposal, but with bilateral financing. The United States has also made its contribution through the IMF, the African Development Fund, the International Development Association and many other bodies.

Nonetheless, all these initiatives are aimed at heavily indebted poor countries, whose total debt is in the region of US$ 55 billion, while it is calculated that the total debts of UDCs are in the region of US$ 2.3 trillion.

Countries that are heavily indebted but not very poor and middle-income debtor countries are not included in these initiatives and can only hope that something will come out of the so-called Evian Approach of the Paris Club, which advises its members to take a more lenient approach to debt problems.

Accordingly, and while the initiatives undertaken so far have freed up resources for long-term development goals, it should not be forgotten that the Secretary General of the United Nations has defined debt sustainability as the level of debt that would allow a country to both achieve the Millennium Development Goals and reach 2015 without an increase in its debt ratios (United Nations, 2005). Obviously, for all HIPCs and for many low- and middle-income UDCs, this would simply mean 100% debt cancellation.

In any event, even if debt forgiveness were extended to all UDCs (which is not viable at present), the sustainability of new borrowing would depend greatly on these countries' growth prospects and their ability to participate in international trade. Debt sustainability ought to be part of a broader development strategy that takes a comprehensive and consistent approach to the issues of trade, finance and debt. Linking this issue with the idea of reforming the international financial architecture, there seems to be an urgent need for an international bankruptcy and defaults court.

VI
Conclusions

Financial internationalization and liberalization are among the most salient features of the economic globalization process and perfectly encapsulate the duality of that process, with its combination of opportunity and threat.

On the one hand, it theoretically makes available to every economy on the planet a vast quantity of resources poised to move instantly to wherever the most profitable investment opportunities are to be found. On the other, there seem to be all kinds of difficulties along the way, such as market-dominating oligopolistic agents driven by the herd instinct, resources concentrated in just a handful of financial centres, money-laundering, speculation, financing of illegal activities and recurrent financial and currency crises.

Where the issue of development is concerned, international finance displays the same dichotomy. Had it not grown so strongly over recent decades, it would be hard to account for the progress of economies such as China and India and those of South-East Asia, which have had access to constant flows of international capital to finance their economic progress. The other UDCs need private and public capital flows to help them escape from the trap of underdevelopment and poverty in which they find themselves.

At the same time, the international finance/development connection brings exclusion for some and a threat for others: exclusion because many of the countries that need the most recourses are not among the destinations for private capital flows, a threat because in countries that do receive these flows the beneficial effects are undermined by problems of volatility, scarcity and geographical concentration, by the speculative character they often acquire, and most particularly by their reversibility.

In this context, ODA is required to play the role that habitually falls to every kind of public, institutional or at any rate not strictly private intervention: that of rectifying the imbalances and filling in the gaps left by the private sector (the market). Despite the relatively satisfactory progress of such assistance in recent years, however, there are still major problems to resolve. These concern, among other things, the inadequacy of the total amounts available, their structure and composition, their volatility and their high degree of geographical concentration and conditionality.

Of all these difficulties, the one most relevant to the subject being studied here is the fact that there is not enough ODA to achieve the most imperative development goals. As noted earlier, the development economics literature estimates that an extra US$ 50 billion of assistance a year is needed to meet the Millennium Development Goals by the deadline (United Nations, 2001; Atkinson, 2005). Consequently, there are three alternatives: (i) increase traditional ODA, (ii) design and implement measures to secure additional financing or (iii) abandon the Millennium Development Goals.

If the third option is ruled out, it seems clear that a combination of the first two is the alternative with the best prospects of success. However, given the tendency for total ODA to decline in 2006 and 2007 (chiefly owing to structural problems with its composition) and the limited progress made in applying the innovative financing tools analysed here, the Millennium Development Goals are becoming reminiscent of the closing sequences of those old 1940s films where the hero walks away and is swallowed up by the fog.

To resist this image, we need to recall some of the recommendations put forward in this debate with a view to finally placing international finance at the service of development. In doing so, we shall concentrate exclusively on the three fundamental elements analysed in this essay: private capital flows, ODA and innovative financing instruments.

In the first place, there will need to be deep reforms to the international financial architecture through which international private financial flows move. In other words, financial liberalization ought to be considered, if at all, as the final step in a long process beginning, among other measures, with the implementation of an appropriate institutional and legal framework and the creation of deep, efficient and transparent national financial markets with widely available information and sound financial regulation.

In any event, if the decision is taken to go forward with this process, it ought to be supported by the whole of economic policy; it should be sequential, selective, gradual, economy-specific and capable of being slowed down or reversed if necessary, and it should be subject to the guidance and supervision of local and international economic authorities, who need to have appropriate oversight and regulation instruments available at all times (García-Arias, 2002a).

There is a need not only to improve the quantity, quality and transparency of information but also to adopt a more active position in the process, supervising and regulating financial and currency markets and the financial flows channelled through them. It is also necessary to work for the establishment of an international lender of last resort and an international bankruptcy and defaults court, take measures to combat money-laundering, make it harder for tax havens to be used to evade or avoid tax obligations and democratize international financial institutions.[11]

Second, it is important to fulfil the quantitative ODA commitments made by devoting 0.7% of donor countries' GDP to this purpose while ensuring that the resources provided are of high quality and, most importantly, are stable and constant. ODA should be used exclusively to finance anti-inequality measures, access to all fundamental economic and social rights and the provision of global public goods.[12]

Third, it seems indispensable to reform ODA instruments and rebalance the way they are managed so that partnership is prioritized over aid, with development being treated as a process of economic and social progress that involves the reduction of inequalities and access to fundamental human rights for all. It is also important to support national development strategies decided upon by sovereign nations, give priority to essential services, recognize the vital role played by civil society organizations, establish real partnerships between donor and recipient countries, support partnerships between civil societies and work to enhance the democratic process.

Lastly, it is vital to implement some of the innovative development financing methods proposed, specifically the suggested International Finance Facility (IFF) and supranational taxes. Where IFF is concerned, it must be understood that the funds raised by it should be treated as strictly

[11] See García-Arias (2002b) for further details.

[12] See Kaul and others (1999, 2003) and García-Arias (2002b) for an in-depth analysis of global public goods.

supplementary to those deriving from other ODA flows; should go to the poorest populations; should be used to guarantee the exercise of human rights and access to global public goods; should seek to keep conditionality to a minimum in general and to do away with such conditions as do not contribute directly to the attainment of development goals; and should promote renewed governance, with democratic, representative and transparent decision-making mechanisms in which the countries of the South and their representatives are partners.

Where fiscal measures are concerned, and tax policy in particular, supranational taxation has an indispensable role to play in complementing national taxation (given a context in which the role of public sectors has been affected by globalization) for at least three reasons (García-Arias, 2004): (i) the need to provide global public goods, which require stable and sustainable international public financing, (ii) the erosion of the position of public-sector economic authorities and especially their ability to raise the resources they require to meet the collective needs of their citizens, and (iii) the asymmetrical treatment given by traditional fiscal arrangements to owners of capital, which has undermined the traditional tax base of public sectors.

(Original: Spanish)

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Venture capital
and innovation in Latin America

Luis Felipe Jiménez

One of the drivers of economic growth is innovation, which raises productivity by creating new production methods, technologies, products and firms. This article examines an instrument that supports this process, venture capital, and highlights the need for a financing system covering each phase of innovation. It starts by illustrating Latin America's innovation deficit. It then proceeds to a general analysis of the difficulties affecting the financing of innovation and the provision of venture capital to overcome these. It goes on to examine the form taken by these obstacles in the region and, considering the experience of Brazil and Chile, the methods used to deal with them. In relation to a number of the subjects addressed, the article discusses issues connected with major problems of financial system development.

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I
Introduction

Changing production patterns are at the same time one of the most obvious manifestations and one of the determinants of economic growth. As a number of authors have pointed out, growth does not occur evenly between one sector and another or within sectors. Instead, it arises in conjunction with –and is caused by– new technologies, products and firms, while activities that lose competitiveness as a result of these advances disappear or languish. According to this view of the matter, innovation –broadly defined as the introduction of new ways of doing things, including new organizational structures and new products and processes– is one of the driving forces of growth. For innovating agents, it translates into opportunities to produce more efficiently, increase production capacity, raise market share or create wholly new markets and/or market segments by introducing new products. The effect of this process on growth will depend, among other things, on the intensity of the learning experience triggered by innovations, the extent to which these spread to other sectors and the depth of the production complementarity relationships between innovating agents and the rest of the production system (Ocampo, 2005; Ocampo and Martín, 2003).

Properly quantifying innovation and its results is not easy, as the latter often take the form of organizational changes or are intangible. It is therefore necessary to resort to indirect indicators of innovation effort; these usually include investment in research and development (R&D) and the public and private resources put into innovative firms or programmes.

The available statistics show that, in comparison with advanced economies and newly industrialized Asian economies, the region has a large R&D deficit. As figure 1 shows, investment in R&D is very low in most of the economies included and there were no significant increases between the two periods considered. Brazil has the highest levels of R&D investment in the region, well ahead of the countries that follow it in the ranking: Chile, Argentina and Mexico. At the global level, China and India have made major efforts to increase investment in R&D.

In the advanced countries, an average of over 60% of R&D investment is carried out by private firms. In the Latin American countries for which information is available, most R&D investment is carried out or financed by governments and universities, with firms making a lesser contribution (OECD, 2007).[1] This indicates that firms in these countries have made little use of innovation strategies to raise their competitiveness vis-à-vis the rest of the world, and also that the economic structure there is less complex than in the advanced economies.

Broadly speaking, many innovations take place within existing firms. Furthermore, many firms, particularly large ones, have specialized departments permanently engaged in exploring new ideas and ways of applying them to production processes, marketing strategies or new or existing commercial products. The resulting expenditure or investment forms part of the development plans of these firms which, among other things, have to secure the necessary financing. At the same time, many innovations lead to the creation of new firms, either because existing firms or their employees decide to create a separate venture to develop innovations externally, bearing in mind the risk and expected return, or because innovations are the outcome of initiatives by independent agents. In these latter two cases, one of the conditions for turning an innovative idea into a marketable product, and thereby generating the positive effects on growth referred to above, is the provision of financing with the characteristics needed to overcome the obstacles standing in the way of support for innovation.

In the following pages, section II of this article conducts a general analysis of the challenges facing innovation financing. Section III deals with venture capital as an innovation financing instrument.[2] Section IV more specifically examines the obstacles to the development of venture capital in the region.

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[1] According to the OECD, the share of companies in R&D investment in Chile is just over 40%, probably because of the investment carried out by the National Copper Corporation of Chile (CODELCO) and the National Petroleum Corporation (ENAP), two public-sector firms that by their nature have a substantial research budget available.

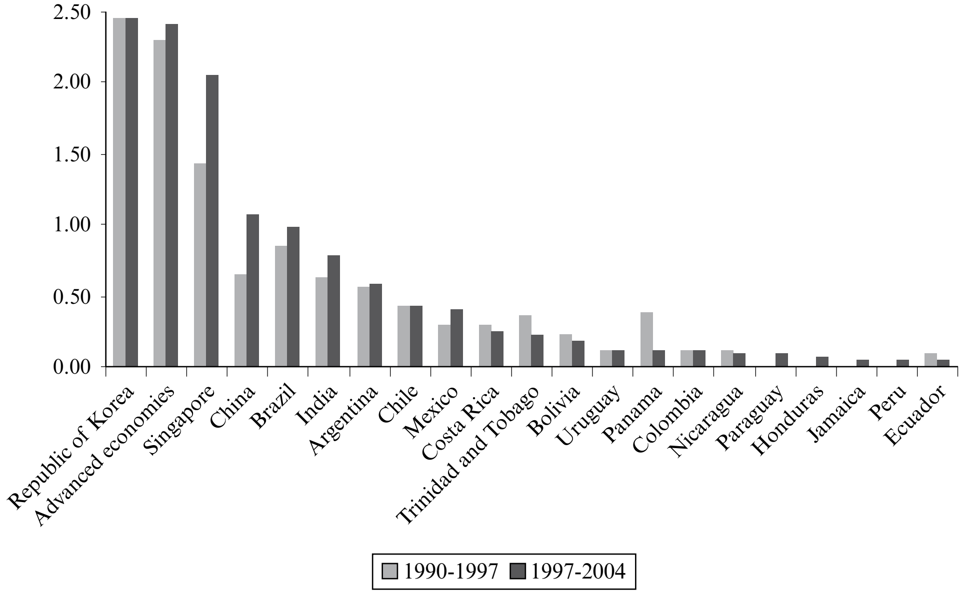
[2] See Jiménez (2006) for an analysis of the characteristics of other financial and tax instruments used to support innovation in developed countries.

Section V reviews the experience of Brazil and Chile in implementing financing of this kind, given that they are the region's two most advanced countries in this area. Section VI, lastly, sets forth some conclusions.

FIGURE 1

Latin America and the Caribbean, advanced economies[a] and Asian countries: investment in research and development, 1990-2004

(Percentages of gross domestic product)



Source: prepared by the author using data from the Ibero American Network of Science and Technology Indicators (RICYT) and World Development Indicators.

[a] The advanced economies are 22 OECD member economies.

II

Difficulties affecting the financing of innovative initiatives and firms

From the financing standpoint, the experience of countries that have used innovation to raise their productivity suggests that supporting innovation requires the construction of a system capable of dealing with the specific obstacles to financing at each stage in the process.[3] This reference to a "system" does not necessarily imply an organic body or bodies under the control of a public-sector agency, or obedience to government policy guidelines. What is being emphasized, rather, is that all the links in this system are necessary to achieve the desired end. Table 1 analyses the different phases of the

[3] This article focuses on the financial factors behind the transformation of an idea into a marketable product and examines how venture capital is particularly suited to the task of supporting innovation. There are other factors, such as the existence of an innovative environment and the availability of human capital and research-oriented institutions, that will determine the success of efforts to innovate and to develop the venture capital system. These aspects are discussed in Avnimelech and Teubal (2004) and Jiménez (2006).

innovation implementation process, its financing needs and some types of stimulus and support.

The division into phases in the table is intended more for analytical purposes than as a realistic description of the innovation process. While there is a certain order of precedence, it is not one-directional; it is common, for example, for changes to be made to the original designs at the marketing and/or production stage, particularly in the case of firms that are constantly innovating and can thus be at all three stages at once. The table also illustrates the financing needs of an innovation that translates into a marketable product. Many innovations are organizational or commercial in nature and serve to increase productivity, but without necessarily resulting in new products.

The early stages of the innovation process are generally R&D-intensive and their results are characterized by a high degree of uncertainty and by externalities that make them difficult to appropriate. For the potential financier, therefore, the likelihood of failure is high, while the chances of repayment under guarantees based on future revenue flows are small. Furthermore, there have to be large investments in some cases to create the infrastructure needed to experiment with new products and processes.

Then when it comes to organizing production and expanding it to commercial proportions, there are usually problems of information asymmetry between entrepreneurs and financiers, conflicts of interest and moral hazard, all factors that increase the cost of participating in the financing of innovative activities.

Information asymmetry exists if financiers (or venture capitalists, as they will be called from

TABLE 1

Innovation financing needs at the different phases of implementation

Innovation implementation phase	Main obstacles affecting financing	Type of financing required	Other stimuli required to overcome obstacles	Further support
Research, conceptual engineering and preparation of prototypes.	High level of uncertainty. Difficulty capitalizing on externalities. The intangible nature of innovations restricts their use as collateral.	Seed capital.	Non-reimbursable financial contributions for R&D projects.	Interaction of institutional R&D bodies (universities, research centres) with firms with a view to creating commercially viable innovations. Creation of networks of "angel" investors. Business incubators.
Preparation of business plans, detail engineering, organization of production and start of commercial production.	Information asymmetries. Lack of payment track record. Lack of collateral.	Provision of capital to establish initial production capacity. Working capital (banks and suppliers) to begin production.	Non-reimbursable contributions to prepare business and engineering plans and support R&D. Preferential credit facilities, support via credit guarantee systems.	Progress with venture capital provision mechanisms.
Equilibrium point reached. Production expanded with rates of return that make the business financially viable.	Information asymmetry and moral hazard. Agency problems and conflicts of interest: insider trading, related party transactions, prolongation of unprofitable projects.	Capital investment for expansion. Working capital.	Continuing R&D support. Capital gains tax exemptions. Continuing support for credit provision by means of guarantee mechanisms and preferential access facilities.	Regulations to allow investment funds to hold minority equity stakes. Legislation regulating the solution of conflicts of interest. Legal framework that does not penalize bankruptcy and that expedites the solution of critical situations.

Source: prepared by the author.

now on) do not have adequate knowledge of the nature of the activity they are backing and cannot easily obtain and process information about the way the business is being run. These asymmetries are particularly acute in the case of technological innovations, since such innovations usually have highly specialized characteristics. Conflicts of interest arise, meanwhile, when entrepreneurs are in a position to take decisions that favour them over other stakeholders. For example, if they find they are in possession of insider information or in a position to abuse their power, they may have an incentive to carry out transactions that are particularly favourable to them or to extend the life of a project for longer than is economically justifiable. Moral hazard, lastly, derives from the difficulty of predicting the future payment behaviour of entrepreneurs, particularly since under certain conditions (time inconsistency of decisions) they may be tempted to change their payment behaviour once they have secured the funding.

Under these circumstances, the amount of financing available for innovative ventures will be small and probably of the wrong type, and the amount of innovation it generates will be suboptimal; given these problems, and the prevalence of bank financing in the region, innovative firms that have collateral available might resort to borrowing. But dealing with information asymmetries in innovative ventures means incurring the cost of risk assessment for highly specialized activities, and this could substantially raise the cost of financing provided by commercial banks, which do not usually have any special expertise when it comes to appraising activities of this type.

Again, while there is a place for bank financing, the nature of innovative projects (which do not usually begin generating returns for a long time) and the risk levels involved in the creation of a new product or process mean there is a preference for long-term funding and equity investments. Venture capital, whose main characteristics are described in the following section, is a system of organization and financing that aims to provide innovative firms with capital while solving the problems of information asymmetry and moral hazard.

III
Venture capital as an innovation financing instrument

After a number of designs had been tried out, the corporate structure known as the limited partnership, introduced in the United States to provide innovative firms with venture capital, has been increasingly adopted by different countries, with some variations. Its general features are described below.

1. The structure of venture capital

The core of the system is the venture capital partnership (VCP), which uses capital investment commitments by third parties to create multiple separately capitalized investment funds, each of which invests in several ventures. Each fund is administered by a general partner or administrator who invests capital on behalf of the VCP and has decision-making powers over the management of the different projects, playing an active role in their administration in collaboration with the entrepreneurs responsible for the innovation.

The general partner or administrator is someone who has experience in organizing businesses and possesses the specialist knowledge needed to understand the content and quality of innovative projects and participate in their management.

Other venture capitalists (private individuals or institutional investment funds) also contribute to the fund as limited partners. While they follow the businesses concerned closely, they do not usually involve themselves directly in their management.

The VCP arranges capital investment pledges for each fund, which are drawn down as projects proceed. Each fund has a fixed lifetime, after which it must be wound up and the equity holdings distributed among the investors and the entrepreneur to be sold on to third parties so that the gain or loss on the original investment is realized. Instead of proceeding to sell off the equity stakes, the fund may extend its life and continue with the projects, but this requires a new round of investment pledges.

This arrangement is designed to deal with the problems of information asymmetry and moral hazard in three ways. First, the operational project involvement of an administrator who specializes in the innovation area concerned and has experience with business start-ups reduces information costs and the risk that the innovator will use the financing provided for his own benefit, i.e., "agency problems" are reduced. Second, the fact that returns are realized via the distribution of equity stakes means that investors' and entrepreneurs' incentives are aligned, as both will wish to maximize the economic value of the project in which they will receive stakes. Lastly, the requirement to wind up the fund on a predetermined date forces the general partner/administrator to show a good performance if he means to continue with the project or finance new ones.

Furthermore, the fact that VCPs have experience with business start-ups (particularly when it comes to turning new technologies into marketable products) and participate in technology creation and dissemination networks means that they are able to assist with the development of the new venture, help draw up its business plans and provide backing for the launch and consolidation of production and marketing activities. If the venture is successful, they will then be in a position once some time has passed to realize large returns by selling equity stakes.

2. Exit mechanisms

Returns on investment are realized when equity stakes are sold, which means that the exit mechanisms available, the price formation process for illiquid assets, the effects of capital gains taxation and the means used to ensure the necessary secondary liquidity all become key factors.

It needs to be understood that this method of establishing returns on the funds invested does have some problems, particularly as regards the corporate governance of a VCP. Since it is very hard to mark an illiquid portfolio of innovative projects to market, fund partners who are not administrators are at something of a disadvantage in their dealings with the administrator and entrepreneur, as these may keep a project's valuation artificially high in order to continue receiving the funding previously agreed upon, rather than admitting to losses. This would help to explain the great variability in the amount of funding intermediated by VCPs in recent years and would appear to be behind the substantial overinvestment in "dot.com" firms in the United States and their subsequent collapse around the year 2000. The search for a solution to this problem continues. In practice, the result has been that many VCPs have disappeared and the industry has consolidated around those with more experience of setting up businesses and a greater capacity to develop advanced technology projects.

Generically, exit mechanisms are as follows: (i) an initial public offering (IPO) in formal public markets or informal private markets, (ii) the sale of the new business to another firm, and (iii) a buyout of the business by the innovating entrepreneur himself.

The natural institutional complement to the development of the venture capital industry is the existence of public and private markets that facilitate the realization of capital gains. Given the boom in this industry, some governments have tried to make it easier for innovative firms to access capital resources, in the knowledge that formal public markets impose regulatory requirements which obstruct such access, and have encouraged the creation of specialist markets for this purpose. Examples of this are NASDAQ in the United States, the AIM in the United Kingdom, the Neue Markt in Germany and the Nouveau Marché in France, among others. Given the difficulties involved in creating these specialized bourses, efforts have also been made to facilitate corporate mergers and acquisitions through private equity markets. In the region, Brazil and Chile have carried out reforms that have led to better exit conditions for venture capitalists, and these will be examined further on.

It is not necessary for these specialized markets to be located in the same country as the venture capital investment, but it is essential for there to be the possibility of access to an appropriate external market. In the case of the Israeli venture capital industry, access to NASDAQ played a key role as an exit mechanism. The greater regulatory requirements resulting from application of the Sarbanes-Oxley Act in the United States have now led to the London AIM gaining in importance as a market for emerging company share offerings.

IV

Obstacles affecting venture capital in the region

In a number of the region's countries, there has been an upsurge of interest in the establishment of venture capital as an instrument for supporting new ventures, particularly more innovative ones. In Argentina, Brazil, Chile, Colombia, Mexico and Peru some degree of progress has already been made with financing of this kind and in some cases an initial or intermediate phase of development has been reached. In most of the countries, however, it is embryonic and numerous obstacles will have to be overcome before it can prosper.

Different analyses of the conditions for creating venture capital in the region's countries[4] have identified what are considered to be the most serious problems.

Where policies and institutions are concerned, the main difficulties stem from the following:

(i) *Inadequate development of support mechanisms for the precompetitive stage*. Few countries have the institutions and instruments needed to turn ideas and projects into marketable products, business plans and new enterprises. The number of business incubators is still small and networks of innovative entrepreneurs and seed capital investors are only beginning to take shape. With some exceptions, public programmes to support enterprise and innovation are of very recent date. As a result, the flow of new projects leading to demand for venture capital is still small.

(ii) *Inadequate corporate governance standards and practices that discourage the involvement of minority partners in new ventures*. Rules on disclosure, related party transactions, insider trading and the distribution of buyout or takeover premiums, among other things, do not do enough to safeguard the rights of minority shareholders, which is what venture capitalists usually are. This is compounded in some cases by provisions outlawing covenants between shareholders or voting agreements and/or lack of provision in legislation for the legal vehicle (or corporate structure) normally used to organize VCPs. Furthermore, institutional mechanisms for resolving disputes between shareholders, or between these and the company, are slow and in many cases not equipped to cope with the highly technical nature of these disagreements.

(iii) *The difficulty of estimating expected project returns*. A lack of uniformity in accounting practices is compounded by incompatibility with international standards. There is uncertainty about the valuation of contingent liabilities (relating to tax, labour and the environment) because of the possibility of changes in rules and standards. In some cases, rulings on such liabilities by the supervisory authority are not even final and are subject to retroactive revision.

(iv) *Double taxation of fund revenues*. Because venture capital funds, both for risk control and absorption and for the administration of the projects they invest in, act as an intermediate vehicle between investors and entrepreneurs, the tax system needs to allow for the possibility of taxation pass-through. This is not always the case, so that income may be taxed both when received by the fund and when paid out to the final recipient.

(v) *Prohibitions and limitations on involvement in certain businesses*. The legacy of earlier experiences and the history of the countries have led in some cases to limitations on State involvement in the productive economy and in others to prohibitions and constraints on the involvement of foreigners in certain industries. While there are reasons for these restrictions, their consequences are manifested in a lessening of the availability of State support instruments, even though international experience indicates that these are important catalysts, and in restricted access to the know-how and market contacts offered by foreign investors, another factor that has been crucial to the success of venture capital outside the region.

(vi) *Regulations limiting banks' equity holdings*. Although banks are some of the main providers

[4] See Charvel, Gonzales and Olivas (2006), Córdova (2005), Echecopar, Angelelli and others (2006), Jiménez (2006), Kappaz, O'Hare and McNeece (2003), Kappaz (2005), Morrison and Foerster (2000), Nacional Financiera (2005), Chocce and Atienza (2006), Superintendencia de Valores y Seguros de Chile (2002), Wallack (2005) and Zervos (2004).

of financing, there are also constraints on their participation in venture capital. These are mainly due to the adoption of a specialized banking model that seeks to limit the risks and conflicts of interest which can arise when a bank is at the same time an owner and a creditor of a particular firm by prohibiting banks from holding direct ownership stakes in companies. This is not the case in countries where a universal banking model prevails, and where these problems are kept at bay by imposing limits on the percentage of firms' equity banks may hold and the amounts they may lend to them. It has been suggested that adopting measures of this kind might facilitate the involvement of specialized banks in venture capital.

Among the features of market structure that hold back the development of venture capital are the following:

(i) *Fledgling entrepreneurial culture and traditional corporate ownership structure*. Many entrepreneurs and small businesses with growth potential do not fully appreciate the contribution that could be made by a partner in terms of managerial expertise and access to new technologies and markets. They prefer not to open up the capital structure, either for reasons of family tradition or because they wish to retain 100% control and not share the running of their businesses with outside partners. On top of this, they appear to be reluctant to provide proper disclosure of the results of their businesses and their real financial and asset position (particularly where financial and tax liabilities are concerned). As already indicated, involvement in management and access to reliable information on the quality of a firm and its business plans are essential conditions for venture capital to work.

(ii) *Lack of venture capitalists and old-fashioned attitudes to risk*. Few people have developed the skills needed to identify, select and administer innovative high-risk ventures. Those with the resources available prefer safer investments. This could be due in part to a legal environment that punishes failure (bankruptcy laws, for example) and to an approach to financial activity that sees taking and administering risks as a spurious, almost illicit road to wealth rather than as a value-creating activity. This attitude is not confined to the private sector. By way of example, the use of modern risk control instruments (such as derivatives) by public-sector enterprises and institutions and the use of public resources in risky undertakings (like supporting new ventures) is generally resisted by policymakers and legislators. Underlying this is an outlook that does not acknowledge the inherent uncertainty of economic activity and interprets an adverse result solely as the outcome of poor decision-making or fraud.

(iii) *Lack of involvement by institutional investors*. As reforms resulting in the creation of pension funds and other institutional saving mechanisms have produced their full effect, the potential of these institutions to finance investment has become apparent. For reasons peculiar to the transition from an unfunded regime to one of private saving, however, the range of eligible investments was initially restricted, with less risky ones being favoured. These restrictions have gradually been lifted, but the share of venture capital investment coming from pension funds is still low as a proportion of their accumulated resources, even if in certain cases it may be significant as a proportion of venture capital funds' total resources. Consequently, there is great potential to channel more resources into venture capital, but it is necessary for institutional investors to be better informed about the characteristics and risks of the asset class this capital represents. It is also necessary for legislators, regulators and the public at large to have a better understanding of risk management; in particular, they need to realize that the contribution made by a particular project to overall portfolio risk depends not just on its actual risk level, but ultimately on the way this correlates with the risk represented by the other assets in the portfolio.[5]

(iv) *Small size of the market for innovative ventures*. The scarcity of innovative new projects offering adequate returns translates, for investors, into reduced scope for risk diversification and, for VCPs, into difficulties in affording the administration costs of a small portfolio. Another factor here is the small size of some economies, which may mean less wealth and less complex production activities.

(v) *Underdeveloped capital markets and illiquid exit mechanisms for venture capitalists*. Underdeveloped capital markets provide less scope for exit strategies involving the stock market, owing to high issuance costs and a lack of liquidity mechanisms for smaller firms and/or those without a track record. At the same time, private equity

[5] The strong growth in the proportion of venture capital financed by pension funds in the United States is put down to the efforts of their regulator to clarify this point.

markets are underdeveloped, which restricts the scope for realizing returns on venture capital investments and thus reduces the incentive to participate.

Lastly, economic growth is another of the ambient conditions that appear to influence the emergence of venture capital, which would be more likely to prosper if new businesses were constantly appearing—a situation that generally only arises under conditions of steady growth. Consequently, the repeated experience of slow and unstable growth in the region can hardly have been conducive to the emergence of financing of this type.

Recognizing the impact of these factors and the importance of stimulating innovation and new business creation to boost economic growth and competitiveness, a number of countries have undertaken reforms to remove the obstacles to the development of venture capital. They include Brazil and Chile, whose progress in this area is reviewed in the following section.

V

Progress with venture capital for innovation financing in Brazil and Chile

According to a recent comparative study, Brazil and Chile are the two countries in the region today that have made the greatest progress in creating favourable conditions for this industry.[6] That study analyses 13 aspects of critical importance for venture capital in 11 Latin American and Caribbean countries and compares them with findings for four countries outside the region where this system of financing is highly developed.[7] Brazil and Chile score close to, and in some cases as well as, the benchmark countries in the five most important aspects. These are: (i) tax treatment, (ii) protection for minority shareholders' rights, (iii) the removal of restrictions on the participation of institutional investors, (iv) capital market development and the practicability of exit strategies and (v) corporate governance requirements.

1. Progress in Brazil

As noted earlier, a number of indicators show that Brazil is the country making the greatest innovation effort in the region. Three key aspects of the Brazilian experience have been: the recent law on innovation,[8] intended to encourage this and enhance public-private interaction; the support programmes operated by the National Bank for Economic and Social Development (BNDES) and the Finance Company for the Study of Programmes and Projects (FINEP), including one oriented towards venture capital; and the creation by the São Paulo Stock Exchange (BOVESPA) of favourable conditions for minority equity holdings. This last measure in itself represents an important innovation for the development of capital markets in the region, over and above the financing of innovative initiatives.

Brazil's innovation law foments commercial interaction between public- and private-sector innovation bodies. Thus, it allows public-sector science and technology institutions[9] to establish strategic alliances and sign contracts with private-sector firms and non-profit organizations governed by private law to carry out R&D activities aimed at creating innovative products and processes. To the same end, it empowers the public sector and its authorized agencies to take minority equity stakes in private-sector firms whose specific purpose is to devise science and technology projects with a view to creating innovative products and processes.

[6] This section is based on information and figures presented in detail in Jiménez (2007).

[7] See Economist Intelligence Unit (2005). The countries from the region that were included were Argentina, Brazil, Chile, Colombia, Costa Rica, El Salvador, Jamaica, Mexico, Peru, Trinidad and Tobago and Uruguay. The economies taken as benchmarks were Israel, Spain, Taiwan Province of China and the United Kingdom.

[8] Law 10973 of 2 December 2004, implemented in 2005.

[9] The innovation law defines science and technology institutions as governmental bodies or organizations whose institutional mission includes the carrying out of basic and applied research of a scientific or technological character.

Intellectual property rights over the end product are proportional to the equity holding.

It also encourages the participation of science and technology institutions in the innovation process by means of provisions allowing these institutions and those of their staff who participate in innovation processes to receive some financial reward. Thus, public-sector science and technology institutions may enter into technology transfer and licensing rights for the technologies they create and may provide R&D services to private-sector firms.

As can be seen, the thinking behind this law is markedly at odds with approaches circumscribing the role of the State in the productive economy to one of regulation and supervision and the correction of static market failures.

For their part, BNDES and FINEP operate support programmes for innovative firms, particularly those of a technological character, using traditional instruments such as subsidies and preferential credit facilities, but also equity holdings in innovative firms through VCPs and incubation programmes for such companies.

Financing comes from their own resources and from budget revenues. The latter include those raised by specific taxes or royalties applied to different industries, giving rise to 16 sectoral funds whose implementing agency is FINEP. By 2006, almost US$ 600 million had been drawn down from these funds for science and technology investment. As of 2004, meanwhile, venture capital funds had committed US$ 5.58 billion, mostly for start-ups. Over 50% of the firms in the portfolios of these funds belonged to sectors in which emerging companies are usually based on new technologies[10] (table 2).

Since December 2000, the stock market has undergone radical changes which, while not explicitly designed to support venture capital investment, in practice have given them a boost which could have the effect of consolidating this method of financing innovation and entrepreneurship. The changes introduced are meant to address the main factors discouraging minority investors (particularly foreign ones) from holding equity in companies.

In December 2000, BOVESPA introduced three new company listing segments, with requirements to which firms can voluntarily conform. The first of these segments is the Novo Mercado, whose standards of governance, transparency and protection for minority partners are more demanding

[10] The following are classed as high-technology sectors: information and communication technologies (ICTs), electronics, industrial products and services, telecommunications, biotechnology, medicine and health care.

TABLE 2

Brazil: distribution of firms in venture capital fund portfolios by industry, December 2004

Sector	Number	%	Sector	Number	%
1. Information and communication technologies (ICTs) and electronics	92	30	7. Biotechnology	10	3
Software	50	16	8. Financial services	10	3
Process outsourcing	14	5	9. Construction/real estate	9	3
Internet	8	3	10. Travel and leisure	9	3
Machinery and equipment	7	2	11. Agribusiness	8	3
2. Industrial products and services	41	13	12. Medicine and health care	8	3
Iron and steel	7	2	Pharmaceutical products	3	1
Machinery and equipment	7	2	Medical and hospital products	2	1
Basic industry	6	2	13. Energy	7	2
Industrial automation	4	1	14. Textiles	7	2
3. Telecommunications	28	9	15. Media	7	2
4. Retail	21	7	16. Distribution and logistics	7	2
5. Food, drink and tobacco	12	4			
6. Transport	11	4	Other sectors	19	6
Air	4	1			
Rail	4	1	*Total*	*306*	*100*

Source: Carvalho, Ribeiro and Furtado, 2006.

than those laid down in legislation and in the rules of the Securities and Exchange Commission (CVM) and are similar to those found in developed-country markets. The other two new market segments (Nivel 2 and Nivel 1) have less stringent requirements to help firms adapt gradually to the new rules. Subsequently, in the second half of 2006, another new market segment, BOVESPA MAIS, was set up with a view to making the Novo Mercado increasingly accessible to small and medium-sized enterprises.

The Novo Mercado listing rules strengthen the hand of minority shareholders, as they require all shares to carry voting rights and at least 20% of company directors to be independent.[11] They prevent controlling shareholdings from being used to extract value from the firm at the expense of minority investors, giving the latter the right to receive the same price for their shares as is raised by the sale of the controlling shareholder's (tag-along right). At the same time, they greatly increase disclosure requirements in relation to the presentation of financial statements, transactions with parties related to the controlling group and insider trading. To prevent the need for long, complex judicial proceedings to resolve shareholders' disputes with the firm or with each other, they require these to be resolved by an arbitration body specially created by BOVESPA. Lastly, they establish a stock market presence requirement to ensure share liquidity and continuous price quotations.[12]

The market's response to these innovations initially fell short of expectations, but the new stock market segments have gradually been increasing their weight, especially since 2004, so that by 2008 the shares quoted on them accounted for some 80% of stock market capitalization and over 60% of daily trading volumes. Furthermore, the indices published by BOVESPA show that price performance has been better in the new segments than in the rest of the market. Thus, the Special Corporate Governance Stock Index (IGC), the index representing the new market segments, rose by 34% more than the IBOVESPA and by as much as the IBrX50 in the period from mid-2001, when the IGC was created, to August 2008. It should be explained that the IBOVESPA and the IBrX50 are, respectively, the index with the greatest coverage and the one representing the 50 most heavily traded and liquid shares in the market. The dynamism of the new market segments was also expressed in a substantial increase in new share offerings there: whereas only 12 companies used them to begin with, by mid-2008 the number had increased to 161.

Besides the large increase in new issues, the data available show the proportion of share offerings accounted for by firms backed by venture capital, probably via the private equity market method. These account for a significant proportion of all new issuances (table 3). This is a very important symptom, as it shows that the Brazilian system for financing innovation and new business creation has evolved to the point where it covers almost every link in the chain, from early support for seed capital to the development of market mechanisms that provide exit options for venture capitalists, who can thus recommence the cycle of investment and innovation.

Of course, this does not mean there are no failings to be overcome in the way innovative firms are financed. On the whole, the region's countries have not taken on board the lessons learned in developed countries from the failures of major conglomerates and external auditors as a result of laxness in the criteria governing the independence of auditors from the firms they audit. These continuing shortcomings could impair the quality of information about financial statements, thus discouraging minority participation in new ventures.

2. Progress in Chile

A number of indicators show Chile ranking second in the region in terms of innovation effort (figure 1). It lags well behind Brazil in some qualitative aspects, however, and this, combined with the relatively late start it made in providing support for innovation, has meant that it has performed somewhat less well in this area.

Chilean efforts in support of innovation have been divided among numerous public, private and mixed institutions, including universities and firms, which to a large extent have operated independently. Only in 2005 was the Council on Innovation for Competitiveness created as an advisory body reporting to the national presidency with a view to its helping to formulate a strategy. The functions and legal status of the Council have yet to be formally

[11] Under Novo Mercado rules, directors are deemed to be independent when they do not have business, family or blood ties with the controlling group or the managers of the firm.

[12] See BOVESPA (2006a, 2006b, 2006c and 2006d) and Santana (2007).

TABLE 3

BOVESPA: initial public offerings on the Novo Mercado, Nivel 1 and Nivel 2
(Millions of dollars and percentages)

	2004	2005	2006	2007[a]
Total offerings				
Total value of primary and secondary offerings	1 531	2 232	7 052	6 063
Number of offerings	7	9	26	22
Average value of offerings	219	248	271	276
Participation of foreigners (%)	69	62	76	…
Offerings supported by venture capital[b]				
Total value of primary and secondary offerings	649	527	1 711	…
Number of offerings	3	3	7	…
Average value of offerings	216	176	244	…
Participation of foreigners (%)	72	81	75	…

Source: prepared by the author from BOVESPA data.

[a] Figures as of May 2007.
[b] 2006, up to October only.

established by law, so that in practice the situation has not changed much.

More broadly, in Chile there are also public-sector institutions whose mission it is to support innovation, private-sector venture capital funds and an incipient equity market framework which should favour the financing of new ventures, particularly innovative ones. By contrast with the situation in Brazil, there are various obstacles to public-private interaction and some still unresolved deficiencies in the rules governing public companies (*sociedades anónimas*) that discourage minority equity holdings. By way of example, the national Constitution adopted during the military regime limited the powers of the Chilean State to create new companies, so that this requires case-by-case legal authorization from parliament. This makes it difficult for the public and private sectors to jointly found innovative ventures. Furthermore, the current rules for public companies do not give minority shareholders enough protection (over insider trading and related party transactions, for instance); during 2007 and 2008 this gave rise to well-publicized cases in which the supervisor succeeded in penalizing flagrant violations, even though in many cases there are still no penalties. Parliamentary bills designed to solve these problems have been strongly resisted by the private sector.

The Production Development Corporation (CORFO) is one of the main public agencies implementing policies to support innovation and business start-ups. Among other development programmes, it has two major lines of action.

First, its INNOVA CHILE committee administers non-reimbursable support programmes (subsidies) for the initial stages of company development, including the incubation stage. Subsidies are also provided for business start-ups. Under the Seed Capital Facility (Línea de Capital Semilla), subsidies are provided to companies without a track record at the creation, start-up and initial trading stages. At the same time, investor networks are supported with subsidies for the organization, formalization and operation of networks of “angel” investors with a view to reducing the costs involved in identifying and evaluating business start-up projects.

Second, CORFO operates a programme of quasi-equity financing (i.e., credits with special subordination clauses and cost calculation methods) to support the venture capital industry. As of 2006, these credit lines totalled some US$ 160 million but the level of disbursement was very low, hardly exceeding a fifth of that amount.

Lastly, only recently (2006) was a law passed to allow CORFO to take temporary (up to seven years) minority equity stakes as a venture capital provider. Until then this was not possible, since the belief that the State should play only a subsidiary role in the economy had reduced State involvement in production activity.

Although a legal framework for business investment funds has existed since 1989, the number of such funds is still small, despite an increase in activity since 2003. According to the information available, a total of US$ 340 million was committed in 2006, but only half that amount was disbursed. Most venture capital funds are still at the formation and project identification stage. A review of the type of firms that received funding when these funds actually invested shows that resources have been used in the first place to finance expansion and in the second place to help businesses begin trading, rather than to fund the precompetitive phase. This is much as would be expected from a financial industry that is still in the process of formation and is cautious about assuming risk.

Most investment is going to consumer, agricultural and construction businesses (table 4). Although it is not possible to establish with certainty the innovation and technology content of the firms being invested in, it is immediately clear that they are not concentrated in sectors usually characterized by the introduction of new technologies. Interviews with investment fund executives and officials responsible for public programmes have revealed some factors that appear to be influencing the behaviour described.

First, it is argued that there are not enough innovative technology projects whose returns would defray the (follow-up and specialization) costs their financing would entail. For the same reason, the potential for diversifying risk by investing in projects of this kind is small, since too little is still known about the type of risks they involve. In short, a vicious circle seems to be in operation whereby growth in this market is being held back because it is too small to provide the necessary scale.

As regards the creation of exit mechanisms, the results are again mixed. In 2001, a new stock market segment known as Bolsa Emergente was created to meet the specific needs of firms wishing to open up their capital structure. Existing disclosure requirements were replaced by more flexible ones designed to permit prospective risk assessment; another novelty was the introduction of the role of sponsor, an agent whose task it is to prepare the information needed for a firm's economic and financial position and the quality of its business plans to be reliably established. For other aspects of corporate governance and disclosure, current rules governing public companies continue to apply.

To ensure that these new securities are sufficiently liquid and are regularly quoted on the market, the companies concerned will have to employ a market maker responsible for providing and maintaining liquidity in the shares issued by continually offering prices at both ends of the market. In exchange, the shares issued will be exempt from capital gains tax for a set period of time, irrespective of their stock market presence. This benefit currently exists in Chile for shares with a strong stock market presence. The firms referred to have been given this special treatment because stock market presence is rated by trading volume and frequency parameters that the new shares would be unable to achieve in the short term.

TABLE 4

Chile: distribution of firms in venture capital fund portfolios by sector, June 2006

Sector	Number of firms	Amounts invested (millions of dollars)	Distribution (%)
Communications	3	3.07	1.8
Computer-related	1	1.00	0.6
Medicine and health care-related	1	1.47	0.9
Consumer-related	9	30.07	17.6
Industrial products and services	2	3.08	1.8
Chemical products and materials	1	2.67	1.6
Industrial automation	2	5.59	3.3
Other manufactures	5	18.52	10.8
Financial services	1	0.06	0.0
Other services	2	7.99	4.7
Agriculture	6	30.42	17.8
Construction	6	32.15	18.8
Other	11	34.65	20.3
Total	*50*	*170.75*	*100.0*

Source: prepared by the author using data from the Chilean Association for the Administration of Investment Funds (ACAFI).

As can be seen, the changes brought in are not on the scale of those adopted in Brazil by BOVESPA, nor do they address the failings of Chilean corporate governance legislation as regards insider trading, related party transactions, the presence of outside directors, disclosure standards and quality and independence requirements for external auditors, among other matters. These failings discourage minority equity ownership, especially in the case of new and innovative firms.[13]

The results obtained so far have been mixed, depending on the viewpoint taken. Considering that the number of companies listed on the stock

[13] Aware of these shortcomings in the rules currently governing public companies, and of their effects on the capital market, the Chilean Government sent a bill to parliament in 2005. The proposals that were adopted voluntarily by BOVESPA have met with strong resistance from the private sector in Chile.

exchange had been falling consistently since 1997, this new market segment undoubtedly helped to moderate and to some extent halt this downward trend in 2005 and 2006. In 1997, 294 companies were listed, after which the number fell to a low of 238. From the creation of this new market segment to late 2007 there were 14 new listings, of which 12 were carried out under the new rules. From that standpoint, the outcome has been positive.

From another point of view, it must be recognized that the companies listing on the Bolsa Emergente are far from being emerging enterprises or new ventures with a large innovation or technology content, the only exception being one large information technology company with a long-standing presence in the market.

However, that does not make the establishment of this exit mechanism less important or useful. For one thing, earlier experience in a number of countries shows that markets of this type take a long time and require favourable conditions to mature. For another, the existence of an exit mechanism stimulates interest among potential participants in the prior phase of innovation financing, i.e., venture capital.

VI
Conclusion

Although the impulse to innovate derives from various sources, financing for innovative initiatives is an essential enabling condition if they are to bear fruit in the form of new products, processes or firms. The analysis conducted in this article highlights the need for a system whose various links can cover the different financing needs that arise at each phase by employing instruments which serve to overcome the deficiencies holding back support for innovation in each case.

This system is necessary because one of the driving forces of innovation is the search for competitive advantages that translate into higher returns. Consequently, the incentive to innovate will be greater if appropriate support is forthcoming right along a route that begins at the earliest phases, perhaps in the laboratory or in direct production experience, and ends at some market where the rewards of innovation can be realized and captured.

This article has reviewed a variety of instruments that are employed along this financing path, placing the emphasis on venture capital because this is a relatively new resource in the region, but one that has been successfully applied by some of the more innovative countries. It is obviously not the only instrument. Furthermore, its application must take account of the realities of the different financial systems. The cases of Chile (which has the greatest financial depth in the region) and Brazil (which, with Mexico, has the region's largest financial system in absolute terms) may not be applicable to countries with less financial depth and/or with financial systems that are small in absolute terms, as in these circumstances it is difficult or unviable to develop capital markets generally, let alone the segment for innovative firms.

In cases where it is difficult to develop the private-sector components of the precompetitive and venture capital phases of this system, public-sector action, probably through banks or development agencies, should be at the core of innovation financing.

Again, when it is not realistic to expect significant near-term progress in the capital market, particularly the segment oriented towards new firms, it will be necessary to find other exit mechanisms. The response in some cases has been to create tie-ups between venture capital partnerships and foreign investors, and thence with financial market segments in more advanced countries (Avnimelech and Teubal, 2004).

There is no one right solution for innovation financing. The essential elements, from the financing point of view, are as follows: (i) how instruments (venture capital, for instance) serve to overcome obstacles which increase the level of risk (externalities and the intangibility of results, information asymmetries, moral hazard), (ii) how the incentive for investors (the prospect of returns) can be retained, and (iii) how private and public interest groups can be prevented from capturing the system.

(Original: Spanish)

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KEYWORDS

Macroeconomy
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The competitive real exchange-rate regime, inflation and monetary policy

Roberto Frenkel

This article argues that in a stable and competitive real exchange-rate (SCRER) macroeconomic regime, the exchange-rate component can drive up inflation through the very mechanisms that stimulate high rates of gross domestic product and employment growth; to offset this pressure, fiscal and monetary policies will have to be used to control aggregate demand. It finds that in an exchange-rate regime of this type, monetary policy has a degree of autonomy that can be exploited to apply active monetary policies. It analyses the degree to which monetary policy can be used to control aggregate demand and concludes that it cannot bear the main responsibility for this, which means that fiscal policy ought to be the main instrument for controlling aggregate demand.

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I

Introduction

This paper examines some characteristics of the stable and competitive real exchange-rate (SCRER) regime. After briefly describing the regime, section II argues that such an exchange rate may create permanent inflationary pressure through the very mechanisms that stimulate high rates of growth in gross domestic product (GDP) and employment. For an SCRER regime to be capable of controlling inflation, this pressure needs to be offset by the use of fiscal and monetary policies to control aggregate demand. Section III analyses monetary autonomy in an SCRER regime and finds that, generally speaking, there is a considerable degree of autonomy which can be exploited to implement active monetary policies. Section IV studies the scope for using monetary policy as the main instrument for controlling aggregate demand. The conclusion is that the main responsibility for controlling aggregate demand cannot be assigned to monetary policy, but ought to be borne mainly by fiscal policy.

II

The stable and competitive real exchange-rate policy

For some time, and in a number of papers, this author has been arguing that maintaining a stable and competitive real exchange rate (SCRER) is one of the most important contributions macroeconomic policy can make to growth and employment.[1]

In the first place, a competitive exchange rate creates an incentive to produce a wide range of internationally tradable products and sell them in the external or domestic market. When the range of potentially profitable products is increased, so is the potential for output and employment growth. Unlike other systems of incentives, this policy of promoting tradable activities (in preference to non-tradable ones) across the board does not give rise to rent-seeking. It can be combined with trade policy or other sector- or activity-specific incentives, but exchange-rate policy has a unique importance in a context of international agreements that restrict the use of tariffs and subsidies. Via short- and long-term transmission channels that Frenkel (2004b) terms the "macroeconomic channel" and the "development channel", respectively, a competitive exchange rate provides a powerful stimulus to growth and employment.

In the second place, an SCRER promotes greater labour intensity in both tradable and non-tradable activities. Through this channel, which Frenkel (2004b) calls the "labour intensity channel", an SCRER provides a special stimulus for job creation on top of the employment effects of rising output.

In the third place, an SCRER plays a preventive role with regard to external and financial crises. Through its effects on the current account of the balance of payments and via the accumulation of international reserves, an SCRER reduces the economy's vulnerability to negative external shocks, both real and financial, and forestalls unsustainable trends in external borrowing.

What is the best exchange-rate policy for implementing an SCRER? The answer to this question needs to take account of the fact that the stability sought for the real exchange rate is not a short-term attribute. Real exchange-rate stability does not mean mechanically indexing the nominal exchange rate to

□ Earlier versions of this study were presented at the cycle of economic seminars organized by the Central Bank of the Argentine Republic (10 April 2008) and at the first International Encounter of the Brazilian Keynesian Association (Campinas, São Paulo, 18 April 2008). The comments received on those occasions were much appreciated. The author also wishes to thank two anonymous reviewers whose comments have been incorporated in the present version.

[1] Frenkel (2004a, 2004b and 2006), Frenkel and Taylor (2007), Frenkel and Ros (2006), Frenkel and Rapetti (2008).

the difference between domestic and international inflation. The aim is to achieve stability over more extended periods. The main goal here is to reduce uncertainty about the real exchange rate over the time frames that matter for decisions about recruitment and investment in existing or new tradable activities.

Exchange-rate policy needs to combine short-term flexibility with signals of commitment to a stable long-term real exchange rate. Nominal exchange-rate flexibility discourages short-term capital movements and tends to smooth the balance-of-payments capital account. It is good for there to be currency risk in the short term. Flexibility should characterize not just the price behaviour of the international currency, but also the behaviour of the monetary authority in the market. It means that the exchange rate is set in the currency market and that in the short term the monetary authority has no commitments with regard to that price. This type of intervention cannot fall victim to speculative attacks and retains the ability to respond to international market volatility. Managed floating practices[2] of this kind can be encountered in the recent experience of the region's leading economies and of many emerging markets and seem to be the best form of intervention for implementing an SCRER in today's circumstances.

1. The SCRER macroeconomic regime

There are two aspects of the SCRER policy that this author has been highlighting since it was originally proposed in Frenkel (2004a). The first is that the exchange-rate policy sketched out here needs to be part of a wider framework that includes fiscal and monetary policies consistent with it. For one thing, preserving an SCRER cannot be the sole objective of macroeconomic policies. For another, the latter (exchange-rate, monetary and fiscal policies) are interconnected and have to be designed and implemented consistently. For these reasons, the proposal for a competitive real exchange-rate target needs to be understood as a component of a macroeconomic policy regime capable of pursuing multiple conflicting objectives in a consistent way. This regime needs to pursue growth, employment, activity level and inflation objectives simultaneously. The SCRER is an intermediate goal of the regime, as a given interest rate might be for monetary policy, or a given primary surplus for fiscal policy.

The second aspect is the need to coordinate macroeconomic policies within a governmental authority that has strong powers of analysis and decision-making. It could be argued that coordinated policy management is advantageous under any regime.[3] But under the SCRER regime, coordination is indispensable. With this regime, the three types of macroeconomic policy –exchange-rate, monetary and fiscal– are all active and contribute jointly to the attainment of policy goals. Since these goals conflict, there must be a single guiding authority to ensure that policies are mutually complementary.

2. The SCRER as a driver of aggregate demand

A special feature of the SCRER macroeconomic regime is that exchange-rate policy is constantly acting as a powerful driver of aggregate demand and employment. It is precisely in these effects on the demand for locally produced tradable goods, for investment and for labour that much of this regime's ability to stimulate output and employment growth is manifested. For the same reason, its exchange-rate policy component can set up inflationary pressures that do not exist with other exchange-rate regimes.[4] The degree of inflationary pressure will depend on the structure of the economy and also on the circumstances it is going through. Where structure is concerned, for example, the effects will be different if an economy where a large subsistence sector is continually swelling the labour supply (China, for example) is compared to an economy where this characteristic is absent, such as Argentina. As

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[2] See Bofinger and Wollmershäuser (2003).

[3] Although there are some who argue that it is better to segment objectives and give a particular institution exclusive responsibility for each of them, one example being an independent central bank that takes exclusive responsibility for inflation.

[4] The idea that an SCRER is inflationary is widely held among economists. Two different ideas underlie this belief in mainstream thinking. One is that the real exchange rate necessarily tends towards its long-term equilibrium; if the real exchange rate is depreciated (in relation to its long-term equilibrium) and exchange-rate policy prevents nominal appreciation, it is believed that real exchange-rate equilibrium will tend to be brought about by a rising trend in domestic prices. The other idea is monetary, the belief being that central bank purchases in the currency market to maintain a depreciated exchange rate will expand the quantity of money and induce inflation. There is no notion that fiscal and monetary policies can contain inflation in a context where exchange-rate policy is used to maintain the real exchange rate. By contrast with the two positions just described, the present author argues that inflationary pressure derives from the same mechanisms as stimulate faster growth (and from rapid growth itself) and can be controlled by the fiscal and monetary policies which need to accompany exchange-rate policy.

regards circumstances, inflationary pressures will differ depending on how fully employed the labour force and other resources are; for example, these pressures will be lower coming out of a recession than after several years of growth, since the latter naturally tends to employ installed capacity and come up against bottlenecks.

The boost given to aggregate demand by a competitive exchange rate is hard to pin down and quantify. Among the mechanisms involved are the relative prices it influences. It is very difficult to arrive at an accurate appreciation of the scale and evolution of these effects. To begin with, it is not easy to estimate the complex effects of relative prices on aggregate demand. The difficulty has been even greater in recent economic history because other expansionary forces, deriving from the higher export prices obtained by many developing economies, have operated through the same mechanism.

Again, relative price effects are not the only expansionary mechanism created by this regime. A depreciated real exchange rate and a current-account surplus create expectations of real-term appreciation and lead to portfolio shifts that favour local assets, including real estate and also consumer durables. As with relative prices, these positive financial effects have recently been combined with factors deriving from the international context, as international interest rates have been low for much of the present decade.

Although the scale and evolution of the SCRER effect on aggregate demand may be difficult to pinpoint, we do know that the higher growth experienced by economies which adopt an SCRER[5] is partly due to this effect, although we cannot judge its relative importance or how this varies from one country to another or over time. It seems reasonable to assume, for example, that the relative impact of the different expansionary effects differs from one country to another and also varies over time in each. Because of the uncertainties mentioned, it is very difficult, if not impossible, to carry out fine-tuning with exchange-rate policy to regulate aggregate demand growth by altering the real exchange rate. There is known to be a positive association between the real exchange rate and growth, but it is not known if this relationship is non-linear, if there are thresholds, or how it differs from one country to another and over time. The basic knowledge required to carry out fine-tuning with monetary policy is thus not available. Furthermore, experimenting with exchange-rate policy seems wholly unadvisable in the absence of the knowledge needed to implement a fine-tuning exchange-rate policy whereby a new real exchange-rate target could be set from time to time with reasonably accuracy. As already noted, the main objective of an SCRER policy is to reduce uncertainty in agents' investment and employment decisions. Thus, experimental and uncertain changes in the exchange-rate target would have very adverse effects on the main policy objective.

To sum up, the SCRER regime differs from other policy contexts in one crucial aspect: exchange-rate policy in this regime is a permanent driver of demand growth which can give rise to inflationary pressure, and it is unlikely that this stimulus can be regulated by fine-tuning exchange-rate policy. These special characteristics of the regime mean that the policies required to accompany exchange-rate policy must also have special features: the permanent expansionary stimulus that is part and parcel of the regime heightens the importance of the restraining role to be played by fiscal and monetary policy. In general, fiscal and monetary macroeconomic policies are designed to control aggregate demand and may be expansionary or contractionary. This holds true with the SCRER regime, but in that regime the accelerator is permanently pressed down. In principle, therefore, it is fiscal and monetary policy that are responsible for controlling the speed of expansion, i.e., for regulating the rate of aggregate demand growth. Because the accelerator is permanently down, the most important regulatory function of these policies is to know when to press the brake.

These considerations lead macroeconomists, and particularly Keynesian economists, into little-known territory. Monetary policy has been the subject of considerable debate, and there is a long track record of experience in this area, because for many years it has borne the main responsibility for controlling aggregate demand in developed and developing economies. There is also a large body of experience and analysis concerning the expansionary role of fiscal policy. But it is a fact that debate and experience are lacking when it comes to the restraining role of fiscal policy. In the SCRER regime, macroeconomic policy has to find its own way. Conducting it requires creativity and permanent monitoring of economic data and of the consistency of exchange-rate, monetary and fiscal policy.

[5] A number of recent international comparative studies have presented further evidence on the correlation between growth and the real exchange rate. See, for example, Prasad, Rajan and Subramanian (2006) and Rodrik (2007).

III

Monetary autonomy in the SCRER regime

This section will analyse whether, under an SCRER regime, there is sufficient economic autonomy for monetary policy to be conducted. It finds that there can usually be enough monetary autonomy to make an active monetary policy practicable. The regulatory power of monetary policy is examined further on, in section IV; the conclusion there is that monetary policy cannot be relied upon to carry the main burden of controlling aggregate demand in an SCRER regime, which underscores the importance of fiscal policy.

The main orthodox objection to the competitive exchange-rate policy is that it would entail a loss of monetary autonomy. This criticism is based on the well-known "trilemma" of economies open to capital movements. The "trilemma" asserts that the central bank cannot simultaneously control the exchange rate and the interest rate in a context of free capital movements. As will be seen below, the "trilemma" is false in particular circumstances, and is thus false as a general characterization of open economies.

The condition for combining control of the exchange rate with the preservation of monetary autonomy is the existence of an excess supply of international currency at the exchange rate targeted by the central bank. In these circumstances, the monetary authority can set the exchange rate by purchasing the excess supply in the currency market and can control the interest rate by sterilizing the monetary effects of this intervention, which it does by issuing treasury or central bank bonds in the money market. The central bank has two instruments for achieving its two goals: intervention in the currency market to set the exchange rate and intervention in the money market to determine the interest rate.

An excess supply of international currency, at the exchange rate targeted by the central bank and at the current interest rate, implies an excess demand for local assets. Fully sterilized intervention can be seen as a policy that is implemented in two stages. In the first, central bank intervention in the currency market leads to an increase in the monetary base. As a result there is a larger monetary base, an unaltered stock of local assets and an interest rate lower than it was initially. In the second stage, full sterilization completely offsets the change in the private-sector portfolio that occurred in the first stage. The central bank absorbs the increase in the monetary base and issues an amount of local assets equivalent to the initial excess demand for these assets (the excess supply of currency), returning the local interest rate to its earlier level.

An excess supply of international currency at the exchange rate targeted by the central bank is what invalidates the "trilemma" and empowers that bank to set the exchange rate and the interest rate. This idea appears to be unfamiliar because studies analysing monetary autonomy and currency regimes and policies rarely address conditions in which there is an excess supply of international currency, mainly concentrating instead on situations of balance-of-payments deficit. But the effects of a competitive exchange-rate policy on the current and capital accounts tend to create the conditions which invalidate the "trilemma" and allow for a degree of monetary autonomy.

Sterilized intervention to purchase currency is possible at any time. But can this policy be applied continuously? Not in every circumstance. The sustainability of the policy depends on the interest rate earned by international reserves, on the local interest rate, on the exchange-rate trend and on the evolution of the variables determining the supply of and demand for base money. The main conclusion of a recent paper by this author (Frenkel, 2007) is that there is a maximum local interest rate above which the policy of sterilization becomes unsustainable. According to that study, under conditions of excess supply of international currency at the targeted exchange rate (which usually obtain in an SCRER regime), the central bank can set the exchange rate and is free to set a local interest rate no higher than that maximum without creating an unsustainable situation.

1. The cost of sterilization and the degree of monetary autonomy

At any point in time, the unit cost of sterilization is $s = I - r - e$, where s is the cost of sterilization, I the local interest rate, r the international interest rate and $e = dE/E$ (E = pesos / US$) the rate of increase in the price of the international currency. The sterilization cost s is nil if $I = r + e$, i.e., if the local interest rate is equal to the sum of the international interest rate and the rate of increase in the exchange rate. Or (what comes to the same thing) if the uncovered interest parity condition is strictly met.

A policy of sterilization is obviously sustainable if the cost of sterilization is nil or negative. If this were the sustainability condition, the policy of sterilization would only be sustainable if $I \leq r+e$, i.e., $r + e$ would be the maximum value of the interest rate needed to keep the policy of sterilization sustainable. Rates higher than this would make the policy unsustainable.[6]

Frenkel (2007) showed that the condition referred to was not necessary for sustainability. It demonstrated that the policy could be sustainable with local interest rates higher than $r + e$ and calculated the maximum rate at which sterilization remained sustainable. This conclusion was arrived at simply by considering the stock of central bank liabilities and taking into account the seigniorage received by the bank. The study cited formulated a simple model which took account of the fact that, in addition to interest-bearing financial assets, the public demands and the central bank issues a monetary base which is not interest-bearing. Note that if the intention were to determine the maximum interest rate at which the cost of sterilization operations was nil or negative, seigniorage could not be added. Since what is to be demonstrated, however, is not a nil cost but the sustainability of all central bank monetary and financial operations taken together, the seigniorage total can be included in the calculation, as indeed could other revenue items, such as returns on commercial bank debt and public bonds. The present study takes account of seigniorage alone.

The degree of monetary autonomy is defined here as the difference between the maximum local interest rate at which sterilization is sustainable and $r + e$. Thus, $g = i_{max} - (r + e)$, where i_{max} is this maximum rate and g the degree of monetary autonomy.

Given the international interest rate and the rate of increase in the exchange rate, the higher the local interest rate that can be set without rendering the policy of sterilization unsustainable, the greater the degree of autonomy.

2. The sustainability condition and the permanence of the degree of monetary autonomy

This section briefly presents the model from which the conclusions referred to derive. It is assumed that the central bank has international reserves as its only asset and that it issues two liabilities, base money and sterilization bills, yielding local interest rate i.

$$P = B + L$$

where P is the total stock of central bank liabilities, B the outstanding monetary base and L the stock of interest-bearing liabilities. At interest rate I and exchange rate E there is an excess supply of international currency C in the currency market, which the central bank purchases. R is the central bank's stock of international reserves (in international currency) and $R\,E$ is the peso value of these reserves. The international reserves yield r, the international interest rate.

Again, with interest rate I determined, the increase in demand for base money is $dB = B\,\beta\,(p + y)$, where p is the inflation rate, y the real GDP growth rate and β the nominal GDP-elasticity of monetary demand.

The sustainability condition of the sterilization policy is defined as $dP \leq d(R\,E)$.

The condition means that the sterilization policy is sustainable if the ratio between total central bank liabilities and the local-currency value of international reserves $P/(R\,E)$ does not

[6] It could be argued that the definition of sustainability used here is too restrictive because it focuses exclusively on the central bank's balance sheet and assets. Certainly, the sustainability of a sterilization policy could be analysed with reference to the consolidated balance sheet of the public sector and central bank, so that any deficit that might be incurred by the bank through its sterilization operations was covered by fiscal transfers. With that approach, however, discussion of the sustainability of a sterilization policy becomes a discussion about the sustainability of the consolidated public debt. This latter perspective encompasses numerous issues, among which the sustainability of a sterilization policy would not feature prominently. With the approach used here, on the other hand, a precise answer can be given to the question of whether sterilization is sustainable, and the degree of monetary autonomy can be defined and calculated. If a policy of sterilization is sustainable under this definition of sustainability, then it is also sustainable from the perspective of the consolidated accounts of the public sector and central bank. The restrictiveness of the definition of sustainability employed here derives mainly from the direction given to the controversy: this paper takes issue with those who argue that when an economy is open to capital flows, a policy of sterilization is not sustainable and there can be no monetary autonomy.

increase. Frenkel (2007) shows that the sustainability condition is $I \leq (e + r) / l_R$, where $l_R = L/R\,E$ is the quotient between the stock of interest-bearing central bank liabilities and the local-currency value of international reserves.

If $l_R < 1$, the local interest rates required to preserve the sustainability of the sterilization policy can be greater than $e + r$, and the lower the l_R quotient is, the higher they can be. As pointed out earlier, central bank operations determine the local interest rate and exchange rate at every point in time. The sustainability of these operations depends on the local and international rates, on l_R and also on the trajectory of the exchange rate over time.

The maximum local interest rate at which the sterilization policy remains sustainable is $i_{max} = (r + e) / l_R$. Consequently, the degree of monetary autonomy is $g = i_{max} - (r + e) = (r + e)\,(1 - l_R) / l_R$. The lower l_R is, the higher the degree of monetary autonomy, i.e., the difference between the highest sustainable local rate and $r + e$.

The l_R ratio varies over time, altering the range of sustainable interest rates and the degree of monetary autonomy. If l_R increases over time, the degree of autonomy tends to diminish, and vice versa. This consideration indicates that it would be advisable to analyse the trend of the sustainability condition to establish whether the highest interest rate consistent with a sustainable policy of sterilization tends to rise or fall over time. Or, what comes to the same thing, whether the evolution of the monetary variables and the currency market tends to increase or reduce the degree of monetary autonomy.

Frenkel (2007) defined the permanence condition of the degree of monetary autonomy as:

$$d(L/R\,E) = dl_R \leq 0$$

If the monetary and currency market variables meet this condition, the highest sustainable interest rate and the degree of autonomy tend to remain stable or increase. If they do not meet it, the degree of autonomy tends to fall, although this does not mean that the sterilization policy rapidly becomes unsustainable.

The study cited showed that the permanence condition of the degree of autonomy could be expressed as a constraint on the local interest rate:

$$I \leq (e + r) + (B/L)\,\beta\,(p + y) - (C/R)(1 - l_R) / l_R$$

Local rates equal to or lower than the second member of the expression are required to maintain the degree of autonomy over time. Higher rates imply that the degree of autonomy is tending to fall, because the ratio between the central bank's stock of interest-bearing liabilities and its reserves is tending to rise. The constraint depends on the ratio between the monetary base and the stock of interest-bearing central bank liabilities (B/L) and on the rate of growth in the demand for base money $\beta\,(p + y)$. As can be seen in the last term of the expression, the constraint depends negatively on the ratio between the flow of central bank purchases in the currency market and the stock of reserves (C/R) (equivalent to the rate of international reserves growth, net of interest). The insight is clear: the greater the purchases of the central bank in the currency market, the more quickly the stock of sterilization liabilities and their cost will increase.

The above analysis assumes freedom of capital movements. Over and above the theoretical discussion, however, it highlights the functions that can be performed by controls on capital inflows and foreign currency purchases by the government. Capital controls that moderate the scale of central bank purchasing help preserve whatever degree of autonomy is possessed by the economy at a given time. In the same way, fiscal policy can also help preserve autonomy. If there is a fiscal surplus, the government can invest part of that surplus in external assets, thereby reducing the amounts the central bank needs to purchase to keep the exchange rate on target.

In summary, the conclusions arrived at in Frenkel (2007) are as follows. If the conditions $I \leq (e + r) / l_R$ and also $I \leq (e + r) + (B/L)\,\beta\,(p + y) - (C/R)(1 - l_R) / l_R$ are met, the policy of sterilization is sustainable and the degree of autonomy is permanent.

Conversely, if $(e + r) + (B/L)\,\beta\,(p + y) - (C/R)(1 - l_R) / l_R < I \leq (e + r) / l_R$, the sterilization policy is sustainable but the degree of autonomy tends to diminish.

The study cited presents a number of numerical exercises, involving different inflation and growth scenarios and using plausible data and parameters. The results suggest that sterilization policies are sustainable and that a considerable degree of permanent monetary autonomy exists in contexts that are by no means uncommon in many developing economies. The conclusion must be that exchange-rate policy in an SCRER regime does not usually inhibit the exercise of monetary policy. The orthodox criticism is not valid. Even with freedom of capital movements (on the obvious assumption that domestic and external assets are not perfect substitutes), this regime is not incompatible with a considerable degree of monetary autonomy.

3. A digression to specify and generalize the foregoing conclusions

The model used earlier to analyse sterilization assumed a greatly simplified financial structure. Agents' investment portfolios include base money, local assets and external assets. There are only two interest rates, the local rate and the international rate.

The foregoing analysis of sterilization is based on the following reasoning. Given a certain configuration of investment portfolios and a certain interest rate structure, it is reasonable to assume an increased preference for local assets, for whatever reason. At the rates in force, this change leads to excess demand for local assets and the corresponding excess supply of external assets. Since the central bank issues the very local asset that is in demand (the only interest-bearing local asset in the model), a monetary policy of maintaining the local interest rate implies full sterilization of the monetary base issued as a result of interventions to purchase currency in the market. With this model, maintaining the interest rate is equivalent to full sterilization or, what comes to the same thing, to keeping the stock of base money unchanged.

How is the analysis affected by the existence of a wider range of local assets? To examine this point, a somewhat more complex model with two interest-bearing local assets is considered here. It is assumed that the range of local assets consists of base money and two interest-bearing assets: short-term assets and long-term assets (bonds or shares, for example). It is also assumed that the central bank operates only in the market for short-term assets. Now let it be assumed that the excess demand for local assets resulting from the change of preferences posited above is distributed in some way between short- and long-term local assets. The first step in the central bank operation (the purchasing of surplus foreign currency to maintain the exchange rate) would result in lower short- and long-term local interest rates than the starting rates. In this case, if the central bank fully sterilized the base money it issued via the placement of short-term assets, the resulting short-term interest rate would be higher than the starting rate. This is because the long-term rate would be lower than it was to begin with and if the elasticity of substitution between base money and short- and long-term assets were significant, the demand for base money would be higher than at the start. To keep the amount of base money equal to the original amount, the short-term interest rate would have to be higher than its starting level to compensate for the effects of a lower long-term interest rate.

The rise in the short-term interest rate in the above exercise comes about because the central bank, which operates exclusively with short-term assets, carries out full sterilization of its currency market interventions. Conversely, if the central bank wishes to restore the short-term interest rate to its starting level (because this is its monetary policy instrument, for example), it can do so. This will involve conducting a partial rather than full sterilization, allowing the supply of base money to adapt to higher demand via the influence of a long-term rate that is lower than the starting rate.

The example using three local assets illustrates a more general case: a large quantity of local assets, including land and buildings, that are in demand as a counterpart to the excess supply of external assets. Obviously the central bank cannot control the entire interest rate structure, whether in an open or a closed economy. The monetary autonomy exercised through the sterilization policy needs to be understood as the capacity of the monetary authority to control the instrument rate of its monetary policy. The variable targeted by the sterilization policy ought to be the interest rate of the assets with which the central bank operates and not an underlying quantitative variable (or other monetary variable).

There have been cases in practice (and this is often brought up) where sterilization policies have induced higher local interest rates. The foregoing analysis offers a possible explanation for these cases. If the central bank pursues quantitative monetary targets (e.g., for underlying quantitative variables or other monetary variables) and fully sterilizes its currency market purchases to meet them, the interest rate of the asset class with which the bank is operating is likely to rise. In this case the problem lies not in the nature of the sterilization policy but in the goal it is pursuing.

IV
The potential of monetary policy

1. A simplified model for studying demand regulation

To consider the potential for monetary policy to become the main instrument in controlling aggregate demand, a simplified macroeconomic model including only the variables being analysed will now be presented. For example, lagged variables and expectations are excluded from the equation describing the growth rate of the economy and inflationary expectations are excluded from the equation describing the inflation rate. Excluding expectations deprives the model of an important anti-inflation policy mechanism, but this simplification makes it easier to present the arguments without loss of generality. For the same reason, the model is presented in a deterministic fashion.

The economic growth rate y is given by the equation:

$$y = \hat{y} + a_1\, ER + a_2\,(I - p) + a_3 f \qquad (1)$$

where the parameters are $a_1 > 0; a_2 < 0; a_3 > 0$. ER is the log of the real exchange rate and f represents the fiscal impulse. $ER > 0$ implies a competitive exchange rate that stimulates growth. $F > 0$ implies an expansionary fiscal impulse and $f < 0$ a contractionary impulse.

The inflation rate p is:

$$p = b_1\, \rho_{-1} + b_2\,(e + p^*) + b_3\,(y - \hat{y}) \qquad (2)$$

where the parameters are $b_1 > 0$; $b_2 > 0$; $b_1 + b_2 = 1$; $b_3 > 0$, and where p^* is the international inflation rate.

The functional form of the model makes it necessary to restrict the parameter values. For a rise in the nominal interest rate to be contractionary and deflationary, i.e., $(dy/di) < 0$ and $(dp/di) < 0$, it is necessary for $(1 + b_3\, a_2) > 0$.

Note that $y = \hat{y} \rightarrow p = b_1\, \rho_{-1} + b_2\,(e + p^*)$. That is, the inflation rate is an average of the past rate and the rate of increase in tradable goods prices. If exchange-rate policy additionally keeps the real exchange rate stable, $e = p - p^* \rightarrow p = p_{-1}$.

The inflation rate thus remains stable. Consequently, with an exchange-rate policy that keeps the real exchange rate stable, $\hat{y}$ is the rate of growth that neither accelerates nor decelerates inflation. This rate is not assumed to be a constant. The assumption is merely that at each moment in time there will be a certain rate of growth at which the economy tends to keep the inflation rate stable.

2. The SCRER policy and exclusively monetary anti-inflation policy

The model defined will now be used to examine an SCRER policy and an exclusively monetary anti-inflation policy. In other words, it is assumed that $ER > 0$; that the exchange-rate policy applied maintains the stable real exchange rate $e = p - p^*$ and that the fiscal impulse is nil: $f = 0$. Monetary policy is applied using a truncated Taylor rule: $I = \theta p$, with policy parameter $\theta > 1$.

The sustainability of this policy is examined first of all. For the reasons explained above, the sustainability of the sterilization policy requires:

$$i = \theta p \leq (e + r) / l_R = (p - p^* + r) / l_R\,,$$
$$\text{whence } \theta \leq [1 + (r - p^*)/p] / l_R$$

In other words, the parameter θ must not be greater than the second member of the expression. Note that with $l_R < 1$ and plausible values for the real international interest rate and for the inflation rate, θ can sustainably take values significantly higher than 1.

The anti-inflationary goal of monetary policy will now be considered. If inflation is not to accelerate, it is necessary for $y = \hat{y}$, whence, because of equation (1), it follows that $a_1\, ER + a_2\,(I - p) = 0$.

When interest rate I is replaced in this expression by the policy rule, the result is that $\theta = 1 - a_1\, ER / a_2\, p$ (with $a_2 < 0$).

As can be seen, the ability of monetary policy to control inflation depends on the size of a_2, the interest rate elasticity of aggregate demand. If elasticity a_2 were low, the interest rate needed to control inflation (and the θ parameter) would have to be higher. In this case, it is possible that

$$\theta = 1 - a_1\ ER\ /\ a_2\ p > [1 + (\ r - p^*)/p]\ /\ l_R$$

In other words, the monetary policy needed to control inflation would not be sustainable. If this were the case, the interest rate policy of the SCRER regime should be to keep within the sustainable maximum (which would be insufficient to prevent inflation accelerating via this route) and aggregate demand should be controlled mainly by fiscal impulse *f*.[7]

3. The interest rate elasticity of aggregate demand

Consideration will now be given to some empirical evidence on the magnitude of the interest rate elasticity of aggregate demand in Latin American economies. Empirical analyses of recent experience with inflation targeting policies in Brazil and Mexico will be reviewed, the basis for this being two studies on Brazil (Barbosa-Filho, 2006 and 2008), one on Mexico (Galindo and Ros, 2008) and one covering a number of Latin American economies (Chang, 2007).

The studies on the Brazilian and Mexican economies cited above do not contain direct estimates of the interest rate elasticity of aggregate demand. What they do contain, however, are analyses (based on different methodologies) of the transmission mechanisms of the interest rate policy involved in inflation targeting systems. Their conclusions indicate that the interest rate elasticity of aggregate demand is low.

The analysis of Mexico covers the 1995-2004 period and that of Brazil the 1999-2006 period. In both cases there was an initial phase of devaluation and accelerating inflation and a second phase of systematically slowing inflation associated with inflation targeting. In both cases, exchange-rate appreciation took place at the same time. What is of particular interest for the purposes of this study is the phase of slowing inflation, which began in 1998 in Mexico and 2003 in Brazil.

The second phase in these two cases can be summarized by describing the stylized facts they have in common. In both, there was a progressive deceleration of inflation, a tendency towards exchange-rate appreciation and low economic growth rates. These stylized facts were the main focus of the studies referred to, which tried to explain them, in a disaggregated form, as the effects of the policies applied through interest rates.

In accounting for the slowing of inflation, the academics from the two countries highlighted exchange-rate appreciation (the pass-through[8] mechanism) as the leading factor. For both countries, emphasis was laid on the negative relationship between interest rate *I* and the exchange-rate trend *e*. The anti-inflation policy of high interest rates resulted in a supply of international currency that created an appreciating trend in the exchange rate. Although the Mexican and Brazilian central banks intervened to purchase currency in the periods analysed, these interventions did not alter the direction of the market trend. The exchange rate tended to strengthen, and this was the most significant factor in the slowdown of inflation. It was the exchange rate, and not the rate of aggregate demand growth, that acted as the main transmission mechanism linking interest rates to inflation rates.

Again, the Mexico study attributed the low economic growth rate to the influence of real exchange-rate appreciation. This factor was also mentioned in the case of Brazil, although no empirical evidence was presented for this. The Brazil study left open the possibility that low growth rates might also be associated with the high real interest rates of the period.

The conclusions of these studies can be expressed in terms of the model shown earlier, the results being interpreted as estimates of the significance and magnitude of the model coefficients.

Regarding the inflation rate, expressed in equation (2), both countries' studies highlighted the significance of coefficient b_2, which relates the inflation rate to the nominal exchange-rate trend. There is no evidence concerning the significance of

[7] There are theoretical precedents for this conclusion. The Keynesian approach recognizes the possibility that aggregate demand may have low interest rate elasticity, the result being a weakening of monetary policy and a stronger role for fiscal policy. But this does seem a good time to revisit and highlight the issue, given the primacy acquired by inflation targeting policies in Latin America and many developed countries.

[8] The term "pass-through" refers to the effect of exchange-rate fluctuations on the general price level, whatever the channels of transmission.

coefficient b_3, which relates the inflation rate to the growth rate. Regarding the growth rate, expressed in equation (1), the Mexico study particularly emphasized the significance of coefficient a_1, which relates that rate to the level of the real exchange rate. None of the studies presented empirical evidence on the significance of coefficient a_2, which relates the real interest rate to the growth rate. As already indicated, however, there is the possibility that the coefficient may have been significant, albeit small, in the case of Brazil, to judge by the high real interest rates observed in the Brazilian economy.

In summary, the analyses of transmission mechanisms in recent Brazilian and Mexican experience with inflation targeting policies find that the interest rate elasticity of aggregate demand is low. This characteristic in the economies of Brazil and Mexico is probably shared with other economies that have similar levels of financial intermediation. The conclusions given reinforce the idea that in an SCRER regime, or more generally in contexts where preventing exchange-rate appreciation is a goal, it cannot be incumbent upon monetary policy alone to control aggregate demand, which means that fiscal policy has to bear the greater part of the burden.

(Original: Spanish)

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KEYWORDS

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Distributive effects during the expansionary phase in Argentina (2002-2007)

Fernando Groisman

This article analyses developments in the labour market and income distribution in Argentina between 2002 and 2007, using data from the Permanent Household Survey and econometric estimates. Following the 2001 crisis the employment situation improved in the aggregate and there was initially a marked decline in income concentration. This reduction later tailed off, however, apparently because of differences in the opportunities for different types of households to reap the benefits of growth. Members of resource-poor households had less chance of finding work and faced disadvantages in terms of pay and labour market participation. The isolation and social homogeneity of the neighbourhoods in which these households were located appear to have influenced the distributive outcome.

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I

Introduction

Following the great crisis of 2001 and the change of macroeconomic regime, Argentina experienced a steady and lasting economic recovery.[1] Developments in the labour market were likewise encouraging. Employment and the purchasing power of earnings grew substantially, the proportion of registered workers increased and labour underutilization diminished overall, i.e., unemployment and time-related underemployment decreased. Meanwhile, the demand for labour was stronger for more highly educated workers, even though pay rose by slightly more for workers less endowed with human capital. The corollary of these income distribution trends has been a sharp reduction in absolute poverty, although this remained high in 2007, and a moderate decline in income concentration (see section III below).

Economic developments in Argentina have paralleled those in most other Latin American countries, and indeed it has outperformed the rest of the region on many fundamental macroeconomic measures.[2] Annual gross domestic product (GDP) growth has been high in many of the region's countries by past standards, while they have also run current-account surpluses and built up their international reserves; investment too has been fairly dynamic.[3] However, income distribution has not improved to a degree commensurate with the favourable evolution of the economic cycle.[4] This means there is a need to pay close attention to the labour market. Because the bulk of households' income is generated by the work of their members, what happens in that market will be one of the factors most influencing future trends in income concentration.

The traditional interpretation of this equity deficit as being largely due to low relative levels of job creation was consistent with the evolution of numerous employment indicators. However, the new labour market situation in Argentina since 2002 is different from those of earlier periods. Although levels of informal and unprotected employment remain high, the rapid drop in unemployment and the increase in registered jobs (which are better paid and more stable than unprotected jobs)[5] have been a force for equity that distinguishes the 2002-2007 phase from other phases of economic recovery.

In part, the modest distributive response to this recovery is undoubtedly due to a historical deficit. The structural heterogeneity of the production system and recurrent uncertainty about macroeconomic sustainability, combined with certain limitations on the labour supply that are essentially skills-related, have contributed to the high level of income concentration seen in Argentina over the last three decades. Albeit to varying degrees, these factors have re-emerged regularly in the economic dynamic and are difficult to eradicate. Other factors also seem to have had noticeable effects, not least the difficulty of incorporating extra household members into economic activity when the earnings of the household head are low. This limitation has arguably become more severe because of the cumulative disadvantages suffered by resource-poor sectors over time. The consolidation of a situation of increasing social segmentation appears to be making economic growth less liable to feed through directly into lower inequality.

The rigidity of the social structure has led to, and at the same time been heightened by, the segmentation of the urban space. Residential segregation, which in Argentina is eminently socio-economic in nature, has exacerbated social isolation and made social boundaries more unyielding.[6] Consequently, disparities in access to economic, financial and social assets have been widening and

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[1] See Beccaria and Groisman (2008) for an analysis of the earlier period.

[2] See Frenkel and Rapetti (2008) for a description of the macroeconomic regime in Argentina from 2001.

[3] See ECLAC (2007a).

[4] It has been pointed out that poverty has displayed an inverse relationship with growth throughout history and the same has been true of inequality in income distribution, but to a lesser extent. There have generally been a time lag and marked asymmetry resulting in persistently high levels of inequality (Tokman, 2007).

[5] In Argentina, a "registered" job is one that is registered with the social security system and therefore protected by employment laws.

[6] See ECLAC (2007b), Kaztman (2001), Wilson (1997), Roberts and Wilson (forthcoming) and Hutchens (2004), among others.

their adverse effects on household well-being have increased accordingly.

While there have been numerous diagnostic studies based on these interpretations, there is still a lack of empirical work on the issue. The present investigation aims to produce some findings on the situation in Argentina and its primary goal is to obtain information on the factors influencing income differences between households. Constituted as a unit of analysis, households were classified into two socio-economic strata (higher and lower) by the education level of the household head. Employment and distribution indicators for the two groups of households were contrasted and the dynamic of the labour market was then assessed. Using this approach, estimates were arrived at to provide a picture of the role of employment demand and the influence of social isolation or the possession of more limited social assets on the occupational status and earnings of households.

This article contains six sections. Section II describes the methodology and data employed, section III examines the evolution of the main employment indicators and the distribution of income in the period considered, section IV conducts an analysis by household stratum, section V introduces the econometric analysis and section VI presents the conclusions.

II

Methodology and data source

1. Methods of analysis

To analyse the overall labour market situation in the period studied, the evolution of employment and earnings was examined by occupational category, sector of economic activity and education level. Income distribution was studied using a set of standard indicators. The household-level analysis was conducted by analysing the level and quality of employment and earnings in each of the two socio-economic strata indicated. Some of the factors influencing the ability of households to respond to signals in the economic environment were also reviewed. Events over the period were explored within that framework, differentiating between the behaviour of household heads and that of other members. The universe considered was that of households with heads aged under 65, i.e., the set of families whose income derives essentially from the earnings of their members in their respective occupations. This universe includes about 79% of all households across all urban areas. The criterion used to classify households is a proxy for socio-economic stratification, with education levels being recognized as the exogenous variable that most influences income levels. Only the education level of the household head was considered, and two household strata were distinguished: (i) the lower stratum (household head with incomplete secondary education or below) and (ii) the upper stratum (household head with complete secondary education or above). Just over half of all households are in the lower stratum.

The econometric estimates used were of two kinds. The first included multinomial logistic regression models while the second were based on income functions.

Multinomial logistic regression models are a variant on conventional logit estimates and are appropriate for evaluating the factors that determine occupational status. The dependent variable contains a set of categories that in this case were as follows: working in a non-wage occupation, working in an unprotected job, working in a registered job, and not working. This last category was the base against which the parameters were estimated (appendix, table A.1). Three models were used. In the first of them, the independent variables taken were: the stratum (higher or lower) of the household (defined by the education level of the head), household size, employment status of the household head, education level, age, age squared, sex, position in the household and region of residence. Dummy variables were also included for each of the periods (or waves) included in the data used (see section 2 below). In the second model, interactions between stratum and education level and between stratum and occupational category were introduced. In the third model, lastly, a constructed variable was included to capture households' degree of social isolation. This variable took as its value the proportion of lower-stratum households in each set of dwellings making up each of the sample points in the survey. This last procedure, which is only possible with the survey in use since 2003, allowed each household to be rated by a characteristic encapsulating the social composition of the neighbourhood of residence. This variable proved to be a useful proxy for neighbourhood. The average number of dwellings per territorial unit thus defined was 28. Given the way the micro database is designed, the decision was taken to apply it in Greater Buenos Aires only.

The earnings models, which were of the Mincer type, used the log of hourly earnings as the dependent variable. Ordinary least squares and quantile methods were used, these being part of the standard battery of techniques applied to income analysis. The difference between the two is that quantile regression is semiparametric and can be used to estimate the desired variables for different sections of the conditional income distribution. The independent variables were the same as those used in the multinomial models, supplemented by hours worked and economic sector. The regressors included a variable to correct sample selection bias. To carry out this correction, use was made of the standard procedure proposed by Heckman, which consists first of all in estimating a probit function of employment participation. The independent variables in this case were position in the household, household size and occupational status of the head. Once the equation had been estimated, its remainders were used to calculate the inverse Mills ratio, which was included as an extra regressor in the income functions (appendix, table A.2).

The universe of analysis comprised individuals aged 15 to 64 who were not household heads. In the earnings models, naturally, working non-heads of households were the universe of analysis.

2. Data used

The data used in this study come from the micro databases of the Permanent Household Survey (EPH) conducted regularly by the National Institute of Statistics and Censuses (INDEC).

Up until May 2003, the data were collected in May and October. Since then this has been done continuously every week of the year, giving rise to quarterly and half-yearly estimates. Data collected in both ways have been used for this article, with a standard splicing procedure employed to make them comparable: the data for the second quarter of 2003 were adjusted for fluctuations in the relevant variables between May 2002 and May 2003. Use has also been made of all available continuously collected data up to the first quarter of 2007. The Permanent Household Survey is urban in coverage and is conducted in 31 urban areas.

The econometric models were applied to pooled data in order to increase the number of cases and improve the estimates. The waves included were those of the first and third quarters of 2004, 2005 and 2006 and the first quarter of 2007 (the only one available for that year). The 2004-2007 period was chosen because of its distributional characteristics, as income concentration was relatively stable during that time.

III

Employment, earnings and equity

1. Employment and earnings

Employment and earnings grew by similar amounts between the beginning and end of the period from May 2002 to the first quarter of 2007. The number of people in work increased by 31%, while the purchasing power of earnings grew by 29% (table 1).

Both variables were already recovering steadily by the second quarter of 2003, albeit at differing rates in certain subperiods. Only in the period immediately following the 2001 crisis (between May 2002 and the second quarter of 2003), in fact, did they follow different paths: real earnings fell by 11% while employment expanded by 5.8%. During the second half of 2003 and up to the second quarter of 2004, employment and earnings grew at a similar pace. In the last three quarters of 2004, earnings were stable while employment continued

TABLE 1

Argentina: employment and real earnings,[a] quarterly figures between May 2002 and the first quarter of 2007

Employment	Total	Non-wage	Registered	Unregistered	Industry	Construction	Domestic service	Trade	Transport and commu-nications	Modern services	Social and personal services	Public sector	Low education level[b]	High education level
May 2002	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*
II-2003	105.8	109.5	100.4	111.0	100.2	120.0	97.8	108.0	101.1	108.0	101.1	115.9	104.3	111.1
III-2003	110.9	110.4	105.2	120.3	116.0	126.2	101.6	109.9	99.0	109.8	113.0	116.6	115.6	118.8
IV-2003	113.7	112.0	108.6	123.6	113.9	139.1	98.5	117.0	103.6	112.2	109.4	125.0	117.2	123.1
I-2004	113.6	108.6	111.5	122.6	114.0	151.8	96.8	118.0	101.2	111.1	103.1	128.2	122.4	125.5
II-2004	116.7	110.5	114.3	127.3	125.6	142.4	104.1	117.7	100.2	122.7	110.4	120.8	122.7	133.4
III-2004	119.0	114.9	117.0	126.8	123.4	153.5	103.2	123.2	111.0	117.7	118.1	116.2	126.3	135.1
IV-2004	120.5	114.5	116.2	133.6	128.8	154.4	105.4	125.7	111.9	115.7	107.1	130.2	128.2	137.6
I-2005	117.4	108.2	116.3	128.9	126.3	151.3	103.9	117.1	106.5	116.0	105.9	136.7	127.4	129.4
II-2005	119.9	111.9	119.0	130.0	123.5	159.9	106.3	115.7	107.6	125.0	115.6	137.1	132.2	147.3
III-2005	124.2	116.4	124.2	132.9	127.5	168.5	108.4	124.2	112.5	123.0	118.4	136.9	134.1	148.8
IV-2005	125.7	114.8	127.5	134.9	127.8	179.4	111.6	124.9	111.2	129.6	115.8	135.0	139.2	152.8
I-2006	124.2	109.1	130.4	131.3	127.7	172.1	113.1	121.5	109.9	124.9	118.1	139.7	135.6	152.5
II-2006	128.4	113.8	134.3	135.6	134.9	172.4	110.5	126.3	107.6	128.0	125.5	151.8	142.9	161.6
III-2006	128.8	110.3	137.3	136.1	130.4	176.3	115.1	129.2	109.8	128.2	122.7	150.5	142.6	163.7
IV-2006	131.4	115.3	138.5	138.4	132.5	193.4	118.7	131.4	109.1	132.1	123.6	146.7	142.2	164.3
I-2007	130.8	112.3	141.7	134.8	129.6	193.2	117.9	129.1	113.0	127.8	120.9	157.6	140.6	158.4
Monthly earnings from main occupation	Total	Non-wage	Registered	Unregistered	Industry	Construction	Domestic service	Trade	Transport and commu-nications	Modern services	Social and personal services	Public sector	Low education level[b]	High education level
May 2002	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*
II-2003	88.9	94.6	87.9	92.2	90.2	103.8	82.3	80.8	94.2	99.4	88.8	82.7	90.3	87.3
III-2003	95.9	106.3	95.0	104.6	98.4	116.2	96.5	92.3	98.1	112.1	91.7	83.3	93.5	93.9
IV-2003	98.7	105.4	97.6	108.1	103.8	121.2	92.7	88.3	113.7	113.1	90.7	90.0	98.5	94.2
I-2004	101.9	109.2	100.5	112.3	114.4	120.3	95.7	94.7	120.5	113.8	99.5	84.3	104.1	98.6
II-2004	101.4	115.4	97.9	107.5	107.6	119.2	89.4	99.4	118.9	112.2	97.0	87.4	103.4	95.7
III-2004	100.3	114.2	97.2	104.8	108.7	118.8	80.9	93.8	114.9	113.2	97.5	90.3	101.6	97.0
IV-2004	101.7	117.0	97.8	110.4	108.4	132.2	85.8	95.8	117.3	123.5	97.3	82.2	104.4	98.1
I-2005	105.7	116.0	102.7	119.2	116.2	127.0	89.6	99.5	117.0	126.5	104.3	85.1	109.5	102.0
II-2005	108.4	126.9	103.7	116.3	119.5	135.5	85.9	105.5	113.4	113.2	98.7	101.0	109.4	101.8
III-2005	111.6	128.2	107.1	119.1	119.1	129.1	89.5	108.7	126.6	120.8	110.2	98.7	108.4	107.7
IV-2005	113.1	126.3	111.2	115.5	119.3	139.4	86.3	109.9	124.9	128.7	116.6	93.8	113.8	108.0
I-2006	116.8	129.7	113.7	120.6	127.7	143.3	90.6	112.7	140.8	128.7	114.1	96.0	121.5	109.6
II-2006	118.1	130.3	115.5	122.3	120.3	151.0	90.2	118.5	136.0	136.5	113.6	94.9	121.4	109.5
III-2006	120.8	132.2	119.9	120.4	131.7	149.6	87.0	120.5	133.6	136.8	117.6	98.0	124.4	112.5
IV-2006	124.6	137.1	122.3	126.7	136.3	161.8	95.9	118.8	150.1	131.3	123.5	102.7	125.4	117.4
I-2007	129.1	146.1	124.2	129.2	140.3	168.0	93.4	118.9	160.5	151.4	130.3	99.4	133.2	121.1

Source: prepared by the author using data from the Permanent Household Survey.

[a] All urban areas, excludes job creation schemes.
[b] Education level: a low education level is incomplete secondary education or below and a high education level is complete secondary education or above.

to grow. Lastly, earnings grew more strongly than employment from 2005 onward.

Employment growth was concentrated in wage-paying jobs. Once again, except between May 2002 and the second quarter of 2003, when non-wage employment increased strongly, the characteristic feature of the period was the greater dynamism of wage employment, both registered and unprotected. There were differences between the two, however. During 2003 it was unprotected employment that grew more strongly, but thereafter, and up to the third quarter of 2004, growth rates were similar for both. From then on, and until the second quarter of 2005, the number of registered jobs remained virtually unchanged while unregistered jobs continued to grow, albeit with greater variations. From the second half of 2005, registered jobs were created steadily and at a faster rate than unregistered jobs, although the latter did continue to expand in absolute terms. By the fourth quarter of 2006, registered and unregistered employment had accumulated similar increases (around 38%) on May 2002. Non-wage employment, meanwhile, had experienced almost no growth from its 2003 level.

The evolution of employment just described is much as would be expected in the aftermath of a crisis as deep as the one Argentina went through. Improving economic conditions usually impact the demand for labour, with the effects being felt first in unprotected and non-wage jobs, chiefly in the form of longer working hours. If the expansionary phase persists or is expected to do so, the number of wage-paying jobs, including protected jobs, will then expand. However, the salient feature here is the persistence of high levels of unprotected employment at the end of the period, apparently sustained in part by the sectoral dynamic and the large share of jobs created by smaller businesses. As will shortly be seen, the growth of sectors where there is a large proportion of unprotected jobs (such as construction, the textile industry and the retail trade) seems to account for the persistence of these in the employment structure.

Earnings by occupational category evolved in a way consistent with employment. Wages recovered strongly from early 2003 to the first quarter of 2004, with somewhat larger increases for unregistered wage earners, something that can be put down to their low starting level. In the last three quarters of 2004, the recovery in wages came to a halt for both unregistered and registered wage earners even though, as mentioned above, employment carried on expanding. Real wages began to rise again in 2005, with those of registered workers showing greater dynamism.

Some of the improvement in incomes for wage earners in unprotected jobs was due to an increase in working hours.[7] Government incomes policy, meanwhile, operating through measures such as fixed-sum allowances during 2003 and 2004 and a higher minimum wage, was instrumental in increasing wages for registered workers. In the expansionary climate of the time, furthermore, these instruments also drove up earnings for workers in unprotected jobs. The conjunction of the factors described seems to account for the increase in wages in 2003 and for their stability during part of 2004.

From 2005, on the other hand, it was the wages of registered workers that rose by most, apparently thanks to union negotiations that secured substantial real wage increases which made up some of the ground lost in the crisis and subsequent devaluation of 2001.

There was a very marked and sustained recovery in the earnings of non-wage workers from 2003 onward, contrasting with stability in the volume of employment. Two factors appear to have played a part in the trend. First, one segment of these workers, the least skilled, moved into wage-paying jobs; the proportion of non-wage workers who had not completed secondary education fell from 59% in 2002 to 55% in 2007, while the total number in work remained virtually unchanged. This indicates that those who continued in non-wage work were people with a higher level of education. Second, the general rise in prices favoured goods and services produced by own-account workers while, on the demand side, the recovery in household incomes appears to have worked in the same direction. The two factors seem to have come together to restore earnings in this group more quickly.

The sectoral dynamic of employment showed a degree of heterogeneity. Construction drove private-sector employment growth throughout the period and industry did so in certain subperiods. The rate of job creation in the construction sector was so strong and sustained, in fact, that by the end of the first quarter of 2007 it was employing twice as many workers as in 2002. Employment in industry,

[7] There tends to be more time-related underemployment among these workers.

meanwhile, increased by a cumulative 29.6% between the beginning and end of the period (growth was much higher in the initial stage, as cumulative growth was already 26% by the second quarter of 2004); in the following two years it held steady at around this level, before rising again in 2006. The initial reaction seems to have been the response of the sector to the spur of an exchange rate that was competitive for industrial import-substituting goods. There were also sharp increases in employment in trade and modern services (29.1% and 27.8%, respectively), and employment in the public sector, including State enterprises, was very dynamic. Below-average employment growth was seen in social and personal services, domestic service and transport and communications, the last two of which saw rises of 18% and 13%, respectively.

The behaviour of domestic service employment was not systematic over the period. It appears to have risen in parallel with recovering wages, especially from 2005, which indicates how dependent it is on improvements in household income.

Earnings by sector show a rather different pattern from employment, since only in construction is a close association observed between the two. With regard to the scale of the recovery in earnings, the largest increases occurred in construction, transport, modern services and industry, while the smallest ones were in the public sector and domestic service, in that order.

A review of these indicators makes it possible to conclude that economic growth was matched by a gradual improvement in the level and quality of employment and wages. The new configuration of relative prices in the period, which is key to this performance, thus had a potentially progressive effect on income distribution. Within this general framework, sectoral developments were consistent with the new "industrialist" orientation of economic growth and reinforced this characteristic via the expansion of labour-intensive activities. This is why some of the economic benefits went to resource-poor households, since about a third of these households' heads work regularly in industry and construction, two of the most dynamic sectors.[8]

However, this information needs to be supplemented by data on other developments whose effects on inequality have also been significant. The discontinuity of income policies like those applied in 2003 and 2004, the tailing-off of the rise in industrial employment and the sluggishness of employment and earnings in sectors largely employing low-skilled workers (such as domestic service) would appear to have limited the scale of improvements in distribution. Already by 2004, the number of jobs was increasing more slowly for people with a low education level (incomplete secondary education and below) than for those with a high education level (complete secondary education and above). These two sets of data are indicative of limits on the further recovery of earnings for resource-poor households.

2. Inequality

Turning to distribution, the empirical evidence for the improvement in absolute poverty indicators is overwhelming. Absolute poverty diminished by more than 20 percentage points between the beginning and end of the period. The reduction in the percentage of people living in poverty was somewhat greater among households headed by someone with a high education level than among those headed by someone with a low education level: 38% and 35%, respectively (table 2).

This performance indicates that the overall redistributive effect of economic growth in the period was modest. In other words, income concentration proved more resistant to reduction than the poverty rate. Evaluation of different indicators of per capita household income distribution confirms that there was a marked improvement in equity at the start of the expansion phase (2002-2003), but that this then tailed off (table 3).

To gauge the improvement in equity over a longer time horizon, it is worth looking at its evolution in the 1990s. In the first half of that decade the level of income concentration fell, after reaching very high levels because of the hyperinflationary episodes at the end of the previous decade. By contrast, in the second half of the 1990s distribution worsened again, first in the context of the so-called Tequila crisis (1995) and then persistently between 1998 and 2001. Considering these developments, it needs to be emphasized that, notwithstanding six years of strong GDP growth, inequality in 2007 was only slightly less pronounced than in 1995, and similar to the level of the early 1990s.

The effect of labour market developments on inequality can be appreciated more directly if the

[8] Data from the Permanent Household Survey, first quarter of 2007.

TABLE 2

Argentina: poverty level,[a] half-yearly figures between the second halves of 2003 and 2006

	Total		Households whose head has a low education level[b]		Households whose head has a high education level		Households whose head has a low education level and is under 65		Households whose head has a high education level and is under 65	
	People	Households	People	Households	People	Households	People	Households	People	Households
II-2003	48.0	36.5	60.7	24.7	48.0	18.7	65.8	25.7	57.0	20.0
I-2004	44.4	33.5	57.7	22.1	45.6	16.5	62.5	23.0	53.5	17.8
II-2004	40.2	29.8	53.1	18.9	41.5	13.7	58.3	20.1	49.6	15.0
I-2005	38.9	28.8	51.4	18.4	39.8	13.7	56.7	19.6	47.5	15.0
II-2005	33.8	24.7	46.5	13.9	36.0	9.9	51.8	14.7	43.3	10.7
I-2006	31.4	23.1	42.7	13.8	32.9	10.3	47.2	14.7	39.3	11.3
II-2006	26.9	19.2	38.3	10.2	28.7	7.6	42.9	10.8	34.9	8.3

Source: Prepared by the author using data from the Permanent Household Survey.

[a] All urban areas.

[b] Low education level = incomplete secondary education and below. High education level = complete secondary education and above.

TABLE 3

Argentina: household per capita income inequality,[a] quarterly figures from May 2002 to the first quarter of 2007

	All households				Households with heads under 65					
					Decomposition of the Theil index			Confidence interval of the Gini coefficient		
	Ratio between quantiles 90/10	A (1)	Theil index	Gini coefficient	Theil index	Theil index within	Theil index between	Gini coefficient	Lower limit	Upper limit
May-02	24.3	0.638	0.652	0.567	0.687	0.560	0.125	0.585	0.580	0.598
II-2003	18.0	0.513	0.579	0.543	0.589	0.460	0.123	0.554	0.545	0.570
III-2003	17.7	0.511	0.570	0.541	0.579	0.458	0.122	0.552	0.536	0.568
IV-2003	13.6	0.486	0.522	0.524	0.557	0.442	0.114	0.539	0.521	0.557
I-2004	13.5	0.451	0.476	0.510	0.499	0.407	0.092	0.522	0.507	0.536
II-2004	11.7	0.447	0.492	0.509	0.500	0.402	0.098	0.518	0.505	0.531
III-2004	13.3	0.448	0.525	0.516	0.477	0.364	0.113	0.515	0.500	0.529
IV-2004	12.0	0.435	0.492	0.501	0.516	0.413	0.102	0.518	0.501	0.536
I-2005	12.3	0.432	0.475	0.505	0.520	0.419	0.101	0.526	0.509	0.543
II-2005	11.4	0.418	0.455	0.495	0.495	0.393	0.102	0.516	0.503	0.529
III-2005	12.5	0.434	0.482	0.506	0.511	0.403	0.108	0.523	0.506	0.540
IV-2005	11.1	0.385	0.428	0.483	0.444	0.337	0.107	0.497	0.487	0.507
I-2006	12.0	0.427	0.462	0.497	0.479	0.380	0.099	0.511	0.497	0.525
II-2006	10.7	0.390	0.415	0.475	0.431	0.344	0.086	0.488	0.476	0.500
III-2006	12.0	0.401	0.414	0.480	0.433	0.343	0.089	0.495	0.484	0.505
IV-2006	10.4	0.392	0.469	0.487	0.440	0.346	0.094	0.492	0.480	0.505
I-2007	10.6	0.391	0.423	0.480	0.456	0.365	0.091	0.501	0.487	0.515

Source: Prepared by the author using data from the Permanent Household Survey.

[a] All urban areas.

analysis is confined to households whose income derives mainly from the labour market (those with heads aged under 65). When this is done, the same pattern of distribution is confirmed. Indeed, estimating the statistical confidence intervals of the Gini coefficient reveals that there are no differences between the 2004 measurements and subsequent ones.[9]

The picture is completed by a further two elements characterizing the distribution trend. The first is the fact that indicators providing a more sensitive gauge of the changes which have taken place at either end of the distribution (for example, the income ratio and the Atkinson and Theil indices) threw up a rather larger reduction in inequity than the Gini coefficient. This suggests that the small overall improvement was due to a diminution in income differences between the two ends of the distribution, which is confirmed when income distribution is evaluated by quintile. It transpired, in fact, that between the beginning and end of the period analysed the poorest 20% of households increased their income share by 20% and that the increase tailed off up the quintiles so that the share of the richest 20% declined. This finding is consistent with some of the employment trends already referred to, such as the evolution of the wages of the least skilled workers. The fact is that by early 2004, workers with a low education level were earning more in real terms than they had been in 2002, something that did not happen for highly educated workers until 2005. Again, the purchasing power of earnings grew more strongly from 2005 for less educated workers. The role of the unions in this outcome should not be overlooked, since their negotiating capabilities are usually reflected in even greater improvements in the pay of the lowest earners than in that of more highly skilled registered workers. As mentioned earlier, furthermore, both the State policy of raising wages by means of fixed-sum allocations and the rise in minimum wages seem to have made a real contribution.

Despite this, there was no reduction in the differences between the higher and lower household strata. Indeed, and this is the second element that needs to be considered, a breakdown of the Theil index into a component capturing how much inequality is due to differences between strata and another one expressing intra-stratum dispersion shows that the latter accounts for approximately 80% of inequality and that this percentage did not change greatly over the period (see table 3 again). In summary, the overall distribution outcome was that inequality in household income distribution declined moderately, while remaining at critical levels throughout the period.

As was pointed out in section I, the distribution picture is enhanced by including events at the household level in the analysis, and these will be examined now.

IV

The household-level analysis

The distribution outcome discussed in section III can be evaluated in different ways. It is possible to argue that the scale of the redistributive effect seen in the expansionary stage, obviously excluding the large initial reduction in inequality, was due to changes in the economic participation patterns (i.e., decisions) of household members. Since developments at the household level are a synthesis of the actions of individual household members, the latter's decisions about entering or leaving the labour market can influence household income levels.[10] The literature on the subject is extensive and generally indicates that these changes tend to be associated with the working patterns of the main income provider. Indeed, changes in the latter's earnings and employment opportunities have major effects on the economic participation of the other members. If the earnings of the household head, usually the main income provider, fall or rise, the

[9] Obtained using the statistical technique of "bootstrapping".

[10] It has often been pointed out that the family is an institution which is also associated with social inequalities (Arriagada, 2004).

other members will be motivated in some degree to enter or leave the labour market. While all sorts of factors influence these effects and the relationship is far from linear, it can be assumed that the kind of behaviour described will occur.

The case of Argentina is indicative of this. In line with the overall picture, employment growth in Argentina has been lower for members of resource-poor households which, it will be recalled, are those whose heads have a low education level (table 4).

From 2004 and especially 2005 onward, employment grew more strongly for members of households whose heads had a high education level. Furthermore, this widening of the employment gap was even greater for other household members. Between the beginning and end of the period, employment in households headed by someone with a low education level rose by a cumulative 16%, as against 41% in households headed by someone with a high education level. For members other than household heads with a low and high education level, the increases were 18% and 53%, respectively.

Conversely, the unemployment rates of the two groups of households fell at about the same rate; indeed, that of residents of households with a lower level of education declined somewhat faster. This reflects different activity rate trends.[11] Economic participation rates fell slightly for members of households headed by someone with a low education level, including beneficiaries of job creation schemes, but increased for members of households headed by people with a high education level.[12] Once again, it must be stressed that this outcome was the result of differences in the behaviour of household heads and non-heads. The relative rise in economic participation in upper-stratum households was caused by the greater dynamism of non-heads. It was this group that benefited most from the expansion of employment, helping to widen the social divide between the two household strata.

The second element to be considered is the evolution of earnings, which improved more for members of households with less educated heads (33%) than for working members of households with highly educated heads (18%) between the beginning and end of the period. The earnings of heads increased faster and by a somewhat greater amount (table 5).

The contrast in the evolution of employment and earnings has generated some controversy about the motivations underlying the working behaviour of household members other than the main income provider. Some analysts argue that the withdrawal of labour by resource-poor households may be an expression of discouragement in the face of the weak demand experienced by this group. Given the high levels of poverty that still persisted in Argentina around 2007, this interpretation seems well-founded. Others maintain, on the other hand, that the rise in the earnings of household heads in the lower stratum contributed to the withdrawal of other members' labour. If this is so, the net effect on current household income must necessarily be indeterminate. Furthermore, if what predominated within households was a substitution effect and the net change in incomes was not very pronounced, the situation would be compatible with a moderate improvement in distribution like the one observed. More evidence is required to support the theory that the supply of labour from resource-poor households shrinks as the occupational position of the head improves.

One direct way of evaluating this hypothesis is to find out whether the distribution of employment within households altered and whether higher wages for household heads changed the pattern of contributions by different household members to the family budget. Table 6 shows that if relative changes caused by the scaling-back of job creation schemes are discounted, employment increased by more among the spouses and particularly among the children of household heads than among the heads themselves. Much the same happened with contributions to household income: the relative household income contribution of heads fell by some 10 percentage points. Thus, the work and earnings of other members in resource-poor households continued to be very important and their contribution, far from diminishing, tended to increase.

The theory that the above is due to weak demand for low-skilled labour seems more consistent and is supported by other evidence. One piece of evidence is the high unemployment rate affecting households headed by people with a low education level: after

[11] See Altimir and Beccaria (2000) on changes in the activity rate in earlier periods.

[12] Even if beneficiaries of job creation schemes are excluded from the "active" category, swelling the inactive population, in relative terms the economic participation rate rose by less in resource-poor households than in households headed by someone with a high education level.

TABLE 4

Argentina: employment, unemployment and economic participation,[a b] quarterly figures

	Whole population			Heads of household			Non-heads of household		
Employment (excludes job creation schemes)	Total	Head with low education level	Head with high education level	Total	Low education level	High education level	Total	Head with low education level	Head with high education level
May-02	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
II-2003	103.8	97.7	108.1	102.0	99.2	105.2	102.3	96.0	112.0
III-2003	108.9	105.7	112.2	107.8	107.1	108.7	109.1	104.2	116.7
IV-2003	110.9	106.7	115.1	111.7	108.8	114.9	108.6	104.5	114.9
I-2004	111.8	109.2	114.4	111.1	109.3	113.1	111.7	109.0	115.9
II-2004	114.3	108.4	121.1	113.0	109.0	117.4	114.9	107.7	125.9
III-2004	116.9	110.4	124.4	115.6	112.0	119.6	117.4	108.6	130.9
IV-2004	118.1	112.5	124.5	116.9	111.6	122.8	118.6	113.3	126.6
I-2005	115.0	110.9	119.6	115.4	113.2	117.7	113.7	108.4	121.7
II-2005	117.5	109.6	126.7	114.5	109.3	120.2	120.0	109.8	135.6
III-2005	121.7	111.0	134.6	120.6	113.3	128.6	122.0	108.6	142.6
IV-2005	122.7	116.3	130.0	120.6	116.5	125.1	124.2	116.1	136.7
I-2006	121.1	113.6	129.8	118.5	112.9	124.6	123.1	114.2	136.8
II-2006	125.7	116.3	136.7	121.6	114.7	129.1	129.4	117.9	147.1
III-2006	126.2	114.4	140.4	124.0	115.0	133.9	127.7	113.7	149.1
IV-2006	127.6	115.7	141.9	122.8	113.9	132.6	132.1	117.3	154.6
I-2007	127.2	115.6	141.1	122.4	113.3	132.3	131.8	117.8	153.1
Unemployment rate (excludes job creation schemes)	Total	Head with low education level	Head with high education level	Total	Low education level	High education level	Total	Head with low education level	Head with high education level
May-02	24.2%	28.1%	18.5%	15.4%	19.0%	10.9%	32.2%	34.8%	27.5%
II-2003	18.7%	22.6%	13.7%	10.7%	13.3%	7.9%	26.5%	30.5%	20.5%
III-2003	17.1%	20.6%	12.4%	9.8%	12.4%	6.9%	24.2%	27.7%	18.8%
IV-2003	15.2%	18.6%	10.7%	8.0%	9.8%	5.9%	22.6%	26.2%	16.9%
I-2004	15.2%	17.9%	11.5%	7.7%	9.3%	5.8%	22.6%	25.2%	18.4%
II-2004	15.6%	19.3%	10.9%	9.0%	11.6%	6.2%	22.1%	26.0%	16.4%
III-2004	13.8%	17.4%	9.2%	7.5%	9.2%	5.6%	20.1%	24.7%	13.5%
IV-2004	12.5%	15.8%	8.3%	6.5%	9.0%	3.9%	18.6%	21.7%	13.8%
I-2005	13.4%	16.5%	9.3%	7.1%	9.2%	4.7%	19.9%	23.2%	15.0%
II-2005	12.3%	15.0%	9.1%	7.4%	9.3%	5.4%	17.2%	20.1%	13.3%
III-2005	11.2%	14.6%	7.3%	5.7%	7.7%	3.8%	16.9%	21.0%	11.6%
IV-2005	10.2%	12.6%	7.2%	5.5%	6.8%	4.1%	15.1%	17.9%	11.1%
I-2006	11.9%	14.7%	8.5%	6.7%	8.6%	4.8%	17.1%	20.1%	12.9%
II-2006	10.6%	12.5%	8.4%	5.7%	6.8%	4.6%	15.4%	17.5%	12.6%
III-2006	10.4%	12.6%	7.9%	5.4%	6.8%	4.0%	15.5%	17.9%	12.4%
IV-2006	8.9%	10.8%	6.8%	4.2%	5.3%	3.2%	13.5%	15.7%	10.8%
I-2007	10.0%	12.2%	7.6%	4.9%	6.1%	3.8%	15.1%	17.6%	11.9%
Activity rate (includes job creation schemes)	Total	Head with low education level	Head with high education level	Total	Low education level	High education level	Total	Head with low education level	Head with high education level
May-02	58.9%	57.9%	60.5%	88.8%	87.4%	90.6%	44.3%	45.0%	43.2%
II-2003	59.6%	58.4%	61.5%	88.7%	87.5%	90.2%	45.4%	45.6%	45.0%
III-2003	60.3%	59.4%	61.6%	88.5%	87.7%	89.6%	46.0%	46.4%	45.2%
IV-2003	59.6%	58.2%	61.7%	89.2%	88.1%	90.6%	44.6%	45.0%	43.9%
I-2004	59.4%	58.0%	61.3%	88.2%	87.4%	89.2%	45.0%	45.2%	44.6%
II-2004	60.2%	58.5%	62.5%	88.7%	87.6%	90.0%	45.6%	45.5%	45.9%
III-2004	60.2%	58.3%	62.8%	88.9%	87.5%	90.6%	45.4%	45.1%	45.9%
IV-2004	59.7%	58.2%	61.8%	89.2%	88.0%	90.7%	44.8%	45.1%	44.4%
I-2005	59.1%	57.7%	61.1%	88.6%	87.8%	89.6%	44.1%	44.3%	43.8%
II-2005	58.8%	56.1%	62.5%	87.6%	85.8%	89.8%	44.2%	42.8%	46.3%
III-2005	59.6%	57.0%	63.1%	88.4%	87.3%	89.6%	44.7%	43.3%	46.8%
IV-2005	59.4%	57.1%	62.6%	88.2%	87.0%	89.4%	44.6%	43.6%	46.0%
I-2006	59.6%	57.2%	62.9%	88.4%	87.1%	89.8%	44.9%	43.9%	46.4%
II-2006	60.4%	57.9%	63.6%	88.2%	86.8%	89.6%	46.0%	44.8%	47.7%
III-2006	60.3%	57.6%	63.6%	88.3%	86.7%	89.9%	45.5%	44.1%	47.3%
IV-2006	59.5%	56.2%	63.6%	87.2%	85.2%	89.3%	45.2%	43.3%	47.9%
I-2007	59.8%	57.0%	63.5%	87.2%	85.0%	89.6%	45.8%	44.4%	47.7%

Source: prepared by the author using data from the Permanent Household Survey.

[a] All urban areas, households with heads aged under 65.

[b] Low education level = incomplete secondary education and below. High education level = complete secondary education and above.

TABLE 5

Argentina: real earnings,[a] [b] quarterly figures

Monthly earnings from main occupation	Members			Heads		Non-heads	
	Total	Low education level	High education level	Low education level	High education level	Low education level	High education level
May 2002	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*
II-2003	88.0	87.8	86.8	89.1	91.3	86.2	84.4
III-2003	94.1	91.4	93.2	93.9	97.2	88.0	97.2
IV-2003	97.1	97.0	94.2	99.9	96.0	95.7	93.1
I-2004	103.1	101.8	102.2	103.4	98.7	98.7	102.3
II-2004	99.3	101.0	94.6	105.0	98.2	96.9	97.8
III-2004	98.3	98.5	94.1	103.0	98.8	91.8	94.4
IV-2004	101.1	102.0	96.9	107.3	98.7	96.4	94.3
I-2005	105.3	108.9	100.5	109.0	102.2	104.8	101.5
II-2005	106.5	107.0	101.9	110.1	108.3	103.1	101.6
III-2005	114.7	109.4	110.8	111.2	108.9	106.9	104.8
IV-2005	111.3	112.6	106.4	114.2	109.8	113.4	109.8
I-2006	117.5	121.5	110.8	122.2	109.5	119.5	116.8
II-2006	116.2	119.8	109.1	123.1	111.8	120.2	114.5
III-2006	119.3	123.4	110.4	127.1	113.6	118.8	114.9
IV-2006	121.9	124.6	113.5	126.7	117.9	125.1	120.7
I-2007	127.6	132.6	118.2	135.0	122.5	133.9	119.6

Source: prepared by the author using data from the Permanent Household Survey.

[a] Excludes job creation schemes. Households with heads aged under 65.

[b] Low education level = incomplete secondary education and below. High education level = complete secondary education and above.

six years of expansion, 12% of these households' members were unemployed, including 17% of non-heads (see table 4 above). Meanwhile, although registered employment among heads increased, it did so more slowly than in households headed by people with a high education level. In 2007, over 50% of lower-stratum households still did not have a registered worker among their members, which is a proxy for the health-care coverage deficit.

In this situation, it is worth asking whether there are other constraints preventing members of these households from obtaining better jobs and higher earnings; in other words, whether the mobilization of assets (essentially labour) in resource-poor households is coming up against impediments associated with the social isolation believed to affect the poor. The specialist literature has often sought to identify these obstacles, but the empirical evidence is still limited. The next section will examine the role played by social ties and interactions within each household stratum and the social homogeneity of residential environments.

TABLE 6

Argentina: distribution of employment and contribution to household earnings,[a] quarterly figures

	All households					Households whose head has a low education level[b]				
Employment	Total	Job creation scheme	Heads	Spouses	Other members	Total	Job creation scheme	Heads	Spouses	Other members
III-2003	100	8.4	49.6	18.7	23.3	100	11.8	44.8	15.4	28.0
IV-2003	100	8.1	50.8	17.8	23.3	100	11.7	45.4	14.9	28.0
I-2004	100	7.9	49.7	18.8	23.5	100	11.4	44.7	15.2	28.7
II-2004	100	6.6	50.9	19.2	23.3	100	10.0	45.8	15.8	28.4
III-2004	100	6.8	50.7	18.8	23.7	100	9.9	45.9	15.4	28.8
IV-2004	100	6.3	50.5	18.8	24.4	100	9.2	45.3	16.2	29.3
I-2005	100	5.9	51.5	18.7	23.9	100	8.6	47.2	16.0	28.3
II-2005	100	5.4	50.0	19.2	25.4	100	8.1	45.8	16.1	30.0
III-2005	100	4.5	51.8	19.2	24.5	100	6.7	47.4	15.6	30.2
IV-2005	100	4.0	51.1	19.5	25.4	100	5.9	46.9	15.9	31.4
I-2006	100	4.1	50.8	19.2	25.9	100	6.1	46.3	15.7	31.9
II-2006	100	3.6	50.2	19.6	26.6	100	5.4	46.1	16.4	32.0
III-2006	100	2.9	51.7	19.9	25.4	100	4.5	47.5	16.7	31.3
IV-2006	100	2.3	51.2	19.6	26.9	100	3.7	47.1	16.1	33.2
I-2007	100	2.0	51.3	19.7	27.0	100	3.0	47.1	16.8	33.0
Earnings	Total	Job creation scheme	Heads	Spouses	Other members	Total	Job creation scheme	Heads	Spouses	Other members
III-2003	100	2.1	72.0	17.1	8.8	100	4.8	69.8	11.7	13.6
IV-2003	100	1.9	73.3	15.6	9.2	100	4.4	69.0	11.6	15.0
I-2004	100	1.9	66.6	17.9	13.6	100	4.2	60.1	13.1	22.6
II-2004	100	1.6	66.9	18.0	13.6	100	3.5	61.0	13.5	22.0
III-2004	100	1.6	67.5	17.4	13.6	100	3.5	62.3	12.1	22.1
IV-2004	100	1.4	66.9	17.1	14.5	100	3.1	60.4	13.4	23.1
I-2005	100	1.3	66.8	17.2	14.7	100	2.8	61.1	13.8	22.3
II-2005	100	1.1	65.9	17.1	15.9	100	2.5	59.4	13.4	24.6
III-2005	100	0.9	67.0	17.2	15.0	100	2.0	60.3	12.1	25.6
IV-2005	100	0.8	65.6	18.2	15.4	100	1.7	59.0	13.3	26.0
I-2006	100	0.8	64.6	17.9	16.8	100	1.6	58.8	13.2	26.4
II-2006	100	0.6	64.2	17.9	17.2	100	1.4	58.5	13.3	26.8
III-2006	100	0.5	65.2	18.1	16.2	100	1.1	60.0	13.7	25.2
IV-2006	100	0.4	64.5	18.2	16.9	100	0.9	58.5	13.1	27.4
I-2007	100	0.3	65.4	17.8	16.4	100	0.7	58.9	14.1	26.3

Source: Prepared by the author using data from the Permanent Household Survey.

[a] All urban areas, households with heads aged under 65.
[b] Low education level = incomplete secondary education and below.

V

Social segmentation and isolation

The case of Argentina is illustrative of the widening differences between social strata.[13] This is directly reflected in the situation of households within the per capita income distribution by socio-economic stratum. The fact is that less educated household heads (who, as already mentioned, account for just over half of all domestic units with heads aged under 65) are found mainly in the lowest quintiles. In the first quarter of 2004, these households accounted for over 83% of the poorest quintile but for less than 29% of the highest quintile. Concentration had intensified by the end of these years of expansion. In dynamic terms, it transpired that these households

[13] See Beccaria and Groisman (2006) and Cortés and Groisman (2007) for an analysis of the earlier period.

TABLE 7

Argentina: wage earners by education level and skill category[a] [b]
(Percentages)

	Skill category				
	Professional	Technical	Operational	Unskilled	Total
High education level	14.3	25.2	44.2	16.3	100
Low education level	0.6	4.6	50.4	44.4	100
2004 (quarters 1 and 3)	8.1	15.8	47.0	29.0	100
High education level	12.6	24.6	46.4	16.4	100
Low education level	0.4	3.3	51.8	44.6	100
2006 (quarters 1 and 3) and 2007 (quarter 1)	7.4	15.4	48.7	28.6	100
Wage earners with a high education level, by category					
2004 (quarters 1 and 3)	96.5	87.0	51.5	30.7	54.7
2006 (quarters 1 and 3) and 2007 (quarter 1)	97.9	90.9	54.1	32.7	56.9
Wages of workers with a high education level compared to wages of those with the same education level in jobs categorized as professional	Professional	Technical	Operational	Unskilled	
2004 (quarters 1 and 3)	100	64.1	43.8	31.1	
2006 (quarters 1 and 3) and 2007 (quarter 1)	100	68.8	46.9	30.3	

Source: prepared by the author using data from the Permanent Household Survey.

[a] Pooled data, households with heads under 65.
[b] High education level = complete secondary education and above. Low education level = incomplete secondary education and below.

were increasingly falling out of the higher quintiles and being relegated to the least favoured positions in the distribution. In the first quarter of 2007, the relative shares of this group of households had diminished by 3% and 20% in the bottom and top quintiles, respectively. In a context of economic recovery, this tendency for resource-poor households to cluster increasingly in the lowest positions of the income distribution is evidence of their worsening social isolation.

As was mentioned in the previous section, one of the greatest factors in social segmentation is the lack of demand for less educated labour, and this is aggravated if, in addition, jobs traditionally done by low-skilled workers go to people with greater educational credentials. While these processes are gradual and need to be observed over periods longer than the one taken here, events in Argentina over the period studied do point in this direction. As table 7 shows, while the skill structure of wage employment was maintained, there was a growing tendency for more educated workers to be employed in low-skilled jobs, something that was not fully reflected in pay differences. In other words, highly educated workers doing lower-skilled jobs were paid in accordance with the characteristics of the job they did and not of their education level. This is what might be expected to happen in episodes where education is devalued as an attribute, the main victims (via expulsion from employment or a reduction in job opportunities) being individuals with a low education level.

Diminished employment opportunities for the less educated may also have been associated with other changes that would tend to compound their employment problems. One of these changes concerns the social networks through which information about job vacancies circulates.[14] These networks, which have become quite important both in publicizing information about job opportunities and as a source of demand, often effectively act as employment exchanges. Since contacts and networks are highly correlated with the socio-economic level of households, it is fair to say that people from lower-stratum households will have had greater difficulty finding higher-quality jobs. It is in this stratum that certain households are most likely to

[14] Numerous studies deal with the question of what may be included in the concept of "social capital". See Durlauf and Fafchamps (2004) for an analysis of the way this concept is applied in research.

be excluded from these networks and circuits of information and social relationships.

The descriptive information points in this direction. Table 8 reveals that heads, spouses and their children in households where the head has a low education level earn less than their counterparts in households with highly educated heads. In other words, not only do lower-skilled working people earn less than the more highly educated, but the fact of belonging to a household with a less-educated head would appear to result in lower pay than is earned by other workers of a similar education level and position in the household. The descriptive information provided also shows that spouses living in lower-stratum households earn less per hour than those in higher-stratum households, the difference being 18% and 35% for those with a low and high level of education, respectively. In the case of their children, the disparity is 13% and 25% for those with a low and high level of education, respectively.

These differences in earnings may be influenced by an unequal sectoral composition of employment or by the occupational position of those in work. Table 8 shows the prevalence of employment in both social and public-sector services for working people with a high education level and, particularly, for those from households with a highly educated head. At the other extreme, spouses with a low education level are more concentrated in domestic service and their children, if they have a low education level, in construction. Where occupational category is concerned, a smaller proportion of wage earners with a low education level are registered.

These data indicate the existence of a segment of working people who appear to have benefited relatively little from the economic expansion and of whom a very large proportion (42.7%) have remained in poverty (see table 2 above).

The situation described is compatible with the existence of barriers to employment (and particularly to

TABLE 8

Argentina: some characteristics of working household members[a]

	Household whose head has a low education level[b]							Household whose head has a high education level						
	Head	Spouse			Children			Head	Spouse			Children		
		Low education level	High education level	Total	Low education level	High education level	Total		Low education level	High education level	Total	Low education level	High education level	Total
Composition		71.8%	28.2%	100	51.2%	48.8%	100		12.8%	87.2%	100	15.2%	84.8%	100
Age	44	44	41		23	25		42	40	40		21	25	
Monthly earnings (2002 pesos)	515	289	506		281	415		985	412	770		294	521	
Hourly earnings (2002 pesos)	2.9	2.4	3.9		1.9	2.7		5.8	3.0	6.0		2.1	3.6	
Economic sector														
Industry (%)	18.7	12.0	11.0	11.7	18.2	17.7	18.0	15.3	16.6	8.8	9.8	17.2	13.8	14.3
Construction (%)	17.4	5.9	1.8	4.7	16.7	4.8	10.9	4.5	4.3	1.2	1.6	8.9	3.0	3.9
Domestic serv. (%)	9.1	35.0	10.1	28.0	9.6	5.0	7.4	2.2	21.0	2.8	5.1	8.7	2.0	3.2
Trade and trans. (%)	35.1	29.3	27.1	28.7	41.5	40.6	41.1	27.4	35.4	21.1	23.0	49.8	32.6	35.2
Services (%)	19.7	17.7	50.1	26.8	13.9	31.9	22.7%	50.7	22.7	66.0	60.5	15.5	48.4	43.4
	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Occupational category														
Non-wage (%)	30.4	28.4	23.8	27.1	19.9	14.0	17.0	27.1	31.6	25.0	25.8	24.4	15.9	17.2
Registered wage earners (%)	37.6	19.6	53.3	29.1	17.7	45.9	31.5	56.3	26.3	59.1	54.9	15.7	47.7	42.9
Unregistered wage earners (%)	31.9	52.1	22.9	43.8	62.4	40.0	51.5	16.6	42.1	15.9	19.3	59.9	36.3	39.9
	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Source: Prepared by the author using data from the Permanent Household Survey.

[a] Pooled data, households with heads aged under 65.

[b] Low education level = incomplete secondary education and below. High education level = complete secondary education and above.

more productive, more highly paid and better-protected jobs) for members of less favoured households.

Besides the factors mentioned, there are different manifestations of spatial segregation that can act in the same direction. Both the availability of jobs and their take-up can be influenced by the shortcomings of transport, security and childcare, among other things, that characterize the neighbourhoods where the poorest live. These shortcomings are compounded by others reflecting a variety of discrimination mechanisms.

In accordance with the considerations set out in the methodology section above, the independent influence of these factors was tested by estimating the determinants of the labour force participation and earnings of household members other than heads. This delimitation makes it possible to avoid potential problems of endogeneity by first using an attribute of the household head to classify households and then considering the scale of employment and the earnings contributed by other household members (see table 6 again). To estimate occupational status, use was made of multinomial logistic regression models in which non-working individuals were the reference category. Estimates were calculated for all urban areas and for Greater Buenos Aires. It will be recalled that a variable was constructed for the latter region to capture the social composition of the area of residence. The same criteria were followed in estimating pay and use was made of income functions estimated by ordinary least squares and by quantiles[15] (see appendix, tables A.1 and A.2).

For all urban areas, model I shows that membership of a lower-stratum household entailed a high probability of obtaining unprotected wage-paying employment. In model II (with interactions), it can be seen that those who had a high education level but belonged to the lower stratum had much the same likelihood of being in low-quality employment as lower-stratum individuals with a low education level, while working people who had a low education level but belonged to households in the upper stratum had a negative probability of ending up in this situation. In short, when the education level of individuals is taken into account (along with the other variables included in the models), membership of a given social stratum entailed differences that were not fully offset by the individual's education level. This highlights the pernicious effect of certain households' underendowment with social assets.

The analysis can be refined if it is expanded to accommodate the social composition of neighbourhoods (as a proxy variable for residential segregation of a socio-economic nature). It should be recalled that the constructed variable is continuous and takes as its value the proportion of households belonging to the lower stratum in each group of dwellings making up each of the sample points.[16] This allows each household to be rated using a characteristic that synthesizes the social composition of the neighbourhood of residence. The finding is that the influence of the neighbourhood (social homogeneity variable) was significant and had the expected sign: the greater the social homogeneity (at a low level), the greater the likelihood of individuals ending up in unprotected employment. In short, there seems to be a significant association between living in a segregated neighbourhood and being at a disadvantage when it comes to obtaining a better job.

In the earnings models, membership of a lower-stratum household was likewise associated with lower hourly pay. Furthermore, this handicap remained when the model was expanded to include the interactions of the household's stratum with the main determinants of the model: education and employment status. In the same way as when the multinomial analysis was conducted, the handicap persisted for highly educated working people belonging to the lower stratum of households, although to a lesser extent. This indicates that individual asset endowments partially offset but do not remove this difference. No differences were observed by stratum in the handicap represented by non-registration, although there was a difference in the case of non-wage workers, whose earnings were reduced by more when they were members of the lower stratum. This latter finding is consistent with this group's more limited opportunities for self-employment.

The quantile regressions reflect the fact that the earnings handicap associated with the socio-economic stratum of a person's household was somewhat greater at the upper end of the conditional income distribution (see appendix, table A.2). This

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15 It should be emphasized that in both cases the models have the expected signs for the vector of covariables that are usual in these analyses.

16 The distribution of the constructed variable was consistent with other indicators describing the social situation of households, e.g., by earnings and employment quality (estimated with correlation coefficients).

pattern of increasing constraint in the distribution (because of unobserved factors) may be indicative of disparities in the jobs taken up by people with similar personal characteristics. The way socio-economic stratum interacted with education level (models II and III) showed that individuals belonging to the lower stratum in the upper quantile experienced greater declines in their earnings.

This is consistent with a labour market still struggling to absorb the whole of the available workforce. Although it is not possible to establish causal relationships at this level of analysis, the results obtained reveal a situation in which resource-poor households are handicapped in their opportunities for social inclusion (via participation in the labour market) by a number of mechanisms. First, because members who have a low education level have fewer job opportunities as a result, and in any event can only aspire for the most part to low-quality jobs that are also relatively badly paid. Second, because members with a higher level of education and better job prospects, given their individual attributes, do not have the same opportunities of access and are not paid as much as workers who have a similar education level but come from households whose education level is higher. Lastly, there is also found to be a disadvantage associated with the homogeneous composition of neighbourhoods, which limits and narrows people's opportunities for social interaction with other groups and inhibits access to more heterogeneous social networks that could improve their employment prospects.

VI
Conclusions

Since 2002, following the deep crisis of late 2001 and the change of macroeconomic regime, Argentina has experienced a sustained economic recovery. This expansionary phase has been accompanied by a major reconfiguration of employment and wage levels in the context of a general improvement in the workings of the labour market. The proportion of registered workers has increased and unemployment and time-related underemployment have diminished. Where distribution is concerned, absolute poverty has fallen sharply. However, the level of inequality is still high, having diminished only moderately after a rapid initial decline.

Given this distributive trend, analysis of socio-economic developments in the six years of expansion from 2002 to 2007 has made it possible to identify certain factors that appear to have had a real impact in this area. Among other things, it transpires that the dynamic of employment tended to favour those with a high education level. This relative increase in the number of employed people with greater human capital endowments does not seem to have been due to changes in the skill structure of jobs. In any event, changes in recruitment criteria led to a narrowing of the opportunities available to less educated workers; the decline in participation in economic activity by members of the poorest households is consistent with this diagnosis. The empirical evidence analysed does not bear out the theory of a voluntary withdrawal of labour from the market (essentially spouses and sons and daughters) in the households with fewest resources. The employment and earnings of these members continued to be very important to households and, far from diminishing, their incidence tended to increase.

The analysis carried out also suggests the existence of social segmentation; the isolation and social homogeneity of the neighbourhoods where the households with fewest resources live seem to have had a bearing on the situation described. The results show that these households were limited in their opportunities to share in the benefits of economic expansion. This was partly because, as already mentioned, members who had a low education level found as a result that they had fewer employment opportunities and/or were worse-paid, and partly because members who had a high education level and individual attributes that might help them in the job market did not enjoy the same kind of employment opportunities or pay levels as similarly educated workers living in households with a high level of education. There were also found to be disadvantages associated with the homogeneity of social composition in lower-stratum neighbourhoods, a factor that appears to have limited the scope for interaction with other groups and inhibited access to more varied social networks that might have provided greater occupational and social integration.

It should be stressed that it is not possible to establish causal relationships at this level of analysis and that more research is needed. However, the empirical evidence presented points to the need to apply specific policies in pursuit of greater equity.

(Original: Spanish)

APPENDIX

TABLE A.1

Argentina: multinomial logistic models, individuals aged 15 to 64 who are not household heads[a]

All urban areas	Unregistered wage workers		Non-wage workers		Registered wage workers	
	Coefficient	Standard error	Coefficient	Standard error	Coefficient	Standard error
Model I						
Lower social stratum	0.502	0.018	0.055	0.024	-0.002	0.020
Low education level[b]	0.020	0.018	-0.420	0.024	-1.426	0.022
Household size	0.012	0.004	-0.030	0.005	-0.081	0.005
Working head	-0.140	0.019	0.195	0.027	-0.053	0.023
Spouse	-0.551	0.030	0.084	0.042	-0.349	0.034
Son or daughter	-0.090	0.027	0.235	0.041	0.059	0.032
Age	0.363	0.004	0.380	0.006	0.528	0.006
Age squared	-0.005	0.000	-0.004	0.000	-0.006	0.000
Woman	-0.728	0.019	-1.345	0.027	-1.056	0.022
Wave dummies	Yes		Yes		Yes	
Region dummies	Yes		Yes		Yes	
Constant	-6.924	0.089	-8.433	0.128	-8.049	0.108
Pseudo R^2	0.133					
Model II (with interactions)						
Lower social stratum x low education level	0.506	0.021	-0.370	0.026	-1.427	0.024
Higher social stratum x low education level	-0.091	0.031	-0.576	0.039	-1.508	0.038
Lower social stratum x high education level	0.425	0.024	-0.049	0.031	-0.050	0.023
Pseudo R^2	0.134					
No. of observations 129 708						
Greater Buenos Aires						
Model III						
Lower social stratum	0.219	0.044	-0.188	0.060	-0.035	0.046
Low education level	-0.113	0.042	-0.650	0.059	-1.551	0.050
Social homogeneity	0.349	0.104	0.193	0.148	-0.242	0.118
Household size	-0.011	0.009	-0.024	0.014	-0.146	0.012
Working head	-0.248	0.046	0.107	0.072	-0.205	0.055
Spouse	-0.657	0.072	-0.091	0.107	-0.776	0.082
Son or daughter	-0.140	0.067	0.204	0.109	0.074	0.078
Age	0.307	0.010	0.365	0.015	0.486	0.012
Age squared	-0.004	0.000	-0.004	0.000	-0.006	0.000
Woman	-0.766	0.045	-1.249	0.068	-0.967	0.051
Wave dummies	Yes		Yes		Yes	
Region dummies	No		No		No	
Constant	-5.189	0.203	-7.484	0.316	-6.793	0.247
Pseudo R^2	0.119					
No. of observations 23 095						

Source: prepared by the author using data from the Permanent Household Survey.

[a] Pooled data, households with heads aged under 65. To simplify the presentation, the parameters of the wave and region dummies are not given. For the same reason, only the relevant coefficients are shown in model II.

[b] Low education level = incomplete secondary education and below. High education level = complete secondary education and above.

TABLE A.2

Argentina: income models, individuals aged 15 to 64 who are not household heads

All urban areas	Unregistered wage workers		Non-wage workers		Registered wage workers	
			Quantile 10		Quantile 90	
	Coefficient	Standard error	Coefficient	Standard error	Coefficient	Standard error
Model I						
Unregistered wage worker	-0.526	0.008	-0.731	0.020	-0.382	0.010
Non-wage	-0.581	0.009	-1.086	0.024	-0.175	0.013
Low education level	-0.225	0.007	-0.223	0.013	-0.212	0.014
Age	0.046	0.002	0.049	0.003	0.038	0.003
Age squared	0.000	0.000	-0.001	0.000	0.000	0.000
Wave dummies	Yes		Yes		Yes	
Woman	-0.111	0.007	-0.101	0.011	-0.087	0.013
Hours	-0.014	0.000	-0.012	0.000	-0.016	0.000
Region dummies	Yes		Yes		Yes	
Economic sector dummies	Yes		Yes		Yes	
Correction of selection bias	-0.421	0.037	-0.366	0.077	-0.507	0.064
Constant	2.023	0.054	1.213	0.095	2.975	0.103
Adjusted R^2	0.531					
Pseudo R^2			0.337		0.330	
No. of observations 39 896						
Model II (interactions)						
Lower social stratum x unregistered wage worker	-0.538	0.009	-0.733	0.012	-0.399	0.015
Higher social stratum x unregistered wage worker	-0.540	0.011	-0.737	0.018	-0.390	0.022
Lower social stratum x non-wage	-0.700	0.012	-1.215	0.032	-0.334	0.023
Higher social stratum x non-wage	-0.420	0.013	-0.910	0.036	0.000	0.016
Lower social stratum x low education level	-0.355	0.010	-0.357	0.015	-0.393	0.017
Higher social stratum x low education level	-0.322	0.012	-0.290	0.030	-0.351	0.021
Lower social stratum x high education level	-0.176	0.010	-0.166	0.012	-0.226	0.011
Adjusted R^2	0.536					
Pseudo R^2			0.339		0.335	
No. of observations 39 896						
Greater Buenos Aires						
Model III (interactions)						
Social homogeneity	-0.250	0.039	-0.286	0.078	-0.129	0.046
Lower social stratum x unregistered wage worker	-0.444	0.021	-0.751	0.049	-0.292	0.032
Higher social stratum x unregistered wage worker	-0.444	0.024	-0.635	0.058	-0.317	0.048
Lower social stratum x non-wage	-0.610	0.029	-1.189	0.067	-0.245	0.044
Higher social stratum x non-wage	-0.284	0.030	-0.726	0.059	0.114	0.046
Lower social stratum x low education level	-0.411	0.025	-0.337	0.040	-0.513	0.040
Higher social stratum x low education level	-0.352	0.029	-0.215	0.075	-0.409	0.051
Lower social stratum x high education level	-0.221	0.022	-0.167	0.032	-0.327	0.037
Adjusted R^2	0.454					
Pseudo R^2			0.292		0.314	
No. of observations 7 378						

Source: Prepared by the author using data from the Permanent Household Survey.

Note: Pooled data, households with heads aged under 65. To simplify the presentation, the parameters of the wave, region and economic sector dummies are not given. For the same reason, only the relevant coefficients are shown in the models with interactions.

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KEYWORDS

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The agricultural machinery industry in Argentina: from restructuring to internationalization?

Graciela M. C. García

This paper sets out to show that, having undergone restructuring at a microeconomic and sectoral level, the agricultural machinery industry in Argentina depends for growth on higher exports and further progress towards internationalization, which are strategic goals for the largest firms. Given the dynamism of global demand for this type of machinery, the conclusion is that the sector can increase its sales in export markets, where some of its products are competing well. The behaviour of domestic demand will be critical, and this largely depends on the profitability of Argentine agriculture. To internationalize further, the sector will have to overcome certain limitations, largely technological in nature, while receiving support from government programmes and assistance from employers' associations and science and technology institutions.

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I
Introduction

The agricultural machinery sector in Argentina developed in the import substitution industrialization period. It consisted of subsidiaries of transnational enterprises and locally-owned firms whose growth was oriented towards the domestic market, which they supplied without external competition until the late 1970s. The last three decades have been a time of increasing competitive pressure and technological change in the metallurgical industry and pampas agriculture, and this has exposed the sector's lack of competitiveness in an open, globalized domestic market. The result has been a process of restructuring in the sector, its industries and its individual firms. Firms have also rethought their own growth strategies and improved their techno-productive capabilities.

These changes have left the sector with a domestic market share of 35%, barely higher than in the early decades of the twentieth century. In this first decade of the twenty-first century, however, after building up experience and maturing technologically over six decades, locally-owned firms are active participants in the market. Some of them have increased their exports and begun to internationalize. Has this happened because of favourable economic trends, or because international expansion is among their strategic goals? Does the techno-productive development they have achieved fit them to continue operating in global markets? What are the factors underlying the Argentine agricultural machinery sector's internationalization? This article will try to find answers to these questions and others like them.

The present study posits that, following its restructuring at the microeconomic and sectoral level, the long-term expansion of the agricultural machinery sector in Argentina will depend on its ability to operate in globalized markets, increase exports and internationalize, and that this process is possible given certain macroeconomic and industrial policy conditions. To undertake this exploration, the findings of a number of studies carried out over recent years will be used to examine, first of all, the performance of the sector in 1980-2007, along with changes in the incentive regime and the macroeconomic situation of Argentina.

Second, it will analyse fundamental macro/micro links, describe the main features of the successive bouts of sectoral restructuring and analyse the roles and activities of supporting institutions.

The behaviour of firms will be examined by employing a neo-Schumpeterian approach and dynamic capabilities theory to construct their "evolutionary pathways" and review three different but interrelated features of each firm: its strategy, its structure and its basic capabilities. Restructuring in the sector and markets will be studied from an industrial organization standpoint, and the roles and activities of supporting institutions from a National Innovation System (NIS) perspective.

Third, the sector's internationalization potential and limitations will be explored and a number of case studies drawn upon to show that since the 1990s the goal of larger firms' strategies has been to increase exports and operate in external markets. Lastly, the sector's situation as it faces the challenge of expanding exports and pursuing further internationalization will be briefly described.

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II

The incentive regime and competitiveness

1. Market opening and technological change

In Argentina, growing competitive pressures, the shifting technology frontier in the metallurgical industry and the spread of direct seeding techniques have all influenced the performance and organization of the agricultural machinery sector in the last three decades.

Competitive pressures gradually increased as the process of domestic market opening and "globalization" proceeded. Market opening began in the late 1970s;[1] it gathered pace in 1988 with the signing of the Integration, Cooperation and Development Treaty between Argentina and Brazil and was consolidated from 1991 with a new reform of the tariff system[2] and progress with the formation of MERCOSUR. At the same time, the increasing globalization of transnational enterprises' techno-productive activities and of global markets for agricultural machinery increased intra-firm trade, imports of such machinery and, ultimately, the globalization of the domestic market.

Meanwhile, the shifting technology frontier of the metallurgical industry resulted in machine tools that were more complex and productive than conventional ones. The best-known are numerically controlled machine tools (NCMT) and computer numerical control machine tools (CNCMT).[3] These NC/CNCMT, and new technologies generally, have advantages over the conventional variety. They provide flexibility and allow for smaller batches and production runs without loss of efficiency. They are capable of turning out particular shapes and precisely engineered, standardized products. They also offer savings in working capital, energy, labour and quality controls and they use less space because one machine can replace several (Soifer, 1986).

Both globally and locally, transnational enterprises were the first to introduce the new machine-tool, design and industrial organization technologies. In Argentina they began to do so in the late 1980s. The process accelerated in the 1990s because of the increasing globalization of these firms' techno-productive activities and the spread of information and communication technologies (ICTs). Locally-owned firms began to incorporate NC/CNCMT and design technologies in the 1990s, and this trend accelerated in the 2000s.

Another technological change that has had major effects on the agricultural machinery sector is the spread of direct seeding techniques in Argentina,[4] owing to their economic advantages and technological viability. Direct seeding makes intensive use of agrochemicals, resistant seed strains and equipment specially designed to seed without tilling the soil. Its general adoption was made possible by a "technology package": advances in chemistry, which provided the agrochemicals; in biotechnology, which developed genetically improved, agrochemical-resistant seeds; and in the agricultural machinery industry, which designed the seeding equipment.

From the economic standpoint, average costs are lower for direct seeding than for conventional seeding. The reduction in tractor use means lower fuel consumption per hectare, while better management of soil humidity and nutrients raises yields per

[1] In 1978, agricultural equipment import tariffs were cut and the tractor industry regime began to be liberalized. That regime established which tractor parts and components could be imported, what percentages of foreign-made components were allowed and what customs tariffs and duties had to be paid. Around 1990, the requirement for Argentine components to be used in tractor production was dropped.

[2] In 1991, import tariffs on agricultural machinery were set at 22% for final goods, 11% for intermediate goods and 5% for tractors of more than 140 h.p. Since 1995 the tariff has been zero for imports of agricultural equipment (and the corresponding parts and components) from MERCOSUR member countries. Since 2001, there has also been a 14% tariff on imports of final goods from outside MERCOSUR.

[3] There are also robots that integrate different devices into flexible production "cells", "islands" or "lines", as well as simple or complex graphical systems –computer-aided design (CAD), computer-aided engineering (CAE), computer-aided manufacturing (CAM), computer-integrated manufacturing (CIM)– and computer software for business and organizational purposes. It is also possible to replace a set of tools with a laser system.

[4] Conventional tilling exposes soils to wind and water erosion and reduces their water retention capacity, thereby exhausting them and destroying their agricultural potential. By contrast, direct seeding (no-till) on existing crop residues reduces the need for ploughing and mechanical weed control, contains erosion, increases the amount of organic material and allows soils and their agricultural conditions to be managed more sustainably. Direct seeding began to be used in Argentina in the 1980s, and in 2005/2007 the area sown in this way stabilized at 19 million hectares, or about 70% of the total area under cultivation.

hectare. In consequence, total direct seeding costs are lower than (or similar to) those of conventional agriculture, while revenues are greater because of higher yields (García, Ambroggio and Trucco, 2000; Hybel, 2006).

Changes in pampas farming techniques made it necessary to devise and incorporate innovations in a range of agricultural implements (Bisang and Kosacoff, 2006). Direct seeding requires seed drills for plots with stubble, treated with agrochemicals. Some locally-owned firms began to manufacture this type of equipment in the early 1980s, improved their products in the 1990s and have begun to export them in the last few years. Direct seeding also makes it necessary to design and manufacture large self-propelled sprayers, increase cutting width and improve both the productivity of combine harvesters and the use of electronic global positioning systems (GPS).

Changes in technology and in the incentive regime have strongly affected the techno-productive behaviour of firms, as well as the organization of the agricultural machinery sector in Argentina. They have likewise influenced the results of market opening and the strategies of transnational enterprises.

2. Performance of the sector in an open economy (1980-2007)

The Argentine State encouraged the development of the agricultural machinery sector to meet the mechanization needs of pampas farming. From the 1950s until the late 1970s, the sector was protected from external competition by quotas and high import tariffs, so that activity levels reflected the behaviour of domestic demand.

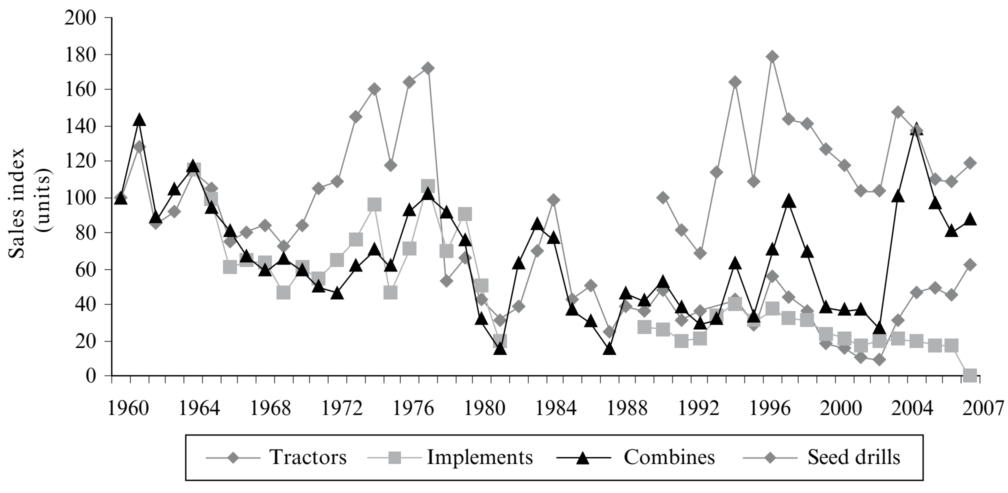
(a) Small market size and cyclical demand

Since the 1960s, the demand for agricultural machinery from pampas farmers has behaved cyclically, with large annual fluctuations (figure 1). The evidence suggests that the determining factors in this behaviour are technological and economic in nature and operate over both the short and long terms. The hypothesis of the present paper is that demand levels are basically related to the areas under cultivation and the profitability of agriculture, which depends both on company size and on technological, economic and climatic variables. Among the technological variables to be

FIGURE 1

Argentina: domestic demand for agricultural machinery, 1960-2007

(Units)



Source: Prepared by the author on the basis of information from AFAT, CAFMA and INDEC, Huici (1988) and Fontanals and Lavergne (1988).

considered are elements contributing to improved agricultural productivity (seeds, agrochemicals, agronomic techniques) and the degree of equipment obsolescence. Among those of an economic nature are the relative prices of cereals and inputs, interest rates, the availability of financing and tax policy for the agricultural sector.

The cyclical behaviour of demand leads to changes in the size of the domestic market for agricultural machinery. If the size of this market is compared with average annual sales in a particular period (table 1), it is observed that the Argentine market for combine harvesters and tractors was greater in the 2002-2007 period than in the 1990s, while for seed drills it was unchanged and for ploughing equipment it was smaller. This pattern is connected with the increasing prevalence of direct seeding and the high returns on pampas agriculture in recent years.

In money terms, the Argentine agricultural machinery market is worth about a billion dollars a year. Even in its expansionary phase, it is smaller than the Brazilian and United States markets. The Brazilian market for such machinery is five to seven times as large as that of Argentina, while the United States market for combine harvesters is about 15 times as large as the Argentine market.

In Argentina, market size and the cyclical behaviour of demand have influenced the techno-productive behaviour and performance of firms, especially locally-owned ones that started out in the import substitution industrialization period. The small size of the market has constrained growth in supplier numbers and the exploitation of economies of scale and specialization. The cyclical behaviour of demand has also discouraged firms from planning for long-term investment and expansion.

(b) New market participants and the problem of competitiveness

The change in the incentive regime and the arrival of new participants in the market put the competitiveness of the sector in Argentina to the test. Imports increased in the 1980s, particularly for combine harvesters and tractors. Then between 1992 and 1998, which was a period of economic liberalization, progress with the creation of MERCOSUR and dynamic demand, imports trebled in value and, with the exception of seed drills, their share of sales in the domestic market rose. In 1998, about half of all tractors and combine harvesters sold were imported. Conversely, the share of imports in seed drill sales fell from 6% in 1992 to 1% in 1998.

Between 2002 and 2007, in a context of dynamic demand and installed capacity constraints in the Argentine agricultural machinery sector, imports sextupled in value and their share of total sales rose. In 2006/2007, about 80% of tractor and combine harvester sales by value, and 27% of implement sales, were of imported equipment.

In Argentina, transnationals were responsible for most imports of combine harvesters, tractors and agricultural implements. In the 1990s they imported from their subsidiaries in Brazil, Germany and the

TABLE 1

Argentina: size of the agricultural machinery market, 1980-2007

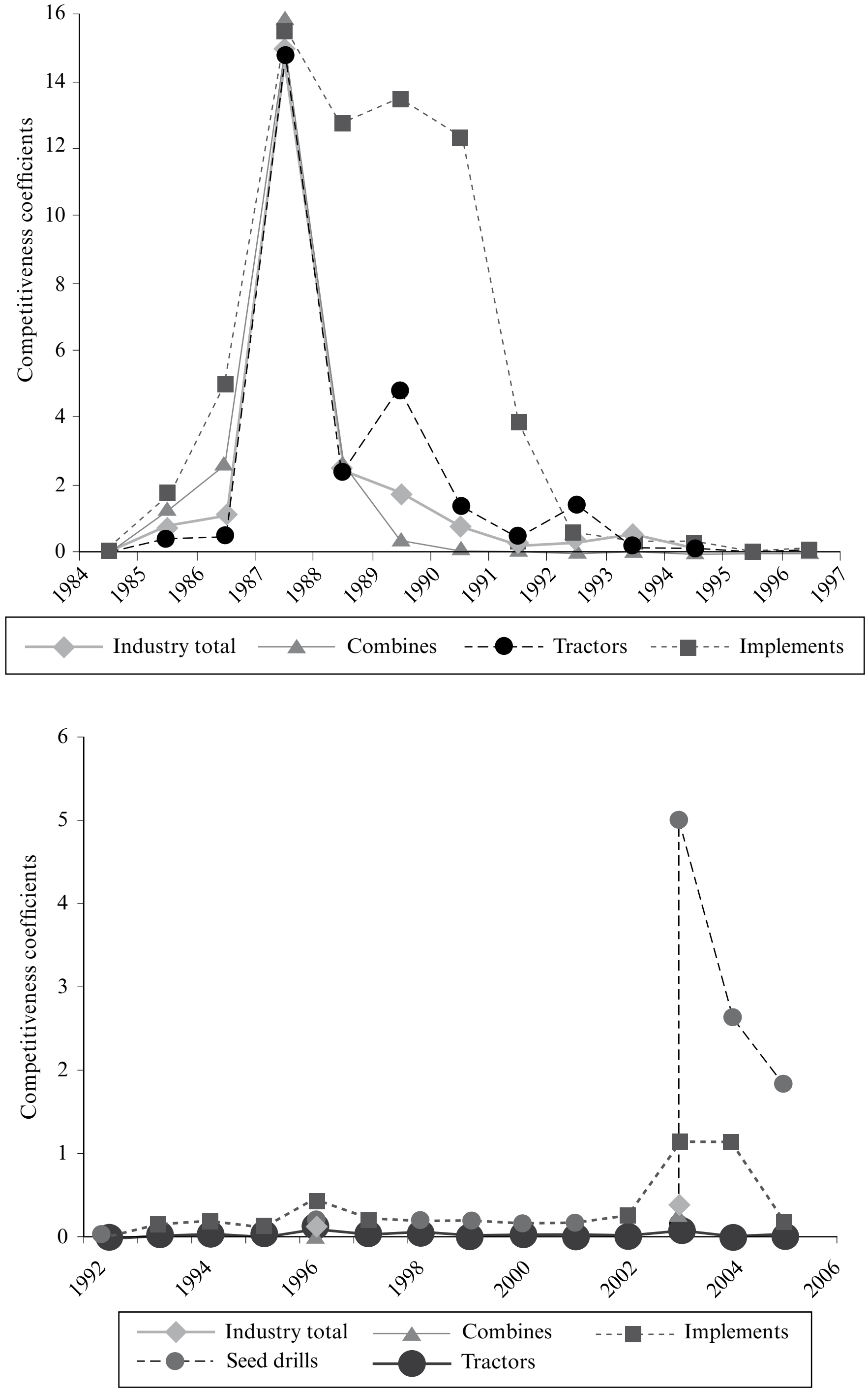
Period / Total sales in the domestic market	Size of the tractor market (average annual sales, units)	Size of the combine harvester market (average annual sales, units)	Size of the ploughing and seeding implements[a] market (average annual sales, units)	Size of the seed drill market (average annual sales, units)
1979-1984	7 437	1 351	23 058	3 828
1985-1989	5 079	803	10 110	3 280
1980s	6 172	1 036	19 821	3 691
1990-1996	5 188	1 063	10 776	3 840
1997-2001	3 259	1 307	9 258	4 174
1990s (1990/1999)	4 163	1 224	10 772	4 040
2002-2007	5 349	2 052	6 923	3 992

Source: prepared by the author on the basis of information from AFAT, CAFMA and INDEC, Huici (1988) and Fontanals and Lavergne (1988).

[a] Includes ploughs, harrows, seed drills and tillers.

FIGURE 2

Argentina: competitiveness coefficientsa in the agricultural machinery sector, 1984- 2004



Source: prepared by the author using information from INDEC for 1984-1995, Chudnovsky and Castaño (2003) for 1992-2001 and Documentos de PROARGENTINA, Serie Estudios Sectoriales, Maquinaria Agrícola (2005) for 2002-2004. The export and import series in both documents were prepared using INDEC data.

[a] The competitiveness coefficients measure the value of exports per dollar imported each year.

United States; in the 2000s, 80% to 90% of tractors and combine harvesters and most agricultural implements were imported from Brazil.

In the import substitution industrialization stage, Argentine agricultural machinery firms had only a small presence in external markets. In the 1980s they barely exported at all, except in the 1986-1988 period. In the 1990s, which were a time of intense competitive pressure, the exports of the sector rose, especially for agricultural implements and seed drills. This exporting trend has gathered force in recent years. As a result, the share of exports in sectoral gross domestic product (GDP) rose from 3% in 2001 to 30% in 2006/2007. The products displaying the greatest dynamism were seed drills, agricultural implements (including sprayers) and tractors. Although the Argentine sector still makes 86% of its sales in the domestic market, the steady rise in the value of its exports suggests that some firms are selling regularly in external markets.

Competitiveness coefficients, defined as annual exports by value as a proportion of annual imports by value, give a broader view of the competitiveness of the sector and its leading industries (figure 2). They suggest that after 1991, when the formation of MERCOSUR began and the economic liberalization process gathered pace, the competitiveness of the sector and each of its industries declined. They also suggest that in the 1990s the implements industry was the most competitive and the combine harvester industry the least.

According to the competitiveness coefficients, the competitiveness of the sector and its industries (except tractors) was greater in the 2000s than in earlier decades. Continuing with the trend begun in the 1990s, the seed drill industry was the most competitive, followed by the implements industry; the tractor and combine harvester industries were the least competitive.

To sum up, as competitive pressures have growth over the last three decades, the Argentine agricultural machinery sector has lost 80% of the domestic market for tractors and combine harvesters. This has been due to the strategic reorganization of transnationals operating in Argentina and to the local industry's lack of competitiveness. In the 2000s, however, some locally-owned firms making combine harvesters and tractors have competed well in external markets. Exports of seed drills and agricultural implements have also grown. Even so, the sector as a whole is not very competitive either in the domestic market or abroad.

III

The restructuring of firms and of the sector: new actors

Over the last three decades, amidst changes in the incentive regime and the Argentine macroeconomic situation, the agricultural machinery sector and the firms in it have undergone restructuring (Katz, 1996). In addition, new supporting institutions have been created and existing ones have taken on new roles.

1. Firms and macro/micro links

The macroeconomic situation in Argentina from 1976 to 1982 was one of "stabilizing liberalization": the tractor industry regime was liberalized, import tariffs were cut and subsidized-interest credits for agricultural machinery purchases were discontinued. Demand fell dramatically, imports rose and firms in the sector lost profitability.

In those years, major transnational firms restructured both their production and their commercial arrangements with a view to cutting costs. To lower their costs in this corporate environment, their Argentine subsidiaries cut their research and development (R&D) spending, dismantled whole departments and restructured to adapt to lower levels of activity and new product mixes. They reorganized to produce and trade within the transnational enterprise, specializing in products they could make at a lower cost than other subsidiaries and importing others. They standardized tractor design, specialized in the production of particular models, increased their use of imported inputs and began making parts and components for subsidiaries in Brazil. They also began to import tractors made outside

Argentina and Brazilian combine harvesters, which they finished assembling in their local plants.

The "dislocation" of the 1983-1990 period was characterized by profound macroeconomic imbalances, high and variable inflation rates and a dearth of financing. In this context, the challenge facing firms was to restore their profitability and improve their techno-productive capabilities, operating as they were with a great deal of idle capacity (50% to 70%).

Larger firms sought to reduce costs by expanding their product ranges and improving production processes. Although falling demand and high real interest rates discouraged investment in equipment, the subsidiaries of transnational enterprises and some locally-owned firms adopted new technologies and incorporated NC/CNCMT. For their part, most small and medium-sized enterprises (SMEs) that manufactured combine harvesters expanded their production and trading platforms and increased their degree of vertical integration to reduce idle capacity and market risks. Irrespective of size and production type, locally-owned firms also set out to lower their unit costs by forging production and commercial partnerships (García, 2005 and 2006).

To narrow the product technology gap, manufacturers of combine harvesters also brought in innovations to increase the productivity of these machines. Producers of agricultural implements, meanwhile, increased the size and traction power of their devices and incorporated hydraulic mechanisms into them.

In 1991-2001, a time of stability, the economy was opened up further, progress was made with the formation of MERCOSUR and the environment became more favourable to the success of industrial activities. Domestic demand for agricultural machinery recovered and import growth increased. In the area of taxation, tax rebates were introduced for the domestic sales of firms in the sector.[5] The corollary of this was a rise in the relative prices of goods and services that were not tradable internationally, particularly privatized public services.

Some locally-owned agricultural machinery firms modified their growth strategies, others restructured and most invested in greater production capacity. More dynamic demand and lower prices for imported capital goods allowed them to build or expand factories and equip them with NC/CNCMT and lasers. Most of them increased R&D spending, expanded their engineering departments, improved their techno-productive capabilities and reduced their unit production costs. In addition, some firms reduced their degree of vertical integration as the labour market was deregulated.[6]

In SMEs that manufactured combine harvesters, the technological modernization process of the 1990s was constrained by the small size of plants, the type of equipment used and the difficulty of reorganizing production processes. As a result, some firms left the industry and some went into partnership with other companies in the sector or diversified their output to capitalize on the capabilities they had acquired. Only one combine harvester firm expanded during the decade. At the subsidiaries of transnational enterprises, meanwhile, techno-productive activities diminished and the commercialization of imported agricultural equipment (most of it from Brazil) increased.

In the mid-1990s, transnationals once again redefined their global strategies and centralized their decision-making. They sited the production of tractors for MERCOSUR in Brazil and stopped making them in Argentina. Some Argentine subsidiaries invested in refitting their plants to produce tractor and other agricultural machinery parts, components and engines for other subsidiaries, particularly those in Brazil. They also increased their imports of tractors, combine harvesters and other agricultural equipment and started importing earth-moving, road-building and construction equipment.

In the late 1990s, growth in the Argentine economy slowed down and it became harder to hold the exchange rate at the level set by the Convertibility Act. From 2002, following suspension of payments on the external debt and the devaluation of the peso, the growth rate recovered. From 2005 onward, rapidly rising inflation eroded the real exchange rate and the competitiveness of firms.

Under these circumstances, the expansion and creation of techno-productive capabilities in agricultural machinery firms that had begun in the 1990s gathered pace. One locally-owned firm, the

[5] In 1993, the national State established a regime that gave capital goods manufacturers a tax rebate of 15% on sales in the domestic market. In 1995 the rebate fell to 10%, and in 1996 the regime was abolished altogether. One with similar characteristics has applied since 1999 exclusively to manufacturers of agricultural machinery.

[6] The mechanism worked as follows: the firm would dismiss workers, provide them with financing to buy equipment and then purchase the parts or components they manufactured.

largest manufacturer of combine harvesters, increased its production capacity tenfold between 1990 and 2004 while lowering its unit costs and commencing export operations. New tractor and combine harvester firms also entered the sector, all of them SMEs. In this situation of industrial dynamism, the participation of science and technology institutions in the quest for new markets and in corporate innovation processes increased, especially in the case of firms making seed drills and direct seeding implements.

In summary, over the last decade the subsidiaries of transnational enterprises have stopped making tractors in Argentina, increased their imports and consolidated their strategy of specialization and complementation with other subsidiaries of the parent company. Some locally-owned firms that make combine harvesters and tractors have built up new techno-productive capabilities and begun exporting. The largest manufacturers of seed drills and agricultural implements, spurred by the spread of direct seeding, have created new products and begun exporting, either on their own or in partnership with other firms. They have also developed products in other countries, for other agricultural environments. In most cases, however, production scales are still small and conventional equipment still predominates.

2. Reorganizing the agricultural machinery sector: industries and markets

In the late 1970s, this sector was characterized in the industrialized countries by the presence of large enterprises, some of them transnational, that manufactured several different lines of agricultural equipment. In Argentina, on the other hand, what prevailed in the sector were SMEs specializing in the manufacture of one main product line, and four industries could be identified: tractors, combine harvesters, agricultural implements and auxiliary agricultural equipment.

Since 1978, the sector has gone through four episodes of restructuring (table 2). The first episode, in 1978-1981, took place amidst changes in the incentive regime, falling domestic demand and an abrupt decline in sectoral production indices. Many locally-owned SMEs left the business and the subsidiaries of transnational enterprises that made tractors reduced the scale of production. There were massive lay-offs, particularly in the tractor industry.

Between 1988 and 1994, Argentina saw its second episode of restructuring, driven by the loss of competitiveness among locally-owned firms.[7] Many manufacturers of agricultural implements and auxiliary equipment left the business and the combine harvester industry broke up (García, 1999). The tractor industry accounted for the largest share of sectoral output by value, while the implements industry was the most considerable in terms of the number of firms and the level of employment.

The main features of the third episode, which took place between 1995 and 2000, were the departure of subsidiaries of transnational enterprises from the Argentine tractor industry and the arrival of new locally-owned firms in the seed drill industry. Since then the sector's organization has been dominated by locally-owned firms, most of them SMEs. The global strategy shift among transnationals and the spread of direct seeding in Argentina were what triggered this episode.

Between 2002 and 2006, the fourth and latest restructuring episode took place. The increased profitability of agriculture and the newly dynamic demand for agricultural machinery[8] attracted new locally-owned firms into the business; the combine harvester and tractor industries were reorganized; the seed drill and agricultural implements industries came to account for the largest shares of sectoral GDP; and firms with two or more principal product lines also emerged.

To sum up, between 1980 and 2007 the structure of the agricultural machinery sector in Argentina changed and the value of its output fell by 50%. Following successive bouts of restructuring: (i) the tractor industry and market are now dominated by locally-owned firms, most of them SMEs; (ii) transnational firms have ceased to manufacture agricultural equipment in Argentina and have raised their market share for combine harvesters to 80%; (iii) the leader in the sector is no longer the tractor industry but the seed drill industry, while the share of the combine harvester industry, at 17%, is now just above its 1980s level; and (iv) the seed drill, agricultural implements and agricultural accessories industries are now the most dynamic in the sector (led by manufacturers of direct seeding implements).

[7] According to information from the National Industry Register (RIN), the value of the agricultural machinery sector's output doubled between 1990 and 1993 while direct employment fell by 36%.

[8] Data from the National Institute of Statistics and Censuses (INDEC) show the sector's output increasing by 60% in value between 2002 and 2006.

TABLE 2

Argentina: restructuring episodes in the agricultural machinery sector, 1980-2007

Key episodes	First episode (1978-1981)	Second episode (1988-1994)	Third episode (1995-2000)	Fourth episode (2002-2006)
Incentive regime, impact on the sector	Market opening. The State and public banks discontinue incentives to the sector. Abrupt fall-off in demand and exporting difficulties. Decline in production indices and loss of profitability.	Economic liberalization and faster import growth. Loss of competitiveness for locally-owned firms. Tax rebates on sales of agricultural machinery from 1993.	Liberalization and MERCOSUR. Dynamic demand due to growth of direct seeding and tax rebates on agricultural machinery sales. Transnationals relocate tractor production to Brazil and discontinue it in Argentina.	Demand increases 400% between 2002 and 2006 because of high profits in agriculture and the growth of direct seeding techniques. Tax rebates on sales of agricultural machinery. Increased profitability for agricultural machinery firms.
Role of employers' associations and science and technology institutions	Locally-owned firms join forces in the Argentine Chamber of Agricultural Machinery Manufacturers (CAFMA). Technology Advisory and Services Department (DAT) created in Santa Fe Province to provide technical assistance.	INTA steps up its programme to reduce harvesting losses and spreads direct seeding techniques. CAFMA forges ties with science and technology institutions to support the development of firms' techno-productive capabilities.	The CIDETER Foundation is created as a public-private initiative. It offers technical assistance. Firms increasingly link up with science and technology organizations to implement innovation processes and find markets.	Employers' associations and science and technology organizations implement programmes to enhance technological capabilities and increase exports. Ties between firms and sectoral institutions strengthen.
Tractor industry and market	Four or five subsidiaries of transnational firms. Loss of production capacity, break-up of the supplier network and decline in R&D spending. Mass lay-offs. Joined in the 1980s by three locally-owned firms. Highly oligopolistic supply, more asymmetrical than in previous decades. Competition is on product type rather than price.	Seven firms in the industry. Industry share of sectoral GDP by value rises from 43% in 1984-1986 (Huici, 1988) to 65% in 1993. Independent importers enter the market and transnationals increase imports.	Break-up of the industry as subsidiaries of transnationals depart. Locally-owned firms remain. These contribute 7% of sectoral GDP in 2001 (Hybel, 2006). In 1990-1998, the number of manufacturers rises from seven to nine; they include five independent importers. Globalization of supply, change of leadership and reduced concentration. Oligopolistic and asymmetrical supply. Four firms have a combined market share of 75%, the share of the two largest is 40%.	Industry built around locally-owned firms. Five SMEs enter the market. There are 12 market participants; eight are locally-owned firms (two large and six SMEs). Globalization of supply. Two transnationals have a combined market share of 70% (Hybel, 2006). Oligopolistic and asymmetrical supply.
Combine harvester industry and market	Higher imports. There are 12 to 15 locally-owned firms. No changes in the industry. Oligopolistic supply, with one dominant firm whose market share is 40%. The other firms position their prices and technology around it. SMEs compete among themselves in peripheral markets.	Break-up of the industry. Between 1990 and 1994, the number of locally-owned firms falls from 10 to two while the number of imported machinery suppliers rises from two to six. There are eight to 10 suppliers in the market. Leadership has shifted from a locally-owned firm to a transnational with market share of 40%.	Industry broken up. One or two firms active. Share of the industry in sectoral output by value: 14% in 1984 (Huici, 1988) and 15% in 2001 (Hybel, 2006). In the 1990s there are eight to 10 participants. The market share of the four largest ranges from 77% to 82%. Oligopolistic and asymmetrical supply. There is one dominant firm with a market share of 38% to 48%. The others position themselves around it.	Entry of three locally-owned firms and reorganization of the industry. Ten to 12 participants in the market. Oligopolistic, asymmetrical supply. One dominant firm with a market share of 40%. The market share of the two largest, both transnationals, is 60%. That of five locally-owned firms is 18% (Hybel, 2006).
Agricultural implement and seed drill industry and market	Exit of firms. In 1984-1986: 400 locally-owned firms in agricultural implement and auxiliary equipment industries, most of them SMEs. They account for 43% of sectoral output (Huici, 1988).	Import growth speeds up in 1990-1994. Between 1984 and 1993 an estimated 100 to 150 SMEs leave the industry. In the 1980s, manufacturers of seed drills for direct seeding also enter the market. In the ploughing and seeding implements industry and market, there is great dispersion in company size. Two or three leading firms each have a 10% market share.	Number of firms in the seed drill industry and market: rises from 40 to 50, all locally-owned. Oligopolistic and asymmetrical supply. Supply is diversified but not internationalized. In 2001, seed drills account for 45% of sectoral output by value and sprayers for 16% (Hybel, 2006).	Dynamism in the seed drill, self-propelled sprayer and grain platform industries. Lower output of ploughing implements owing to spread of direct seeding techniques. In 2005/06, seed drills account for 42% of sectoral output by value. Seven or eight large seed drill manufacturers have a market share of 50% to 60%, and the two largest have a 10% share apiece. Competition is on product, price and financing.

Source: Prepared by the author.

3. New actors and new roles in the sector

In the import substitution industrialization years, the main actors in the agricultural machinery sector were locally-owned firms, subsidiaries of transnationals, suppliers and a variety of public and private institutions. The national State, besides protecting the domestic market, promoted the sector's development by means of programmes implemented through the Department of Industry, the public banking system and international financial organizations. For their part, science and technology institutions provided technical assistance under various programmes. As for private-sector institutions, those years saw the creation of the Association of Argentine Tractor Manufacturers (AFAT), whose membership consisted of tractor-making subsidiaries of transnational enterprises. These firms contributed to the industrial fabric of the sector by training engineers and technicians who disseminated cost-reducing technological practices not hitherto used by local firms.

In the 1980s, the national State and the public banking system abolished incentives for the sector, and competitive pressures accordingly increased. In response to the changes in the incentive regime, locally-owned firms joined forces in the Argentine Chamber of Agricultural Machinery Manufacturers (CAFMA).[9] The Technology Advisory and Services Department (DAT) of Santa Fe Province was also set up to provide technical assistance to industrial companies in the province (García, 2004).

In those years, locally-owned firms forged more contacts with science and technology organizations with a view to improving their own techno-productive capabilities. With centres in the provinces of Buenos Aires, Córdoba and Santa Fe, the National Institute of Industrial Technology (INTI) offered a variety of services to firms in the sector, with a particular focus on new materials, the design and production of devices and improvements to production processes.

Meanwhile, the National Institute for Agricultural Technology (INTA) stepped up its R&D, assistance and advisory activities aimed at improving the technology, utilization and safety of agricultural equipment. With the participation of locally-owned agricultural machinery firms, it also began to implement programmes to improve seeding technologies and reduce harvesting losses. The programmes and activities of INTA were critical to the spread of direct seeding and the improvement of the technological capabilities of seed drill firms. Other important actors were the Argentine Association of Direct Seeding Producers (AAPRESID) and the stock exchanges of Buenos Aires, Córdoba and Rosario.

In the last decade, spurred by rising domestic demand, employers' associations and science and technology organizations involved themselves further in companies' innovation processes and in the search for new markets. In this respect, the 1990s seem to have marked a clear departure from earlier decades. The two employers' associations (AFAT and CAFMA) took on new roles. At AFAT, subsidiaries of transnational enterprises were joined by locally-owned tractor manufacturers and independent importers. Since the main business of most of these firms is the import and export of agricultural equipment rather than manufacturing, AFAT activities are oriented mainly towards the regulatory framework for the external trade in agricultural machinery.

CAFMA, meanwhile, represents locally-owned firms and has struck up relationships with science and technology institutions to implement programmes and activities aimed at enhancing the innovation and commercial capabilities of firms. With a view to promoting exports and internationalization in the sector, in 2007 it formed the Argentine Agricultural Machinery Research and Business Development Centre (CIDEMA).

In response to growing demand for particular technology services, the CIDETER Foundation was created in Santa Fe Province in the 1990s. This is a regional technology centre involving firms from Santa Fe and Córdoba provinces. Its objective is to encourage the formation of an agricultural machinery production cluster and respond to companies' need for outside assistance with their technological, production and commercial activities. In recent years, Argentine universities have also begun to provide technology services to firms in the sector through their agricultural machinery departments, as have research institutes and colleges.

As for firms, in the last decade the subsidiaries of transnationals have reduced their presence in the sector's industrial fabric. This has been detrimental to the transmission of their technology practices to

[9] CAFMA is a member of the Association of Metallurgical Industrialists of Argentina (ADIMRA), which in turn is part of the Argentine Industrial Association (UIA).

locally-owned firms. Meanwhile, a group of locally-owned SMEs, the most dynamic in the sector, have stepped up R&D activities oriented towards product innovation and process improvement to raise their productivity and lower production costs: they have expanded their engineering departments, worked regularly with science and technology professionals and organizations and, in some cases, carried out joint activities with INTA and INTI.

This whole process has intensified in the last few years because of the need to resolve the problems created by the growing technological complexity of products and processes. However, only a small group of firms in the sector have created ties with science and technology organizations to implement innovation processes.

Firms, science and technology institutions, employers' associations, Argentine and international financial organizations and different departments of the national State and the provincial states of Santa Fe, Córdoba and Buenos Aires[10] are the main stakeholders in the National Innovation System for Agricultural Machinery (SNIMA). On the whole, their activities are not well coordinated and they do not offer specialist services. However, growing competitive pressures and rising domestic demand have given rise to activities and programmes oriented mainly towards techno-productive capacity-building, exporting and the internationalization of SMEs in the sector. Against this background, trade associations and science and technology institutions are now participating more in locally-owned companies' innovation activities.

IV

Global markets, corporate strategies and internationalization

Following successive bouts of restructuring, the agricultural machinery sector in Argentina now consists of locally-owned firms, most of them SMEs oriented towards the domestic market. Manufacturers of agricultural implements in general, and seed drills in particular, are the most dynamic and contribute most to the sector's GDP. The small size of the domestic market and the cyclical behaviour of demand there continue to limit the long-term growth prospects of the sector. To expand, firms will have to export more and become more international.

Agricultural machinery markets are global, as are the main participants in them. A group of large transnational enterprises, which are also leaders in technology, account for the bulk of global output of this type of machinery.[11] Meanwhile, global demand for this is rising thanks to the dynamism of world agricultural commodity markets. In this context of global markets and rising demand, Argentine firms could be suppliers of combine harvesters, tractors and particularly seed drills and implements for direct seeding, a practice in which European and Latin American countries are showing an increasing interest. This means developing the techno-productive capabilities and commercial skills needed to operate in globalized markets.

1. Industrial development and the ability to compete

Even though global and local demand for agricultural machinery is dynamic, the sector in Argentina is uncompetitive. Imports have risen and Argentine production has declined in value over the last decade, revealing the limitations of the installed production capacity in the sector. At the same time, exports have grown[12] and certain indicators of competitiveness have improved. As well as increasing their exports,

[10] In Argentina, agricultural machinery firms are distributed around small towns in the pampas region, especially the provinces of Santa Fe and Córdoba (70%) and Buenos Aires (20%).

[11] According to information from PROARGENTINA (2005), the two largest transnationals in the industry, John Deere and CNH, account for 44% of world output, and the six largest for 54%. As global actors, they design products for different markets while also operating locally.

[12] Some 82% of Argentine agricultural machinery exports go to neighbouring countries, particularly Uruguay (51%). Other destinations are Australia, Mexico, Spain, the United States and Ukraine, according to information from PROARGENTINA (2005).

producers of seed drills, sprayers and agricultural implements have expanded their activities to other countries, focusing on developing products that are specially suited to their soils.

The dynamism of external sales can be attributed to large firms, specialized production clusters and link-ups between innovative SMEs and a range of sectoral institutions. Both employers' associations and science and technology organizations and institutes have reorganized their activities to meet the needs of firms. They have increased their participation in innovation activities, in the search for new markets and in the internationalization of SMEs in the industry. Technology upgrade financing from international organizations, the dynamism of domestic demand and the State incentives available to the sector have also been favourable to external sales growth.

The growth in exports suggests that firms have gone through techno-productive learning and development processes that have prepared them to compete in globalized external markets. With tractors and combine harvesters, progress is still based on adaptive imitation and innovations are mainly associated with the practices of the metallurgical and electronics industries. By contrast, the innovations being incorporated into seed drills, sprayers and other agricultural implements go beyond metallurgy and electronics to take in practices in the fields of agriculture, genetics and biology. Argentine seed drill manufacturers usually innovate in response to specific agronomic requirements. However, some firms have introduced innovations of their own that are original and unlike those found in products at the technology frontier (Bragachini, 2005).

To operate in global markets, Argentine agricultural machinery firms would have to attain a certain level of development in their techno-productive capabilities and be able to adapt continuously to technological change. However, the evidence suggests that a number of constraints need to be overcome first. One of them is the small scale of production (250 to 500 seed drills and 400 to 600 combine harvesters a year) even at plants considered large (García, 2005 and 2006). The production plant of the largest combine harvester manufacturer in Argentina is only 10% to 20% as large as its counterparts in Brazil and the industrialized countries.[13] Because plants are small, there is a great deal of vertical integration and few opportunities for cost-cutting. Generally speaking, the small size of plants and the lack of suppliers mean there is little scope to increase production, lower product prices and break into new markets.

Another constraint on efforts to raise the sector's international competitiveness is the way businesses are managed: although some firms have professional management, most of the others are family-owned, family-run SMEs with non-specialized executive (and sometimes technical) staff. Their products usually do not have international quality certification and their R&D spending, ranging from US$ 100,000 to US$ 200,000 a year, is well below that of foreign firms. They usually have trouble designing and improving products because of financial constraints and the lack of suppliers. Because they are situated in small towns in the pampas region, furthermore, they generally find it hard to recruit and retain skilled labour.

In summary, global demand for agricultural equipment is increasing. This suggests there are opportunities for Argentine firms in the industry to increase their exports and operate regularly in globalized, dynamic external markets. The ability to increase exports and internationalize depends both on companies' level of techno-productive development and on the macroeconomic environment and incentive regime. The process of acquiring new techno-productive capabilities involves both the firms and institutions supporting the sector and the industrial and technological policy of the Argentine State.

Irrespective of the incentive regime and macroeconomic context, however, it is firms themselves that set their strategic goals. These goals may or may not include increasing their exports and expanding their techno-productive activities to other markets. Corporate decisions are a necessary but not sufficient condition for export growth and further internationalization of the Argentine agricultural machinery sector.

2. Strategy and the search for new markets

At the import substitution stage, increasing exports was not a strategic goal of firms in the sector. In most of them, sales to external markets (usually neighbouring countries) served to offset cyclical variations in the small domestic market. One question must be whether the rise in exports over recent years

13 When domestic demand is in a contractionary phase, furthermore, Argentine companies operate with idle capacity of 40% to 60%.

has been the result of favourable economic conditions or of changes in corporate strategy. Another is whether firms that have begun to export aim to set up operations in other countries. In an attempt to answer these questions, the growth strategies of one subsidiary of a transnational enterprise and six locally-owned firms will now be examined.

By a company's strategy is meant a set of broad measures that include identifying and rationalizing goals and the methods to be used to attain them. The measures in a strategy may not be optimum; indeed, they could be self-destructive. From an evolutionary perspective, it makes no sense to assume that a firm can determine its "best" strategy. However, some strategies will be profitable and others will not; firms that systematically lose money will have to change their strategies and structures and create new capabilities or use those they already have to better effect if they wish to survive in the marketplace. To be successful in an innovative and changing world, firms need to delineate a strategy that enables them to decide which new avenues they should follow and which they should not. It must be assumed that firms are diverse and will choose slightly different strategies that lead them to different structures, to different basic capabilities and, inevitably, to different pathways to maturity (Nelson, 1991).

Firms' strategies are influenced by the macroeconomic situation and the incentive regime. In the Argentina of the 1980s, agricultural machinery firms lost competitiveness: they needed to restructure to adapt to the new incentive regime. However, falling demand, relative price volatility, high and variable inflation rates and high real interest rates discouraged investment in capital goods and in some cases helped to swell firms' debts.

In this macroeconomic context, SMEs in the sector expanded their product range to reduce their high levels of idle capacity and keep annual revenues more or less stable. Large firms, meanwhile, not only altered or expanded their product mix, but sought to restore profitability by entering into techno-productive and commercial partnerships with other agricultural machinery manufacturers to cut costs and break into new markets. Subsidiaries of transnational enterprises, meanwhile, diversified production, increased their commercial activities and began to trade with subsidiaries in Brazil. In some locally-owned firms and in subsidiaries of transnational enterprises, there were changes in ownership and organization structures.

As indicated earlier, in the 1980s the Argentine subsidiaries of transnationals, operating within the global strategies of their parent companies, initiated specialization and production and trade complementation processes with other subsidiaries. Meanwhile, locally-owned firms that had started out in a context of substitution industrialization carried on with "defensive" growth strategies that had proved profitable in earlier decades. They looked towards the domestic market not only because they were uncompetitive abroad, but essentially because they believed that the market opening process in Argentina would not be extended and indeed would not be permanent.

By contrast, locally-owned firms that entered the sector in the 1980s pursued "offensive" strategies appropriate to an open economy and competitive markets. For them, increasing exports was a strategic goal right from the start: they designed products to compete with foreign firms and operate in other markets, such as Brazil, Chile and European countries (Spain, the United Kingdom and eastern Europe).

By the 1990s, most of the firms that redefined their growth strategies had lost competitiveness as manufacturers of combine harvesters or tractors, but retained the ability to design, manufacture and market less technologically complex equipment. This group included both subsidiaries of transnational enterprises and locally-owned SMEs.

Two SMEs that made combine harvesters set up a techno-productive and commercial partnership with other firms in the industry, reallocated their accumulated production capacity and modified their product and commercial mix to make better use of installed capacity and economies of scale. The Argentine subsidiaries of transnationals, meanwhile, reacted to a new wave of global strategy shifts by discontinuing tractor production in the late 1990s. Since then they have made engines, parts and components, i.e., less technologically complex products than tractors. In general, commercial and financial activities have grown in Argentina while manufacturing activities have declined.

Although imports have increased, the leading seed drill manufacturers have not lost their competitiveness in the domestic market. Those that started out in the substitution industrialization stage and wished to carry on expanding have included higher exports and greater internationalization of their techno-productive activities among their strategic goals. Some firms have also decided to go into techno-productive and commercial partnerships with others to operate in the domestic market and abroad. These changes of strategic direction, associated with the growing use of direct seeding and the dynamism of demand, have been consolidated in the 2000s.

Generally speaking, firms manufacturing seed drills have built up their techno-productive capabilities with the domestic market and certain external markets in view. The largest have forged ties with science and technology organizations to innovate and increase their exports. In some cases, these activities are supported by government agencies. Some firms manufacture seed drills adapted to the soils of neighbouring countries, others design them for European countries (the United Kingdom, Spain, eastern Europe) or New Zealand.

In summary, Argentine subsidiaries of transnational enterprises have used specialization and intra-firm techno-productive complementation to go further along the road they started down in the 1980s, and now operate in global markets. For larger locally-owned firms, increasing exports and trading in globalized external markets have been strategic objectives since the 1990s. For firms that are leaders in the seed drill and agricultural implements industry, in particular, higher exports and internationalization of their activities are strategic goals associated with the spread of direct seeding techniques. The factors helping to consolidate these goals have been ties with science and technology organizations, the formation of export consortia and techno-productive and commercial partnerships between firms in the sector.

V
Concluding remarks

In a more competitive environment, the Argentine agricultural machinery sector has struggled to compete in both the domestic and external markets. In the 1980s, to narrow the product and process technology gap, locally-owned firms began to restructure in a context of low domestic demand, high levels of uncertainty and relative prices that were a disincentive to production. Even so, locally-owned tractor manufacturers began to expand in those years, as did small firms that began to produce seed drills for direct seeding.

Spurred by the liberalization and globalization of the domestic market for agricultural equipment and by progress with the formation of MERCOSUR, large and medium-sized locally-owned firms included higher exports and greater internationalization of their activities among their strategic goals. The dynamism of domestic demand, the increasing use of direct seeding and the actions of organizations and institutions in the sector helped to consolidate these goals and have underpinned firms' expansion in recent years.

Until the 1990s, generally speaking, agricultural machinery firms in Argentina were subjected to successive bouts of techno-productive restructuring and changes in growth strategy. Since then, subsidiaries of transnational enterprises have operated at a global level. Locally-owned firms have increased their exports and some have begun to internationalize. These processes have been driven equally by the macroeconomic environment in Argentina, including the incentive regime applied to the sector, and by the strategic decisions of firms and support from governmental and science and technology bodies.

For a number of reasons, the agricultural machinery sector in Argentina has scope to increase exports and internationalize further. First, the dynamism of agricultural commodity markets is expanding the local and global agricultural frontier and Argentine firms are in a position to design and manufacture equipment tailored to different farming models. Given that from a global perspective the level of agricultural development in Argentina is considered to be comparable with that of Europe and the United States (PROARGENTINA, 2005), there seems to be no reason why the country should not develop equipment for sophisticated markets.

Second, agricultural implement markets are dynamic, largely because of the diversity of sources contributing to product innovation. These sources include technological changes in agronomic practices (direct seeding, for example), in the metallurgical industry (new types of engines, new designs), in biotechnology (new seeds) and in the chemical industry (agrochemicals). This implies that barriers to entry are low and that locally-owned SMEs could enter the market and compete as well as or better than established firms, including transnationals.

Third, the sophistication of demand and the internationalization of the domestic market are pitting locally-owned firms, especially those making tractors and combine harvesters, against large manufacturers of products at the global technology frontier. This situation offers a challenge to the design capabilities of local firms, while providing them with models to live up to and incentives for learning: products that compete successfully in the domestic market can do so in other markets as well.

In recent years, firms making seed drills and agricultural implements have been the most competitive. Some that have forged ties with science and technology institutions to pursue their innovation processes are also undertaking research and development to design and manufacture equipment suited to other countries' soils and spread the practice of direct seeding (for example, in New Zealand, Chile and Spain). To consolidate this incipient internationalization and the rise in SME exports, support from government activities and programmes, employers' associations and science and technology institutions is just as important as firms' own strategic goals.

Export growth and progress with internationalization in the Argentine agricultural machinery sector also depend on its ability to overcome its own limitations, particularly where technology is concerned. This being so, the macroeconomic and institutional environment needs to be one that is favourable to long-term decision-making. The incentive regime should also promote and facilitate access to external markets, larger plant sizes, the creation of a supplier network and the manufacture of safer, quality-certified products.

Lastly, it needs to be borne in mind that the profitability of Argentine SMEs in the industry depends on their performance in the domestic market and that firms need to mature and consolidate in that market before starting to export. Consequently, one of the factors that have contributed most to export growth and greater internationalization in the sector is the behaviour of domestic demand for agricultural machinery, which basically depends on the profitability of Argentine agriculture.

(Original: Spanish)

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The structure and competitiveness of the Brazilian capital goods industry

André Nassif

This article analyses changes in the structure and competitiveness of the Brazilian capital goods industry since the early 1990s and proposes a classification within that industry based on the different industrial segments from which the demand for machinery and equipment derives. Although this industry still accounts for a large share of manufacturing sector value added, the production efficiency and international competitiveness of the segments it comprises are quite heterogeneous. The article singles out the segments with the greatest development potential and suggests measures that could be taken in each of them to complement the industrial and technology policy instruments contained in the Production Development Policy officially established in May 2008.

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I
Introduction

A country's capital goods industry must count among the engines of its economic development. Both microeconomically and macroeconomically, the importance of this industry as a creator of production capacity and a driver of technical progress in the economic system generally is well recognized, even when the country is a net importer of these goods. Indeed, its linkages with the science and technology base and its role in spreading technological externalities and embodying innovations in the goods it manufactures make it in some degree responsible for the systemic competitiveness of the economy.[1] It is not surprising, then, that the capital goods sector was one of the four priority sectors identified in the Industrial, Technological and Foreign Trade Policy (PITCE) applied during President Luiz Inácio Lula da Silva's first term (2003-2006).

The new industrial, technological and foreign trade policy introduced in President Luiz Inácio Lula da Silva's second term (2007-2010) and officially announced in May 2008 as the Production Development Policy (PDP) is much further-reaching and more ambitious than its predecessor. To promote technological training, encourage innovation and stimulate exports, the PDP provides fiscal, tax and credit incentives to 24 sectors deemed to be of high priority. Despite its apparent sectoral focus, the new policy has been designed from a systemic perspective and the intention is to use target-setting and government follow-up to ensure that the industries thus encouraged create positive externalities for the economic system as a whole. In the PDP, the capital goods industry is once again identified as a priority recipient of public-sector incentives to enhance the competitiveness of the Brazilian economy.[2]

This article sets out to use domestic and international competitiveness indicators to analyse the development potential of the Brazilian capital goods industry subsequent to trade liberalization. Its main objective is to identify the segments with the highest levels of current and potential competitiveness. Given the diversity and complexity of the capital goods sector, it also seeks to identify the segments with the best prospects of meeting Production Development Policy goals, particularly those that relate to increasing domestic productivity, expanding and diversifying exports and furthering the country's economic and social development.[3]

The article contains six sections, including this introduction. Section II sets out the theoretical framework for the analysis and describes the classification that will be used here to delimit the capital goods industry. Section III briefly summarizes the historical development of the capital goods sector in Brazil, before and immediately after the trade liberalization of 1990. Section IV presents the main empirical evidence on the competitiveness of the Brazilian capital goods industry, using national and international performance indicators for the 1989-2006 period. Section V discusses some support measures to supplement the industrial and technological policy instruments contained in the Production Development Programme for each of the segments with the greatest development potential in Brazil. Section VI, lastly, sets forth some brief conclusions.

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[1] The term "systemic competitiveness" is a reference to Porter (1991). Fajnzylber (1988) used the term "spurious competitiveness" to refer to "a country's capacity to sustain and expand its share of international markets (…) by making use of the available cheap manpower and of subsidized lines of credit", in contrast to "genuine competitiveness", which is based on "improved productivity resulting from the incorporation of technological advances" (pp. 12-13). In this author's view, "spurious competitiveness" is not sustainable in the long run.

[2] Full details of the PITCE and PDP are available online on the website of the Ministry of Development, Industry and Commerce (http://www.mdic.gov.br).

[3] The Production Development Policy provides public-sector incentives for mass-produced and made-to-order capital goods, but does not establish which segments have the best prospects of achieving the new industrial policy goals.

II

The capital goods sector: theoretical framework and proposed typology

This section describes the theoretical framework surrounding the competitiveness indicators used in this article. It has become commonplace to assert that the capital goods industry plays a strategic role in countries' economic development because it produces the machinery and equipment used by the entire production system, embodies new technology endogenously and, consequently, spreads technical progress to the rest of the economy. Countries that succeed in internalizing the production of certain kinds of more sophisticated capital goods in an economically efficient way tend to enhance their technological independence and economic development potential. In other words, the capital goods industry, allied with other factors, strongly influences productivity growth and competitiveness in the economy as a whole.

The concept of competitiveness has been the subject of fierce debate in the economic literature, since the factors determining it depend on the hypotheses underlying the theoretical methodology. According to the neoclassical approach, for example, competitiveness is clearly linked to cost efficiency, which is a biunivocal function of the behaviour of productivity.[4] Conversely, the neo-Schumpeterian approach treats competitiveness as a dynamic, complex and uncertain process deriving from the efforts of companies to innovate in quest of more lucrative opportunities or a larger share of the market or markets in which they operate.[5] Although it is not our intention to pursue this debate here, there can be no doubt that the capital goods industry makes an essential contribution to increased long-run productivity and competitiveness in the economy.[6]

According to theoretical and empirical studies of long-run economic growth determinants, technical progress (i.e., the spillover not directly observable in the data) can derive from two sources: technologies embodied in capital goods investments and "disembodied" technologies resulting from the know-how built up in research and development (R&D) activities, workforce education and training and other residual forms of human capital.

According to empirical evidence based on growth accounting methods, capital goods-embodied technologies contributed more to productivity growth in the United States during the post-war period than disembodied technologies. In the 1954-1990 period, about 58% of the rise in productivity was due to the former and 42% to the latter (Greenwood, Hercowitz and Krusell, 1997, p. 351). In a shorter period (1966-1989), stripping out the adverse effects of the business cycle, Abramovitz (1993) obtained lower but still considerable results, with figures of 46% and 54%, respectively.

It is a fact that the contribution of capital goods investment to rising productivity underwent a relative decline in the twentieth century, since prior to that, in the 1855-1890 period, it had come to account for some 66% of that growth, according to estimates by Abramovitz (1993, p. 223). Nonetheless, the same author argues that the lessening of the relative contribution of capital goods as a source of technological progress since the mid-1960s is only apparent. The estimated coefficients of the variables accounting for productivity improvements do not reveal the mutually reinforcing and interdependent relationship between tangible and intangible capital accumulation and technological progress (via the embodiment of technology, investment in R&D, learning by doing and using, education and other methods). In a word, in the most recent period the technology spillover effect has been manifested in

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[4] See Koutsoyiannis (1975) and Kreps (1990).

[5] See Nelson and Winter (1982) and a study of the subject in Possas (1996).

[6] The well-known criticism by Krugman (1994) of the concept of competitiveness as applied to countries is only partially valid. The primary sources of competitiveness (and economic growth itself) are indeed to be sought in firms, where crucial decisions about investment and innovation in processes, products and organizational methods are taken. However, competitiveness needs to be seen as a dynamic process, one that entails interaction between firms, markets and other public and private institutions but that has implications for international political and economic relations.

a marked dependency between the use of more sophisticated equipment and other forms of human capital.[7 8]

The importance given to the capital goods industry is justified by a number of other considerations. Apart from the technological arguments, it plays an undeniably important role in expanding potential production capacity and, consequently, in sustaining long-run capital accumulation and economic growth. Furthermore, as Greenwood, Hercowitz and Krusell (1997, pp. 345-346) point out, technological changes embodied in investment can increase potential supply only if preceded by fixed-capital investments, whereas this is not a condition for change induced by the neutral part of technology.

It needs to be asked whether capital goods might contribute in the same way to long-run productivity growth and systemic competitiveness if they were imported. In the long run, the answer is no. Developing countries do not need to master all segments (and nor should they try). However, the empirical evidence does confirm that the forms of technological change manifested in greater capital-intensity (i.e., those embodied in equipment) have a common characteristic: they are specific to the production of equipment and not the demand for it (Greenwood, Hercowitz and Krusell, 1997, p. 345). Using a microdata model based on a dynamic cost function, Paul and Siegel (1999) also confirm that in the manufacturing sector, owing to the existence of various industries (among them the capital goods industry) with technologies subject to increasing returns to scale, industrial groupings arising as a result of dynamic supply-side effects are more in evidence than those deriving from demand.

In the particular case of the capital goods industry in developing countries, traditional segments operating in industrial plants that use standardized technologies and produce on a relatively small scale coexist with capital-intensive segments operating in industrial plants characterized by technological indivisibilities and huge economies of scale. This is indicative of a high degree of structural heterogeneity within this industry. This heterogeneity is manifested, for example, in firm size, ownership and corporate structures, the share of each segment in the industry's total value added, the rate of productivity growth, the strategies used to bring their technology closer to the international frontier (and the results obtained by these) and their export potential.

Thus, competitiveness is largely determined by the production and technology structure of each segment of the industry. In the segments where the technologies used are widely available and product cycles are long, barriers to entry are usually low, which makes it possible for small, medium-sized and large enterprises to coexist. Conversely, in segments where technologies are characterized by indivisibilities and unit costs can only be kept down by ensuring that production levels match the minimum efficient scale, highly concentrated industrial structures (due to enormous barriers to entry) are ultimately more conducive to competitiveness.

Regarding particular strategic options for firms producing capital goods, there is no consensus as to whether these have positive or negative effects on their competitive positioning. The options most discussed include greater product specialization or diversification and vertical or horizontal integration of production. In both cases, firms will have to weigh up the advantages and disadvantages and make their own decisions with reference to structural trends in their industry in the relevant historical context.

In the first case, for example, increased global competition has led to greater specialization by firms in the sector. According to Vermulm and Erber (2002, p. 29), when firms opt to reduce the number of products on their production lines they lose some of the economies of scope that derive from greater variety, but swell the net profits from economies of specialization. Kupfer (1994) argues that this has been the international trend (at least in the machinery and equipment segment), so that greater specialization in specific market niches has created opportunities for small and medium-sized enterprises that have technological expertise and establish technical assistance networks for customers.

In the second case, theoretical studies of industrial organization have not explained whether greater production efficiency is also associated with greater commitment by firms to a horizontal

[7] Nelson (1964) pointed out some time ago that technological advance does not significantly reduce the contribution of "embodied technologies", the reason being that as a rising investment rate (which accompanies technological advance) modernizes the capital stock (i.e., the age of equipment falls), the contribution of the technology embodied in machinery and equipment tends to rise.

[8] We also need to be aware of the difficulties of calculating the contribution deriving from human capital as such. As Griliches (1994, p. 16) points out, knowledge cannot be measured in the same way as iron ore reserves since, unlike these, it manifests itself as a constant flow of very heterogeneous information.

production integration strategy, which basically consists in outsourcing the production of some or all of the raw materials and other inputs needed to manufacture a particular product. As Scherer and Ross (1990) argue, firms tend to backtrack on vertical integration when they calculate that efficiency would be improved by a greater division of labour. Nonetheless, it is possible that the prevailing pattern of competition in the industry, the distance and transport costs involved in obtaining raw materials, the structure of sectoral protection, the structure of sales taxes, the level of sectoral regulation and other factors may lead firms to seek greater efficiency by following a strategy contrary to the one described (Tirole, 1995, p. 17). According to Scherer and Ross (1990, p. 94), *cost-cutting is the main reason for firms to pursue greater vertical integration*. In this respect, the empirical evidence available on changes in the degree of vertical integration in the United States economy have not revealed any long-term trend. Between the late nineteenth century and the early 1980s (unmistakably a period of technological and structural change in that economy), developments within the industry did not evince any explicit trend towards greater or lesser vertical integration.[9]

The capital goods industry is generally regarded as the one most directly affected by the business cycle. Faced with a large drop in the demand for its products during prolonged periods of recession, capital goods firms tend to operate with higher levels of idle capacity than the average for the whole economy, which makes considerable inroads into their competitiveness. In the case of capital-intensive segments, the loss of economic efficiency is compounded by the average increase in fixed production costs. This suggests that, as in other sectors of economic activity, the competitiveness of the capital goods industry depends on both microeconomic and macroeconomic factors, but that it tends to be more acutely affected than other sectors of the economy by the latter.

In the specific case of the effect of the real exchange rate on the economic efficiency of production sectors in general and the capital goods industry in particular, the predictions of theoretical studies are ambiguous: on the one hand, an overvalued real exchange rate can stimulate productivity by reducing the relative price of imported equipment and inputs; on the other, an undervalued real exchange rate can also help to increase efficiency via the reallocation of economic resources to tradable goods segments or sectors, particularly those in which the country has a potential comparative advantage.

Given the range and diversity of the capital goods industry, and its technological variety and complexity, no country could master a large number of its segments (and nor would this be advisable).[10] Again, even in countries that have managed to develop more technologically complex segments in this industry, the import tariffs set have been moderate or low, so that domestic production growth has generally been accompanied by a substantial increase in the flow of imports.[11] More recently, as comparative advantage has been secured in a limited number of segments, international trade in capital goods-producing countries has begun to be characterized by large volumes of intra-industry trade.

Different typologies can also be established to reflect the complexity of the capital goods industry by categorizing the variety of products in specific segments of this industry, either by the technology content of products or by the purposes they are designed for. The traditional classification is based on technological complexity and divides the industry into two categories: (i) segments producing capital goods to order, which have high product engineering R&D costs because they are more technologically sophisticated and are designed to meet users' specific needs, and (ii) segments mass-producing standardized capital goods, production of which is subject to large static economies of scale and, with rare exceptions, demands not only quite high minimum efficient scales but also hefty process engineering R&D expenditure.[12]

Since the object of this paper is to analyse the national and international competitiveness of the capital goods industry to identify the segments with the greatest development potential, the most suitable classification is one that categorizes machinery and

[9] See Scherer and Ross (1990, p. 96).

[10] The recent introduction of electronics into the mechanical and electrical capital goods segments has in some cases broken down the traditional division between industries producing mechanical and electrical capital goods, on the one hand, and electronic capital goods, on the other. See Vermulm and Erber (2002).

[11] See Amsden (1989) on the Republic of Korea and Amsden (2001) for a comparative analysis of developments in Asia and the Latin American countries.

[12] See Vermulm (1993).

equipment production by the business segments that are the end users. This classification is compatible with the argument made by Nelson (1996) that know-how built up through learning by using machinery and equipment stimulates and promotes the introduction of new technical advances by both users and suppliers of capital goods. Thus, it is possible to analyse the performance of machinery and equipment segments oriented towards activities with different levels of technology content. The classification used in this paper adapts the segments in the National Classification of Economic Activities (CNAE) of the Brazilian Geographical and Statistical Institute (IBGE) as follows: traditional industrial machinery and equipment, electricity generating machinery and equipment, telecommunications machinery and equipment, electronic and non-electronic office machinery and equipment, medical and hospital equipment, agricultural machinery and equipment and transport machinery and equipment.[13]

III

The capital goods sector in Brazil before and immediately after trade liberalization

The Brazilian capital goods industry dates back to the late nineteenth century. By contrast with the industries of a number of late-industrializing European countries, it arose spontaneously and without deliberate State support. During the main period of what is known as the primary-export stage (1870-1930), the industry produced capital goods that were fairly rudimentary by the standards of the time, usually designed for activities associated with coffee production and commercialization.[14] Although the effects of the crisis that began in 1929 led to the breakdown of the primary-export model and contributed to the emergence, again spontaneous, of the import substitution industrialization model, the lack of a national plan for the development of this industry goes some way towards explaining why the capital goods sector continued to be technologically backward in Brazil until the late 1940s.

From the mid-1950s onward, the Brazilian industry was aided by a number of government incentives, including a customs protection scheme and a system of differentiated exchange rates. Once the adverse effects of economic stagnation in the 1960s had been overcome –the capital goods industry grew at negative average annual rates (-2.6%) between 1962 and 1967– the sector once again began to display considerable internal dynamism in the early 1970s.[15] In the first half of that decade, gross fixed capital formation in the Brazilian economy averaged 20.2% of the country's gross domestic product (GDP), boosting machinery and equipment production.[16] In the second half, the capital goods industry, classified as one of the priority industries in the second National Development Plan (1974-1979), benefited from a series of public-sector incentives, such as government procurement policy, agreements mandating ever-increasing shares of national content by value in major State-financed investment projects, and the programme of the Commission for the Concession of Fiscal Benefits to Special Export Programmes (BEFIEX) exempting firms that undertook to make high-value exports in future from capital goods import taxes.[17] The data available show that growth in this industry's gross output by value averaged 20% a year between 1970 and 1977.[18]

However, only a few segments of the capital goods industry were able to move towards technological convergence and attain economic efficiency levels compatible with the latest advances in the world

13 In the two-digit cnae, manufacturing industry contains 24 divisions (from number 10 to number 33). The data on different machinery- and equipment-producing segments used in this research, which is based on the three-digit CNAE, were taken from divisions 26, 27, 28, 29, 30 and 33. See the IBGE website (http://www.ibge.gov.br) for further details.

14 See Silva (1982).

15 See Vermulm (1993, p. 2).

16 Data from Ipeadata, a database of the Institute of Applied Economic Research (IPEA), available at http//www.ipea.gov.br.

17 See Nassif (1995) for further details.

18 See Vermulm (1993, p. 2).

market.[19] In those segments whose technology was subject to increasing returns to scale, a large proportion of firms were operating at production levels below the minimum efficient scale. Furthermore, impelled by severe tariff and non-tariff constraints on importing, these firms went too far with the vertical integration of production.[20]

Again, despite the ambiguities inherent in the logic of the industrial policy contained in the second National Development Plan (1974-1979), which combined a high degree of tariff and non-tariff protection with public subsidies to encourage local production, while at the same time seeking to lower domestic investment costs by applying fiscal and tax cuts or breaks to external purchases of capital goods, the predominant style of growth in the demand for capital goods imports was one whereby its expansion complemented domestic production, owing to the rise in the national investment rate during cyclical upturns in the economy (Resende and Anderson, 1999, p. 17).[21]

This overblown protection for local industry would end only with the trade liberalization process of 1990-1994. Among the main repercussions of this reform in the capital goods sector was a sharp rise in the import ratio,[22] the rapid exit of inefficient firms from the market,[23] a substantial reduction in the range of goods produced per company, a slow reversal in the vertical integration of production processes[24] and rapid internationalization of the industry.[25]

IV

The competitiveness of the Brazilian capital goods industry after trade liberalization: empirical evidence

This section will analyse the data available on the performance and on the domestic and international competitiveness of the capital goods industry. Given that the methodologies of the IBGE Annual Industrial Survey (PIA) before and after 1996 are incompatible, it was only possible to analyse industrial production indicators in the 1996-2005 period (2005 being the last year available from the PIA at the time this research was conducted). Most of the external trade indicators are for 1989-2006; the data concerned were obtained from the Foreign Trade Department (SECEX). The codes of the old Brazilian Merchandise Nomenclature (NBM) had to be converted to those of the current MERCOSUR Common Nomenclature (NCM) and from this to the CNAE codes.[26]

[19] The estimates of Kume, Piani and de Souza (2000) show that the machinery and equipment sector recorded effective protection rates of 44% in 1989, a little lower than the average for the whole economy, which was 46.5%. These data confirm that the trade reform which took place in 1988, and whose main thrust was the lowering of import tariffs, did not do much to reduce effective protection in the economy, given the prevalence of high non-tariff barriers. For this reason, it is in 1990 that effective trade liberalization should be considered to have taken place in Brazil, as gradual but deep cuts in customs tariffs were combined with the abolition of most non-tariff restrictions. See Nassif (1995 and 2003a).

[20] See Vermulm and Erber (2002).

[21] Resende and Anderson (1999, p. 17) state that until the late 1980s, increases in the capital goods import ratio occurred when both the quantum of such goods imported and the quantum produced rose, confirming that demand for imports and the behaviour of domestic production were complementary.

[22] Moreira and Correa (1996) state that the import ratio as a proportion of apparent consumption (output plus imports minus exports) rose from 20.6% in 1990 to 45.9% in 1995.

[23] Vermulm (1993) and Vermulm and Erber (2002).

[24] Vermulm (1993), Miranda (2001) and Vermulm and Erber (2002). These authors suggest but do not empirically demonstrate the supposed rolling back of vertical integration.

[25] Moreira (1999, pp. 20-23) estimated that the market share of foreign firms (more than 10% foreign-owned) had risen on average from 41% to 64% between 1980 and 1995, which was greater than the average increase in their share of the manufacturing market as a whole (from 28% to 43% in the period).

[26] The author is extremely grateful for the assistance of Mário Costa Levorato Jr. in carrying out the computer programming required to convert these codes.

1. Industrial structure, productivity and employment

Table 1 shows that the marked adjustment in production and technology that followed trade liberalization did not lead to the demise of the Brazilian capital goods industry. In 2005, the sector accounted for about 12% of all value added in manufacturing industry, which is slightly less than the figure of 14% in 1996.

Nonetheless, in recent years the capital goods industry has undergone substantial changes in its internal structure. The transport machinery and equipment segment was the only one to substantially

TABLE 1

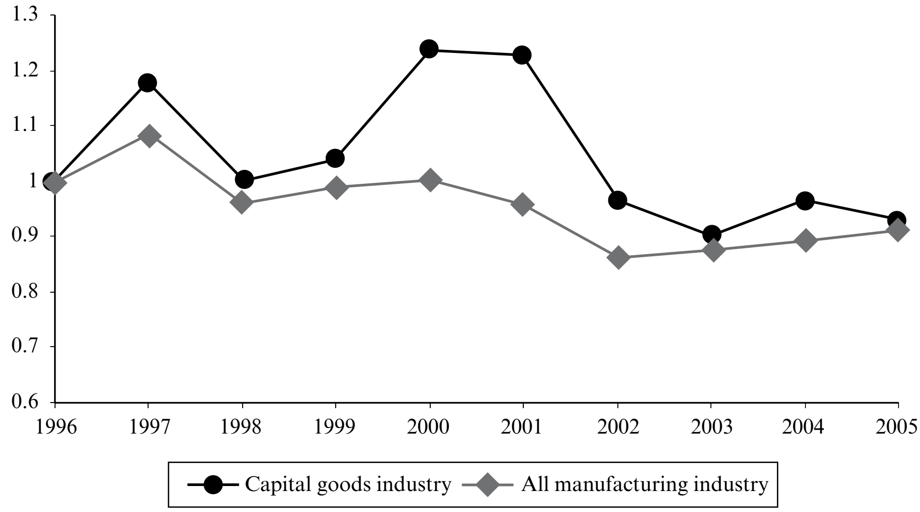
Brazil: composition of value added in the different segments of the capital goods industry
(Percentages)

Segment	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Traditional industrial machinery and equipment	**52.27**	**50.69**	**50.58**	**48.48**	**43.72**	**43.24**	**45.33**	**44.68**	**44.11**	**46.71**
Metal frames and heavy boilers	3.85	3.76	3.99	3.11	2.90	3.29	3.07	2.93	2.93	4.62
Tanks and boilers	1.78	1.39	1.36	1.09	0.88	1.05	1.33	1.34	1.04	0.98
Motors, pumps, compressors and transmission equipment	9.29	8.39	10.12	9.92	8.15	9.33	9.82	10.13	10.16	8.14
General machinery and equipment	10.41	10.48	9.71	10.17	8.71	7.94	8.94	8.28	7.13	8.48
Machine tools	2.52	2.20	1.99	2.11	1.93	1.77	1.96	2.59	2.28	2.27
Mining and construction machinery and equipment	2.63	3.22	3.49	3.11	2.43	3.03	3.17	3.29	3.62	4.23
Other extraction machinery	8.79	8.88	7.47	6.63	6.45	5.57	5.50	5.64	5.55	5.96
Generators, transformers and electric motors	3.55	3.83	4.50	4.25	4.05	4.48	4.40	4.16	4.28	4.49
Other electrical equipment	1.41	1.35	1.21	1.13	1.52	1.07	1.08	1.05	1.12	2.21
Basic electronics	4.95	4.27	3.57	3.63	3.33	2.74	3.04	2.38	3.01	2.22
Measuring, testing and control devices	1.86	1.68	1.81	1.85	2.00	1.74	1.75	1.53	1.77	1.84
Industrial automation equipment	0.55	0.52	0.60	0.60	0.54	0.44	0.55	0.50	0.49	0.60
Optical and photographic equipment and supplies	0.67	0.72	0.76	0.89	0.82	0.80	0.72	0.86	0.74	0.69
Electricity generating equipment	**3.60**	**4.29**	**5.96**	**3.05**	**2.74**	**2.73**	**2.48**	**4.40**	**3.16**	**4.39**
Telecommunications machinery and equipment	**20.38**	**18.79**	**16.04**	**17.96**	**20.37**	**18.30**	**16.19**	**11.74**	**13.38**	**13.74**
Telephony and radio-telephony equipment and television and radio transmitters	9.73	12.48	11.49	14.24	15.49	14.96	11.04	7.64	8.75	8.57
Receiving, playback, recording and amplification devices	10.65	6.30	4.55	3.72	4.87	3.34	5.15	4.11	4.63	5.17
Electronic and non-electronic office machinery and equipment	**3.52**	**3.70**	**3.92**	**5.71**	**7.81**	**8.63**	**5.07**	**5.09**	**3.75**	**4.40**
Office machinery	1.12	1.46	0.34	0.63	3.86	0.15	0.21	0.25	0.13	0.07
Equipment for electronic data processing systems	2.39	2.25	3.58	5.08	3.95	8.48	4.87	4.83	3.63	4.33
Medical and hospital equipment	**2.10**	**1.94**	**2.16**	**2.23**	**2.12**	**1.60**	**2.05**	**2.11**	**2.15**	**2.55**
Agricultural machinery and equipment	**3.42**	**4.23**	**4.69**	**3.61**	**3.53**	**4.39**	**5.52**	**7.79**	**8.84**	**5.12**
Transport machinery and equipment	**14.72**	**16.36**	**16.66**	**18.97**	**19.71**	**21.11**	**23.35**	**24.19**	**24.81**	**23.09**
Trucks and buses	5.64	6.16	5.31	5.16	5.89	5.23	5.92	6.62	5.75	6.68
Truck cabs, bodywork and trailers	3.10	3.07	3.18	2.77	3.02	2.83	2.97	3.31	3.33	3.32
Railway rolling stock construction, assembly and repair	0.42	0.46	1.03	1.10	0.44	0.35	0.41	0.76	0.90	1.49
Boat construction and repair	1.28	1.32	0.73	0.73	0.57	0.67	1.22	2.02	2.05	1.69
Aircraft construction, assembly and repair	1.41	2.28	3.15	6.58	7.08	9.14	9.74	8.08	8.53	5.67
Manufacture of other transport equipment	2.87	3.07	3.26	2.62	2.72	2.90	3.07	3.41	4.26	4.24
Capital goods industry total/manufacturing industry total	**14.01**	**14.72**	**14.19**	**13.32**	**14.20**	**15.58**	**14.19**	**12.03**	**12.55**	**12.12**
Capital goods industry total	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**

Source: prepared by the author using data from the Annual Industrial Survey (PIA) of the Brazilian Geographical and Statistical Institute (IBGE).

FIGURE 1

Brazil: productivity of the capital goods industry and all manufacturing, 1996-2005
(Index 1996 = 1)



Source: Annual Industrial Survey (PIA) of the Brazilian Geographical and Statistical Institute (IBGE).

increase (from 14.7% to 23.1% between 1996 and 2005) its share of the industry's value added. Although there was a small increase in the share of the electricity generating machinery and equipment, electronic and non-electronic office machinery and equipment and agricultural machinery and equipment sectors in the total value added of the capital goods industry over the same period, the percentage for medical and hospital equipment remained virtually unchanged from the mid-1990s.

Among the groups most affected in recent years are the telecommunications machinery and equipment and the traditional industrial machinery and equipment sectors, whose relative shares in value added fell off greatly between 1996 and 2005. In the telecommunications machinery and equipment sector, it is possible that this contraction may have reflected not just the drying up of investment opportunities after the initial post-privatization surge (after 1998), but also the low average growth rate of the Brazilian economy in the period.

Again, while the production structure of the Brazilian capital goods sector is reasonably diversified, production is heavily concentrated in the traditional industrial machinery and equipment and transport machinery and equipment sectors, which jointly generated almost 70% of capital goods industry value added in 2005. This concentration is not altogether a bad thing, however, since it has increased the opportunities for static or dynamic specialization in the segments where Brazil has a comparative advantage.[27]

The indicator used to measure the domestic performance of the capital goods industry was labour productivity. This indicator is very well-established in economic theory and is defined as the ratio between value added and the number of workers.[28] Figure 1 initially compares cumulative productivity index values in the capital goods industry and manufacturing industry as a whole from 1996. The trend (observed from the start of the period analysed) of higher cumulative average

[27] The international specialization indicators will be analysed in detail further on.

[28] The methodologies most commonly used to calculate labour productivity take the ratio between gross production value and personnel employed and the ratio between physical production and hours worked. Nonetheless, as Bruno (1978) argued in his classic paper, the best measure is the ratio between value added and personnel employed. The fact is, as Bonelli and Fonseca (1998) acknowledge, that if technical coefficients change over time, the measure of production (usually indices of real "physical production") as a proxy for output (i.e., value added) will give very distorted results.

productivity growth in the Brazilian capital goods industry than in manufacturing generally reversed from 2001 onward. In any event, in 1996-2005 both the capital goods industry and manufacturing generally displayed negative average annual growth rates of -0.8% and -1%, respectively (table 2).

Table 2 details average annual rates of growth in value added, employment and labour productivity between 1996 and 2005. This period fell into two parts: the subperiod during which the Brazilian currency was generally overvalued against the dollar in real terms (1996-1998) and the subperiod characterized by substantial undervaluation of the Brazilian real (1999-2005). The use of annual averages allows a clearer picture to be formed of which sectors were able to sustain average real efficiency gains over the whole period.

In Brazil, average changes in labour productivity in the capital goods industry were insignificant both when the real was overvalued (1996-1998) and when it was undervalued (1999-2005).[29] Average annual productivity growth rates in manufacturing industry as a whole were negative in both periods.[30] Between 1996 and 2005, the segments that avoided this adverse trend were electricity generating machinery and equipment, agricultural machinery and equipment and transport machinery and equipment, particularly truck and bus production, railway rolling stock construction and assembly and aeronautical machinery and equipment. In the industrial machinery and equipment group, whose performance in efficiency terms was disappointing, only the other electrical equipment segment showed somewhat higher average annual growth in the period under consideration.

Table 2 also used a measure of relative average productivity calculated as the ratio between productivity in each segment and productivity in the capital goods industry as a whole (both at current prices). Because it does not use price deflators, this indicator serves only to test the consistency of the results obtained for the real-term behaviour of productivity. Thus, if the rate of productivity growth in a given segment is higher than productivity growth in the capital goods industry as a whole, its relative average productivity will be positive, and vice versa. As can be seen, in almost all segments productivity growth and relative average productivity growth had the same sign and in most cases very similar values, which confirms the validity of the deflators used.

We shall now analyse how the behaviour of productivity affected employment in the different segments of the capital goods industry from the second half of the 1990s. The empirical studies available reveal that the productivity of Brazilian manufacturing industry improved in the first half of the 1990s thanks to the acquisition of new equipment (locally made and imported) and the embodiment of technological innovations and organizational change, but that industrial employment fell sharply.[31] However, as the last column of table 2 shows, this trend clearly changed in the second half of the 1990s. In the 1996-2005 period, the labour absorption rate exceeded the rate of real-term growth in value added (annual averages), so that average annual productivity growth was negative in the capital goods industry as in manufacturing generally. In the same period, the behaviour of employment differed appreciably in the various segments of the capital goods industry (see table 2 again).

In summary, it can be concluded:

(i) that only in the other electrical equipment, agricultural machinery and equipment, railway and aeronautical machinery and equipment and other transport equipment segments were productivity improvements accompanied by substantial (average) increases in employment from 1996, and

(ii) that employment was far more volatile in the other sectors over the period analysed, tending sometimes to increase and sometimes to diminish. In any event, whereas between 1996 and 1998 the level of employment in the capital goods industry tended to diminish, average annual employment growth was positive in the period following the deep real-term devaluation of the Brazilian currency against the dollar (1999-2005).

29 Taking 2000 as the base year, some empirical studies show that the Brazilian real once again tended towards overvaluation from 2003 onward. See, for example, Nassif (2008).

30 Nassif (2008) showed that the average annual growth of labour productivity in Brazilian manufacturing industry had been negative (-2.9%) between 1996 and 2004, thus reversing the trend towards strong growth (of some 5%) seen in 1990-1996. See also Carvalho (2000).

31 See, for example, Carvalho (2000) and Nassif (2003a).

TABLE 2

Brazil: value added, employment and productivity in the capital goods industry, 1996-2005[a b]

(Average annual growth rates)

Capital goods industry segment	1996-1998				1999-2005				1996-2005			
	Value added	Employment	Productivity	Relative average productivity	Value added	Employment	Productivity	Relative average productivity	Value added	Employment	Productivity	Relative average productivity
Traditional industrial machinery and equipment	**-4.85**	**-2.28**	**-2.63**	**-2.66**	**1.10**	**3.42**	**-2.24**	**-0.36**	**-1.16**	**1.87**	**-2.97**	**-2.21**
Metal frames and heavy boilers	-1.55	3.27	-4.67	-4.70	8.65	4.68	3.79	3.71	2.14	3.59	-1.41	-0.63
Tanks and boilers	-15.63	-9.28	-7.00	-7.03	-0.17	1.87	-2.00	-0.19	-6.40	-0.38	-6.05	-5.30
Motors, pumps, compressors and transmission equipment	0.98	0.84	0.14	0.11	-1.57	1.89	-3.39	-1.13	-1.37	1.82	-3.13	-2.36
General machinery and equipment	-6.61	-4.51	-2.20	-2.24	-1.31	0.71	-2.01	-0.19	-2.18	0.52	-2.68	-1.91
Machine tools	-14.06	-11.76	-2.61	-2.65	2.96	5.55	-2.45	-0.50	-1.10	1.43	-2.50	-1.73
Mining and construction machinery and equipment	11.40	6.15	4.94	4.90	7.07	11.78	-4.21	-1.70	5.49	8.53	-2.80	-2.03
Other extraction machinery	-10.79	-3.84	-7.23	-7.27	-0.07	1.98	-2.01	-0.19	-4.14	-0.29	-3.86	-3.10
Generators, transformers and electric motors	8.92	2.10	6.68	6.64	2.67	6.31	-3.42	-1.16	2.73	3.98	-1.21	-0.42
Other electrical equipment	-10.59	-15.37	5.64	5.61	13.75	12.46	1.15	1.94	5.18	3.32	1.80	2.61
Basic electronics	-17.84	-10.21	-8.50	-8.54	-6.27	3.65	-9.57	-5.40	-8.44	0.87	-9.23	-8.51
Measuring, testing and control devices	-4.60	6.90	-10.75	-10.79	1.63	-2.45	4.18	3.96	-0.06	-0.20	0.14	0.93
Industrial automation equipment	1.48	1.50	-0.01	-0.05	1.88	10.98	-8.20	-4.44	1.20	7.71	-6.05	-5.30
Optical and photographic equipment and supplies	2.70	-5.37	8.52	8.48	-2.44	0.38	-2.80	-0.73	0.45	0.46	-0.01	0.78
Electricity generating equipment	**24.39**	**8.32**	**14.84**	**14.80**	**8.10**	**-2.37**	**10.72**	**8.27**	**2.30**	**-2.30**	**4.70**	**5.53**
Telecommunications machinery and equipment	**-14.19**	**-10.54**	**-4.08**	**-4.12**	**-2.71**	**4.51**	**-6.91**	**-3.55**	**-4.20**	**-0.03**	**-4.17**	**-3.41**
Telephony and radio-telephony equipment and television and radio transmitters	5.12	5.49	-0.35	-0.38	-6.53	2.39	-8.71	-4.80	-1.32	4.59	-5.65	-4.90
Receiving, playback, recording and amplification devices	-36.79	-19.23	-21.74	-21.77	7.46	6.81	0.61	1.57	-7.63	-3.01	-4.77	-4.02
Electronic and non-electronic office machinery and equipment	**2.09**	**2.60**	**-0.50**	**-0.53**	**-2.59**	**7.97**	**-9.78**	**-5.54**	**2.61**	**5.89**	**-3.09**	**-2.33**
Office machinery	-46.80	-47.38	1.11	1.07	-29.08	-9.73	-21.44	-13.86	-26.16	-18.77	-9.10	-8.38
Equipment for electronic data processing systems	18.24	20.60	-1.96	-2.00	-0.94	9.14	-9.23	-5.16	6.89	10.52	-3.28	-2.52
Medical and hospital equipment	**-2.06**	**3.50**	**-5.37**	**-5.41**	**4.00**	**3.03**	**0.94**	**1.80**	**2.25**	**3.13**	**-0.86**	**-0.07**
Agricultural machinery and equipment	**13.34**	**8.31**	**4.64**	**4.61**	**7.84**	**6.14**	**1.60**	**2.24**	**4.70**	**4.05**	**0.63**	**1.42**
Transport machinery and equipment	**2.91**	**-3.00**	**6.09**	**6.06**	**5.12**	**9.70**	**-4.18**	**-1.67**	**5.22**	**4.96**	**0.25**	**1.04**
Trucks and buses	-6.16	-10.17	4.47	4.43	6.19	1.61	4.51	4.19	1.98	-1.44	3.47	4.29
Truck cabs, bodywork and trailers	-2.00	1.09	-3.05	-3.08	4.85	5.41	-0.53	0.81	0.86	2.59	-1.68	-0.90
Railway rolling stock construction, assembly and repair	51.99	1.27	50.08	50.02	6.94	15.17	-7.15	-3.72	15.30	11.25	3.64	4.46
Boat construction and repair	-27.01	-24.93	-2.77	-2.81	17.07	26.18	-7.22	-3.77	3.24	8.97	-5.25	-4.50
Aircraft construction, assembly and repair	44.57	15.06	25.65	25.60	-0.76	14.50	-13.33	-8.04	16.83	15.59	1.07	1.87
Manufacture of other transport equipment	3.09	1.93	1.13	1.09	10.19	9.91	0.26	1.34	4.50	4.44	0.06	0.85
Capital goods industry total	**-1.58**	**-1.62**	**0.04**	**0.00**	**2.30**	**4.09**	**-1.72**	**0.00**	**1.32**	**2.12**	**-0.78**	**0.00**
Manufacturing industry total	**-3.88**	**-2.00**	**-1.92**	–	**3.35**	**4.73**	**-1.32**	–	**1.72**	**2.78**	**-1.03**	–

Source: prepared by the author using data from the Annual Industrial Survey (PIA).

[a] The industrial value added figures were calculated at constant 1996 prices on the basis of the sectoral wholesale price indices calculated by the Getulio Vargas Foundation.
[b] Relative average productivity is expressed as the ratio between the productivity of each segment at current prices and the productivity of the capital goods industry, also at current prices.

2. Sectoral value added and vertical integration

In some studies, it is common to measure the degree to which value is added to the goods produced by the ratio between value added (VA) and gross output value (GOV). For example, when a paper by the Industrial Development Research Institute (IEDI, 2007) found a marked reduction in the VA/GOV ratio in various (three-digit) segments of Brazilian manufacturing industry between 1996 and 2004, it concluded that this result indicated a diminution of value added per item produced and thus of national content in Brazilian industrial output, and consequently that the deindustrialization of the Brazilian economy had intensified over the period.[32] Going by this methodology, the data in table 3 could

[32] However, the study uses other indicators to evaluate the supposed deindustrialization of the Brazilian economy in the period analysed. See IEDI (2007) for further details.

TABLE 3

Brazil: ratio between value added and gross output value in the capital goods industry, 1996-2005

Capital goods industry segment	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Traditional industrial machinery and equipment	**0.53**	**0.52**	**0.50**	**0.50**	**0.49**	**0.47**	**0.47**	**0.45**	**0.44**	**0.42**
Metal frames and heavy boilers	0.51	0.51	0.46	0.43	0.48	0.50	0.45	0.46	0.42	0.46
Tanks and boilers	0.54	0.44	0.40	0.42	0.40	0.46	0.45	0.44	0.43	0.41
Motors, pumps, compressors and transmission equipment	0.56	0.56	0.55	0.55	0.52	0.49	0.47	0.45	0.44	0.41
General machinery and equipment	0.53	0.53	0.49	0.49	0.47	0.46	0.48	0.45	0.41	0.41
Machine tools	0.58	0.57	0.53	0.55	0.53	0.51	0.52	0.50	0.52	0.48
Mining and construction machinery and equipment	0.47	0.42	0.40	0.48	0.44	0.46	0.49	0.43	0.38	0.36
Other extraction machinery	0.56	0.57	0.52	0.51	0.51	0.46	0.49	0.45	0.46	0.42
Generators, transformers and electric motors	0.48	0.46	0.47	0.48	0.48	0.45	0.45	0.46	0.46	0.40
Other electrical equipment	0.53	0.53	0.56	0.53	0.54	0.47	0.54	0.51	0.56	0.47
Basic electronics	0.51	0.49	0.43	0.43	0.40	0.39	0.39	0.35	0.51	0.34
Measuring, testing and control devices	0.59	0.54	0.55	0.53	0.57	0.52	0.47	0.45	0.46	0.49
Industrial automation equipment	0.63	0.63	0.68	0.58	0.55	0.55	0.57	0.57	0.61	0.54
Optical and photographic equipment and supplies	0.56	0.58	0.60	0.55	0.55	0.54	0.54	0.62	0.60	0.59
Electricity generating equipment	**0.55**	**0.55**	**0.60**	**0.54**	**0.52**	**0.52**	**0.41**	**0.47**	**0.48**	**0.52**
Telecommunications machinery and equipment	**0.45**	**0.44**	**0.40**	**0.36**	**0.38**	**0.37**	**0.36**	**0.29**	**0.25**	**0.29**
Telephony and radio-telephony equipment and television and radio transmitters	0.57	0.54	0.43	0.38	0.40	0.40	0.38	0.30	0.24	0.27
Receiving, playback, recording and amplification devices	0.37	0.33	0.33	0.32	0.33	0.27	0.33	0.27	0.29	0.32
Electronic and non-electronic office machinery and equipment	**0.44**	**0.38**	**0.37**	**0.41**	**0.35**	**0.45**	**0.37**	**0.35**	**0.31**	**0.31**
Office machinery	0.50	0.75	0.34	0.59	0.52	0.54	0.33	0.42	0.80	0.33
Equipment for electronic data processing systems	0.42	0.29	0.37	0.40	0.26	0.45	0.37	0.35	0.31	0.31
Medical and hospital equipment	**0.67**	**0.65**	**0.61**	**0.61**	**0.62**	**0.57**	**0.59**	**0.55**	**0.58**	**0.61**
Agricultural machinery and equipment	**0.49**	**0.45**	**0.39**	**0.41**	**0.40**	**0.41**	**0.40**	**0.39**	**0.39**	**0.37**
Transport machinery and equipment	**0.42**	**0.40**	**0.37**	**0.39**	**0.40**	**0.40**	**0.43**	**0.37**	**0.34**	**0.32**
Trucks and buses	0.38	0.79	0.31	0.32	0.36	0.34	0.37	0.31	0.27	0.27
Truck cabs, bodywork and trailers	0.44	0.42	0.39	0.44	0.41	0.39	0.40	0.37	0.35	0.34
Railway rolling stock construction, assembly and repair	0.62	0.55	0.52	0.58	0.48	0.46	0.47	0.55	0.50	0.45
Boat construction and repair	0.55	0.50	0.50	0.48	0.46	0.52	0.46	0.48	0.28	0.39
Aircraft construction, assembly and repair	0.53	0.51	0.39	0.42	0.47	0.47	0.55	0.47	0.44	0.34
Manufacture of other transport equipment	0.38	0.36	0.37	0.34	0.32	0.33	0.32	0.29	0.34	0.31
Capital goods industry total	**0.49**	**0.48**	**0.45**	**0.44**	**0.43**	**0.43**	**0.43**	**0.40**	**0.37**	**0.36**

Source: Annual Industrial Survey (PIA).

lead to the false conclusion that the capacity to add value to the goods produced had diminished in almost all segments of the capital goods industry, this finding being one of the symptoms of the supposed "deindustrialization" of Brazil. Following this reasoning, furthermore, the results would indicate that the medical and hospital equipment, electricity generating machinery and equipment and traditional industrial machinery and equipment segments were the ones with the greatest capacity to add value in the Brazilian capital goods industry in 2005.

However, this kind of interpretation is not supported by theoretical and empirical studies of industrial organization, where the VA/GOV ratio is firmly established as one of the most appropriate measures for determining the degree of vertical integration at the firm level (Scherer and Ross, 1990, chapter 3). Accordingly, a firm's VA/GOV index can range from 0 (total absence of vertical integration) to 1 (full vertical integration, i.e., the firm manufactures not only the product but all the inputs used in the production process). It is obvious that the index can fall even in cases that do not constitute a traditional horizontal integration strategy, such as the subcontracting of cleaning and repair services or the outsourcing of functions and tasks, trends that have become common with the fragmentation of production activities in Brazil and around the world since the 1990s. However, when this happens the firm will seek to hold costs down by cutting back on production activities or transferring some production to other companies.

The indicator proposed by Scherer and Ross (1990) is appropriate for evaluating vertical integration trends not only within a firm but throughout the industry, provided the classification is at an intermediate level (up to three digits, as in the present study). In the case of the Brazilian capital goods industry, all segments, with the exception of the optical and photographic equipment and machinery segment, saw a decline in the VA/GOV indicator between 1996 and 2005, something indicative not so much of deindustrialization and a contracting industry[33] as of greater "vertical division of labour"[34] (see table 3 again). This greater specialization, which may also include a rise in imports, does not necessarily entail an increase in labour productivity.[35] Indeed, recent Brazilian experience shows that attempting to lower costs by reducing the degree of vertical integration in firms operating in the capital goods sector (table 3) has not resulted in greater labour efficiency in most segments of that industry (table 2). In any event, the data in table 3 confirm that the capital goods industry has carried on trying to cut production costs by a continuing retreat from vertical integration, a trend observable from the very onset of trade liberalization in the early 1990s.[36]

3. The technology gap between the Brazilian capital goods industry and the international technology frontier

Although it is difficult to estimate how far the technologies adopted by a particular firm, segment or industrial sector lag behind the latest advances in the world economy, economists generally attempt to do so by using a proxy variable, labour productivity in the industry of the country concerned compared with that in the industry of the country acknowledged to be at the forefront of world technological development. Since no one country is likely to be in the technological vanguard in all segments of a particular industrial sector, the most advanced

[33] Note that, according to the table 1 data, the decline in the total manufacturing share of the capital goods industry (measured by value added) was less than two percentage points between 1996 and 2005.

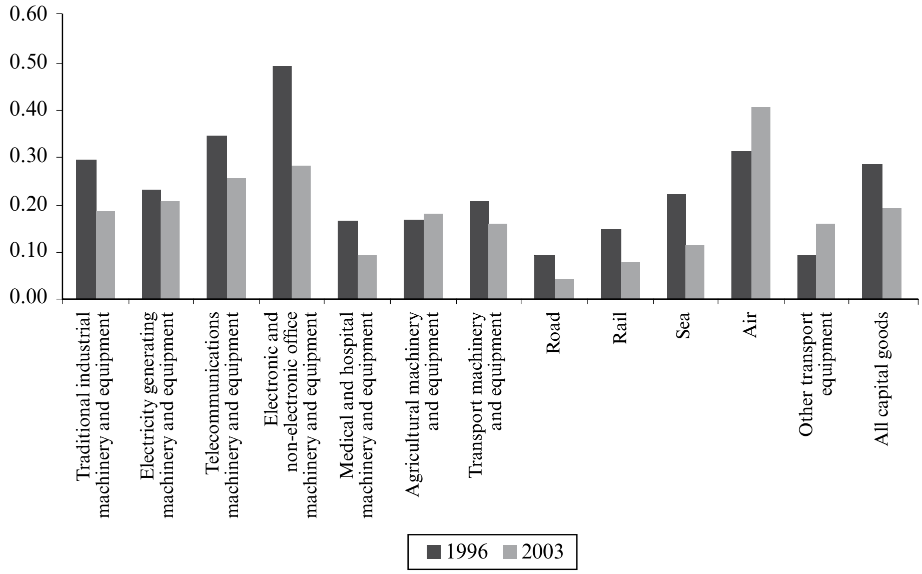
[34] This expression was suggested by Mário Luiz Possas of the Economics Institute of the Federal University of Rio de Janeiro.

[35] In the study by the Industrial Development Research Institute (IEDI, 2007), the author seems to be surprised that the VA/GOV ratio of the oil refining segment should have risen from 54.1% to 68.5% between 1994 and 2004. However, this degree of vertical integration is exactly equal to that seen in the mid-1950s in the United States oil industry (the most vertically integrated of any industry in the United States industrial sector), a situation that did not change greatly in the following period (Scherer and Ross, 1990, pp. 95-96). Furthermore, the oil refining segment was the one that advanced most in terms of its share in the value added and total investment of Brazilian industry in the second half of the 1990s (Nassif and Puga, 2004).

[36] Because values are given in current prices, shifts in the VA/GOV ratio may be distorted by relative price changes. If there has been a large increase in input prices over the period analysed, the VA/GOV indicator could fall (because of the increase in the denominator) without thereby denoting a reversal in vertical integration. Nonetheless, in the case of Brazil particularly, wholesale sectoral price indices in the 1996-2005 period show industrial raw material prices rising by hardly more than those for machinery, vehicles and equipment. This indicates that relative price changes were not so great as to distort the economic significance of this indicator (see Ipeadata for tables and charts dealing with wholesale price indices for machinery, vehicles and equipment and industrial raw materials; available at http://www.ipea.gov.br).

FIGURE 2

Brazil: technology gap between the country's capital goods industry and the same industry in the United States, 1996 and 2003[a]



Source: prepared by the author using data from the Annual Industrial Survey (PIA), the Census Bureau of the United States Department of Commerce and the Bureau of Labor Statistics of the United States Department of Labor.

[a] Productivity gaps were calculated from the ratio between the labour productivity of Brazilian industry and the labour productivity of United States industry. The two values were first converted into constant values at 1996 prices (current prices deflated by, respectively, the sectoral wholesale price indices of the Getulio Vargas Foundation and the sectoral wholesale price indices of the United States). The productivity of Brazilian industry was then converted into 2000 dollars at real purchasing power parity.

country is generally deemed to be the one which occupies the leading position in the sectors that are most important in terms of technology content.

In the case of the capital goods industry, for example, the United States may be considered, on average, to be the most technologically advanced country. It also seems to have managed a sustained increase in productivity in that industry. All segments of the United States capital goods industry other than telecommunications machinery and equipment displayed positive index values for cumulative labour productivity growth between 1996 and 2003. In that period, the labour efficiency of the United States capital goods industry grew at an average annual rate of 2.3% in real terms. The greatest increase in cumulative labour productivity index values was observed in the medical and hospital machinery and equipment, transport machinery and equipment and agricultural machinery and equipment sectors.[37]

This subsection estimates the recent evolution and current situation of the technology gap between the Brazilian capital goods industry and the same industry in the United States.[38] The estimate is based on the ratio between the labour productivity indices of the two countries, at 1996 prices; those of Brazil were converted into dollars at purchasing power parity (figure 2).

[37] See Nassif (2007).

[38] The classification used for the capital goods industry is the same as in the previous sections. Reconciliation was carried out between the nomenclature of the CNAE, on the one hand, and the Census Bureau of the United States Department of Commerce and the Bureau of Labor Statistics of the United States Department of Labor, on the other. The results for certain sectors might present greater distortions owing to the large disparity between the number of segments with production capacity in the two countries. In the aeronautical machinery and equipment sector, for example, the United States industry has segments producing items such as missiles, rockets and high-technology aeronautical equipment that are scarcely produced in Brazil. The estimates only run up to 2003 because data on the United States industry are not available for subsequent years.

Between 1996 and 2003, the Brazilian capital goods industry fell much further behind the international technology frontier, with the technology gap ratio rising from 70% to 81%. The picture was broadly the same across all segments of the industry other than agricultural machinery and equipment, aeronautical machinery and equipment and other transport equipment.

In the Brazilian capital goods industry, the aeronautical segment was the one that came closest to the international technology frontier.[39] Although this industry fell further behind between 1996 and 2003, towards the end of the period the electronic and non-electronic office machinery and equipment, telecommunications machinery and equipment and electricity generating machinery and equipment segments displayed levels of relative technological progress higher than the average for the capital goods industry.

It is evident that this type of methodology cannot really capture how much ground a country's industry needs to make up in terms of technology, since a great deal of material progress is due to the evolution of "disembodied" technology, i.e., that resulting from the search for new production processes or new products in public or private R&D laboratories. However, precisely because this methodology does not capture the qualitative aspects of the technology divide,[40] the results shown in figure 2 indicate that it will not be easy to make up the ground lost by the Brazilian capital goods industry. As well as catching up and sustaining productivity increases higher than the average for the most technologically advanced countries, the industry will have to pursue greater private R&D spending and technology absorption, launch more new products and attain minimum efficient scales in segments subject to economies of scale.

4. The structure and dynamic of external trade

As theoretical studies have long been showing, external trade flows are a reflection in static terms of comparative advantage (or disadvantage) levels and in dynamic terms of intersectoral changes in competitiveness (dynamic comparative advantage).[41] At a higher level of aggregation, they are also influenced by macroeconomic variables such as real GDP growth rates and, above all, the real exchange rate. Although this subsection will concentrate primarily on the external trade behaviour of the Brazilian capital goods industry from the microeconomic point of view, it will begin by setting forth some considerations relating to the behaviour of the industry's trade flows at the aggregate level.

As figure 3 shows, since the early 1990s Brazilian capital goods imports have invariably grown faster than exports. In the first half of the decade this behaviour was due to the immediate effects of trade liberalization, but the considerable strengthening of the real exchange rate (leading to an overvalued Brazilian real) between 1994 and 1998 accounts for the huge difference between the high growth rates of imports and the low growth rates of exports during that time. With the devaluation of the Brazilian real in 1999, capital goods imports fell considerably. With the renewed trend towards overvaluation of the Brazilian currency in real terms from 2003 onward, however, they began to grow much faster than exports again. There now follows an analysis of the data available on the international trade behaviour of the Brazilian capital goods industry at a more disaggregated level.

The revealed comparative advantage indicators (a measure traditionally used to identify the sectors with the greatest net exporting potential) confirm the enormous relative competitive disadvantage under which the Brazilian capital goods industry works (table 4). Comparative disadvantage is found in all segments except agricultural machinery and equipment, road transport and aeronautical machinery and equipment, mining and construction machinery and equipment, and telephony and radiotelephony machinery and equipment and television and radio transmitters.[42] Since the indicators referred to are static indicators of international competitiveness, it cannot be stated categorically that certain segments with a comparative disadvantage in 2006 will be unable to alter this situation in the

[39] The state of relative technological advance of the Brazilian aeronautical industry may have been underestimated for the reasons given in the previous footnote.

[40] It should be noted here that the electronic and non-electronic office machinery and equipment segment in Brazil is not only highly internationalized, but is basically an assembly industry.

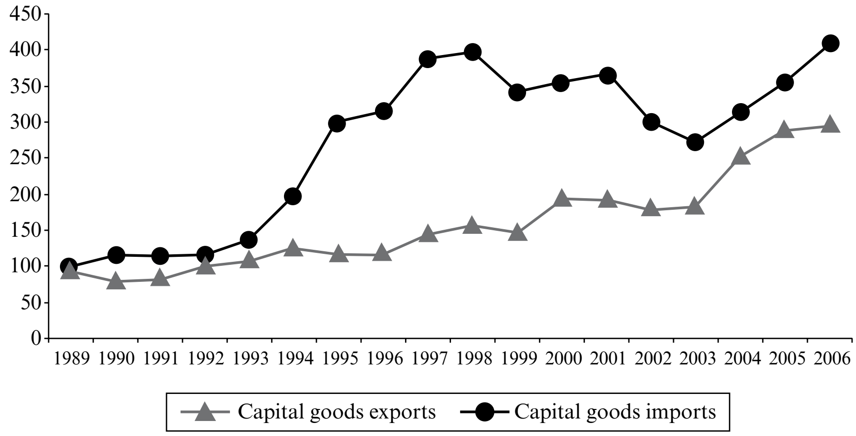
[41] To cite two indispensable works, see Helpman and Krugman (1985) for a more orthodox view and Dosi, Pavitt and Soete (1990) for a neo-Schumpeterian approach.

[42] The RCA index values for the metal frames and heavy boilers segment and the tanks and boilers segment are close to zero.

FIGURE 3

Brazil: capital goods exports and imports,[a] 1989-2006

(1989 = 100)



Source: Foreign Trade Department (SECEX) of the Ministry of Development, Industry and Commerce (MDIC).

[a] Export and import values were originally converted into constant 1989 dollars, using the United States producer price index (PPI) as the deflator.

medium or long term. To succeed in doing so, however, they will have to adopt various strategies with a view to raising their productivity considerably, including higher R&D spending, larger production scales and a greater export effort.[43]

The following two tables present the composition and dynamic of Brazilian capital goods exports and imports, respectively. Table 5 shows that, thanks to higher average annual growth rates in certain segments, external sales of capital goods rose from 26.9% of manufacturing exports in 1989 to 29.2% in 2006. This indicates that, while fairly concentrated in a few segments, the export base of Brazilian machinery and equipment is fairly substantial. The data in the table reveal that capital goods export growth rates were much lower between 1989 and 1998 than in the period after 1999, which suggests that external sales of machinery and equipment may have been affected both by the immediate aftermath of trade liberalization (1989-1994 period) and by the overvaluation of the Brazilian currency against the dollar (1995-1998). Following the rapid weakening of the real exchange rate in 1999, when the initial cycle of industrial and technological restructuring that ensued upon trade liberalization may be considered to have ended, Brazilian capital goods exports saw much higher average annual growth rates.

There were major changes in the composition of capital goods exports over the period analysed. Between 1989 and 2006, the segments whose shares fell most were traditional industrial machinery and equipment (especially mining and construction machinery and equipment and other extraction equipment) and electronic and non-electronic office machinery and equipment. Conversely, while the telecommunications machinery and equipment sector substantially increased its share of external sales of capital goods between 1989 and 2006 (owing exclusively to larger exports of telephony and radio-telephony equipment and radio and television transmitters), the other groups maintained their original relative positions.

[43] It may seem contradictory to recommend an increased export effort by certain segments operating at a comparative disadvantage. However, bilateral trade with countries of a similar technology and per capita income level (e.g., with MERCOSUR partners and other countries in Latin America, or under free trade agreements with countries whose development models are similar) can be a means of increasing the net exports of the more traditional segments of the capital goods industry, such as metal frames and heavy boilers, tanks and boilers, motors, pumps and transmission equipment and machine tools. According to the so-called "new trade theories", the main strategy for raising international competitiveness in sectors subject to economies of scale is to strengthen trading relationships with partners that have fairly similar technology and demand patterns. See Helpman and Krugman (1985) and Krugman (1987).

TABLE 4

Brazil: indices of revealed comparative advantage[a] in the capital goods industry

Capital goods industry segment	1989	1994	1998	2006
Traditional industrial machinery and equipment	**-6.36**	**-8.07**	**-8.96**	**-12.08**
Metal frames and heavy boilers	0.03	0.08	-0.01	0.02
Tanks and boilers	-0.02	0.06	-0.04	0.03
Motors, pumps, compressors and transmission equipment	-0.98	-1.35	-0.88	-1.53
General machinery and equipment	-0.32	-0.53	-1.35	-1.09
Machine tools	-0.68	-0.72	-0.77	-0.63
Mining and construction machinery and equipment	0.59	0.62	0.34	0.47
Other extraction machinery	-1.53	-2.77	-2.48	-1.69
Generators, transformers and electric motors	-0.38	-0.06	-0.47	-0.16
Other electrical equipment	-0.23	-0.23	-0.24	-0.16
Basic electronics	-1.78	-2.08	-1.83	-4.99
Measuring, testing and control devices	-1.00	-0.95	-1.01	-1.31
Optical and photographic equipment and supplies	-0.07	-0.15	-0.23	-1.04
Electricity generating equipment	**-0.55**	**-0.79**	**-0.60**	**-0.70**
Telecommunications machinery and equipment	**-0.49**	**-1.49**	**-2.39**	**-2.62**
Telephony and radio-telephony equipment and television and radio transmitters	-0.26	-0.66	-1.60	0.82
Receiving, playback, recording and amplification devices	-0.23	-0.83	-0.79	-3.45
Electronic and non-electronic office machinery and equipment	**-0.77**	**-1.93**	**-1.48**	**-2.68**
Office machinery	-0.11	-0.28	-0.15	-0.08
Equipment for electronic data processing systems	-0.66	-1.64	-1.33	-2.60
Medical and hospital equipment	**-0.62**	**-0.57**	**-0.67**	**-0.89**
Agricultural machinery and equipment	**0.16**	**0.12**	**0.08**	**0.19**
Transport machinery and equipment	**1.57**	**1.82**	**0.92**	**2.04**
Trucks and buses	1.89	0.93	0.59	1.88
Truck cabs, bodywork and trailers	0.09	0.35	0.24	0.36
Railway rolling stock construction, assembly and repair	-0.01	0.01	-0.10	-0.16
Boat construction and repair	0.01	0.62	0.14	-0.01
Aircraft construction, assembly and repair	-0.39	0.22	0.17	0.08
Manufacture of other transport equipment	-0.01	-0.31	-0.12	-0.11
Capital goods industry total	**-7.06**	**-10.91**	**-13.11**	**-16.74**

Source: prepared by the author using data from the Foreign Trade Department (SECEX) of the Ministry of Development, Industry and Commerce (MDIC) and Ipeadata.

a The revealed comparative advantage (RCA) index values were calculated on the basis of the methodology proposed by Lafay (1979 and 1990). In the table, positive RCA figures indicate that the segment has a comparative advantage and negative figures that is has a comparative disadvantage. The methodology is as follows:
Revealed comparative advantage index: RCA = (1,000/GDP) x {(EXPi - IMPi) - (EXPi + IMPi)[(EXP - IMP) / (EXP + IMP)]}, where
EXPi = exports in segment i
IMPi = imports in segment i
EXP = total country exports
IMP = total country imports
GDP = gross domestic product of Brazil; all values expressed in dollars.

It should be noted that the composition of exports in the transport machinery and equipment segment changed, with a considerable decline in the external sales share of trucks and buses and a substantial increase in that of aeronautical equipment. In any event, the segments with the greatest weight in Brazilian capital goods exports in 2006 were those producing aeronautical equipment (17.1%), trucks and buses (16.9%), telephony and radio-telephony equipment and television and radio transmitting equipment (13.7%) and motors, pumps, transmitters and transmission equipment (10.2%).

Table 6 suggests that the behaviour of capital goods imports has been adversely affected by changes in the macroeconomic environment. Very high average rates of growth in Brazilian capital goods imports between 1989 and 1998 reflected not just the early effects of liberalization (1990-1994) but

TABLE 5

Brazil: share of capital goods industry segments in capital goods exports, 1989-2006

(Percentages and real average annual growth)

Capital goods industry segment	1989	1994	1998	2006	1989-1994	1995-1998	1999-2006	1989-2006
	Percentages				Real average annual growth			
Traditional industrial machinery and equipment	**42.01**	**47.33**	**41.22**	**37.43**	**9.12**	**2.54**	**8.15**	**6.27**
Metal frames and heavy boilers	0.46	0.94	0.61	0.51	26.38	-7.27	6.95	7.66
Tanks and boilers	0.50	0.77	0.54	0.57	18.25	-4.54	10.61	8.04
Motors, pumps, compressors and transmission equipment	9.97	11.94	11.06	10.20	10.80	4.66	8.39	7.19
General machinery and equipment	5.61	8.08	5.59	4.70	16.01	-5.02	6.96	5.86
Machine tools	1.34	1.94	2.25	1.56	16.33	12.75	4.02	8.07
Mining and construction machinery and equipment	9.51	8.51	7.50	6.55	2.99	2.96	7.56	4.57
Other extraction machinery	6.84	5.15	4.45	3.76	-1.36	2.24	7.05	3.10
Generators, transformers and electric motors	2.30	4.51	3.80	6.09	25.26	1.41	17.32	13.75
Other electrical equipment	0.47	0.61	0.94	0.38	13.07	24.35	-3.60	5.71
Basic electronics	2.20	2.16	2.24	1.25	5.35	8.80	0.85	3.31
Measuring, testing and control devices	1.37	2.33	1.90	1.62	20.96	0.41	7.21	8.20
Optical and photographic equipment and supplies	1.43	0.40	0.34	0.23	-23.00	1.81	3.77	-4.47
Electricity generating equipment	**1.31**	**1.74**	**1.41**	**1.28**	**13.78**	**0.05**	**8.14**	**6.88**
Telecommunications machinery and equipment	**9.55**	**6.13**	**6.90**	**15.22**	**-5.20**	**11.70**	**22.77**	**10.20**
Telephony and radio-telephony equipment and television and radio transmitters	0.94	0.74	2.61	13.74	-0.31	63.68	39.05	26.59
Receiving, playback, recording and amplification devices	8.61	5.39	4.29	1.48	-5.78	-0.48	-5.81	-4.11
Electronic and non-electronic office machinery and equipment	**4.17**	**2.60**	**4.09**	**2.27**	**-5.89**	**24.92**	**0.80**	**3.05**
Office machinery	1.28	1.14	1.30	0.65	3.01	11.96	-0.58	2.64
Equipment for electronic data processing systems	2.89	1.46	2.80	1.62	-10.78	33.49	1.41	3.23
Medical and hospital equipment	**0.45**	**0.74**	**0.87**	**1.01**	**19.73**	**13.30**	**12.12**	**12.58**
Agricultural machinery and equipment	**2.19**	**2.20**	**2.94**	**2.15**	**5.92**	**18.32**	**4.86**	**6.90**
Transport machinery and equipment	**40.33**	**39.27**	**42.58**	**40.64**	**5.21**	**10.31**	**8.92**	**7.09**
Trucks and buses	22.87	19.89	18.92	16.86	2.28	5.59	7.86	5.02
Truck cabs, bodywork and trailers	2.08	4.99	4.96	4.57	31.79	7.14	8.38	12.43
Railway rolling stock construction, assembly and repair	0.34	0.26	0.27	0.65	-1.63	9.16	24.35	11.37
Boat construction and repair	1.14	6.09	1.52	0.14	60.97	-32.44	-22.34	-6.31
Aircraft construction, assembly and repair	13.42	7.51	16.43	17.11	-8.40	39.42	10.29	8.68
Manufacture of other transport equipment	0.47	0.54	0.49	1.32	9.63	3.82	26.39	14.17
Capital goods industry total	**100.00**	**100.00**	**100.00**	**100.00**	**5.91**	**7.38**	**9.65**	**7.04**
Capital goods industry/manufacturing industry	**26.90**	**27.12**	**29.46**	**29.23**	**5.70**	**4.45**	**9.77**	**6.48**

Source: prepared by the author using data from the Secretariat of Foreign Trade (SECEX) of the Ministry of Development, Industry and Commerce (MDIC). Exports were converted into constant 1989 dollars on the basis of the United States producer price index (PPI).

also those deriving from a long period of currency overvaluation (1994-1998). Meanwhile, the very low average annual growth of machinery and equipment imports in 1999-2006 (just 0.4% in real terms) reflected the sharp currency devaluation which occurred between 1999 and 2003, and also the low average growth rates of the Brazilian economy in the same period (some 2.4%). Thus, capital goods imports as a share of all manufacturing imports dropped to 32.2% in 2006 after rising from 26.9% to 37.3% between 1989 and 1998.

Regarding changes in the composition of capital goods imports, the segments whose share declined were traditional industrial machinery and equipment (almost 10 percentage points), medical and hospital equipment and electricity generating

TABLE 6

Brazil: share of capital goods industry segments in capital goods imports, 1989-2006

(Percentages and real average annual growth rates)

Capital goods industry segment	1989	1994	1998	2006	1989-1994	1995-1998	1999-2006	1989-2006
	Percentages				Real average annual growth			
Traditional industrial machinery and equipment	**64.05**	**60.75**	**56.07**	**54.99**	**16.85**	**22.96**	**0.14**	**8.14**
Metal frames and heavy boilers	0.04	0.08	0.30	0.19	39.64	97.05	-5.78	20.27
Tanks and boilers	0.37	0.12	0.42	0.20	-10.95	92.28	-9.59	5.07
Motors, pumps, compressors and transmission equipment	11.77	12.17	8.69	9.66	19.39	12.88	1.94	7.84
General machinery and equipment	5.13	6.48	8.17	5.62	25.51	36.47	-4.82	9.80
Machine tools	5.13	4.28	4.24	2.66	13.21	25.85	-6.05	4.79
Mining and construction machinery and equipment	1.31	1.34	1.99	1.81	19.20	43.93	-0.94	11.41
Other extraction machinery	13.62	15.33	12.36	6.97	21.95	17.55	-7.47	4.71
Generators, transformers and electric motors	3.74	2.49	3.68	3.49	6.94	43.89	-0.36	8.70
Other electrical equipment	1.71	1.36	1.42	0.69	11.78	28.05	-9.49	3.11
Basic electronics	12.74	10.65	8.65	15.68	13.20	17.83	9.33	10.60
Measuring, testing and control devices	7.22	5.56	5.05	4.75	10.88	22.38	-0.47	6.36
Optical and photographic equipment and supplies	1.25	0.90	1.10	3.27	8.94	35.21	17.29	15.92
Electricity generating equipment	**4.29**	**4.51**	**3.15**	**2.75**	**19.89**	**12.12**	**-1.53**	**6.19**
Telecommunications machinery and equipment	**8.33**	**9.91**	**13.10**	**15.45**	**23.65**	**38.60**	**2.81**	**13.48**
Telephony and radio-telephony equipment and television and radio transmitters	2.18	3.42	7.86	4.30	32.46	66.73	-7.87	13.91
Receiving, playback, recording and amplification devices	6.15	6.49	5.23	11.15	20.02	17.55	11.87	13.32
Electronic and non-electronic office machinery and equipment	**7.28**	**10.18**	**8.03**	**9.23**	**28.76**	**16.70**	**2.42**	**10.81**
Office machinery	1.42	1.88	1.22	0.58	27.08	9.19	-9.76	3.20
Equipment for electronic data processing systems	5.86	8.30	6.82	8.65	29.15	18.28	3.89	11.87
Medical and hospital equipment	**4.26**	**3.01**	**3.19**	**3.18**	**8.59**	**28.76**	**0.36**	**7.20**
Agricultural machinery and equipment	**0.13**	**0.53**	**1.00**	**0.48**	**69.53**	**56.16**	**-9.52**	**18.74**
Transport machinery and equipment	**11.67**	**11.12**	**15.46**	**13.92**	**16.97**	**40.98**	**-1.08**	**10.39**
Trucks and buses	0.14	5.60	6.13	2.66	199.08	30.17	-10.89	31.37
Truck cabs, bodywork and trailers	0.57	0.86	1.23	1.17	31.00	42.23	-0.24	14.17
Railway rolling stock construction, assembly and repair	0.23	0.09	0.53	0.81	-6.04	127.45	6.82	18.22
Boat construction and repair	0.56	0.17	0.09	0.08	-11.91	3.04	-1.31	-3.14
Aircraft construction, assembly and repair	9.83	2.69	6.76	8.22	-14.33	71.60	3.25	7.96
Manufacture of other transport equipment	0.34	1.70	0.73	0.98	77.52	-4.84	4.75	16.70
Capital goods industry total	**100.00**	**100.00**	**100.00**	**100.00**	**18.41**	**26.30**	**0.41**	**9.18**
Capital goods industry/manufacturing industry	**26.88**	**31.31**	**37.32**	**32.16**	**13.98**	**19.12**	**2.57**	**7.96**

Source: prepared by the author using data from the Foreign Trade Department (SECEX) of the Ministry of Development, Industry and Commerce (MDIC). Imports were converted into constant 1989 dollars on the basis of the United States producer price index (PPI).

equipment, while the shares of all other segments grew. In 2006, the segments with the greatest relative weight in Brazilian capital goods imports were basic electronics (15.7%), playback, recording and amplification devices (11.1%), motors, pumps, compressors and transmission equipment (9.7%) and aeronautical equipment (8.2%). Lastly, in 2006 exports and imports of pumps, motors, compressors and transmission equipment, and of other extraction machinery, recorded similar shares of capital goods exports and imports; this indicates that international trade flows in these segments are essentially intra-industry, i.e., they owe more to the search for greater economies of scale by Brazilian producers and their respective international partners than to relative price differences.

V

The Brazilian capital goods industry and the segments with the greatest growth potential

The Production Development Policy classes the capital goods industry as one of the sectors best placed to enhance the competitiveness and international trading position of Brazilian industry (MDIC, 2008). The goals of the PDP for 2007-2010 are ambitious. One of the main ones is to increase capital goods exports from US$ 19.6 billion to US$ 26.7 billion and raise private R&D expenditure from 1.32% to 2% of each firm's total net revenue.[44] To attain these goals, the PDP provides for a range of industrial policy instruments, including bndes innovation financing facilities,[45] accelerated depreciation for machinery and equipment that reduce production times for capital goods by 20% and the abolition of the 0.38% tax on financial transactions in the case of BNDES lending operations.[46]

Although the new support instruments may prove effective in raising the competitiveness of the capital goods industry, the PDP does not identify the segments with the greatest development potential. Since the industry comprises numerous segments that differ markedly in their structural and competitive profile, it is worth making an extra effort to identify those with the best prospects of increasing their competitiveness.

The set of indicators presented in this paper leads us to conclude that the Brazilian capital goods industry can be divided into four groups on the basis of structural characteristics, labour efficiency and international competitiveness. The first group comprises those segments whose production efficiency increased strongly in the recent period or that already have unmistakable competitive advantages: mining and construction machinery and equipment; agricultural machinery and equipment; telephony and radio-telephony equipment and television and radio transmitters; land motors, machinery and equipment; and aeronautical machinery and equipment.

The second group includes segments which have performed poorly in terms of labour efficiency improvements and currently lack comparative advantage, but are in a position to improve their competitiveness over the medium term, given their weight in the composition of capital goods exports: pumps, compressors and transmission equipment; generators, transmitters and electric motors.

The third group includes segments that require specific industrial and technological policies to drive their future development, and that face an enormous uphill struggle to become really efficient and internationally competitive. These are segments that figure quite substantially in the structure of the capital goods industry and are strategically important for economic development: electricity generating machinery and equipment and equipment for electronic data processing systems.

The fourth and last group includes traditional segments whose performance, in terms of production efficiency and international competitiveness, suffered from the succession of events that began in the 1990s, including relatively rapid trade liberalization in a context of high inflation, overvaluation of the Brazilian currency in real terms and low rates of growth in the economy. These are basically the segments in the traditional industrial machinery and equipment group, particularly metal frames and heavy boilers, tanks and boilers and machine tools.

Table 7 details the segments with the greatest growth potential, the reasons for classing them as such and certain support measures that could complement the industrial and technological policy instruments contained in the Production Development Policy.

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[44] This is for mass-produced capital goods. For capital goods manufactured to order, the goal is to raise R&D spending from 0.55% to 0.8% over the same period.

[45] BNDES, the largest development bank in Latin America, is the main source of long-term financing for the Brazilian economy. Since its creation in 1952, it has traditionally financed machinery and equipment purchases and investment projects, but not innovation projects. Since 2006, however, the bank has introduced and diversified new operating lines oriented towards innovation projects.

[46] See MDIC (2008) for more on these instruments.

An earlier study (Nassif, 2003b, p. 60) recommended that "given the technological complexities and the efficient production scales required in some segments", it would be more advisable to carry on importing many of the goods produced by the capital goods industry. Furthermore, large technological gaps in most segments mean that PDP instruments will have to be applied much more carefully than in the past if they are to produce satisfactory results. The complementary measures proposed in this article are compatible with the PDP objectives of increasing competitiveness and expanding capital goods exports, as they concern the following:

(i) stimulating private-sector R&D;
(ii) improving efficiency to take greater advantage of economies of scale;
(iii) financing investment for sectoral expansion, modernization and restructuring;
(iv) coordinating foreign investment so that more technology is transferred and spread to Brazilian producers and production chains.

TABLE 7

Brazil (capital goods industry): segments with the greatest growth potential and measures that could supplement the Production Development Policy

Segment	Reasons why it has growth potential	Supplementary measures
	GROUP 1	
▶ Mining and construction machinery and equipment	Share of capital goods industry value added. Comparative advantage and strong export potential.	Work at government level to encourage greater linkage between producers and customers in a context of rising investment thanks to the Growth Acceleration Programme (PAC). Create new financial engineering tools to increase the number of firms supported by BNDES.
▶ Agricultural machinery and equipment	Substantial weight in the structure of the capital goods industry. High level of labour efficiency and international competitiveness. Strong export potential.	Work to expand the export base, which is still small.
▶ Telephony and radio-telephony equipment and television and radio transmitters	Comparative advantage. Considerable weight in the structure of the capital goods industry. Strong export potential.	Modify financing mechanisms to include requirements (not just the "basic production process" requirement) that induce local and foreign firms to increase private-sector R&D spending. Negotiate local R&D commitments and the use of instruments to promote technology spillovers among local firms and production chains as part of the mechanisms used to attract inward investment, following recent Asian experience.
▶ Road transport machinery and equipment	Very substantial weight in the structure of the capital goods industry. High level of labour efficiency and international competitiveness. Strong export potential.	Formulate promotional policies that spur greater economies of scale and a considerable increase in export values.
▶ Aeronautical machinery and equipment	As per road machinery and equipment.	Attract manufacturers of high-technology spares, parts and components for the Brazilian market (e.g., turbines and other components). Provide financial support for small and medium-sized producers of aeronautical components, for local production of equipment, spares and parts and for the provision of aeronautical services under the BNDES Pro-Aeronáutica programme. Maintain export financing mechanisms.

Table 7 continues overleaf

GROUP 2		
▶ Motors, pumps, compressors and transmission equipment ▶ Generators, transmitters and electric motors	Considerable weight in the capital goods industry value added structure.	Use agreements with local firms to encourage them to export a growing share of output. Promote industrial and technological restructuring by attracting companies in the segment into the BNDES Programme for the Modernization of Machines and Equipment Installed in the Country (FINAME-MODERNIZA BK). Stimulate the development of engineering procurement consultancy firms to foster procurement of locally made equipment. Use government procurement policies (public tenders) to stimulate demand. As with the previous segment, encourage the formation of engineering procurement consultancy firms in the interests of local procurement.
GROUP 3		
▶ Electricity generating machinery and equipment	Strong growth in potential demand for electricity generating machinery and equipment as a result of investments expected in the Brazilian energy sector. Reasonably substantial weight in the structure of the capital goods industry. Strategic segment for infrastructure and economic development.	Use government procurement policies (public tenders) as an instrument to stimulate demand in this segment. Coordinate with the sectors that are the end users of this equipment by means of mechanisms designed to stimulate orders for Brazilian-made electricity generating machinery and equipment.
▶ Equipment for electronic data processing systems ▶ Measuring, testing and control devices	Reasonably substantial weight in the structure of the capital goods industry. Strategic importance for infrastructure and economic development.	Modify financing mechanisms to include requirements (not just the "basic production process" requirement) that induce local and foreign firms to increase private-sector R&D spending. Negotiate local R&D commitments and the use of instruments to promote technology spillovers as part of the mechanisms used to attract foreign investment, following recent Asian experience.
GROUP 4		
▶ Traditional industrial machinery and equipment, especially Metal frames and heavy boilers Tanks and boilers Machine tools	Sectors badly affected by adverse macroeconomic developments since the early 1990s.	Promote technological restructuring in the industry by attracting companies in the segment into the BNDES Programme for the Modernization of Machines and Equipment Installed in the Country (FINAME-MODERNIZA BK). In the case of machine tools, develop mechanisms to increase technology training in this segment.

Source: prepared by the author on the basis of Brazilian and international competitiveness indicators for the capital goods industry.

VI
Conclusion

This study set out to analyse the structural and competitive profile of the Brazilian capital goods industry. It has shown that this industry, which accounts for about 12% of total manufacturing industry value added, presents quite heterogeneous conditions of production efficiency and international competitiveness. The average annual decline of labour productivity in this industry between 1996 and 2005 (about -0.8%) was no greater than that for Brazilian manufacturing industry as a whole in the same period (-1%).

In view of different considerations –improvements in production efficiency and international competitiveness in this industry, its relative weight in the industrial structure, indeed its strategic importance to economic development– this article has sought to identify, justify and propose some measures which could complement the PDP and whose aim is to enhance the efficiency and competitiveness of those segments of the capital goods industry that have the greatest growth potential. None of the recommendations made entails a return to the overblown protection mechanisms of the import substitution period, since what is proposed are not market quotas and high tariff and non-tariff barriers to imports but, essentially, instruments to stimulate research, development and technological training and financial mechanisms for the industrial restructuring of sectors with development potential. It is always worth stressing that government support policies need to be accompanied by mechanisms for supervising firms in receipt of public-sector benefits so that as far as possible corporate featherbedding and rent seeking are avoided.

(Original: Portuguese)

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KEYWORDS

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The economic returns to education in Mexico: a comparison between urban and rural areas

Juan Luis Ordaz-Díaz

This study uses the Mincer equation to calculate the private economic returns to education in urban and rural areas of Mexico in the 1994-2005 period. The findings indicate that investing in education is profitable in both types of area. Returns to education were found to be greater in the countryside than in cities in most of the years analysed and at every level of education. Education in rural areas tends to be more profitable for women at the basic education levels and for men at the higher levels. In urban areas, education proved to be more profitable for men at the primary and higher levels and, in some years, for women at the lower and upper secondary levels.

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I
Introduction

From a variety of theoretical standpoints, the accumulation of human capital is regarded as essential to economic and social progress. Although a number of factors –families, schools, businesses and so on– contribute to its formation, the debate about human capital generally centres on education as the main producer of capabilities (Carneiro, Hansen and Heckman, 2003).

Much of the theoretical debate on the role of education in economic growth and development is about whether education is economically productive. There is abundant evidence that the education levels of the population are closely correlated with economic development, but there is still disagreement as to whether education has contributed to economic development or whether the causality works the other way. On this point, human capital theory postulates that time spent both at school and at work directly increases workers' productivity and, consequently, their pay (Weiss, 1995). It is thus to education that the development and creation of skills and capabilities, translating into higher earnings in the market, are to be attributed.

If education is economically profitable, it ought to be an essential element in public policy design; consequently, it is important to know what benefits arise when individuals receive more years of education. One useful way of finding this out is to determine the economic returns to education, usually measured as the increase in earnings resulting from each additional year's schooling or the attainment of a certain educational level.[1] From the individual's point of view, these economic returns provide a measure of how much it is worth investing in additional schooling. From society's point of view, they can be an indicator of the relative scarcity of people with different education levels, and thus a guide to education policy.

The specialist literature includes a variety of studies that have set out to measure the economic returns to education in different countries. The most common procedure has been to estimate the Mincer (1974) equation by the ordinary least squares (OLS) method. This equation establishes a ratio between the log of individual earnings and years of education, work experience and the square of that experience. The years of education coefficient is interpreted as the economic return to an extra year's schooling.

Some studies have analysed the problems that can arise in seeking to identify what proportion of educated people's earnings is due to education and what proportion to their innate abilities, learning within the family or unobserved variables. There has been speculation that the OLS method might be underestimating returns, and alternative methodologies have accordingly been proposed (Griliches, 1977). The instrumental variables method has been among those most used, the difficulty here lying in the choice of instrument.

According to Carneiro and Heckman (2002), the instruments commonly used in the literature on education are invalid, as they are correlated with omitted abilities. Studies by Carneiro, Heckman and Vytlacil (2001) and Heckman and Li (2004) have shown that estimates of the economic return to education may be skewed because some individuals may choose (self-selection) not to participate in the labour market.[2] Methodologies have accordingly been proposed to correct possible biases in the estimates using parametric methods (such as Heckman's two-stage method) or semiparametric ones, in which a counterfactual structure is introduced and average treatment effects are calculated.

In Mexico, some studies have concentrated on calculating the economic returns to education,[3] but

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[1] The economic return is the percentage gain or loss on an investment, which means that the costs of the investment need to be considered for this to be calculated. In the case of the economic return to education, these costs are the earnings forfeited by studying.

[2] For some people, participation in the labour market is not aleatory and they choose not to participate in that market (they self-select) on the basis of the wage they expect. Thus, some non-working individuals may have chosen not to work because their market wage is below their reserve wage.

[3] Examples are those of Carnoy (1967), Bracho and Zamudio (1994), Zamudio (1995), Rojas, Angulo and Velásquez (2000), Barceinas (2001), Sarimaña (2002), López-Acevedo (2004) and Rodríguez-Oreggia (2004).

most do not distinguish between urban and rural areas, even though the characteristics of the two are very different, and only examine developments over one or two years. One of the few studies that have sought to measure economic returns to education in rural areas of Mexico is that of Taylor and Yúnez-Naude (2000), who find that these returns manifest themselves as increased rural earnings in traditional farming activities, irrespective of the educational level; however, they do not observe positive effects on non-agricultural family income.

Rural areas are interesting to analyse, as they are highly disadvantaged in terms of poverty, inequality and low incomes. For policy purposes, it is important to know whether the economic returns to education differ between city and countryside. If they were higher in cities, the effect of educational investment (other things being equal) would be to heighten the inequality between the two. Conversely, if economic returns were higher in the countryside, education would be reducing inequality, making greater investment in it desirable. In a number of studies, ECLAC has shown evidence that human capital formation has a decisive influence on labour productivity and thus on rural earnings and poverty reduction, as well as the overall well-being of the population (ECLAC/UNESCO, 1992; ECLAC, 2006).

The present study aims to shed some light on the matter, to which end it calculates the economic returns to Mexican education both in the countryside and in urban areas for the years 1994, 1996 1998, 2000, 2002, 2004 and 2005. The data used come from the National Household Income and Expenditure Survey (ENIGH). To calculate these economic returns (hereinafter simply "returns"), Heckman's two-stage method is used to estimate regressions corrected for self-selection.

The remainder of the article is structured as follows. Section II describes some aspects of the current situation of education in Mexico and conducts a comparison between urban and rural areas, and between Mexico and other countries. Section III describes the data used. Section IV presents calculations of education returns in Mexico. Lastly, section V sets forth the conclusions.

II
The current situation of education in Mexico

This section examines some aspects of the current state of education in Mexico; first rural and urban areas are compared, then Mexico is compared with other countries.

1. Comparison between rural and urban areas

In 1950, Mexico was a predominantly rural country. Since 1960 the urban population has been larger than the rural one, but the latter remains very substantial, representing 23.5% of the total population in 2005.

In general, the rural population tends to have lower education levels and receive a lower-quality education. In 2005, the urban illiteracy rate was 6.7%, while rural illiteracy was still almost double the 1994 urban rate. The situation was particularly serious in the case of women. Despite some progress, the female illiteracy rate in 2005 was still a very considerable 18.3% (table 1).

Rural areas also come off worse in terms of years of schooling. In 2005, the average time spent in education by rural residents was still less than the national and urban figures for 1994. Once again, rural women were the most disadvantaged (table 2).

Given that by 2005 rural residents still fell short of the education level achieved in urban areas over a decade earlier, the education gap between urban and rural areas is probably somewhere in the region of 10 years. This indicates a need to accelerate education measures in the Mexican countryside.

TABLE 1

Mexico: illiteracy among the population aged 6 and over, 1994-2005

(Percentages)

	1994	2000	2005
National total	12.5	10.6	8.9
Urban areas	8.5	6.9	6.7
Rural areas	23.5	21.2	16.0
Rural women	26.7	24.1	18.3

Source: prepared by the author using ENIGH data for 1994, 2000 and 2005.

TABLE 2

Mexico: education of the population aged 15 and over, 1994-2005
(Years)

	1994	2000	2005
National total	6.5	7.4	8.1
Urban areas	7.4	8.3	8.9
Rural areas	3.7	4.4	5.6
Rural women	3.5	4.1	5.3

Source: prepared by the author using ENIGH data for 1994, 2000 and 2005.

TABLE 3

Mexico: students with inadequate reading performance in the sixth year of primary school and the third year of lower secondary school, by school type, 2000-2005
(Percentages)

6th year primary	2000	2005	3rd year lower secondary	2000	2005
Sample total	25	16	Total	27	26
Private[a]	9	2	Private[a]	4	5
Urban	22	12	General	28	21
Rural	32	23	Technical	29	27
Indigenous	51	29	Telesecundaria	33	42
CONAFE[b]	35	36			

Source: INEE (2007a).

[a] Includes urban and rural private schools.
[b] National Council for Education.

Increasing education coverage is very important, but so is providing a good-quality education. A useful measure of education quality is students' academic performance. Here again there are marked differences between city and countryside.

Table 3 shows the percentage of students with an inadequate reading performance in the sixth year of primary school and the third year of lower secondary (*secundaria*) school in 2000 and 2005. It is observed that, broadly speaking, primary students performed better than lower secondary students. Considerable differences can also be seen between urban and rural areas. In 2005, no more than 12% of students at primary schools located mainly in urban areas (private and urban schools) underperformed in reading, while at those located primarily in rural areas (rural and indigenous schools and those operated by the National Council for Education (CONAFE)) the figure was at least 23%. In lower secondary education, students at rural (telesecundaria) schools performed worst, and the learning divide between urban and rural areas at this education level was wider as a result.

One variable that probably reflects educational disparities is poverty, which in Mexico is greater in the countryside. Although it fell substantially in the 2000-2005 period (table 4), poverty can increase from one year to the next, as happened between 2004 and 2005.

In Mexico there is an inverse correlation between education and poverty. Table 5 shows that the higher people's education level is, the less likely they are

TABLE 4

Mexico: poverty by area of residence, 2000-2005
(Percentages)

Poverty line	2000		2002		2004		2005	
	Urban areas	Rural areas	Urban areas	Rural areas	Urban areas	Rural areas	Urban areas	Rural areas
Food[a]	12.5	42.4	11.3	34.0	11.0	28.0	9.9	32.3
Capabilities[b]	20.2	49.9	17.2	42.6	17.8	36.2	15.8	39.8
Wealth[c]	43.7	69.2	41.2	64.3	41.1	57.4	38.3	61.8

Source: National Council for Social Policy Evaluation (CONEVAL), consulted at http://www.coneval.gob.mx/coneval/.

[a] Food poverty (*pobreza alimentaria*): proportion of households whose per capita income is insufficient to cover food needs as given by the INEGI-ECLAC food basket.
[b] Capabilities poverty (*pobreza de capacidades*): proportion of households whose per capita income is insufficient to cover basic consumption of food, health care and education.
[c] Wealth poverty (*pobreza de patrimonio*): proportion of households whose per capita income is insufficient to cover basic consumption of food, clothing and footwear, housing, health care, public transport and education.

TABLE 5

Mexico: poverty by education level and area of residence
(Percentages)

Maximum education level	Food poverty		Capabilities poverty		Wealth poverty	
	Urban areas	Rural areas	Urban areas	Rural areas	Urban areas	Rural areas
No schooling or incomplete primary	18.8	47.0	28.6	55.8	57.6	76.0
Complete primary	14.4	37.7	22.4	45.3	53.1	69.0
Lower secondary	11.2	28.7	19.1	37.6	47.3	62.8
Upper secondary	5.2	13.9	8.7	20.6	26.4	44.5
Degree course	1.2	4.3	1.9	5.0	8.2	20.9

Source: prepared by the author using ENIGH data for 2005.

to be poor. It appears, however, that more years of education are needed in the countryside to ensure a low likelihood of a person's living in poverty. Among people who have completed primary school, 14.4% are in a situation of food poverty (*pobreza alimentaria*, considered to be extreme poverty)[4] in cities and 37.7% in the countryside, whereas among those who have undertaken a degree course just 1.2% are in a situation of food poverty in cities and 4.3% in the countryside. Moderate poverty (*pobreza de patrimonio* or wealth poverty) affects 76% of individuals who have not completed primary education in the countryside and 57.6% in cities. Among those who have completed a degree course, 20.9% suffer from wealth poverty in the countryside and 8.2% in cities. Thus, if returns to education in the countryside were higher, education could be an instrument for reducing the inequality between the two.

2. Comparison with other countries

Mexico has progressed more than some other countries in terms of investment at certain education levels. Between 1995 and 2003, its expenditure on primary and lower secondary education rose by 49%, the largest increase of any Organisation for Economic Co-operation and Development (OECD) country after Turkey, Greece, Poland, New Zealand and Ireland. Mexican spending on tertiary education[5] rose by 67% between 1995 and 2003, the second-largest increase among OECD countries. Mexican expenditure on education as a percentage of gross domestic product (GDP) rose from 4.6% to 5.8% between 1995 and 2003, and in the latter year it was above the OECD average of 5.5% (OECD, 2007).

Although education investment increased in Mexico, the amount per student remained low in absolute terms. In 2003, spending per primary school student in Mexico was US$ 1,656 a year at purchasing power parity, or just under a third of the OECD average of US$ 5,450. In lower secondary education, Mexican expenditure per student was US$ 1,918 a year or about a quarter of the OECD average, while spending on tertiary education was just over half the OECD average. When the comparison is with countries at a similar stage of development, the difference is mixed. Mexico spends more per student than Brazil but less than Chile or Israel at all education levels (OECD, 2007).

In the period from 2001 to 2005, countries such as Finland, the United States and Canada spent at least 2% of GDP on research and development (R&D). Mexico allocated 0.4% of GDP to this, a higher proportion than countries like Indonesia, Colombia, Kyrgyzstan and Uruguay but only about half the figure for Portugal, Brazil and Spain and five or six times less than the countries with the highest spending levels (INEE, 2007b).

A large proportion of Mexican education expenditure goes on current spending. It ranks second among OECD countries in the proportion of education expenditure going on current spending at the primary and lower secondary levels, and the share of current spending still looks high when compared to that of some countries with a similar development level, such as Brazil, Chile and Israel (OECD, 2007).

In 2006, the Programme for International Student Assessment (PISA) examined 15-year-old

[4] See SEDESOL (2003) and CONEVAL (2006) for a detailed explanation of how poverty is measured in Mexico.
[5] Tertiary education encompasses university education and advanced vocational programmes.

students in 57 countries. This OECD programme found that, on average, young Mexicans possessed a lower level of knowledge and skills than young people in more developed countries and, in some cases, than those in countries at a similar stage of development. Again, according to INEE (2007b), some 50% of young Mexicans do not attain the skill levels in reading, mathematics and science that they will need in their adult lives. This represents a major challenge for the Mexican education system.

Where returns to education are concerned, Patrinos (2008) states that these are generally higher in developing than in developed countries and puts the average global return to education at 10%. According to Patrinos's calculations, returns in Mexico are slightly above this figure (11%). Latin American countries with higher returns than Mexico include Chile (12%), Guatemala (13%) and Brazil (16%). Countries with lower returns are Bolivia (10%) and the Bolivarian Republic of Venezuela (7%).

In summary, while Mexico has made progress with education, major challenges still lie ahead. It would be advisable to orient education spending more towards infrastructure and educational materials. Further progress is also needed in reducing educational inequality between rural and urban areas.

III

The data

The present analysis is based on the National Household Income and Expenditure Survey (ENIGH) conducted by the National Institute of Statistics, Geography and Informatics (INEGI), the institution responsible for generating and compiling statistical and geographical information on the territory, population and economy of Mexico. The survey yields data on the characteristics of households, the social and demographic characteristics of individuals and their income and expenditure, both monetary and non-monetary; it is representative nationally and at the urban and rural levels. The years studied are 1994, 1996, 1998, 2000, 2002, 2004 and 2005.

The sample was confined to individuals aged between 12 and 70. Individual quarterly earnings were used to calculate the returns to education. Observations lacking information on earnings and the number of hours worked were discarded.[6]

To carry out the analysis, the following variables were generated:

(1) No schooling or incomplete primary: takes a value of 1 if the person is illiterate or progressed no higher than the fifth year of primary school.

(2) Complete primary: takes a value of 1 if the individual completed six years of primary schooling.

(3) Lower secondary (*secundaria*): is equal to 1 if the worker went through at least one and no more than three years of lower secondary schooling.

(4) Upper secondary (*preparatoria*): is equal to 1 if the worker went through at least one and no more than three years of upper secondary education.

(5) Degree course: has a value of 1 if the individual went through at least one year of higher education.[7]

(6) Education: completed years of education, estimated using the information supplied in the ENIGH code catalogue compiled by INEGI.

(7) Experience: this is work experience estimated as zero or the person's age minus years of education minus six, whichever is higher.

[6] Note that people who were out of work or not in receipt of income were not removed from the sample. Some studies do remove them, including those of Bracho and Zamudio (1994) and Sarimaña (2002). Doing this can skew the results by increasing the apparent returns to education. When the unemployed population is not considered, the returns obtained may be reflecting the influence of skills on earnings to a greater extent, as many of the unemployed are likely to be less skilled than other people with a similar level of education.

[7] It is known that a completed degree course may yield different returns to those produced by just one or two years of higher education. Nonetheless, individuals with a complete upper secondary education were found to earn less on average than those who had also spent a year in a degree course. For this reason, it was decided that all those with at least one year of higher education should be included in the degree course variable.

(8) Experience^2: this is the square of work experience.

Table 6 presents some characteristics of the individuals included in the sample used for this study. The proportion of women is observed to be higher in urban areas than in rural areas in every year except 2004, while the opposite holds for men. The proportion of women in the sample ranges from 52.3% to 53.7% in urban areas, while that of men in rural areas is between 47% and 50.5%. The proportions are thus fairly stable in both cases. Individuals in urban and rural areas are very similar in average age; in no case does the difference exceed a year, and the average age rises slightly over the years. In every year of the sample, individuals in rural areas tend to have greater work experience than those in urban areas.

Generally speaking, urban areas contain a larger proportion of people with a higher level of education and rural areas of people with a lower level of education; in both, however, there was a substantial increase in education levels over the years. In 1994, for example, the proportion of individuals with complete primary schooling or less was 20.9% in urban areas, a figure that had fallen to 17% by 2005. The proportion of rural people with this same education level remained virtually unchanged between the same years (rising slightly from 22% to 22.1% in 2005). Meanwhile, the proportion of individuals with upper secondary education or above increased in both urban and rural areas, rising from 12.5% to 22.6% in the former and from 2.7% to 10.6% in the latter between 1994 and 2005.

TABLE 6

Mexico: characteristics of the individuals included in the sample, urban and rural areas, 1994-2005

	1994		1996		1998		2000		2002		2004		2005	
	Urban areas	Rural areas	Urban areas	Rural areas	Urban areas	Rural areas	Urban areas	Rural areas	Urban areas	Rural areas	Urban areas	Rural areas	Urban areas	Rural areas
Sex (%)														
Male	47.7	50.5	47.4	49.1	47.5	49.3	46.3	48.8	46.7	48.0	47.2	47.0	47.6	47.8
Female	52.3	49.5	52.6	50.9	52.5	50.7	53.7	51.2	53.3	52.0	52.8	53.0	52.4	52.2
Age (average in years)	31.9	31.9	31.7	31.6	32.4	33	32.4	32.9	33	33.6	33.8	34.5	34.1	34.3
Work experience (average)	18.5	21.8	17.9	21	18.4	22.1	18.2	22.1	18.5	22.5	19	22.7	19.2	22.2
Education (average)	7.4	4.1	7.8	4.6	8	4.9	8.3	4.9	8.5	5.2	8.8	5.7	8.9	6.1
Education (%)														
No schooling or incomplete primary	25.2	59.6	22.7	53.3	20.4	49.6	18.7	45.1	18.3	46.4	17.9	41.5	17.7	38.0
Complete primary	20.9	22.0	20.0	23.9	20.2	24.8	19.0	24.4	18.0	22.6	17.6	20.8	17.0	22.1
Lower secondary	30.9	14.5	31.5	18.6	32.5	20.1	31.5	23.7	31.6	22.5	28.6	25.6	28.7	26.0
Upper secondary	12.5	2.7	14.1	3.1	14.6	4.1	15.9	4.9	16.9	6.0	21.9	10.0	22.6	10.6
Degree course	10.6	1.1	11.7	1.1	12.2	1.5	14.8	1.9	15.1	2.6	14.0	2.1	14.1	3.4

Source: prepared by the author using ENIGH data for 1994, 1996, 1998, 2000, 2002, 2004 and 2005.

IV

The returns to education in Mexico, 1994-2005

In the specialist literature worldwide, Mincer's specification is the one most commonly used to calculate returns to education. It establishes that the log of earnings is a function of education, work experience and the square of that experience. Formally, we have:

$$ln\ Y_i = \gamma + \phi E_i + \delta_1 Exp_i + \delta_2 Exp_i^2 + \varepsilon_i \quad (1)$$

where lnY represents the log of earnings, E are years of education and Exp is work experience. The coefficient associated with education (φ) provides an estimate of the returns to this, as it represents the percentage change in income for a unitary change in education level.

There is a problem with equation (1): it does not consider whether individuals have decided (by self-selection) not to participate in the labour market; if that happens, the estimates from this method may be skewed.[8] Furthermore, it assumes that returns are the same at each level of education. However, the Mincer equation is very important because it can be used to estimate the returns to education and is the basis for international comparisons. Given that the aim of the present study is to compare these returns between two geographical areas (rural and urban), this specification may be adequate. To reduce possible self-selection bias, however, the estimates will be corrected using Heckman's two-stage method, and a gender analysis will be carried out. To estimate the returns of each education level, a specification based on dummy variables will be carried out by education level.

Heckman's two-stage method is used to remove biases that may arise because all that surveys observe are the earnings of individuals whose reserve wage is below the market wage. Those whose reserve wage is above the market wage do not appear in the estimate. According to Heckman (1979), this situation may introduce biases into the estimators of the earnings equation parameters similar to those generated by the omission of relevant variables in the model.

To illustrate Heckman's two-stage method, two equations are proposed:

$$Z_i^* = \gamma^T w_i + u_i \qquad \text{(decision equation)} \qquad (2)$$

$$y_i = \beta^T x_i + \varepsilon_i \qquad \text{(interest equation)} \qquad (3)$$

In this case they are, respectively, the equation for the participation of wage earners and the Mincer function (1). In equation (2), Z_i^* is the propensity to work, w_i is a vector of observed explanatory variables and u_i is an unobserved error term in the decision equation. In equation (3), y_i is the potential earnings level of a particular individual (expressed in logarithms), x_i is a vector of variables that influence the potential earnings level and ε_i is an error term in the interest equation, again unobserved.

y_i is observed if $Z_i^* > 0$. Thus:

$$E\left(y_i \mid y_i \text{ is observed}\right) = E\left(y_i \mid Z_i^* > 0\right) \qquad (4)$$

For those not in work, $Z_i^* > 0$ and y_i is consequently equal to zero. The self-selection problem arises if the unobserved part of the decision to work (u_i) is correlated with the unobserved part of the result (ε_i). Empirically, in the first stage of this method a probit model is estimated in the decision equation used to calculate the inverse Mills ratio (λ) corresponding to the ratio between the density function and the cumulative distribution function of a normal function, evaluated at $\lambda T w_i$. At the second stage, λ is included as a regressor in the interest equation.

The final equation estimated is:

$$y_i \mid Zi^* > 0) = \beta^T x_i + \beta_\lambda \lambda + \xi_i \qquad (5)$$

If the estimated value of $\beta\lambda$ is other than zero, it may be concluded that self-selection exists.

Individual decisions to join the labour market may be affected by various factors. In this case, the

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[8] This type of problem is known in the specialist literature as self-selection bias. See Heckman (1979) and Lewis (1974) for a detailed explanation.

TABLE 7

Mexico: estimation of the income function of the basic Mincer model, 1994-2005

Variable	1994		1996		1998		2000		2002		2004		2005	
	Coef-ficient	t stat-istic	Coef-ficient	t stat-istic	Coef-ficient	t stat-istic	Coef-ficient	t stat-istic	Coef-ficient	t stat-istic	Coef-ficient	t stat-istic	Coef-ficient	t stat-istic
Mincer model														
Education	0.1336	54.6	0.1117	47.1	0.1121	37.9	0.1030	34.3	0.1129	51.4	0.1214	66.8	0.1188	65.0
Experience	0.0287	12.2	0.0252	11.2	0.0301	10.8	0.0216	7.4	0.0274	12.1	0.0264	13.2	0.0228	11.5
$Experience^2$	-0.0004	-10.1	-0.0003	-8.0	-0.0004	-8.2	-0.0002	-4.5	-0.0003	-8.7	-0.0003	-8.8	-0.0002	-6.8
Constant	5.8184	123.5	6.2572	135.3	6.3613	106.6	6.8606	113.6	6.8024	143.9	6.7769	161.1	6.8558	159.6
Probit model														
Sex	1.1655	83.0	1.1125	83.0	1.0343	67.3	1.1167	-67.0	1.0335	82.8	0.9594	90.3	0.9187	86.4
Experience	0.0824	53.8	0.0821	57.0	0.0756	46.4	0.0860	51.0	0.0894	71.5	0.0828	77.4	0.0818	77.0
$Experience^2$	-0.0012	-48.9	-0.0013	-52.0	-0.0011	-41.8	-0.0013	-46.2	-0.0014	-64.1	-0.0014	-72.3	-0.0013	-70.2
Education	0.0596	29.9	0.0635	32.6	0.0644	29.4	0.0645	27.3	0.0592	35.3	0.0482	35.7	0.0517	38.1
Residents	-0.0873	-18.8	-0.0845	-19.0	-0.1039	-19.0	-0.0849	-14.8	-0.0790	-18.2	-0.1181	-27.8	-0.1411	-32.7
Constant	-1.3276	-39.4	-1.3160	-40.7	0.8871	22.5	0.8859	21.0	0.7795	24.8	-1.0359	-40.2	-0.970	-37.6
Inverse Mills ratio	-0.2047	-7.4	-0.1907	-7.0	-0.2357	-6.6	-0.2948	-8.2	-0.1750	-6.0	-0.0825	-3.1	-0.2269	-8.4

Source: prepared by the author using ENIGH data for 1994, 1996, 1998, 2000, 2002, 2004 and 2005.

variables considered relevant were sex (which takes a value of 1 if the individual is a man), the number of residents in the household, years of education, work experience and the square of that experience.

Table 7 shows the estimate of the basic Mincer model, using Heckman's two-stage method.[9] Three sections are presented, one showing the estimated coefficients of the basic Mincer model corrected for self-selection, another showing the coefficients of the probit model,[10] in which the dependent variable takes the value 1 if the individual has at least one job, and lastly the coefficient of the inverse Mills ratio, which indicates the possibility of self-selection. The probit model shows statistically significant coefficients in all cases and indicates in all years that the probability of participating in the labour market is higher for men and increases to a certain extent with education level and work experience, while it declines as the number of residents in the household rises.

The estimate of the inverse Mills ratio proves to be statistically significant in all years, which suggests that there may be self-selection and thus that the OLS estimates may be skewed. With this method, the results show that in 1994 an average individual's earnings rose by about 13% with each additional year of education; from 1996 to 2000 they increased by between 10.3% and 11.2%; and after 2000 they increased by over 11.3%. Thus, returns have tended to vary over the years, which may be due to a number of factors, such as changes in education quality and in the demand for workers with a certain level of qualifications, the supply of workers with particular levels of education, the distribution of employment between occupations, and economic growth.

As already indicated, the above specification assumes that the returns to education are the same at every level of the system. To obtain an estimate of returns by education level, a specification with dummy variables will be used as follows:

$$\ln Y_i \mid Zi^* > 0 = \gamma + \sum_{i=1}^{k} = \beta_i D_i + \delta_1 Exp_i + \delta_2 Exp_i^2 + \beta_\lambda \lambda + \xi_i \qquad (6)$$

where D_i represents each of the dummies of each education level i. The levels considered in this case are: (1) no schooling or incomplete primary, (2) complete primary, (3) lower secondary, (4) upper secondary and (5) degree course.

[9] All the estimates presented in this paper were carried out using OLS and in most cases slightly lower results were obtained. The results obtained with the OLS method can be found in Ordaz (2007).

[10] Referring in this case to the probability of a person having at least one job.

Psacharopoulos (1993) argues that for this type of specification, the returns to the *i*-th educational level r_i can be estimated by calculating the difference between the D_i and D_{i-1} coefficients and then dividing this by n_i, i.e., by the number of school years corresponding to level k.[11] In other words:

$$r_i = \frac{(\beta_i - \beta_{i-1})}{n_i} \tag{7}$$

Since one of the goals of this study is to ascertain whether returns to education differ between rural and urban areas, equation (6) was estimated for each separately. The results are presented in the appendix, and they indicate once again that all the coefficients are statistically significant. The presence of the self-selection problem is also found to be a possibility, since the estimated coefficient of the inverse Mills ratio is statistically significant in all years for both types of area.

On the basis of this information, formula (7) was used to estimate returns by education level (table 8), indicating the percentage by which income from education rises with each level.

These findings can be used to analyse the evolution of private returns to education in urban and rural areas of Mexico in the 1994-2005 period. To facilitate comparison of the results, the information given in table 8 was used to prepare figures 1 and 2, shown below.

One important observation deriving from the results is that studying is a profitable activity in Mexico, since all education levels offer positive returns in all the years analysed. Another is that returns have tended to change over the years.

For rural areas, it is observed that lower secondary education offered the best returns at the start of the period, and that these increased towards the end of the period as higher levels of education were attained. The trend of returns to primary education was downward between 1994 and 1998, upward between 1998 and 2002 and downward in the closing years of the period.

Returns to lower secondary education fell substantially between 1994 and 2000, only to rise sharply thereafter. Returns to upper secondary education grew throughout the period, while returns to higher education fell in 1994-1998 before tending to increase again (figure 1).

According to Esquivel (2008), inequality in rural Mexico has taken the form of an inverted U. It rose significantly between 1996 and 2000 and started to decline from 2002. In other words, it followed the opposite course to returns from lower secondary education. The initial increase in this inequality could have been influenced by the decline in returns from higher and primary education between 1994 and 1998, while its subsequent reduction may have been largely due to the tendency for returns to increase across all education levels after 1998. Thus, education seems to be contributing to a reduction of inequality in Mexico.

TABLE 8

Mexico: returns by education level, selected years in the 1994-2005 period

(Percentages)

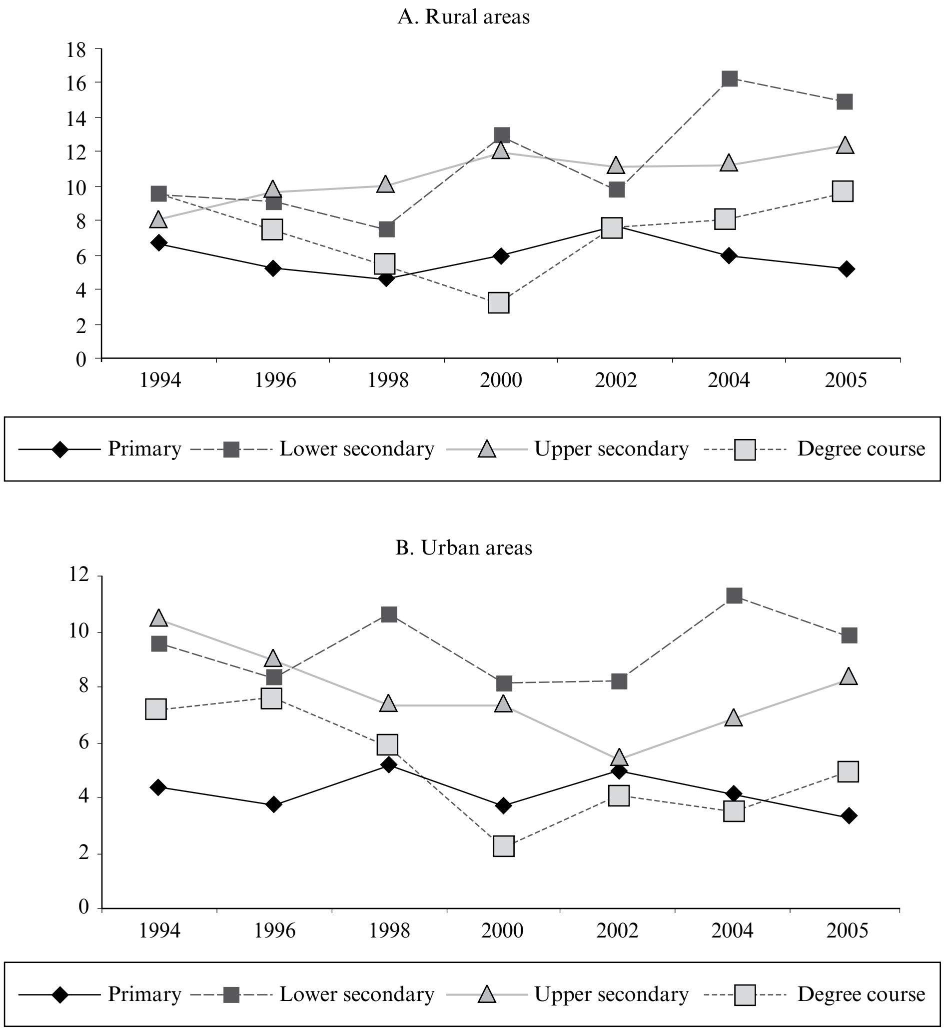
	Rural	Urban
1994		
Complete primary	6.7	4.4
Lower secondary	9.7	7.1
Upper secondary	8.1	10.5
Degree course	9.6	9.6
1996		
Complete primary	5.2	3.7
Lower secondary	7.4	7.6
Upper secondary	9.9	9.0
Degree course	9.1	8.4
1998		
Complete primary	4.6	5.2
Lower secondary	5.3	5.8
Upper secondary	10.1	7.4
Degree course	7.5	10.6
2000		
Complete primary	6.0	3.7
Lower secondary	3.0	2.3
Upper secondary	12.0	7.4
Degree course	13.0	8.1
2002		
Complete primary	7.7	4.9
Lower secondary	7.6	4.0
Upper secondary	11.2	5.4
Degree course	9.8	8.2
2004		
Complete primary	5.9	4.2
Lower secondary	8.0	3.6
Upper secondary	11.3	6.9
Degree course	16.3	11.3
2005		
Complete primary	5.2	3.3
Lower secondary	9.8	4.9
Upper secondary	12.6	8.4
Degree course	14.9	9.9

Source: prepared by the author using ENIGH data for 1994, 1996, 1998, 2000, 2002, 2004 and 2005.

[11] The number of years of education taken for this study are six for primary, three for lower secondary, three for upper secondary and five for higher education.

FIGURE 1

Mexico: returns to education by education level, rural and urban areas, 1994-2005
(Percentages)



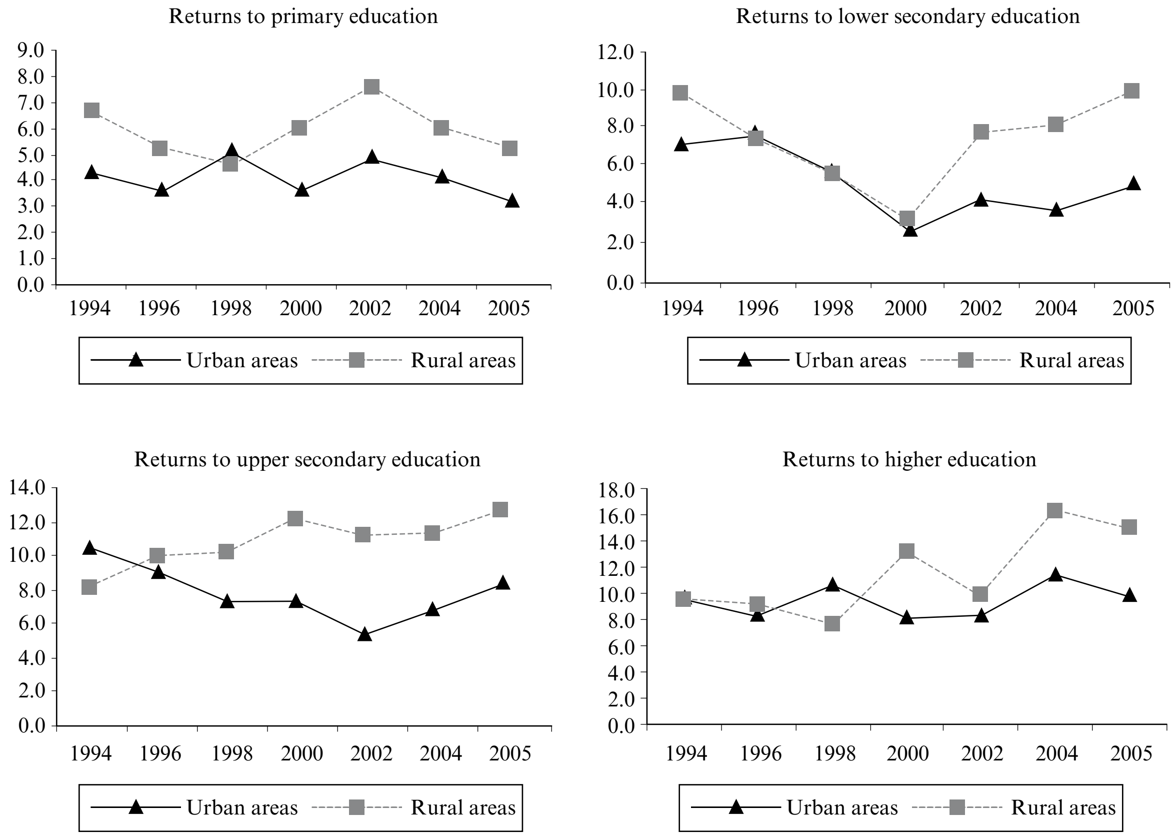
Source: prepared by the author using data from table 9.

In urban areas, upper secondary education was the level offering the highest returns in the early part of the 1994-2005 period,[12] followed by degree courses. Economic yields from primary education displayed a fairly stable trend between 1994 and 2002, but began to decline in the final years of the period. Returns to lower and upper secondary education changed roughly in tandem, although lower secondary returns were always less great: the trend was downward for both from 1994 and then upward, first (after 2000) for lower secondary and then (after 2002) for upper secondary education. After the end of the 1990s, it was higher education that yielded the greatest returns. By the end of the period, a straightforward pattern had emerged: the higher the education level, the higher the return (see figure 1 again). The relatively stable trend of returns to primary education and the rising trend in higher education returns may go some way towards

[12] This finding agrees with that obtained by Barceinas (2001), who also finds that upper secondary education was the level yielding the highest returns across the whole population of Mexico in 1994.

FIGURE 2

Mexico: returns to education by education level, urban and rural areas, 1994-2005
(Percentages)



Source: prepared by the author on the basis of table 9.

explaining the steady reduction of inequality in urban areas of Mexico identified by Esquivel (2008) for the 1994-2006 period.

As can be appreciated, at the start of the period indicated it was enough to have gone through upper secondary education in urban areas, or lower secondary in rural areas, to obtain the greatest returns from education. Now, however, higher education is required for this. Thus, the market appears to be rewarding the best-qualified most.

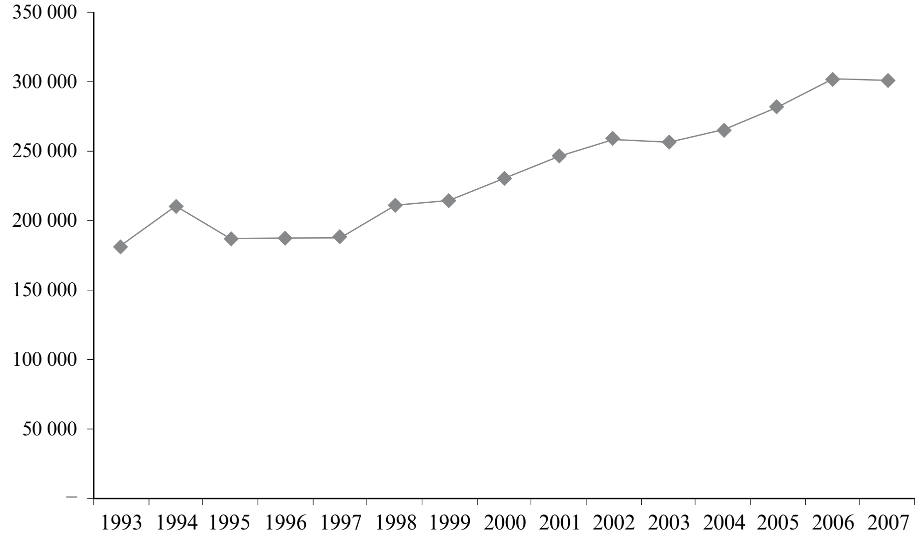
The information shown in figure 2 is interesting: in most years and at every level of education, returns to education in the period analysed were higher in rural than in urban areas.

Primary education returns were higher in urban areas in 1998 only, and lower secondary education returns in 1996 and 1998 only. Returns to upper secondary education were higher in urban areas in 1994 alone. Returns to higher education at the start of the 1994-2005 period were similar in both types of area, but were higher in rural areas from 1990 onward. This means that moving up one education level yielded a larger increase in earnings in rural than in urban areas. Generally speaking, returns increased by most in rural areas from the late 1990s onward. This situation could be partly due to higher education spending by the Mexican public sector from 1997 onward, chiefly in the countryside via the programme known originally as Progresa and now as Programa Oportunidades. Figure 3 shows that expenditure on education for social development in the period grew strongly from the late 1990s onward.

To check the consistency of the results and analyse whether there were any gender differences,

FIGURE 3

Mexico: programmable public-sector expenditure[a] on education for social development, 1993-2007
(Millions of 2002 pesos)



Source: Office of the President (2007).

[a] In Mexico, programmable expenditure (*gasto programable*) is an administrative category that covers most direct spending by central government, including education outlays.

education returns were estimated for men and women in both rural and urban areas (table 9).[13] This table also includes national GDP and agricultural GDP growth rates for each year t and each year t-1 in the 1994-2005 period.

On the basis of these results, and comparing the two sexes in rural areas, returns from primary education were found to be higher for men in 1998 and 2000 only. At the lower and upper secondary levels the findings were heterogeneous: returns were higher for women in some years and for men in others. On average, returns from higher education were greater for women until 2000 and for men in the other years. Thus, yields from primary education for men and women in rural areas appear to be strongly associated with agricultural GDP growth rates, which may be because the remuneration of workers with few qualifications largely depends on the economic situation of farming. At the other education levels there appears to have been some association with GDP growth in the year concerned or the previous one in the 1990s, but this association subsequently tended to disappear, perhaps because of greater support for education in rural areas.

When men and women in urban areas are compared, it is found that men tend to obtain higher returns from primary education. In lower and upper secondary education there is no clear pattern: men obtained higher yields in some years and women in others. In urban areas, it was more profitable for men to have higher education than for women, with the estimates showing greater returns for men in all years.

In the latter years of the period, returns from basic (primary) education in rural areas were found to be greater for women than for men, but those from the highest educational level (degree course) were found to be greater for men.

In urban areas, men tend to obtain greater returns from the lowest and highest education levels (primary and degree course), but at the intermediate levels (lower and upper secondary) returns were higher for women in some years.

Again in urban areas, there seems to be some association between national GDP growth and returns

13 These findings were obtained by applying equation (7) to the coefficients obtained in regressions corrected for self-selection, in each type of area, for men and women. All the coefficients obtained are statistically significant at 99%.

TABLE 9

Mexico: returns to education, by sex, 1994-2005
(Percentages)

	1994	1996	1998	2000	2002	2004	2005
Rural women							
Complete primary	9.1	7.6	4.4	4.9	8.6	6.5	5.4
Lower secondary	8.9	6.2	9.3	6.5	9.2	8.1	7.8
Upper secondary	4.7	12.0	6.5	6.7	9.3	11.6	12.8
Degree course	12.4	12.5	10.9	13.1	8.8	8.8	10.0
Rural men							
Complete primary	5.9	3.8	5.5	6.2	6.0	5.4	4.5
Lower secondary	10.1	7.8	4.2	2.7	4.5	6.1	10.2
Upper secondary	10.3	7.1	13.6	12.1	12.0	8.7	8.8
Degree course	7.2	7.2	5.2	10.7	13.0	18.1	17.8
Urban women							
Complete primary	2.4	3.3	5.3	2.5	3.3	3.2	3.6
Lower secondary	6.4	6.7	10.3	5.0	6.4	3.0	3.1
Upper secondary	11.3	8.7	8.6	7.6	5.3	4.5	8.1
Degree course	3.8	7.9	9.8	5.1	6.5	7.9	6.4
Urban men							
Complete primary	4.8	4.1	5.0	4.3	5.6	4.6	2.8
Lower secondary	6.9	8.0	3.0	2.2	3.6	4.6	6.8
Upper secondary	9.0	9.9	7.3	6.8	6.2	7.2	7.8
Degree course	12.0	8.9	12.0	9.8	8.5	12.8	10.2
Gross domestic product (GDP) at year t (% growth)	4.5	5.1	4.9	6.7	0.8	-4.2	2.8
GDP at year t-1 (% growth)	1.9	-6.2	6.8	3.7	-0.2	1.4	-4.2
Agricultural GDP at year t (% growth)	0.9	3.6	0.8	0.6	0.1	2.5	-2.6
Agricultural GDP at year t-1 (% growth)	2.9	0.9	0.2	3.6	3.5	3.1	2.5

Source: prepared by the author using ENIGH data for 1994, 1996, 1998, 2000, 2002, 2004 and 2005.

to primary education, and this is more marked in the case of men. Where the other education levels are concerned it is likely that other factors weigh more heavily, since no clear association with GDP is detected.

On the whole, women in rural areas obtained greater returns from education than those in urban areas in most of the years studied and at all education levels. Something similar can be seen in the case of men. In both cases, the gap in terms of education returns has widened since the late 1990s in favour of the rural population.

When all subgroups at all education levels are compared, rural women are found to have obtained the greatest returns from primary education in recent years.

This analysis indicates that the main findings hold good: people in rural areas obtained greater returns from education on average in most of the years analysed. The estimates are thus statistically robust.

V
Conclusions

This study has shown that, educationally, rural areas in Mexico lag well behind urban ones. On average, the rural population is educated for a shorter time and to a lower standard. Returns to education are found to have been greater in rural areas in most years and at every level of education.

When distinguished by sex, the main findings hold up: returns to education are greater for the rural population than for the urban population. It can thus be said that the estimates arrived at are consistent.

There are gender differences in education returns in Mexico. In rural areas, returns to the basic levels of education are greater for women, while at the higher levels they are greater for men. In urban areas, the primary and higher education levels tend to yield greater returns for men, but returns from the intermediate levels (lower and upper secondary) are higher for women in some years.

These findings are not just descriptive, but may be a pointer to how Mexican education should be invested in. Given that returns to education are higher in rural areas and that the highest levels of poverty are encountered there, education could lead to a gradual diminution of inequality. Higher investment in education is therefore desirable. As has been shown, furthermore, education has an inverse relationship to poverty. While education may increase the earnings of individuals, however, educated people will not be able to make productive use of their skills unless the right economic and institutional conditions exist in the country. It has been shown that in some cases economic growth appears to influence education returns.[14]

These returns may be seen as an incentive for people to invest in themselves; even so, there are people in Mexico, particularly those on low incomes, who are hardly in a position to invest in their own or their children's education. State action is therefore needed to stimulate educational investment and help poor families to make this investment. More also needs to be done to raise the quality of education in Mexico, which could help to increase the returns from it.[15]

Some authors have discussed the importance of human capital investment to promote growth and efficiency and help reduce inequality. Becker (1995) argues that education is the most effective way for people living in poverty to improve their economic status, and Sylwester (2002) that allocating more resources to education could reduce economic inequality within a country.

The participation of women is important if quality of life in rural areas is to be improved, as they usually provide health and preventive care services and are responsible for their children's nourishment. As this study has shown, however, rural women have the lowest average education levels of anyone in the country, even though they obtain greater returns than anyone else from primary education and greater returns than people in urban areas from the higher education levels. This suggests that it would be economically rational to invest in female education in rural areas.

Physical capital can complement human capital. This study has shown that there is relatively little investment in education infrastructure in Mexico. If there were more capital spending in education, in both rural and urban areas, returns to human capital would very probably increase.

Education can be linked to production. Different studies have shown that farmers obtain greater yields if they improve their knowledge and skills, as this allows them to use technology more efficiently (World Bank, 2005). Thus, increased education in rural areas, in combination with production-related elements, can significantly improve know-how, technology use and agricultural productivity, and hence living standards in these areas.

[14] A study on Latin America (Duryea and Pagés, 2002) shows that improving the economic and institutional environment may substantially increase productivity and reduce poverty. Another study (Ruiz-Nápoles, 2007) finds that a large proportion of the unemployed population in Mexico has been through higher education, which indicates that there are distortions in the labour market.

[15] Card and Krueger (1996) present evidence that improvements in education quality may markedly raise the returns to education.

APPENDIX

Mexico: estimation of the earnings function with dummy variables, 1994-2005

Variable	Rural		Urban	
	Coefficient	t-statistic	Coefficient	t-statistic
1994				
Mincer's model				
Complete primary	0.4029	10.2	0.2637	7.5
Lower secondary	0.6926	13.7	0.4761	13.0
Upper secondary	0.9365	11.0	0.7914	17.7
Degree course	1.4145	13.0	1.2706	27.8
Experience	0.0148	4.1	0.0198	5.9
Experience^2	-0.0003	-5.0	-0.0003	-4.6
Constant	6.1358	93.6	6.7869	102.9
Probit model				
Sex	1.3888	60.7	1.0212	56.7
Experience	0.0784	29.8	0.0908	46.4
Experience^2	-0.0010	-25.8	-0.0015	-43.1
Education	0.0702	16.3	0.0698	28.0
Residents	-0.0743	-10.3	-0.0940	-15.4
Constant	-1.4458	-25.0	-1.4167	-32.8
Inverse Mills ratio	-0.3296	-8.5	-0.2895	-7.7
1996				
Mincer's model				
Complete primary	0.3127	8.3	0.2244	6.7
Lower secondary	0.5344	11.4	0.4523	13.1
Upper secondary	0.8317	10.7	0.7234	17.3
Degree course	1.2862	12.3	1.1414	26.4
Experience	0.0116	3.4	0.0225	7.1
Experience^2	-0.0002	-3.2	-0.0003	-5.8
Constant	6.5737	107.2	6.9595	108.9
Probit model				
Sex	1.4113	59.6	0.9591	58.2
Experience	0.0738	28.0	0.0904	51.0
Experience^2	-0.0010	-24.0	-0.0015	-47.2
Education	0.0799	17.6	0.0718	30.6
Residents	-0.0559	-7.7	-0.1036	-18.2
Constant	-1.4660	-24.8	-1.3707	-34.1
Inverse Mills ratio	-0.3417	-9.0	-0.2222	-6.1
1998				
Mincer's model				
Complete primary	0.2782	5.7	0.3120	7.0
Lower secondary	0.4376	7.3	0.4859	10.8
Upper secondary	0.7414	7.4	0.7071	13.2
Degree course	1.1155	8.9	1.2382	22.8
Experience	0.0129	2.9	0.0267	6.7
Experience^2	-0.0002	-3.6	-0.0003	-4.6
Constant	6.8426	77.7	6.9799	86.7
Probit model				
Sex	1.2059	45.5	0.9534	49.9
Experience	0.0651	22.2	0.0886	43.4
Experience^2	-0.0008	-17.6	-0.0015	-41.0
Education	0.0824	16.5	0.0660	24.9
Residents	-0.0759	-8.2	-0.1163	-17.0
Constant	-1.3632	-20.0	-1.2115	-26.2
Inverse Mills ratio	-0.4400	-8.3	-0.2328	-5.0
2000				
Mincer's model				
Complete primary	0.3576	6.7	0.2200	4.7
Lower secondary	0.4472	7.3	0.2886	6.2
Upper secondary	0.8085	8.3	0.5094	9.5
Degree course	1.4605	11.8	0.9153	17.0
Experience	0.0119	2.6	0.0128	3.2
Experience^2	-0.0002	-2.2	-0.0001	-1.6
Constant	6.9743	79.2	7.7336	95.7

Variable	Rural		Urban	
	Coefficient	t-statistic	Coefficient	t-statistic
Probit model				
Sex	1.3874	46.5	0.9879	48.7
Experience	0.0758	24.8	0.0957	46.1
Experience^2	-0.0010	-21.3	-0.0016	-42.7
Education	0.0700	12.9	0.0670	23.6
Residents	-0.0865	-8.7	-0.0833	-11.8
Constant	-1.4352	-19.5	-1.3753	-28.7
Inverse Mills ratio	-0.3094	-6.1	-0.4099	-8.6
2002				
Mincer's model				
Complete primary	0.4606	10.7	0.2968	9.0
Lower secondary	0.6873	13.9	0.4183	12.7
Upper secondary	1.0237	13.4	0.5806	15.1
Degree course	1.5147	13.6	0.9922	24.6
Experience	0.0119	3.2	0.0175	6.0
Experience^2	-0.0001	-2.3	-0.0002	-4.0
Constant	6.7715	91.2	7.7627	125.7
Probit model				
Sex	1.2856	53.8	0.8830	61.2
Experience	0.0781	31.1	0.0948	64.5
Experience^2	-0.0010	-26.2	-0.0015	-58.4
Education	0.0732	17.3	0.0712	36.7
Residents	-0.0692	-8.3	-0.0686	-13.6
Constant	-1.4971	-25.0	-1.3963	-40.9
Inverse Mills ratio	-0.2555	-5.9	-0.3431	-9.0
2004				
Mincer's model				
Complete primary	0.3563	8.5	0.2510	8.6
Lower secondary	0.5972	12.6	0.3585	12.8
Upper secondary	0.9376	15.6	0.5655	19.6
Degree course	1.7512	22.5	1.1318	36.3
Experience	0.0214	5.9	0.0158	6.4
Experience^2	-0.0003	-5.1	-0.0002	-5.0
Constant	6.8106	94.6	7.8704	161.3
Probit model				
Sex	1.2900	57.3	0.8593	70.9
Experience	0.0776	33.5	0.0883	71.6
Experience^2	-0.0011	-29.7	-0.0015	-67.9
Education	0.0570	16.3	0.0489	31.4
Residents	-0.0989	-11.1	-0.1213	-25.0
Constant	-1.2954	-22.8	-1.0128	-34.2
Inverse Mills ratio	-0.2506	-5.9	-0.2224	-7.0
2005				
Mincer's model				
Complete primary	0.3103	8.0	0.1989	3.4
Lower secondary	0.6034	14.4	0.3472	9.2
Upper secondary	0.9806	18.0	0.5984	17.1
Degree course	1.7263	24.5	1.0913	31.1
Experience	0.0216	6.4	0.0099	3.9
Experience^2	-0.0003	-5.5	-0.0001	-2.7
Constant	6.8803	102.6	8.0998	158.8
Probit model				
Sex	1.2091	58.3	0.8106	65.0
Experience	0.0783	37.0	0.0862	68.8
Experience^2	-0.0011	-32.6	-0.0014	-63.7
Education	0.0511	16.3	0.0552	34.5
Residents	-0.1190	-14.7	-0.1474	-28.7
Constant	-1.1431	-22.1	-0.9623	-31.5
Inverse Mills ratio	-0.2783	-6.8	-0.4589	-13.5

Source: prepared by the author using National Household Income and Expenditure Survey (ENIGH) data for 1994, 1996, 1998, 2000, 2002, 2004 and 2005.

(Original: Spanish)

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Titles should not be excessively long.

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– It is recommended that footnotes be kept to a minimum.

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– The location of tables and figures in the body of the article should be indicated in the appropriate place as follows:

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

Recent ECLAC publications

Flagship publications

Economic Survey of Latin America and the Caribbean 2007-2008, LC/G.2386-P/I, United Nations Publication, Sales Number: E.08. II.G.2, ECLAC, Santiago, Chile, August 2008, 146 p.

This 2007-2008 edition of the *Economic Survey of Latin America and the Caribbean* comes 60 years after the first session of ECLAC, when the Executive Secretary of the Commission was mandated by the United Nations Economic and Social Council and the countries attending the session to undertake "the collection, evaluation and dissemination of [...] economic, technological and statistical information" on the region with a view to preparing "an economic survey of Latin America". The first report drawn up in fulfilment of that mandate was seen as a first step in what was already recognized as a long and arduous task: that of producing a comprehensive, well-documented analysis of the economic situation in the region.

That formidable task was to become an ongoing one. Indeed, throughout the past 60 years, the *Economic Survey* has embodied the Commission's perspective on the main economic problems and trends observed in the countries in the region in order to strengthen the capacity of Governments to tackle these issues and, according to the situation in each economy, to draw up a development strategy and adopt policies designed to ensure a steady rise in living standards for the entire population. Thus, the *Economic Survey* has been a constant witness of economic development in general and, in particular, of the growth of a region as rich, complex and diverse as Latin America and the Caribbean with all its unique and distinctive features.

This flagship publication of ECLAC has thus become the principal source of information and analysis relating to the economic situation in the region and one of the documents most frequently consulted and cited by stakeholders, government authorities and experts. As such, it has helped to shape thinking on the challenges to development from the Latin American and Caribbean viewpoint.

The format of this publication has evolved in response to new ideas and problems, technological progress and the growing availability of figures and statistics. Starting with the previous edition (No. 59), the analysis of economic trends in the region has been supplemented with a series of thematic chapters which examine in depth certain issues of particular importance for short-term policies as well as factors affecting long-term growth.

Chapter I of the present edition, entitled "Regional overview", which follows the executive summary, surveys the main determinants of the region's economic development in 2007 and the first half of 2008, as well as the impact on the region of recent events in world markets. This chapter is supplemented with a statistical appendix, presented at the end of the document.

The next three chapters examine the nature of volatility in output growth and the countercyclical measures adopted by countries in the region. Chapter II, entitled "Why does real volatility matter in Latin America and the Caribbean", considers the adverse effects of volatility on long-term growth and in other key areas such as financial development and investment, income distribution and poverty. Chapter III, entitled "Volatility and crisis in Latin America and the Caribbean: the empirical evidence", describes the analytical framework used to identify periods of growth and decline in economic activity and to quantify trends in gross domestic product (GDP) and their causes. "Volatility, the business cycle and policy responses", the topic of chapter IV, is examined with an emphasis on fiscal policy, whose variability is yet another factor in the region's sluggish growth. The conclusion to this chapter considers three points that shed light on the constraints faced by the countries of the region in implementing countercyclical policies: policy coordination problems, constraints arising from the political economy of public spending and taxation and, lastly, the income-distribution implications of economic shocks.

Chapter V, entitled "Sixty years of the *Economic Survey*", has been specially prepared to mark the anniversary of this publication. It reviews the Economic Survey's 60 years of existence and the main challenges to the region's development it has analysed. The economic climate that prevailed in each of the periods examined is described in the light of the dominant historical trends of the time.

Lastly, the individual performance of each economy in 2007 and in the first half of 2008 is analysed in the country notes which, as in preceding editions, include tables setting out the main economic indicators. These notes, together with the statistical appendix prepared for each country, are contained in the CD-ROM that accompanies the printed publication and are also available on the ECLAC website (www.eclac.org). The tables presented in the statistical appendix provide ready access to data for recent years and allow the creation of spreadsheets. This CD-ROM also contains the electronic versions of the chapters appearing in the printed publication. The statistical information presented in this publication reflects the data available up to 7 August 2008.

Latin America and the Caribbean in the World Economy, 2007. Trends 2008, LC/G.2383-P, United Nations Publication, Sales Number: E.08.II.G.36, ECLAC, Santiago, Chile, December 2008, 190 p.

This year's edition of Latin America and the Caribbean in the World Economy is divided into seven chapters.

Chapter I contains an analysis of recent trends in the main industrialized and emerging economies and reviews the possible impact of the financial crisis that began in the United States on the world economy and on the economic and trade performance of Latin America and the Caribbean. The effect of the crisis on the prices of commodities (especially food and oil) and the implications for growth, inflation and the region's external sector are also examined. Lastly, the chapter looks at the region's trade figures for 2007 and projections for 2008.

Chapter II describes recent developments in the Doha Round, including documents disseminated in July 2008 on negotiations relating to agriculture and non-agricultural market access. It also provides a summary of the main advances and obstacles emerging from those negotiations, with emphasis on the repercussions for Latin America and the Caribbean.

Chapter III discusses some new trade-related topics: (i) new security requirements for freight transport; (ii) the development and legal status of private quality standards; (iii) the state of play in discussions on trade and labour rules; and (iv) the debate on the links between climate change, trade and the multilateral trading system. It is argued that these and other issues will be on the international agenda for the next few years and that the region must begin to form unified positions on such topics.

Chapter IV examines recent progress in regional integration and the main initiatives under way in the region's integration schemes (the Southern Common Market (MERCOSUR), the Andean Community, the Central American Common Market (CACM) and the Caribbean Community (CARICOM)). The chapter also analyses: (i) Mexico's active policy aimed at strengthening its trade and infrastructure links with Central America; (ii) the Latin American Pacific Basin Initiative; (iii) the South American Community of Nations (UNASUR); and (iv) the hosting by Brazil in December 2008 of a Summit of Heads of State and Government of Latin America and the Caribbean on the subject of regional integration schemes. The chapter concludes with an analysis of the links between investment and services as an instrument of de facto integration.

Chapter V reports on the status of negotiations for the adoption of an association agreement between the European Union and each of the above-mentioned subregional integration schemes. In each case, there is a description of the negotiation process, controversial issues and the main challenges. It is noted that, since there is a similar framework for all these negotiations (covering Caribbean and Central American countries, the Andean Community, MERCOSUR, Mexico and Chile), they may generate important synergies for the subsequent convergence of trade and investment rules among the region's integration schemes.

Chapter VI presents an in-depth analysis of trade and investment relations between the Latin American and Caribbean region and the Asia-Pacific region, as well as within the latter. It is established that: (i) biregional trade remains inter-industrial in nature, despite the emergence of some new export commodities and high-technology manufactures; (ii) so far, efforts to forge closer links between the Latin America and Caribbean and the Asia-Pacific regions have been undertaken by individual countries on a somewhat sporadic basis; and (iii) there needs to be a more coordinated strategy among countries, so as to strengthen the nexus between trade and investment and to reinforce production and trade linkages through various types of public-private alliances (including free trade agreements).

The subject of chapter VII is the foresight analyses carried out by some countries of the Organisation for Economic Co-operation and Development (OECD) with a view to strengthening innovation, competitiveness and export diversification. Despite the importance of such exercises for building consensus around strategic development guidelines, they are not frequently used in Latin America and the Caribbean. Advances achieved in other parts of the world could therefore encourage the countries of the region to use such exercises as an effective tool for promoting competitiveness, innovation and export development.\

Other publications

América Latina y el Caribe: migración internacional, derechos humanos y desarrollo, Libro de la CEPAL, No. 97, LC/G.2358-P, United Nations Publication, Sales Number S.08.II.G.5, CEPAL, Santiago, Chile, September 2008, 369 p.

In view of the growing importance of international migration in a globalized world, this document seeks to provide guidelines to governments in the region, from the cross-cutting perspective of the human rights of migrants and their families, to enable them to face up to the main challenges and seize the opportunities for development presented by this social process. With this aim in view, the author places emphasis on the need to promote and strengthen multilateral cooperation as a legitimate way of ensuring that international migration contributes to the development of the countries of Latin America and the Caribbean.

Part 1 examines the backdrop to current migratory flows with special attention to the forces of globalization and the emergence of transnationalism as a frame of reference for understanding this trend, to the impact of such flows on the countries of the region and to the initiatives for governance of migration. Part 2 describes the trends and patterns of intraregional migration and the main international destinations, and highlights the salient developments and the special features of the process. Part 3 addresses an important phenomenon that is an offshoot of regional migration –remittances– and considers the problems and potential that these monetary inflows present for Latin American and Caribbean societies. Part 4 reviews the data, approaches, setbacks and proposals relating to female migration and the regional migration of skilled workers. Lastly, the relationship between migration and human rights is examined, with emphasis on the issue of vulnerability, the need to protect migrants and the active role played by countries, at both the national and the multilateral level, as well as by civil society organizations. The findings of the study, including reflections and proposals, are set out in the conclusion.

Claves de la innovación social en América Latina y el Caribe, Libro de la CEPAL, No. 101, LC/G.2394-P, United Nations Publication, Sales Number: S.08.II.G.57, CEPAL, Santiago, Chile, November 2008, 227 p.

This book systematizes the lessons of the ECLAC initiative "Experiences in social innovation in Latin America and the Caribbean", which was implemented with the support of the Kellogg Foundation. The information presented in this publication is the result of interviews and workshops involving the participants and representatives of the finalist projects of the first three cycles of the contest (2005, 2006 and 2007). The aim of the project is to identify innovative initiatives in the field of social development, so as to inspire those responsible for formulating and managing public policy. This book brings together what can be learned from the projects and teachings identified by the authors, with special emphasis on factors that have contributed to the success of initiatives and that make it easier to replicate them in a creative way.

Innovations in the field of social development often come about amidst adverse conditions, in environments where the market has not provided options or the public sector has been unable to respond to the needs and demands of the population. The implementation of such initiatives is therefore often fraught with obstacles when an attempt is made to extend them beyond the local level where they began or to increase the number of people targeted. Those responsible for formulating and implementing public policies should become involved with such innovations, facilitate their realization and acknowledge their contribution. The projects considered in the contest featured in this book are representative of hundreds of other projects under way in Latin America and the Caribbean, and provide an opportunity to renew and enrich public policies relating to innovation and social change.

The first chapter offers a summary of the challenges facing the authorities, those responsible for financing, formulating and implementing public policies and those in charge of carrying out and managing social innovation projects. The second chapter describes the criteria applied at each stage of the contest, which are used to define the characteristics of a social innovation project. The third chapter summarizes the difficulties, factors contributing to the success of, and lessons to be learned from the finalist projects. The fourth chapter provides a reflection on what can be learned from the experiences from the point of view of public policymaking and how they can be replicated. Lastly, the conclusions outline the book's main ideas on the innovation experiences on which it is based. The annexes include, inter alia, a detailed description of the methodology used and a summary of some of the most significant projects from recent cycles of the contest.

Publicaciones de la CEPAL / *ECLAC publications*

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Revista CEPAL / *CEPAL Review*

La *Revista* se inició en 1976 como parte del Programa de Publicaciones de la Comisión Económica para América Latina y el Caribe, con el propósito de contribuir al examen de los problemas del desarrollo socioeconómico de la región. Las opiniones expresadas en los artículos firmados, incluidas las colaboraciones de los funcionarios de la Secretaría, son las de los autores y, por lo tanto, no reflejan necesariamente los puntos de vista de la Organización.

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CEPAL Review first appeared in 1976 as part of the Publications Programme of the Economic Commission for Latin America and the Caribbean, its aim being to make a contribution to the study of the economic and social development problems of the region. The views expressed in signed articles, including those by Secretariat staff members, are those of the authors and therefore do not necessarily reflect the point of view of the Organization.

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