

Productive development in open economies



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Notes and explanation of symbols

The following symbols have been used in the tables in this report:

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

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

A full stop (.) is used to indicate decimals.

Use of a hyphen (-) between years, e.g., 1971-1973, signifies an annual average for the calendar years involved, including the beginning and the end years.

References to "dollars" United States dollars, unless otherwise stated.

Figures and percentages in tables may not necessarily add up to the corresponding totals, because of rounding.

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Presentation

The countries of the Latin American and Caribbean region have shown a keen and lasting interest in mechanisms of economic development and public policies for its promotion. This is a process in which ECLAC has been involved ever since it was founded over half a century ago. Today, the debate on these issues continues against the backdrop of a globalization process in which the remarkable dynamism of some dimensions —especially its economic, financial and cultural aspects— contrasts with the slow formation of an institutional network capable of coping with the increased interdependence of nations on various levels and of gradually rectifying the striking asymmetries of the global order.

Over the past two decades, the Latin American and Caribbean region has wagered heavily on its integration into the global economy. In fact, of all the developing regions of the world, it has been the most resolute in its pursuit of economic liberalization. A review of this period brings to light a number of extremely important achievements, but it also reveals areas in which the region is lagging behind and others in which unfinished business remains. ECLAC contends that the region must build upon the progress it has already made, but it also has to close existing gaps and address unresolved issues. The inroads made in these areas may play a vital role in consolidating the region's fuller integration into the world economy and in ensuring that the social, economic and political costs of the economic reform process have not been incurred in vain.

In order to accomplish this, the “more market and less State” approach that guided the economic reform process must give way to an emphasis on properly functioning markets and quality in governance. This new approach, which entails the use of active public policies capable of overcoming both market and government failures,

can prove to be more market-friendly than the line of reasoning that was the driving force behind the initial reforms. These active public policies must be backed by the political legitimacy afforded by democratic institutions and must be founded upon public transparency as well as efficient, effective government programmes subject to strict oversight and evaluation.

This is the general framework for the proposal put forward in this analysis of strategies for furthering productive development in open economies. As is customary in the documents prepared by the ECLAC secretariat, an integrated structural approach has been used. The study is composed of five sections comprising a total of 12 chapters. Part one (chapters 1 and 2) sets the analysis of national productive development strategies for open economies in its current international context. Specifically, chapter 1 looks at the basic traits of today's international economy. It then goes on to consider the current status of the international debate on issues that influence how much manoeuvring room is available to the countries for the design and implementation of their development policies. Chapter 2 describes the general features of the region's development process after nearly two decades of economic and institutional reforms. It also traces the ways in which the other topics examined in this document tie in with the conceptual framework of the development process. It concludes with a discussion of a number of strategic courses of action for the promotion of productive development in open economies. These lines of action revolve around three pivotal and mutually complementary elements: inclusion, modernization and the densification of the production apparatus.

Part two (chapters 3 and 4) deals with the aspects of the macroeconomic environment and the financial system that have the greatest bearing on productive development and examines the links among economic growth, investment in infrastructure and the sustainable development of natural resources. Chapter 3 underscores the importance of stability, in the broad sense of the term, as a pillar for saving and investment, together with the crucial role played by countercyclical policies in buffering the effects of real and financial shocks on economic growth. This chapter also reviews the development of new risk-management instruments and mechanisms that make it possible to finance innovation and provide access to, in particular, long-term credit for small and medium-sized enterprises. Chapter 4 analyses investment in infrastructure and the sustainable development of natural resources. With respect to the former, the discussion deals with the balance between infrastructure supply and demand in the coming years, changes in public/private supply models and critical problems in the area of public regulation. In regard to the latter, an assessment is made of the relationship existing among the production structure, natural resources and the environment, as well as the challenges facing the countries and the opportunities open to them in terms of the sustainable utilization of natural resources, the introduction of innovations in the fields of biotechnology and clean production techniques, and the production of environmental and ecological goods and services of value to the entire planet.

Part three (chapters 5 through 8) is devoted to a consideration of policies for stimulating productive development in open economies. Chapter 5 examines the major expansion recently seen in the region's foreign trade activity and the diversification of its exports in terms of both destination markets and the types and technological content of export products. It also looks at the various kinds of instruments that can be used to help the region improve its position within the international economy, including the growing number of trade agreements that have been signed in the past few years in order to broaden and consolidate market access. Chapter 6 presents an analytical description of the transition made from, first, supply-side and, later, demand-side technology policies to a model based on the use of the linkage between supply and demand to define the most suitable technological development path for each productive context. It then goes on to propose a typology of strategies for promoting innovation that takes into account the wide array of situations existing in the region. The concluding portion of this chapter offers guidelines for increasing the coordination and complementarity of the various types of policies for promoting innovation and discusses their characteristics and specific content. Chapter 7 explores the development and articulation of entrepreneurial capacities in the sphere of production. The concept of the entrepreneurial process

which is implicit in measures and policies for the creation and modernization of business enterprises is described as it relates to three categories of firms: large businesses that tend to be more fully integrated into the global economy; small and medium-sized formally constituted firms, and informal microenterprises. The discussion then turns to the various policy measures that can be used to foster the formation of business linkages of various sorts. Chapter 8 considers the objective of strengthening the production structure by increasing the density of the production, technological and business apparatus. An overview of the policies employed to pursue this objective in the past is followed by a description of practices used as part of current strategies in the region. In addition to analysing some of the aspects of the follow-up and evaluation of their implementation and impact, policy guidelines are proposed for strengthening the production structure under the conditions now prevailing in the region.

Part four of the document (chapters 9 and 10) looks at the conflict that the countries of the region have had to deal with in order to reconcile the flexibility required by an open economy in order to adapt to an ever-changing environment with the social protection required by the population in order to cope with the risks associated with a reorganization of the production structure. Chapter 9 examines trends and prospects in the region's labour markets, with emphasis on changes in the quality of employment. The development and current status of the labour market's institutional structure is outlined, and the possible contribution of job-creation and job-training policies to an improvement in working conditions and workers' economic security is assessed. Suggestions are then made concerning steps that could be taken to contribute to a form of flexible employment combined with social protection mechanisms based on a fiscally responsible social cohesion covenant. Chapter 10 expands upon the definition of this covenant to give it a dynamic dimension intended to ensure that the educational system will adapt to the challenges of competitiveness on an on-going basis. To this end, it is argued that measures should be adopted to upgrade the delivery and financing of educational services as a means of broadening access to the sector and boosting its productivity, attaining higher secondary-school graduation rates, gearing the educational system more closely to the labour market's requirements and narrowing the digital divide at the international and social levels.

Part five (chapters 11 and 12) delves into the relationship between economic development and institutional modernization and the fundamental role that regional efforts can play in giving the countries of the region more manoeuvring room. Chapter 11 starts out with an analysis of how institutions have influenced economic growth and equity, and then moves on to an examination of the institutions associated with a market economy and the process of institutional change. After reviewing the morphology of institutions in open and increasingly interdependent economies, the way in which a political system processes reforms within the framework of democratic institutions is explored. The twelfth and final chapter looks at the current status of integration processes in the region. It assesses the important role played in the 1990s by the region's four imperfect customs unions, both in terms of trade creation (in some cases with greater technological content) and in relation to the potential for cooperation on various fronts. It is noted that these processes tended to taper off in the late 1990s and that more and more countries have decided to concentrate on concluding free trade agreements with developed countries or regions in order to gain access to those markets. The discussion concludes with a consideration of the policy options available to the countries of the region in this connection.

We are hopeful that the proposals set forth here will encourage further analysis of a subject of such vast political, economic and social importance in the world of today and that they will serve as a stimulus for debate at this thirtieth session of the Economic Commission for Latin America and the Caribbean.

José Luis Machinea
Executive Secretary



Part one: Latin America and the Caribbean in the international context



Introduction

Today's world is a globalizing one in which economic, social and cultural processes taking place on a global scale are increasingly influencing those that are national or regional in scope (Ocampo and Martin, 2003). Although this process has deep historical roots, the dramatic telescoping of time and geography resulting from the information and communications revolution has extended and hastened its effects, giving rise to qualitative transformations in relation to the past.

Globalization entails opportunities and risks on several levels. Perhaps the worst option is to remain outside the process and thus forego its opportunities. Participation also creates major risks, however: new sources of instability in business and, above all, in finance; the risks of exclusion for countries that are ill prepared for the high degree of competitiveness demanded in today's world; and the risk of rising structural heterogeneity among social sectors and regions within countries whose integration into the world economy has been segmented. Success in capitalizing on the opportunities and attenuating the risks will depend on the national and regional strategies employed to participate in the process and on the nature of the global institutions that provide the framework for these strategies (Ocampo and Martin, 2003).

The purpose of this first part is to place the debate over national strategies for productive development in open economies within the context of the current international situation. Chapter 1 looks at some fundamental features of today's international economy, then considers the progress made with the multilateral discussions which, in different areas, are determining how much room for manoeuvre countries have in designing and implementing development policies. Chapter 2 gives the strategic outlines of the proposal set forth in the other parts of the document. This proposal is designed to remedy some shortcomings in the recent development of the Latin American and Caribbean countries.



Chapter 1

The evolving international context

The 1990s saw the consolidation of economic and financial characteristics whose roots lie well back in the past. As a result of the conditions thus created, the world economy has progressively changed from an aggregate of national economies linked by trade, investment and financing flows into a set of global market and production networks that span national borders. While this process is undoubtedly a powerful one, though, and becoming more so, it has not been accompanied by an equivalent development of global institutions, whose agenda is incomplete and asymmetrical (Ocampo, Bajraj and Martin, 2001).

This chapter will look first at some basic features of the new situation, such as the loss of dynamism in the world economy by comparison with past decades, the weakening of the relationship between exports and economic growth, the leading role taken by multinational enterprises in the current global environment, the predominance of the financial sector and the volatility of capital flows into developing countries, and the increased concentration of innovation and technological development in the developed countries. It will then analyse the inadequacy or inappropriateness of institutional developments in relation to multilateral governance in macroeconomic and financial matters; international trade, which is taking in a wider and wider range of related issues; the promising start made with sustainable development, despite what are still serious implementation difficulties, and the slow progress made with governance of international migration.

I. Basic features of the globalized economy

Against a backdrop of slower global growth, international trade expanded at rates of close to 6% a year between 1990 and 2003, foreign direct investment (FDI) touched US\$ 1.4 trillion in 2000, a sevenfold increase over the early 1990s, and currency market transactions have exceeded US\$ 1.5 trillion a day in the early years of this century, while innovation and technological change have become even more concentrated in the developed countries.

1. The loss of world economic dynamism

Between 1990 and 2003, world economic growth averaged just 2.6% a year, the lowest level for any equivalent period since the War. This result was contributed to by the poor performance of the developed countries (2.3%), the decline in Eastern Europe (-0.3%) and weak growth in Africa (2.8%) and Latin America and the Caribbean (2.7%). By contrast, Asia grew at high rates (6%) and growth improved in the Middle East (3.3%), as table 1.1 shows.

Table 1.1
ANNUAL GROWTH RATES, SELECTED PERIODS
(Average annual rates)

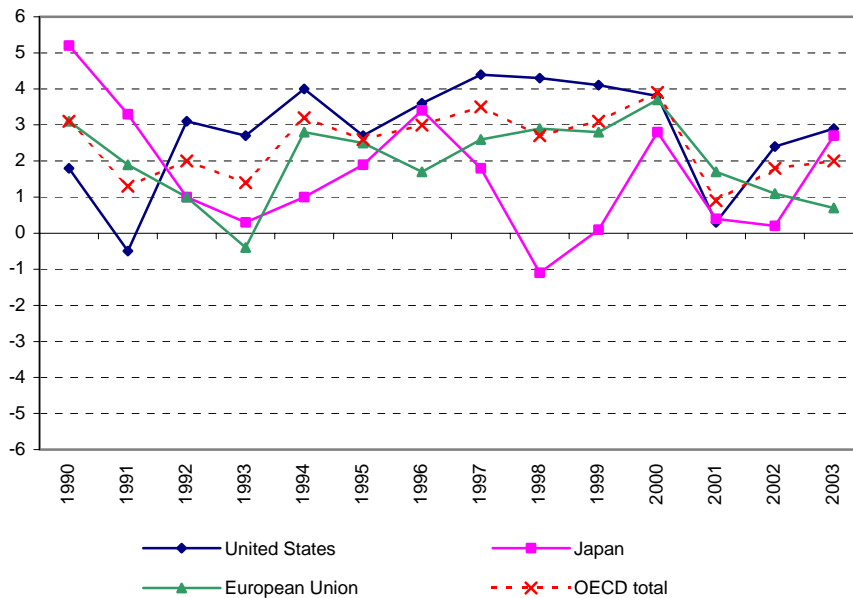
	World	Developed countries	Developing countries	Latin America	Africa	Asia	Middle East	Eastern Europe
1950-1960	4.4	4.1	5.1	4.9	4.5	5.7	5.7	9.2
1960-1973	5.1	5.0	5.5	5.5	5.0	5.2	7.7	6.7
1973-1980	3.4	3.1	5.1	5.1	3.5	6.2	4.4	4.6
1980-1990	3.2	3.2	3.7	1.6	2.6	7.0	1.6	2.4
1990-2003	2.6	2.3	4.4	2.7	2.8	6.0	3.3	-0.3
Per inhabitant								
1950-1960	2.8	2.8	2.8	2.2	2.0	3.6	2.9	8.2
1960-1973	3.1	4.1	3.0	3.3	2.5	2.9	4.8	5.5
1973-1980	1.6	2.3	2.9	2.4	0.3	4.3	1.4	3.7
1980-1990	1.5	2.4	1.7	-0.4	0.1	5.1	-1.6	1.7
1990-2003	1.2	1.7	2.7	1.0	0.4	4.5	1.1	-0.4

Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of United Nations, *World Economic and Social Survey 2003*, New York, and *Demographic Yearbook*, New York, various years; United Nations Conference on Trade and Development (UNCTAD), *UNCTAD Handbook of Statistics 2003* (TD/STAT.28), Geneva, 2003, United Nations publication, Sales No. E/F.03.II.D.33; International Monetary Fund (IMF), *International Financial Statistics*, Washington, D.C., various issues; Economic Commission for Europe (ECE), *Trends in Europe and North America: 2003 Statistical Yearbook of the United Nations Economic Commission for Europe*, New York, 2003, United Nations publication, Sales No. E.03.II.E.42; Economic Commission for Latin America and the Caribbean (ECLAC), *Statistical Yearbook for Latin America and the Caribbean*, Santiago, Chile, various years. The countries of eastern Europe are not classified as developing countries. Regional aggregates are calculated using constant 1995 dollars. Figures for 2002 are official figures. For 2003, the data on Latin America are estimates prepared by ECLAC and published in the *Preliminary Overview of the Economies of Latin America and the Caribbean 2003* (LC/G.2223-P), Santiago, Chile, 2003, United Nations publication, Sales No. E.03.II.G.186. While for other countries they are the 2003 estimates given in the IMF publication *World Economic Outlook. Public Debt in Emerging Markets*, Washington, D.C., September 2003.

Within the group of developed countries, there is a sharp contrast between the performance of the United States on the one hand and the European Union (EU) and Japan on the other, especially from 1992 onward (see figure 1.1). Growth in the United States, supported by strong expansion in fixed investment (8% a year), averaged almost 3% annually between 1990 and 2003, speeding up in the three years from 1997 to 1999, when it exceeded 4% annually, only to fall back abruptly in 2001

and then move into a recovery which seems to have established itself only in the second half of 2003. By contrast, Japan, which was characterized by high rates of growth after the War, averaged just 1% a year over the same period and even experienced negative growth in 1991 and 1998. The European Union was below the world average with a rate of 2%, having experienced a sharp fall-off in the early 1990s followed by a modest recovery between 1994 and 2000, which tailed off again towards the end of the period (less than 1% in 2003).

Figure 1.1
**GDP GROWTH IN THE MAIN COUNTRIES OF THE ORGANISATION FOR
 ECONOMIC CO-OPERATION AND DEVELOPMENT (OECD), 1990-2003**
 (Percentages)



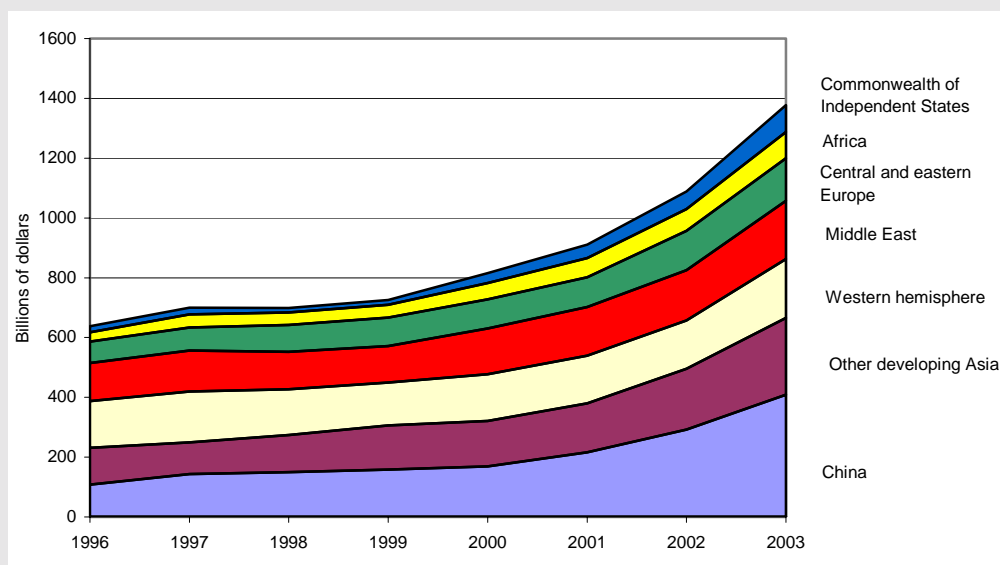
Source: Organisation for Economic Co-operation and Development (OECD), *Economic Outlook*, No. 74, Paris, December 2003.

This growth performance in the developed countries was accompanied by major macroeconomic imbalances. Even the United States, with the strongest growth and a low unemployment rate in the late 1990s (4.2% in 1999), ran a large and growing trade deficit because of rapid import growth. In 2001 fiscal expenditure began to expand, mainly owing to increased military spending, while economic recession and tax cuts reduced revenues. The budget surplus achieved in the 1990s thus turned into a large deficit, so that the “twin deficit” problem re-emerged (see box 1.1). In Japan, the legacy of the country’s financial crisis was a much weakened banking sector, a consumption-averse private sector, a fall in the investment rate, the doubling of an unemployment rate that had averaged 2.5% between 1985 and 1995, and a public sector that took it upon itself to sustain demand, thereby increasing the national debt as large budget deficits succeeded one another year after year.

Box 1.1

THE UNPRECEDENTED GROWTH OF INTERNATIONAL RESERVES IN THE DEVELOPING WORLD

With its twin deficits, the United States economy is acting as a powerful magnet for international funds. A substantial part of these funds is accounted for by the unprecedented build-up of international reserves by the central banks of developing countries. In 2003 this amount totalled almost US\$ 1.4 trillion, with about a quarter of that being accounted for by the Asian countries, especially China and India.

THE INTERNATIONAL RESERVES OF DEVELOPING COUNTRIES
(Billions of dollars)

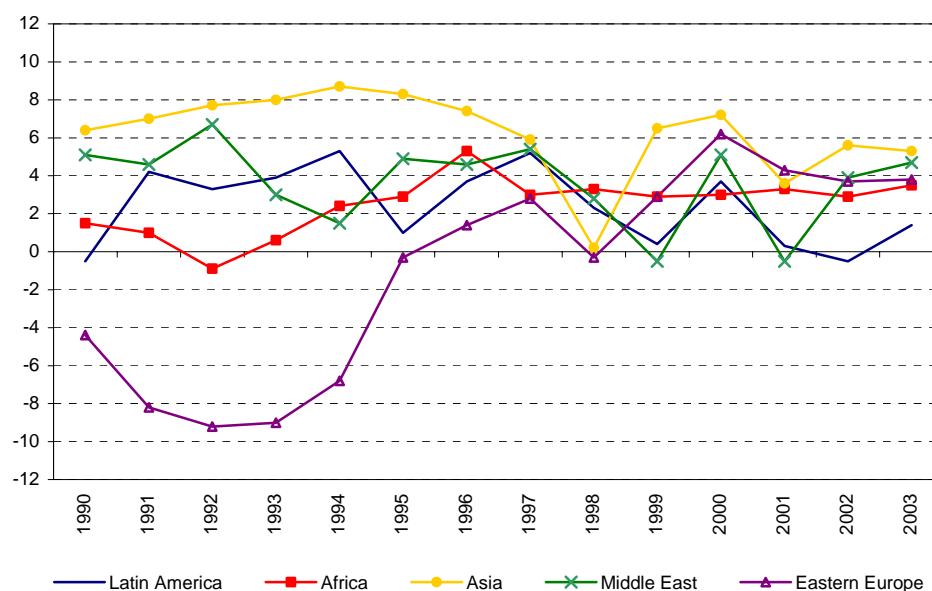
Thus, in 2003 almost 40% of the United States current-account deficit was financed by official sources in developing countries at extraordinarily low rates. The size of this figure raises a number of questions, ranging from the importance of the way these international reserves are managed as an investment portfolio (currencies and instruments) and their potential impact on exchange and interest rates, to the issue of whether these current-account surpluses plus capital inflows into developing countries are sustainable. Everything points to the need for at least a partial correction of these imbalances. In the medium term, this will entail a depreciation of the dollar against the currencies of a number of developing countries, or slower growth in the United States economy than in the rest of the world.

Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of World Bank, *Global Development Finance 2004: Harnessing Cyclical Gains for Development*, Washington, D.C., April 2004.

The requirements of macroeconomic convergence dominated the situation in the European Union from the early 1990s onward. The Maastricht Treaty (1992) laid down criteria for budget deficits and public debt and for the extent to which each country's inflation rate could diverge from the EU average. Subsequently, in 1997, the Treaty of Amsterdam created the Stability and Growth Pact as a system of medium-term macroeconomic policy convergence to prepare for entry into the euro (European Monetary System), which was launched on 1 January 2001. Within the same framework, progress began to be made with unemployment, which in the 1990s fluctuated around an average of 10% in the EU countries. The situation is dominated at present by the historic agreement achieved in Copenhagen (2003), by virtue of which 10 new members joined the European Union on 1 May 2004.

As figure 1.2 shows, the developing countries, including the transition economies of eastern Europe, began the 1990s with large differences in growth rates. The most dynamic countries in 1990-2003 were those of South-East Asia, China and India. With the exception of Indonesia, those of South-East Asia recovered rapidly from the 1997 crisis, while China more than tripled its output over the period (226% growth between 1990 and 2003) and Indian virtually doubled its (98.1%). China's impressive growth has made it the world's third-largest importer behind the European Union and the United States (see box 1.2). From 1996 onward, meanwhile, the transition economies re-established themselves on a path of growth which has tended to stabilize at around 4% in the early years of the present decade. After its poor performance in the early 1990s, Africa tended to grow at about 3% a year without major fluctuations from 1994 onward. Like the Middle East, Latin America and the Caribbean performed better in the first half of the 1990s than in the second, particularly from 1997 on; in 1999 and 2001, output declined sharply.

Figure 1.2
**GDP GROWTH IN THE MAIN DEVELOPING AND TRANSITION REGIONS,
 1990-2003**
(Percentages)



Source: Estimates for the 1990-2003 period based on figures from the Economic Commission for Latin America and the Caribbean (ECLAC) and the International Monetary Fund (IMF). The 2003 data are ECLAC estimates for Latin America and IMF estimates for all other countries.

Box 1.2

THE IMPACT OF CHINESE GROWTH ON WORLD TRADE

China's remarkable economic expansion has meant that the country's importance as a global actor has been steadily increasing. Unlike other instances of rapid economic growth in the past, the recent expansion of China has taken place in a context of far-reaching trade liberalization that accelerated following WTO entry in late 2001. In 2003, GDP grew by 9.1% while exports rose by 34.6% and imports by 39.9%. As these growth rates accelerated in the first quarter of 2004, the country recorded a trade deficit for the first time since 1993. China has overtaken Japan as the world's third largest importer, behind the European Union and the United States.

SHARE OF WORLD TRADE
(Percentages of total)

	Exports		Imports	
	1990	2003	1990	2003
European Union	43.8	39.8	44.0	38.6
United States	11.4	10.0	14.6	17.3
Japan	8.3	6.5	6.7	5.1
China	1.8	6.0	1.5	5.5
Latin America and the Caribbean	4.3	5.3	3.4	4.6

China displays a peculiar pattern of external trade. On the one hand, it has become a platform for labour-intensive manufacturing exports to the rest of the world, while on the other it is the most dynamic centre of demand for a large range of commodities. These characteristics account for the differential impact that China's external trade has had on the countries of Latin America and the Caribbean. For Mexico and a number of Central American and Caribbean countries, China is a strong competitor in the United States market, while for some South American countries it is a major driver of demand for a number of their commodity exports, strongly influencing volumes and prices. Thus, in 2003 China's share of total United States imports exceeded that of Mexico, while the country also increased its share of the wearing apparel and accessories market at the expense of Central America and the Caribbean. By contrast, Argentina and Brazil supplied 60% of China's soya imports, Chile 40% of its copper imports, Brazil and Peru 38% of its iron imports and Brazil and Chile 25% of its wood pulp imports. China runs a trade deficit with all these South American countries.

Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of official figures from the countries.

The 1990-2003 period also saw a substantial reduction in inflation in different groups of countries, particularly those of Latin America. In that region, inflation fell from an average of 670% a year in 1990-1993 to a single-digit rate in 2003. Less spectacular, but still significant, was the fall in the industrialized countries, where rates fell from 8% or so in the 1970s to less than half that in the 1990s, and then to between 1% and 2% in 2000-2003.

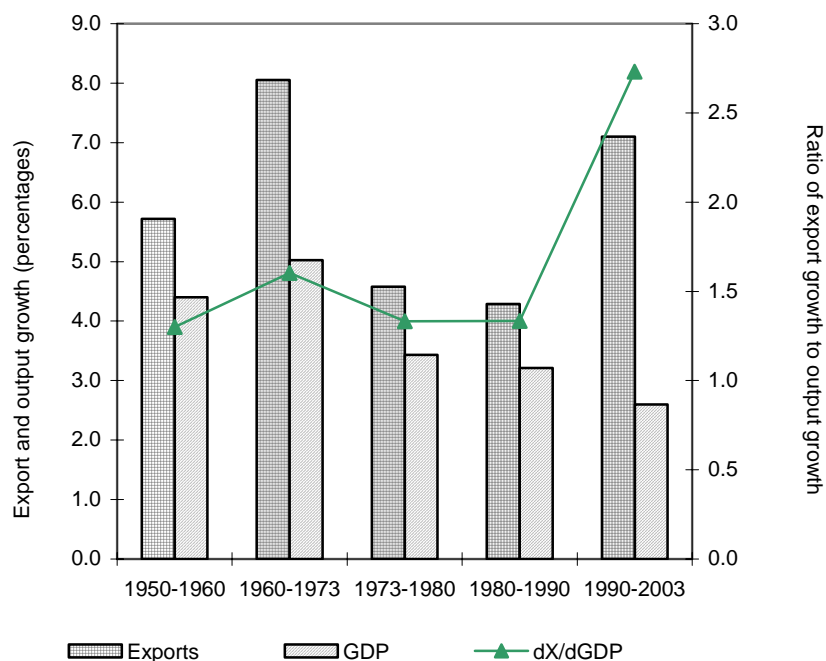
In 2003, for the second time in less than five years, this development led to fears of world deflation (IMF, 2003). The risk began to dissipate in the early months of 2004, however, as world economic recovery took hold and raw material prices rose, despite elements of continuing political uncertainty and economic vulnerability in the world situation.

2. Exports and economic growth: a weakened relationship

In the 1990-2003 period, world trade once again attained annual growth rates similar to those of the first two decades after the War, following a sharp slowdown between 1973 and 1990. Since world output growth rates fell at the same time, the ratio between the two variables in the 1990-2003 period was the highest since the War, with exports growing almost three times as fast as output (see figure 1.3). In fact, exports grew faster than output every year from 1985 to 2000. Increasing trade liberalization in manufacturing and services, and a growing volume of intra-

company trade because of the dynamic of international integrated production systems, help explain this gap between world trade and output growth (UNCTAD, 2002a).¹

Figure 1.3
**EXPORT AND OUTPUT GROWTH RATES, WORLD TOTAL,
 1950-2003**
(Percentages and multiples)



Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of United Nations, *World Economic and Social Survey*, New York, various years and *Demographic Yearbook*, New York, various years; United Nations Conference on Trade and Development (UNCTAD), *UNCTAD Handbook of Statistics 2003* (TD/STAT.28), Geneva, 2003, United Nations publication, Sales No. E/F.03.II.D.33; International Monetary Fund (IMF), *International Financial Statistics*, Washington, D.C., various issues; Economic Commission for Europe (ECE), *Trends in Europe and North America: 2003 Statistical Yearbook of the United Nations Economic Commission for Europe*, New York, 2003, United Nations publication, Sales No. E.03.II.E.42; Economic Commission for Latin America and the Caribbean (ECLAC), *Statistical Yearbook for Latin America and the Caribbean*, Santiago, Chile, various years. The countries of eastern Europe are not classified as developing countries. Regional aggregates are calculated using constant 1995 dollars. Figures for 2002 are official figures. For 2003, the data on Latin America are estimates prepared by ECLAC and published in the *Preliminary Overview of the Economies of Latin America and the Caribbean 2003* (LC/G.2223-P), Santiago, Chile, December 2003, United Nations publication, Sales No. E.03.II.G.186, while for other countries they are the 2003 estimates given in the International Monetary Fund (IMF) publication *World Economic Outlook. Public Debt in Emerging Markets*, Washington, D.C., September 2003.

This tendency was more pronounced in developed economies than developing ones and, among the latter, much stronger in Latin America and the Caribbean than in the Asian economies. In fact, Latin American and Caribbean exports expanded almost four times as fast as output on average between 1990 and 2003, while the ratio was 1.4 in Taiwan Province of China, 1.6 in mainland China and 1.8 in the Republic of Korea and India. Of course, trade liberalization was

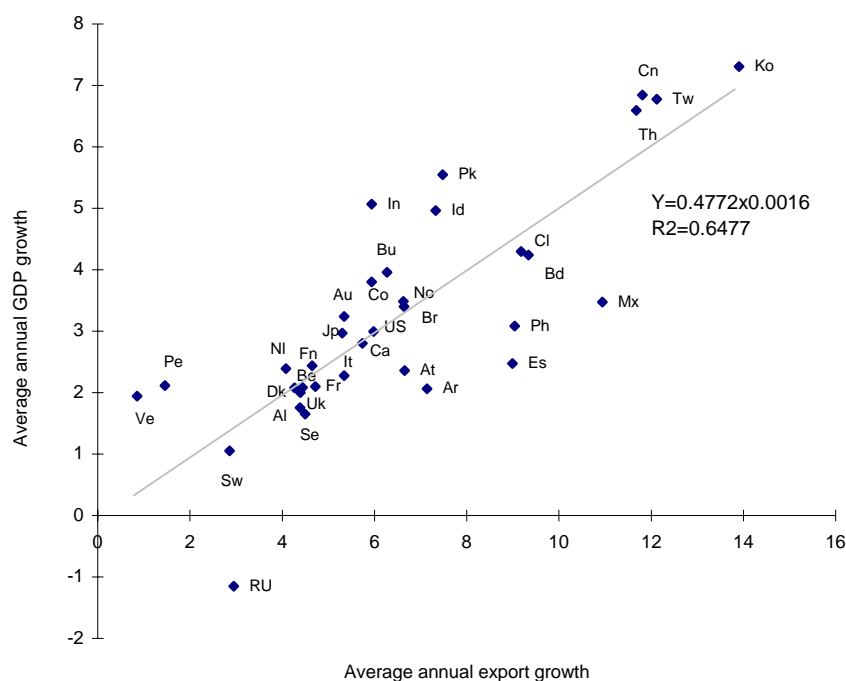
¹ Something similar, although less marked, had already happened between 1960 and 1973 when the large rise in intra-industry trade in western Europe likewise meant that international trade grew persistently faster than world output.

particularly vigorous in Latin America and the Caribbean in the 1990s, while a number of Asian economies had already opened up to international trade in previous decades.

Undoubtedly, the relationship between development strategies, external trade and economic growth has been variable in the developing world since the War. Comparative analyses (such as Helleiner, 1994) show clearly that trade policy has had a tremendous effect on development strategies, but that no single straightforward relationship can be identified in all countries at all times, or in any one country in different periods.

In more recent times, rapid economic growth has been more and more closely associated with export success (see figure 1.4). This, however, has taken place within very different trade policy frameworks. In particular, as Rodríguez and Rodrik (2001) show, no solid relationship can be observed between export growth and trade liberalization. As the many publications on East Asia also show (including Agosin, 2001; Akyüz, 1998; Amsden, 1989 and 2001; Chang, 1994; Jomo, 1998, and Wade, 1990), where high growth has occurred, it has been accompanied by systematic State intervention in foreign trade, the financial sector and technology. According to Rodrik (1999 and 2001), rapid growth in developing countries has coincided with different combinations of economic orthodoxy and “local heresies”.

Figure 1.4
EXPORT AND OUTPUT GROWTH, SELECTED COUNTRIES, 1973-1998
(Average annual growth rates)



Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of Angus Maddison, *The World Economy: A Millennial Perspective*, Paris, Organisation for Economic Co-operation and Development (OECD), 2001.

Countries: Ar: Argentina; At: Austria; Au: Australia; Bd: Bangladesh; Be: Belgium; Br: Brazil; Bu: Burma; Ca: Canada; Cl: Chile; Cn: China; Co: Colombia; Dk: Denmark; Es: Spain; Fi: Finland; Fr: France; Id: Indonesia; In: India; It: Italy; Jp: Japan; Ko: Republic of Korea; Mx: Mexico; Ni: Netherlands; No: Norway; Pe: Peru; Ph: Philippines; Pk: Pakistan; RU: Russian Federation; Se: Sweden; Sw: Switzerland; Th: Thailand; Tw: Taiwan Province of China; Uk: United Kingdom; US: United States; Ve: Venezuela.

The composition of world trade by goods category has changed substantially in recent years (UNCTAD, 2002a). Table 1.2 classifies products into “dynamic” and “undynamic” (those growing faster and slower than the average, respectively) and shows their relative importance in a world trade classification developed by ECLAC, which highlights the intensity of natural resource and technology use.²

Table 1.2
DYNAMIC AND UNDYNAMIC PRODUCTS IN WORLD IMPORTS, BY TECHNOLOGY CATEGORY, 1985 AND 2000
(Percentages of total imports)

	Dynamic products				Undynamic products				
	Number of items	1985 (1)	2000 (2)	Increase A=(2)-(1)	Number of items	1985 (3)	2000 (4)	Decrease B=(4)-(3)	Net increase or decrease (A-B)
Commodities	15	0.7	0.8	0.1	132	22.5	11.6	-10.9	-10.8
Natural resource-based manufactures	65	5.3	6.8	1.6	134	14.3	8.9	-5.4	-3.8
Low-technology manufactures	71	7.3	10.8	3.5	90	7.1	4.9	-2.2	1.3
Medium-technology manufactures	91	16.7	21.1	4.4	111	11.8	8.6	-3.3	1.1
High-technology manufactures	45	9.5	21.6	12.2	21	2.2	1.3	-0.9	11.3
Unclassified products	4	1.4	2.8	1.4	7	1.4	0.9	-0.5	0.8
Total	291	40.8	63.9	23.1	495	59.2	36.1	-23.1	0.0

Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of the Competitive Analysis of Nations (CAN) software, 2001.

Commodities are strikingly undynamic, as are natural resource-based manufactures, largely as a result of protectionism in the developed world. What is more, this protectionism has combined with growing competition in markets to place strong downward pressure on commodity prices (Ocampo and Parra, 2003). Among other manufactures, those based on the application of advanced technologies have been far more dynamic than the average, increasing their share by more than 11 percentage points.

3. The global leadership of multinationals

The appearance of new technologies and the increasing rapidity with which existing ones are changing have resulted in significant alterations to the way production is organized within companies, production sectors and, ultimately, the world economy. This new way of organizing production can be typified with reference to six activities, all of which use information and communication technologies to bridge the gulf between the design and production phases.³

In turn, the new forms of business organization, including subcontracting, virtual cooperation and the degree of vertical integration, depend on the dynamic of transaction costs and their impact on the location of the production frontier between hierarchical coordination and market coordination (Hilbert and Katz, 2002). Depending on whether transaction costs can be reduced by

² In ECLAC (1992a) this classification groups items at the four-digit level of the Standard International Trade Classification (SITC).

³ In particular, use is made of techniques involving: (i) simultaneous engineering, which integrates the design and manufacturing stages into a single process; (ii) continuous innovation, achieved in some cases by means of quality circles; (iii) teamwork, involving workers with multiple skills; (iv) just-in-time and real-time stock production and management, enabling production to be adjusted more quickly to changes in demand; (v) incorporation of quality control into the actual production process, thereby avoiding the costs incurred when mistakes have to be corrected subsequently, and (vi) the growing importance of supplier-user interaction in respect of innovation, design and production, which translates into global production and marketing networks and chains (Oman, 1994).

most within the company or out in the market, this frontier will shift towards greater company size or a preponderance of market transactions (outsourcing).

Although the world economy is not new to global conglomerates and oligopolies, the new feature is the increase in the number of sectors where they have become the standard way of organizing production, particularly in industries with a large technological research and development component and in manufactures with large economies of scale (Chesnais, 1993). In this context, coordination of the whole production chain is a key source of competitive advantage, and for this reason the network is used as a strategic asset. Information flows are the basic mechanism whereby a company can improve or consolidate its position in the production chain, while the way benefits are appropriated will depend on how much power leading companies can exercise in their different segments, something that naturally changes over time (Gereffi, 2000).

The most dynamic economic agents in this trend towards the creation of global oligopolies in more and more sectors and activities have been the multinationals, as these have been able to react fastest to changes in the way production is organized and have succeeded in capitalizing on their competitive advantages to organize international systems of integrated production. The expansion of multinationals has meant a rapid increase in foreign direct investment (FDI) flows accompanied, to differing degrees depending on the sector and the region of the world, by large numbers of mergers and acquisitions (table 1.3).

Table 1.3
**REGIONAL DISTRIBUTION OF THE WORLD'S NET FOREIGN DIRECT INVESTMENT
INFLOWS, 1991-2003**
(Billions of dollars)

	1991-1996 ^a	1997	1998	1999	2000	2001	2002	2003 ^b
World total	254.3	481.9	686.1	1 079.0	1 393.0	823.8	651.1	653.0
Developed countries	154.6	269.7	472.3	824.6	1 120.5	589.4	460.3	467.0
-United States	46.8	103.4	174.4	283.4	314.0	144.0	30.0	86.6
-Japan	0.9	3.2	3.2	12.7	8.3	6.2	9.3	7.5
-European Union	87.6	127.9	249.9	475.5	683.9	389.4	374.4	341.8
-Other	19.3	35.2	44.8	98.0	114.3	49.8	46.6	31.1
Developing countries	91.5	193.2	191.3	229.3	246.1	209.4	162.1	155.7
-Africa	4.8	10.7	9.0	12.3	8.5	18.8	11.0	14.4
-Latin America and the Caribbean ^c	27.2	73.4	82.2	108.4	95.5	83.8	56.1	42.3
-Asia and the Pacific	59.5	109.1	100.1	108.6	142.1	106.8	95.0	99.0
Transition economies	8.2	19.0	22.5	25.1	26.4	25.0	28.7	30.3

Source: United Nations Conference on Trade and Development (UNCTAD), *World Investment Report 2003. FDI Policies for Development: National and International Perspectives* (UNCTAD/WIR/2003), New York, 2003. United Nations publication, Sales No. E.03.II.D.8, and "Global FDI decline bottoms-out in 2003", press release, Geneva, 12 January 2004.

^a Annual averages.

^b Figures for 2003 are preliminary.

^c Includes financial centres in the Caribbean.

FDI flows grew substantially in the 1990s, particularly the latter part of the decade. In fact, they rose from an annual average of US\$ 254.3 billion between 1991 and 1996 to almost US\$ 1.4 trillion in 2000. Nonetheless, they fell sharply in 2001 and 2002, before stabilizing in 2003. The decline in 2001-2002 was the fourth largest since 1970, and proportionately the largest of all. FDI inflows fell by 21% in 1976, 14% a year on average in 1982-1983, 24% in 1991 and 31% a year on average in 2001-2002 (UNCTAD, 2003).⁴

⁴ The reasons for this decline are of several types: macroeconomic (slow growth in the world economy and the fall in stock markets), microeconomic (the fall in corporate profits, less lending between parent companies and subsidiaries and the slow pace of some company restructuring) and institutional (fewer privatizations and the mistrust caused by some corporate scandals). Although FDI

This global integration of production is being driven by some 64,000 multinational companies controlling over 870,000 subsidiaries abroad. Acting supranationally, with capital flows and accumulation capacity of worldwide scope, multinational companies are the main architects and chief beneficiaries of globalization. Thus a comparison of the world distribution of FDI inflows and outflows between 1980 and 2002 reveals their growing geographical reach and the importance that FDI has acquired for a large number of countries. Over 50 countries (24 of them developing ones) have inward FDI stocks of over US\$ 10 billion, as compared to just 17 countries a little over 20 years ago (seven of them developing). The situation with outflows is similar: the number of countries with investments abroad exceeding US\$ 10 billion rose from 10 to 33, including 12 developing nations in 2002 as against just 8 in 1980.

Their leadership in world trade is also decisive. It is estimated that a third of all trade in goods and non-factorial services consists of intra-company operations among the headquarters, subsidiaries and associate companies of multinational conglomerates. These transactions and their prices, of course, do not always obey market forces but are recorded at transfer prices. Since another third of world trade consists of exports by the subsidiaries of multinationals to unrelated companies, the conclusion is that, in some way or another, two thirds of world trade in goods and non-factorial services takes place within the international production system of multinational enterprises (UNCTAD, 2002a).

This appreciation can be completed by looking at some other indicators of globalized production and investment. Between 1982 and 2002, the subsidiaries of multinational enterprises increased their turnover almost sevenfold, their gross output almost sixfold and their exports fourfold. Particularly striking is the increase in the value of subsidiaries' assets (see table 1.4).

Table 1.4
INTERNATIONAL PRODUCTION AND INVESTMENT INDICATORS, 1982-2002
(Billions of dollars, constant prices)

Item	1982	1990	2000	2002
Turnover of subsidiaries	2 541	5 479	15 087	17 658
Gross output of subsidiaries	594	1 423	2 807	3 437
Total assets of subsidiaries	1 959	8 759	23 460	26 543
Exports of subsidiaries	670	1 169	2 594	2 613
Employment at subsidiaries (thousands)	17 987	23 858	51 013	53 094

Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of official data.

As regards the intensification of global integration in production networks and the specialization patterns of different regions and countries, measures of stock are more significant than those of flows.⁵ In other words, as long as trends in FDI flows are positive, the stock of FDI in the world is increasing. This stock was in excess of US\$ 7 trillion in 2002, i.e., more than 10 times the 1980 value.

The developed world is home to two thirds of inward stocks and accounts for 90% of outward stocks. This group is dominated in turn by the countries of the so-called Triad (the European Union, Japan and the United States), which account between them for 55% of inward stocks and 80% of outward FDI stocks worldwide.

declined more or less across the board in 2002, it was not uniform across the different aspects characterizing FDI inflows (regions of the world, sectors, financing method and type of inflow) and nor did it affect all sectors alike (see UNCTAD, 2003).

⁵ The estimates of FDI stocks produced by UNCTAD are based on different official sources in the countries and are supplemented by International Monetary Fund (IMF) data. In some cases and periods, the data are obtained by updating previous estimates. Although there is no guarantee that uniform methodologies are being applied, these data are believed to provide a reasonable reflection of orders of magnitude at the aggregate level (see UNCTAD, 2003).

The importance of multinationals in both developed and developing economies becomes clear when it is considered that in 2002 the stock of FDI in the former represented some 19% of GDP, almost four times the 1980 percentage (5%). Although growth has been slower in developing countries, the proportions are higher: the stock of inward FDI was equivalent to 13% of GDP in 1980 and 33% in 2002.⁶ These figures show that the stock of inward FDI has grown much faster than output in both groups of countries.⁷

In terms of broad economic sectors, the most striking development has been the growth of services. Their share has increased worldwide, so that by the late 1990s they accounted for over half the FDI stock (see UNCTAD, 2001a). This important shift has taken place in parallel with the structural transformation of the developed economies, where services have been increasing in relative importance so that they now account for over two thirds of value added in the OECD countries (OECD, 2000a).⁸ In turn, the liberalization and privatization policies adopted by developing countries in the 1990s have triggered a large flow of FDI in financial services, telecommunications and other infrastructure sectors. Although these flows declined in the early years of the present decade, as already mentioned, they have contributed to the rise in the inward stock of developing countries. This has been particularly true of Latin America and the Caribbean, as will be seen.

From a developing-country standpoint, multinationals are viewed in two ways: quantitatively, so that FDI and external financing aspects are stressed from a balance-of-payments point of view, and qualitatively, with the emphasis on the contribution they may make to productive development in the host countries.⁹ A useful way of reconciling these sometimes conflicting outlooks is to analyse the corporate strategies that lead multinationals to invest in developing countries, as set out in table 1.5.

Table 1.5
COMPARATIVE STRATEGIES OF MULTINATIONAL COMPANIES

Strategy/ Sector	Natural-resource- seeking	Market access- seeking (national or regional)	Efficiency-seeking	Strategic element- seeking
Goods	Oil/gas Minerals	Cars Food Tobacco Drinks Electrical equipment	Cars Electronics Wearing apparel	Pharmaceutical
Services	Raw material transportation Tourism	Finance Telecommunications Retail trade Electricity distribution	Logistics Regional offices Computer programs Administrative services	Research and development centres

Source: Economic Commission for Latin America and the Caribbean (ECLAC).

⁶ See Bouzas and Ffrench-Davis (2004) for an analysis of the impact of FDI on gross capital formation.

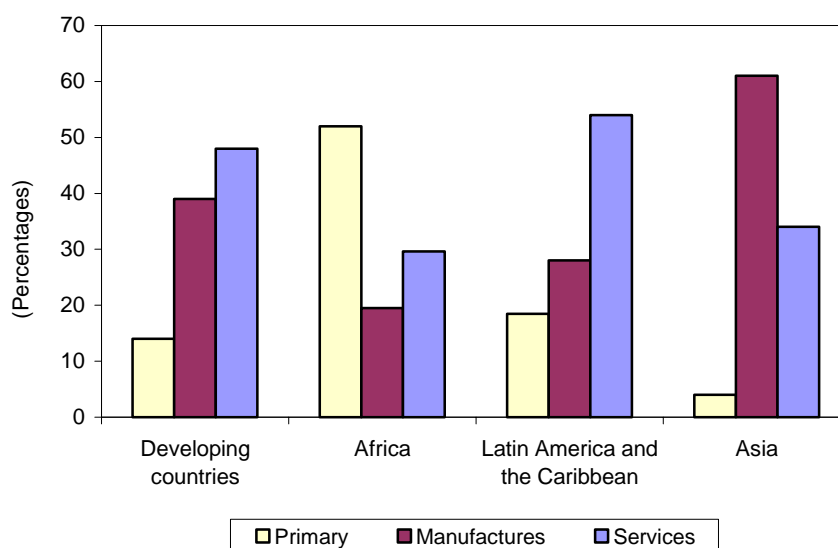
⁷ The stock of outward FDI also increased in relation to GDP for the developing countries, from 3% in 1980 to over 13% in 2002, owing to the internationalization of some new multinationals from such countries, particularly in Asia. In 2002, three developing-country enterprises featured among the world's 100 largest: Hutchison Whampoa of Hong Kong Special Administrative Region of China, Cemex of Mexico and LG Electronics of the Republic of Korea.

⁸ Seen from another point of view, manufacturing activities as such have come to account for a smaller share of the final value of goods and now represent less than a quarter, the balance being made up by service activities from product conception to final marketing (Giarini, 1999). Again, the revenues of companies classified as manufacturers come mainly from the sale of services, and this has led some authors to argue that services are encapsulated in manufactures (Howells, 2000).

⁹ This contribution may include the establishment of new activities to improve the quality of interaction with the world economy; access to, and transfer and assimilation of, new technology; development and enhancement of production chains; human resources training, and development of local business capabilities.

The table shows that there are four main motivations both in the production of goods and in the provision of services, namely the search for raw materials, for access to national or regional markets, for efficiency at the global level, and for strategic elements involving a science or technology base (ECLAC, 2004a). The empirical evidence seems to suggest that the different regions of the developing world have taken different approaches (passive or active) in the way they use their comparative advantages to benefit from these corporate strategies. This in turn has led to significant differences in the sectoral composition of FDI stocks in the different regions, these being concentrated in the primary sector in Africa, manufacturing in Asia and services in Latin America and the Caribbean (see figure 1.5).

Figure 1.5
SECTORAL SPECIALIZATION OF FOREIGN DIRECT INVESTMENT IN DEVELOPING COUNTRIES



Source: World Bank, *Global Development Finance 2004: Harnessing Cyclical Gains for Development*, Washington, D.C., 2004.

Lastly, striking similarities are beginning to emerge in the trading and investment links between each member of the Triad (the European Union, Japan and the United States) and their partner countries. There are three reasons for this similarity. To protect their investments, Triad members tend to establish bilateral trade agreements with the countries these go to. Conversely, partner countries seek to establish these same agreements with Triad members to guarantee their main source of FDI. The complementarity between trade and investment reinforces these relationships. Regional and bilateral trade agreements have thus gradually been turning into investment agreements and, in several cases, double taxation agreements as well (UNCTAD, 2003). The constraints placed by these agreements on the way multinationals are treated are stricter than those agreed to in multilateral negotiations.

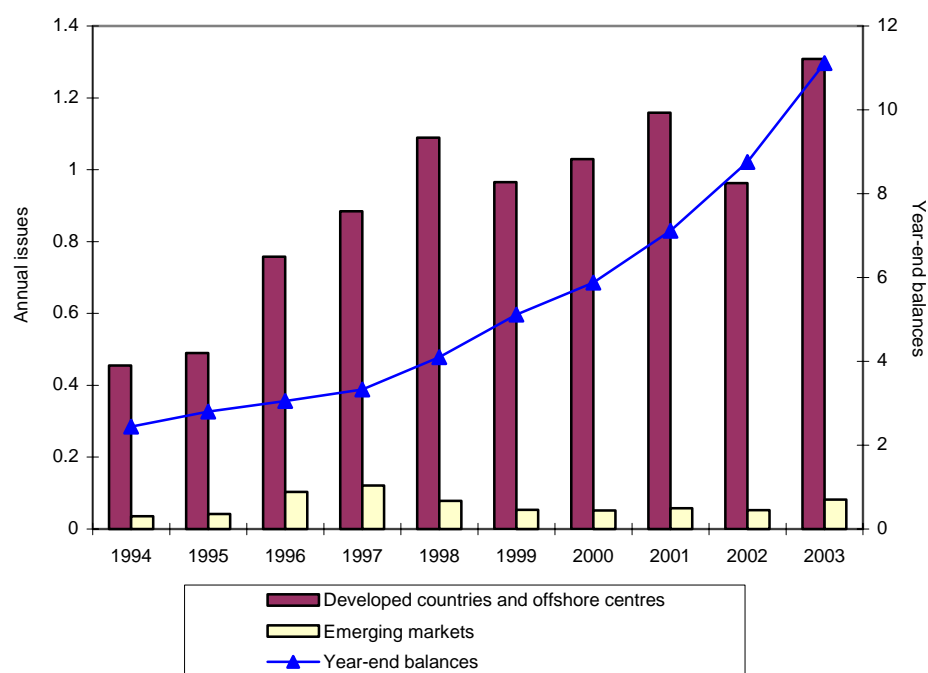
4. The predominance of financial capital and the volatility of flows

Expansion of international trade and FDI has been accompanied by growth in international financial flows, which have come to play an extraordinarily dominant role in the world economy. One indicator of this is the growth in assets held by banks from the main developed countries in the

rest of the world.¹⁰ Between June 1991 and December 1997 (i.e., between the virtual ending of the debt crisis and the beginning of the Asian crisis) these assets grew by 10% a year, from US\$ 1.1 trillion to US\$ 1.9 trillion. In 1998 total assets shrank by 7%, owing mainly to the fall in Asian countries (30%). In 2000 the total began to grow again, reaching US\$ 3.1 trillion by late 2003.

Even more substantial have been the sums involved in international bond issues, with total balances climbing from US\$ 1.8 trillion in late 1991 to US\$ 11.1 trillion in December 2003. Annual issues grew significantly in the second half of the 1990s, with emerging markets taking a somewhat larger share, especially in 1996 and 1997 (peaking at 16.5% in the second quarter), as figure 1.6 shows. This share declined substantially in the last quarter of 1997 and again from mid-1998, falling to just 6% in 2003.

Figure 1.6
INTERNATIONAL BOND ISSUES, BY REGION OF BORROWER'S NATIONALITY
(Trillions of dollars)



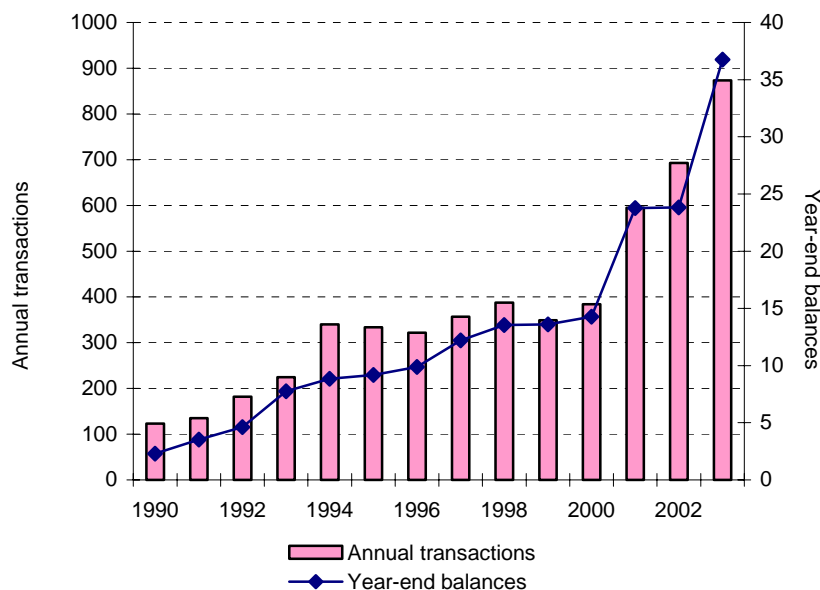
Source: Bank for International Settlements (BIS), *International Banking and Financial Market Developments*, Basel, various issues.

Lastly, the outstanding stock of financial derivatives (futures and options) grew at an average annual rate of 25% during the 1990s to exceed US\$ 35 trillion by late 2003. Transactions in such securities in the organized markets covered by the Bank for International Settlements (BIS) totalled almost US\$ 900 trillion a year, as figure 1.7 shows. The crises that followed on from one another in 1997 and 1998 affected this market with a reduction of US\$ 2.7 trillion dollars in the outstanding total in the last quarter of 1998, a fall of 17%, as major intermediaries collapsed. This situation gave rise to questions about the operating methods of certain financial agents that had taken on large

¹⁰ These are the positions that banks reporting to the Bank for International Settlements (BIS) hold in countries outside the BIS area, i.e., chiefly developing countries and offshore financial centres. The figures are taken from BIS, *The maturity and sectoral distribution of international bank lending*, Basel, various issues. See Hawkins (2003) and Lubin (2003) for an analysis of the effects of the Asian crisis on bank lending.

liabilities with little capital,¹¹ and the result was a series of measures to extend regulation and supervision of such agents.¹²

Figure 1.7
FINANCIAL DERIVATIVES: ANNUAL TRANSACTIONS AND YEAR-END BALANCES
(Trillions of dollars)



Source: Bank for International Settlements (BIS), *International Banking and Financial Market Developments*, Basel, various issues.

Globalized financial capital seems to have become increasingly detached from the real economy, even though its function in theory is to finance this. Financing for non-financial agents creates the base for an inverted pyramid of derivatives that swell the assets and liabilities of intermediaries and offer financial investors a multitude of investment options that have no direct relationship with any real investment or commercial transaction.

International economic transactions grew far more rapidly than countries' output in the 1990-2003 period. Thus, trade grew by more than output, but less than bank lending and far less than international bond issues. The stock of outstanding derivatives, lastly, has grown by far more again, although not all of these transactions are international.

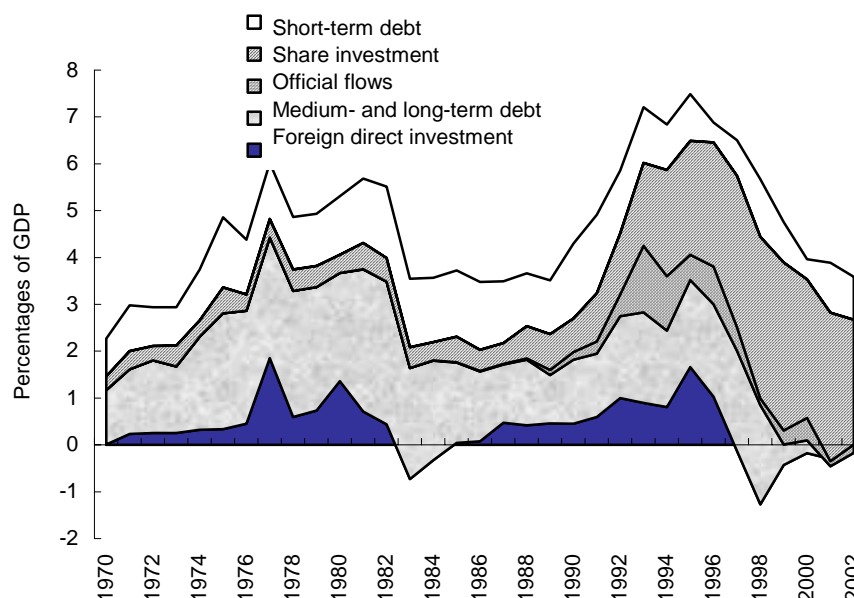
Two characteristics of rapid financial development have been volatility and contagion. The volatility that has prevailed in international financial markets over the last three decades is not a recent development, but certain features of today's markets have tended to heighten it. These include, firstly, inadequate regulation of the activities both of banks and of institutional investors and agents operating in the derivatives markets, and the procyclical nature of current regulations. Secondly, serious problems of contagion associated with the inadequacy of information on emerging markets have been caused by the liquidity constraints faced by institutional investors in different markets. Thirdly, the fact that different agents use the same risk assessment system and apply it on a short-term basis tends to intensify herd behaviour, and this is compounded by the procyclical behaviour of risk rating agencies (Ocampo, 2001a).

¹¹ See Dodd (2003) for an examination of the workings of different derivatives markets and their implications for financial stability.

¹² The Basel Committee on Banking Supervision, and more recently the Financial Stability Forum, have analysed the risks that the actions of highly leveraged financial institutions represent for banks (see BIS, 1999).

In the 1990s, unlike previous decades, FDI and short- and medium- or long-term private sources provided most financing for developing countries, chiefly through bond issues. Broadly speaking, FDI showed a rising tendency until 2000 and behaved less procyclically (see figure 1.8). On average, this source of financing supplied three quarters of all net capital flows into developing countries in the 1990s.

Figure 1.8
NET FLOWS TO DEVELOPING COUNTRIES



Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of World Bank, *Global Development Finance 2003: Striving for Stability in Development Finance*, Washington, D.C., April 2003

Note: Official funds include donations and borrowing from multilateral organizations; share investment means the purchasing of domestic company shares by foreign agents and includes American depository receipts (ADRs); medium- and long-term debt includes bond issues, bank debt and other private creditors; and short-term debt is that contracted with private creditors.

In marked contrast to FDI, short- and medium- or long-term private financing sources were variable and their financing conditions were highly sensitive to the ups and downs of international markets, with periods of enthusiasm for high-risk economies and activities alternating with flight to the quality represented by certain segments of developed economies. Share portfolio flows and placements of deposit instruments in international markets (ADRs and similar instruments) were the most unstable. Taken together, all these other sources of finance, unlike FDI, were strikingly procyclical in the 1990-2003 period (Ffrench-Davis and Ocampo, 2001).

Lastly, it should be stressed that greater openness to capital flows is not necessarily associated with higher economic growth. Again, while greater financial integration seems to reduce the volatility of growth in developed countries, it clearly tends to increase it in developing ones (see Fanelli, 2000, and Prasad and others, 2003).

5. The concentration of innovation and technical progress

As already mentioned, reductions in the cost of transporting goods and information as a result of the technological revolution have expanded markets, to the point where some have now become global in scale.¹³ The increase in market size has meant that economies of scale have become more important in companies' cost functions. Both processes have been strengthened by the tendency for the preferences of large groups of consumers to converge, which has expanded the market for products able to satisfy this type of demand on the basis of strong price competition. As competition has centred on the price variable there has been an increasing tendency for technologies to converge and this, combined with the growing convergence of preferences, has swelled the mass of consumers with access to global markets dominated by economies of scale in production.

As a result of this configuration, competition that depended on mechanisms to cover variable costs (one example of which was the "redeployment" of industrial activities to certain developing countries from the 1970s onward) has been replaced by competition to cover fixed costs. Fixed production costs now tend to be a large proportion of the total, particularly in manufacturing. This does not mean that competition to cover variable costs has disappeared, only that its relative importance has declined. This is particularly true of activities and processes in the forefront of technological change, and much less so of goods production in mature sectors, where assembly continues to take place in areas with low variable costs, particularly wages and taxes. Increased flexibility in labour markets, to the extent that this has reduced wage costs, is continuing to decrease the share of variable costs, which in some branches of manufacturing accounted for no more than 10% of total costs in the 1990s, as against some 25% two decades previously (Oman, 1994).

Meanwhile, the intensification of product and process research and development efforts and the development of worldwide brands have also increased companies' fixed costs. Thus, economies of scale in research and development and in marketing have combined with economies of scale in production, giving rise to a struggle among global producers to achieve market shares sufficient for them to cover their fixed costs. Furthermore, scale and external economies, which have been the focus of the most recent studies of international trade, may give rise to economies of agglomeration which tend to polarize the location of the most dynamic activities.¹⁴ It is essential to grasp this if the workings of the world economy today are to be understood. It is also vital for an understanding of why the different productive and technological asymmetries between developed countries and developing and transition ones are becoming more pronounced.

In the first place, technical progress, which all schools of thought identify as the basic source of economic growth, is very highly concentrated in the developed countries. The empirical evidence shows that the richer a country (or region) is, both absolutely and relatively (output per inhabitant), the more likely it is to undertake research and development activities (see table 1.6). Again, the more such activities are undertaken, the more likely it is that the country concerned will become involved in technologically more sophisticated and capital-intensive projects, perhaps in partnership with other countries and regions.

Thus, the developed countries account for 84.4% of gross research and development spending and a somewhat smaller percentage of scientific researchers and engineers (71.6%). Other indicators reveal the asymmetries between developed and developing countries more starkly: the

¹³ Other technological revolutions, such as the one led by the railway in the mid-nineteenth century, had similar effects, breaking down local barriers to trade in goods and creating national markets even in countries of continental size, such as the United States. What is characteristic of the current revolution, however, is not the expansion of markets as such but their sheer scale, so that genuinely global markets have arisen and services have been brought into the process, considerably reducing the range of products that cannot be marketed globally.

¹⁴ Examination of indices representing the geographical concentration of industrial production by technology content reveals a very clear pattern: the higher the technology level of an industry, the more it is geographically concentrated in a small number of countries, and in a few places within those countries (see UNCTAD, 2001a). Studies that focus on this subject include Krugman (1990) and Fujita, Krugman and Venables (1999).

ratio of gross research and development spending per inhabitant is 19:1, the ratio of scientific researchers and engineers per inhabitant is 7:1, and gross research and development spending per researcher is more than double.¹⁵ There are also large disparities within the developing world itself, with the new industrial economies of Asia performing much better than the rest. This concentration means that the developed countries are home not only to the bulk of research and development as such, but also to the sectors and production activities most closely linked to technological change, which are characterized by great dynamism within the production structure and world trade, and by their high returns on innovation.

Table 1.6
WORLDWIDE DISTRIBUTION OF RESEARCH AND DEVELOPMENT ACTIVITIES,
1996-1997

Groupings and countries	Gross expenditure on research and development (GERD)				Researchers			GERD per researcher (thousands of PPP dollars)
	Amount (billions of PPP dollars) ^a	% world GERD	% of GDP	Per inhabitant (PPP dollars)	Number (thousands)	% of world total	Per million inhabitants	
World	547	100.0	1.8	100	5 189	100.0	946	105
-Developed countries	461	84.4	2.2	377	3 713	71.6	3 033	124
-Developing countries	86	15.6	0.6	20	1 476	28.4	347	58
-United States	199	36.4	2.6	750	981	18.9	3 697	203
-European Union	138	25.2	1.9	370	825	15.9	2 211	167
-Japan	83	15.2	2.8	661	817	15.8	6 498	102
-Russian Federation	6	1.0	0.9	39	562	10.8	3 802	10
-Central and eastern Europe	6	1.0	0.8	49	168	3.2	1 451	33
-Latin America	17	3.1	0.5	34	348	6.7	715	48
-New industrial economies of Asia	27	4.9	1.1	66	241	4.6	595	111
-China	21	3.9	0.6	17	552	10.6	454	38
-India	11	2.0	0.7	11	143	2.8	151	76
-Africa	4	0.7	0.3	6	132	2.5	211	29

Source: United Nations Educational, Scientific and Cultural Organization (UNESCO), *The State of Science and Technology in the World, 1996-1997*, Montreal, UNESCO Institute for Statistics (UIS), 2001.

^a Purchasing power parity dollars.

Secondly, technological change in the developed world affects developing countries in many ways, including the transfer to developing countries of production sectors considered technologically mature in the developed countries, the transfer of actual technology, including that incorporated into production equipment, and the possible participation of developing countries in the more dynamic production activities and sectors.

All the mechanisms referred to are subject to constraints or costs, however. Mature industrial sectors are characterized by low margins and low costs of entry; the latter can result in a considerable decline in returns and prices, akin to that usually suffered by raw materials in periods of slow growth. Furthermore, it is on agricultural products and these sectors that protectionist pressures in the developed countries are concentrated.

Technology transfer, meanwhile, is subject to payment of innovation rents, which are increasingly protected by the universalization of strict rules on intellectual property protection. Owing to the "tacit" character of technology, i.e., the impossibility of specifying it fully owing to its close link with the collective human capital accumulated by innovative companies, transfer is difficult or is most attractive when carried out through multinationals' networks of subsidiaries.

Lastly, developing countries have very few opportunities to participate in highly dynamic sectors, other perhaps than in activities that require lower skill levels (assembly of electronic equipment, for example). The education- and knowledge-related external economies that lead to a

¹⁵ This last indicator is indicative not only of large differences in pay (whose share of gross research and development spending varies between half and two thirds) but also of the lesser availability of financial resources, instruments and equipment for these activities.

high degree of geographical concentration can by themselves check any tendency towards convergence in productivity levels, as the literature on endogenous growth has emphasized.¹⁶ Furthermore, technological development requires large government subsidies, something that is easier for developed countries owing to their greater fiscal capacity and, probably, the lesser urgency of other calls on public funds.

The combined effect of these factors explains why, despite increased diversification of the production structure in the developing world (other than the least advanced regions), there are still major asymmetries at the world level: a high and continuing concentration of technical progress in the developed countries, their unremitting dominance of intellectual property ownership in the branches and activities that are most dynamic in international trade, and their hegemonic influence when it comes to the creation of large multinational enterprises.

Thus, the economic opportunities of developing countries are still largely determined by the position they occupy in the international hierarchy. It is certainly true that the “spread of technical progress” from the centre is taking place through the channels already mentioned, but this is “relatively slow and irregular” (Prebisch, 1951a) and its fruits have been distributed unequally among developing countries. In relation to the “moving target” that is the world technology frontier (Pérez, 2001), few countries, and few sectors and companies within them, have proved able to move quickly enough to close the technology gap. Many others have only been able to move at the same speed as the frontier is receding, while a substantial number are falling further behind (Katz, 2000).¹⁷

II. International regimes

Globalization has given rise not only to growing interdependence, but also to marked inequalities among countries, as economic processes have operated upon an essentially uneven playing field. Today’s globalization, then, needs new institutions that can reconcile more efficient management of global interdependence with the adoption of clear principles of international solidarity. Only thus will it be possible to make sure that globalization “becomes a positive force for all the world’s people”, as the Millennium Declaration puts it (United Nations, 2000).

There are major obstacles to a new institutional structure, however: the lack of shared principles among the main actors involved, the unequal influence of those participating in the process and the difficulty of creating stable coalitions to deal with the different issues. This is compounded by the main paradox of the current globalization process, which is the contrast between problems of global scope and the lack of any real internationalization of politics (Ocampo and Martin, 2003). We shall now examine the state of the multilateral debate on some issues that are important for decision-making about productive development strategies in open economies.

The explosive development of world finance has created opportunities for financing and for covering financial risks, but it has also brought to light the enormous problems caused by the contrast between the dynamic forces of the market and the weakness of the institutional frameworks regulating it. The coexistence of financial globalization and national macroeconomic policies has created strains in developing countries that are compounding the characteristic problems of financial systems to which the concepts of volatility and contagion refer.

¹⁶ See the now classic essays of Lucas (1988) and Romer (1990), and the extension of this analysis to international trade by Grossman and Helpman (1991).

¹⁷ “As scientific knowledge has become a crucial factor in the production of wealth, so its distribution has become more inequitable. What distinguishes the poor (be it people or countries) from the rich is not only that they have fewer assets, but also that they are largely excluded from the creation and the benefits of scientific knowledge.” (UNESCO, 1999)

Steady growth in international trade, the strengthening of multilateral rules under the auspices of the World Trade Organization (WTO) and open regionalism along the lines proposed by ECLAC are all helping to integrate developing countries better into the world economy. But these favourable processes are countered by the failure of developed countries to open their economies fully and by the demand that developing countries should comply with international regulations in a number of trade-related areas.

Globalization enhances the value of environmental comparative advantages such as sustainable use of natural capital with economic value (for agriculture, forestry, fishing and tourism), ecological value (genetic information contained in biodiversity and the role of forests as sinks for carbon and other pollutants) and scientific, historical and aesthetic value. Although substantial progress has been made with sustainable development based on sound principles, ratification and implementation of these agreements are still in the early stages.

At the same time as free movement of goods, services and capital is promoted, the movements of individuals are restricted. Global migration agreements need to be an essential part of a contemporary international agenda. Such agreements should replace approaches designed to control migration to developing countries with rules that give more consideration to the dynamic of their labour markets and the protection of people's rights. Progress in this field is still controversial, however.

Examination of the changes that have taken place in all these areas in the immediate past is of the greatest importance if we are to gauge the potential, the risks and the constraints for the countries of Latin America and the Caribbean in the current stage of globalization. Determining how much room for manoeuvre is left by current international arrangements, some of whose aspects reveal the incompleteness of the agenda while others reflect the profound asymmetries of the global order, has to be the starting point for determining and implementing productive development strategies in open economies.

1. Macroeconomic and financial regimes

The uncertainty caused by the South-East Asian crisis of 1997, and the perception that the international financial architecture was not fully equipped to deal with it, created the conditions for a political debate not only on the macroeconomic dimensions of the crisis, but also on its implications for the promotion of development and the eradication of poverty (ECLAC, 1999 and United Nations, 2001). ECLAC (Ocampo and Martin, 2003) highlighted the value of macroeconomic and financial stability as a global public good, complementing this by pointing out the need to correct the asymmetries of the world economy in this respect.

International macroeconomic and financial stability is a global public good that generates positive externalities benefiting all participants in international markets and obviates the negative externalities associated with contagion, both in periods of growth and at times of financial panic and recessionary forces in general. This explains the importance of certain processes of global scope on different fronts.

First, the lack of mechanisms for gauging what effects the macroeconomic policies of the major economies will have on the rest of the world is a basic failing of the current international order. Thus, for example, ECLAC (Ocampo and Martin, 2003) and other bodies recently warned about the side-effects that the expansionary policies of the United States might have, particularly given that the country's budget and trade deficits have risen to their highest levels for 25 years. The way these twin deficits are financed has enormous implications for the rest of the world. Some of these manifested themselves in 2003, when the dollar fell sharply against the yen and the euro in a context of great currency volatility. If these trends continue, capital flows into the United States will probably decline, requiring a rise in interest rates that will adversely affect the recovery of the

United States economy itself and those of the rest of the world. The debates that take place in restricted forums (G7 or G8) do not adequately reflect the scale of these effects, and the International Monetary Fund (IMF) should play a central role in efforts to coordinate the macroeconomies of the main economies.

The second front is preventive macroeconomic oversight of all economies and the drafting of codes of good practice for macroeconomic management. Major progress has been made in this area in recent years, both with crisis prevention and with the creation of early-warning vulnerability indicators. Concerning crisis prevention, efforts have focused on sound debt administration.¹⁸ Emphasis has also been placed on the need to detect financial vulnerabilities and provide technical assistance so that oversight and monitoring systems can be improved. To this end, IMF has established programmes to evaluate the stability of financial systems, and in particular the macroeconomic risks that can arise in the financial sector and its capacity to absorb any external shocks.¹⁹

There has also been progress with countries drawing up and adopting codes of good macroeconomic management. These codes have been developed for a number of areas.²⁰ More and more countries are preparing these reports for their discussions of economic policy with international financial institutions, and they are also being used by the private sector for risk evaluation. Many developing countries are finding some of the standards very complex and difficult to implement, however. Although they do not question their usefulness, they are asking for gradual and differential implementation of standards and emphasizing the need for international support and technical assistance.

Corporate governance continues to be a cause for concern, particularly in developed countries. Business malpractice has been unearthed in a number of cases, as have unethical practices or worse in the administration of some mutual funds. Recent progress should be reflected in a revision of the OECD Principals of Corporate Governance. Proposals have likewise been drawn up to deal with the conflicts of interest facing financial analysts.

The third front in the effort to secure global macroeconomic stability is the formulation of international prudential regulation and oversight standards for financial markets and the provision of better information to markets. The Basel Committee on Banking Supervision has finished its draft of a new agreement (Basel II). The proposals it contains are being criticized for a number of reasons, but improvements are expected in several of these areas and it is hoped that the new agreement will be operative by late 2006.²¹

Lastly, capital is now so mobile that international tax cooperation is required. There are virtually no institutional mechanisms of international scope in this area, so what is required is not only the adoption of new agreements, but the creation of a body with responsibility for international tax cooperation (Tanzi, 2000). Some alternatives that fall short of this might be the adoption of

¹⁸ To this end, conventional analysis has been extended to include the medium-term tendency of debt, its relationship with fiscal programmes and financing needs, and sovereign exposure to currency risk on the basis of the debt profile and structure (Wilton Park Conference Team, 2003).

¹⁹ In 1999, IMF introduced a financial sector evaluation programme to support the efforts of governments to strengthen their financial sectors.

²⁰ These areas are: publicization of information, fiscal transparency, transparency of monetary and financial policy, banking supervision, securities regulation, insurance supervision, payment systems, control of money laundering and terrorist financing, accounting, auditing and bankruptcy and creditors' rights.

²¹ ECLAC (Ocampo and Martin, 2003) has identified the following shortcomings: failure to involve developing countries in its formulation; the tendency to universalize standards without considering the different regulatory traditions and absorption capacity of different countries; the attempt to make IMF financial cooperation conditional on application of codes and standards, even though there is no international consensus; the limited attention given to certain matters, in particular the regulation of institutional investors operating in developing countries, direct regulation of highly leveraged activities and operations in derivatives markets, and regulation of the activities of risk rating agencies, whose evaluations are procyclical and have been strongly criticized. In adopting new regulatory measures, care should be taken to avoid heightening the discrimination against capital flows going to developing countries that is a characteristic of the current system (Reisen, 2001; Griffith-Jones and Spratt, 2001).

subregional or hemispheric agreements and the extension of cooperation that already takes place in this area under OECD auspices to countries that are not members of that organization.

Apart from the systemic issues associated with global macroeconomic and financial stability, international reform efforts need to centre on gradual correction of macroeconomic and financial asymmetries in the world economic system. The primary objectives here should be to make access to international financial resources less segmented and volatile for developing countries and to give these countries greater scope to adopt countercyclical macroeconomic policies. Among the basic components of this comprehensive strategy must be the provision of liquidity in cases of crisis, the design of multilateral schemes to handle the problems of excessive borrowing, stronger development cooperation and a new consensus about the scope of conditionality.

To improve existing mechanisms for the provision of liquidity in crisis situations, IMF should gradually emphasize its function as international lender of last resort. To this end it should be supplied with the necessary financial resources, with support being made conditional only upon the performance of economies with liquidity problems. This role for IMF would have to be complemented by banking regulations in the developed countries that favoured continuity in short-term financing and the use of contingency credit lines where the situation justified it. What is required in any event is a comprehensive approach, since otherwise the effect of these mechanisms is reduced, with the result that some liquidity problems ultimately turn into solvency problems.²²

The provision of liquidity should be supplemented by a system to resolve problems of excessive borrowing, something for which there are as yet no international arrangements.²³ In recent years progress has been made with some related issues. Thus, for example, there has been discussion of a code of conduct stipulating the role of key actors in crisis resolution. These debates between creditors and issuers have been encouraged by the G20, and their essential aim is to enhance information-sharing between debtor governments and their creditors, to ensure similar treatment for different creditors, and to assess the viability of relief where the number of creditors is large.

Some progress has also been made specifically with the bond market, one example being issues in the New York market that have collective action clauses. These clauses, which already existed in other markets (London and Tokyo), improve countries' capacity for restructuring their debt in an orderly manner, prevent a minority of shareholders from blocking restructuring, and specify the procedures to be followed.²⁴ Applying them to the entirety of a country's bond debt can take a long time, however, as different terms, issues and jurisdictions can create a very complex debt profile.

Alongside these initiatives by private creditors, the Paris Club of government creditors has also decided to reform its practices. Thus, it has developed a new approach to solvency problems in countries not included in the Heavily Indebted Poor Countries (HIPC) initiative. This approach essentially consists in finding responses that are tailored to the specifics and merits of each case, as opposed to the traditional practice of applying standard criteria to particular classes of borrower governments. Debt reduction for eligible countries will be considered as an option, but

²² This was the case with the contingency credit lines introduced by IMF in 1999 to provide financial support against external shocks, which were never used before they expired in late 2003. The essential problem was with potential users fearing that their employment might be seen by the market as an indication of financial weakness and that their effect on confidence in the economy might thus be the opposite of what was intended. The underlying thinking, however, which is that IMF should have this capacity to respond to the financial needs of countries that have sound policy fundamentals but are threatened by special situations in the capital markets, remains valid (see Ocampo, 2001a; Wilton Park Conference Team, 2003 and United Nations, 2004).

²³ See ECLAC (2003a) for a description of the main components. Regarding the role of development banks in such systems, see also UNCTAD (1998 and 2001b), Krueger (2001) and Machinea (2004).

²⁴ New sovereign bond issues have been carried out in this way in Belize, Brazil, Guatemala, the Republic of Korea, Mexico and South Africa. Most of these sovereign bonds were not penalized for their collective action clauses. Such clauses were also used in the US\$ 5.4 billion Uruguayan debt restructuring, which represented half of that country's debt (United Nations, 2004).

will be agreed to only where exceptional circumstances justify it, and will involve a three-stage procedure.²⁵

The IMF effort to develop a comprehensive statutory approach to solvency problems did not win enough support to be taken forward. The proposed sovereign debt restructuring mechanism would have enabled a crisis-hit debtor country and a qualified majority of creditors to reach a restructuring agreement by following a formal process internationally established by means of an amendment to the articles of IMF agreements. This restructuring agreement would have been valid for all creditors and would have covered the full range of debt instruments. The proposal was strongly opposed by private-sector financial institutions on the grounds that it would have constrained their negotiating capacity and made it easier for borrower countries to default. Unless substantial progress is made in this area, it is hard to see how debt restructuring for insolvent countries might be negotiated with any speed.²⁶

Improvements to multilateral banking and development cooperation are a third area where action is needed. Multilateral development banking is obviously very important to ensure financing for countries that have no access to private markets, especially the poorest, and to provide long-term financing to middle-income countries during periods of drought in those markets. This countercyclical function of multilateral financing complements the role of IMF in supplying liquidity. Multilateral banks also have other vital functions: stimulating innovation (particularly in the area of social development) and private-sector participation in infrastructure projects, supporting the expansion of financial systems in developing countries and the measures adopted for this purpose by national development banks, and providing technical assistance in general.

At the International Conference on Financing for Development held by the United Nations in Monterrey, Mexico, in March 2002, the international community undertook to enhance international financial cooperation for less developed countries. The results can be seen in what happened subsequently with two mechanisms: official development assistance (ODA) and the Heavily Indebted Poor Countries (HIPC) debt reduction initiative. After Monterrey, donor countries increased their ODA contributions by some 5% in real terms, giving an annual total of about US\$ 57 billion in 2003.²⁷ This increase still falls far short of the US\$ 100 billion a year that would be needed to meet the United Nations Millennium Objectives (United Nations, 2004).²⁸

The HIPC Initiative has also proved difficult to implement. Late in 2003 a group of 27 countries reached “decision point” and benefited from debt relief, with reductions of about two thirds of net present value. Only eight countries in the group, among them Bolivia, also reached “completion point” and left the programme. These results show that the Initiative is working slowly, owing to the difficulties beneficiary countries are having with their strategies to reduce poverty and meet fiscal targets. Furthermore, there is no certainty that countries reaching “completion point”

²⁵ See United Nations (2004) for a detailed analysis of each of these stages and the conditions laid down. The new approach also emphasizes the need for coordination between private creditors and the Paris Club to ensure similar treatment for their respective claims.

²⁶ The Argentine debt negotiations provide a measure of the capacity of the current system in a case involving a large sum of debt in bonds, numerous creditors, currencies and terms, and a variety of jurisdictions.

²⁷ This was mainly due to new contributions from Canada, the European Union, Norway, Switzerland and the United States, but it was a long way from the steady increase promised up to 2006, which would have represented a rise of 31% over current levels or about US\$ 16 billion a year in 2006 (0.26% of GDP for the member countries of the OECD Development Assistance Committee). The undertaking by the United States to increase its main contribution by US\$ 5 billion (a rise of 50%) by 2006 requires the creation of a Millennium account for use by countries that show strong commitment to good governance, health and education within a context of economic policies that favour business development. This procedure was legislated for in 2003 and is expected to begin operating in the 2004 fiscal year (United Nations, 2004).

²⁸ To close this gap, it has been proposed that ODA administrative expenses should be reduced through better coordination of procedures and closer collaboration among donors. It has also been argued that recipient countries do not have the capacity to absorb large quantities of such aid. This aspect should be seen rather as a problem to be solved, however, than as a reason to reduce the contributions of the main donors or not to expand their numbers.

have really achieved a sustainable level of debt, especially if they have been suffering from low international prices for their exportable goods.²⁹

The last element required by this comprehensive approach is a new international agreement on the scope of conditionality, with a view to bringing to international practice a firmly grounded sense of “ownership” of macroeconomic and development policies. Progress has been made in this area, including analysis and discussion of the issue at IMF in 2001. Nonetheless, some of what is being said about creating a sense of ownership actually conceals new forms of conditionality, and this underlines the need for an explicit international agreement on the subject.³⁰

These different issues surrounding the architecture of international finance still require considerable debate. In the first place, decisions need to be taken about the work of IMF and other multilateral financial institutions.³¹ In the second place, different agencies have been suggested for promoting the agreements of the Monterrey Consensus, the idea in most cases being to involve different interest groups to promote best practice and information-sharing in the implementation of the Consensus (United Nations, 2004).

Lastly, mention should be made of the measures proposed in different regional contexts to complement the global initiatives. These include the cooperation mechanisms established among the 10 member countries of the Association of South-East Asian Nations (ASEAN) plus China, Japan and the Republic of Korea for the purposes of macroeconomic consultation and coordination, monitoring of financial vulnerabilities and the development of schemes for mutual assistance among central banks. These regional arrangements demonstrate the interest of developing countries in exploring a less centralized and more flexible financial architecture.

2. Multilateral trade negotiations

Since the conclusion of the Uruguay Round (1994), the eighth round of trade negotiations held under GATT, the multilateral system has operated under the auspices of the World Trade Organization (WTO). The Fourth Ministerial Conference of WTO, held in Doha in November 2001, gave rise to a new round of negotiations, which should be completed in January 2005. The issues being debated include important areas of government action and have implications for the growth opportunities and future place in the world economy of all countries, particularly developing ones.

Developing countries played a key role in defining the programme of work that took shape in Doha, their priority being to reduce the asymmetries between the rights and obligations of member countries (currently 148 in number). This position derived from the view that the main thrust of the multilateral trade system since the Uruguay Round had been to establish a homogeneous regulatory framework that ignored the asymmetries characterizing the different actors in the world economy (Ocampo and Martin, 2003). Furthermore, despite the commitments accepted under the Montevideo Declaration, progress in opening up sectors of interest to developing-country exporters had not only been slow, but had been accompanied by measures that were incompatible with obligations accepted previously and by new forms of selective protectionism.³²

²⁹ Current discussions about ways to improve the workings of the Initiative are focusing on the need to revise the debt sustainability criteria, create more innovative relief mechanisms and speed up the payment of contributions promised by donors. It has also been suggested that the “completion point” should be defined more flexibly with a view to ensuring that debt is sustainable over the medium term and determining the flow of supplementary donations that may be necessary.

³⁰ See Rodrik and Subramanian (2003) for some recent suggestions in this area.

³¹ Although some measures have been taken to give developing countries a greater say in these institutions, little progress has been made as yet with the fundamental issue, which is to bring in a new formula for allocating votes and lending and contribution quotas. The IMF Development Committee and World Bank have undertaken to work on these matters and plan out a route for reform.

³² There can be little doubt that the developed countries have been the main gainers from the Uruguay Round. Developing countries were faced with a hard choice: accept what was proposed, or be marginalized in WTO (see Ocampo and Martin, 2003; UNCTAD, 2002; Finger and Nogués, 2002).

As globalization has progressed, meanwhile, international trade negotiations have been extending far beyond the conventional provisions governing cross-border goods transactions (tariff or quantitative restrictions) to cover more and more issues formerly dealt with only within a national policy framework. As a result, negotiations now have to be approached in a far more comprehensive and consistent way than formerly, taking in measures that affect a whole variety of issues. To succeed with this systemic approach, developing countries will have to generate the institutional capabilities needed to set and implement appropriate, coherent policies in different areas, a task requiring large quantities of public funds that are needed for other purposes.

The Doha Round covers a very broad range of issues.³³ The Ministerial Declaration confirmed, furthermore, that for most issues the negotiating process was to be governed by the “single undertaking” principle established in the Uruguay Round. In other words, uncontroversial subjects are tied to success or failure with issues concerning which the negotiating positions of member countries differ sharply.

The texts that came out of Doha have given rise to the so-called Development Programme. The Ministerial Declaration emphasizes the issue of development throughout all its decisions, addresses implementation issues and reaffirms that special and differential treatment is an integral part of WTO agreements; it also includes commitments regarding cooperation and training in developing countries, particularly the least developed ones. The ministers also announced their decision to set up three working groups on issues of interest to developing countries: (i) small economies, (ii) trade, debt and finance and (iii) trade and technology transfer. It should be stressed that the subjects around which each of these working groups are organized are not matters of negotiation, although they ought to be, considering their enormous importance to developing countries, particularly those of Latin America and the Caribbean.³⁴

The Programme agenda gives a prominent place to analysis of the countries’ scope for adopting development policies, particularly as regards export diversification.³⁵ The Uruguay Round significantly reduced the opportunities for middle-income countries to use national policies to promote exports and strengthen their links with national productive development. Among other things, disciplines were applied to export subsidies and limits were placed on the use of investment-related trade measures (requirements governing local content, export-import ratios, currency balances and export restrictions), reducing countries’ discretionary scope for actively promoting “incipient export industries” and diversifying exports. As in other fields, too, the agreements authorize subsidies that are used more in developed countries (for technology, subnational development, the environment) while restricting those used more often in developing ones (free-trade zones, direct subsidies for export activities and performance agreements).³⁶

Generally speaking, the work undertaken as a result of the Doha Round has by no means progressed as originally intended, with little headway being made in 2002 and 2003. Overall, asymmetries in the development of the negotiations can be seen on two different levels. First, there is the limited progress made with subjects of interest to developing countries, such as agriculture

³³ The negotiating mandate includes a total of 21 subjects and the negotiating agenda arranges them in eight groups, six of which are part of the single undertaking: (i) implementation issues; (ii) agriculture; (iii) services; (iv) market access for non-agricultural products; (v) trade-related aspects of intellectual property rights; (vi) WTO rules (including disciplines relating to antidumping, subsidies and countervailing rights, and regional agreements); (vii) dispute settlement understanding, and (viii) trade and the environment. Some aspects of issues (v) and (vii) had an earlier deadline for negotiations to be completed (during 2003) and were thus not part of the single undertaking. See ECLAC (2003a).

³⁴ Complementary to this is the special decision in which governments undertook to address implementation issues arising from the Uruguay Round. These concern more than 10 Uruguay Round agreements and include special provisions on special and differential treatment.

³⁵ This is the sense in which article 10.2 of the Declaration on Implementation Issues should be taken. Strictly speaking, the main restriction of the Uruguay Round agreements is the one concerning specific subsidies to particular production branches or economic agents.

³⁶ Some analysts believe that the obligations placed on developing countries in these respects under the Uruguay Round agreements ought to be modified and attenuated. See Finger and Nogués (2002).

and antidumping and subsidy rules, which contrasts with the more rapid progress seen in discussions on investment, services and further liberalization of industrial products.³⁷ Second, there is the almost complete absence of progress with the specific tasks defined as part of the “development dimension”. Regarding new issues, most of them of interest to developing countries, there are also different views on the scope the work should have and the right place for the debate.

The great heterogeneity of interests among both developed and developing countries has resulted in the creation of coalitions for specific negotiating issues that involve members of both groups of countries. This is the case, for instance, with the Cairns Group, whose members are Argentina, Australia, Bolivia, Brazil, Canada, Colombia, Chile, Costa Rica, Guatemala, Indonesia, Malaysia, New Zealand, Paraguay, South Africa, Thailand and Uruguay, and which aims, with partial support from the United States, to speed up the liberalization of agricultural markets. Other groups have been formed to limit the use of fishing subsidies because of their effects on the environment (Friends of Fishing), to clarify and better define the mechanisms used to implement antidumping regulations (Friends of Antidumping Negotiations) or to oppose the Singapore Issues (Africa, Caribbean and Pacific Group, the African Union and least developed countries).

At the Cancún Meeting (Fifth Ministerial Conference of WTO, 2003), the intention was to take stock of the progress made in the Doha Round, as the Meeting took place at its halfway point. In addition, a decision was to be taken as to whether the so-called Singapore Issues would be included in the WTO negotiating agenda, and under what modalities.³⁸ At Cancún, the greatest difficulties arose with agriculture, market access for non-agricultural goods and the four Singapore Issues. There were also problems with a number of others relating to the development agenda, including special and differential treatment for developing countries and implementation problems, with no significant consensus being reached.

The subject of agriculture, which has been kept on the margins of negotiations since the creation of GATT, was perhaps the greatest failure. Although some proposals were put forward, the developed countries persisted with their refusal to abolish subsidies and other forms of support for their producers that distort world trade. Developing countries regard this obduracy as an insuperable obstacle, since trade in agriculture is more protected now than it was before the Uruguay Round owing to the level of tariffs applied (higher than for industrial goods), the opaqueness of a number of tariff and non-tariff mechanisms and the laxness of the safeguard mechanism for the sector.

Regarding market access for non-agricultural goods, a non-linear formula was proposed for reducing tariffs, involving larger cuts in those above the average and a smaller one in those below it. Developing countries rejected this formula because of its complexity and because it ran counter to the principle of less than full reciprocity set forth in the Doha Declaration, affecting their nascent export industries. Regarding the Singapore Issues, a degree of rapprochement was achieved with the issues of transparency in government procurement and trade facilitation, mainly in relation to customs.

The results of Cancún were thus regarded as a failure and the Conference instructed the WTO General Council to arrange for work to be done on some issues to unblock the process, while consideration also began to be given to an extension to the original Round deadline.³⁹ The obvious difficulty in reaching significant multilateral agreements has been compounded by other disturbing developments. First, the expiration of the deadlines agreed for some transitory regimes threatens to leave important issues in limbo for an indefinite period. This is the case, for example, with the non-

³⁷ United States support for the main backers of the investment negotiations, the European Union and Japan, could account for the progress made in this area.

³⁸ The so-called Singapore Issues, first discussed at the inaugural Ministerial Conference of WTO, include the relationship between trade and investment, the interaction between trade and competition policy, transparency in government procurement and trade facilitation.

³⁹ The General Council meeting of 15 and 16 December 2003 likewise failed to settle on mechanisms for unblocking the negotiations.

actionable subsidies whose deadline expired in 1999 and the so-called “peace clause” of the Agreement on Agriculture that expired in late 2003.⁴⁰

Second, there has been a proliferation of regional and bilateral treaties that sometimes involve both developed and developing countries. As of early 2004 there were 215 of these treaties operating worldwide and the number is expected to rise to about 300 by 2007. Some 40% of world trade now takes place under the auspices of such treaties, and this percentage is expected to exceed 50% by 2005 (United Nations, 2004). This development has been particularly important for Latin America and the Caribbean, which is distinguished from other regions of the developing world by the number of trade negotiations each country is engaged in. Asian countries have traditionally shown a clear preference for multilateral negotiations as against bilateral or regional ones, and for informal rules and contractual relationships among companies as against intergovernmental agreements, while African countries have sought to preserve their traditional access privileges, without granting reciprocity. In Latin America and the Caribbean, for different reasons, the countries have preferred reciprocal concessions with binding rules and legal dispute settlement mechanisms that increasingly protect the interests of private investors against State action, among other things. Broadly speaking, while they have guaranteed access to the major developed-country markets, these agreements have reduced yet further the room for manoeuvre of the region’s governments in designing and implementing productive development policies.

Consequently, the current state of international negotiations is facing developing countries with difficult choices. On the one hand, it is usually better to carry on negotiating than to sign a disadvantageous agreement. Indeed, some analysts regard the firmness shown by a number of developing countries (G20+) in Cancún as a sign of progress, even if the negotiating process was blocked as a result. On the other hand, the lack of progress in multilateral negotiations favours the strategy of the developed countries, particularly the United States and the European Union, which continue to sign free trade agreements with countries or regions in the developing world covering many issues over which there is no multilateral consensus. For many developing countries, increasing and stabilizing access to developed-country markets by signing a free trade agreement is almost an end in itself, and it thus contributes to the same effect.

A palpable example of this dilemma for developing countries is the current state of the Free Trade Area of the Americas (FTAA) negotiations. In November 2003 the trade ministers of the FTAA countries issued a statement of intent reaffirming their commitment to completing the negotiations successfully by the deadline (January 2005) laid down for the creation of a hemispheric free trade area.

They also agreed that the negotiating teams should aim for a balanced agreement that took account of the differences in size and development level among the economies of the hemisphere and that, in addition to a common basic agreement, the countries could accept different levels of commitments rather than signing up to a single undertaking (variable geometry agreements). The negotiations in progress suggest, however, that the common basic agreement will have very little substance, making the FTAA look more and more like an aggregate of bilateral agreements radiating out from the United States, but one that does not include all countries. An agreement with these characteristics would cause major trade diversion, thus weakening intraregional transactions and the political project of regional integration.

⁴⁰ The peace clause of the Agreement on Agriculture laid down a term of nine years beginning in 1995 during which some subsidies would be non-actionable under the WTO Agreement on Subsidies and Countervailing Measures, i.e., it made it impermissible for countervailing measures to be applied against them for a time. It has been suggested that developing-country exporters of agricultural goods should start to bring cases before the WTO Dispute Settlement Body now that the peace clause has expired (Nogués, 2004a).

3. Environmental sustainability

The United Nations Conference on Environment and Development (Earth Summit, Rio de Janeiro, Brazil, 1992) was a historic milestone in the process of setting a global agenda for sustainable development, calling forth a political consensus at the highest level. This Conference began the transition to a new international sustainable development regime, represented by a new generation of agreements and a global programme of action.⁴¹ The Conference also adopted innovative principles designed to put international cooperation on a more equitable footing. It is important to note that the principles contained in the Rio Declaration involve explicit recognition that “levelling the playing field” in respect of environmental issues is neither possible nor desirable, in contrast to the principles that prevail in the economic spheres of the new international structure. This is the case with Principle 7 concerning common but differential responsibilities, which provides a political basis for the developed countries to accept greater environmental commitments under multilateral agreements than developing ones.

The meeting marked a turning point in the negotiation of multilateral agreements, taking a broad view of development that recognized the importance of reconciling economic production and international trade with sustainable use of natural resources and protection for the environment. Many of these agreements and their protocols incorporated innovative financial mechanisms and instruments to facilitate the access of developing countries to new technologies.

Progress was also made subsequent to Rio with multilateral agreements emphasizing certain environmental threats that had loomed larger as scientific knowledge increased. The main achievement of these agreements was to spell out the links between the environment, health, and production, trade and social policies.⁴² A growing international perception of how interdependent countries were in relation to global environmental problems meant that the legally binding instruments of Rio were adopted and ratified more quickly than in previous decades and that virtually all countries subscribed to them.

Although the international community enthusiastically committed itself to applying these instruments, the original impetus faded over the course of the 1990s. More than a decade after the Rio Conference, it is undeniable that implementation is lagging badly. Much work remains to be done in applying coherent policies in the spheres of finance, trade, investment, technology and sustainable development. Furthermore, the funding made available is not enough for the range of agreements reached subsequently to be implemented with reasonable thoroughness, and nor have the technology transfer mechanisms provided for in agreements been improved.

At the World Summit on Sustainable Development (Johannesburg, South Africa, 2002), the political commitments of the Rio Declaration were reaffirmed, particularly Principles 7 and 15 concerning common but differential responsibilities and the precautionary principle, respectively. Furthermore, the 34 targets agreed to in the plan for implementing the decisions of this Summit complemented the commitments previously established in Agenda 21 and in the development objectives laid down by the Millennium Declaration. Again, there was recognition for the first time of the importance of specific regional initiatives and of cooperation among public-sector, private-sector and civil society actors through the voluntary partnerships mechanism. From an economic development point of view, these principles have translated into new imperatives for the countries of the region, both institutionally and politically. This is firstly because there is now an opportunity to capitalize on the kind of productive competitiveness that is attained through

⁴¹ Participants in the United Nations Conference on Environment and Development approved Agenda 21, the Rio Declaration on Environment and Development, the authorized Statement of principles to guide the management, conservation and sustainable development of all types of forests (not legally binding), the Convention on Biological Diversity and the Framework Convention on Climate Change.

⁴² This is particularly evident in the Kyoto and Cartagena protocols and the Rotterdam and Stockholm Conventions, respectively.

environmental excellence and good use of natural diversity, and secondly because a conditionality is created for goods and services production systems and international trade.

The global agenda being shaped by current international debates covers a number of important issues (Ocampo and Martin, 2003; United Nations, 2002a; ECLAC/UNEP, 2001). First, it stresses the need to alter certain unsustainable patterns of consumption and production in both developed and developing countries. In this area, energy efficiency is unquestionably one of the most important items on the agenda. Addressing it will require the gradual creation of a world alliance for the use of renewable energy sources and clean, efficient conventional technologies. The Kyoto Protocol is the multilateral instrument *par excellence* for pursuing this strategy. The subsequent Bonn and Marrakech agreements, which build on it, give grounds for cautious optimism about the prospects for implementing the clean development mechanism which, with glaring exceptions (including the United States), has been supported by the international community, including most recently the European Union, which has agreed to set up a regional mechanism called “Eurokyoto”. This mechanism is the first concrete example of a global environmental services market, which should be extended in this and other fields in future.

The agreements on energy resources form part of a broader range of activities aimed at promoting environmental efficiency and clean technology use worldwide on the basis of the commitment by multinational companies to work towards this objective, the extension of some voluntary international standards (ISO 14000), technology transfer to developing countries and the provision of technical and financial assistance to small and medium-sized enterprises. Perhaps the most important voluntary international initiative of recent years has been the Global Compact signed between global business and the United Nations at the World Economic Forum in Davos, Switzerland, in February 1999. It sets out nine fundamental principles on the basis of which the two sides undertake to work together. These principles include aspects of human rights, employment and the environment; the last three seek to reconcile environmental protection and economic growth by recommending that companies should back a precautionary approach to environmental challenges (Principle 7), undertake initiatives to promote greater environmental responsibility (Principle 8) and encourage the development and diffusion of environmentally friendly technologies (Principle 9).

It is necessary, then, for companies to accept greater responsibilities and for technological development programmes to be implemented to raise the productivity and competitiveness of industries in developing countries. Work is likewise needed to promote ecological product design, labelling standards and other transparent, verifiable and non-discriminatory consumer-oriented information practices, taking care to ensure that they are not used as covert trade barriers.

A second important issue is sustainable management of ecosystems and biological diversity. What is needed in this case is an alliance to uphold a world commitment to *in situ* conservation of biodiversity, preserve important ecosystems and prevent damage to them. This global alliance should be formed within a framework that combines the principles of global administration to protect the land and marine environment, involving quantitative targets and measures to achieve them, and that incorporates the main objectives of the Convention on Biological Diversity, the United Nations Convention to Combat Desertification in Those Countries Experiencing Serious Drought and/or Desertification, Particularly in Africa, and the Global Programme of Action for the Protection of the Marine Environment from Land-based Activities. For these initiatives to be implemented effectively, a global compensation fund should be set up to finance the conservation and restoration of ecosystems, with recognition being given to the environmental services provided by natural ecosystems. This also means achieving synergies among global and regional conventions

and instruments for the protection and sustainable use of biodiversity and ecosystems, including forests, through the partnership providing the instrument of cooperation in this area.⁴³

Third, it is important to encourage countries to ratify the Cartagena Protocol on Biosafety so that it can come into force. It is also necessary to apply the mechanisms approved for analysing the risk that genetically modified organisms might pose to biodiversity. In recent years, biotechnology has become a major industry that plays a strategic competitiveness-raising function. Nonetheless, innovations have been the work of private-sector companies in the developed world, and are protected by intellectual property rights. As a result, access to these innovations is limited for the vast majority of developing countries, besides which there is growing concern about the risks they might give rise to.

The Protocol supplies an international regulatory framework for these matters that reconciles the protection requirements of trade and the environment. It is also the first multilateral treaty to institutionalize the precautionary principle, and it establishes the prior informed consent procedure to ensure that countries have the information they need to take decisions about importing products based on modern biotechnology. There are also plans to create equitable technology transfer mechanisms to enable developing countries, particularly those with megadiversity, to play an active part in this emerging market.

To develop the multilateral mechanisms referred to, it will be necessary to make a reasonable amount of funding available and to consolidate operating approaches that enable global resources to be targeted on problems that are likewise global, in accordance with the principle of common but differential responsibilities. This being so, it is worth exploring the opportunities for taxing activities of international scope that are potentially damaging to the world environment and using the resources collected in this way to set up specific funds for solving such problems on a multilateral basis. Extending instruments similar to the clean development mechanism to new fields by creating genuinely global markets in environmental services might be one way of achieving this. The “polluter pays” criterion which underlies Principle 16 of the Rio Declaration should be the guiding rule, but there should also be the necessary flexibility for mitigation measures to be implemented in a different geographical area.

Education, research and development, technology transfer and adaptation, and access to information will make an ever-increasing contribution to sustainability. This derives from Principle 10 of the Rio Declaration, which enshrines the “right to know” so that society has access to accurate, timely information on the environmental hazards it is exposed to in everyday life. This right is a legal concept that is becoming increasingly prominent in the design of latest-generation environmental management instruments based on incentives linked to publicization of information on the environmental record of economic agents. All this creates greater transparency and thus reduces information asymmetries and stimulates “more perfect” competition in markets.

Given the evidence that the accumulation of environmental damage on different scales has led to greater ecological fragility, the precautionary principle has acquired a new and broader meaning. The time will come when protection efforts will not be enough, while the need for adaptation and mitigation and, above all, scientific and technological development to cope with the new challenges will be increasing. In this sphere, mechanisms to protect the intellectual property embodied in traditional knowledge, be this formal or informal, will take on particular importance.

These considerations indicate the need for greater coherence and compatibility between the world trading system, including intellectual property protection, and sustainable development. The Declaration of the Fourth WTO Ministerial Conference (Doha, Qatar, 2001) represents a major step forward here, as it explicitly acknowledges the need to analyse the interactions between WTO rules and multilateral environmental agreements. The Declaration clearly specifies that countries may

⁴³ See the Report of the Secretary-General to the Commission on Sustainable Development (United Nations, 2002a).

take steps to protect human and animal health, plant life and the environment, always provided that the measures applied do not act as disguised trade discrimination or protectionist mechanisms. Again, analysis of the effects of environmental measures on market access, particularly in the case of developing countries, is identified as a priority issue for the Trade and Environment Committee, as is analysis of the main provisions of the agreement on intellectual property protection and environmental labelling.

Globalization is also creating new and different imperatives for world environmental management and thence international cooperation. For one thing, it is leading governments to act proactively in the international sphere in order to protect global environmental goods and services by means of innovative multilateral schemes. For another, it has been encouraging the private sector to play a leading role, particularly in some of the multilateral environmental agreements and their protocols. In this context, the issue of governance for sustainable development is a matter of huge international interest. In particular, there is an urgent need to strengthen the capacity of the United Nations to respond to the challenges of sustainable development through coordination agreements and joint programming mechanisms that transcend piecemeal approaches and establish close links with regional and subregional organizations and with multilateral financing bodies.

4. International migration

International migration has surged again in recent decades, with the number of migrants and the number of origin, transit and destination countries all increasing. At the same time, this has become one of the most delicate of international issues owing to the growing concern being expressed about its consequences in developed countries. In fact, migrants are only a very small percentage of the world population, with growth between 1965 and 2003 taking it to only 3%. Nonetheless, the striking thing is the way migrants tend to concentrate in developed regions and, within these, in a small number of countries, where the percentage of migrants in the population is several times larger than in the world as a whole (United Nations, 2002b).

Despite the restrictions applied to the movement of labour, the developed world undoubtedly needs foreign workers. These restrictions are not actually new, but they have been tightened in the European Union countries and the United States, resulting in a decline in legal migration and a large increase in the number of illegal immigrants. The net result is that the stock of immigrants has continued to grow in the early years of this decade, although at rates that have varied among regions and periods. In some member countries of the Organisation for Economic Co-operation and Development (OECD), annual flows of legal migrants have tended to decline, although they have remained above 100,000 people a year in the main economies (Ocampo and Martin, 2003).

The inclusion of migration on the international agenda is important if there is to be an international system that works to narrow global asymmetries. There is no theoretical justification whatsoever for liberalizing markets for goods, services and capital whilst continuing to place tight restrictions on the international movement of labour. Furthermore, asymmetrical liberalization of markets has regressive effects at the world level, since it benefits the more mobile factors of production (capital and skilled labour) and harms those whose mobility is restricted (less highly skilled labour). This restriction also nullifies one of the mechanisms that, according to a number of historical analyses, played a vital role in income convergence among the countries that are now developed. Furthermore, placing tighter restrictions on the mobility of less highly skilled labour selectively drains off the human capital of developing countries and tends to accentuate income differences by skill level.

As ECLAC (2002a) has insisted in recent years, there is still a crucial need for global agreements on migration if a democratic, shared and sustainable contemporary migration agenda is to be achieved. These agreements need to replace criteria whose aim is migration control with others that are more closely attuned to the dynamic of labour markets and the protection of

individual rights. The main objective, therefore, needs to be the adoption of a global agreement on migration policies that takes account of diversity and is based on the relevant regional experiences. Dialogue among countries and the inclusion of different actors, promoted by the United Nations for the governance of international migration, are echoed in the existence of regional and hemispheric mechanisms, reflecting the political will to achieve consensus and shared responsibility among countries.⁴⁴

Latin America and the Caribbean has distinguished itself by some recent initiatives with this aim. The first and most important was the Regional Conference on Migration held by the countries of North and Central America (the Puebla Group, formed in the Mexican city of Puebla in 1996). The Puebla Group brings together countries with high emigration, immigration and transit levels that differ enormously in terms of social and economic development. Its special features are the inclusion of numerous issues requiring governance and the application of multilateral mobility and migration diplomacy management principles to problems that have traditionally been a source of friction among countries. Civil society has gradually been encouraged to participate in implementing the Plan of Action, and it is thus being held up as a regional model of dialogue and cooperation.

More recently the South American Conference on Migration was created. This initiative aspires to become a forum similar to the Puebla one, and since 1999 the countries have been jointly seeking better migration practices on the basis that the movement of people across borders is an important stage in social and economic development. Continuous sharing of experience takes place in these institutionalized forums with a view to addressing common problems, establishing a baseline of consensus (in the sphere of comparative legislation, for example) and developing a broad agenda that addresses the needs of each country. Another of the virtues identified for them is that they have encouraged dialogue and debate within each country.

Although these bodies are still a long way from becoming supranational organizations with binding powers, they have created opportunities for civil society and promoted best practice as regards respect for human rights. Furthermore, they are encouraging tolerance, renewing the perceptions of different sectors and contributing, slowly but surely, to an understanding in each society that migratory movements form part of the day-to-day relations among States, communities, families and individuals.

One of the most important milestones, lastly, has been the development of a migration agenda in the Summit of the Americas process, whose Plan of Action (Quebec, Canada, April 2001) explicitly includes commitments on migration, human rights and equity. This initiative has benefited enormously from the progress made by the intergovernmental forums mentioned.

The lack of an international framework for the governance of migration increases the risks of exclusion, discrimination and abuse of human rights, particularly in the case of undocumented migration, which continues to rise as methods for evading controls on the entry and residence of foreigners proliferate. One extreme situation is the traffic in persons, with the most serious manifestation of this phenomenon being the exploitation of minors. This highlights the ethical imperative of protecting rights and the need for the relevant international instruments to be ratified, or fully implemented where they have been approved.

⁴⁴ In December 2003 the Secretary-General of the United Nations created the Global Commission on International Migration, composed of distinguished public figures from South Africa and Sweden. The Commission began operating on 1 January 2004. Its objective is threefold: (a) to place international migration on the global agenda; (b) to analyse gaps in current policy approaches to migration and examine inter-linkages with other issue-areas, and (c) to present the United Nations Secretary-General and other stakeholders with recommendations to improve the governance of international migration.

By and large, the instruments currently in use are limited in scope. The broadest of all is the International Convention on the Protection of the Rights of All Migrant Workers and Members of Their Families, approved by the General Assembly of the United Nations in 1990, which came into force in mid-2003. The importance of this convention is that it reiterates the fundamental human rights of migrant workers and their families, including those who might be living in an irregular situation. It also provides States with a legal instrument that helps standardize legislation across countries. Over 13 years after it was approved, however, this Convention has not been signed by a single developed country and those countries that have ratified it, 25 in number, are not major recipients of immigrants. Closely related to the above is the need to reduce the hazards created by discrimination and xenophobia by ratifying the relevant international instruments and complying with the Plan of Action signed at the World Conference against Racism, Racial Discrimination, Xenophobia and Related Intolerance held in Durban, South Africa, in 2001.

Meanwhile, the governance of international migration needs to include improvements to the remittances market (one of the most visible manifestations of today's migration), the adoption of innovative mechanisms to link countries of origin with their emigrants (taking advantage of developments in the communications media) and the inclusion of a gender perspective, given that women are a majority in a number of migration flows. Remittances to developing and transition countries have been put at about US\$ 93 billion for 2003, with a third of this total going to countries in Latin America and the Caribbean, especially Mexico (see table 1.7).⁴⁵

Table 1.7
REGIONAL DISTRIBUTION OF REMITTANCES, 2001-2003
(Billions of dollars)

Region	2001	2002	2003	Increase 2001-2003 (percentages)
East Africa and Pacific	13.7	17.0	17.6	28.9
Europe and Central Asia	10.2	10.3	10.4	1.9
Latin America and the Caribbean	22.9	26.8	29.6	29.3
Middle East and North Africa	13.2	13.0	13.0	-1.2
South Africa	13.1	16.9	18.2	38.7
Sub-Saharan Africa	3.9	4.1	4.1	3.5
Total	77.1	88.1	93.0	20.7

Source: World Bank, *Global Development Finance 2004: Harnessing Cyclical Gains for Development*, Washington, D.C., April 2004.

Despite its size, the family remittance market is very imperfect, with high and variable transfer costs and differential participation by agents. In turn, the lack of stable policies to stimulate or orient productive utilization of family remittances minimizes their effect on the destination communities. Although less significant in quantitative terms, collective remittances are seen as potentially high-quality resources, given the experience of generation and utilization that communities have had, and the important transnational linking role they are taking on. What sets them apart is the participation of the actors generating the remittances (emblematic of which are the "hometown associations" in the United States) and the use made of strategic alliances among banks, financial institutions and the communities of origin. Nonetheless, the results of these initiatives have owed little to sustained government policy, and they have consequently suffered from limitations such as lack of continuity in their results, the limited management capabilities of

⁴⁵ The scale of remittances today is very large in macroeconomic terms. In Mexico they are equivalent to four times the country's agricultural exports, exceed tourism revenues, and represent two thirds of oil exports. In the economies of Central America, the Dominican Republic and several Caribbean countries, remittances provide one of the largest currency flows. Generally speaking, the bulk of them consist of family remittances and they exceed the development funding received from developed countries.

recipients and problems deriving from the marketing of certain products, among others (Moctezuma, 2002).

A particularly disturbing issue is the selective draining of skilled human resources resulting from the migration policies of OECD countries, which are heightening the already deep asymmetries between developed and developing countries as regards their research and development capabilities. Again, as has been emphasized in the economic development literature, this can lead both to virtuous circles and to poverty traps (Easterly, 2001a and 2001b). Two factors combine to increase migration flows of skilled personnel from developing countries to the developed world. One is the rising returns and large externalities of knowledge creation, which creates agglomeration processes in scientific communities.⁴⁶ The other factor is the special migration policies implemented in developed countries in response to growing demand for highly skilled personnel. The main pole of attraction is the United States, which in the 1990s took in almost a million specialists from the developing world in the area of information technology alone under the special H1-B visa programme. A number of other OECD countries (Australia, Germany, New Zealand and the United Kingdom) have also implemented selective programmes, such as Germany's "green card" scheme (Solimano, 2002).

In the case of emigration by highly skilled personnel, what is striking is the policy inaction of developing countries in the face of what is a long-standing problem which is perceived to have grown worse.⁴⁷ Their ability to retain human resources at this level is decreasing all the time owing to the lack of opportunities for using their skills, which results in open unemployment, underemployment, inadequate pay and tertiarization (ECLAC, 2002b). Again, there have been few initiatives to create links with emigrants, and existing networks have been sporadic, erratic in their development and starved of government support, despite their potential as a meeting ground between the scientific diaspora and local communities.⁴⁸ This situation is particularly serious given the waste of opportunities it entails as regards the introduction of innovative strategies in science, technology and productive investment.

⁴⁶ At present, three quarters of all foreign postgraduate students in the United States, which is the main destination for Latin American and Caribbean students at that academic level, remain in the country after completing their studies. In the 1970s this percentage was around half (Lema, 2000).

⁴⁷ Most Latin American and Caribbean countries have over 5% of their most skilled human resources abroad. In the smallest and poorest countries, the figure is in excess of 10% (Pellegrino and Martínez, 2001).

⁴⁸ No less than seven Latin American networks have been identified in the region (in Argentina, Chile, Colombia, El Salvador, Uruguay, Peru and Venezuela). All of them are heterogeneous and of different sizes, with most having arisen in the 1980s. The best known is the Red Caldas of Colombia, which was one of the earliest initiatives. In Chile, some of these networks have been strengthened recently (Pellegrino and Martínez, 2001).



Chapter 2

The global economic performance of Latin America and the Caribbean

Among the world's developing regions, that of Latin America and the Caribbean was the most decisive in acting to adopt economic liberalization programs. The process was clearly evident in the 1991-2003 period, though not without enclaves of stagnation and regression, as will be discussed. The greatest frustration has been the gap between the region's per capita GDP and that of the developed world since 1973. According to data provided by Maddison (2001), the region's per capita GDP, which fluctuated around 28% of the United States figure in the 1870-1973 period, dropped to 22% in 1998. Since then, it has declined in the region as a whole, as well as in half of the individual countries of the region, and the economies that grew most in the 1990s have lost strength (ECLAC, 2002c). This poor performance in 1998-2002 came on the heels of a quarter of a century of poor economic performance for the region, and the gap between its per capita GDP and that of the developed world widened further. Renewed economic growth in 2003 (1.5%) and estimates for 2004 (approximately 3.8%) are positive signs, but do not remedy the situation.

This widening gap has been accompanied by increasing income distribution disparities, as well as growing poverty and indigence, in practically all of the region's countries (ECLAC, 2003e). According to ECLAC estimates for the 1991-2003 period, the worsening of income distribution continued, with very few exceptions in the region. This deterioration is linked to asymmetric changes in distribution during

economic cycles, the frequency and amplitude of which were pronounced in the past 30 years. Thus, lower-income sectors lost more ground than others during recessive periods, while for higher-income sectors growth (in relative terms) was above average during boom periods. Changes among the poor population are also indicative. The percentage of the population living in poverty declined during the economic recovery of 1991-1997, but remained higher than before 1980. After 1997, improvement ceased, and the situation even worsened again in some countries.¹ The general optimism of the early 1990s was replaced by a sense of anxiety, as the results of the reform period became evident.

This chapter begins by presenting some stylized facts related to development in Latin America and the Caribbean following nearly two decades of economic and institutional reform. The second section provides a conceptual framework for analyzing the challenges facing productive development strategy in the current open economies of the region. It emphasizes the importance of accumulating and linking: different types of capital for the purpose of overcoming physical problems (related to both natural and constructed capital); productive and technological capital, and business practices associated with productive units; human capital (through education and training, linkages with labour markets and social protection systems); and institutional capital, in order to create the synergies required to achieve objectives of efficiency, equity and proper economic functioning at the national level. This second section ends by offering some strategic guidelines for productive development in open economies.

I. Stylized facts related to development in Latin America and the Caribbean in the 1990s

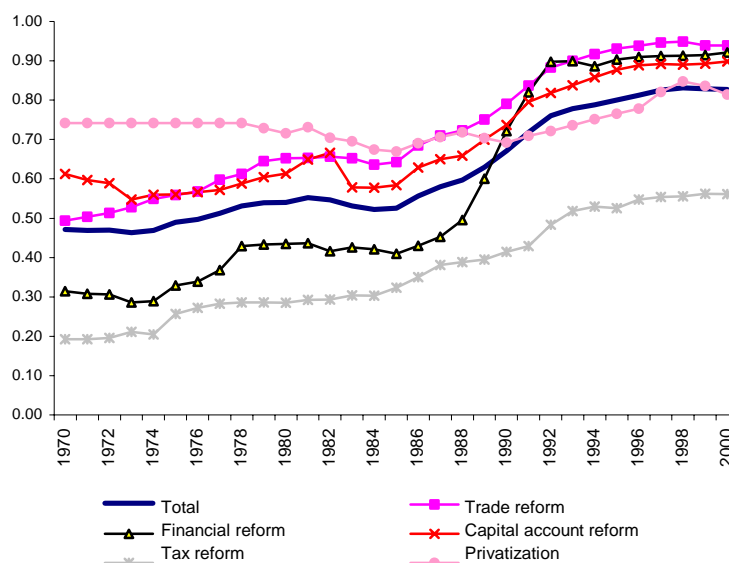
Though reform is usually thought of as a phenomenon of the 1990s, experiments in economic liberalization began in the 1970s in the Southern Cone (Argentina, Chile and Uruguay) and, to a lesser extent, in some other countries as well. Between 1982 and 1985, following the debt crisis, many of the reforms included in liberalization programs were halted and even, in some cases, reversed through temporary controls on the liberalization of capital accounts and increased tariffs, as well as non-tariff barriers, along with intervention in, or nationalization of, insolvent private banks (Ocampo, Bajraj and Martin, 2001).

From 1985 onwards, economic reform began to affect nearly the entire region. Trade and national financial markets were the first areas to be liberalized on a widespread basis. Liberalization of international capital flows followed, beginning in 1991. Thus, significant convergence occurred in these three areas, starting in the second half of the 1990s, significantly raising the average regional indices associated with these areas, as shown in figure 2.1.

In the areas of privatization and tax systems, there has been less convergence. Though Argentina and Peru have privatized almost all State enterprises, other countries have maintained a State presence in key sectors such as hydrocarbons and mining (Chile, Colombia, Ecuador, Mexico and Venezuela) and public services (Costa Rica and Uruguay). In a third group of countries, the State's business activity has been always reduced. There may be less convergence in tax reform because of the common conflict in that area between neutrality and equity as objectives, and also because of differences in the size of the public sector in the different countries of the region. However, tax reform has been relatively frequent since the second half of the 1990s (Martner and Tromben, 2003).

¹ It should be noted that greater growth is not the only factor here. Much of the improvement in the 1991-1997 period is due to the effort of the region's governments to increase social spending, which rose from 10.4% of GDP in 1990-1991 to 13.1% in 1998-1999, and has remained at that level until today (ILPES, 2004).

Figure 2.1
LATIN AMERICA: ECONOMIC REFORM INDICES



Fuente: Samuel Morley, Roberto Machado and Stefano Pettinato, “Indexes of structural reform in Latin America”, *Reformas económicas series*, No. 12 (LC/L.1166), Santiago, Chile, Economic Commission for Latin America and the Caribbean (ECLAC), 1999, updated by ECLAC.

An interesting pattern emerges as one examines the breadth and depth of reform in the different countries. Countries whose economies had low reform indices in 1985 introduced the greatest changes in the 1990s, heightening regional convergence. The exceptions were Argentina, which pushed its reforms even further, and Venezuela, which still has the region’s lowest indices (see table 2.1).

In the ongoing debate concerning the results of economic liberalization (Kuczynski and Williamson, 2003), terminology has become rather confused. Thus, emphasis is placed on the need to consolidate “first generation” reforms and proceed to “second generation” reforms in order to strengthen institutions and create social safety nets. In principle, there is basic agreement on various issues: the need for solid macroeconomic management; the importance of being open to, and taking advantage of, opportunities in the international economy; the desirability of the private sector’s taking an increasing role in the development process; the importance of better public policy; and the need to strengthen institutions and adopt active social policies. Nevertheless, there are profound differences of opinion regarding the scope and significance of each of these areas, and on how to implement them.

Table 2.1
INTENSITY OF ECONOMIC REFORM, AND CHANGES THEREIN

Intensity of reforms, 1985-2000	Level of reforms, 1985	
	Below the average	Above the average
Below the average	Venezuela	Chile Colombia Honduras Mexico Uruguay
Above the average	Bolivia Brazil Ecuador El Salvador Jamaica Paraguay Peru Dominican Republic	Argentina

Source: Samuel Morley, Roberto Machado and Stefano Pettinato, “Indexes of structural reform in Latin America”, *Reformas económicas series*, No. 12 (LC/L.1166), Santiago, Chile, Economic Commission for Latin America and the Caribbean (ECLAC), 1999, updated by ECLAC.

In truth, the concept of “generations” of reform is an essential part of the problem, since it assumes that the process of development is both linear and universal (ECLAC, 2002a). The assumption of linearity is clear when first generation reforms are seen as the foundation for subsequent generations of reform. However, this idea has not held up in all cases. There are: systems of macroeconomic management, for instance, that have led to procyclical practices, increasing risk for economic agents; cases of trade liberalization that have had net negative results in terms of generating/destroying productive activities, while accentuating structural differences between sectors, businesses and regions; instances where regulation of privatized public services is lacking, preventing productivity from being transferred to businesses and families; and new social policy models that entirely ignore the principle of solidarity, undermining the social cohesion that is indispensable. Significant changes in original designs have proven necessary in a number of cases in order to address the problems created by first generation reforms. In some cases, the reform process has been halted, while, in others, the principles on which it is based have been changed completely. In many cases, it has been necessary to “reform the reforms” (Ffrench-Davis, 1999a).

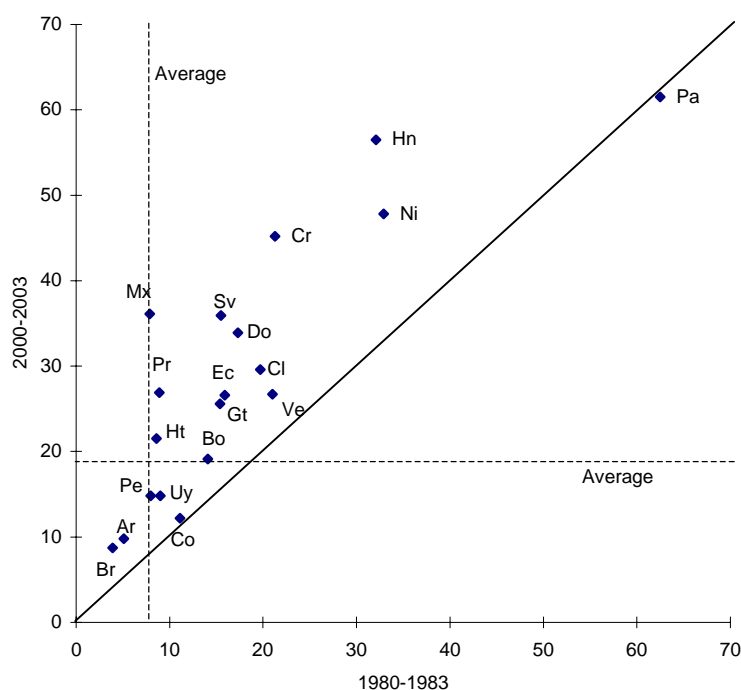
The second assumption—that the process is universal— ignores the rich diversity of capitalism in both developed and developing countries (Albert, 1992 and Rodrik, 1999). It is impossible to prescribe a single macroeconomic management model that will guarantee economic stability, and there is no single, universally valid, path to integration in the world economy or to optimal political, economic and social institutions. Nor is this to be lamented, since it implies a leading role for democracy. It also gives meaning to “the sense of belonging” in development policy and leads away from the notion of one dominant paradigm (Ocampo and Martin, 2003).

In the case of Latin America and the Caribbean, a review of the last few years reveals the achievements of the 1990s, as well as deficiencies and still-pending issues. ECLAC shares the idea that the achievements must be used as a basis for further progress, but believes that addressing pending issues is equally important—perhaps even essential— if the objectives of reform are to be reached. A proper approach to active public policy can connect with markets better than did the perspectives that predominated in the initial reforms.

1. Greater trade liberalization

One of the salient facts of the reform period was the dramatic and widespread trade liberalization of the region's economies. Openness coefficients increased considerably between the 1980-1983 period and the 2000-2003 period, as shown in figure 2.2.² First, all of the region's economies are more open today than they were at the beginning of the 1980s. Second, the increase in openness has been far from minor. The regional average has more than doubled, rising from 7.8% for 1980-1983 to 18.9% for 2000-2003. The greater openness of small and medium-sized economies becomes evident if simple averages (17.4% and 29.1% for the two periods) rather than weighted averages, are considered. Finally, the two economies that were least open in the 1980s (Argentina and Brazil) have not changed in that respect, while Colombia, Peru and Uruguay, which were above the regional average are now below average. The remaining countries were, and are, more open than the regional average. Mexico is a case in point, having quintupled its openness coefficient in the period in question.

Figure 2.2
LATIN AMERICA AND THE CARIBBEAN: CHANGES IN TRADE LIBERALIZATION,
1980-1983 AND 2000-2003



Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of official figures from the countries.

Notes:

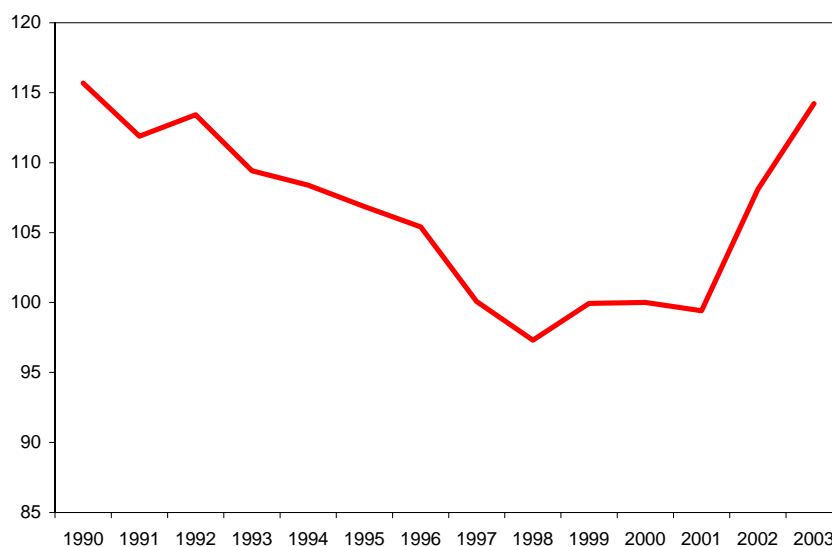
- The openness coefficients have been calculated as $\frac{1}{2}(X+M)/GDP$, at constant 1995 prices.
- Ar: Argentina; Bo: Bolivia; Br: Brazil; Cl: Chile; Co: Colombia; Cr: Costa Rica; Ec: Ecuador; Sv: El Salvador; Gt: Guatemala; Ht: Haiti; Hn: Honduras; Mx: Mexico; Ni: Nicaragua; Pa: Panama; Py: Paraguay; Pe: Peru; Do: Dominican Republic; Uy: Uruguay; Ve: Venezuela.

² The openness coefficient is defined as $\frac{1}{2}(X+M)/GDP$.

Both the region's exports and imports showed great strength. The physical volume of exports grew at an unprecedented rate between 1991 and 2000 (9.3% annually) —above the world average and exceeded only by China and India. The problems in the international economy in 2001-2002 interrupted this growth, which recovered, however, in 2003. While Mexico's exports, which represented almost one half of the region's total, contributed to the high average for the region, Brazil's modest export performance up to 2000 had the opposite effect. The majority of the remaining countries experienced strong growth in exports —in the neighborhood of 8% annually.

Meanwhile, imports increased even more than exports (ECLAC, 2004c). The major reason for this was sudden, broad-based tariff reduction, against a fairly generalized background of rising national currencies, which made imports relatively inexpensive (see figure 2.3).³ In addition, there was a rising trend in the purchase of foreign inputs and services by export firms and service providers. This was especially notable in transnational firms that have international networks of providers. Meanwhile, the restructuring of businesses oriented to the domestic market, when successful, required growing imports of capital and intermediate goods, as well as technological services. Finally —since openness operates in both directions— a process occurred in which national consumer goods are replaced by imported items.

Figure 2.3
LATIN AMERICA AND THE CARIBBEAN: REAL EXCHANGE RATE INDEX FOR IMPORTS^a
(Simple average, 2000=100)



Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of official figures from the countries and International Monetary Fund (IMF) figures.

^a The index of the effective real exchange rate, weighted for imports, is calculated by taking nominal exchange rates in relation to each of the major trading partners, deflating them for changes in the consumer price index in each of the countries and, finally, weighting bilateral trade as a share of all imports.

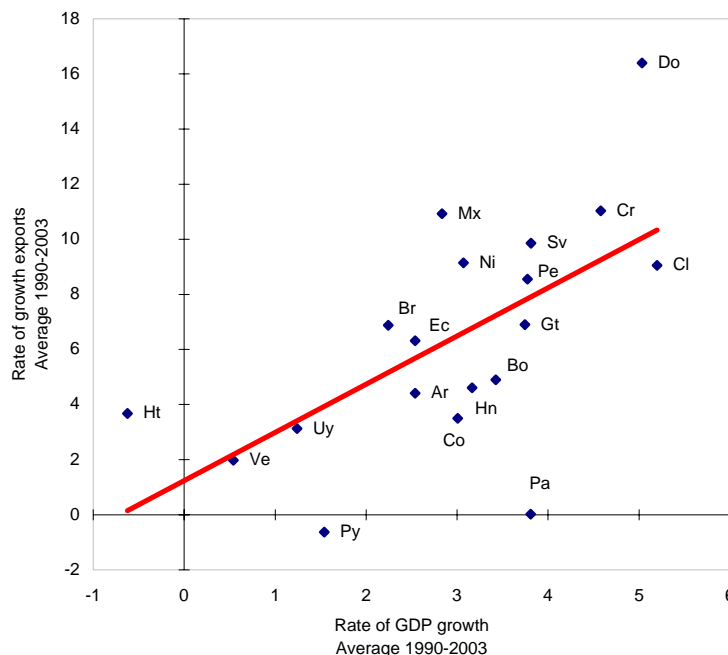
Performance by country in the 1991-2003 period shows a strong relation between rates of increase in exports and GDP growth, in that the countries with the greatest growth are those that most increased their exports (see figure 2.4).⁴ It should be emphasized that current patterns of export specialization in the region include both cases of success and instances of mediocre

³ In principle, economic liberalization should have led to currency depreciation. As in the Southern Cone in the 1970s, however, liberalization of the capital account in a period of strong capital inflow led to the appreciation of national currencies.

⁴ Excepting Panama and Paraguay, economies where service exports predominate.

performance. This contradicts the “curse of natural resources” postulate, and counters the strong evidence regarding the secular trend toward the worsening of terms of trade for commodities. Chile is the most conspicuous case here. Despite its specialization in exports based on natural resources, it maintained high GDP and export growth. The poor performance of Ecuador and Venezuela, whose exports are also heavily dependent on natural resources, are contrary cases. Mexico has benefited little, in terms of economic growth, from its notable success in expanding and diversifying its exports. Costa Rica, El Salvador and, especially, the Dominican Republic have achieved greater synchronicity between export performance and economic growth (Ocampo, 2004).

Figure 2.4
RELATION BETWEEN EXPORT GROWTH AND GDP GROWTH, 1990-2003



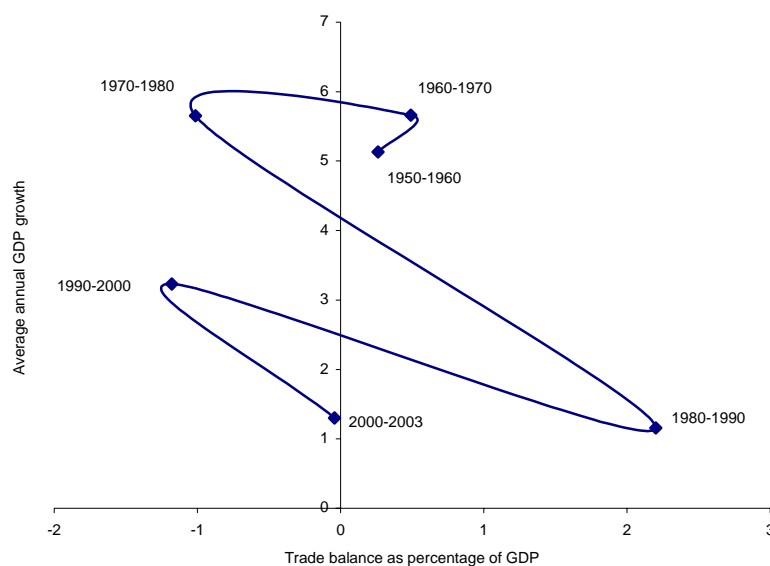
Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of official figures from the countries.

Note: Ar: Argentina; Bo: Bolivia; Br: Brazil; Cl: Chile; Co: Colombia; Cr: Costa Rica; Ec: Ecuador; Sv: El Salvador; Gt: Guatemala; Ht: Haiti; Hn: Honduras; Mx: Mexico; Ni: Nicaragua; Pa: Panama; Py: Paraguay; Pe: Peru; Do: Dominican Republic; Uy: Uruguay; Ve: Venezuela.

In macroeconomic terms, these changes in the aggregate led to a structural worsening of the relation between growth and trade balance. Trade deficits in 1990-1997 rose to levels comparable to those of the 1970s, but with rates of GDP growth three percentage points lower. In 2000-2003, the trade deficit was small and economic growth very low.⁵ In fact, the growth rate for the earlier period is only comparable to the 1980s rate, which was, however, accompanied by a trade surplus of more than two percentage points. The changes of the 1990s contrast even more unfavorably with the 1950s and 1960s, with their high growth rates and small trade surpluses (see figure 2.5). Contributing to the structural deterioration was the weakness of the linkages between exports and the rest of the productive apparatus, as well as the short-term bias of macroeconomic policy, which tended to generate exchange-rate lags as a result of the abundance of foreign capital during much of the 1990s.

⁵ Trade balance figures were volatile in the 2000-2003 period, with a deficit in 2000 and 2001 (US\$13.4 billion and US\$22.9 billion, respectively) and a growing surplus in 2002 and 2003 (US\$9.2 billion and US\$27.7 billion).

Figure 2.5
GDP GROWTH AND THE TRADE BALANCE, 1950-2003
(Median annual rates)



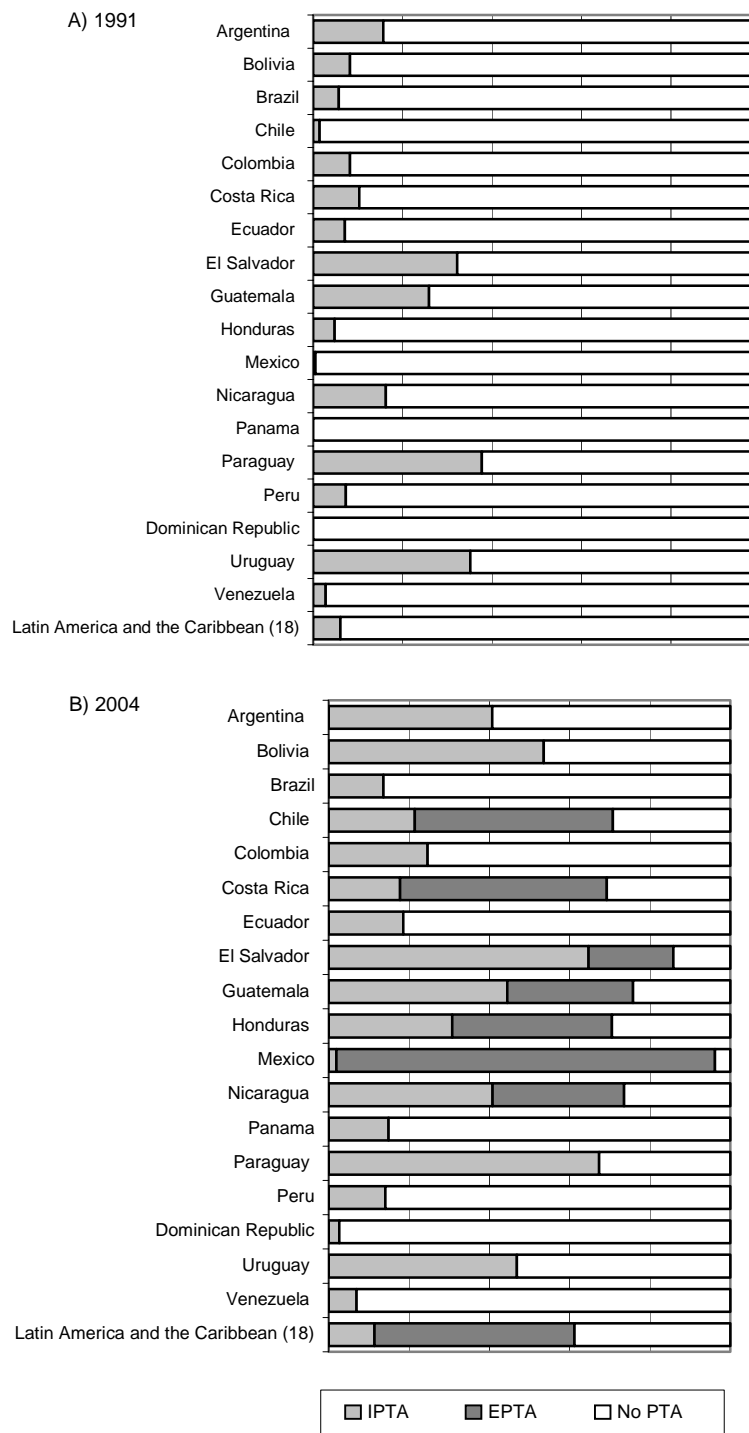
Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of official figures from the countries.

The export orientation of the region's countries, combined with the protectionist practices of the developed countries (see chapter 1), have made the issue of market access more important. Hence, the Latin American and Caribbean governments have been particularly active in reaching bilateral and plurilateral, as well as intra- and extra-regional preferential agreements (see figure 2.6). The rationale for this is that unilateral liberalization does not guarantee the openness of target markets. Thus, in an economy that is undergoing globalization and regionalization simultaneously, countries seek strategies for positioning themselves in import markets in ways that will give their products greater and more reliable access to those markets. As discussed in chapter 5, market access has become a central element in export incentives.

In 1991, multilateral preferential agreements were practically the only ones in force. They were associated with the region's four imperfect customs unions, which represented roughly 6% of total exports. The percentage was considerably higher for Paraguay and Uruguay in MERCOSUR, and for El Salvador and Guatemala in the Central American Common Market. The rest of the region's exports took place outside of the framework of preferential agreements. This situation changed dramatically in the 1990s. Considering export destinations in 2003 and current preferential agreements, 61.2% of the region's exports may be expected to occur within the framework of various types of preferential agreements in 2004, including intra-regional and extra-regional bilateral agreements (1.2% and 3.1%, respectively), as well as intra-regional and extra-regional plurilateral agreements (10.2% and 46.7%).⁶ The most notable cases are Mexico, 95% of whose exports fall within multilateral extra-regional agreements; the Central American countries, for which three quarters of exports are within the framework of intra- and extra-regional plurilateral agreements; and Chile, more than 70% of whose exports take place under various preferential arrangements.

⁶ Intra-regional agreements are defined as those involving only Latin American and Caribbean countries.

Figure 2.6
EXPORTS IN THE FRAMEWORK OF PREFERENTIAL AGREEMENTS
(As percentages of exports)



Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of official figures from the countries.

Notes:

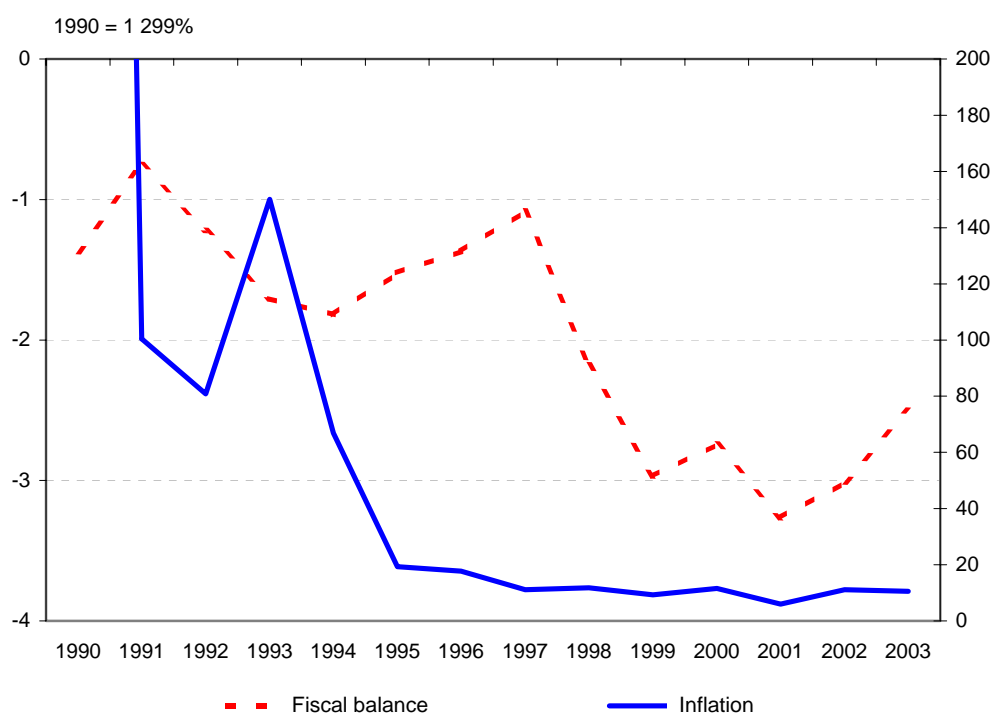
- IPTA: Intra-regional preferential trade agreements.
- EPTA: Extra-regional preferential trade agreements.
- PTA: Preferential trade agreements.

In contrast, a large reduction in import tariffs may be expected when the preferential agreements are in full operation. Thus, the simple average of most-favored-nation tariffs in the region's countries, which was 10.2% in 2003, will be reduced to an effective 6.9% tariff once the commitments involved in the agreements are implemented. The most outstanding cases are Mexico (a reduction from 16.4% to 3.1%) and Chile (from 6.1% to 1.3%). This effective reduction could have significant fiscal repercussions in a number of cases, making it necessary to raise domestic taxes.⁷

2. Meagre and volatile economic growth

Another economically significant phenomenon of the 1991-2003 period is increased domestic and, particularly, foreign confidence in the authorities responsible for macroeconomic management, as a result of success in reducing price instability and controlling budget imbalances, the region's two endemic ills. The region's budget deficits have fallen significantly as a percentage of GDP, compared with the late 1980s. They remained between one and two percent of GDP in the aggregate during most of the 1990s, though they rose to over 3% after 1999 (see figure 2.7). There are significant differences from country to country, with fiscal crises affecting a number of economies in the last few years, and high debt-GDP ratios still prevailing in some countries (ILPES, 2004).

Figure 2.7
LATIN AMERICA AND THE CARIBBEAN: FISCAL BALANCE AND INFLATION^a
(Simple average for Latin America and the Caribbean, 1991-2003)



Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of official figures from the countries.

^a Fiscal balance refers to the central government, and inflation to the change in consumer prices from year to year.

⁷ In the case of Chile, the value added tax was temporarily raised one percentage point to compensate for the reduction in tax revenue as a result of free trade agreements with the European Union and United States. For a more thorough analysis of this subject, see IDB (2004).

Progress in price stability has been more uniform, and shows more lasting effects. Average inflation in the region fell steadily until 2001, when it reached single-digit levels. In 2002, there was some deterioration, as average inflation increased for the first time in the decade. Nevertheless, major outbreaks of inflation were limited to a small number of countries, and the average figure fell to the single digits again in 2003 (ECLAC, 2003a).

Expectations that controlling the budget deficit and inflation would lead to greater economic growth and sustained growth in the investment rate did not materialize, however. In fact, the macroeconomic management model, which produced such significant progress on these fronts, has also been partially responsible for the sensitivity of economic growth rates to foreign capital, and for some undesirable features of the productive restructuring process, as well as the propensity for national banking crises in a number of countries (Ocampo, 2001a). In reality, as Stiglitz (2003b) maintains, one of the principal effects of the economic reforms has been the establishment of automatic destabilizers associated not only with public-sector but with private deficits and asset-liability ratios.

Though economic growth returned to a few Latin American and Caribbean economies toward the end of the 1980s, the recovery spread through the region as a whole only in the early 1990s, with renewed capital flows to the region after a long period of negative external transfers. This flow facilitated structural reform, as well as price-stabilization programs based on exchange-rate anchors. Meanwhile, the ability to attract foreign capital increased as a result of economic reforms—particularly, liberalization of capital-account regulations and privatizations, which spurred major foreign direct investment.

GDP growth, however, was low in comparison with earlier decades, except for the lost decade of the 1980s. In the period of 1991-2003, the annual increase in GDP was only 2.5%, or less than half of the 5.5% recorded between 1950 and 1980 (see table 2.2). The region's performance in the 1990s was clearly poorer than that of other developing regions, especially Southeast Asia, which expanded at an average rate of 6% (see chapter 1).

Table 2.2
GDP GROWTH AND VOLATILITY IN SELECTED PERIODS
(Median annual rates)

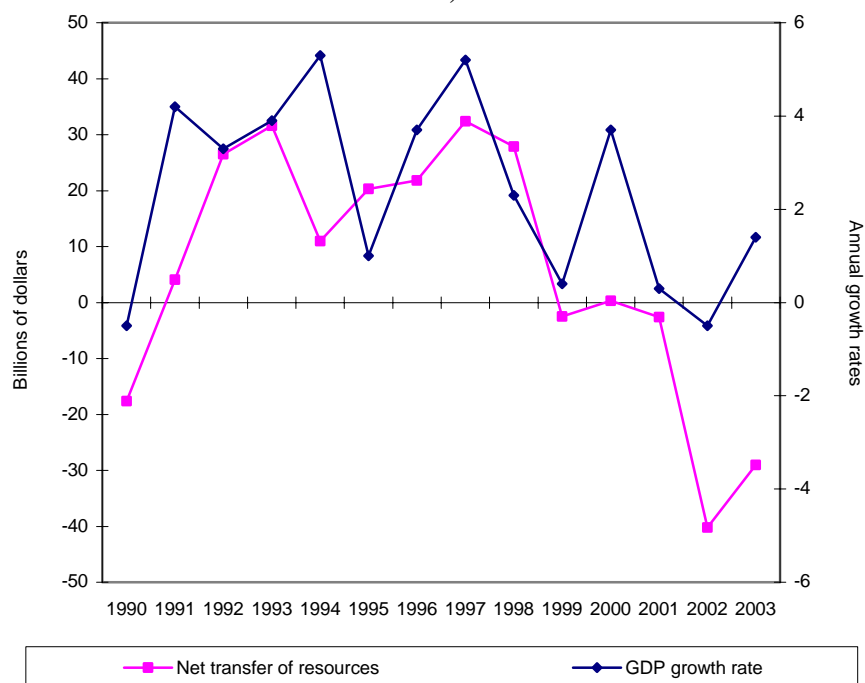
	World		Latin America	
	Average rate	Standard deviation	Average rate	Standard deviation
1950-1980	4.6	1.49	5.5	1.70
1981-2003	2.8	1.05	2.1	2.17
1991-2003	2.5	0.87	2.5	1.93

Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of official figures from the countries.

The region's economic growth has not only been slow, but has been characterized by a high level of volatility. Thus, while the standard deviation of annual growth rates in Latin America with respect to the average rate (1.70) was very close to the value for world GDP (1.49) between 1950 and 1980, it was more than double that between 1981 and 2003 (2.17 and 1.05, respectively). Both in the region and worldwide, volatility was less in the 1991-2003 period than in the previous decade. However, the relation between the two groups' standard deviations was maintained (1.93 and 0.87, respectively).

Both the greater relative increase of GDP in Latin America and the Caribbean between 1991 and 1997, when it averaged 3.2% annually, and the broad-based slowdown in the region's growth in 1995 and, more particularly, in 1998-2003, are clear indicators of the link between capital flows and rates of economic growth (see figure 2.8). Though other elements (trade factors and domestic policy) also have an impact, changes in the capital account are the single element that most affects the economic cycle in the region's countries.

Figure 2.8
LATIN AMERICA AND THE CARIBBEAN: GDP GROWTH AND NET TRANSFER OF RESOURCES, 1990-2003



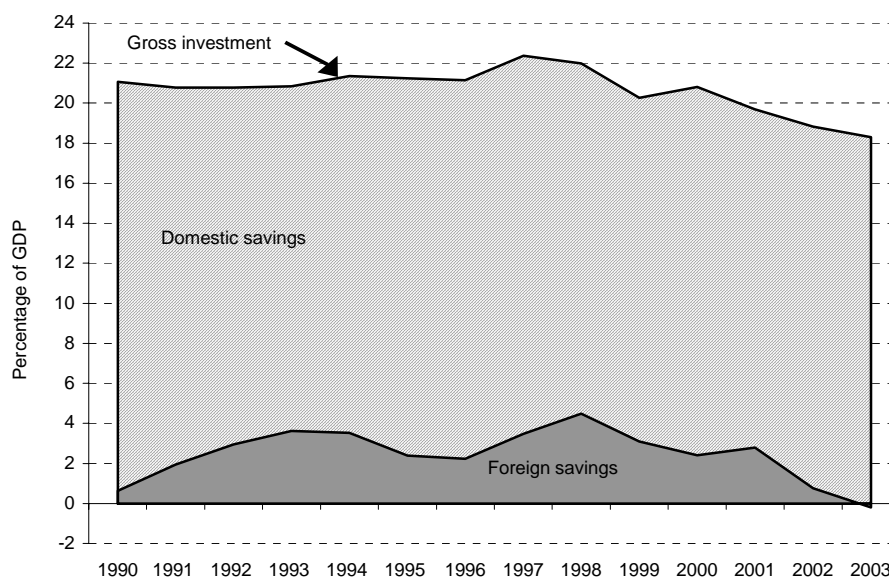
Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of official figures from the countries.

One lesson that emerges clearly from the recent period is that instability in real variables is also very costly. In the recessive phases of the economic cycle, resources that may be unrecoverable are dissipated. This is the case with lost tangible and intangible capital for firms, and with human capital for the unemployed and underemployed. Furthermore, uncertainty associated with volatile growth rates can be very harmful for new investment, as it triggers defensive microeconomic strategies designed only to protect firms' assets in a hostile environment, as opposed to offensive strategies, which involve high rates of investment and incorporation of technical advances.

Meanwhile, in the expansion phases of the economy, economic agents, both public and private, tend to underestimate the inconsistency over time of their decisions regarding spending and financing. When the good news is interrupted and a crisis begins, costs tend to be very high. In addition to the loss of assets laboriously accumulated over the years, pressure is generated to socialize the costs, as the only alternative to a systemic crisis. The magnitude of the consequences of this breaking of contracts depends on how widespread the phenomenon is. In any case, however, present and future fiscal (or quasi-fiscal) resources are committed, and credibility suffers in the financial sector. Restoring confidence takes time, and the financial system's aversion to risk is increased, working against its ability to fulfill its primary economic function.

Poor savings and investment performance from 1991 to 2003 helps explain the region's disappointing economic growth. The investment coefficient for the period —i.e., gross investment as a percentage of GDP— increased slightly until 1997, and then fell to a level lower than at the beginning of the decade (see figure 2.9). Recall that, in 1981, the coefficient had begun falling abruptly from the levels that prevailed in the second half of the 1970s, when it was between 24% and 26% of GDP (Ocampo, Bajraj and Martin, 2001).

Figure 2.9
LATIN AMERICA AND THE CARIBBEAN: SAVINGS-INVESTMENT RATIO
(In dollars at current prices)



Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of official figures from the countries.

The counterpart of gross investment is, by definition, total savings, the composition of which underwent major changes through the 1990-2003 period. Until 1998, its strongest element was foreign savings, which rose from 0.6% of GDP in 1990 to 4.5% in 1998, then falling to reach a negative value in 2003 (-0.4% of GDP) for the first time in half a century.⁸ The negative foreign savings figure means that a portion of domestic savings was devoted to reducing net indebtedness, financing the placement of capital abroad, or creating international reserves, rather than to the domestic accumulation of capital (ECLAC, 2003a).⁹ Domestic savings were disappointing in this period. Savings in the public sector fell, and private savings also failed to rise, as domestic credit was channeled into consumption, and foreign savings replaced domestic savings to a large extent, as more capital flowed into the region (Uthoff and Titelman, 1998). Starting in 2000, domestic savings increased roughly one percentage point of GDP as a result of the decline in private consumption and a significant increase in remittances (which averaged nearly 2% of GDP in the 2002-2003 biennium). The adjustment in consumption rates reflected the need of many indebted countries to devote funds to foreign commitments, given their high level.

⁸ Negative foreign savings are interpreted as the use of a portion of domestic savings by the rest of the world. It is associated with a positive current account balance, and is reflected in the capital and financial account balances, errors and omissions, exceptional financing and changes in the balance of payments reserves.

⁹ In fact, international reserves increased by US\$ 35 billion in 2003, which is less than 2% of the region's GDP. This means that the entire current account surplus plus the region's small capital inflow were channeled in that direction.

Moreover, the relation between investment and growth during the reform period has deteriorated, a fact reflected in the increase in the incremental relation between investment and GDP, which rose from a simple average of 3.8% in the 1950-1980 period to 6.7% in 1990-2002 (Ocampo, 2004). This phenomenon, which has not been sufficiently studied, reflects the fact that growth volatility leads to major under-utilization of installed capacity, which reduces the productivity of investment (Ffrench-Davis, 1999a). In some cases, the phenomenon is the result of a major destruction of installed capital following the implementation of economic reforms; in others, it results from the highly capital-intensive nature of the principal economic activities that are involved in the countries' new pattern of international economic activity.

The total productivity of the factors of production in 1990-2002 rose at a median annual rate of only 0.6% if measured in terms of the simple average of the ten countries included in table 2.3, and at a mere 0.2% if measured in terms of the weighted average for the group. The difference between the two averages is explained by the poor performance of the two largest economies (Brazil and Mexico), which had negative rates.

Table 2.3
LATIN AMERICA (10 COUNTRIES): TOTAL PRODUCTIVITY OF FACTORS OF PRODUCTION, 1950-2002
(Median annual rates)

	1950-1980	1980-1990	1990-2002	1990-1997	1997-2002
Argentina	1.2	-2.2	0.7	4.6	-4.5
Bolivia	1.6	-1.9	0.7	1.3	-0.2
Brazil	2.6	-1.5	-0.1	0.0	-0.3
Chile	1.6	0.5	2.4	4.6	-0.5
Colombia	2.4	0.6	0.4	1.6	-1.2
Costa Rica	2.3	-1.1	1.1	1.2	1.0
Ecuador	3.0	-1.6	-0.3	0.8	-1.8
Mexico	1.9	-1.4	-0.3	-0.2	-0.5
Peru	1.8	-3.7	1.2	2.9	-1.0
Venezuela	1.9	-1.4	0.3	2.2	-2.2
Simple average	2.0	-1.4	0.6	1.9	-1.1
Weighted average ^a	2.1	-1.4	0.2	1.1	-1.1

Source: André Hofman, *Crecimiento y productividad en América Latina: una visión a largo plazo* (LC/R.1947), Santiago, Chile, Economic Commission for Latin America and the Caribbean, 1999, updated by ECLAC.

^a Average weighted according to each country's 2001 GDP (in 1995 dollars).

Though this performance is better than that of the 1980s (-1.4% in both cases) it is clearly worse than the extended period between 1950 and 1980, when the total productivity of the factors increased around two percentage points per year, measured in terms of either of the two averages. More recently, the situation differed sharply from the period before 1997 to the period following. Indeed, the simple average of the annual rates of productivity growth in the 1990-1997 sub-period (1.9%) was not far from the figure for the 1950-1980 period, though the similarity does not hold if one uses weighted averages (1.1% and 2.1%, respectively) to make the comparison. Again, the performance of the region's two largest economies points up the differences. On the other hand, the trend was decidedly poor from 1997 to 2002, with annual rates of -1.1% for both the simple and weighted averages, which were affected by marked backsliding in all the countries, especially those whose productivity had increased most in 1990-1997 (Argentina, Chile, Peru and Venezuela).

3. Increased structural disparity among the region's economies

The increased strength of exports in relation to economic growth in 1991-2003 is related to a stage of structural transition characterized by abrupt and indiscriminate trade liberalization in a context of rather widespread foreign exchange arrears. The transition process faced profound changes in the rules of the game for productive enterprises. Though new activities emerged during the transition, the creation of a new productive structure was not the dominant phenomenon. What prevailed was, rather, the initial destruction of the most fragile segment of the existing productive base.

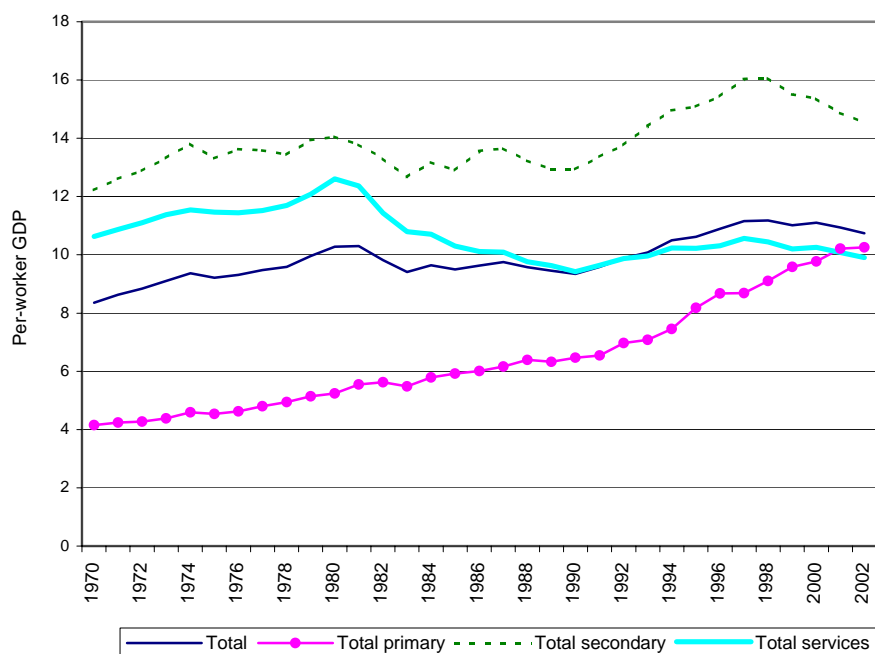
The greater competition in open economies has increased uncertainty in the business environment. Liberalization transmits the insecurities of the international environment to the local one, namely, the effects of technological change, changes in relative prices at the international level, amount of activity and exchange rates in export markets and in countries that produce competing goods. Local uncertainty regarding macroeconomic conditions, rules of the game and inevitable learning on the part of new domestic and foreign competitors are also a factor. This helps to explain the current concentration of new investment in a few sectors and agents that have a capacity to deal with this proliferation of uncertainty.

The various productive agents in the region's economies were certainly not playing on a level field as they faced change and the increased uncertainty surrounding it. The process of adaptation has been marked by flaws in the market, including, in particular, major asymmetries of information between productive agents. This creates significant differences in terms of knowledge and the practices needed to connect with foreign markets, access financing (especially long-term) and acquire the technological knowledge needed to compete in the new environment. Very different responses have emerged in the productive apparatus as a whole, which has accentuated the structural differences between the region's economies. The most important effect is that an excessive number of economic agents has been excluded from the transition to productive modernization.

Thus, poor performance in aggregate productivity was accompanied by different changes in each economic sector, as figure 2.10 indicates. The median annual growth in labour productivity in the primary sector showed strong, sustained growth beginning in 1970, in both agriculture (4.1%) and mining (6.8%). This increase in productivity accelerated between 1991 and 1997 —very slightly in agriculture (4.4%) and intensely in mining (12.6%).

Increased productivity in mining is linked to the sector's notable expansion in the 1990s, and both phenomena are the direct result of economic reform. Indeed, the period produced an unusual development of mining potential. The reforms were based on the assumption that incorporating and disseminating technical progress were indispensable for the sector's development, and that technological advances since 1970 called for private (particularly foreign) investment to play a large role. These reforms, though they reaffirmed the State's control over resources, reduced its major entrepreneurial role and produced a drop in fiscal revenue from the sector, as a result of various programs to stimulate private investment.

Figure 2.10
LATIN AMERICA (10 COUNTRIES): CHANGE IN LABOUR PRODUCTIVITY BY SECTOR
(Simple average of the countries)



Source: André Hofman, *Crecimiento y productividad en América Latina: una visión a largo plazo* (LC/R.1947), Santiago, Chile, Economic Commission for Latin America and the Caribbean, 1999, updated by ECLAC.

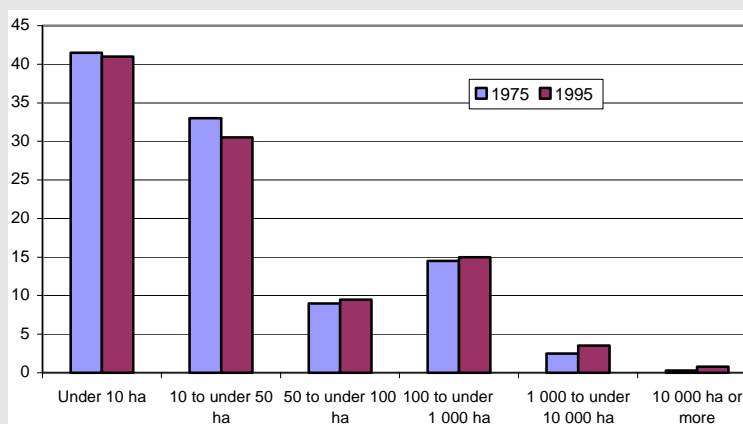
Following the economic reforms, agricultural activity underwent major structural change and changes in productivity and competitiveness, which affected the relative profitability of different products. Liberalization of the economy and deregulation of markets changed what was being produced and exported, affected the adoption of new technology and the repercussions thereof, including increased yield, greater activity in livestock and forestry, and reduced employment. In several cases, these factors accelerated changes in agriculture that had begun one or more decades earlier.

Increased agricultural productivity reduced the disparity between sectors, since the average productivity of labour in agriculture is lower than in other sectors. On the other hand, the opportunity to raise agricultural productivity varied enormously from country to country, depending on the size of farms and producers' access to inputs and resources. The relatively modern and well-capitalized sectors were able to innovate technologically, mechanize more and orient production to the most promising areas. However, small producers stagnated and, in many cases, lost ground, due to difficulty obtaining credit, acquiring technology and accessing markets. They were also at a disadvantage because of their concentration in traditional crops, which are under competitive pressure from imports. As in other productive areas, the strength of the sector was markedly uneven in terms of agents' response to economic signals and relevant institutional changes. Box 2.1 illustrates this for the case of Brazil.

Box 2.1
**CHANGES IN EMPLOYMENT AND PRODUCTIVITY, ACCORDING TO SIZE OF
 AGRICULTURAL ENTITIES, 1975 AND 1995**

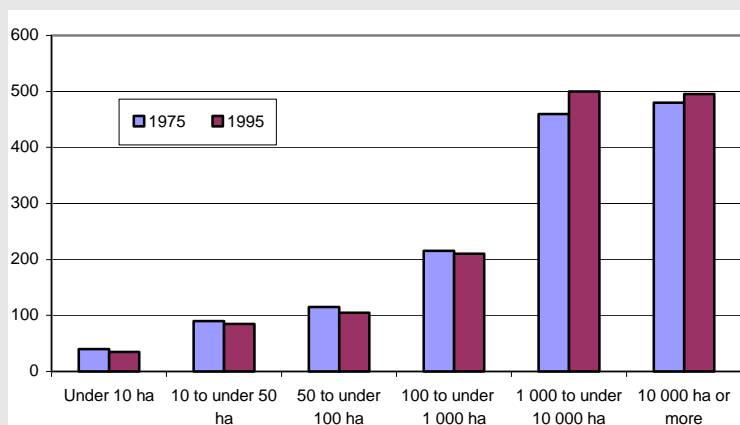
Census data in Brazil make it possible to establish roughly the structural heterogeneity of the agricultural sector. More than 40% of jobs are in productive units of less than 10 hectares, and almost three quarters in units of less than 50 hectares, with a slight decline in both categories between 1975 and 1995.

SHARE OF AGRICULTURAL JOBS



The productivity of labour, measured as the value of production per employee, rises with the size of productive entities. Thus, if the average value for all entities is benchmarked at 100, labour productivity in entities employing over 1,000 people is nearly 500.

PRODUCTIVITY OF LABOUR
(All entities=100)



Note that, between 1975 and 1995, labour productivity rose in the largest productive units (over 1,000 hectares), while falling elsewhere. In the smallest operations (under 50 hectares), this reduction was accompanied by a declining share of total agricultural jobs, while the opposite occurred in the intermediate segment (over 50 hectares but less than 1,000), where an increased share of jobs was accompanied by less productivity.

Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of 1975 and 1995 agricultural data from Brazil.

Two patterns of rural-urban convergence in the region's countries can be identified as effects of increased agricultural productivity (see table 2.4). The first, seen in Argentina, Uruguay and Chile, is an increasing convergence of agricultural and non-agricultural productivity. Positive factors predominate in rural-urban change, associated with greater technological convergence and standards of living. The second pattern is associated principally with the Andean and Central American countries, excepting Costa Rica. Here, increased agricultural productivity is accompanied by falling non-agricultural productivity, reflecting an increase in informal economic activity in urban areas as a result of urban-rural migration. Costa Rica and the Dominican Republic, where agricultural productivity is below the regional average, manifest the first pattern, while Brazil, Colombia, Mexico and Venezuela share features of the second.

Table 2.4
**LATIN AMERICA: AGRICULTURAL AND NON-AGRICULTURAL LABOUR
 PRODUCTIVITY, 2000**
(In constant 1995 dollars)

	Non-agricultural productivity under the regional average of US\$ 10 574 /EAP in 2000					Non-agricultural productivity above the regional average of US\$ 10 574 /EAP in 2000				
	Annual growth in productivity from 1990 to 2000 and productivity in 2000					Annual growth in productivity from 1990 to 2000 and productivity in 2000				
	Agricultural		Non-agricultural			Agricultural		Non-agricultural		
	Rate	Dollars	Rate	Dollars		Rate	Dollars	Rate	Dollars	
Agricultural productivity above the regional average of US\$ 3 307/EAP in 2000	Costa Rica	3.2	5 254.6	0.9	10 114.5	Argentina	2.9	9 461.2	1.8	18 906.1
	Venezuela	2.0	4 856.8	-1.1	7 798.5	Uruguay	2.3	7 807.4	1.7	13 688.7
	Brazil	4.4	4 594.5	-0.2	10 268.6	Chile	4.2	5 084.0	3.4	15 890.3
	Colombia	1.4	3 641.9	-0.9	5 726.7					
	Dominican Republic	5.3	3 361.4	2.3	5 056.3					
Agricultural productivity under the regional average of US\$ 3 307/EAP in 2000	Paraguay	-0.1	3 062.4	-2.0	4 661.7	Mexico	1.2	2 265.2	-0.1	14 260.8
	Panama	2.2	2 741.6	1.3	9 141.5					
	Nicaragua	5.4	2 305.8	-2.1	993.6					
	Peru	4.0	1 914.2	0.2	8 132.1					
	Guatemala	0.8	1 881.8	-0.1	6 357.5					
	El Salvador	0.2	1 701.8	0.4	5 051.9					
	Ecuador	0.7	1 659.6	-2.3	4 363.2					
	Honduras	1.5	1 150.0	-1.8	2 263.4					
	Bolivia	0.9	755.5	0.8	3 593.6					
	Haiti	-2.4	3.97	-4.0	2 234.2					

Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of GDP figures from official country sources, and figures from the Food and Agriculture Organization of the United Nations (FAO) based, in turn, on Agricultural Statistics Analysis Technology (AGROSTAT) figures for the distribution of the economically active population.

Note: EAP: economically active population.

For the secondary sector (manufacturing and construction) it can be seen that, after a long period of stagnation with minor fluctuations, the productivity of labour increased from 1990 to 1997 (at an average annual rate of 2.6% in manufacturing and 4.4% in construction) and then fell from 1998 to 2002 (-1.9% and -2.8% annually, for the two areas). Thus, increases and decreases have been more marked in construction than in manufacturing.

The performance of the manufacturing sector varies from one subsector to another and, most importantly, between productive units of different sizes. First, the shift share of the change in the sector's labour productivity in the 1990-2001 period (defined for present purposes as 100) shows that the change is almost entirely due to increased labour productivity in the different three-digit

categories of the uniform industrial classification (105.5). Though much less influential, the sign of the structural changes (static 0.6, dynamic -6.1) indicates that the absorption of employment was greater in areas that had the highest levels of labour productivity in 1990 (positive static change), while the number of jobs diminished in those areas where labour productivity increased in the 1990-2001 period (negative dynamic change).¹⁰

Second, relative productivity with respect to the formal manufacturing sector's international borders has increased, though probably only very slightly.¹¹ When areas of manufacturing are ranked by their contribution to the sector's value added, and according to the rate at which productivity is changing in relation to productivity in the United States, the correlation coefficient of the ranking of the areas is positive (0.47). This indicates that the areas closest to the technological frontier —i.e., those that succeeded in reducing their labour productivity gap vis-à-vis the United States for the 1990-2001 period— increased their share of the manufacturing sector's value added. When categories 383 and 382 (electrical and non-electrical machinery) are excluded, the ranking correlation rises considerably (0.72). The reason is that these two categories, whose share of the region's manufacturing value added rose, also found that their productivity gap vis-à-vis the United States increased, as a result of the notable increase in productivity made in the United States in these two areas.¹²

Third, there are major differences in labour productivity between small and medium-sized manufacturing firms on the one hand, and larger ones on the other (see table 2.5). Though the definition of small and medium-sized varies considerably from country to country, the simple average of their labour productivity is, in any case, less than half (44.7%) that of large firms. Since they represent 39.7% of manufacturing jobs, their lower productivity has a very significant effect on the manufacturing sector's median productivity. There is a good deal of dispersion around these averages, though this is due, to a large extent, to the different lower limits used to define small firms.

The productivity of small and medium-sized firms as a percentage of the productivity of larger firms in Latin America (44.7%) does not differ significantly from the corresponding ratio in Organisation for Economic Co-operation and Development (OECD) countries, which is 54% —especially considering that the OECD definition of SMEs includes firms with up to 250 employees. Some differences, however, complicate the comparison. One is the obvious discrepancy in terms of absolute values, another the difference in the universes involved, since the OECD definition of SMEs includes microenterprises, which the Latin American and Caribbean definition does not. In fact, one of the structural features of the region's economies is the significant number of manufacturing microenterprises traditionally found in the informal sector of the economy. Figure 2.11 not only reveals a significant difference of labour productivity between formal and informal manufacturing firms, but also shows that the difference has increased since 1980, especially during the 1990s. As occurred in agriculture, the manufacturing sector's internal divergences were accentuated as a result of the unequal opportunity of firms, as they faced the challenges of economic liberalization.

¹⁰ Shift share analysis (Timmer and Szirmai, 2000) makes it possible to break down the change in aggregate productivity into three components: one representing the productivity in different areas, weighted according to their share of jobs in the initial year; another representing changes in the share of jobs between the first and last year, weighted according to their productivity in the initial year (static structural change); and a third, which reflects the change in productivity in each area, weighted according to changes in the structure of employment between the first and final years (dynamic structural change).

¹¹ At the level of the different areas, the reduction of the technology gap is much more closely linked with increased production in the respective sectors than with a growing convergence driven by economic reform. Thus, for instance, automobile production, which continued to be the target of selective protection schemes, registered an increase in productivity comparable to increases in natural resource-intensive manufacturing exports. On the other hand, industrial areas that compete with imports performed poorly and were displaced (Katz and Stumpo, 2001).

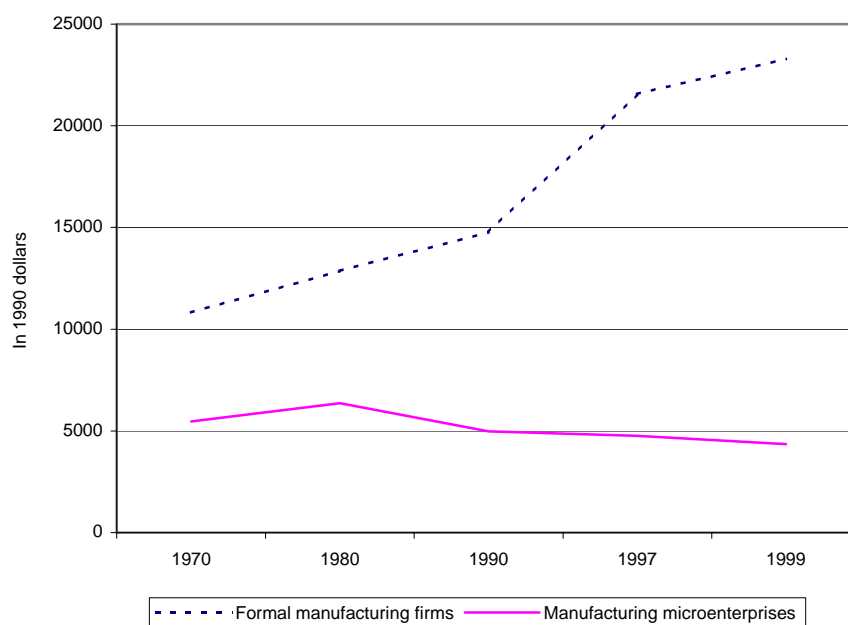
¹² Electrical machinery and electronics expanded markedly, increasing at a median rate of 11% per year between 1992 and 2000 (Ryd, 2003).

Table 2.5
LATIN AMERICA (10 COUNTRIES): RELATIVE PERFORMANCE OF SMEs AND LARGE INDUSTRIAL FIRMS
(As percentages)

Country	Size of firm	Year	Relative productivity SME/large	SME jobs as a result of all jobs
Argentina	6-100	1993	56.6	44.6
Brazil	10-99	2000	41.1	32.2
Chile	10-199	1996	37.6	22.1
Colombia	1-199	1996	45.2	52.2
Costa Rica	31-100	1996	73.0	13.2
Ecuador	10-99	1996	39.8	37.7
Mexico	16-250	1993	56.1	44.6
Peru	11-200	1994	25.4	52.5
Uruguay	5-99	1995	47.8	57.9
Venezuela	5-100	1995	24.5	39.5
Latin America (simple average)	10-145		44.7	39.7
Organisation for Economic Co-operation and Development (OECD)	0-250	1999	54.0	58.7

Source: Economic Commission for Latin America and the Caribbean (ECLAC), data base on industrial SMEs.

Figure 2.11
LATIN AMERICA (6 COUNTRIES): CHANGING HETEROGENEITY IN THE MANUFACTURING INDUSTRY
(Simple average of the countries)



Source: Economic Commission for Latin America and the Caribbean (ECLAC), based on countries included in the Industrial Performance Analysis Program (PADI).

Note: Based on information from 6 countries (Argentina, Brazil, Chile, Colombia, Mexico and Uruguay) which, together, represent 87% of GDP of the region's manufacturing industry.

Finally, labour productivity in the tertiary sector fell sharply during the 1980s (-2.6% annually) followed by recovery during the 1990-2002 period (2.6% annually). This is the result of two contradictory trends. On one hand, there was a great deal of restructuring in the 1990s, both in public services and in the financial sector, as privatization and foreign investment boomed. Restructuring was associated with major expansion and human resources streamlining in privatized firms, carried out by the public sector before the sale or by private owners after privatization. Moreover, business services expanded considerably as a consequence of subcontracting (ECLAC, 2004c). A major part of the labour productivity increase that occurred after 1990 can be explained by these factors. The productivity of other services continued on the downward trend that had begun in 1980. Seven out of ten jobs created in the 1990s were in the urban informal sector (ILO, 2000).

On the global level, there have been some notable changes in the evolution of the principal business groups. The first is in large enterprises with State capital, national private firms and transnational firms. There have been different motivations behind the strategic positioning of transnational firms. In some cases, access to natural resources is the prime factor, against a background of institutional changes in the treatment of foreign investment, especially in Chile and some of the Andean Community countries. Two patterns appeared in manufacturing. One was increased capacity in the sectors where they were already operating, in order to take advantage of the expansion of markets resulting from the region's integration processes. The other was the initiation of activities in export sectors targeting the United States market, especially in Mexico and some Central American and Caribbean countries. Finally, there was strong movement into markets, and an effort to take advantage of the opportunities created by the privatization of basic services, primarily in the telecommunications and energy sectors. Hence, the share of business represented by transnational corporations in the segment made up of the region's 1,000 largest firms increased considerably (see table 2.6).

Transnational firms increased their share of sales from 29.9% in the 1990-1992 period to 41.6% in 1998-2000, while the share represented by State enterprises fell from 32.5% to 17.1%. The share of sales represented by national private firms fluctuated around 40% during the 1990s. If the analysis considers specific activities, transnational corporations can be seen to have concentrated in services (especially telecommunications, trade and energy) and manufacturing (in particular, electrical equipment and electronics, the automobile and auto parts industry, chemicals and pharmaceuticals), while increasing their share of the oil and mining sector, in which State enterprise still has a pronounced presence (62.5% of sales in 1998-2000). Meanwhile, national private enterprise concentrated in manufacturing (agribusiness, metallurgy, petrochemicals, cement, cellulose and paper, and other manufacturing), as well as construction, trade and transportation services.

Change in the smallest firms, both urban and rural, varies widely. In a number of countries and sectors, many firms have disappeared or moved into the informal sector. Though a good deal of this change occurred in the 1980s as a result of a major decline in per capita income, the process was not reversed in the 1990s. On the contrary, renewed growth was insufficient to prevent the trend to informal employment, which grew from somewhat over 30% of jobs in 1980 to 43% in 1990 and 48.4% by the end of the 1990s. Perhaps one of the distinctive features of the most recent period has been the increase of informal employment in urban areas, where its share of total employment rose five percentage points, representing 20 million individuals (ECLAC, 2001b). Besides the effect of the rural-urban migration—important for some countries, as has been noted—the increase in informal employment in urban areas may be associated with the intense productive restructuring that occurred with the reforms of the 1990s. This would represent a shift from the formal sector to the urban informal sector by individuals lacking the resources and conditions to take advantage of the opportunities offered by the new economic order, and not in a position to negotiate the constraints associated with it.

Table 2.6
LATIN AMERICA (10 COUNTRIES): 1,000 LARGEST FIRMS' SHARE OF SALES IN EACH SECTOR, ACCORDING TO OWNERSHIP, 1990-1992; 1994-1996; 1998-2000
(As percentages of total)

Sectors/Ownership	1990-1992 ^a			1994-1996			1998-2000		
	FF	NP	PF	FF	NP	PF	FF	NP	PF
Primary sector	19.3	6.3	74.5	19.3	14.5	66.2	19.7	17.9	62.5
Mining and petroleum	19.3	6.3	74.5	19.3	14.5	66.2	19.7	17.9	62.5
Manufacturing	48.6	45.4	6.0	53.5	44.9	1.6	55.0	44.8	0.3
Agribusiness	31.3	66.6	2.1	36.6	62.9	0.6	44.2	55.8	---
Automobiles and auto parts	87.0	12.3	0.7	90.5	9.5	---	83.4	16.6	---
Electrical and electronic equipment	68.6	30.1	1.3	89.6	9.5	0.9	84.4	15.0	0.6
Metallurgical industry	9.8	57.7	32.5	15.9	73.4	10.7	30.0	70.0	---
Chemicals and pharmaceuticals	77.5	21.4	1.1	79.1	20.9	---	71.3	28.7	---
Petrochemicals	37.4	47.7	14.9	22.5	75.8	1.7	21.8	78.2	---
Cement industry	16.4	83.7	---	31.2	68.8	---	24.6	75.4	---
Cellulose and paper	11.2	79.4	9.3	18.0	82.0	---	19.4	80.6	---
Other manufacturing ^b	33.0	67.0	---	28.4	71.6	---	27.2	69.9	3.0
Services	10.2	53.0	36.8	19.3	54.0	26.7	36.9	49.7	13.4
Trade	13.3	84.4	2.3	22.9	75.5	1.6	37.1	60.9	2.0
Telecommunications	22.5	38.1	39.5	38.1	17.9	44.0	59.4	36.1	4.5
Electricity	0.2	6.3	93.5	11.7	20.3	68.0	34.7	18.4	46.9
Transportation services	7.1	63.5	29.3	4.8	76.7	18.4	16.8	79.5	3.6
Construction	10.3	89.7	---	---	100.0	---	6.8	93.2	---
Public services	---	---	100.0	---	27.2	72.8	10.4	8.2	81.4
Other services ^c	16.9	83.1	---	11.0	86.4	2.6	18.6	79.2	2.2
All sectors	29.9	37.7	32.5	35.5	42.7	21.9	41.6	41.3	17.1

Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of information from the research department of *América Economía* and information from other financial sources: *Exame* (Brazil); *Mercado* (Argentina); *Expansión* (Mexico); *Semana* (Colombia); *Estrategia* (Chile); and information from the public balance sheets and annual reports of firms.

Note: FF: foreign firms; NP: national private firms; PF: public firms.

^a The sample includes 800 firms.

^b Includes leather and shoes, machinery and equipment, rubber and plastics, photography, editorial, glass and textiles.

^c Includes tourism.

There is little doubt that this change has led to more structural diversity in the economies of Latin America and the Caribbean, and that the changes that have occurred have affected economic agents in different ways. The early interest in this subject on the part of ECLAC shows that the problem is not a new one, though it may have acquired new aspects over time (Pinto, 1976). In any case, it is essential to figure out how to deal with these trends in the region today, and this, precisely, is the object of the present study. In the next section, after discussing the process of productive development in an open economy in the light of the issues addressed in the other chapters, we propose some strategic guidelines for approaching the challenges of contemporary development in the region's countries.

II. Strategic guidelines for development in open economies

There has been deep and persisting interest in the mechanisms of economic development and public policy designed to foster it in Latin America and the Caribbean. ECLAC has been involved in this from the beginning, for what is now more than half a century. Consensus on the basics has seemingly been reached on various occasions. However, the successes and failures of each attempt have ended up posing new questions, rather than confirming previous convictions.

Learning and change have certainly occurred regarding the analytical criteria for policy design and implementation, as experience has provided significant lessons in various important areas. After decades of attention to economic development, however, there is no comprehensive, precise view of how economic growth and social progress are generated and sustained, though many relevant obstacles have been identified. This is an indication of the complexity of the phenomena involved, which do not lend themselves to interpretations based on simple or single causes (Adelman, 1999).

The issue of development in the region today, with all the differences among countries to be taken into account, must generally be addressed in the context of greater openness to the outside world on the part of countries. In the world economy, the globalization of production and markets is increasingly pronounced. This has led to unprecedented changes in various dimensions, the most important elements of which were examined in chapter 1.

This section offers some reflections on the process of economic development, first analyzing its principal components, and then presenting the strategic guidelines for public intervention that ECLAC believes are needed to correct certain weaknesses in the immediate past and foster the development of the region's countries.

1. Features of economic development

Economic development follows a general logic, which entails accumulating resources, mobilizing them productively and using them ever more effectively. The way of doing this varies, however. Both old and new studies on the theory of growth enumerate a range of possible analytical approaches that is far from being exhausted by existing models. Concrete analysis, however, is not concerned with multiplying the number of possible approaches, but with identifying one or more that are demonstrably plausible and relevant. Propositions based on supposed universal validity are thus of little use. Almost by definition, economic development is a non-repeating process that occurs at a specific time and place and creates irreversible changes in configurations of activities and behavior of agents (Furtado, 1956). The raw material of development analysis consists of episodes that are in some sense unique—that, though they share elements of the general logic cited above, do not provide a basis for mechanical extrapolations.

One long-standing and useful distinction is that between economic development and what is simply an increase in the scale of an economy. The basic feature of economic development is structural change—i.e., change in the sectoral composition of production— involving diversification of activity and deepening division of labour, as well as, probably, more diverse relations with the rest of the world. Thus, one might expect increasing complexity of productive equipment and individual skills, as behavior, institutions and modes of social interaction change. Though development entails changes in the configuration of the economy, the ability to generate continuing new activities that are dynamic and innovative, in a broad sense, is an essential determinant of rapid economic growth (Ocampo, 2002b).¹³

It is impossible to prescribe a path, at least in all its details. The success of an economy is likely to depend on how agents identify and take advantage of opportunities and deal with the constraints that emerge from the immediate and global economic environments. Opportunity is a dynamic phenomenon, and the economic system must adapt to changing circumstances.¹⁴ Though it is important for development strategy to be well defined, so that economic agents can take it into

¹³ Schumpeter's definition of innovation (1961), or new terminological combinations, includes: the introduction of new goods and services or major changes in quality; the development of new production processes or ways of placing products in markets; the opening of new markets; the discovery of new sources of natural resources and new ways of exploiting known resources; and the establishment of new structures in productive sectors.

¹⁴ The ways in which some economies in Asia and northern Europe changed their pattern of specialization are particularly notable as examples of adaptation. Of course, this does not imply that the current evolution of productive activity in Latin America and the Caribbean can or should reproduce a pattern of change that dates from decades ago.

account when allocating resources and making other decisions, the complexity of the problem is such that productive activity is likely to change as a result of a series of responses to problems that emerge over time.

In any case, it is essential to have a common vision, based on collective thinking about specific issues, transcending mere doctrinal definitions, with the disagreements that customarily accompany them. For the vision to have political legitimacy, social groups must see that its implementation can benefit their interests, and they must have confidence that the issue of distributive balance will be addressed. As Prebisch (1963) stated, the proof of dynamic validity in development theory is its ability to grow quickly and to progressively improve income distribution. From this point of view, it is clear that economic development goes far beyond economic and technical issues in the narrow senses of those words (Sen, 1999).

If development occurs by introducing new activities and forms of production, it is unlikely to evolve continuously, with different strata of the economy advancing in parallel. Oscillations of energy and slackness in the process, as well as tension and ruptures in the system, are unavoidable. The result depends on how these vicissitudes are dealt with. Thus, ultimately, it depends on the solidity of the coalition for development.

It is useful to consider innovation as a generator of increased productivity resulting from localized learning, with an ability to spread, due to complementarities and linkages (Bardhan, 1998). These effects, which have been reasonably well documented in a number of cases, involve externalities, the intensity of which depends on the configuration of the economy. Growth has a systemic component that is a function both of expanding activities that interact with increased productivity in other activities, and of more and better collective services, such as traditional public goods, infrastructure and social services (health, education, etc.).

It is difficult to attain persistent growth without localized stimuli and the counterpart, at least initially, of greater heterogeneity in the economy. At the same time, development demands that increased productivity and income affect the overall economy in one way or another. This means that, beyond the lags and delays that are to be expected, the stimuli must spread and propagate. The need to facilitate progress in those segments of the economy that have growth potential, while ensuring a certain homogeneity so that the progress can spread and produce systemic effects, may produce problems that are difficult to solve in the abstract, without examining specific problems and conditions in the economy (ECLAC, 1990).¹⁵ Thus, a structural perspective that is concrete and non-dogmatic would appear to be the best approach.

2. Principal components of the development process

Development is associated with changes in the social system as a whole, as indicated by observation of economies that have made the transition.¹⁶ Though it is essential to find ways of isolating phenomena to study them with some precision, it is a mistake to assume that certain elements of the system, such as institutions, for example, remain constant. All of this suggests that the analysis of development is necessarily an intricate conceptual construction.

As a general analytical approach, one can represent the potential curve of an economy's production by an expanded production function, whose arguments include the accumulation of physical capital (natural and constructed), human capital, the knowledge capital embedded in technology and business practices, and institutional capital. The curve of these growth factors will be influenced by the level of resources and expected changes therein. This perspective is useful,

¹⁵ There is a dilemma, for instance, when it is advantageous for a given activity, with growth potential, to have access to importable high-quality inputs at a low price, while the regressive chain effects of the activity may be an important means of dissemination.

¹⁶ Here, it might be worthwhile to consider Adam Smith's thoughts regarding the "wealth of nations", taking as the unit of analysis the national economy, which cannot be represented as the aggregate of individual activities or agents.

because it directs attention to the interaction of factors, their complementarities and substitution possibilities, as general determinants of growth. The marginal effect of each, and, hence, the ways of accumulating resources that seem most urgent or promising, vary according to the state of the economy, the availability of resources and conditions beyond the country's borders. It is not enough to say that development requires development in productive factors overall. From moment to moment, there will be problems due to budgetary constraints, with effects on public policy.¹⁷

Furthermore, these factors, like the indicators used to measure development levels quantitatively, such as GDP, are not simple variables. On the contrary, they reflect aggregates of very diverse components. When these black boxes are opened up—to echo Fajnzylber's (1990) references to technology—the analysis becomes more complex. But only at that stage does it begin to deal with concrete things, i.e., with material for specific decisions. Hence, it is unlikely that investment in technology or education will have the same meaning in a large, diversified country as it does in a small primary-sector and low-income economy.¹⁸

An examination of specific problems in the development of individual economies shows that analytical efforts must consider particularities in the frame of reference provided by lessons incorporated in economic theory and good practices. These, as heuristic indications, have been inferred from previous cases. Naturally, the principle of the “originality of the copy” must be respected (Cardoso, 1977). At the same time, it is possible to impart a certain perspective to issues that have been the subject of intense debate, including the interaction of the growth process with an economy's international position.

(a) Macroeconomics, investment and sustainable growth

First, it should be noted that a clear distinction between long-term growth curves and situation-dependent fluctuations is impossible (Heymann, 2000). On one hand, the evidence suggests that macroeconomic volatility affects growth. Willingness to invest certainly depends on having predictable macroeconomic conditions, and on a level of activity that makes ample use of the available factors of production. Hence, decisions regarding expansion of supply capacity are influenced by the level and variability of demand (Kaldor, 1978; Barro, 1991). On the other hand, fluctuations in public and private agents' perceptions regarding growth may have macroeconomic consequences of the first order. Budget constraints mean that agents' spending capacity depends on generating present and future income. Hence, economic growth and increased productivity are essential elements of macroeconomic sustainability (see chapter 3).

The financial system plays a key role in reconciling the income and spending of productive agents over time. Financial instruments for risk management must be developed for this purpose, so that the needs of a diversified productive system can be covered, while long-term investment is financed. Through the financial accelerator, this system tends to amplify the macroeconomic effects of the various shocks to which economies are subject and, hence, to increase the frequency and amplitude of the economic cycle. Mitigating these effects through financial policy and countercyclical regulation, as well as by creating financial depth, is very important for developing economies.

The correlation between growth and macroeconomic stability is based on the dynamic of the savings and investment process. Successful development involves significant increase in accumulated physical capital and productivity, supported by a rise in the investment coefficient.¹⁹

¹⁷ To mention an example, the trade-off between incentives for physical investment via low taxes, and the provision of high-quality public services in high quantity, cannot be resolved in general terms, but only by establishing cost-benefit relationships for specific cases.

¹⁸ Private and public policy are related to particular activities, products and behaviors. When budget constraints are taken into account, practical problems emerge, such as the need to determine (where growth, for example, is at issue) which is more likely to stimulate growth: greater secondary enrollment, or a new polytechnic school to train engineers who will work at the technological frontier.

¹⁹ In other words, Romer's (1994) combination of the “idea gap” and the “object gap,” which distinguishes the externalities inherent in physical investment from the accumulation of material inputs.

Accumulated physical capital, however, is also a heterogeneous variable. Thus, recent debate suggests a profound complementarity, in terms of the real economy, between productive investment by private enterprise and existing infrastructure. Precisely because of the major effect of infrastructure on firms' productivity and on the economy's systemic competitiveness (hence, on growth, as well), governments have sought to ensure adequate infrastructure. In today's circumstances, this is approached on a combined public-private basis, where macroeconomic stability and public regulation are fundamental. Expansion and maintenance of the economy's productive capacity not only requires conserving and expanding constructed capital, but taking advantage of, valuing and preserving natural resources. Indeed, the region's problem of poor savings performance appears worse when the loss, in terms of natural patrimony, is discounted (see chapter 4).

(b) International linkages and productive development policy

Second, the idea that development is associated with an ongoing process of increasing productivity says nothing, in principle, about an economy's international linkages. However, the most productive economies show an ability to increase exports and, in particular, exports of more highly processed products and those that contain technology. Though international economic relations are asymmetric, it is difficult for economies such as those of Latin America and the Caribbean to aspire to development without close and growing interaction with the world economy. Economic growth involves a deepening of the division of labour and ever greater improvement of production techniques and procedures. This requires a diversified set of inputs, many of which are complex. Some are physical, but others include knowledge and abilities that are not incorporated into objects, and may even be invisible. Obtaining them requires broad and fluid access to the rest of the world's production.

Taking advantage of the opportunities that exist, despite the presence of asymmetries, in international trade —without creating types of segmentation in the economic system that would be difficult to reverse later on— poses significant problems. These problems cannot be tackled, however, by rejecting integration in the larger world or by opening the economy indiscriminately. The basic objective must be to improve the quality of the country's international position by diversifying the destination markets for exports and export products, incorporating greater value added and knowledge and improving trade diplomacy to gain access to markets in different countries (see chapter 5).

At the same time, the diversification of demand may be expected to be accompanied by an increase in import coefficients in relation to GDP. Hence, exports may be expected to increase more rapidly than GDP.²⁰ Increased exportation involves various elements. Quantitatively, it means generating resources to maintain the demand for imports, in relation to a given value of aggregate spending. This requirement is linked with meeting intertemporal budgetary constraints, i.e., being able to finance accumulation without excessive borrowing, which can lead to the need for adjustments (with recession). Hence, it is not the composition of exports, but their total value, that is important. However, exports do have a qualitative dimension. In a developing economy, the export pattern will probably shift toward more complex and highly processed products. This process is usually gradual, and is essentially a sign of development rather than a force driving development.

Thus, some of the learning that is part of development consists of the ability to competitively produce goods that were previously purchased abroad. Since this learning can result from doing, in specific situations, in which the recognized problems of incentives are handled properly, may call for mechanisms that can foster incipient industrial activity, as well as promote prospecting, transfer,

²⁰ It should be no surprise if GDP grows less than exports, especially during periods in which the economy is opening up to the world beyond its national borders. This numeric relationship does not diminish the importance of exports in supporting GDP and aggregate spending.

adaptation, and creation and dissemination of technology, with public policy playing a mediating role.²¹ This form of import substitution seems to be inherent in growth. It requires sustained savings and investment. Opportunities may emerge from domestic demand, supported by public policy that fosters private accumulation by promoting the development of national systems of innovation (see chapter 6).

The quality of exports contributes in other ways to improving productive capacity. An economy's participation in international markets for relatively complex goods, with associated requirements for quality and stable supply, may lead to learning. It should be stressed that it is not the degree of processing of exports that determines their impact on growth, but the effect of this on the accumulation of resources and capacities in the economic system. Thus, expansion depends on the existence of productive and technological chains, as well as on the development of business capacity and links between firms (see chapter 7).

Given the existing factors of production in the region's economies, it seems normal that a large portion of exports should make intensive use of natural resources. This seems compatible with the development process, if the monies produced by sale of products from the primary sector are used to increase the capacity to produce goods, diversify the supply and make it more complex. In considering these sectoral factors, there is no attempt to suggest detailed modes of intervention. The challenge is to find the combination of policy tools, action and opportunity for public intervention that is best adapted to the specific development problems an economy faces, and to its capacities and available resources. One can only work with what one has, recognizing that problems, opportunities and constraints will change as the process unfolds. The important point is not to decide whether to intervene much or little, but to ensure that whatever interventions are undertaken address specific constraints on expansion. Thus, policy action is justified, in a particular case, when concrete benefits can be anticipated, and when the intervention is compatible with the resources available and with maintaining the appropriate incentives (see chapter 8).

(c) Labour market, social protection and human capital

Third, the liberalization process has brought new social risks, because of the relation between competitiveness and jobs. Job stability is no longer a dominant feature of how work is organized, and wage uncertainty has increased (Rodrik, 2001). "Lifetime employment" has been replaced by frequent changes of job and company, accompanied by changing skill requirements. New technologies and work processes require increasing creativity, initiative and versatility, and less specialization. Therefore, basic skills are more important to develop than specific skills, if a worker is to have a knowledge base that enables him or her to adapt effectively to new jobs, and if the cost of greater flexibility in the labour market is not to fall entirely on workers. There must be progress toward flexibility with social protection, in a framework of responsible fiscal management (see chapter 9).

In situations that feature increasing levels of innovation and knowledge, education prefigures the fate of individuals and societies. Today's patterns of production and the changes associated with globalization require human resources trained for new modes of interaction, work, production and competition. Education is, thus, a requisite both for individuals to gain access to the benefits of progress, and for economies to ensure sustained development through more highly knowledge-intensive competitiveness. This means improving secondary school graduation rates, adapting the educational system to the needs of the labour market, and reducing international and social gaps in the use of information (see chapter 10). Education has considerable potential long-term effects on

²¹ As Acemoglu, Aghion and Zilibotti (2002) indicate, there are two types of learning relevant to economic growth: adaptation of existing technology and innovation to create new technology. Ramos (2000) analyses the importance of this distinction for the region's countries.

equity, but the condition for them to materialize is that sufficient high-quality jobs be created. Education and jobs are the key to economic growth with social equity (ECLAC, 2000a).

(d) Governance and institutional development

Fourth, the relation between institutional design and functioning and economic development is a two-way phenomenon. Some basic institutions of the economic system allow agents to be reasonably confident about taking advantage of the productive opportunities in the economy.²² At the same time, the type and quality of institutions are also a function of economic development, both because of the increasing complexity of the economy and because more resources are available. More important, yet, the perception of opportunities for economic growth leads to building and redesigning institutions. In various circumstances, it has been observed that institutional change does not emerge from a diffuse notion that reform is necessary, but from precise incentives and from the will to follow a specific economic trajectory that seems promising.²³ Having a perspective on development makes it possible to identify priorities and define interests in such a way that the motivating factors behind certain institutional actions or changes become clear, and their implementation is facilitated.²⁴ Hence, it is not only that economic development requires institutional changes, but that the crucial institutions function on the basis of the expected course of the growth. (see chapter 11).

Beyond the greater or lesser depth of reforms, institutional functioning depends on experience and lessons that require a medium-term perspective.²⁵ One requirement is obviously macroeconomic stability —i.e., achieving a rough correspondence between expectations and the real evolution of the economy. When agents have a realistic and reasonably specific view of the direction of the economy, crises are less likely to develop. At the same time, investment is more likely to be well placed —and this includes investment to develop capacities and reputation, which tend to strengthen institutions.

Open regionalism, in the terms proposed by ECLAC (1994) is an option that can moderate some of the dilemmas mentioned above in relation to competition in the global economy. Indeed, in the 1990s, the four imperfect customs unions in the region generated intra-regional trade, as well as the potential for cooperation on various fronts. Toward the end of the decade, however, the process stagnated, while some countries (first Mexico, then Chile) began to favor free trade agreements to ensure access to certain markets in developed and developing countries. Because of changes in the Free Trade Area of the Americas negotiations, other countries (Central American and some Andean Community countries) are adopting similar strategies. In this context, subregional blocks face the choice of either strengthening their economic unions or moving, collectively or individually, into multiple free trade agreements with the rest of the world. In the latter case, the significance of existing blocks would be seriously affected (see chapter 12).

²² Rodrik and Subramanian (2003) draw an interesting distinction between types of institutions. Basic institutions are those that create the market. Without them, the market would not exist, or would not function well. However, long-term economic development requires other groups of institutions—those that regulate certain markets (where externalities, economies of scale and imperfect information are present), guarantee macroeconomic stability (foreign exchange, monetary and fiscal institutions), and confer social legitimacy (social protection systems, unemployment insurance and social funds).

²³ The case of the Eastern European countries and their adoption of institutions that have an affinity with those of the European Union is a case in point. Also illustrative is the case of Argentina in the second half of the nineteenth century, when economic actors were well aware of the specific opportunities and demands associated with the country's resources and its position within the international economy.

²⁴ Thus, the argument "It is known that the accumulation of human capital contributes decisively to growth and, therefore, more resources should be devoted to education" would be weaker than one that argued "In order to satisfy the demand for technicians, created by our booming software industry, there is an urgent need to expand and improve training activities in this field."

²⁵ Dixit (2004) maintains that the best strategy is not to attempt to reproduce the institutions of developed countries, but rather to modify those that already exist in each country.

3. Some strategic guidelines for public intervention

Any thinking regarding Latin America and the Caribbean must begin by recognizing the great differences among the countries that make up the region, and the need to respect their unique characteristics. Nevertheless, there are common features that make it worthwhile to think about the countries as a whole, while bearing in mind that these are general principles and require significant complementary adjustment before being applied to specific circumstances in individual countries. In essence, the task is to define a “roadmap” that articulates public policy in different areas, while taking into consideration the specific present situation.

First, dissatisfaction with the results of the 1990s reforms, in terms of economic growth and social equity, is leading to an alternative vision. The change can be summarized conceptually as a transition, from an approach that advocated more market and less State to one that, without denying achievement in developing market economies, places renewed emphasis on better government —i.e., on interventions of higher quality.

Second, a new balance must be reached between private initiative and public interest, paying special attention to equal opportunity and social cohesion. In a number of the region’s countries, many citizens and social groups have been losing their sense of belonging, along with ability to see common objectives as their own. Overcoming these centrifugal tendencies requires “society creation”, as well as more active participation in democratic political institutions, more tolerance for differences and greater willingness to compromise. With this object in mind, public policy must regain its original sense, addressing all types of decision-making in pursuit of the common interest, not restricting itself to today’s most common meaning of State action, i.e., making “others” responsible.

Third, the foregoing is made easier when there is a shared vision of how to create an inclusive future. In all of the region’s countries, there have always been marked differences regarding the well-being of their inhabitants. However, in a number of cases, during more or less prolonged periods, there was a perception that there existed the possibility of a better future, based on people’s own efforts and within the framework of the opportunities that society offered. Today, the situation is different, and requires a mobilization of social energies around a common endeavor, in order to establish long-term agreements (explicit or implicit) between the State and political and social actors regarding objectives, and the set of policies and innovations needed to achieve them. These agreements must be based on mutual commitments, particularly in the case of the business sector, and not merely on a unilateral attempt to gain rent-seeking concessions from the State.

Fourth, the countries of the region have a more diverse productive structure than they did in the past and than that of other developing economies such as those of East Asia. This situation can be represented, in diagrammatic form, through a “three-speed” economic model, based on the size and legal constitution of enterprises that make up the economy. One group is composed of informal enterprises that, because of their structure and capacity, are of lower productivity and operate in an environment that offers them little opportunity for development and learning. The second group is made up of formal small and medium-sized enterprises which, in turn, have problems accessing resources (particularly financial) and gaining access to certain markets for factors of production that would allow them to develop their ability to compete. The final group consists of large national and foreign enterprises, whose productivity often rivals that of businesses operating on the global scale, but with few links to the rest of the domestic economy and, in some cases, with poor capacity for innovation.

Fifth, as is true in the international arena, asymmetries —macroeconomic and financial, productive and technological, and of different degrees of mobility of productive factors— that characterize the relation between developed and developing countries, tend to reproduce and amplify inequalities. Moreover, at the national level there is a lack of genuine equality of

opportunity that would allow ventures of the different productive entities mentioned to prosper on an equal basis. Proactive public policy is therefore needed to level the playing field, through specific measures designed to eliminate the obstacles that unevenly affect different productive units.

A differentiated structure of support and incentives could bring together three major public strategies. The strategy of inclusion is designed to move as many small productive units as possible from the informal to the formal sector of the economy. The horizontal policies that make up this strategy have broad coverage, but are also selective in terms of their beneficiaries, based on a definition, adjusted for each country, of the productive units to which they are directed. Notable among these policies are the simplification of rules and administrative procedures, lower tax liabilities, with simpler declaration procedures, expanded access to credit for small investments (and, above all, for working capital), and basic training programs in management and technology skills. By moving businesses into the formal sector of the economy, they will be able to access other public policies and instruments, making it possible to advance their businesses, while providing a degree of social protection to their workers.

The modernization strategy is based on horizontal policies, combined with selective measures directed at productive clusters or specific productive chains. Criteria for selection should take account of the possibility of producing goods and services for export, introducing higher levels of technology, and increasing efficiency by bringing together different agents. Support for modernizing production includes policies to improve access to information, credit, technology and marketing systems. Exporting can be enhanced through services offering guidance on foreign markets and available support, provided by specialized public agencies in association with private-sector business associations. Added to these are other policies involving training activities, incorporation of improvements in production, technology and procurement of new machinery and equipment. In several countries there are policies of this type in place, but there is a need for major improvements in their design, for participation on the part of the potential beneficiaries, for establishing follow-up and assessment mechanisms and, above all, for increasing their coverage.

This last strategy can be summarized by the concept of “densification,” since it aims to incorporate more knowledge in the national productive landscape, as well as to establish a more articulated web of productive, technological, entrepreneurial and labour relations. In principle, the overall policy and proper functioning of the institutions within a market economy would allow large businesses, which are more closely linked to international markets, to operate under reasonable conditions. Ideally, however, this framework should be supplemented by specific measures designed to produce changes in the public interest. In this case, it involves strategic —and, therefore, highly selective— measures that require public officials to exercise a high degree of skill in negotiating and persuasion, in order to mobilize private efforts. This strategy can: provide implementation, through a variety of programs, including programs aimed at strengthening links among the export base; fostering public-private cooperation in specific areas of innovation, in order to realize potential competitive advantages; attracting higher-quality foreign investment for productive links and technological capacities; supporting the expansion and internationalization of domestic enterprises; and strengthening the services infrastructure, in order to eliminate bottlenecks in productive development.

Sixth, the adoption of differentiated strategies, such as those referred to earlier, requires a considerable increase in the transparency of public policy. This will strengthen its legitimacy and provide for major improvements in design, based on a fruitful interaction with the potential beneficiaries. It is also necessary, in the interest of greater transparency and effectiveness, to implement follow-up and assessment mechanisms that make it possible to learn from successes and failures and, as a result, re-plot the course or make adjustments in order to achieve the objectives that have been outlined. Together these requirements point to the importance of improving the functioning of democratic institutions, as well as the quality of government officials overseeing

strategic areas. This task can be met successfully, as demonstrated by the progress that various countries have achieved with technical teams dealing with monetary and fiscal issues.

Seventh, the policy instruments in an open economy are fewer and of more limited scope than those used in semi-closed economies. International regulations, free trade agreements and a number of regional agreements restrict the use of many such measures that were commonly used in the past. At the same time, budgetary and financial constraints make necessary greater selectivity in their application. Thus, the incentives will certainly be more moderate than those of past eras, particularly the strong incentives that characterized the period of industrialization overseen by the State, including quantitative or tariff restrictions on the importation of specific goods and the channeling of vast amounts of fiscal resources to public enterprises operating in sectors considered strategic for national development. All of this requires a targeting of efforts, increased efficiency and, above all, identifying new ways of making public policy.

As a final thought, it is worth noting that economic growth is simultaneously a condition and a consequence of the foregoing. However, it seems impossible to imagine not undertaking major efforts to increase domestic savings and channel them more effectively to productive investment. Although developing economies should be the recipients of foreign savings, one of the most disruptive factors to economic decisions in recent years has been the variability in the supply of international financing. Thus, it would be wise to rely more on countries' own strengths, rather than depending exclusively on those of countries outside the region. Similarly, it is vital to establish a new fiscal agreement that financially supports the public functions required by productive transformation accompanied by social equity, in the framework of market economies that are open to the world, as is currently the case of the region's economies.



Part two: The macroeconomy, investment and sustainable development



Introduction

One of the most conspicuous traits exhibited by the countries of the region during the 1990s was the pronounced volatility of their business cycles, which has undermined their economies' ability to embark upon a sustained growth path. This pattern has hindered the production sector's expansion and consolidation, since one of the main preconditions for its development is a stable economic environment conducive to real investment. The uncertainty generated by this volatility interferes with saving and investment decisions. This, in turn, curbs productivity gains, which are closely linked to the various sorts of capital formation.

Private investment trends are highly sensitive to macroeconomic policy, which influences the behaviour of interest rates, exchange rates, inflation and wages. Any divergence by these variables from their equilibrium values heightens the volatility of real business cycles and discourages productive investment. In open, financially integrated economies, the dynamics of these variables are affected by both real and financial shocks, with the latter having predominated in recent decades. A macroeconomic policy designed to foster productive development should therefore be aimed at smoothing out business cycles and preventing fluctuations in the financial market from exerting undue influence over trends in these "macro prices". Countercyclical policies are a tool of vital importance in achieving this end.

Investment is also influenced by the workings and development of financial systems. The appearance of new tools and markets for providing financial intermediation for technological innovation, facilitating and improving small and medium-sized enterprises' access to financial resources and promoting long-term financing are crucial for productive development. Since financial systems can soften or magnify the macroeconomic impacts of external or internal shocks, if these systems are functioning properly they can help to smooth out business cycles and reduce the volatility of growth.

Investment in infrastructure influences an economy's overall competitiveness. Countries that have an ample supply of quality infrastructure services have a competitive edge over those that do not. There is a wealth of empirical evidence that points to the close relationship existing between economic growth and the development of infrastructure services. In order for an economy to grow, it needs to increase the quality and quantity of such services and, by the same token, the expansion of such services stimulates and facilitates growth.

The region's ample endowment of natural resources has been an influential feature of its production activity throughout its history. The challenges posed by economic liberalization and integration, together with the appearance of new technologies, has given an added impetus to the relationship between investment in natural resources and the environment, on the one hand, and the sustainability of economic growth, on the other. Economies specializing in exports based on non-renewable resources, in particular, should evaluate the impact that their export activities may have on their capital stock. In fact, when the disinvestment associated with the reduction in capital stock is taken into account, a number of countries in the region turn out to have lower savings rates than indicated by their national accounts. Furthermore, the growing awareness of the environmental implications of economic growth has led to the emergence of new productive and technological opportunities that the region should use to fuller advantage.

This section focuses on the subjects just mentioned. Chapter 3 reviews macroeconomic trends during the 1990s and the early years of this century. The procyclical profile of macroeconomic policy, and particularly fiscal policy, is examined. Events in the countries' financial systems are also discussed, and the point is made that financial deepening is not synonymous with the financial development process that is of such vital importance for Latin America and the Caribbean. In the final portion of this section, recommendations are made concerning ways of promoting countercyclical policies and enhancing the role of the banking system and capital market in the productive development process.

The relationship between infrastructure and growth is explored in the first section of chapter 4, which examines the region's demand for infrastructure services and the challenges it must face in this connection in the immediate future. Consideration is given to the need to boost public investment in order to supplement private investment and thus strengthen the role of infrastructure in development, especially in areas where private investment is not profitable. To this end, the analysis also covers means of increasing fiscal resources and using them more flexibly to promote and advance public investment while maintaining a position of fiscal responsibility. In view of the existing and foreseeable involvement of private suppliers in the delivery of infrastructure services, regulatory mechanisms will need to be refined, particularly with respect to rate-setting, so that fees and charges will reflect productivity gains in these services. The second half of the chapter is devoted to the relationship between the production structure, natural resources and the environment. As part of this discussion, an assessment is made of the countries' potential for the development of mining products and hydrocarbons, ecological goods and services, environmental goods and services markets, technological innovation in biotechnology and clean production. The chapter concludes with a discussion of the items that should be included in a production-friendly environmental agenda.



Chapter 3

The macroeconomy and financial development for growth

The dynamics of economic growth are influenced by both short- and long-term factors. Insofar as structural factors have a significant bearing on productive development and productivity gains, policies in this area should incorporate long-term goals and targets. Macroeconomic policy, for its part, supports economic growth through the use of short- and medium-term policy tools in order to keep economic aggregates and key relative prices on a stable path. Although they are implemented in different spheres and governed by different criteria, the productive development agenda and macroeconomic policy are nevertheless closely related, and their effective coordination and convergence are essential for sustained development.

First of all, saving and investment decisions, which are key factors in productive development, are intertemporal in nature, since their costs and benefits arise over time. The promotion of saving and investment requires a balanced macroeconomy capable of engendering a stable economic environment that affords reasonable degrees of certainty. Business-cycle volatility, caused by internal or external shocks, has negative effects on saving and investment, thereby hampering productive development. Second, macroeconomic instability has the effect of shifting the priorities of the economic policy agenda towards short-term goals. The structural agenda, which includes productive development, can be addressed more successfully in the absence of short-term emergencies. In practice, episodes of extreme macroeconomic instability (inflationary spikes, financial

and fiscal crises, balance-of-payments problems, high unemployment, any sharp appreciation or depreciation of the exchange rate, etc.) tend to result in the deferral of the long-term agenda. Third, macroeconomic policies affect relative prices (the real exchange rate, real interest rate and real wages), which play a major role in generating incentives for investment and saving. Moreover, high and volatile inflation has a negative impact on development by obscuring relative price signals at the microeconomic level. Lastly, macroeconomic policy choices are not neutral from the standpoint of productive development.

Financial policies are not neutral either. Financial intermediation has a direct impact on an economy's levels of investment and productivity, since it strongly influences the availability of savings (especially long-term funds), the cost of capital and the payment chain. Sound intermediation fosters new business and investment opportunities, lowers capital costs and facilitates the correct identification and selection of investment projects, all of which ultimately enhances growth potential.

Financial flows also strongly affect macroeconomic policies' capacity to smooth out fluctuations in the business cycle. Their effects are manifested in the performance of credit markets, which influence the severity and spread of negative or positive shocks. These effects are, in turn, transmitted through such factors as the supply of domestic credit and the valuation of national assets.

This chapter provides a Latin American and Caribbean perspective on macroeconomic policies and trends in the region, the development of the region's financial systems and the accessibility problems they exhibit. It then looks at tools for the design of countercyclical macroeconomic policies and, lastly, analyses financial intermediation instruments for improving risk management and thus facilitating access to, in particular, long-term funds.

I. The macroeconomic backdrop

One of the greatest economic achievements of the 1990s was the progress made in terms of macroeconomic governance in most of the region's countries. Fiscal deficits shrank considerably in the second half of the 1980s and averaged between 1% and 2% of GDP for much of the following decade. In fact, it was not until the late 1990s that they began to approach the 3% mark as the growth of economic activity slowed owing to contagion from the Asian crisis. Progress in this regard has been uneven across the countries of the region, as is indicated by the fiscal crises that have plagued some economies in recent years and by several countries' persistently high public-sector borrowing indices. On the other hand, as noted in chapter 2, the reduction in inflation has been more uniform and more lasting. On average, inflation in Latin America gradually moved downward until 2001, when it reached single-digit figures in most of the countries. The setback suffered in 2002, when average inflation rose for the first time in a decade (coinciding with significant exchange-rate devaluations in several cases), was concentrated in just a few countries and was followed by a decline in 2003.

The inroads made with respect to the fiscal situation and inflation have not, however, translated into faster economic growth, more stable access to external capital or significant increases in domestic saving and investment. In fact, GDP growth has been slow and highly volatile for the past 14 years, with a simple average of 2.4% for the period 1990-2003.

1. External financing trends, business cycles and vulnerability

The countries began to enjoy renewed access to international financial markets in the early 1990s, when net resource transfers went from negative to positive. Foreign direct investment (FDI) and bond issues became the primary channels for external capital inflows. FDI accounted for nearly three fourths of the region's net capital inflows and, until 2001, helped to offset downturns in other

types of inflows. The bond market firmed up with the introduction of the Brady Plan, which facilitated the development of a secondary market, and came to play an increasingly important role that was disrupted only by the fallout from the Mexican financial crisis of 1995, the Asian crisis of 1997 and the worldwide slowdown that began in 2001 (ECLAC, 2002a and 2003a).

As shown in table 3.1, sharp fluctuations in capital inflows have primarily reflected the behaviour of debt and portfolio flows (including the issuance of American Depositary Receipts (ADRs)). FDI, on the other hand, followed a clear upward trend that continued unbroken until the international crisis of 2001 and 2002. Migrant worker remittances have been accounting for an increasing share of capital flows to the region and had come to represent 1.5% of the region's GDP by 2003.

Table 3.1
LATIN AMERICA AND THE CARIBBEAN: SOURCES OF EXTERNAL FINANCING, 1990-2003
(Percentages of GDP)

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
A. Debt	0.49	1.05	2.62	2.53	1.02	1.80	0.59	0.83	1.44	-0.95	-0.74	-0.40	-1.81	-0.45
Loans ^a	-0.14	0.40	0.52	-0.85	-2.36	1.13	-1.70	-0.36	-0.24	-1.82	-0.95	-0.49	-0.94	-0.10
Bonds	0.63	0.64	2.10	3.38	3.38	0.67	2.30	1.18	1.68	0.87	0.22	0.09	-0.87	-0.35
B. Investment	0.65	1.23	1.35	2.09	2.40	1.84	2.98	3.77	3.07	3.77	3.32	3.26	2.07	1.54
Direct	0.48	0.76	0.82	0.65	1.45	1.52	2.32	3.16	3.42	4.22	3.47	3.29	2.01	1.54
Equity	0.17	0.47	0.53	1.44	0.95	0.32	0.66	0.62	-0.35	-0.45	-0.15	-0.03	0.07	0.00
C. Other	0.36	0.44	0.55	0.52	0.61	0.69	1.01	1.04	1.14	0.79	0.85	1.00	1.17	1.28
Debt rescheduling, copyrights	0.02	0.04	0.03	0.02	0.02	0.05	0.06	0.05	0.05	0.05	0.05	0.04	0.06	0.06
Worker remittances	0.34	0.40	0.52	0.50	0.59	0.65	0.95	0.99	1.10	0.73	0.80	0.96	1.12	1.22
Total (A+B+C)	1.49	2.72	4.52	5.14	4.03	4.33	4.58	5.64	5.65	3.61	3.44	3.87	1.44	2.37
Total excluding remittances	1.15	2.32	4.00	4.64	3.44	3.69	3.64	4.65	4.55	2.88	2.64	2.90	0.32	1.15

Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of the International Monetary Fund (IMF).

^a GDP in dollars at 1995 prices was used.

While the cyclical behaviour of trade and of the terms of trade have continued to play a role in the ups and downs experienced by the region's economies, during the last decade external financing flows have been a fundamental determinant of the business cycle, as detailed in chapter 2 (Ffrench-Davis, 2003a; ECLAC, 2002a and 2003a). Fluctuations in capital flows, more than changes in the terms of trade, have been responsible for the variations observed in the countries' real exchange rates. The extent to which terms-of-trade or financial shocks affect a given economy depends on that economy's degree of openness. Changes in export and import prices will have different effects on the production structure, depending on the significance of imports with respect to GDP. Thus, an economy that is more open to trade should have a greater capacity to absorb financial shocks and will therefore have less of a need to adjust domestic demand (Machinea, 2003).

Exposure to the volatility and contagion associated with new forms of external financing has become the main source of external vulnerability in the region's economies. In fact, sovereign bond spreads, which reflect financial agents' perception of a country's capacity to meet its obligations, has become one of the key macroeconomic prices.¹ The fact that the sovereign spreads of different

¹ This does not mean that changes in this variable provide an accurate indication of the soundness of an economy. Rating agencies have exhibited a procyclical tendency that has resulted in their over- or under-valuation of country risk.

countries of the region have followed more or less parallel trends, regardless of the soundness of each country's macroeconomic fundamentals, clearly attests to the exogenous shocks and contagion that have affected private capital markets, both during booms (contagion of optimism) and busts (contagion of pessimism). This phenomenon was particularly evident during the boom of 1996-1997 and the subsequent Asian and Russian crises.

The volatility of external flows has given rise to spurts of GDP growth that have helped fuel a recovery of economic activity and have then given way to periods of sluggishness or outright recession. The net outcome has been a period of unstable and mediocre regional growth that can be divided into two main phases: a growth phase that lasted from 1990 to 1997 during which, in any case, growth was slower than it had been during the three decades preceding the debt crisis (averaging 3.7% a year between 1990 and 1997, versus 5.5% between 1950 and 1980), followed by a sharp slowdown (to an average of 1.7% a year between 1998 and 2003). This last phase can accurately be described as another lost half-decade, since per capita GDP shrank during this period (see table 3.2). In the past five years, half the countries of the region have witnessed a drop in per capita GDP, while all the countries in which economic recoveries had begun in the 1990s saw these processes grind to a halt.

Table 3.2
LATIN AMERICA: GROWTH AND VOLATILITY, 1950-2003

	1950-1980	1980-2003	1990-2003	1990-1997	1998-2003
Average GDP growth					
Simple average	5.5	2.0	2.8	3.7	1.7
Weighted average	4.8	1.9	2.4	3.2	1.3
Large and medium-sized countries ^a	5.2	1.9	2.3	3.2	1.2
Small countries	4.5	2.1	3.1	3.8	2.2
Average per capita GDP growth					
Simple average	2.7	0.1	0.7	1.4	-0.1
Weighted average	2.1	0.3	1.1	2.3	-0.5
Large and medium-sized countries	2.4	0.3	0.9	2.0	-0.7
Small countries	1.8	-0.1	0.6	1.0	0.2
Standard deviation of GDP growth					
Simple average		1.9	1.5	1.1	1.2
Weighted average		2.2	2.0	2.0	1.6
Large and medium-sized countries		2.2	2.1	2.1	1.6
Small countries		2.3	1.6	1.2	1.7
Public-sector balance					
Simple average	-1.5	-2.5	-1.8	-1.1	-2.7
Large and medium-sized countries	-1.0	-2.0	-1.5	-1.0	-2.2
Small countries	-1.7	-2.8	-2.0	-1.3	-3.1
Inflation ^b					
Simple average	34.4 ^c	107.4	58.5	108.4	10.1
Large and medium-sized countries	57.6 ^c	104.1	76.9	148.5	12.4
Small countries	17.2 ^c	91.6	40.0	69.8	8.3

Source: Economic Commission for Latin America and the Caribbean (ECLAC).

Notes: The sample consists of 19 countries: Argentina, Bolivia, Brazil, Chile, Colombia, Costa Rica, Dominican Republic, Ecuador, El Salvador, Guatemala, Haiti, Mexico, Nicaragua, Panama, Paraguay, Peru, Uruguay and Venezuela.

Of this group, the following were considered to be large or medium-sized countries: Argentina, Brazil, Chile, Colombia, Ecuador, Mexico, Peru and Venezuela. The rest were classified as small countries..

^a Weighted average.

^b 1971-1980: average yearly growth. After 1980: December-to-December growth. The Dominican Republic was included in the figures for 1994 and subsequent years.

^c Geometric average for the period 1971-1980.

The sensitivity of economic growth to capital flows is attributable in part to the fact that macroeconomic policy management has been strongly procyclical. One conspicuous feature of the reform period has been the emergence of imbalances associated not only with public-sector deficits but also with excess private spending financed through external borrowing (Stiglitz, 2003a; Ocampo, 2004; Marfán, 2000). In the past two decades, large and growing private-sector deficits have led to serious financial crises in some countries (Chile in 1982, Mexico in 1994 and the South-East Asian economies in 1997). Since these crises took place in countries that combined strict fiscal discipline with an independent central bank committed to an inflation target, it may be inferred that these two conditions are not enough to rein in excess private spending. Such excesses are usually associated with perceptions of economic success among national and international stakeholders and, in fact, are usually accompanied by considerable capital inflows. Once the boom ends, the economy is left in a more vulnerable position and loses momentum, unless the public sector takes timely action to temper private exuberance with public prudence. If the public sector does not cut back on its outlays when private spending is excessive, GDP will grow too fast, creating unrealistically high expectations of future per capita income growth that will lead to an overvaluation of the real exchange rate and a deterioration in the current account balance, thus increasing the economy's external vulnerability. If, on the other hand, private spending is "depressed" and the public sector fails to compensate for this, GDP will grow below its potential rate and will result in a current account surplus above its equilibrium level and a depreciation of the real exchange rate. If a country's economic authority does not take proper steps to offset private-sector imbalances, it will end up magnifying the business cycle. A problem of political economy arises when compensation for excess private spending makes it necessary to increase the fiscal surplus, even though the public sector has not been assigned the role of offsetting excess private spending. Examples of "compensatory" public spending include that took place in Chile between 1994 and 2001 and in Ireland in the 1990s.

2. Fiscal policy and public finances

Fiscal policy has generally had a procyclical orientation that amplifies fluctuations in private spending, which has done nothing to help stabilize macroeconomic variables throughout the business cycle. The countries' difficulties in keeping their fiscal accounts in balance stem not only from the external shocks that have led to lower fiscal revenues and higher interest payments, but also from the accumulation of public debt, even in periods of above-trend GDP growth.

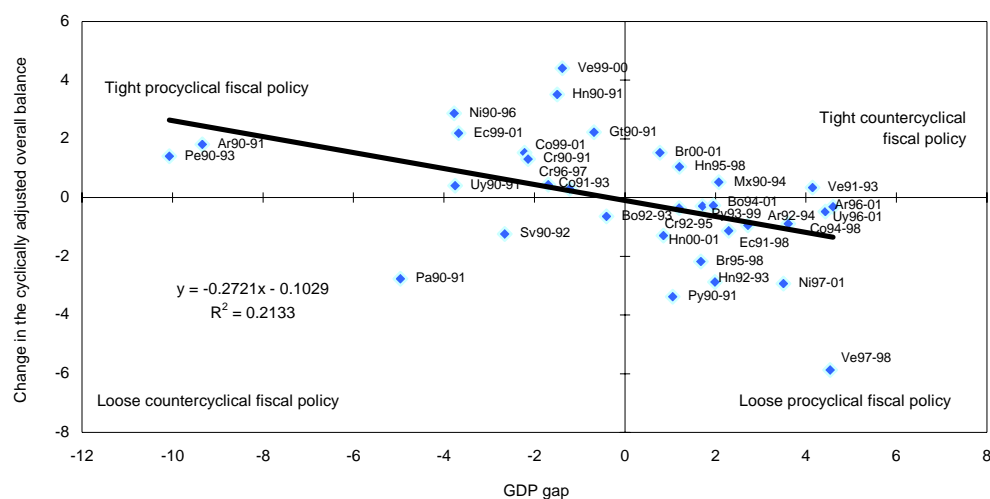
This becomes apparent when changes in the cyclically adjusted public-sector balance are compared to the GDP gap (see figure 3.1). An analysis of 45 episodes of variation in the overall public-sector balance, adjusted for the business cycle, in some of the region's economies shows that 12 of them were neutral in relation to the cycle, 25 reflected a procyclical fiscal policy stance and only 8 exhibited countercyclical behaviour.² More precisely, in 13 of the 17 cases in which GDP growth was above trend, the change in the cyclically adjusted public-sector balance was negative, reflecting an expansionary fiscal policy. Conversely, when economic growth fell short of the medium-term trend, the change in the cyclically adjusted public-sector balance was positive in 12 of the 16 episodes in this category, reflecting a tight fiscal policy.³ The analysis of changes in the public sector's cyclically adjusted primary balance yields similar conclusions,

² If automatic stabilizers had operated symmetrically—that is, if policies had been neutral throughout the business cycle—the points would have been distributed along the axis of the abscissae. When policies are countercyclical, the points should fall in the upper right and lower left quadrants. When the points are concentrated in the upper left and lower right quadrants, they indicate the existence of procyclical policies. The episodes in which the cyclically adjusted overall balance varied little even though there were significant changes in the GDP gap are those that took place in Colombia (1999-2000), Chile (1992-1998), Bolivia (1994-2000), Brazil (1990-1994), Guatemala (1992-2000), El Salvador (1993-2000), Mexico (1995-1997), Panama (1992-2000), Paraguay (1993-1998), Peru (1994-2000) and the Dominican Republic (1990-1996 and 1997-2000) (Martner and Tromben, 2004).

³ When this happens, the countries have no choice but to cut spending in most cases, meaning that this is more a consequence than a policy.

although it must be borne in mind that debt interest payments undoubtedly have an even stronger negative correlation with the GDP gap than other budget items (Martner and Tromben, 2004).

Figure 3.1
LATIN AMERICA AND THE CARIBBEAN: PROCYCLICAL FISCAL POLICIES, 1990-2000
(Changes in the cyclically adjusted overall balance and the GDP gap)

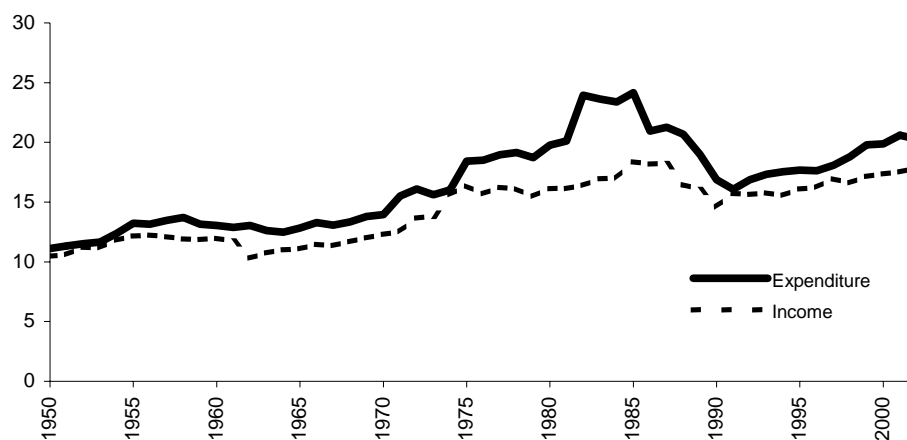


Source: Ricardo Martner and Varinia Tromben, “La sostenibilidad de la deuda pública, el efecto bola de nieve y el ‘pecado original’”, *Gestión pública series*, No. 46 (LC/L.2150-P/E), Santiago, Chile, Economic Commission for Latin America and the Caribbean (ECLAC), 2004. United Nations publication, Sales No. S.04.II.G.75.

The revival of economic growth in the 1990s, together with the design of better tax systems, caused fiscal revenues to rebound strongly. Between 1990 and 2002, central government tax receipts increased as a proportion of GDP in 16 countries of the region. The jump in receipts has been especially significant in the case of the value added tax (VAT) and, to a lesser extent, direct taxes. Higher fiscal revenues, in turn, allowed the countries to raise public spending by a simple average of more than three percentage points of GDP in the course of the 1990s: from 17% in 1990 to 20.4% in 2002 (see figure 3.2). This increased income enabled them, in particular, to boost public social spending. The upward trend in such expenditure was quite pronounced in the first half of the 1990s, but has been on the wane since then.

The combination of persistent public-sector deficits and high debt-servicing costs has undermined the sustainability of fiscal accounts in many of the region’s countries. Since the real interest rates paid on the public debt have been much higher than economic growth rates, a large and, in many cases, growing proportion of fiscal income has gone towards interest payments.

Figure 3.2
LATIN AMERICA: CENTRAL GOVERNMENT INCOME AND EXPENDITURE
(Simple average, 1950-2002, in percentages of GDP)



Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of institutional data and Oxford Latin American Economic History Database (OXLAD).

Note: The ratio for Latin America is the simple average of the ratios for the 19 countries considered: Argentina, Bolivia, Brazil, Chile, Colombia, Costa Rica, Dominican Republic, Ecuador, El Salvador, Guatemala, Haiti, Honduras, Mexico, Nicaragua, Panama, Paraguay, Peru, Uruguay and Venezuela.

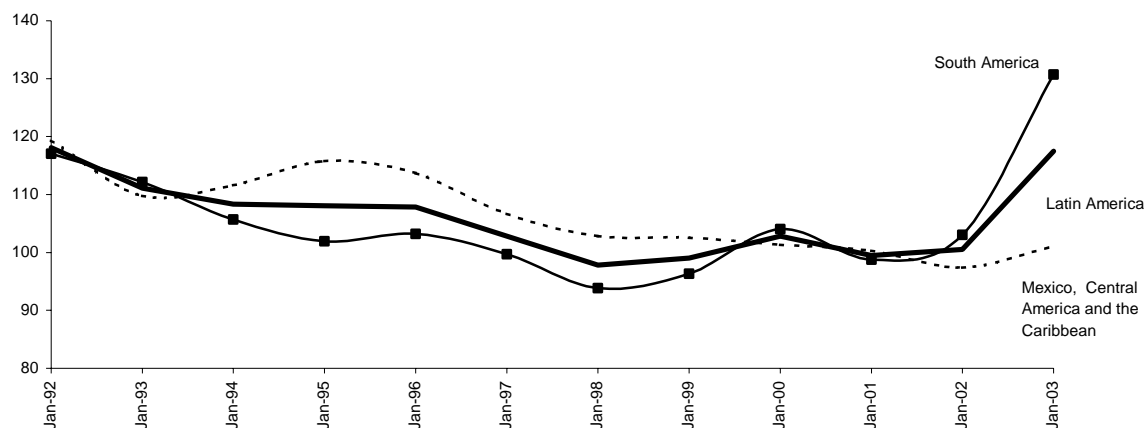
3. Exchange-rate and monetary policy

As mentioned earlier, curbing inflation has been one of the prime objectives of macroeconomic policy in recent years. Accordingly, the design and implementation of exchange-rate and monetary policies have been geared to achieving this goal.

The nominal exchange rate has been a significant component of policies to fight inflation. Between 1990 and 1998, the region exhibited a trend towards, on average, a real appreciation of local currencies (see figure 3.3). This revaluation translated into increased imports and large current-account deficits, which were financed with external capital. Contrary to the optimistic forecasts made at the beginning of the decade, this overvaluation became the Achilles heel of the countries' stabilization strategies when external capital flows dried up. The balance-of-payments crises in Argentina in late 2001, Brazil in early 1999 and Mexico in late 1994 exemplify this phenomenon (ECLAC, 2003a).

The countries of the region can be divided into two subgroups according to the behaviour of their real exchange rates: South America, on the one hand, and the Central American and Caribbean countries and Mexico, on the other (ECLAC, 2003a). Until 1998 real exchange rates in both groups tended to appreciate, albeit to different degrees. Between 1999 and 2002, the South American countries saw their currencies depreciate significantly, as their exchange rates rose far above the levels observed in the 1990s. In 2003, a slight appreciation was seen in the first half of the year, but this trend was partially reversed later in the year and in early 2004. For the region as a whole, the real exchange rate tended to stabilize in 1999-2002, then began to depreciate in 2002 and then levelled off again starting in 2003 (see figure 3.3).

Figure 3.3
LATIN AMERICA: REAL EFFECTIVE EXCHANGE RATE
 (Base 2000=100)



Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of official data.

Note: The real exchange rate is the average of the real exchange rates for imports and exports, where 2000=100. Figures representing annual averages were used. "South America" includes Argentina, Bolivia, Brazil, Chile, Colombia, Ecuador, Paraguay, Peru, Uruguay and Venezuela. "Mexico, Central America and the Caribbean" includes Mexico, Costa Rica, Dominican Republic, El Salvador, Guatemala, Honduras, Jamaica, Nicaragua and Panama.

The choice of exchange-rate regimes has been influenced not only by the need to stabilize domestic prices, but also by the volatility of capital flows and changes in the terms of trade. Since these last two factors have made fixed-rate or currency-band regimes increasingly expensive, most of the countries have opted for currency floats (see table 3.3).

Table 3.3
LATIN AMERICA: EXCHANGE-RATE REGIMES, 1996-2003

Regime	1996	1999	2000	2001	2002	2003
Dollarization	Panama	Panama	Panama Ecuador	Panama Ecuador	Panama Ecuador El Salvador	Panama Ecuador El Salvador
Currency board	Argentina	Argentina	Argentina	Argentina		
Other fixed peg	El Salvador	El Salvador	El Salvador	El Salvador		Venezuela
Crawling peg	Bolivia	Bolivia	Bolivia	Bolivia	Bolivia	Bolivia
	Costa Rica	Costa Rica	Costa Rica	Costa Rica	Costa Rica	Costa Rica
	Nicaragua	Nicaragua	Nicaragua	Nicaragua	Nicaragua	Nicaragua
Crawling band	Brazil	Colombia	Honduras	Honduras	Honduras	Honduras
	Colombia	Chile	Uruguay	Uruguay		
	Chile	Honduras	Venezuela	Venezuela		
	Ecuador	Uruguay				
	Honduras	Venezuela				
	Uruguay					
	Venezuela					
Floating	Guatemala	Brazil	Brazil	Brazil	Argentina	Argentina
	Haiti	Ecuador	Chile	Chile	Brazil	Brazil
	Mexico	Guatemala	Colombia	Colombia	Chile	Chile
	Paraguay	Haiti	Guatemala	Guatemala	Colombia	Colombia
	Peru	Mexico	Haiti	Haiti	Guatemala	Guatemala
	Dominican Rep.	Paraguay	Mexico	Mexico	Haiti	Haiti
		Peru	Paraguay	Paraguay	Mexico	Mexico
		Dominican Rep.	Peru	Peru	Paraguay	Paraguay
			Dominican Rep.	Dominican Rep.	Peru	Peru
					Dominican Rep.	Dominican Rep.
					Uruguay	Uruguay
					Venezuela	

Source: Economic Commission for Latin America and the Caribbean (ECLAC).

As the countries switched to floating-rate regimes, monetary policy generally focused on inflation control. Several countries of the region set inflation targets to serve as a nominal anchor for their economies; accordingly, more central banks geared their monetary policies to meeting these targets (Mishkin and Schmidt-Hebbel, 2001). As shown in table 3.4, in 2003 ten countries of the region either had an inflation-targeting system in place or had committed to adopting one in their agreements with IMF.

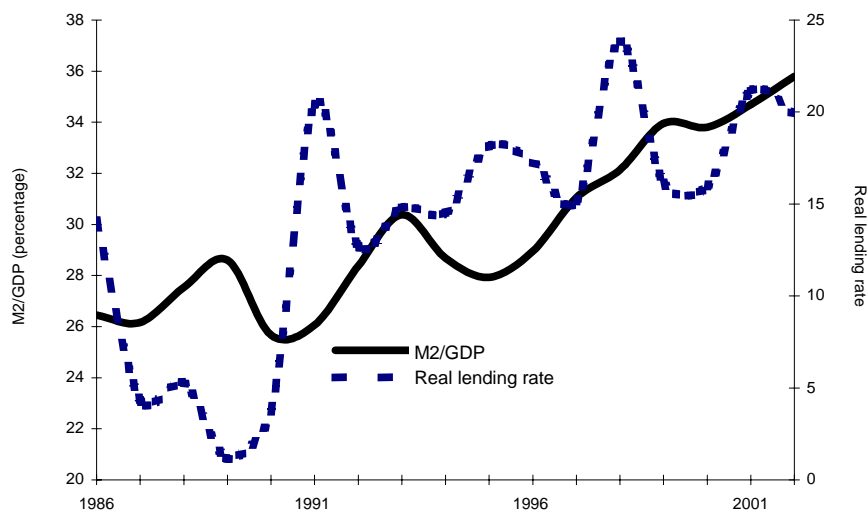
Table 3.4
MONETARY POLICY IN LATIN AMERICA

Country	Situation	Instrument	Target
Argentina	Inflation-targeting system being phased in; currently has monetary-base growth targets	Monetary base increased with quasi-currencies	Inflation between 4% and 7% (2004)
Brazil	Inflation-targeting system in place	Monetary policy rate (SELIC)	Inflation of 5.5% (deviation of $\pm 2.5\%$) (2004)
Chile	Inflation-targeting system in place	Monetary policy rate	Inflation in the middle of the band (2%-4%) (2004)
Colombia	Inflation-targeting system in place	Reverse repo rate	Inflation of 5.5% (2003)
Costa Rica	The crawling-peg regime has increased dollarization and eroded competitiveness		Introduce an inflation-targeting system
Guatemala	Inflation-targeting system in place		
Mexico	Inflation-targeting system in place	<i>Corto</i> (target for commercial-bank balances at the central bank)	The country will try to use an objective interest rate (to increase transparency)
Paraguay	Plans to adopt a monetary policy based on the control of aggregates		
Peru	Inflation-targeting system in place	Interest rate	Inflation of 2.5% ($\pm 1.5\%$)
Uruguay	Inflation-targeting system being phased in; currently has monetary-base growth targets	Monetary base	

Source: Economic Commission for Latin America and the Caribbean (ECLAC).

The chief instrument used by the region's monetary authorities is the monetary policy interest rate, which directly influences the interbank interest rate and, in turn, the cost of credit, thereby affecting the demand for money and the composition of portfolios through the real interest rate. Lower inflation led to a remonetization of the economies, which took place as real lending rates were rising (see figure 3.4). There was also an expansion of domestic credit, which reached some 45% of GDP in 1994. The expansion was backed up by a substantial increase in the region's average level of international reserves, whose growth in the 1990s reflected burgeoning capital inflows (see figure 3.5).

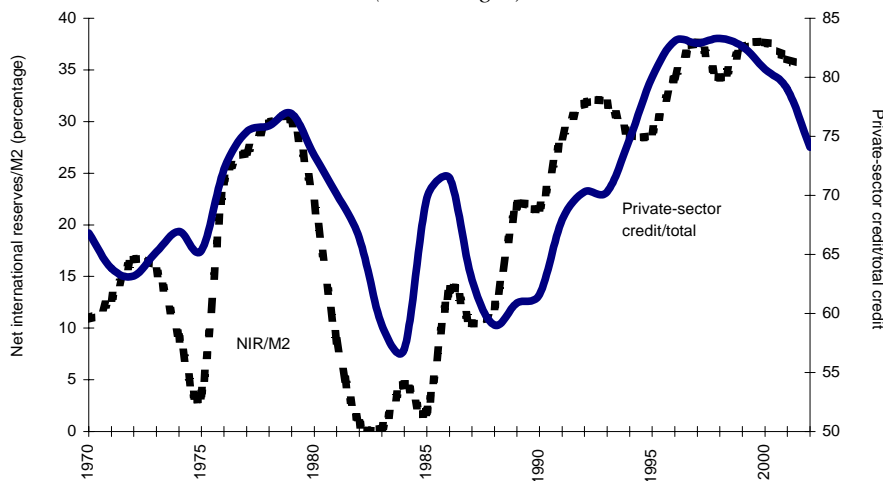
Figure 3.4
LATIN AMERICA: M2/GDP AND REAL LENDING RATE
 (Percentages)



Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of the International Monetary Fund (IMF).

Note: M2 refers to end-of-period balances in the following countries: Argentina, Bolivia, Brazil, Chile, Colombia, Costa Rica, Dominican Republic, Ecuador, El Salvador, Guatemala, Haiti, Honduras, Mexico, Uruguay and Venezuela. GDP data were taken from the International Monetary Fund’s *International Financial Statistics*. The 2002 entry for Venezuela represents the 2001 M2 figure and the consumer price index (CPI) and GDP variations for 2002. To calculate real lending rates, the nominal rates were deflated by the annualized CPI variation between November and December of each year. The data for Latin America are simple averages.

Figure 3.5
LATIN AMERICA: NET INTERNATIONAL RESERVES/M2 AND PRIVATE-SECTOR CREDIT/TOTAL
 (Percentages)



Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of the International Monetary Fund (IMF).

Note: M2 refers to end-of-period balances in the following countries: Argentina, Bolivia, Brazil, Chile, Colombia, Costa Rica, Dominican Republic, Ecuador, El Salvador, Guatemala, Haiti, Honduras, Mexico, Uruguay and Venezuela. Data on net international reserves were taken from IMF data on net external assets. Domestic credit figures are based on end-of-period data on commercial-bank and central-bank credit in the following countries: Argentina, Bolivia, Brazil, Chile, Colombia, Costa Rica, Dominican Republic, Ecuador, Guatemala, Haiti, Honduras, Mexico, Paraguay, Peru, Uruguay and Venezuela. The data for Latin America are simple averages of the ratios for the above-mentioned countries.

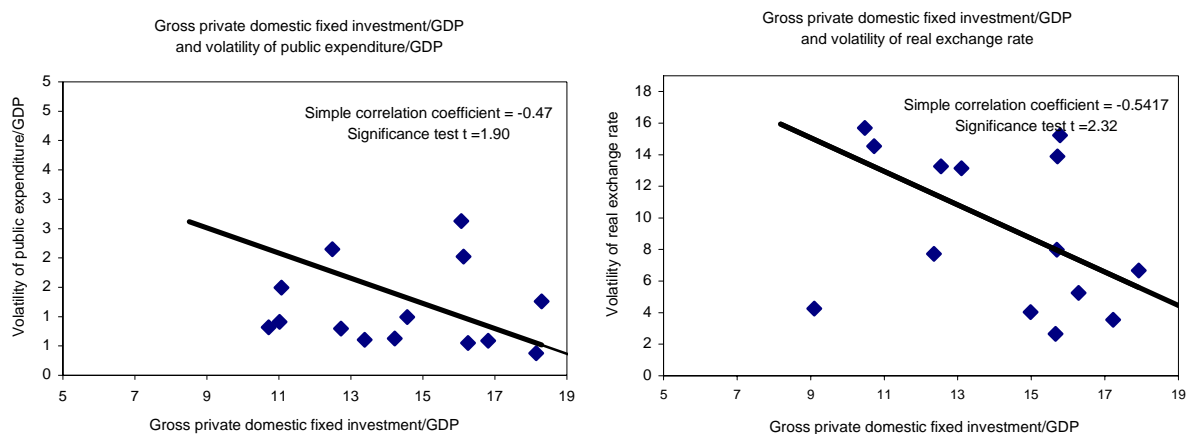
II. The performance of domestic investment and saving

The effects of economic uncertainty on investment in physical capital are a matter of growing concern. The dynamics of this interrelationship works are not yet clear, nor has a consensus been reached as to its direction and magnitude (Caballero, 1997; Chirinko, 1993). Nevertheless, analytical and empirical evidence suggests that, given asymmetrical adjustment costs, which are associated with irreversibility and sunk costs, price volatility has a negative effect on investment (Pindyck, 1988). Since part of the investment made in physical capital is irreversible, investors will tend to postpone such investment when future conditions are too uncertain and hard to predict.

Empirically, a number of studies have found a moderately negative correlation between macroeconomic volatility and private investment (Pindyck and Solimano, 1993; Ramey and Ramey, 1995).⁴ Aizenman and Marion (1999), in a study of 46 developing countries, find a highly significant negative correlation between various indicators of macroeconomic volatility and private investment. This correlation does not hold when public investment is included. In fact, public investment is positively correlated with volatility indicators, suggesting that it behaves countercyclically. The estimated correlation coefficients for private investment are robust and have a value of -0.44 when the volatility indicator used is the ratio of public spending to GDP, -0.46 when the rate of monetary expansion is used and -0.34 in the case of the real exchange rate.

With respect to the region, data for a sample of 13 countries show that macroeconomic volatility and private investment as a percentage of GDP were negatively correlated in the 1990s (see figure 3.6). Volatility indicators were constructed on the basis of the trend (average deviation) of real exchange rates and fiscal deficits or surpluses. The simple correlation coefficient is -0.54 when the real exchange rate is used and -0.47 when the fiscal deficit or surplus is used.

Figure 3.6
LATIN AMERICA: GROSS PRIVATE DOMESTIC FIXED INVESTMENT AND VOLATILITY,
1990-2003



Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of institutional data and International Finance Corporation (IFC).

Note: For each year, the volatility of public expenditure/GDP and of the real exchange rate was calculated as the average deviation. Fifteen countries were considered: Argentina, Bolivia, Brazil, Chile, Colombia, Costa Rica, Dominican Republic, Ecuador, El Salvador, Guatemala, Mexico, Paraguay, Peru, Uruguay and Venezuela, which account for over 96% of regional GDP.

⁴ While volatility and uncertainty are two different things, the former is a good indicator of the latter. "Volatility" refers to a variable's tendency to fluctuate; "uncertainty" refers to the difficulty of predicting those fluctuations, or to the state of affairs when fluctuations are unpredictable. Since fluctuations are extremely hard to predict in practice, volatility is a good indicator of uncertainty.

Volatility exerted downward pressure not only on the rate of economic growth, but also on the rate of investment and, consequently, on productive development and productivity growth. While it is true that the more favourable external environment that prevailed during the boom years of the 1990s paved the way for a recovery in investment —when measured in current prices— starting in 1992, investment rates relative to GDP stayed close to the levels reached in the 1970s and were far below the rates seen in the Asian countries (see table 3.5).

Table 3.5
LATIN AMERICA AND THE CARIBBEAN: GROSS DOMESTIC FIXED INVESTMENT
(Percentages of GDP)

	1970s	1980s	1990s	2000-2003	1990-2003
Argentina	21.0	14.0	17.8	14.6	16.9
Bolivia	15.9	12.4	17.3	15.3	16.8
Brazil	24.1	18.3	20.2	18.8	19.8
Chile	11.5	14.6	22.6	22.0	22.4
Colombia	18.7	16.4	18.6	14.9	17.5
Costa Rica	22.7	18.9	18.9	19.6	19.1
Ecuador	17.4	17.1	18.1	18.5	18.2
El Salvador	17.0	13.3	16.3	17.4	16.6
Guatemala	13.6	14.5	14.8	16.8	15.4
Haiti	10.5	19.0	22.9	34.2	26.1
Honduras	21.4	17.4	25.4	25.3	25.4
Mexico	20.1	19.2	20.1	21.7	20.6
Nicaragua	15.9	18.4	24.6	28.1	25.6
Panama	24.0	19.7	22.3	26.5	23.5
Paraguay	21.5	22.2	22.3	16.3	20.6
Peru	15.7	19.9	20.8	18.4	20.1
Dominican Republic	21.9	21.1	24.6	27.7	25.5
Uruguay	12.2	13.3	13.4	10.5	12.6
Venezuela	31.6	22.0	17.3	13.4	16.2
Latin America					
Weighted average ^a	21.4	18.1	19.7	18.8	19.4
Simple average ^b	18.8	17.4	19.9	20.0	19.9
Median	18.7	18.3	20.1	18.5	19.8
South-East Asia ^c					
Simple average ^d	24.6	28.4	31.1	22.5	29.1
Median	24.2	28.2	33.0	23.6	30.8

Source: Economic Commission for Latin America and the Caribbean (ECLAC).

Annual data. 1970-1979: 1970 dollars; 1980-1989: 1980 dollars; after 1989: 1995 dollars. GDP figures at market prices were used for all the years except 1971 and 1972, for which no data are available. For those years, the coefficients were calculated using figures in constant values in the respective currencies.

^a The weighted average is derived from total gross domestic fixed investment/GDP, in millions of constant dollars.

^b The simple average is the average of the variations in the different countries in the same period.

^c No data for 2003 were available for South-East Asia.

^d The countries considered were Indonesia, Malaysia, Pakistan, Republic of Korea, Singapore and Thailand. The data were calculated on the basis of figures in local currency at current values (source: IMF).

Higher investment in the 1990s had the effect of increasing capital productivity but not labour productivity in the countries of the region, with the exception of Argentina and Chile. The upshot was that the average growth of total factor productivity between 1990 and 2002 was slightly lower than the rate observed between 1950 and 1980 (see chapter 2).

Like investment, national saving was lethargic, rising by barely two percentage points of GDP between 1990 and 2002 to 17% of GDP. Over the same period, the countries of South-East Asia posted average savings rates bordering on 30% of GDP (see table 3.6). The region's mediocre performance was due in part to a decline in public-sector saving, which improved in several

countries in the first half of the period but later deteriorated. Private saving likewise failed to make significant gains, both because domestic credit went mainly towards consumption and because domestic saving was largely replaced by the external saving that accompanied the larger inflow of capital (ECLAC, 2003a; Titelman and Uthoff, 1997).

Table 3.6
NATIONAL SAVING/GDP

Country	1980	1985	1990	1995	1998	1999	2000	2001	2002
Argentina	24.0	16.5	17.2	15.9	15.0	13.8	13.1	12.5	19.4
Bolivia	14.6	12.5	8.0	10.4	15.8	12.9	11.9	9.3	9.4
Brazil	18.6	20.3	19.3	19.7	16.9	15.4	17.4	16.6	17.3
Chile	13.9	8.7	23.6	22.0	22.7	26.5	19.8	20.7	21.1
Colombia	18.5	13.9	19.9	20.8	14.4	13.5	13.9	12.8	12.9
Costa Rica	12.8	18.5	18.7	15.2	16.8	12.8	12.2	13.7	16.4
Ecuador	20.7	18.6	14.1	13.1	14.0	19.6	23.5	22.0	16.5
El Salvador	14.2	7.3	8.1	17.3	16.8	14.4	13.6	14.7	15.5
Guatemala	13.8	9.3	10.6	11.6	12.3	11.8	12.3	12.6	12.5
Haiti	10.6	11.9	19.1	25.5	26.3	26.2	25.1	22.9	25.4
Honduras	12.4	8.8	16.9	27.1	28.5	30.2	26.6	25.4	23.9
Mexico	21.8	21.6	20.3	19.4	20.5	20.6	20.4	17.8	18.5
Nicaragua	-41.6	-28.8	-26.8	-17.9	-5.9	-6.1	-2.8	-5.2	3.7
Panama	19.5	16.6	20.8	24.3	21.2	20.5	21.5	24.1	22.0
Paraguay	22.5	16.4	19.6	22.9	21.0	20.9	19.4	16.6	17.5
Peru	27.0	22.2	17.2	17.2	17.2	18.0	17.1	16.4	16.3
Dominican Republic	14.0	15.2	19.4	17.9	21.3	21.8	18.8	19.8	18.6
Uruguay	10.3	10.0	14.1	14.8	13.1	13.5	12.3	11.2	13.1
Venezuela	32.7	23.9	27.3	20.7	18.5	21.5	28.0	23.2	21.2
Latin America	14.8	12.8	15.1	16.7	17.2	17.3	17.1	16.2	16.9
Republic of Korea			36.0	37.0	21.0	35.4	33.5	31.5	33.5
India			23.4		24.0	23.1	23.4	24.0	25.0
Pakistan			13.6			11.5	14.1	15.0	16.1
Sri Lanka			15.3			23.7	21.6	20.3	20.5
Indonesia			33.7	31.9	25.0		34.6	29.2	20.8
Malaysia			27.1	43.5	34.2	38.2	36.2	32.0	31.8
Philippines			18.2	22.2	20.2	29.2	29.7	23.9	24.6
Singapore			46.6	33.7	32.0	51.9	48.8	45.2	44.6
Thailand			32.1	41.6	26.0	30.7	30.3	29.4	29.0
South-East Asia			31.5	31.3	23.0	28.0	32.9	30.4	29.3
Asia			27.3	35.0	26.1	30.5	30.2	27.8	27.3

Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of institutional data and the International Monetary Fund (IMF), list of current prices.

Note: Simple averages. "South-East Asia" includes Indonesia, Malaysia, Pakistan, Republic of Korea, Singapore and Thailand. "Asia" includes South-East Asia plus India, Sri Lanka and the Philippines.

In view of the behaviour of domestic saving in the region, the increases in investment ratios in the 1990s largely reflected the greater availability of external savings, which, measured in constant prices, grew to very high levels, reaching a peak in 1998 (5% of GDP) that had not been seen since 1981. In 1998 those funds were enough to finance over 20% of fixed investment, which was equivalent to 22.7% of GDP. In contrast, external saving in 1990 represented only 0.2% of GDP, measured in constant 1995 dollars, and made only a marginal contribution to the financing of gross fixed capital formation, which amounted to only 16.5% of GDP that year.⁵ As external capital

⁵ It should be borne in mind that external savings calculated at constant prices usually differ from the result derived in current prices from the current balance-of-payments deficit.

flows have been erratic, the need to turn to external savings to finance increases in investment has been a source of volatility and vulnerability. Accordingly, despite the positive effects of external saving, it is preferable to rely more on domestic saving to finance investment and growth and to reduce macroeconomic volatility.

Increasing national saving is not an easy task, and its determinants are still being hotly debated, as are a number of policy recommendations for encouraging more saving. Any policy recommendation in this regard must make a distinction between corporate saving, household saving and public saving. As will be discussed below, public saving is vital for national saving and should be the cornerstone of a countercyclical macroeconomic policy.

In relation to private saving, the Asian countries' experience suggests that corporate profit reinvestment is one of the key elements explaining those countries' high savings rates (Akyüz and Gore, 1996). Corporate financing comes from both domestic sources (earnings and depreciation funds) and external ones (debt, equities, bonds). The choice of one form of financing or another depends on the tax structure. If taxes on reinvested earnings are low, then earnings will become a major source of saving. In the short term, reinvesting earnings means reducing the flow of dividends to shareholders. This is offset, however, by the increase in the firms' market value as a result of the larger amount of earnings that are reinvested.⁶

Taxation based on dividend withdrawals must be applied across the board to all production sectors. Otherwise, when different tax schemes overlap, the State could lose a substantial volume of revenue, since the production system will tend to concentrate profits in sectors subject to the withdrawal-basis scheme and profit distributions in sectors subject to traditional or presumptive-income tax schemes, using transfer prices to shift profits and liquidity around. Moreover, the withdrawal-basis system requires strong tax institutions with considerable oversight capacity, and seems to be less advisable for countries with a high degree of tax erosion (Ocampo, Bajraj and Martin, 2001).

To promote household saving, forced-saving mechanisms have proved to be relatively effective. The most obvious example is that of social security saving, which is used to finance old-age, survivors' and disability pensions. However, pension systems cannot make a positive contribution to national saving unless they are adequately funded; otherwise, they affect saving negatively. Underfunded pension systems drain off resources from other uses to cover pension payments, weakening the capacity to finance investment. Without prejudice to the redistributive (or solidarity-based) elements that any such system should contain, it is important to avoid running any pension-system deficits because, otherwise, the increase in private saving will be offset by the decrease in public saving.

From the standpoint of national saving, there is little difference between pay-as-you-go systems and fully funded (individual capitalization) systems, provided that both are financially sound. More important in terms of saving are contribution rates, the system's coverage, the retirement age, administrative costs, State pension insurance and, in the case of pay-as-you-go systems, replacement rates. It should be pointed out, apart from strictly pension-related considerations, that fully funded schemes have the advantage of encouraging the development of local capital markets, since these schemes cannot function properly without them.

Aside from pension savings, one way of stimulating personal and household saving is to use special-purpose savings mechanisms. Saving for the purchase of housing or to cover educational expenses, especially for higher education, can be encouraged by means of targeted subsidies. Subsidies of this sort can be assigned using a point system that rewards prior saving and should be tied to recipient households' income levels and living standards. These subsidies would be paid out

⁶ To keep tax revenues from falling, fiscal authorities must offset reductions in taxes on reinvested profits with increases in taxes on distributed profits.

at the time that housing units are purchased or upon enrolment in an institution of higher learning. These types of incentives are subject to some leakage, but less so than more general sorts of asset ownership incentives (Held, 2000).

Another way to boost household saving is through insurance and reinsurance systems. These mechanisms offer a way to save as a hedge against uncertainty and unforeseen events. Life insurance and health insurance are examples of such mechanisms. Other examples are disability insurance provided under pension systems and fully or partially self-financed unemployment insurance. Tax incentives can be used to encourage people to take out these kinds of insurance on a collective or individual basis (Ocampo, Bajraj and Martin, 2001).

III. Financial markets

The close relationship between business cycles, investment and the development of financial markets can be understood in the light of the effects associated with the financial accelerator (Bernanke, Gertler and Gilchrist, 1998; Aoki, Proudman and Vlieghe, 2003). Credit-market dynamics can soften or amplify the macroeconomic impact of internal or external shocks by affecting the capacity of macroeconomic policy to attenuate fluctuations. Financial integration has smoothed out consumption cycles in developed countries, but in developing economies just the opposite has occurred (Fanelli, 2000; Prasad, Rogoff, Wei and Kose, 2003). Thus, financial mechanisms have tended to accentuate the peaks and troughs of boom and bust periods (ECLAC, 2002a).

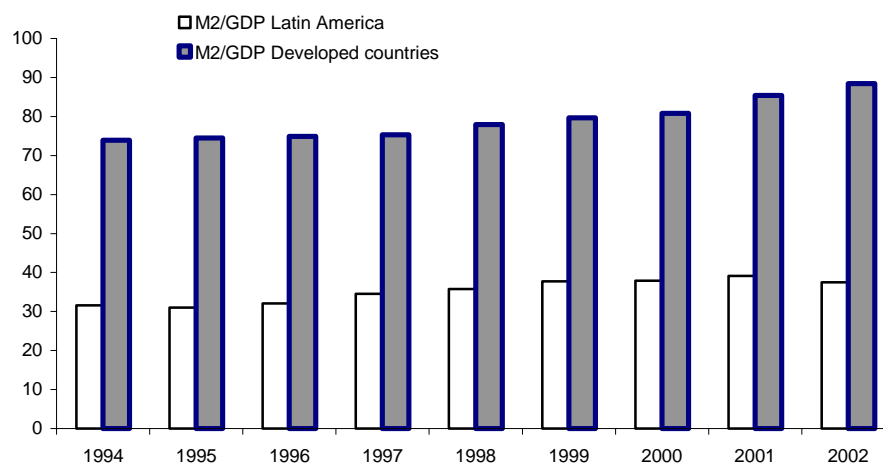
One financial mechanism that directly influences investment financing is the correlation between the financing costs which a firm must pay in the credit market and the value of its net assets (defined as the value of its liquid and non-liquid (collateral) assets, minus its obligations). The cost of credit is negatively correlated with the net value of the borrower's assets, as reflected by the value of its collateral. The higher this value, the lower the interest rate. When the business cycle enters a downswing, the value of assets tends to fall, which brings down the value of collateral and pushes up the cost of financing still further as interest rates rise. This magnifies the impact of negative shocks on the availability of investment financing and on growth. Where markets are underdeveloped and highly segmented, as they are in the region, these mechanisms become even more evident, turning the financial sector into an amplifier of the positive or negative impact of different shocks and contributing to the business cycle's volatility. All this has adverse implications for investment and productive development.

Empirical evidence suggests that financial intermediation and economic growth are positively correlated (Rousseau, 2002; King and Levine, 1993; Neusser and Kugler, 1998; Mullineux and Murinde, 2001). Financial deepening alone will not, however, resolve the problem created by the exclusion of substantial sectors of the production structure, nor does it contribute to the availability of long-term financing (Dymski, 2003). If financial systems are to support the development of production, they must have intermediation instruments that take into account the diversity of production in the region and, accordingly, the diversity of the financial and economic risks that this situation entails. Thus, to be efficient, financial intermediation must reflect the "real" opportunity cost of resources in terms of the expected profitability of the projects that are financed, offer easier access to financing for sectors that have traditionally been excluded, such as small and medium-sized enterprises (SMEs) and entrepreneurs with innovative projects but no credit history, and promote long-term financing.

1. Expansion of the financial system

As noted above, in the 1990s the region's economies saw an increase in the demand for money and an expansion of domestic credit, which was reflected in greater financial deepening. As shown in figure 3.7, the M2/GDP ratio is on the rise, as it is in the developed countries. Yet the region still has relatively low rates in comparison to those countries. The expansion of financial systems reflects the fact that reform of these systems was a major component of economic reform processes. Generally speaking, most of the countries eased legal reserve requirements and eliminated interest-rate controls. Other positive factors were lower inflation rates, better financial regulation and supervision, progress in the adoption of international accounting standards, easier access for new international investors and the emergence of institutional investors.

Figure 3.7
LATIN AMERICA: FINANCIAL DEEPENING (M2/GDP)



Source: Economic Commission for Latin America and the Caribbean (ECLAC), International Monetary Fund (IMF) and World Bank, *World Development Indicators*, various issues.

Note: End-of-period balances. "Latin America" includes Argentina, Bolivia, Brazil, Chile, Colombia, Costa Rica, Dominican Republic, Ecuador, El Salvador, Guatemala, Haiti, Honduras, Mexico, Nicaragua, Panama, Paraguay, Peru, Uruguay and Venezuela. "Developed countries" includes the United States, Japan and Canada. The figures are simple averages in both cases.

The expansion of financial activity has not necessarily been reflected in greater financial development in the economies of the region, if such development is understood as entailing the creation and consolidation of instruments of financial intermediation that contribute to productive investment. For the most part, the accumulation of financial savings in the countries has not translated into proportional increases in investment financing. Instead, a large part of such funds has been used to finance consumption. What is more, these resource flows have generated speculative bubbles in asset prices which have in turn engendered financial fragility that has magnified the effects of the external financing constraints affecting a number of countries in the region during the 1980s, 1990s and the early years of this decade.⁷

⁷ One example is the crisis that hit the countries of the Southern Cone (Argentina, Chile and Uruguay) in 1981-1982, when the collapse of the financial system had a strong impact on the recession that came in the wake of the debt crisis.

The inflation history of the region's economies and problems with the enforcement of property rights are two elements that have traditionally hampered financial growth in Latin America and the Caribbean. Since financial decisions are by nature intertemporal, the level, volatility and expected course of inflation have held back financial development in the region, in the absence of indexation mechanisms. Progress in financial integration, together with credibility problems related to the behaviour of inflation and exchange rates in the countries, led to a process of financial dollarization in the 1990s. This has increased holdings of foreign-currency-denominated financial assets in local financial markets, which, given the absence of instruments for hedging risk, has weakened national financial systems.⁸

In terms of total deposits in the banking system, many economies are financially dollarized, reflecting a trend that has intensified since the mid-1990s. This phenomenon has been particularly evident in Argentina (before the crisis), Bolivia, Costa Rica, Peru, Paraguay and Uruguay, whose levels of foreign-currency bank deposits ranged from 60% to 90% of total deposits in 2002 (see table 3.7).

Economic stakeholders' preference for dollar-denominated financial assets or liabilities is closely related to the level and volatility of inflation and to those stakeholders' expectations as to future inflation trends, since dollarization is a means of protecting savings against any loss of real value.⁹ If the real exchange rate is expected to be less volatile than domestic inflation, economic stakeholders will tend to dollarize their holdings (Nicoló, Honohan and Ize, 2003).

The more heavily dollarized a financial system becomes, the more vulnerable it is to crises triggered by changes in relative prices. The biggest risk stems from the adverse effects of devaluation, when dollarization results in a currency mismatch between assets and liabilities in the non-tradables sector. Currency mismatches directly or indirectly affect banks' solvency by undermining the quality and profitability of their dollar-denominated portfolios. This effect is heightened when heavily dollarized financial systems use different currencies for financial transactions (dollars) and real transactions (local currency), thereby magnifying the negative impact of a devaluation. When companies that produce and sell in the local market borrow in dollars, their position becomes more fragile when the local currency depreciates, affecting the value of bank portfolios. Furthermore, the dollarization of assets increases vulnerability to systemic risks, which may lead to bank runs and liquidity problems. Dollarization also limits the degrees of freedom for monetary and exchange-rate policy that are required in order to maintain the real macroeconomic balances that are necessary for productive development.

To encourage the use of local currencies in financial intermediation as a way to boost financial development, national authorities must keep inflation rates low and stable. Considering the region's inflation history, however, the countries will have to go through a relatively long transition period in which indexation is crucial for promoting the use of local currency. Accordingly, an indexed unit of account is a key instrument for stimulating financial development, particularly long-term financing. Insofar as this unit of account provides an effective hedge against inflation risks, it will remove the incentive for using dollars and promote borrowing in indexed local currency. The

⁸ Three types of partial or de facto dollarization can be distinguished: dollarization of payments (currency substitution), where a country's residents use foreign currency as a means of payment; financial dollarization (asset substitution), where residents have locally held foreign-currency assets and liabilities; and real dollarization, where domestic prices are indexed to a foreign currency.

⁹ Of course, decisions to dollarize assets are also influenced by other factors, such as the regulations applicable to foreign-exchange holdings, the perception of risk in the financial system and the economy as a whole, exchange-rate policy and other institutional factors.

Table 3.7
LATIN AMERICA: FOREIGN-CURRENCY DEPOSITS AS A PERCENTAGE OF TOTAL DEPOSITS

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	
Argentina														43.0	49.2	52.9	52.6	50.6	53.0	56.4	59.7	71.0		
Bolivia					0.9	32.1	54.5	67.8	73.9	81.4	81.6	80.7	81.2	81.4	78.5	78.3	91.6	91.7	91.9	92.6	92.1	90.8	91.0	
Chile											19.5	17.6	12.3	12.3	9.4	7.2	5.3	4.4	7.4	10.4	11.4	13.7	12.6	
Costa Rica								37.0	40.3	43.4	40.1	49.1	41.7	37.1	37.7	44.6	44.3	49.6	52.9	54.6	54.8	58.8	59.7	
Ecuador									4.7	5.9	4.8	5.0	7.7	8.9	11.8	19.8	23.2	30.8	37.3	52.4	100.0	100.0	100.0	
El Salvador										9.0	7.2	4.0	5.9	4.3	5.5	6.0	7.2	8.3	8.4	8.9	8.9		100.0	
Honduras																								
Mexico	6.0	4.9	4.1	3.3	2.5	2.6	2.7	2.3	1.4	1.0	1.9	3.4	5.9	11.5	16.5	19.4	29.6	24.0	25.1	26.0	26.6	30.8	32.0	
Nicaragua						4.6	7.4	8.7				6.0	3.8	5.0		6.4	6.8	5.3	6.0	6.9	8.6	9.9	9.6	
Paraguay	2.4	2.6	1.8	1.0	0.8	0.7	0.5	0.1	11.9	30.3	46.2	41.3	46.9	58.4	59.0	64.9	68.6	68.2	71.3	70.1	72.0	73.7	76.7	
Peru										5.2	29.1	37.7	40.2	47.8	55.5	49.4	42.3	44.3	46.9	57.6	63.1	64.2	66.7	68.0
Uruguay													80.8	79.7	74.1	72.5	74.9	72.6	76.5	77.3	76.9	74.3	73.2	
	38.2	48.8	64.2	61.1	66.7	59.5	65.9	66.1	69.2	75.8	79.1	78.1	76.9	74.8	77.5	75.6	77.2	79.3	80.2	81.8	82.5	85.1	90.4	

Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of the International Monetary Fund (IMF) and central banks.

Note: End-of-period balances.

countries' experience with general-purpose indexation instruments demonstrates this. Table 3.8 contrasts the cases of Argentina, Chile and Uruguay. In Chile, which has an all-purpose, reliable indexed currency (the *unidad de fomento*, or UF), most financial credits and deposits are generated in this currency and the dollarized segment is relatively small. In contrast, in Argentina and Uruguay, which do not have all-purpose indexation mechanisms, foreign-currency-denominated credit accounts for between 60% and 70% of total credit in Argentina and between 80% and 90% in Uruguay. Apart from indexation, other mechanisms that help to discourage the use of foreign currency in local financial transactions are higher reserve requirements for dollar deposits and higher provisioning requirements for dollar loans to the non-tradables sector.

Table 3.8
LENDING IN LOCAL, INDEXED AND FOREIGN CURRENCY
(Percentages of the total)

Chile	Percentage of loans and letters of credit		
	Indexed currency	Local currency	Foreign currency
1995	51.3	25.2	23.5
1999	60.8	21.3	17.9
2000	59.9	21.5	18.6
2001	56.3	24.1	19.6
2002	53.4	29.5	17.1

Uruguay	Percentage of loans	
	Local currency	Foreign currency
1995	18.6	81.4
1999	15.8	84.2
2000	15.6	84.4
2001	12.7	87.3
2002	7.3	92.7

Argentina	Percentage of loans	
	Local currency	Foreign currency
1995		
1999	37.3	62.7
2000	31.5	68.5
2001	18.1	81.9
2002	92.7	7.3

Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of central banks.

Holdings of local assets in foreign currency are not the only form of dollarization found in the countries of the region. Like other developing and emerging economies, the region's economies find it hard to issue local-currency-denominated sovereign debt instruments on international financial markets. The fact that the external debt they have accumulated is primarily denominated in foreign currency (the "original sin" referred to in Eichengreen, Hausmann and Panizza, 2003) generates currency mismatches in the economies' aggregate balance sheets. These mismatches are normally associated with more volatile GDP growth and capital flows, as well as downgraded risk ratings and more problems in managing monetary and exchange-rate policy. The difficulty of issuing external debt in local currency stems not only from domestic institutional and economic deficiencies, but also from international investors' distrust of and reluctance to invest in debt paper denominated in these local currencies.

As a way of enabling emerging economies to issue external debt in local currency, Eichengreen, Hausmann and Panizza (2003) propose the creation and floating of a new financial instrument backed up by multilateral financial institutions (such as the World Bank or the Inter-American Development Bank). This proposal involves, first, the creation of a unit of account based on a basket of emerging-market currencies, called the EM index. The use of a currency basket

diversifies risk and the index should therefore be more stable, since shocks that are negative for some of the economies participating in the basket will be positive for others. The second step is for international financial institutions to support the basket by issuing debt denominated in this index. These institutions' top (AAA) risk rating would enable them to stimulate the development of a market for EM-denominated debt. The third step, to expand the market for this debt paper, is for the Group of 10 countries to issue EM-denominated debt which they can then swap with the countries included in the index basket.

As noted earlier, legal problems and obstacles have also hampered financial development. Empirical evidence increasingly shows that countries' legal frameworks and their effectiveness in enforcing existing provisions are vital for financial development. The legal framework's capacity to protect creditors' rights strongly influences the valuation of firms and banks and, therefore, the supply and cost of capital (Levine, 2003; Levine and Beck, 2003; Caprio, Laeven and Levine, 2004). In the region, problems in effectively protecting creditors' property rights (such as inadequate bankruptcy laws) have emerged as one of the factors that hinder domestic financing and make it more expensive, since these problems make guarantees hard to enforce within a commercially acceptable time frame. Moreover, the lack of an efficient legal and supervisory framework that sets minimum standards for accounting, transparency and the regular provision of relevant information, along with the shortage of risk-rating agencies, have also held back the development of new financial intermediation instruments for managing risk and, accordingly, meeting the financing needs of a highly diversified production sector.

2. The banking sector

The region's economies operate with financial systems based primarily on bank intermediation, while the capital market plays a very limited role. Bank credit dominates the market, while non-bank financing accounts for a much smaller but growing share. In 1985 nearly 93% of total financial resources were supplied through the banking system, and about 7% through the capital market. In 1995 these figures stood at 73% and 27%, respectively. In 2002 the percentages were 72% for the banking sector and 28% for the capital market.

In the countries of the region, most bank financing for the production sector goes to large and medium-sized firms. The situation is very different in developed countries; in the United States, for example, 50% of SME financing comes from banks and only 20% from the firms' own capital. The percentage of SME liabilities accounted for by the firms' own resources is only 22.3% in Germany, 26.7% in Japan and 26% in Italy (García and Pollack, 2003; Zahler, 2003).

Insufficient access to financing in the region has become a major impediment to the growth of existing firms and the formation of new ones. As far as companies are concerned, financing issues are one of the main hurdles to their development, far surpassing the problems that may arise from a lack of infrastructure, political instability, the tax and regulatory structure, inflation, the exchange rate and the legal system. In general, a firm's access to the banking system is strongly dependent on its size and credit history. In all the countries of the region, SMEs have the most trouble obtaining financing. Credit access problems show up in the areas of cost (interest rates) and availability (credit supply and loan maturities). In fact, the main obstacles to financing reported by SMEs include high interest rates, short loan maturities and collateral requirements (IDB, 2002a).

Financing is substantially more costly for SMEs than it is for large firms. Table 3.9 contains data for selected countries of the region. The table shows that in 2003, the cost of credit was more than 4,000 basis points higher for SMEs than it was for large firms in Peru, 2,000 points higher in Brazil, about 800 points higher in Colombia, nearly 1,300 points higher in Chile and some 1,700 points higher in Argentina (in 2000).

Table 3.9
SPREADS BETWEEN REGULAR AND PRIME LENDING RATES

	Argentina	Brazil	Colombia	Peru	Uruguay	Chile
1995	28.5	35.1				
1996	27.8	27.9				
1997	26.2	16.1				
1998	18.8	20.0	1.4		37.1	
1999	17.5	17.1	4.0		37.8	
2000	17.4	15.4	3.5		33.6	
2001		16.5	5.8		36.3	
2002		18.5	6.0	42.0	36.6	13.1
2003		19.6	7.3	41.7	26.5	12.1

Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of the International Monetary Fund (IMF).

Note: The following regular rates were used: personal loan rate (Argentina), average rate (Brazil), regular rate (Colombia), family rate (Uruguay) and rate for local-currency loans of between 200 and 5,000 UFs maturing in more than 90 days (Chile). The spreads are expressed in basis points.

In terms of international standards, the region's banking systems have wider interest-rate spreads than developed countries do (see table 3.10), which means that financing costs are higher for the region's production sector, to the detriment of its competitiveness. This is compounded by the mismatch between the supply of credit (which consists mainly of short-term credit) and companies' financing needs, which are generally long-term. This situation forces firms to use short-term loans to finance long-term investments, increasing the vulnerability of the production sector and, indirectly, of the financial sector itself.

Table 3.10
BANK SPREADS
(Percentages)

	1997	1998	1999	2000	2001	2002	1997-2002
Argentina	2.1	2.9	2.8	2.5	8.9	10.8	4.9
Bolivia	30.8	23.6	20.6	21.3	9.3	10.5	19.1
Brazil	43.3	45.6	43.2	33.8	33.7	36.2	39.2
Chile	3.3	4.6	3.7	5.2	5.4	3.8	4.3
Colombia	8.1	7.3	6.8	5.9	7.4	6.8	7.0
Costa Rica	8.4	8.6	10.0	10.1	10.8	13.5	10.2
Ecuador	11.7	7.3	5.9	7.2	8.3	9.2	8.2
Guatemala	12.1	10.5	10.7	9.7	9.4	9.3	10.3
Honduras	8.9	10.2	8.5	9.4	8.1	7.7	8.8
Mexico	8.6	13.1	14.8	11.3	8.7	6.3	10.4
Panama	3.4	3.8	2.9	3.2	3.9	5.2	3.7
Paraguay	13.1	11.8	8.7	9.6	10.3	9.4	10.5
Peru	13.0	13.6	12.5	12.9	9.6	10.2	12.0
Uruguay	43.4	37.2	34.2	33.0	32.7	64.9	40.5
Venezuela	7.8	8.5	8.9	7.7	6.0	5.9	7.5
Latin America	14.5	13.9	13.0	12.2	11.5	14.0	13.2
Europe (average)	3.7	3.7	3.3	3.3	3.4	3.4	3.5
Asia (average)	2.5	1.5	2.9	3.3	3.3	3.6	2.8

Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of the International Monetary Fund (IMF).

Note: Figures for regions are simple averages.
Lending and deposit rates were taken from *International Financial Statistics*.

Because the banking sector is so important in the region's financial systems, banking regulations have a huge influence on the stability and costs of financial intermediation. Most of the countries in the region have adopted the banking regulation standards set out in the 1988 Basel Capital Accord (Basel I) with respect to minimum capital requirements.¹⁰ This accord focuses on analysing the credit risk of individual commercial banks' loan portfolios, establishing risk categories for different kinds of assets and limiting the level of risk that banks can assume by providing that their capital must be equal to at least 8% of their risk-weighted assets. Banks must set aside capital to cover unexpected losses and make provision against expected losses.

The aim of these regulations is to strengthen banking institutions by placing them on a sounder footing and giving them more prudent risk-assessment criteria, thus reducing the likelihood of financial crises. As banks have become more risk-averse and more cautious in extending loans, they have turned their attention to low-risk customers and have shortened loan maturities. This has made it hard for SMEs and, in general, all higher-risk activities to gain access to the banking system. In addition, since most of the countries of the region have laws stipulating that government securities have a risk weighting of zero (a questionable premise, in the light of some countries' recent experiences), banks treat these securities as risk-free assets and therefore have an incentive to concentrate a sizeable share of their assets in government instruments, to the detriment of financing for production.

3. The non-bank financial market

The dearth of alternatives to bank financing in the region has generated excess demand for such financing; as a result, short-term credit is characterized by wide spreads, high costs and frequent rollovers. In most of the countries, the creation of non-bank financial instruments is still incipient and has generally taken place in the stock and bond markets. One indicator that is commonly used to measure the depth of the capital market is stock-market capitalization as a percentage of GDP; this indicator averaged no more than 18% in the region in the period 2000-2002.¹¹ This contrasts with the situation in countries such as the United States, where the figure approached 130% of GDP in the same period, and Germany, France and the United Kingdom, where it borders on 100% of GDP. What is more, the number of firms using the stock market as a source of financing is on the decline, contrary to what is happening in other emerging economies (see table 3.11).

Stock-market growth has been adversely affected by the fact that in most of the countries, especially the less developed ones, most firms are family businesses financed primarily with their own resources and undistributed earnings. Added to this is the absence, in many countries, of suitable rules to address risks related to the lack of transparency and the need to protect minority shareholders' rights as they apply to the management of open companies.

Another feature of the region's financial systems is that many domestic financial instruments are too illiquid. Efforts should be made to develop stock and bond markets as a means of increasing the availability of long-term financing.

¹⁰ While Basel I represented a significant step forward in terms of regulation, it did not cover certain areas such as the market risk of bank portfolios, particularly currency and maturity matching, off-balance-sheet items and the operational component. To fill these gaps, the Basel Committee on Banking Supervision adopted the accord known as Basel 1998 or Basel II, which will enter into force in January 2007. This accord takes into account the market risk of banks' equity portfolios, the exchange-rate risk of their loan portfolios and their operational risk. Since the new accord continues to emphasize the responsibilities of individual banks and will increase the focus on risk ratings, it could make the system more unstable. There is, in fact, a good deal of controversy over the desirability of Basel II, which is why a number of countries have decided not to apply it.

¹¹ Stock-market capitalization is defined as the aggregate value of the shares of all listed firms, derived by multiplying the number of each firm's shares by the market value of each share.

Table 3.11
NUMBER OF FIRMS LISTED ON THE STOCK EXCHANGE, BY REGION

	1980	1986	1990	1995	1998	1999	2000	2001	2002
Latin America and the Caribbean	1 436	1 754	1 748	2 120	2 122	1 938	1 785	1 588	1 507
South-East Asia	1 353	1 521	2 413	3 615	4 149	4 622	4 935	5 161	5 446
Eastern Europe	0	40	110	2 081	8 517	8 008	7 437	6 881	6 424
Former Soviet Union	0	0	0	1 000	1 049	1 017	557	538	562
China	0	0	0	323	853	950	1 086	1 160	1 235
India	2 265	4 744	2 435	5 398	5 860	5 863	5 937	5 795	5 650
Africa	368	695	1 668	1 863	2 072	2 271	2 268	2 223	2 182
Europe	5 606	5 261	5 141	5 729	6 674	7 011	7 296	7 608	8 517
United States	6 251	8 403	6 599	7 671	8 450	7 651	7 524	6 355	5 685
Japan	1 402	1 866	2 071	2 263	2 416	2 470	2 561	2 471	3 058
Emerging markets	5 610	9 353	8 925	17 837	26 400	26 491	25 836	25 060	24 688
Developed markets	15 615	18 849	16 499	18 724	20 929	20 666	21 074	20 069	23 488

Source: Standard and Poor's, IFC Global Stock Markets and World Bank, *Emerging Stock Markets Factbook*, Washington, D.C., various issues.

Notes: End-of-period data; simple average in all cases.

Latin America and the Caribbean includes Argentina, Barbados, Bolivia, Brazil, Chile, Colombia, Costa Rica, Dominican Republic, Ecuador, El Salvador, Guatemala, Honduras, Jamaica, Mexico, Panama, Paraguay, Peru, Trinidad and Tobago, Uruguay and Venezuela.

South-East Asia includes Bangladesh, Indonesia, Malaysia, Pakistan, Philippines, Republic of Korea, Singapore, Taiwan Province of China and Thailand.

Eastern Europe includes Bulgaria, Croatia, Czech Republic, Hungary, Malta, Moldavia, Poland, Romania, Slovakia, Slovenia, the former Yugoslav Republic of Macedonia, Turkey and Yugoslavia.

Former Soviet Union includes Armenia, Azerbaijan, Estonia, Kazakhstan, Latvia, Lithuania, Mongolia, Russian Federation, Ukraine and Uzbekistan.

Indexed instruments are crucial elements in the development of a market for long-term corporate bonds. The yield on such bonds would include a real return component plus an adjustment for inflation. Since indexation eliminates the inflation risk premium, it reduces the cost of issuing bonds and, ultimately, the cost of financing for firms. Indexed bonds will not operate effectively unless the unit to which they are indexed is credible (i.e., it correctly measures inflation) and cannot be manipulated, and unless there is a deep, liquid market for public bonds that can serve as a benchmark for private transactions (Zahler, 2003).¹²

The long-term bond market's liquidity and depth depend on the existence of institutional investors who demand these types of assets, principally pension funds, life insurance companies and mutual funds. In the United States and Japan, individual savers hold no more than 12% of all corporate bonds (Reinstein, 2002). In addition, institutional investors help to enhance the capital market's professionalism by demanding more transparency and information, and encourage the improvement of corporate governance by requiring strict regulation and supervision of the stocks and bonds they may purchase.

Now that the region's pension systems have been reformed, they are likely to generate significant demand for long-term portfolio assets, in view of the nature of their liabilities. Pension funds administer large volumes of resources, which in 2002 represented close to 56% of GDP in Chile, 14% in Bolivia, 9% in Argentina, 8% in El Salvador, 5% in Mexico, 6% in Colombia, 5% in Peru and 4% in Uruguay. They are thus major liquidity suppliers. It should be pointed out that

¹² Chile is the only country in the region with a significantly developed indexed bond market. As of late 2000, 89% of total domestic debt was indexed to inflation. This proportion is less than 20% elsewhere in the region, less than 10% in Central Europe and close to zero in Asia (Reinstein, 2002; Mihaljek, 2002).

liquidity shortages not only raise the cost of financing, but also discourage the subscription of bond issues to finance investment projects.

Pension funds' potential to support financing for production is highly contingent on the kinds of regulations imposed on their investment portfolios. Accordingly, a major challenge in the regulatory sphere is to introduce criteria that take into account the impact which the allowable instruments have on the production system's development. Many of the laws and rules concerning the instruments that pension funds may include in their portfolios are based on risk diversification criteria which, in many cases, excessively limit the range of allowable assets, tilting it heavily towards government paper. These instruments are not always related to production-sector investment and may even yield below-market returns; what is more, experience in the region shows that their default risk can sometimes be quite high (Zahler, 2003; Uthoff, 2003).

An adequate regulatory framework can reduce idiosyncratic risks by authorizing pension funds to hold a wider variety of assets, including new ones such as financial instruments related to projects with no track record, infrastructure projects, certain kinds of venture capital and securitized bonds linked to non-traditional economic activities. This would increase the supply of long-term financing for developing the production system. A more diversified investment portfolio, in turn, would help to reduce excessive volatility in the valuation of the domestic assets bought and sold by institutional investors.

Like the stock market, private financing through the issuance of commercial paper or different types of medium- and long-term bonds is essentially the preserve of big companies. By issuing liabilities, firms can obtain financing at lower cost and over a longer term than they could in the banking system, if the domestic market for such instruments is deep enough. Table 3.12 shows that in Chile the number of firms that have issued debt has risen significantly, from 5 in 1995 to 40 in 2002, with substantial growth in the amounts issued. Moreover, the maturities and rates on these bonds reflect terms that are much more favourable than those offered on bank loans. The average risk rating of the firms that issued bonds ranges from A to AA, and the average maturity was 14 years, except in 1999, when it reached 20 years.

Table 3.12
CHILE: PRIVATE BOND ISSUES
(Millions of pesos as of December of each year)

Period	Listed issues	Amount issued	Outstanding debt			Issuers		
			Dollar amount	Rate (UF) ^a	Term (years)	Class ^b	Indebtedness ^c	Private ^d
1995	5	28 082	981 239	5.96	13.35	A	20 465	44
1996	5	73 655	983 855	6.48	27.61	A	20 192	45
1997	7	45 887	836 302	6.13	21.17	A	17 672	41
1998	7	382 189	1 068 617	7.24	14.85	A	22 799	40
1999	13	398 159	1 358 137	7.03	20.41	AA	29 244	43
2000	21	729 224	2 086 184	7.02	13.73	AA	45 747	43
2001	40	1 901 536	4 034 709	6.09	14.91	A	87 093	62
2002	40	1 255 390	5 313 449	5.27	14.51	AA	110 248	66

Source: Superintendencia de Valores y Seguros de Chile.

^a The maturities and interest rates indicated are weighted averages of total issues for the year.

^b Prepared by the authors; does not include bonds issued by State-owned firms or securitized bonds.

^c Average indebtedness of private firms, calculated by dividing total indebtedness at the end of each year by the number of firms with bond debt.

^d Number of private issuers as at the end of each year.

IV. Putting macroeconomic and financial policies to work for productive development

1. Macroeconomic policy

One of the chief lessons of the region's recent macroeconomic performance is that unstable real variables, like high and unstable inflation, also have considerable economic and social costs and discourage investment and productive development. This explains the need for policies that not only control inflation but also help to smooth out business cycles through the use of countercyclical instruments. These policies should be based on a broader definition of macroeconomic stability that includes both nominal price stabilization targets and real targets for variables such as the pace and stability of economic growth (Ffrench-Davis, 2004).

During the growth phase of the business cycle, which is usually triggered by large inflows of capital, macroeconomic (fiscal, monetary and exchange-rate) policies should be geared towards preventing excessive increases in borrowing by public and private stakeholders, significant imbalances in key relative prices (exchange and interest rates) and price bubbles in domestic (fixed and financial) assets that will require overadjustments when the cycle enters a downswing.

(a) Fiscal policy

A countercyclical policy is one in which boom periods are managed cautiously so that resources will be available in bust periods, thereby easing financial constraints and reducing the need for belt-tightening. The authorities' role in this regard is to seek a structural balance in public finances that will boost the economy's saving capacity and, accordingly, the amount of leeway available for countercyclical management.

The fiscal responsibility laws and fiscal rules adopted in some Latin American and Caribbean countries represent significant strides towards achieving dynamic consistency in fiscal policy. If macro-fiscal policies with countercyclical targets are to be implemented, fiscal programming must be based on a long-term, multi-year framework defined according to criteria aimed at maintaining structural balances or only small surpluses or deficits (ECLAC, 2002a).

Notwithstanding the advances seen in budget programming and the chronic problems experienced in public-sector financing, the fiscal policy rules implemented recently in several countries of the region still tend to focus mainly on short-term targets. Under these rules, the authorities set quantitative targets that predetermine how current or actual variables (such as the ratio of the primary balance to actual GDP) should behave, thus limiting the authorities' capacity to react to imbalances in the real economy, such as significant differences between potential and actual GDP, and to unexpected changes in the business cycle, thereby fostering a procyclical form of management. This type of behaviour ultimately dampens capital formation, growth and even fiscal revenues.

This is why it seems more appropriate to base public spending criteria on structural variables such as potential GDP so as to eliminate the unwanted effects of cyclical fluctuations on the programming and execution of fiscal spending and to introduce a significant countercyclical component. Rules of this sort would give automatic stabilizers more room to function and would help the countries develop a healthy mix of macroeconomic discipline and flexibility. Their implementation requires the development of institutions to furnish the technical and political expertise needed to devise agreed estimates of future trends in the relevant structural variables.

Public revenue stabilization funds pertaining to income from both taxes and raw materials exports are a hugely important component of a countercyclical policy framework, since they help to generate fiscal surpluses in boom periods and provide the freedom needed to mitigate fiscal constraints during downswings. They have been used quite successfully in some of the region's

economies (Ocampo, 2001a). Stabilization funds for raw materials prices offer a potential solution to the problems stemming from the structural linkage between the terms-of-trade cycle and the fiscal cycle.¹³ These funds have three elements: (i) a benchmark price for the raw material concerned, established in the budget formulation phase and based on generally conservative medium-term prospects; (ii) a fund that is built up with the surpluses accumulated in boom periods and drawn down in bust periods; and (iii) operating rules that establish a relationship between price fluctuations and stabilization fund deposits or withdrawals. In order to sterilize the effects of foreign-exchange inflows, deposits into the fund must be denominated in foreign currency and must be kept in accounts that fall outside the bounds of the domestic monetary or financial system. This will also help to stabilize the foreign-exchange market.

In the past few years, some countries have set up general funds to stabilize public revenues by regulating the use of windfall profits from the sale of public assets, income from concessions and possible fiscal surpluses. Under the rules in force in Peru, for example, these resources must be used to pay down the public debt when they exceed 2% of GDP.

(b) Monetary policy

Monetary policies should be aimed at preventing cyclical upturns in external financing from triggering excessive increases in external and domestic credit to the private sector and at keeping capital inflows from creating distortions in interest-rate levels that make them incompatible with internal and external balances. Moreover, these policies should be implemented alongside financial policies designed to prevent the financial system from amplifying the macroeconomic effects of real or financial shocks (Ocampo, 2001a).

Because interest rates are currently the key instrument of monetary policy, setting these rates is one of the biggest challenges of monetary management. Although interest rates have been used as a primary means of achieving inflation targets, the recent experience of the Latin American and Asian economies shows that over-emphasizing the interest rate as a stabilization mechanism for controlling exchange-rate fluctuations is counterproductive, since it hastens financial deterioration and generates additional fiscal pressure by necessitating financial-sector bailouts and making domestic public debt more expensive. Furthermore, in economies that are financially integrated with the rest of the world, interest rates not only reflect domestic situations, but also are heavily influenced by trends in external capital movements. There is, in fact, a strong connection between real interest rate imbalances and financial bubbles, which often end in economic and financial crises. Generally speaking, the interest rate goes up when monetary policy is tight, when a currency devaluation is expected and when country risk increases.

Interest-rate management is more effective and has more degrees of freedom when monetary policy is complemented by controls on capital inflows, increased liquidity requirements during upswings in the business cycle, an active approach to the prudential regulation and supervision of financial systems (incorporating countercyclical considerations into the determination of provisioning requirements for loan portfolios) and an explicit “liability policy” aimed at improving the maturity profile of public and private debt, both domestic and external (ECLAC, 2002a).

Given the region’s current levels of capital-market development, the extreme volatility of capital flows and the deficiencies of the international financial architecture, full convertibility of the capital account is not the best policy. Instruments for the prudential management of capital flows, either direct (reserve requirements or taxes on external financing, direct regulation of portfolio flows) or indirect (tax regulations), are preferable. The capital-account regulation measures adopted

¹³ Examples are Colombia’s coffee and petroleum stabilization funds, Chile’s copper and petroleum funds, Mexico’s Petroleum Revenue Stabilization Fund and Venezuela’s and Ecuador’s petroleum funds.

by Chile and Colombia in the 1990s represent best practices in this area.¹⁴ As complementary macroeconomic policy tools, prudential regulations on capital flows give the authorities more leeway to adopt tight monetary policies in boom periods and to prevent unsustainable exchange-rate appreciation. As a “liability policy”, they particularly discourage short-term flows, thus resulting in a better external financing structure.¹⁵ One of their chief advantages is that they apply to financial and non-financial stakeholders alike through a non-discriminatory price instrument. Policies to manage the maturity structure of financial flows are needed because the region’s futures markets are underdeveloped, with the result that risks are hard to hedge and the likelihood of financial runs and crises is accordingly elevated.

Strict control of mismatches between foreign-currency assets and liabilities in the financial system is an essential component of any prudential regulation scheme. These rules’ effectiveness in preventing mismatches between foreign-currency assets and liabilities in the economy as a whole, however, is undermined by the fact that non-financial firms, especially the biggest ones, have direct access to external credit.

All these precautionary or prudential measures will have the effect of moderating overly optimistic expectations during booms and thus reducing the level of financial vulnerability. As a result, during the economic slumps that occur when supplies of external financing dry up, the necessary recessionary adjustment will be less severe, as will the readjustment of interest rates. Past experience indicates that sharp, large-scale adjustments in interest rates give rise to serious problems in production activity, especially in the case of SMEs.

(c) Exchange-rate policy

Today, the demands being made on exchange-rate policy are contradictory and hard to reconcile, since the exchange rate reflects the logic of both trade and finance. First of all, trade liberalization calls for stable real exchange rates that reflect the economy’s productivity levels, as a way to support competitiveness. Second, the external fluctuations that are transmitted through the capital account necessitate exchange-rate adjustments that do not always dovetail with the needs of the trade account. Lastly, when there are pronounced mismatches between the currencies in which economic stakeholders’ assets and liabilities are denominated, exchange-rate variations have significant wealth effects.

In the 1990s, in the debate on how to address these conflicts, a number of analysts embraced the idea that the only stable exchange-rate regimes in the current phase of globalization were the ones at either end of the spectrum: a freely floating exchange rate, on the one hand, and a “hard peg” (currency board or dollarization), on the other.¹⁶ This argument was based on the susceptibility of soft pegs and managed floats to speculative attacks prompted by economic stakeholders’ perception of inconsistency between exchange-rate policy and the other components of economic policy.

While this reasoning points to a real problem (namely, the difficulties posed by fixed-rate regimes (soft pegs and, in some cases, hard pegs as well) when there are strong expectations of devaluation), the chief problem facing today’s developing-country exchange-rate regimes is how to

¹⁴ Chile and Colombia have had considerable success in managing capital flows by imposing non-remunerated reserve requirements on financial flows. Until May 2000 Chile also required that FDI and portfolio flows should stay in the country for at least one year. Colombia regulates such investment directly.

¹⁵ Studies on this subject have found that this instrument has had positive effects on the maturity structure of external borrowing, since it raises the cost of short-term borrowing without having much effect on longer-term flows (Agosin and Ffrench-Davis, 2001; Agosin, 1998; Le Fort and Lehmann, 2000; Ocampo and Tovar, 1999; and Villar and Rincón, 2000). Some of these studies also indicate that reserve requirements have actually reduced capital inflows or have had the equivalent effect of providing more room for sustainable increases in domestic interest rates, changing expectations of devaluation or both at the same time. These additional findings, however, have been more controversial. Valdés-Prieto and Soto (1998) and de Gregorio, Edwards and Valdés (2000) present an opposing view.

¹⁶ Frankel (1999), Hausmann (2000), Velasco (2000), Williamson (2000), Ocampo (2002b) and Ffrench-Davis and Larraín (2003) present more in-depth analyses of these issues..

accommodate trade shocks and capital-account fluctuations, which are largely exogenous, while at the same time preventing them from resulting in sharp business cycles or incorrect or unstable relative prices that discourage the development of tradables-producing sectors of the economy. This is a question of paramount importance for development strategies based on soaring export growth. In order for such strategies to be effective, exports must continue to expand and to be diversified into sectors that generate more value added. It is extremely important to have an exchange-rate policy that will support this type of development. Accordingly, an active exchange-rate policy is called for that will address trends in relative productivity levels and, to a lesser extent, cyclical movements in capital flows.

Managed floats, which fall between the two extremes, are the most attractive policy alternative—provided that the real exchange rate is not allowed to stray too far from long-term equilibrium—because they combine flexibility with stability. Examples of such regimes include crawling pegs, currency bands, indicative targets or bands which the authorities are willing to defend in part and dirty floats. All these regimes have a degree of flexibility that enables them to absorb external shocks, easing the need for adjustments, and to be applied countercyclically, in addition to providing more stable incentives for international specialization. The ideal degree of flexibility basically depends on the size of the economy concerned (with greater flexibility being more desirable in large economies), the depth of its financial and foreign-exchange markets (the greater the domestic financial depth, the greater the flexibility) and the openness of the capital account (the more open the capital account, the more flexible the exchange-rate regime) (ECLAC, 2002a; Machinea, 2002).

As in the case of monetary policy, the proper management of these intermediate regimes may require the active use of capital controls to cope with the pressures generated by international financing. Moreover, these arrangements may come under speculative pressure when macroeconomic policy as a whole does not have enough credibility. Perhaps the most important lesson of all to be learned from events in the region and in the world at large in recent decades is that no single exchange-rate regime is the best choice for all countries at all times. Each country must determine how much nominal exchange-rate flexibility it needs based on its objectives and its actual ability to manage other macroeconomic policy variables.

(d) Financial markets and self-insurance

Upturns in capital inflows must be managed prudently because the countries of the region, like other emerging economies, do not have robust financial mechanisms for coping with the volatility of these flows. In other words, the dynamics of international financial markets have not allowed the economies to delink domestic spending patterns from temporary fluctuations in external resource inflows (financial smoothing). This explains in part why economic activity levels are closely correlated with external capital volatility in the region. The ability to isolate the behaviour of aggregate demand from temporary changes in financial flows is also a key component of a countercyclical policy framework.

Since they lack instruments for hedging the risks generated by financial fluctuations, the countries have had to turn to high-cost self-insurance mechanisms to handle temporary adverse external shocks (Caballero, 2003). One such mechanism has been the build-up of international reserves; this may represent a daunting challenge, however, since recent crises have shown that net capital outflows can amount to several percentage points of GDP. Some countries have tried to achieve this same objective by negotiating contingent credit lines with private international banks. The market for such credit lines is still underdeveloped, however, and the amounts available may be too small at times of acute crisis, especially in the presence of contagion. Some proposals have been put forward for the creation of market instruments for hedging risk, particularly in the bond market, but they are as yet at an embryonic stage and are not feasible in the near future. What is clear is that the complexity of this type of instrument will require the coordinated involvement of private stakeholders, national authorities and multilateral institutions.

2. Financial market development

Financial innovation is essential for reducing the costs of resource intermediation and stimulating saving and investment. Financial innovation means creating and strengthening bank and non-bank instruments for improving risk management in economies with highly diverse production systems. The countries have made different degrees of progress in implementing new instruments and mechanisms for managing different kinds of risks, depending on each country's characteristics. The ones with the most modern financial systems have more opportunities to develop markets for long-term corporate bonds, securitized assets and derivatives.

Because the banking sector plays such an important role in the region's financial systems, any strategy for channelling more resources to production sectors in the short and medium terms must include measures to strengthen private and public banks' financial intermediation capacity, while not neglecting the development of capital markets, which are a key source of long-term financing.

(a) Bank instruments

The problem of credit risk rating has two main facets: moral hazard, which concerns a borrower's effort and capacity to meet its payment obligations with respect to the loans taken out, and adverse selection, which stems from the difficulties faced by banks or lending institutions in assessing a potential borrower's financial quality; that is, whether the borrower is a "good or bad risk" financially. In the region, risk-rating problems are worsened by the fact that large segments of the production structure operate in the informal sector of the economy, with accounting and information standards that do not meet the financial system's requirements.

In practice, credit rationing has primarily affected SMEs, agricultural smallholders and technologically innovative firms. To make bank financing more accessible, the countries should further develop financial instruments that enhance the capacity to diversify risk efficiently and should improve the provision of information for use in assessing potential loan applicants.

Depending on the degree to which bank and capital markets are developed, public or private development banks can play a significant role in strengthening financial intermediation and liquidity generation. In developed countries with deep financial systems, public banks are among the institutions that provide financing for production.¹⁷

In Latin America and the Caribbean, public development banks, with new operating and corporate governance modalities, should contribute to the development of production either by providing financing to stakeholders that have heretofore been excluded from this process or by acting as a catalyst and developer of new forms of financial intermediation. Of course, the extent of these banks' participation will depend on the size and sophistication of the financial system. Small systems that offer a limited range of intermediation instruments will probably require more involvement on the part of these institutions. If development banks are to play a significant role in financing production, they must correct the problems that have plagued them in the past: serious deficiencies in resource management, lack of an explicit mandate and institutional framework, inappropriate lending decisions and flawed collection policies (Titelman, 2003; Ocampo, 2001a).

Since SMEs, the rural sector and innovative activities make up most of the natural customer base of development banks, these banks could support private banks' efforts to diversify their risks in lending to these types of producers. Joint public-private initiatives should be taken to strengthen both new and long-standing risk management instruments (Assael, 2004a).

¹⁷ Examples of these are the different types of special lending institutions (development banks) found in all the European countries. In the United States a similar role is played by the Small Business Administration.

(i) *Guarantee funds*

SMEs have trouble gaining access to credit because of the problems they encounter in providing suitable collateral to back up their loans. Banks usually ask for guarantees consisting of assets over and above the ones directly related to the operations being financed, as a way to diversify risk (Rivas, 2003). In addition, the use of real guarantees is limited by the difficulty of executing them as a result of weaknesses in the legal system and the lack of secondary markets for liquidating them, so that the range of assets accepted as collateral is quite narrow.

Guarantee funds for small businesses help SMEs gain access to bank financing. While these funds are not new, they have attracted increasing attention in recent years, since they help to diversify risk and, therefore, to reduce the cost of credit; this, in turn, should result in better maturity conditions and less demand for real collateral. These funds could be provided by development banks, which would act as second-tier banks by periodically auctioning the use of these funds to commercial banks. The commercial banks, in turn, would assign the collateral to the loans of their choice, provided that the loans qualify under the regulations in force.

The operation of these funds should be subject to periodic review by external auditors. A specific regulatory framework should be created to spell out requirements with regard to issues such as the ratio of capital to collateral, loan portfolio evaluations, borrower rating systems and policies on the management of reserves (Castellanos, 1997).

(ii) *Credit scoring systems*

Credit scoring systems are another alternative for making bank loans less costly and more readily available to SMEs. Using these systems, financial entities can quantitatively assess the quality of a loan operation in terms of whether or not an applicant possesses certain features, each of which is assigned a given number of points. If the applicant's total score exceeds a pre-established threshold, the loan is approved. As this system reduces the assessment costs involved in lending decisions, its chief beneficiaries are small-scale entrepreneurs, whose transaction costs are usually high.¹⁸ One of the main advantages of this method is that it allows banks to extend loans without having to contact the applicant directly. This reduces the number of branch offices and staff that financial entities need, cuts down on the amount of documentation that applicants are asked to provide and speeds up the processing of applications, while also providing a quantitative basis for determining more precisely the interest rates to be applied to each operation (Larraín, 2000).

The system also has certain limitations, however. Since it is a standardized mechanism, it works best in relation to relatively small, short-term loans. In addition, the fact that this method fails to take certain information into account in calculating the score may mean that some applicants' strengths are overlooked, even though they may be good customers (Rivas, 2003).

Credit scoring is most effective when historical information on the firm and its owner are complemented by background information on the environment —geographical and/or sectoral— in which the firm operates, which is usually expensive to systematize. Accordingly, public or private institutions could foster the establishment of centralized credit scoring mechanisms to reduce the cost of rating small firms' credit risk.

(iii) *Export financing*

The export financing needs of SMEs are concentrated in the pre-shipment phase, regardless of the target market, and in the postshipment phase when the exports are shipped to non-industrialized or developing countries (Zahler, 2003).

¹⁸ A Business Bank Board study on the United States showed that the average amount of time needed to approve an SME loan was 12.5 hours (with maximum time frames of up to two weeks) and that the credit scoring method reduced that time to less than one hour (when this was the only method used in taking the lending decision), with an average per-loan cost of between US\$ 1.50 and US\$ 10.

Small and medium-sized exporters have credit access problems because the higher risk associated with their activities prompts commercial banks to lend to them only if they provide real collateral, which, as mentioned earlier, they usually do not have. Direct credit programmes backed by official agencies have generally not been successful because, although they operate as credit lines provided through commercial banks at favourable interest rates, the credit risk associated with such lending rests with the banks. It is therefore preferable to develop guarantee and insurance programmes, which, by transferring some of the banks' risk to other entities, have proved to be more efficient. Under these programmes, the coverage provided for every dollar spent on hedging risk is substantially greater than it is under direct credit schemes (Zahler & Co., 2002).

There are a variety of official guarantee programmes. Working capital guarantees, which are offered in most of the OECD countries, enable small and medium-sized exporters to obtain credit from the financial system. In the region, guarantee and insurance programmes are relatively new, and their implementation has been hindered by excessive requirements and legal gaps that have rendered official guarantees and insurance inoperative and have discouraged the banking system from using them. Instruments of this kind will continue to be underused unless they meet WTO and OECD standards. They must also be distributed through the private financial system, have a significant recovery rate and be used to fund only financially viable operations. Regional and/or subregional financing institutions should play a leading role in providing financial backing for guarantees.

(iv) Working capital financing

Most SMEs encounter serious difficulties in financing their short-term liquidity needs. Instruments that offer an alternative to traditional short-term bank financing are a promising means of meeting those needs.

Factoring is a mechanism used by firms to obtain liquidity through the sale of their accounts receivable (invoices, bills of exchange, promissory notes, credit card vouchers and other documents) to a factoring company, which immediately advances a percentage of the value of the documents (normally 80% to 90%). When the accounts receivable fall due, the factoring company pays the balance minus a discount.

This instrument is designed for firms that need quick access to the money generated by their sales and do not have resources to devote to collecting their receivables. The advantage of this type of financing is that firms can obtain liquidity without taking on additional debt.

The discounts currently charged by factoring companies are quite large because the level of risk attached to the accounts receivable continues to be determined by that of the supplier SME and not that of the (usually lower-risk) firm that purchased the goods or services and, consequently, incurred the obligation to pay in the future. One way to solve this problem is to set up an Internet portal to facilitate competitive factoring. Electronic billing and automatic deduction are thought to have shifted the risk assumed by banks from supplier SMEs to the firms that purchase the goods or services, thereby greatly reducing the costs of this type of financing. Such a system would create competition between financial entities, to the benefit of suppliers, which would be able to sell their accounts receivable at a smaller discount.¹⁹

Leasing is another short-term financing mechanism. It consists of a loan not of money, but of a good whose use is transferred by the owner to the lessee, along with an option to purchase the good, in exchange for periodic payments. The lessor retains ownership of the good, which serves as collateral, throughout the life of the lease agreement. The advantages of leasing are that it enables

¹⁹ The experience of Mexico's NAFINSA is noteworthy in this regard. This development bank has set up a portal on which purchasing firms post their accounts payable and supplier firms sell them to financial intermediaries participating in the programme. NAFINSA runs the platform and provides other relevant services such as offering attractive refinancing options to financial intermediaries, encouraging big companies to post their accounts payable and absorbing the system's operating costs, which amounts to a subsidy.

firms to finance fixed assets without having to tie up working capital and does not increase the firm's level of debt or require guarantees.²⁰

Lastly, leaseback financing enables firms to turn fixed assets into working capital. Under this arrangement, a firm sells a business asset to a bank and simultaneously concludes a contract to rent the asset with an option to buy it (lease agreement).

(b) The capital market

For smaller firms that are not risk-rated, access to bond markets hinges mainly on the supply of instruments for securitizing assets; this, in turn, is strongly dependent on the markets' liquidity levels and institutional development. The capacity to widen the range of firms and sectors that can make use of these forms of financing depends on the capital market's sophistication and liquidity. Asset securitization has proved to be a good way to open the door to this market for SMEs which, for lack of the required risk ratings and/or accounting standards, cannot issue corporate bonds or sell shares on the stock market.

Securitization involves the packaging of a set of assets of a particular kind (such as loans or accounts receivable) and their transfer from the original holder to a third party (securitization company), which issues a bond that is traded on the capital market. On the one hand, this enables a firm to obtain immediate liquidity in exchange for assets whose value is gradually recovered over time; on the other, it transfers the risks involved to the bondholders.

The range of assets that can be securitized depends on each country's legal provisions and on the attractiveness of these bonds to potential investors. Experience with a number of well-received issues in the region suggests that the success of a securitization process depends on investors' willingness to buy securitized instruments, which is strongly influenced by the quality of the assets securitized and by how the various risks involved in the process are hedged. These risks encompass both financial and real elements that reflect the features of the process by which the good or service backing up the bond issue was produced. If the securitized assets are accounts receivable, for example, the loan portfolio must have a good payment history, be diversified and have a good collection system. If the asset consists of entitlement to future flows, the bond's success will depend on the originator's solvency rating, and its attractiveness can be increased through the use of special purpose vehicles, independent collecting banks, credit insurance policies, etc. In addition, collateral plays an essential role in the case of future flows securitization, since the flows are to be generated by services that have yet to be provided.

Recently the region has witnessed some interesting experiences in which producers that do not normally have access to the capital market or to banks have obtained financing, and others in which firms' liabilities have been restructured. Examples of the first type of experience are the livestock investment bonds issued in Colombia and the forest investment bonds issued in Chile; examples of the second are the securitized bonds issued by Chile's University of Concepción and by the Peruvian firms Quimpac and Wong & Metro.

The venture capital industry (VCI) is another means by which innovative projects, primarily in the technological sphere, can gain access to the capital market. This industry has been developed in countries such as the United States and Israel, as well as in Europe and, on a smaller scale, in Latin America (Santos, 2003; Botazzi and Da Rin, 2002).

²⁰ There are two kinds of leases: operating and financial. Operating leases are for the rental of goods without the option to purchase them. The advantage of this arrangement is that the depreciation risk is borne by the leasing company. Financial leases, on the other hand, are used to upgrade equipment on very favourable terms. The lessor buys a good previously selected by the lessee and allows the lessee to use it for a specific period, during which the lessee makes regular payments by way of a user fee. The lessor, for its part, gives the lessee an option to purchase the good at the end of the contract period, at which time the lessee pays the residual value of the transaction. The profit for the lessor consists of the difference between the amount invested in buying the good and the sum of the lease payments plus the residual value payment.

Venture capital investors operate with a pre-established time horizon, since their aim is to profit from their stake in the firm's establishment. They realize this profit by selling their stake, ideally through a share issue. This enables them to receive profits and recycle these resources into new investments. Venture capital funds are managed by specialized organizations that provide not only financing, but also organizational and legal support, managerial expertise and strategic advice.

The effective development of the venture capital industry requires that a number of elements be in place, such as a sizeable pool of attractive projects, investors who are willing to put up funding, exit mechanisms for investors and a suitable legal and regulatory environment (Rivas, 2003).

Public policies to support the venture capital industry's development should do so in two ways. The first is to shore up the supply of venture capital by eliminating disincentives for venture capital funding. For example, since profits are realized through the sale of shares, a capital gains tax is a disincentive for this type of financing. The second approach is to build up demand for these resources by promoting technology-based endeavours through targeted subsidies, modifying legal and regulatory frameworks to facilitate the conclusion of contracts and taking other relevant measures.

The non-traditional risk structure assumed by these funds—as well as their growth and profit potential—may require State guarantees for a time, though not on a permanent basis. For example, the State could set up guarantee funds to encourage private institutional investors to participate in venture capital schemes.



Chapter 4

Growth, infrastructure and sustainable development

The economic expansion and increased productivity of countries are closely linked to patterns of investment in human capital, technology, infrastructure, and machinery and equipment. However, these are not the only investment modalities that affect growth and productivity; natural capital also influences the dynamics and sustainability of these variables. In this context, the availability and quality of infrastructure services, together with the expansion and sustainability of natural resources and the renewal of natural systems and the environment, will have a significant impact on productive development.

Over the next few years, the countries of the region are likely to see considerable growth in demand for infrastructure services, since, despite recent achievements, the existing capital stock of infrastructure and access to infrastructure services are still insufficient. It will therefore be necessary to design policies and mechanisms to stimulate public and private investment in this area. That, in turn, will necessitate the identification of new financing sources and instruments, the development of new methodologies for calculating budgets and setting fiscal goals in order to facilitate public investment, and the strengthening of incentives to encourage public-private partnerships to finance, develop and implement infrastructure projects. To that end, it will be essential to enhance the regulatory frameworks currently in force.

The region's rich natural heritage of biodiversity and natural resources offers a wide and fertile range of renewable and non-renewable resources whose management and use for economic purposes should be a key component of any strategy for national development and integration into the international economy. However, ensuring the productive sustainability of those resources will require investment in order to bolster capacity for adding value and reducing negative environmental externalities. That, in turn, will mean enhancing the region's capacity for negotiation in international forums, improving the coordination of environmental policies with other economic policies and applying environmental and fiscal instruments in order to prevent environmental degradation and utilize new investment opportunities effectively to foster greater environmental conscience.

The first section of this chapter examines the evolution of the region's capital stock of infrastructure. It also discusses various issues relating to regulation problems and measures aimed at promoting investment in infrastructure. The second section analyses the potential of various natural-resource-related sectors, highlighting the most dynamic markets, such as those for certified products, environmental services, biotechnology products, clean energy and environmental infrastructure. Finally, it examines some elements that might be included in a policy agenda designed to harmonize the environmental agenda with the development of production.

I. Infrastructure, financing and regulations

1. Infrastructure capital stock

In the 1990s the Latin American infrastructure services sector underwent profound change, especially in the areas of telecommunications, energy, transport and sanitation services. In most countries, state monopolies were eliminated and the participation of private agents was encouraged.

The opening up of infrastructure services markets and the sale of state-owned enterprises created an *entrée* for foreign firms which, in many cases, introduced new technologies and modes of managerial organization that have played a decisive role in modernizing the infrastructure and services provided locally.

The restructuring of services gave rise to a variety of models which differ not only from one sector to another, but also from country to country. This diversity stems from marked differences arising from variations in market size and structure, in the real degree of competition that can be introduced in each country and in each sector, in price formation processes, in the coverage and quality of services and even in their environmental impacts.

Between 1991 and 2002, the telecommunications sector evidenced significant growth in both fixed and mobile telephony. The total number of fixed lines in Latin America increased by an annual average of 10.4%, as a result of which the region's share in total global fixed telephone lines increased from 5.5% in 1991 to 8.1% in 2002. At the same time, the number of cellular telephone subscribers in the region rose from 300,000 in 1991 to 100 million in 2002. In the past year, the region's share of the global total reached 8.7% (Rozas 2004).¹

Access to Internet services in Latin America has also grown significantly. The International Telecommunications Union reports that in 1999 the region reached a major milestone in terms of number of Internet-connected central computers, surpassing one million for the first time, and the number is increasing faster than in any other region in the world (ITU, 2000). During the period

¹ Notwithstanding the progress achieved in the supply of fixed and mobile telephone services and Internet access, telephone service and Internet connection coverage levels in the principal economies of the region are still well below those in the major countries of the developed world and in the most dynamic of the emerging economies of Asia, which are at least triple the fixed telephony coverage rates in the principal Latin American economies.

1996-2002, the number of Internet users increased 29-fold, rising from 1.49 million to 43.3 million (Rozas, 2004).

Although the number of Internet users has increased rapidly, various authors have pointed out that Internet services are available mainly for socio-economic groups with high and medium-high incomes. Some maintain that the distribution of wealth in Latin America is so regressive that Internet service is generally affordable only for an elite and that the majority of the population remains excluded (ITU, 2000; Hilbert and Katz, 2003, and chapter 10 of this publication).

In the energy sector, the electricity industry has also undergone a radical transformation and restructuring in almost all countries of the region. The predominant feature of this process has been the arrival of new productive agents from other countries, which has led to rapid modernization of the electricity infrastructure and the delivery of services (ECLAC, 2001c). By the end of 2003, total or partial deregulation of the generation and regulation of electricity transmission and distribution had become the preponderant trend in most countries of the region. The basic thrust of these efforts has been to encourage competition in electricity generation, regulating natural transmission and distribution monopolies.

The installed capacity of the electricity industry in the region increased by an average of 31.5% during the 1990s (see table 4.1). Except for Costa Rica, Granada and Guyana, the countries that had introduced major structural reforms in the sector achieved higher rates of growth in installed capacity.² These reforms consisted mainly in changes in the industry's chain of production through privatization of the state-run enterprises that had theretofore exercised a public monopoly over each link in the chain, coupled with opening up of the generation segment to simultaneous participation by various private agents. In some countries of the region, only partial reforms were applied, keeping part of the productive chain aggregated or segmenting the public monopoly only partially. In other countries, such as Brazil, regions in which the electricity industry have been totally segmented and privatized coexist alongside regions that have introduced only partial reforms and others that have maintained the public monopoly.

Table 4.1
**TOTAL INSTALLED CAPACITY OF THE ELECTRICITY INDUSTRY IN LATIN AMERICA,
1980-2000**

(Millions of kilowatts)

	1980	1985	1990	1995	2000
Latin America	98 133	131 619	161 072	185 484	231 848
Latin America as percentage of the world	5.1	5.7	6.0	6.3	6.9

Source: United Nations, *Energy Statistics Yearbook, 2000*, New York, Statistics Division.

The involvement of new investors in the region's electricity industry has not always been accompanied by an increase in competition. Indeed, competition has been limited and, in many cases, hindered or inhibited altogether by the concentration and market dominance of a few firms. As a result, in most of the countries in which the generation market was opened up, increased competition remains an unrealized goal, and investors are therefore reluctant to commit to new projects without the offer of substantial security or guarantees.

With regard to drinking water supply and sanitation, the expansion of these services has still not been sufficient to extend coverage to large segments of population. Estimates of the Pan American Health Organization (PAHO) indicate that in 2000 the coverage of drinking water services ranged from 20% to 90% of the population in the countries of the region (WHO, 2001).

² As is analysed further on, the favourable performance of the region's electric industry pales somewhat when compared with the results attained by some developing countries in South-East Asia.

As for sanitation services, only 49% the region's population is connected to conventional sewerage systems, while another 31% relies on in-situ systems (WHO, 2001). Rates of sewerage system coverage are considerably lower than rates of drinking water supply through household connections. The proportion of urban population connected to sewerage system systems exceeds 70% in only four countries of the region: Chile, Colombia, Guatemala and Mexico. In contrast, in Paraguay, Suriname and several islands of the Caribbean, coverage is below 20%. And in the rural areas of many countries of the region, sewerage systems are still virtually unknown.

As concerns port infrastructure and administration, reforms have had a significant impact, stimulating both greater competition between ports and an increase in the competitiveness of countries and regions. The incorporation of private-sector entities as direct operators has generated major investment and deep changes in ownership regimes. A decade later, the panorama has changed substantially and three main situations can be discerned: countries whose principal ports are under the control of private firms, which make up the largest group (Argentina, Bolivia, Brazil, Chile, Colombia, Cuba, Mexico, Panama, Paraguay and Uruguay); countries in which the private sector is partially involved in port activity; and countries in which ports continue to be publicly owned and administered (IDB, 2001).

In general, countries that have instituted the most sweeping reforms have made sizeable port investments and gains in efficiency. The public ports where reforms have been most successful have tended to adopt the landlord system, in which the national government retains ownership of infrastructure and administration in strategic matters, while operations and investments in port terminals are transferred entirely to the private sector. The introduction of such reforms has resulted in significant reductions in the cost of port operation—sometimes by as much as four- or fivefold—and a marked improvement in operational performance, both in terms of time and quality of services.

Nevertheless, the positive effects of the reforms have often been diminished by the fact that they have focused almost exclusively on the granting of concessions or the authorization of new initiatives, leaving unaddressed important issues such as access, connection with transport infrastructure and logistics, relations with cities, protection of the environment and marine resources, and the situation of ports that fail to attract private investment.

2. Growth and infrastructure

Various empiric works have examined the relationship between investment in infrastructure and economic growth and have found a significant positive correlation, although this does not necessarily reflect any causality between the two variables (Aschauer, 1989a; Easterly and Rebelo, 1993; Canning and Bennathan, 2002). The availability of infrastructure affects growth, as greater availability and quality of infrastructure services generally leads to higher productivity of factors and lower production costs for producers. Higher profitability in turn, serves as an incentive for investment and thus increases potential output growth. For example, recent studies have shown that deficiencies in road systems raise transport costs and general logistic costs above international standards, which reduces the competitiveness of their economies (Guash and Kogan, 2001).

At the same time, greater economic activity leads to greater demand for infrastructure services, on the part of both consumers and producers, with a positive relationship being observed between demand for infrastructure and growth of income per capita. This is particularly true in developing countries, where infrastructure capital stock and access to infrastructure services is relatively limited. Based on World Bank figures, the elasticity of infrastructure demand with respect to GDP per capita is estimated at 1%, with sectoral elasticities ranging from 0.3% for drinking water, 0.8% for roadways, 1.5% for electricity generation and 1.7% for telecommunications (World Bank, 1994).

The evolution of infrastructure endowment and quality of infrastructure services is both a cause and a reflection of the differences in growth rates registered in the countries of the region and in those of Asia, especially South-East Asia. As table 4.2 shows, the growth in infrastructure capital stock in that region has far exceeded that of the countries of Latin America and the Caribbean. This trend began to turn around in 1995, thanks to the efforts put forward in the economies of the region, although significant differences remain.³

Table 4.2
INFRASTRUCTURE STOCKS

	1970	1980	1990	1995	2000
Electricity ^a					
Latin America	0.16	0.28	0.38	0.41	0.48
South-East Asia	0.14	0.29	0.53	0.68	0.80
Asia	0.15	0.24	0.40	0.48	0.54
Telecommunications ^b					
Latin America	22.0	33.5	56.2	92.8	232.4
South-East Asia	28.9	84.3	173.5	275.9	605.9
Asia	30.8	59.7	105.9	165.2	364.7
Transport ^c					
Latin America	0.78	1.10	1.18	0.93	1.22
South-East Asia	0.45	0.58	0.87	0.95	1.04
Asia	0.58	0.73	1.08	1.44	1.71

Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of World Bank, *World Development Indicators*, various issues.

^a Measured as generating capacity in kilowatts per capita.

^b Measured as number of fixed and mobile telephones (since 1995) per 1,000 population.

^c Measured as kilometres of paved roads per capita.

Notes: Figures are simple averages.

Latin America includes: Argentina, Bolivia, Brazil, Chile, Colombia, Costa Rica, Ecuador, El Salvador, Guatemala, Guyana, Haiti, Honduras, Jamaica, Mexico, Nicaragua, Panama, Paraguay, Peru, Suriname, Trinidad and Tobago, Uruguay and Venezuela.

South-East Asia includes: Hong Kong (special administrative region of China), Indonesia, Malaysia, Pakistan, Republic of Korea, Singapore and Thailand.

Although there is an obvious simultaneous relationship between investment in infrastructure and economic growth, it is possible to estimate the impact that such investment will have on the level of economic activity by defining a model in which the latter is the dependent variable.

Various studies have estimated the impact of provision of infrastructure services on economic growth. Using the elasticities obtained by Calderón and Servén (2002), table 4.3 presents estimates that provide an approximate idea of the role of infrastructure gaps in explaining the difference in the growth trends observed in this region and in the countries of South-East Asia during the period 1980–2000.⁴ During that period, output per capita in South-East Asia grew by 125% over and above

³ The infrastructure gap (measured as the difference in growth rates of infrastructure stocks) between the Asian and Latin American countries grew considerably between 1980 and 2000: 32.7% with respect to Asia and 67.2% with respect to South-East Asia. When the figures are broken down by sector, the gap in electricity-generating capacity with respect to South-East Asia grew by 109%, the gap in telecommunications increased 24.6% (thanks to the reduction experienced during the 1990s) and the gap in kilometres of paved roads increased 68%. The pattern with regard to quality of infrastructure services is similar.

⁴ These authors estimate the output infrastructure elasticity per worker. The elasticity estimates obtained are 0.156 for telecommunications, as measured by telephone lines; 0.163 for electricity-generating capacity, as measured in gigawatts; and 0.178 for road infrastructure, as measured by kilometres of roadways.

the figure registered in Latin America. The infrastructure gap accounts for approximately 30% of the difference. The same trend is found when differences in the evolution of output per worker are examined.

Table 4.3
**CONTRIBUTION OF THE VARIOUS TYPES OF INFRASTRUCTURE TO THE
 RELATIVE CHANGE IN GDP PER UNIT IN LATIN AMERICA
 COMPARED WITH SOUTH-EAST ASIA, 1980-2000**

	ECLAC estimates in per capita terms South-East Asia	Figures per worker from Calderón and Servén (1980-1997)
Infrastructure capital	33.7	30.60
Telecommunications	3.9	7.62
Electricity generation	17.8	14.58
Transport	12.0	8.40
GDP gap per capita or per worker	125.6	90.24

Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of World Bank, *World Development Indicators*, Washington, D.C., various issues and César Calderón and Luis Servén, “The output cost of Latin America’s infrastructure gap”, *Working paper*, No. 186, Santiago, Chile, Central Bank of Chile, 2002.

Notes:

- The contribution of the various types of infrastructure to the difference in evolution of output is calculated by multiplying the gap between South-East Asia and Latin America in each category and the output elasticities of the factors. The elasticities used were those estimated by Calderón and Servén (2002).
- The gap in output per capita is calculated by taking the average growth rate of GDP per capita in South-East Asia in 1980–2000 and subtracting the average growth rate of GDP per capita in Latin America.
- The gap in output per worker is calculated by taking the average growth rate of GDP per capita in South-East Asia in 1997–2000 and subtracting the average growth rate of GDP per worker in Latin America.
- All figures are simple averages.
 Latin America includes: Argentina, Bolivia, Brazil, Chile, Colombia, Costa Rica, Ecuador, El Salvador, Guatemala, Guyana, Haiti, Honduras, Jamaica, Mexico, Nicaragua, Panama, Paraguay, Peru, Suriname, Trinidad and Tobago, Uruguay and Venezuela.
 South-East Asia includes: Hong Kong (special administrative region of China), Indonesia, Malaysia, Pakistan, Republic of Korea, Singapore and Thailand.

3. Infrastructure requirements

In order to return to the path of sustained growth, the region will have to meet the great challenge that it faces with regard to delivery of infrastructure services. The constraints on public investment in this area during the 1990s have been partially offset by higher private investment. The privatization processes initiated in the countries of the region in the late 1980s provided the first significant stimulus for the incorporation of private capital in the infrastructure sector (Lora, 2001). The various forms of public-private partnership that have emerged in recent years have also helped to encourage private participation in the financing, construction and administration of infrastructure services. Despite these advances, however, the future points to an important role for the public sector in financing annual investment requirements.

For Latin America to grow at a rate of 3% annually between the years 2000 and 2010, it will be necessary to invest around 3.02% of GDP annually in infrastructure —the equivalent of US\$ 70 billion. This figure breaks down to new investment of US\$ 57 billion (around 2.2% of GDP) and investment in replacement and maintenance of US\$ 13 billion. The new investment needs are not the same across the various sectors. As table 4.4 shows, for the period 2000–2010, the estimates of investment needs are highest for the electric power and roads sectors (Fay, 2001; Fay and Yepes, 2003).

Table 4.4
**ESTIMATES OF NEW INFRASTRUCTURE INVESTMENT REQUIREMENTS
 FOR LATIN AMERICA, 1995-2010**
(Percentages of GDP)

	1995-2000	2000-2010
Fixed telecommunications	0.22	0.27
Mobile telecommunications		
Electricity	0.76	0.99
Paved roads	0.15	0.48
Railways	0.60	0.23
Water	0.12	0.10
Sanitation	0.38	0.18
Total	2.23	2.25

Source: Marianne Fay, *Financing the Future: Infrastructure Needs in Latin America, 2000-2005*, Washington, D.C., World Bank, 2001; Marianne Fay and Tito Yepes, "Investing in infrastructure: what is needed from 2000 to 2010", *World Bank Policy Research Paper*, No. 3102, Washington, D.C., 2003.

Note: For the period 2000/2005 higher projection ranges were used.

The capacity of the private sector to finance these amounts is limited, and requirements for public financing are therefore significant. Based on figures for 1998, the year in which the greatest volume of private investment was mobilized, table 4.5 shows that private investment can be expected to cover approximately 46% to 60% of the US\$ 57 billion needed to finance new investment in infrastructure. With the exception of the telecommunications sector, all sectors, including the electricity, transport, and water sanitation sectors, will require heavy public investment.

Table 4.5
**PARTICIPATION OF PRIVATE CAPITAL IN FINANCING
 INFRASTRUCTURE FOR LATIN AMERICA**

	Estimated investment needs: annual average in dollars, 2000–2005	Actual private investment in 1998	Private investment as a percentage of the estimated need
Electricity	22 042	4 536	21
Telecommunications	6 089	14 546 (6 089) ^a	239 (100) ^a
Transport	22 723	12 366	54
Water and sanitation	6 639	339	5
Total	57 466	34 997 (26 540)^a	61 (46)^a

Source: Marianne Fay, *Financing the Future: Infrastructure Needs in Latin America, 2000-2005*, Washington, D.C., World Bank, 2001.

^a To avoid overestimating as a result of the Brazilian privatizations in 1998, it was assumed that the investments made were equivalent to those required in that year, and Fay's estimates of the total invested in that year and the percentage covered by the private sector were re-estimated.

4. Policies and instruments for stimulating infrastructure investment

In view of the need to combine public and private efforts to meet the growing demand for infrastructure services, steps will have to be taken to strengthen the financing and implementation capacity of the public sector and to promote greater participation by the private sector. For the former, instruments that offer more flexibility in the administration of public investment are required, particularly in the area of infrastructure. As for private-sector involvement, it is necessary

to ensure a relatively stable economic and political environment and to enhance current regulation mechanisms. Regulatory authorities need to improve their capacity to negotiate and set charges for various infrastructure services, and in order to do this they will need to improve their methodologies for determining investment and operating costs and to develop mechanisms and criteria for setting and renegotiating charges.

(a) The role of the public sector

Establishing an adequate financing framework to address growing infrastructure service needs is a major challenge for the authorities of the region. Public investment in infrastructure has shown a downward trend since the early 1980s, and that trend has intensified in recent years. This not only reflects the growing involvement of the private sector, especially in the 1990s, but also the need to reduce fiscal imbalances. The relative importance of these two factors differs from country to country. Nevertheless, in all cases, faced with the need for fiscal adjustment, the economies of the region have had to make significant cuts in budgetary allocations for this purpose. According to World Bank estimates, reductions in public investment during the period 1982-2001 were three times greater on average than the reductions in current expenditure during the periods of fiscal adjustment. In Argentina, Bolivia, Brazil, Chile and Peru, for example, it has been estimated that reductions of investment in infrastructure accounted for half of the fiscal adjustments made in the 1990s. Cuts in public investment during periods of fiscal constraint is not exclusive to the region, however. The same pattern has been observed in the OECD countries (Roubini and Sachs, 1988; Easterley and Servén, 2003).

The need to increase infrastructure stocks, coupled with the limits shown by private investment, have prompted various proposals and initiatives to increase the availability of financial resources for public investment in infrastructure, while at the same time increasing flexibility in budgetary management relative to this type of investment.

A first group of proposals revolves around the use of specific taxes to finance infrastructure projects, in particular fuel taxes to pay for road projects. It is argued that through such a tax, users pay, albeit indirectly, for use of the road system. In addition, fuel consumption is a good proxy indicator of demand for roadways. These proposals are inspired by the experience of the United States, where taxes on fuel used to finance highways, through trust funds for state and federal highways, have had a significant positive impact on road development (Millán and Rotaecche, 2004). The Argentine experience is another example. For decades, taxes on fuels were used to finance companies engaged in the development of road infrastructure.

A second group of proposals was presented by Mexico, on behalf of a group of countries of the region, at the Evian Summit in 2003, and by the presidents of Brazil and Argentina to the IMF. Basically, these proposals seek to bring about greater flexibility in the management of fiscal accounts through enhancement of fiscal and budgetary control instruments such that capital expenditures are treated differently from current expenditures and investments are thus accounted for in a way that does not inhibit rational economic decision-making. This same line of thought is evident in the *Carta de Lima*, a joint declaration signed by the representatives of the governments of the South American countries at the last annual meeting of the Inter-American Development Bank. This line of action is especially important in countries that enter into some type of agreement or programme with IMF.

One way of introducing greater flexibility and promoting a growth-oriented fiscal policy is to recognize that investment and current expenditure are different economic phenomena and that, as such, they should be treated differently, in particular by avoiding the application of limits or cut-offs for public investment in the case of projects whose rates of return will exceed the investment

costs.⁵ The conventional rule of fiscal control, which imposes deficit goals on total spending, does not take account of the assets generated by public investment, but only of the cost of acquiring them, thus creating an anti-investment bias. Fiscal control should revolve around the concept of intertemporal solvency rather than deficit, as the former concept is more important for fiscal sustainability. It incorporates the notion that public investment generates financial returns that will enable governments to fulfil their obligations in the medium and long terms. This proposal has led to a re-examination of the role that public investment can play in the process of gross fixed capital formation and in the expansion of infrastructure (Easterley and Servén, 2003).

A second means of introducing greater fiscal flexibility is by strengthening mechanisms that will stimulate various forms of public-private association. Among the possible forms of collaboration, public-private partnerships (PPPs) have become an important alternative. These partnerships enable governments to create new infrastructure without immediately adding capital outlays to the budget since the investments are financed by the private sector. The latter is remunerated by the government, through charges, fees, rents or another form of current expenditure, once service delivery is operational. This mechanism not only makes it possible to utilize private capital and administration, but it also facilitates distribution of investment costs over time for governments, as the investment is amortized with the outlays that the government pays periodically to the operators of the service.⁶

The experience thus far with these types of programmes indicates that, to be successful, a high degree of coordination and trust between the public and private sectors must be ensured. These are long-term partnerships, in which, often, the only demander of the service operated by the private sector is the government itself and in which the usual risks associated with this type of activity are present, such as construction (design-related) risks and financial risks (interest and exchange rates). Because in public-private partnerships these risks are transferred from the public sector to the private sector, governments are expected to assume political commitments and adopt good practices that will inspire trust in the private sector and enable it to limit its exposure.

At present, numerous OECD countries have adopted this type of partnership. According to IMF, the Private Finance Initiative, created by the United Kingdom in 1992, which is the best public-private partnership programme developed to date, accounts for 14% of public investment in the country and is applied in key areas of infrastructure service. Other countries with significant participation of public-private partnerships are Australia and Ireland. Countries with large infrastructure needs and a weak fiscal position, such as the Czech Republic, Hungary and Poland, have also begun to implement these partnerships (IMF, 2004). In the region, Mexico and Chile have been pioneers in encouraging public-private partnerships. Mexico has amassed considerable experience with PPPs in the energy sector through the PIDIREGAS projects, while Chile has used these partnerships in several projects related to transport, airports, jails and irrigation systems.

To support private involvement in the financing of infrastructure projects, development of capital markets is crucial, as it increases the availability of long-term financial resources. Since this type of project generates revenues in local currency, financing through a private bond issue in that same currency reduces risks and costs as the problem of exchange risk is eliminated. Given the amount and the term of the resources involved, the participation of institutional investors is indispensable to provide the liquidity needed to finance this type of project. For example, in Chile, the main private companies that have obtained concessions for infrastructure projects have covered

⁵ Similar arguments have been put forward by various countries of the European Union. Faced with the need to increase investment in infrastructure, those countries have suggested that some flexibility should be allowed in the rules of the EU Stability and Growth Pact such that infrastructure investments are exempted from the objectives and ceilings imposed by those rules (IMF, 2004).

⁶ Public-private partnerships enable the private sector to supply infrastructure and services in areas traditionally deemed to be the province of government, such as hospitals, schools, jails, roads, and water and sanitation. Under this arrangement, the government establishes what service is to be provided by the private sector, which then designs, builds, finances and operates the service.

76% of their financing needs by means of bond issues. The presence of institutional investors (pension funds and insurance companies) was essential for these bond issues, since they accounted for 91% of the demand (Zahler, 2003).

A third way of increasing fiscal flexibility in the management of public investments has to do with the role played by multilateral development banks. The capacity of these institutions to disburse approved loans at present is being diminished by the budgetary practices of the public sector. This type of financing is recorded as an expenditure. As such, it forms part of the public deficit or debt, and it is therefore subject to the limitations imposed by the countries' fiscal constraints and targets. At the same time, such loans normally require national counterpart or matching funds, which are also counted as expenditures and exert additional pressure on fiscal accounts. When government have difficulties financing their counterpart contributions, loan disbursement is affected. Under public expenditure containment policies, the budgetary appropriations to finance these contributions are habitually limited by quotas and ceilings, which delay the execution of loans and thus hinder the progress of works. For this reason, the IDB, for example, disbursed only 60% of its approved budget for investment projects in the year 2000. In 2003, the percentage fell to 30%.

The projects financed by multilateral development banks are generally high-quality projects that ensure the micro-economic consistency and transparency of the investments. It is therefore reasonable to expect that they will yield positive social returns, independently of their financial returns. Accordingly, as with public-private partnerships, the expenditure that these projects generate should be accounted for in national budgets when governments make payments on the loans, not at the time they receive the loan. This would make it possible to distribute the financial burden over time, thereby causing less pressure vis-à-vis fiscal goals and opening up greater fiscal leeway for financing from multilateral development banks.

Increased availability of new resources to finance infrastructure investments is also a growing demand among the countries of the region. Resources from this type of institution have diminished since the 1990s, reflecting in part changes in the lending strategies of the banks, which have moved from a model oriented towards financing the construction of works to a model that promotes the implementation of policy reforms and institutional strengthening (Global Development Finance, 2004). Given their capacity for design and evaluation of investment projects and their role as providers of long-term financing, the renewal of technical and financial assistance from multilateral development banks is crucial to support the development of infrastructure services in the region.

Beyond the direct financing provided by multilateral development banks, these institutions can support financing from private investors. Risk guarantee funds are a useful instrument for this purpose. In long-term investments, political, contractual, regulatory and exchange risks influence investment decisions. Multilateral development banks already have guarantee instruments to cover political and contractual risks, such as the political risk guarantees offered by IDB and the partial credit guarantees provided by the International Finance Corporation (IFC). However, regulatory and exchange risks are not sufficiently covered by the instruments currently available. Protection against exchange risk is considered critical, since charges for infrastructure services are set in local currency, while the financing for the investment, or the debt, is generally expressed in foreign currency.

(b) Regulatory challenges

The growth in private-sector involvement in ownership, financing, administration and delivery of infrastructure services that took place in the 1990s was accompanied by a strong need for regulatory oversight that has strained the institutional capacity of the public sector and brought to light profound institutional weaknesses (Chong and Rianõ, 2003). Because of the failings in this area, the benefits of private participation have not been as great as expected, since in many cases the increases in productivity have not been reflected in user charges, which has resulted in less

competitiveness and in lower real wages. The great public policy challenge is therefore to improve regulation so that private investment in infrastructure can become a true motor for growth. At present, the future of private investment in infrastructure in the region is uncertain at best. In addition to the risks perceived by private firms and the difficulties stemming from recurrent processes of contract renegotiation, there is growing dissatisfaction among the users of public services that have been privatized or franchised to the private sector, in particular with regard to the quality and cost of the services being provided by private companies. According to recent surveys, in Argentina the percentage of satisfied users of privatized and franchised services fell from 50% in 1998 to slightly over 10% in 2002. In Mexico, the percentage decreased from 60% to 25% and in Brazil, from 55% to 35% in the same period. In Chile and Bolivia, user satisfaction dropped almost 20 points during 1998-2000, falling from 60% to 40% (Foster, 2004).

The foregoing underscores the need to improve and strengthen the regulatory mechanisms of the public sector in order to accommodate the various modalities of public-private partnership. The need for active government regulation depends on the degree of competition in the infrastructure sectors in which the private sector becomes involved, however. Where possibilities and incentives for competition are absent, greater regulation is required (Cavalcanti and Santos de Franca, 2003).

(i) *Diversity of institutional arrangements*

The variety of existing institutional arrangements can be classified in seven categories that range from purely public to purely private. In the first case, the authorities may, for various strategic reasons, not allow private involvement, maintaining instead an entirely public structure of ownership and administration. However, market principles and commercial criteria may be applied in administration processes. To that end, public enterprises that administer and operate infrastructure services must have a certain degree of autonomy to implement policies aimed at increasing efficiency and setting prices based on production costs.

A second modality is public-private participation (PPP) under operation and maintenance contracts. A private contractor commits to operate and maintain the infrastructure, but accepts no responsibility for investments flows, which remain the domain of the public sector as the infrastructure owner. Generally these are contracts of short duration in which the private agent does not assume commercial risks and is remunerated on the basis of a fixed rate.

A third public-private option is lease contracts, which entail a medium-term commitment on the part of the private party (between 5 and 10 years). The private administrator assumes the financial risks and must finance the working capital and replacement investment for the duration of the contract. The public sector, however, is generally responsible for new investments. Normally, a percentage of the fee charged for the service is paid to the private party as remuneration, while the remainder goes to the public sector as payment for the lease. A fourth modality is concession contracts, which, unlike lease contracts, require the private concession-holder to make new investments throughout the term of the contract. Financing for the investment and profits are derived from the fees charged. These are long-term contracts with a duration of 15 to 20 years.

A fifth modality is the build-operate-and-transfer agreement. This form of concession is used primarily for new projects (greenfield projects), in which the private sector finances, builds and operates the corresponding services for a defined period of time. At the end of the contract, the private sector may maintain the facilities and operate them independently or transfer them to the public sector. As with other concessions, remuneration is generated through user charges. A recent option (the sixth modality) is public-private partnerships (PPP), as such, which have become an alternative to concessions and a means of attracting private investment in non-traditional areas such as public hospitals, penitentiary facilities, schools and the environment. Under this modality, the State agrees to pay a certain amount to the private partner throughout the period of partnership. The risk in this type of arrangement lies in the financial capacity of the State to keep up the commitment

in the long term. Lastly, there is the option of total privatization, which is the most extreme form of private involvement. In this case, the private sector acquires ownership of the facilities and generally is subject to specific regulatory provisions.

Most countries of the region have adopted one or more of the last four modalities to encourage private participation in the infrastructure sector. The principal challenges with regard to regulation are therefore to define legal frameworks to govern contractual rights, transparent bidding processes, the establishment of performance standards and criteria for the private companies to which contracts are awarded, regulatory frameworks for setting rates and resolving disputes, and mechanisms for protecting the public interest.

(ii) Rate-setting

Based on the experience of recent years, when the private sector is involved in the financing and delivery of infrastructure services, one of the main regulatory challenges is to develop mechanisms and criteria for setting user charges or rates. One set of problems that arise in this process relate to methodologies, which, regional and international experience have shown, may be of two basic types.

One possibility is to transfer the profitability risk to the private operator, determining the user charge on the basis of demand projections and cost structure. In principle, the private operator assumes the risk of any possible profits or losses that may be generated by changes in the productivity, expected demand or other related factors. Another possibility is that the public sector assumes the risk by setting a rate that will assure the private operator a certain rate of return. Regardless of the approach adopted, calculating rates is difficult owing to information asymmetries and the difficulty of forecasting demand.⁷

Information asymmetries are perhaps one of the biggest obstacles to sound and efficient regulation, since lack of good access to information limits the regulatory entity's ability to estimate operating costs accurately. This problem is compounded when rates are set by means of cost mark-up models, or efficiency models, which require a full understanding of the cost structure (see box 4.1).⁸ Asymmetric information motivates the regulated company to engage in strategic behaviour, hiding information about its technology and costs in order to gain information rents. One way of addressing this situation is to use "yardstick regulation," in which rates are set based on a comparison of the company with others having similar characteristics and operating in the same area. For example, in the area of electricity distribution, it is possible to compare the performance of various regional monopolies and determine the relevant parameters. The regulator can also use observable variables (historical costs, past earnings) to infer the behaviour of a company.

Such information difficulties are extremely common. One example is the franchise that distributes and markets electricity services for a sizeable portion of the state of Rio de Janeiro (the Light company). This company was privatized in 1996, and the problem faced by the regulatory agency stems from its inability to oversee the requirements for investment in technology by the company, since private information is involved. Moreover, the regulatory agency lacks the instruments needed to manage the composition of the investment. Another example is the privatization of cellular telephony in Sao Paulo (Banda B). The problem in this case is related to the speed of technological progress, which makes it very difficult for the regulatory entity to assess the operating costs of the concession-holder (Cavalcanti Ferreira and Santos de Franca, 2003).

⁷ According to a recent study, traffic projections for toll-setting purposes were over-estimated for 28 of 32 toll road concessions in various countries of the world. Actual traffic volumes were about 76% of the forecasted rate (Bain and Wilkins, 2002).

⁸ This model was used in setting rates in the Chilean electricity sector. The marginal costs of an efficiently run firm are estimated and then rates are set based on those costs.

Box 4.1

POST-REFORM REGULATORY CHALLENGES

All countries of the region have experienced conflicts between regulatory entities and private companies with regard to rate-setting. One of the main challenges that the authorities must grapple with is the improvement of regulatory frameworks, especially with respect to: (i) mechanisms for resolution of disputes between companies and regulatory entities, since in some cases existing mechanisms undermine the regulatory function of the State, and (ii) procedures for accessing internal information on regulated companies, especially regulatory accounting, monitoring of purchases and contracting with affiliated companies and participation of consumers in the regulatory process, all of which are extremely weak or virtually inoperative in most countries (Sánchez Albavera, 2002).

In public services, the objective of the regulatory agency is to motivate the regulated companies to behave in essentially the same manner as if they were subject to the forces of competition. When this objective is not achieved and, owing to the weakness of regulatory frameworks, consumers are obliged to pay higher rates than they would do in a competitive context, the situation can resemble the imposition of a tax benefiting the regulated industry. For example, in the case of Argentina, Chisari, Estache and Romero (1997) estimate that the result of ineffective regulation has been the equivalent of an implicit tax of 16% for the average consumer, paid directly to the owner of the service assets.

Many of regulatory problems stem from the regulatory entity's difficulties in accessing and evaluating the internal information of regulated firms. The main difficulty is that at present—with the exception of a couple of very recent cases, such as Argentina and Chile, where the systems are still being consolidated—virtually no country in the region has a good regulatory accounting system, an instrument which helps to mitigate the effects of information asymmetry. Moreover, companies may, through transfer prices, manipulate profit and loss statements and thus also manipulate rate-setting. The case of the auditors' report on the intraholding contracts of Aguas Argentinas is a good example of price transfers, in which the principal has very little control over costs and transfers of efficiency to users. Most of the works for the third year of the first five-year plan were awarded directly to affiliates of Aguas Argentinas. Although the bidding documents establish technical conditions to be met by the bidder, in cases of direct awards these conditions are not fulfilled. In the works awarded directly, there is no evidence that any technical or financial assessment of the bid was carried out, nor is there any evidence of assessment against the estimated budget. A comparison of the costs of these works with those of similar works reveals high internal budgets (Argentina/SIGEN, 2002).

A second set of problems in the regulation of rates arises from the fact that these are long-term contracts, which means that criteria and mechanisms must be established to adjust rates over time. Whether because of political interference or the difficulty of predicting future events that may affect the costs and profitability of infrastructure projects, contracts with the private sector are subject to frequent modifications. During the 1990s, nearly 60% of the concession contracts established in developing countries were substantially renegotiated over a three-year period. Road infrastructure concessions provide a good example of this phenomenon (see box 4.2) (Guash, 2001).

The need for contract renegotiation has been prompted in part by the franchise mechanisms themselves. Many countries have adopted the strategy of “privatize first, regulate later”. As a result, in countries such as Argentina and Colombia, the concessions did not have a clear and defined contractual structure, which tended to lead to frequent renegotiation of the original terms, entailing significant costs for the public sector and the rest of the economy. In addition, many concessions have transferred the economic risks to the private operator, which creates incentives for the renegotiation of rates. These incentives have been clearly biased in favour of the private sector, as when rates of return have been lower than expected, investors have demanded the renegotiation of contracts, owing to the “impossibility” of fulfilling their investment commitments. In contrast, when the returns are higher than expected, attempts to renegotiate rates are generally condemned as a “lack of legal security”, which negatively affects the rest of the economy.

Another issue that arises with long-term contracts is the need to define mechanisms for indexing rates and ways of dealing with random shocks and variations in productivity. The rate readjustment indices commonly used in most countries are some indicator of internal inflation or of exchange rate fluctuations.

Box 4.2

HIGHWAY CONCESSION CONTRACTS

In the 1990s, more than 50 concession projects for private provision of highway services were carried out in the region. In most cases, the approach adopted under these contracts was the build-operate-and-transfer modality, particularly in Argentina, Brazil, Chile, Colombia and Mexico. The advantage of this type of operational arrangement is that a substantial portion of the required financing comes from the private sector, which is generally more efficient in the construction and administration of this type of infrastructure. Continuous renegotiation of these contracts has significantly reduced the projected benefits, however, as it generally leads to lower tax revenues and creates opportunities for private companies with political connections to limit their business risks, which means they have less incentive to continue improving operational efficiency.

In Argentina, the highway concessions programme began in 1990 and was, after Mexico's, the biggest such programme in the region. In 1990, 12 concessions of 12 years' duration each were bid out. The contracts did not include any guarantees regarding the revenue flows expected by the private operators, and the quality of the service provided under the concession was measured by an index which, depending on its value, would result in fines, but this provision was not adequately enforced. A sizeable investment was expected during the early years of the franchise, but scarcely five months into the contract, the government decided to renegotiate in the light of the convertibility policy, which made the indexing mechanisms included in the contracts illegal. Thanks to this renegotiation, the private operators received annual subsidies amounting to 57 million pesos. In 1995, a second round of negotiations was launched in response to an unexpected increase in traffic levels, which generated new investment needs. A third renegotiation was carried out in 2000, in which tolls were reduced 8%. These experiences prompted the government to strengthen the legal framework for bidding on the access highway to Buenos Aires, for which the contracts were more clear and complete, with a 22-year duration, and the concession was awarded to the companies offering the lowest tolls (Cavalcanti and Santos de Franca, 2003).

The first generation of highway concessions in Colombia began in the mid-1990s and comprised 13 projects, with a total investment of US\$ 1.08 billion. Of the 13 projects, 7 were not awarded through competitive bidding owing to a lack of interested bidders. The regulatory entity (Instituto Nacional de Carreteras) made errors in the exact layout of the roads, the bidding processes were short and insufficient effort was made to attract foreign investors, the studies of projected traffic demand were very preliminary and the contracts did not include mechanisms for dispute resolution or rules for ensuring revenue flows. Given all these factors, it is not surprising that the terms were renegotiated shortly thereafter, which entailed large fiscal costs.

In Chile the highway franchising programme was launched in 1993, and by the end of 2002 the total amount invested had risen to US\$ 5 billion. The initial bidding mechanism was complex. Firms submitted their proposals based on a weighted average of seven variables, which included the annual subsidy or payment by the government, the level and structure of tolls, the duration of the concession, the guarantee of minimum revenues, the degree of risk assumed by the private operator and other considerations. The contract was awarded mainly on the basis of the annual payment by the government, with preference accorded to the bidder that proposed the lowest payment. In subsequent tendering, other mechanisms were used, such as the rule of the lowest toll for the Route 78 franchise, or the rule of flexible duration of the bidding process, depending on the present value of revenue flows. The main advantage of this last method is that it reduces the risk for the private operator and makes it easier to establish fair compensation in the event that the government decides to close the bidding early. Recently, contracts have included subsequent guarantees, which makes it possible to ensure a larger flow of traffic than the minimum guaranteed in the original contract, in exchange for additional works and investments.

The risk of devaluation poses an obstacle to private investment in infrastructure in developing countries. As investors are obliged to turn to the international financial market to finance their investments, there is a currency mismatch between income, since the fees they receive for the services provided are set in local currency, and financial liabilities, since the resources that finance the investment are denominated in foreign currency. Because of this currency mismatch, a devaluation has a negative impact on the balance sheets and profits of businesses. A mistaken solution to this problem is to adjust charges for services based on exchange rates. If the majority of such charges are pegged to the exchange rate, a significant devaluation will weaken regulatory capacity, since governments will be compelled to default on their contractual obligations. In the face of such a situation, two main elements are required: flexibility to adapt to changing circumstances (regulatory governance with regard to incomplete contracts) and commitments to limit the government's ability to behave in an opportunist manner.

One example of lack of flexibility is the approach to rate regulation used in the privatization of the telecommunications company in Argentina. The original contract, drawn up before the convertibility plan was introduced, provided for monthly indexing based in the evolution of the local price index. Because the convertibility regime eliminated indexation clauses in contracts, the government agreed with the company to make adjustments based on the evolution of the CPI of the United States, an approach which was later extended to all the other privatized public services. This indexing method led to a de facto dollarization of the rates, but no explicit indexing mechanisms were incorporated in the contracts to deal with contingencies. As a result, the economy experienced several years of rate adjustments owing to inflation in the United States, but this took place in an internal context of deflation, which hindered efforts to improve the competitiveness of the economy. Similarly, when the devaluation occurred in Argentina in 2002, there were no mechanisms built into the rate-setting process to guide renegotiations after the change in the foreign exchange regime (Rozenwurcel, 2004).

The difficulty of predicting events that will affect the profits of private companies operating in the infrastructure area has often led to opportunist renegotiations, as a result of which productivity gains are not reflected in rates and the overall competitiveness of the economy is negatively affected. Current regulations show negative biases against the transfer of gains productivity to rates, which points up the need to introduce specific provisions with regard to when and how renegotiation processes should take place. One option is for contracts to specify a given rate of return (or a given net present value of the project), adjusting the duration of concessions in the light of any changes in return rates. If, for example, there is unforeseen growth in demand which results in an increase in the rate of return, the duration of the concession might decrease or, in the opposite case, it might increase. This mechanism makes it possible to lower the business risk and thus reduce the incentives for renegotiating the terms of the contract in the event of negative demand shocks (Engel, Fisher and Galetovic, 1999, 2001).

iii) Regulation of essential facilities

An element of singular importance on the regulatory agenda is the management and regulation of essential facilities. These facilities, also called basic facilities, include electricity transmission grids, railroad terminals, refineries and telecommunications networks, and they are one of the bottlenecks in infrastructure services. Essential facilities can also include access to natural resources, intellectual property, airports and other facilities. A defining feature of these types of facilities is that they are very expensive and difficult to replicate, which puts the entity that controls them in a monopolistic position and reduces competition (see box 4.3).

Since competitive segments, natural monopolies disaggregated horizontally by geographic area or by type of service, and essential facilities may all coexist within the same sector, access to the latter on the part of service-providers is fundamental. For that reason, antitrust efforts rely largely on the essential facilities doctrine. This doctrine does not imply that access should be free, but that, in the absence of an agreement between the parties concerned, rights of use will be imposed by the regulatory authority and debate over the amount of compensation will not be allowed to impede access. If controversy over compensation is allowed to affect a provider's access, a de facto barrier to entrance is created. This doctrine is part of efforts to promote competition in the United States, Australia and the European Union (OECD, 1996a).

Box 4.3

NEW PUBLIC ADMINISTRATION CHALLENGES IN THE TELECOMMUNICATIONS SECTOR

In recent years government authorities have been faced with major public administration challenges stemming from distortions in the operation of markets, which have, to a greater or lesser extent, altered the conditions for competition in each segment of the telecommunications industry.

The first challenge to be addressed is the heavy concentration in the regional supply of telecommunications services, particularly among businesses that are guided by global strategies, a situation that is not covered by current regulatory legal frameworks. This situation has two salient features. On the one hand, there is the intensification of anti-competitive behaviours at the regional level and the generation of extraordinary, but ill-gotten, profits, obtained by gaining a dominant position and illegitimately excluding competitors. On the other hand, there is the close relationship of some of the principal firms in the sector with financial groups that are highly exposed on stock markets that have been characterized by tremendous instability, which could compromise the development of the sector and its modernization in the countries that make up the target markets for these firms, even where affiliates operating in such markets remain profitable.

A second challenge to be met is the construction of markets that foster true competition, especially in those countries where it has been considered necessary to ensure, for a certain period, the maintenance of monopolistic operating conditions for firms that were awarded control of a state monopoly that was privatized. This means that the authorities will need to put in place a set of measures aimed at: (1) ensuring transparency of decision-making with regard to consumption and investment; (2) eliminating legal barriers that continue to impede entry into the sector and reviewing the granting of some rights that could constitute obstacles to the effective exercise of competition; (3) putting an end to situations of vertical and horizontal integration of the industry; and (4) in accordance with the existing legislation in each country, establishing and imposing exemplary sanctions for anti-competitive behaviours, especially those related to price and market quota agreements, the application of cross-subsidies, predatory price-fixing and discriminatory offers.

Other challenges relate to several issues that are of crucial importance for the future development of telecommunications, owing to the possibilities afforded by technological innovation and diversification of the integrated supply of new services. They include the greater sophistication of demand and the integration of telecommunications systems at regional level, areas in which the regulatory frameworks currently in force in most countries of the region are clearly insufficient. This means that the countries will need to make a major effort to strengthen their regulatory frameworks, updating the legal framework and its institutional structure.

Finally, sectoral authorities must grapple with the challenge of safeguarding the users' rights established under international legislation on protection of consumer rights, which in some countries of the region are specifically excluded from the body of legal provisions governing acts of consumption by virtue of their supplementary nature. The specific legal provisions that regulate the acts of the private and public agents that interact in the telecommunications sector should guarantee the right to free choice, truthful and timely information, non-discrimination, consumer safety, protection of health and the environment, reparation and compensation for damages, education for responsible consumption and quality assurance of the products and services provided.

Source: Patricio Rozas, "Competencia y conflictos regulatorios en la industria de las telecomunicaciones de América Latina", *Gestión pública series*, No. 25 (LC/L.1810-P/E), Santiago, Chile, Economic Commission for Latin America and the Caribbean (ECLAC), 2002. United Nations publication, Sales No. S.02.II.G.121.

II. Productive structure, natural resources and environment

As was discussed in chapter 3, the dynamics and continuity of economic growth are closely linked to the evolution of capital stock in the economy, which consists not only of physical and human capital but also of natural capital. Accordingly, investment should serve to maintain and expand, among other productive factors, the natural resource base of the economy, the capacity of natural ecosystems to support productive activities and the delivery of environmental services. In addition, the region should take advantage of the opportunities arising from greater global environmental awareness, and the larger investments in technology that it has generated, in order to achieve productive development with less environmental impact.

Historically, productive activity in the countries of the region has been heavily dependent on natural resources endowments. However, concern for environmental issues and environmental sustainability became more evident with the liberalization of economies and trade. In this context, the Rio Summit of 1992 marked a turning point in the negotiation of multilateral environmental agreements, with the adoption of a broad vision of development which recognized the importance

of reconciling economic production and international trade with sustainable use of natural resources and protection of the environment. Globalization of the symptoms of environmental deterioration motivated many of these agreements and their protocols, which incorporated innovative financial mechanisms and instruments aimed at facilitating developing countries' access to new technologies.

The scope, scale and sheer number of environmental problems has transformed them from local concerns to global ones. Collective awareness of the urgency of halting global processes of environmental deterioration has given rise to new international cooperation imperatives, while also offering the opportunity to reconsider the restrictions that environmental deterioration could impose on economic growth. Issues such as global warming and depletion of the stratospheric ozone layer (“global public bads”) have drawn attention to global interdependence and vulnerability and have fostered the creation of financial mechanisms aimed at facilitating access for countries and industries to new technologies for reducing carbon emissions and replacing inputs such as chlorofluorocarbons and halogenated substances which are widely used in the refrigeration industry.

Perhaps the most positive aspect of the international debate on these issues is that the modern vision of development has gradually incorporated the environmental dimension as a key factor in economic development, recognizing the value and the functions of environmental and ecological assets as the material basis of support for economic processes.

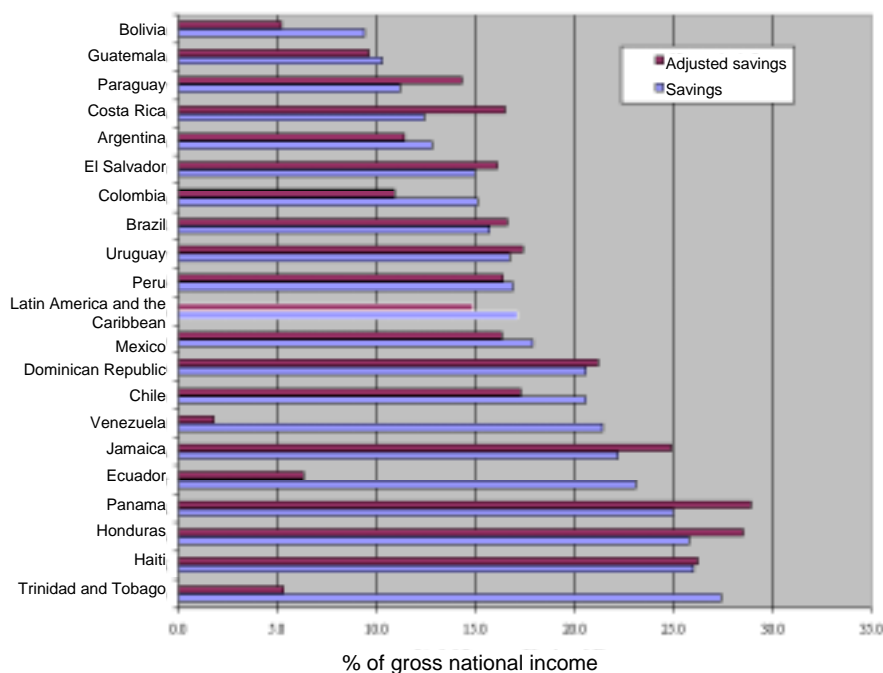
Considering the effects of environmental factors on the evolution of national savings is important in assessing whether a country is coming nearer to or straying farther from a path of sustainable development. One way of doing so is to use the adjusted national savings rate, which is calculated by taking national savings and adding expenditures for education—as the investment in human capital—and then subtracting losses of natural capital, such as energy and mineral resources, forests and environmental externalities.⁹ As figure 4.1 shows, the poor savings performance evidenced by the economies of the region becomes worse still when loss of natural resources is taken into account. In 2001, for example, the adjusted average national savings rate was lower than the rate derived from national accounts.¹⁰

Realizing sustained growth requires a framework of policies and institutions to protect the productive base that relies on natural resources. The complementarity between economic growth, increased productivity and preservation of the integrity and environmental sustainability of natural capital is linked to the capacity of public policy to correct market flaws caused by the absence of effective pricing and ownership regimes, coupled with the existence of incomplete markets for numerous natural resources and environmental services.

⁹ The adjustment is made mainly on the basis of net loss of energy and mineral resources. Lack of information makes it difficult to include other variables in the adjustment, such as loss of fishery resources, pollution of water resources, etc.

¹⁰ Productive capacity is also seriously affected by frequent natural disasters (ECLAC, 2002a; ECLAC, 2002d). In the case of Central America, the economic damages caused by such phenomena in the last 30 years amount to some 2% of the annual subregional GDP. In the countries of the Caribbean, natural disasters are one of three main variables that explain the volatility of economic growth. In both regions, large-scale disasters entail, in addition to the loss of human life and productive capital, the redirecting of investment resources to meet new demands generated by the situation.

Figure 4.1
LATIN AMERICA AND THE CARIBBEAN: ADJUSTED SAVINGS, 2001



Source: World Bank, *World Development Indicators*, 2003, Washington, D.C.

1. Environmental challenges and dynamic sectors

(a) Natural resources

The uniqueness of the natural heritage of Latin America and the Caribbean and the enormous variety of ecological areas in the region, which make it possible to obtain a wide and diversified range of renewable and non-renewable resources, should be a fundamental part of any strategy for development and participation in the international economy (see box 4.4).

To ensure the productive sustainability of these resources it is necessary to mobilize investment towards productive sectors characterized by dynamic growth which utilize technological innovation to add value and reduce the environmental externalities of specialization schemes based on environmentally sensitive industries (ECLAC, 2002a). Exportation of natural resources depends on the characteristics and available supply of natural resources, the nature and availability of technological advances and the tariff policies of the importing countries, which affect the relative profitability of goods by providing greater protection to products with greater added value (Nogues, 2004b and Piñeiro, 2004).

Although the countries of the region have made some headway in diversifying their basic basket of exports, in many cases there is still a marked dependence on a few products, which is a manifestation of the structural weaknesses in the productive system. The main exports are commodities with little added value, as can be seen from table 4.6.

In addition, the export structure of the region is more environmentally vulnerable today as a consequence of the emergence of more stringent environmental requirements in markets, particularly in terms of the quality and management of processes and products. The volume of exports from sectors with heavy environmental impact and intensive use of natural resources has doubled in several countries of the region in the last decade (ECLAC, 2002a).

Box 4.4

AVAILABILITY OF NATURAL RESOURCES IN LATIN AMERICA AND THE CARIBBEAN

Occupying 15% of the Earth's surface, the region has 25% of the world's forests, which cover close to 48% of its total land area. Of this forested area, 95% consists of tropical forests (46% of the tropical forest area of the world), which account for 40% of the total biodiversity of the planet. Brazil, Colombia, Ecuador, Mexico, Peru and Venezuela are considered megadiverse countries and are the origin of many plants of high economic value (corn/maize, potatoes, cotton, beans). Their genetic material and native germoplasm have been used to introduce genes that are resistant to diseases and pests that affect these crops (CAF/IDB/UNDP, 1997).

Thirty-eight per cent (761 million hectares) of the land in the region is devoted to agricultural pursuits. South America (28%), together with the Asian countries (31.6%), accounts for the largest proportion of water resources in the world, and its inhabitants have access to five times more water than the global average.

As for mining resources, the region has 34% of the world's copper reserves, 30% of the bauxite, 41% of the nickel and 29% of the silver, to name only the most representative examples.

The usable energy potential is equal to 35% of the global potential. Within this figure, hydroenergy sources make up 36%, coal 27%, petroleum 24%, natural gas 8% and uranium 5%. Renewable sources of energy, such as biomass, geothermal energy, solar energy and wind energy—for which there is great potential in the region—are becoming increasingly important in the light of international environmental commitments and the possibility of using them as part of emissions trading mechanisms intended to reduce carbon emissions.

As for electricity generation, in Latin America 57.7% comes from hydroelectric resources (the region uses only 21.4% of its potential), 38.2% is thermoelectric, 3.2% comes from nuclear sources and the remaining 0.8% comes from other sources (geothermal, solar and wind). The region's contribution to world reserves of petroleum is relatively small, amounting to only 11.5%. The same is true of its reserves of natural gas (5.2%) and coal (1.6%).

Source: Economic Commission for Latin America and the Caribbean (ECLAC).

Table 4.6
LATIN AMERICA: PRINCIPAL EXPORT COMMODITIES
(Percentages of total exports)

	1950	1960	1970	1980	1990	2001
Argentina	wheat (17) meat (15)	meat (22) wool (14)	meat (25) wheat (6)	meat (10) wheat (10)	oilcake (9) wheat (7)	oilcake (10) petroleum (9)
Bolivia	tin (67) lead (9)	tin (66) lead (7)	tin (50) antimony (16)	tin (36) gas (22)	gas (25) zinc (16)	gas (18) oilcake (14)
Brazil	coffee (62) cocoa (7)	coffee (55) cocoa (6)	coffee (32) iron (7)	coffee (12) iron (8)	iron (8) oilcake (5)	iron (5) soybeans (5)
Chile	copper (52) nitrate (22)	copper (67) nitrate (7)	copper (79) iron (6)	copper (47) molybdenum (6)	copper (47) fish meal (5)	copper (37) fish (7)
Colombia	coffee (72) petroleum (16)	coffee (75) petroleum (18)	coffee (59) petroleum (11)	coffee (60) sugar (4)	petroleum (23) coffee (21)	petroleum (21) coal (8)
Costa Rica	coffee (30) bananas (56)	coffee (53) bananas (24)	coffee (29) bananas (29)	coffee (26) fresh fruit (16)	bananas (26) coffee (18)	bananas (11) coffee (4)
Cuba	sugar (82) tobacco (5)	sugar (73) tobacco (8)	sugar (75) tobacco (4)	sugar (82) nickel (5)	sugar (80) nickel (7)	nickel (34) ^a sugar (27) ^a
Mexico	cotton (17) lead (12)	cotton (23) coffee (9)	cotton (8) coffee (5)	petroleum (61) gas (4)	petroleum (36) fresh veg. (3)	petroleum (7)
Peru	cotton (34) sugar (15)	cotton (18) copper (17)	fish (27) copper (25)	copper (20) petroleum (17)	copper (19) fish meal (13)	gold (17) fish meal (12)
Uruguay	wool (48) meat (19)	wool (57) meat (20)	wool (32) meat (32)	wool (20) meat (15)	wool (16) meat (13)	leather (11) meat (10)
Venezuela	petroleum (94) coffee (1)	petroleum (88) iron (6)	petroleum (87) iron (6)	petroleum (93) aluminium (2)	petroleum (81) aluminium (4)	petroleum (82) aluminium (2)

Source: Rosemary Thorp, *Progreso, pobreza y exclusión. Una historia económica de América Latina en el siglo XX*, Washington, D.C., Inter-American Development Bank /European Union, 1998.

^a 2000.

i) Agriculture

Countries that have good agricultural natural resources should take advantage of their position by promoting agricultural and agro-industrial development that extends beyond the production of primary goods, through the creation of value chains. The modernization of agro-industrial production demands an active process of technical change. Rather than seeking to open up new farmlands, which are generally less fertile and more prone to erosion, higher yields per cultivated hectare should be sought, but doing so will require technological improvements, not more intensive use of fertilizers, agrochemicals and energy (Piñeiro, 2004).

During the last decade, the evolution of the agricultural products market in the most developed countries has led to stricter quality and safety standards. In the wake of recent events such as the appearance of bovine spongiform encephalitis and increased marketing of products derived from genetically modified organisms (GMOs), consumers have expressed growing reluctance to purchase certain products, especially in the European Union. The result has been a proliferation of more complex trade regulations having to do with health issues or technical matters relating to traceability, labelling, animal welfare and environmental concerns, as well as regulations on GMO marketing. International commodities markets have become markets “administered” through international agreements that place restrictions on access to these markets. The developed countries will undoubtedly apply any regulations at their disposal, including strong tariff barriers. Hence, Latin America and the Caribbean, if they want to obtain greater market access, must confront the enormous challenge of reorganizing their production and marketing systems to meet these requirements. It is certain to become increasingly difficult for developing countries to determine whether environmental or health restrictions imposed by developed countries are protective tactics or unfair sanctions, especially as the global nature of environmental problems has given a de facto legitimacy to many of the restrictions placed on exports.

The growing breach in the area of agriculture and food production between what the primary sector produces and the products that eventually reach the consumer has caused a profound change in the nature of products and food production processes that has made it essential to increase the value added of exports. Transport, storage, processing, packaging, and the environmental and social conditions in which primary products are produced have all become decisive factors in determining value and in final purchasing decisions. Competitiveness is increasingly linked to the availability or quality of natural resources and depends more and more on the capacity to create, interpret and adapt to the conditions of demand.

ii) Mining products and hydrocarbons

In the mining sector, participation in international markets on the basis of mineral concentrates means competing in markets that are oligopsonic and that are, moreover, strongly dominated by a handful of firms. Indeed, the capital value of mergers and acquisitions in the sector during the 1990s amounted to some US\$ 56 billion, and by the start of the new millennium, it was estimated that just ten companies controlled 33% of world mining production.

The countries of the region have substantially increased their participation in world production of minerals and metals (see table 4.7).

Worthy of note is the increase in the region’s share of world copper production, which rose 25% to 45%. In the case of gold, the regional share increased from 10% to slightly over 16%, while for silver it increased from 29% to 40% and for zinc, from 17% to 23%. The region’s participation in global production of refined products showed a relatively modest increase (zinc, lead and nickel) or declined (aluminium and tin). The only exception was copper, where the increase was marked. This is because the largest proportion of the copper extracted went into utilizing the extra-regional smelting and refinement capacity of the companies that spearheaded the investments.

Table 4.7
**PARTICIPATION OF LATIN AMERICA IN GLOBAL PRODUCTION OF
 MINERALS AND METALS**
(Percentages)

	Global production of minerals and metals		Global production of refined products	
	1990	2002	1990	2002
Zinc	16.7	23.1	7.4	8.4
Lead	13.4	19.7	7.7	9.0
Nickel	11.4	15.2	9.5	11.2
Tin	27.3	27.5	23.1	20.2
Copper	24.9	44.7	15.7	25.6
Bauxite	23.0	26.2		
Aluminium			9.2	8.5
Silver	29.1	39.8		
Gold	9.6	16.3		

Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of Metallgesellschaft Aktiengesellschaft and World Metal Statistics.

In recent decades, the margins between prices and production costs have become smaller. The growth cycles of the world economy no longer spur consumption of metals as they did before, owing to substitution and reduction of consumption per manufactured unit and to the availability of new materials. These effects have a greater impact in the developed countries than in recently industrialized ones, where consumption remains relatively strong.¹¹

The strategies of the firms operating in the sector are very sensitive to natural and acquired competitive advantages (level of reserves, recognition of potential, cost and availability of infrastructure and skilled labour, among others), as well as to the degree of political and economic stability. From this standpoint, the existence of natural advantages is a necessary but not a sufficient condition to attract investment. New exploration and extraction technologies are increasingly influenced by environmental demands, which affects the origin and dynamics of supply. On the positive side, these environmental demands have led some foreign firms to transfer to the region important technological advances in environmental management of the mining industry.

In the case of hydrocarbons, the region has an abundant supply of fossil fuel resources. It possesses 11.5% of proven petroleum reserves in the world, although these reserves are concentrated in only a few countries (Argentina, Brazil, Colombia, Ecuador, Mexico and Venezuela). In the Caribbean, only three countries have reserves of this type: Barbados, Cuba, and Trinidad and Tobago. The region contributes 13% of total world production, but just four countries account for more than 86% of the regional share: Mexico, Venezuela, Brazil and Argentina. At the same time, Latin America and the Caribbean consume 6.4 million barrels of petroleum a day, which is equal to 8.4% of world consumption, and domestic consumption is expected to grow at a rate of 3% per year.

The structure of total energy supply in the region is as follows: petroleum (40%), natural gas (28%), coal and other sources (6.3%) and renewable sources (25.7%). The latter include hydroenergy (almost 15% of the total), sustainable firewood (5.8%) and sugarcane products (4.1%) (Coviello, 2003).

¹¹ The robust growth of the Chinese economy has had a powerful carry-over effect on the mining and forestry sector of South America (ECLAC, 2004a).

There is no question that the availability of energy resources is a key factor in productive development. In addition to supply, it is important to consider energy intensity as an indicator of efficiency in consumption. This indicator measures the amount of energy used to produce one unit of output and therefore reflects technological options and patterns of consumption in a society. A comparison of the evolution of average energy intensity for Latin America and the Caribbean with that of the OECD countries reveals that between 1980 and 2002 the latter experienced a cumulative reduction of 22.5% in energy intensity, whereas Latin America and the Caribbean posted a cumulative increase of almost 2%. The reduction in the OECD countries occurred as a result of the development of institutions to regulate energy consumption and the allocation of resource for research and development to promote efficient energy use and seek diversified energy sources, particularly renewable ones (ECLAC, 2002a).

(b) Ecological goods and services: challenges and opportunities

Growing awareness of global environmental problems in recent decades, coupled with greater demands on the part of consumers and markets for products derived from processes that do not damage the integrity of ecosystems, has brought about the emergence of an ecological goods and services market.¹²

The concept of ecological goods and services comprises primary environmental goods and services (which must generally be certified) that are derived directly from nature. This type of product comes from sectors such as the organic products sector, the forestry sector and sectors related to biodiversity. The market for organic products in the principal consumer countries (European Union, United States and Japan) is estimated at US\$ 20,000 million. That figure represents between 1% and 5% of the total food market, and the percentage is expected to increase from 5% to 10% in 2005. The only country in the region that devotes a significant portion of its cropland to organic farming is Argentina, which accounts for 19% of the world total (see table 4.8).

Table 4.8
ORGANIC FARMING IN COUNTRIES OF LATIN AMERICA

Country	Hectares	Percentage of world total
Argentina	3 000 000	19.0
Brazil	100 000	0.6
Colombia	22 811	0.1
Paraguay	19 218	0.1
Peru	12 000	0.1
Costa Rica	9 607	0.1
Bolivia	8 000	0.1
Chile	2 700	0.0
Uruguay	1 300	0.0
Latin America	3 175 636	20.1
Rest of world	12 638 181	79.9
World total	15 813 817	100.0

Source: N. Borregaard, A. Dufey and Z. Guzmán, *Bienes y servicios ambientales: una definición desde la perspectiva latinoamericana*, Research and Resources for Sustainable Development (RIDES), Grupo Zapallar and Futuro Latinoamericano, September, 2002.

Sustainable forest products are raw materials obtained from forests in compliance with environmental, economic and social standards, such as those established by the Forest Stewardship Council. Forest certification has increased notably in recent years. In 2001, a total of 82 million

¹² Some texts use the expression “environmental goods and services,” but this document distinguishes between environmental and ecological goods and services. The term “ecological” is used in reference to primary products that come from nature.

hectares were certified, 60% of them within the European Union and 25% in North America. Developing countries account for only 10% of the certified area, of which Latin America contributes 3%. Demand for certified forest products has grown steadily, and in the European Union the percentage of such products rose from 0.2% in 1988 to 8% in the year 2000 of all timber products with some type of seal.

Another market in the area of ecological goods and services is the market for biodiversity-derived products, which is growing quickly and generating appreciable revenues. For example, in 1997 global exports of products obtained from medicinal plants, animals and wood amounted to US\$ 136 billion. Latin America and the Caribbean constitute the richest region on the planet in terms of biodiversity, which puts the region in a privileged position vis-à-vis the application of the Convention on Biological Diversity, adopted at the Rio Conference, which establishes the basis for cooperation to preserve humanity's biogenetic heritage, with full respect for the sovereignty of each country, setting standards to regulate equal access to these resources. This creates the challenge of harnessing the economic benefits to be derived from the use of these resources, both in terms of scientific knowledge and technological development (including access to biotechnologies) and in terms of commercial use. The establishment of more effective mechanisms that will enable the countries of the region to take advantage of the many benefits afforded by their biogenetic wealth is urgent, since the recent development of biotechnology that gives rise to modified living organisms and the growing commercial use of these resources will surely lead to profound changes in systems of agricultural and agro-industrial production. Compounding the challenge is the need to take account of the rights that arise from the role of specific groups, such as traditional farmers and indigenous communities, in conservation and in knowledge of genetic resources.

The expansion of ecological tourism is another area that would allow the region to capture a larger share of the economic benefits of its natural resources and environmental services. In 2002, global income from international tourism totalled US\$ 474 billion, and the World Tourism Organization predicts that it will continue growing at an average annual rate of 4.1% over the next few years.¹³ Ecotourism can be distinguished from traditional “sun and surf” tourism in that it constitutes a specialized segment of the tourist industry which, although it also takes place in a natural setting, is aimed primarily at observing and understanding nature.¹⁴ Although the distinction is important from an economic point of view (ecotourism is growing at a far higher rate than traditional tourism), in practice, visitors often combine traditional tourism with ecotourism activities.¹⁵ In the region, Mexico ranks seventh in the world as a tourist destination, and in several countries, particularly in the Caribbean, this sector has become the largest generator of foreign exchange.¹⁶ In 2001, a difficult year for tourism, Mexico's receipts from international tourism totalled slightly under US\$ 8.3 billion, while those of the Caribbean amounted to US\$ 17 billion. Central America earned US\$ 3 billion and South America, US\$ 11 billion. According to data from their respective tourism satellite accounts, in Mexico 8.4% of GDP comes from tourism and in the Dominican Republic, 20%.

¹³ See WTO (2001b). *Tourism 2020 Vision: Global Forecasts and Profiles of Market Segments*, which presents projections of global tourism, measured in international tourist arrivals, forecasting an average annual growth rate of 4.1% between 1995 and 2020. WTO points out that this figure refers to international tourism and does not reflect domestic tourism.

¹⁴ No general agreement exists on the meaning of the term “ecotourism,” which has resulted in various different definitions and classifications. Although it is often confused with sustainable tourism, the two are not synonymous, since sustainable tourism is characterized by social, environmental and cultural responsibility, regardless of whether or not the tourist activity takes place in a natural setting.

¹⁵ Visits to national parks can be used as a proxy indicator to estimate the volume of ecotourism. Based on data from the Costa Rican Institute of Tourism, 66% of tourists in the high season and 59% in the low season who visited the country and arrived by air, visited at least one national park, biological reserve or refuge in 1988 (Rojas, 1999).

¹⁶ In 1996, income from tourism in the Caribbean was almost US\$ 11.5 billion, as against US\$ 26.7 billion from exports of goods. In several countries (Antigua and Barbuda, Bahamas, Barbados, Saint Lucia, and Saint Vincent and the Grenadines), income from tourism exceeded income from exports of goods.

The relationship between tourism and the environment is complex, but it is essential for the competitiveness of the sector. On the one hand, expansion of the tourist sector has caused a wide variety of environmental problems, especially in coastal areas, including pollution and destruction of marine ecosystems such as coral reefs and swamps. In the Caribbean, it is estimated that cruise ships and yachts generate 70,000 tons of waste a year, and tourist demand for seafoods is increasing pressure on marine resources.¹⁷ In some countries, moreover, tourist areas have also become growth centres, attracting large numbers of immigrants, in an unplanned process that has exacerbated urban environmental problems (access to drinking water and sanitation). On the other hand, tourist demand is sustained by maintaining the quality of an environmental resource base that includes beaches, mountains, forests, biodiversity, and others, on whose conservation the future of the sector depends. From that standpoint, planned development of the tourist sector, with due attention to environmental conservation criteria, is crucial to increasing the region's competitiveness, ensuring the economic sustainability of the sector and related activities, and conserving the environment and natural resources.

In the Caribbean, fear of losing tourist income has become the main motive for environmental concern, prompting the construction of wastewater treatment systems, the development of plans for the management of coastal areas and the creation of protected lands and marine areas. In Costa Rica, natural parks have become the country's second most important industry, and promotion of tourism in protected areas is one of the pillars of the national tourist strategy. Costa Rica's successful example is now spreading across the Central American region, thanks to the Mesoamerican Biological Corridor, which links the protected natural areas of the seven countries it comprises. Another noteworthy proposal for increasing the competitiveness of the tourism industry in the Central American region is an initiative to issue sustainable tourism certificates, which would lend added value and increase the competitiveness of service-providers at the international level by attributing a commercial value to recreation-related environmental services. Lastly, in October of this year a large-scale tourism plan was approved for the Brazilian Amazon region, with financing from IDB. The plan provides for the creation of 20 parks and environmental protection areas and is considered an essential measure for preserving and fostering the sustainable development of the area.

(c) The environmental goods and services market

The rise in consumer demand and the growth of markets for clean products and clean production processes has led to the emergence of an expanding environmental goods and services market, which consists basically of infrastructure and equipment for the treatment or prevention of pollution (sewerage systems, domestic and industrial wastewater treatment, solid waste collection and treatment, control of atmospheric emissions, among others).

The global environmental goods and services industry grew 14% between 1996 and 2000, increasing from US\$ 453 billion to US\$ 518 billion, and by 2010 it is expected to be worth US\$ 640 billion. Environmental services account for about 50% of the market, while the other half consists of sales of environmental equipment and resources, both for treating water and waste and for enhancing energy efficiency (OECD, 1999).¹⁸

Currently, production and consumption of environmental goods and services is occurring mainly in developed countries, which account for 87% of the total revenues generated (UNCTAD). Although the countries of the region participate only marginally in this market at present (accounting for slightly over 2%), there is reason to expect that this participation will grow in

¹⁷ Data from UNEP (1995). Global Programme of Action for the Protection of the Marine Environment from Land-based Activities, Washington, D.C.

¹⁸ The size of this market at the global level rivals that of the aerospace and pharmaceutical industries.

coming decades.¹⁹ However, their ability to take advantage of business opportunities and environmental, social and economic benefits afforded by this market will depend on the effectiveness of environmental policy, the stability of regulatory frameworks, financing mechanisms and policies for support and development.

The needs and opportunities in the region are substantial, not only to cover the existing gaps but also to satisfy new demands. The future investment needed in the countries of the region to address the deficit of environmental goods and services is huge and will require an enormous financial effort. As an example, based on potential scenarios, CESPEDES (2001) has estimated the investment needs for environmental infrastructure in Mexico up to the year 2010 (see table 4.9). As the table shows, the amounts are significant, particularly for urban wastewater treatment, industrial wastewater treatment and management of hazardous industrial waste.

A first stage in the development of this type of market —the stage at which most of the countries of the region currently find themselves— is the supply of basic environmental goods and services. These include sewerage systems, waste collection, urban sanitation —in other words, basic environmental infrastructure services characterized by a public service dimension associated with urbanization. A second stage, which has been attained by some Latin American countries, focuses on providing goods and services to businesses that will enable them to address internal environmental demands, such as services for treatment of wastewater or equipment to prevent air pollution. A third stage involves environmental goods and services designed to improve the environmental performance of businesses and ensure their compliance with the certification or environmental accreditation requirements of external markets, such as eco-labelling and the ISO 14000 standards.

Table 4.9
**INVESTMENT OPPORTUNITIES IN THE ENVIRONMENTAL INFRASTRUCTURE
SECTOR OF MEXICO**
(Millions of dollars)

Type of infrastructure	Total investment to 2010	Annual operating costs
Treatment of urban wastewater	5 551	946
Treatment of industrial wastewater	2 436	473
Management and final disposal of municipal solid waste	728.7	1 249
Management of hazardous industrial waste	3 365	5 760
Management of biological and infectious hospital waste	14.4	73.5
Public systems for control of atmospheric emissions	368.5	99.8
Wind generation of electricity	1 000	-
Solar generation of electricity	1 000	-
Total	14 463.6	8 601.3

Source: Centro de Estudios del Sector Privado para el Desarrollo Sustentable (CESPEDES), *Infraestructura ambiental: necesidades*, Mexico City, 2001.

Expansion of the market for environmental goods and services will help to maintain biophysical balance, which is essential to ensure the continuity of the development process itself and to facilitate compliance with environmental legislation, reduce the costs of environmental management in the industrial sector and make it possible to meet international environmental standards.

¹⁹ The economies of the region experienced annual growth of between 12% and 15% in this type of market – a higher rate than in the developed countries.

(d) Environment and technological innovation

(i) Biotechnology

Sales in the biotechnology sector at the global level amount to US\$ 41 billion. Biotechnology has become the principal motor for innovation not only in the field of medicine but also in agriculture, industrial production and environmental protection.²⁰

Many of the applications of biotechnology are cross-cutting and can bring benefits to various of the productive sectors that rely on natural resources, enabling them to add value to products. Unlike other generic technologies that are disseminated throughout the world in relatively homogeneous and undifferentiated technological packages, biotechnology offers countries with limited resources the advantage of allowing them to choose the market niche that meets their specific needs and requirements and thus address local problems that are unlikely to be of interest to large foreign firms.²¹

The current strategy of biotechnology and pharmaceutical firms is the formation, on a global scale, of partnerships for research and development and the use of subcontracting. This approach implies the existence of global value chains in which firms and countries participate in accordance with their respective competitive advantages. To shorten investment maturity periods (generally 10-15 years), the sector is evolving in a very similar way to the information technology industry. Companies are finding it more beneficial and cost-effective to integrate virtually through the formation of networks and partnerships in which each participant contributes essential elements to the development of high-value products and each shares in the proceeds in proportion to its contribution.

One of the strategies employed in developing biotechnology in developed countries with high levels of biodiversity and traditional knowledge (New Zealand and Australia, for example) is bioprospecting, which includes such activities as discovery (collection of samples, research on biological activity, and isolation and purification of active compounds), protection of intellectual property and product development. The growth of bioprospecting has been supported by technological advances in the fields of pharmaceuticals, biotechnology and agriculture.

The great wealth of biological diversity in some countries, coupled with the possibility of regulating and controlling access to their genetic resources, has aroused renewed interest in bioprospecting activities for pharmaceutical, agricultural and industrial use as one way of capturing some of the benefits of biodiversity. Many of the economic estimates of the benefits of bioprospecting have centred around the development of new pharmaceuticals. However, there are other areas of equal or greater interest that probably have the potential for larger economic yield. Brazil, for example, is exploring the possibilities for (i) bioprospecting of flora and fauna in order to identify species and organisms of industrial interest; (ii) research on sustainable use of biodiversity in order to obtain a variety of products, including phytopharmaceuticals, spices and essential oils; and (iii) research in the area of microbiology for the identification of new microorganisms that might be used in various applications (bioleaching, bioremediation, antibiotic production).

Non-timber forest products are biological materials extracted for human use: foods, medicines, spices, essential oils, resins, rubbers, latex, tanning agents, pigments and dyes, ornamental plants, medicinal herbs and plants, wood for fuel, lianas and fibres, among others. These products have significant market potential. For example, 90% of the medicinal plants marketed

²⁰ Biotechnology offers new ways of protecting and improving the environment, including bioremediation of the air, soil, water and contaminated waste, as well as development of less polluting products and industrial processes based, for example, on the use of enzymes.

²¹ In the Chilean mining sector, the biotechnology application with the greatest immediate utility uses bacteria in bioleaching of minerals with copper content, employing techniques of molecular biology, genetic engineering and bioinformatics. It is estimated that the use of this technology on a large scale would reduce production costs by 50% and increase the country's economically exploitable copper reserves fourfold (Chilean National Commission for the Development of Biotechnology, Report to the President of the Republic, June 2003).

internationally are extracted directly from nature. Furthermore, these figures only reflect the raw materials for much bigger markets, such as the pharmaceutical, chemistry, cosmetics and food industries, which use them as inputs.²²

Many pharmaceutical firms and research institutions are engaged in collecting plants and other natural substances in search of products of interest, in both developed and developing countries.²³ In addition, a variety of bioprospecting activities are being carried out in developing countries under agreements with companies or research institutions in developed countries. The results of these experiences have been mixed; some have been evaluated favourably, while others have been highly controversial. Mention should also be made of other types of benefits linked to these activities, which lack market value in and of themselves, but which help generate economic benefits, namely: (i) production of information and knowledge, which constitutes a valuable contribution, both from a scientific standpoint and in terms of the achievement of objectives for the identification and conservation of biodiversity, and (ii) stimulation of the development of national scientific capacity in various areas, which has a positive impact in other economic sectors, since agreements with laboratories and research institutions generally include commitments for training, technology transfer and joint research.

For countries to avoid becoming mere suppliers of raw materials and take advantage of the significant contribution that biodiversity prospecting can make to their development, scientific infrastructure and local technological capacity are needed, as are suitable conservation areas and clear regulatory frameworks that include provisions regarding access to genetic resources, protection of intellectual property, biosecurity, and negotiating capacity (Feinsilver, 1996; Brenner, 1996).

(ii) *Technology and certification for clean production*

Another essential aspect of the incorporation of sustainability criteria in productive development is the design of cleaner production programmes that promote the adoption of more environmentally and energy-efficient production technologies and processes. These initiatives are the result of new trends in competition and access to new markets that combine greater productivity and efficiency in the use of inputs, including water and electricity, with less environmental impact.

Clean production programmes have become an important component of traditional environmental policy in a number of countries, notably Brazil, but also Chile, Colombia and Mexico. Argentina is in the process of developing a clean production policy, to which considerable resources have been devoted in the last decade. The Dominican Republic, Panama and Paraguay, among others, are also moving in that direction.²⁴ Clean production centres are key institutions for

²² In 1999, the United States, the European Union and Japan imported essential and vegetable oils worth US\$ 717 million, of which 11.7% came from countries of the region, in particular Argentina (US\$ 37.4 million) and Brazil (US\$ 35.7 million); rubbers, latex and resins for use in the food, cosmetics and chemical industries (especially the production of paints), with a total worth of US\$ 829 million, of which 8.5% came from countries of the region, notably Chile (US\$ 35.6 million) and Brazil (US\$ 29.6 million); pigments and dyes used in the food, cosmetics, textile and manufacturing industries, worth over US\$ 217 million, of which 26% came from Latin American countries, especially Argentina (US\$ 24 million), Peru (US\$ 18 million) and Brazil (US\$ 12 million); spices and herbs for more than US\$ 1.2 million, of which 8.2% came from the region, especially Brazil (US\$ 83.8 million) and Chile (US\$ 15 million); and medicinal plants valued at over US\$ 450 million, of which 8.3% came from countries of the region, in particular Chile (US\$ 16 million) and Brazil (US\$ 11 million). In addition, more than US\$ 487 million in plant extracts were imported, of which 3.3% came from countries of Latin America, especially Brazil (US\$ 12 million).

²³ Companies active in the harvesting of plants and natural products include Abbott Laboratories, Boehringer Ingelheim, Bristol-Myers Squibb, CIBA-GEIGY, Eli Lilly, Glaxo Group Research, Merck & Co., Monsanto, National Cancer Institute, Pfizer, Rhône-Poulenc Rorer. Reid et al. (1994). *Biodiversity Prospecting: Using Genetic Resources for Sustainable Development*. Washington, D.C.: World Resources Institute.

²⁴ One of the most important features of clean production policies is that they seek complementarity and coordination between public and private efforts and support compliance with national and international standards. For example, Chile has an instrument called the Clean Production Agreement, which was officially recognized in 1997 by members of the Public-Private Committee on Clean Production, composed of representatives of government agencies concerned with environmental matters and representatives of management and labour organizations. The Agreement has contributed to a change in the regulatory culture by highlighting the need for businesses to be active, not reactive, in seeking solutions. The application of regulations and the acceptance of responsibilities are more likely to be successful if they are based on initiatives put forward by the parties themselves who are subject to environmental regulation.

generating and disseminating information on technological options and promoting projects to prevent pollution and strengthen competitiveness, especially in small and medium-sized enterprises. Dissemination of information on technological options and their demonstration through sectoral pilot projects (tanneries, food and drink production, etc.) complement clean production policies and provide an incentive for the creation of a consulting market and the promotion of endogenous technological advances. Clean production centres provide technical advisory services, train business owners and consultants, offer technical auditing of processes and equipment, and have databases to support technology transfers for businesses and the development of technologies for the treatment and profitable use of waste products.

Growing international competition has engendered greater concern and greater efforts to comply with international environmental standards and differentiate products and processes. This is the focus of the ISO 14001 standards and the concept of eco-efficiency in production processes. The subsidiaries of transnational companies have greater opportunity to incorporate uniform standards of environmental management in their strategies, especially in operations oriented towards the international market. ISO 14001 certification, like ISO 9000 certification in relation to quality management, have gradually become a necessary credential for companies that aspire to market leadership, especially those in the export sector. In line with this trend, a growing number of large companies in the region, both foreign and domestic, have invested in obtaining ISO 14001 certification for their environmental management systems.²⁵

2. Proposals for an environmental agenda compatible with productive development

There is a reasonable consensus in the region that the results obtained thus far with regard to environmental protection are not satisfactory.²⁶ Despite the rapid development of an institutional framework in the environmental arena, environmental sustainability issues still occupy a secondary role in the dynamics of public and private investment, which is a reflection of the weakness of these environmental institutions (ECLAC, 2002d).

Based on the evidence accumulated in recent years, the environmental agenda should focus on three areas for action that will allow better articulation between policies on productive development and sustainable management of natural resources and the environment.²⁷ The first area is strengthening the capacity of the Latin American and Caribbean countries to play an active role in various international negotiations, such as those taking place in regard to trade and environment within the World Trade Organization, in the area of agriculture within the European Union and in the context of the various regional trade agreements, as well as on topics not explicitly trade-related within the various forums of the United Nations, including the follow-up to the World Summit on Sustainable Development and the various multilateral environmental agreements, such as the Convention on Biological Diversity and the Framework Convention on Climate Change, which include trade-related provisions.

²⁵ Although not many companies in Latin America have obtained ISO 14001 certification, in the last four years the number has increased substantially. From only 237 in June 1999, the number rose to 2,145 in December 2003. Brazil ranks first place in the region, with 1,008 certified companies, followed by Mexico, with 406, and Argentina, with 397 (in June 1999, these countries had 100, 50 and 68, respectively). Colombia and Chile had 90 certified companies; Costa Rica, 40; Uruguay, 32; Peru, 31; Venezuela, 17; Trinidad and Tobago, 7; Bolivia, 5; Puerto Rico, 4; Barbados and Guyana, 3; Belize, Ecuador, Guatemala and Honduras, 2 and Dominican Republic, Jamaica, Panama and Santa Lucía, 1. With respect to the total number of ISO 14001-certified companies in the world, the region's share increased from 2% to 3.5%. More information on certification may be found in: www.ecology.or.jp/isoworld/english/analy.

²⁶ OECD Observer (2002). A review of progress undertaken at the recent Johannesburg Summit in 2002 revealed slow progress in the last decade with regard to the goals established under Agenda 21, which summarizes the aspirations and political guidelines agreed at the Earth Summit held in Rio de Janeiro in 1992.

²⁷ See the ECLAC/UNDP Project "Application of economic instruments in environmental management in Latin America and the Caribbean." On-line case studies available at www.cepal.org/dmaah.

The liberalization of markets for environmental goods and services raises a series of questions regarding the capacity of countries to engage in constructive trade processes. Countries need to establish clear and consistent rules to guide national and international investment in these sectors. This is especially important for the development of the environmental infrastructure market, which is particularly sensitive to the risks of changes in contracts or in environmental regulations.

At present there are two issues of vital importance on the agenda of international agreements. The first is the discussion on intellectual property rights, which is a potential source of conflict, given that the countries of the region are the owners of a significant proportion of biodiversity, while the developed countries have a high-level of technological development and in many cases hold industrial patents. The WTO Agreement on Trade-related Aspects of Intellectual Property Rights (TRIPS) implies a privatization of the rights to these resources, a matter which the countries of the region need to examine carefully in order to identify strategies for negotiation.²⁸ The proposal of the developing world to work towards the elimination (or reduction) of tariffs and non-tariff barriers to environmental goods and services is also a source of controversy, although the WTO member countries have agreed to carry it out, in accordance with the provisions of the Doha Declaration (2001).

Reduction of production subsidies and increased access to markets for agricultural products are probably the main areas of conflict in the international negotiations currently under way. Elimination of tariff escalation, which hinders the addition of value through agro-industrialization, is another controversial issue. A recent example of negotiation on these issues is the formation of the Group of 20, in which Argentina, Brazil, China, India, Mexico and South Africa, among other countries, came together to oppose the position taken by the United States and the European Union at the WTO meeting in Cancún.

A second line of action consists in developing an institutional platform aimed at achieving explicit integration of the objectives and instruments of environmental policy, on the one hand, and economic and sectoral policies, on the other. This is particularly important in relation to technological innovations designed to improve sustainable management of forest, energy, mining, fishing and agricultural resources.

From a regulatory standpoint, it is crucial to avoid duplication and contradictions between the regulations issued by the environmental authority and those of the numerous public agencies that play a role in the management of renewable natural resources (ministries of fishing, forestry, agriculture; the various agencies responsible for water and energy, among others) in order to avoid giving mixed signals to economic agents. It is also important to undertake a cross-section analysis of regulatory frameworks and instruments in order to lay the foundation for effective collaboration between economic agents and environmental authorities. Examples of regulatory provisions to be examined in such an analysis include health regulations, methodologies for control and certification of products (labelling, traceability, etc.) and the protocols for production of goods with specific quality features (organic, non-GMO). In addition, it is necessary to fully understand the agro-ecological realities of the region in order to identify those subregions in which it is not advisable to produce certain genetically-modified products. In that connection, zoning of farming areas based on their ecological and genetic characteristics is fundamental and is also an important biosecurity measure.²⁹

Use of renewable energy sources is another element that should figure prominently on the public agenda. Energy policies have tended to favour conventional sources. Although the renewable energies are still not competitive from an economic perspective, they have gained ground at the international level. The development of this type of energy and the promotion of eco-efficient

²⁸ The other instrument that regulates access to these resources is the Convention on Biological Diversity, which reaffirms the sovereign rights of countries.

²⁹ Such is the case with the Andean area, where potatoes originated. Parent plants of great genetic importance continue to exist in the area and should be conserved.

products and processes have been spurred by the negotiations on the United Nations Framework Convention on Climate Change, which led to an agreement on the most equitable means of distributing the costs of mitigating and reducing emissions of greenhouse gases between the developing countries and the developed countries, recognizing the latter's greater historical responsibility for current atmospheric concentrations of these gases (the principle of "common but differentiated responsibilities"). The Kyoto Protocol set a global target for reduction of aggregate emissions of carbon dioxide, which lays a foundation for the emergence of significant demand for a potential market of projects to reduce emissions of greenhouse gases (around 1 million tons of carbon a year).

The commitment achieved in Kyoto was accompanied by flexibility mechanisms designed to enable countries (mainly the developed ones) to effect the reductions and meet the commitment at a lower cost. The logic behind these mechanisms was that countries could obtain "emission reduction units" in exchange for financing projects in developing countries, where these reductions could be achieved at lower cost. Empirical studies show that for developed countries, reducing emissions by the agreed volume would cost several times more than executing projects in developing countries, and the net global impact on the composition of the atmosphere would be the same. This economic opportunity opens up the possibility of creating a North-South market of projects that will help mitigate or reduce emissions of greenhouse gases through energy efficiency and capturing and sequestering of carbon.

The region has before it the opportunity to participate in this market through projects that will help reduce carbon emissions by utilizing more efficient sources of energy—preferably alternate sources (wind, solar or hydraulic energy)—or maintaining and strengthening ecosystems with high carbon absorption capacity, with technological and financial support from the industrialized countries to achieve this transition. It is urgent that the region prepare to participate in this market and, at the same time, that it develop joint strategies that will enable it to offer competitive prices in order to take advantage of emissions trading opportunities. The clean development mechanism, also negotiated in the framework of the Kyoto Protocol, affords another opportunity for the countries of the region to market global environmental services linked to reduction and mitigation of carbon emissions.

Box 4.5

OPPORTUNITIES OFFERED BY THE NEW EUROPEAN DIRECTIVE ON EMISSIONS TRADING (EU ETS)

The objective of the proposal for European Parliament and Council Directive 2003/0173 (COD) is to establish a scheme for greenhouse gas emission allowance trading within the European Union, in accordance with the mechanisms established under the Kyoto Protocol (for example, converting credits obtained from projects carried out under the Joint Implementation and Clean Development Mechanism modalities—mechanisms established under the Protocol—into emissions allowances within the European Union). This new initiative is known as "EuroKyoto".

The rationale behind this proposal is twofold. First, since climate change is a global phenomenon, it does not matter in which part of the world emission reductions take place. Second, it costs less to reduce emissions outside the European Union than within the European Union.

Joint Implementation (JI) projects involve industrialized countries or countries with economies in transition, while projects carried out under the Clean Development Mechanism (CDM) involve developing countries. The precondition for undertaking such projects is that the countries concerned have ratified the Kyoto protocol. Ultimately, such projects result in an exchange: countries with economies in transition and developing countries receive capital and know-how, while the European Union obtain credits for reduction of greenhouse gas emissions.

Information provided by European Union countries indicates that by the start of 2005 they intend to invest €350 million in CDM projects. This figure will undoubtedly increase once the directive has been adopted.

To date, both flexible mechanisms and land use changes have played a secondary role in the approach taken by Member States. However, as it becomes increasingly difficult for the European Union countries to achieve the Kyoto Protocol targets (estimates point to a reduction of about 5% by 2010, well short of the 8% target) interest in flexible measures should increase. Currently under discussion is a proposal to increase the maximum percentage of total emissions allowances that may be derived from JI or CDM projects from 6% to 8% (emission credits take the form of Emissions Reduction Units (ERUs) for JI projects and Certified Emission Reduction Units (CERs) for CDM projects).

Countries would be well-advised to act collectively to negotiate and consolidate the creation of structures that will enable them to reap the economic benefits of the global environmental services that the region has to offer, particularly as its natural heritage gives it a clear comparative advantage (Acquatella, 2001). Effective marketing of such services would allow the region to take advantage of the economic benefits of conservation and management of its extensive forests as a CO² sinks. These resources, though they have suffered marked processes of deterioration year after year, are a positive externality of efforts to stabilize the global climate whose value will continue to increase. In addition, within this framework, important opportunities could arise for the exploration of technology transfers in the area of energy infrastructure that would be more efficient and make greater use of renewable sources.

Complementing the Kyoto Protocol, the Latin American and Caribbean Initiative for Sustainable Development, presented and approved at the First Special Meeting of the Forum of Ministers of Environment of Latin America and the Caribbean, held in Johannesburg in August 2002, stipulates that, within the energy matrix of the countries of the region, renewable energy sources should constitute at least 10% of total primary energy supplies by 2010. I should be pointed out, however, that by the end of 2002 Latin America and the Caribbean were already meeting the goals established under this initiative, and at the Regional Conference on Renewable Energies, held in Brasilia in October 2003, the countries of the region therefore agreed to reorient this goal towards total energy consumption, through voluntary efforts.³⁰ One objective of the Latin American and Caribbean Initiative is to promote increased reliance on renewable sources at the regional and global levels. In furtherance of that objective, in addition to the individual efforts of each country, positive outcomes could be achieved at the regional and subregional levels by promoting joint activities in areas such as technological exchange, cooperation in assisting isolated communities, training, consolidation of energy matrices in order to achieve minimum goals, and development of accounting methods and mechanisms for exchange of renewable energy certificates.

A third area of action relates to recouping the cost of negative externalities arising from the harmful environmental effects of the activities of various productive sectors. Tax rebates, subsidies and tax exemptions aimed at attracting investments and projects in natural resource sectors and activities of known environmental impact have had a negative effect on the environment and have been a deterrent to efforts to develop instruments that will help to quantify and internalize the social costs of environmental degradation.

Fiscal instruments for dealing with environmental externalities that occur as a result of productive processes may be guided by one of two basic premises: the polluter pays principle or the consumer pays principle. The cost is thus assumed by investors and consumers. Application of the polluter pays principle has effects on the relative profits of the various productive sectors, prompting reallocations of resources which, in the long term, will alter the productive structure.

In the international arena, environmental taxes are increasingly being included as an integral part of tax reform plans in the most developed countries. Environmental tax revenues in the OECD countries accounted for 2.5% of GDP in 1995, or almost 7% of total tax revenues in those countries.³¹ Most of these taxes are levied on a specific tax base associated with the transport and energy sectors, but they also include taxes on waste and wastewater management, which are becoming more and more common. In the regional context, some countries have begun to use a variety of economic instruments for environmental management, including instruments of a fiscal nature (see table 4.10).

³⁰ The Brasilia Platform sets the goal of 10% for consumption, whereas the Latin American Initiative focuses more on supply.

³¹ OECD, *Economic Instruments for Pollution Control and Natural Resources Management in OECD Countries: A Survey*. OECD Environment Directorate (ENV/EPOC/GEEI(98)35/REV.1/FINAL), Paris, October 1999.

Table 4.10
EXAMPLES OF THE USE OF ECONOMIC INSTRUMENTS IN THE ECONOMIES OF LATIN AMERICA AND THE CARIBBEAN

Country	Instruments whose application has been analysed in the context of the ECLAC/UNDP project to date
Argentina	<ul style="list-style-type: none"> • Economic support and fiscal advantages under Law No. 25,080 for investments in cultivated forests • Tax rebate under the national system for wind and solar energy • Subsidies for self-generating equipment. Renewable energy project. • Subsidies for environmental management systems in private industry. Pollution management project
Barbados	<ul style="list-style-type: none"> • Certification of forest products for the export market • Deposit-refund system for mass consumption bottles • Environmental tariffs on imported durable goods • Differentiated charges for solid waste collection • Tax exemption for solar water heaters • Tax incentives for construction of rainwater storage tanks and imported equipment to conserve water in hotels
Brazil	<ul style="list-style-type: none"> • Financial compensation for petroleum extraction • Payment for water use rights • Fee for discharge of industrial effluents • Tax on Circulation of Goods and Services (ICMS) and environmental criteria for their transport to municipalities • Awards and prizes for improvements in the environmental performance of industry (nongovernmental initiative)
Chile	<ul style="list-style-type: none"> • System of compensation for emissions of particulate material in the Santiago Metropolitan Region • Differentiated charges for household solid waste • Transferable individual fishing quotas. • Eco-labelling for ozone and organic farming
Colombia	<ul style="list-style-type: none"> • Compensatory fee for water pollution levied at the watershed level by Regional Autonomous Corporations (CAR)
Costa Rica	<ul style="list-style-type: none"> • Payment for environmental services • Voluntary agreement to reduce pollutants in the coffee sector • “Bandera ecológica” environmental certification programme
Guatemala	<ul style="list-style-type: none"> • Water usage permits • Certification schemes (for organic farming and ecotourism) • Incentives (subsidies) for reforestation • Financing for clean production projects at preferential rates • National fund for environmental projects • Flat-rate charges for municipal water, electricity, beautification and solid waste collection services
Jamaica	<ul style="list-style-type: none"> • User charges based on volume of water used
Mexico	<ul style="list-style-type: none"> • Zero tariffs and quick depreciation for pollution prevention and control equipment • Surcharge on gasoline/petrol • Fees for use/exploitation of public goods: flora, fauna, hunting, sports • Fees for discharge of industrial wastewater • Deposit-refund systems for used batteries, tyres and lubricants • Financing with favourable terms and subsidies for forest-planting and management projects in forest-depleted areas
Venezuela	<ul style="list-style-type: none"> • Deposit-refund systems for mass-consumption bottles • Exemption from corporate taxes for investments in pollution prevention and control • Tax for deforestation • System of charges for industrial waste based on volume generated in the Caracas metropolitan area

Source: Jean Acquatella, “Aplicación de instrumentos económicos en la gestión ambiental en América Latina y el Caribe: desafíos y factores condicionantes”, *Medio ambiente y desarrollo series*, No. 31 (LC/L.1488-P), Santiago, Chile, Economic Commission for Latin America and the Caribbean (ECLAC), January 2001. United Nations publication, Sales No. S.01.II.G.28.

The experience with environmental taxes in the OECD countries suggests that fiscal instruments are an ideal means of sending appropriate market signals. In the region, the use of these instruments has gained acceptance as a way of complementing traditional systems of direct regulation. The environmental tax does not include collection objectives, and theoretically it can be applied in a fiscally neutral manner, although in practice it is taxes on electricity and gasoline/petrol that have been most frequently applied. Environmental taxes also allow greater flexibility in regulation, inasmuch as they introduce incentives systems based on relationship of costs and economic value.³²

Fees and charges for use of the environment and natural resources, which can be interpreted as payments for an environmental service, are the mechanism used to implement the consumer pays principle. Fees or charges on effluents, for example, are payments for use of the absorption capacity of a country's bodies of water, and they can be used to finance the cost of treating industrial effluents and wastewater. These charges reflect payments for water supply service which cover not only the operating cost of the service but also the cost of the environmental conservation measures that ensure sustained provision of the services. Entry fees for national parks and fees for hunting licenses and use of conservation areas are payments for the use of a scarce resource. Other examples include charges associated with the use of natural resources that seek to maximize royalties, charges for timber exploitation and fishing licenses.³³

Another possibility that might be explored is the application of fees collected for the use of natural resources for specific purposes, such as covering the cost of a particular public service or financing some programme to compensate for or control pollution. In terms of amounts collected, in developing countries usage charges generally tend to be low, while charges aimed at self-financing environmental expenditures are more significant. In the region, the use of this type of instruments is an area that offers governments opportunities to capture a larger proportion of the economic rent associated with exploitation of resources.

It is imperative to promote the development of a new generation of more effective instruments, based on voluntary compliance, that will be more widely adopted and more accessible to producers, especially small and medium-sized enterprises, together with other economic and financial measures that will encourage them to implement more modern productive development practices.

A fourth area of action is agreement between the public and private sectors on the selection of indicators that will permit regular and comparable measurement of countries' progress with regard to environmental sustainability. This measurement should include quantification of natural capital losses due to degradation and depletion, as well as assessment of the environmental burden that various sectors of economic activity impose on nature and the environment, in order to document progress towards the objective of reducing their rate of growth and achieving a gradual disassociation between economic activity and environmental pressure. This would make it possible to reach consensus among the various social and economic stakeholders on an environmental agenda that would be compatible with productive development and thus achieve a sustained rate of economic growth without negative environmental externalities.

³² An example of a fiscal reform designed to improve environmental performance is a recent Brazilian proposal that seeks to lay the legal foundation for application of the polluter pays principle through specific taxes on activities that fail to meet environmental quality standards. This proposal does not have tax collection goals.

³³ Gandhi V., D. Gray, R. McMorran, "A Comprehensive Approach to Domestic Resource Mobilization for Sustainable Development", document presented at the Fourth Expert Group Meeting on Financial Issues of Agenda 21, Washington, D.C., IMF, 1997.



Part three: The region's external position and productive development policies



Introduction

In differing sequences and at different paces, all the countries of the region have undertaken economic reforms in recent years that have led to improvements in their economic performance. The various incentives associated with these reforms (stabilization, economic openness and privatizations, in particular) have paved the way for export growth, higher rates of capital formation and productivity gains in some segments of the countries' economies. The countries of the region still have a long way to go in order to find their way to a sustained path of rapid growth, however, to say nothing of dealing effectively with the greater structural heterogeneity that has accompanied these reforms.

The region's productive development is, therefore, more of a challenge to be taken up than a process that is already in full sway. The creation of the necessary conditions to permit an open economy to achieve a sustained increase in productivity is a complex task involving elements of macroeconomic management, the mobilization and use of resources, education and the organization of labour markets, and the development of public policies and institutions. These topics, as well as the nature of the current international situation and the features of the region's recent development process, are analysed in other sections of this document. In part three, the emphasis is on understanding how the configuration of the production structure ties in with productivity growth and, on that basis, identifying the objectives to be pursued through the application of productive development policies in open economies as part of a structuralist, evolutionary development perspective. In this perspective, income growth brings increases in productivity in its wake, while productivity gains, in their turn, drive growth, thereby giving rise to what amounts to a circular, cumulative process. By the same token, the characteristics of the production structure influence the intensity of the linkages between income growth and productivity growth.

In the presence of structural heterogeneity, productivity growth will follow differing patterns in the formal and informal sectors. Average labour productivity is a linear combination of productivity levels of the different sectors, weighted by the percentage of total employment accounted for by each. In the informal sector, labour yields diminishing returns because inputs of other factors of production (e.g., capital and land) must be regarded as constant owing to the constraints that limit production units' access to them. Consequently, a pattern in which the percentage of total employment provided by the informal sector is steadily on the rise will lead to a monotonic decline in the economy's average productivity.

The formal sector, on the other hand, enjoys increasing returns to scale for a number of reasons, including the components of technological change embedded in equipment and hardware, improved logistics and organizational practices, and the formation of human capital achieved through education, vocational instruction and learning by doing. The formal sector's productivity is also positively correlated with the growth of demand through a multiplier that embodies the characteristics of the production structure in terms of innovativeness, technological and production linkages, and strategic complementarities across different activities. The size of this multiplier is not necessarily constant over time since, as an economy moves forward along its evolutionary path and increases the density of its production, technological and entrepreneurial networks, this multiplier can be expected to increase. For both of these reasons, the formal sector's productivity will rise monotonically.

These differentiated patterns in the formal and informal sectors shed some light on the question of the Latin American and Caribbean economies' average labour productivity. First of all, while substantial productivity gains have been achieved by some world-class firms, the economy as a whole has continued to perform poorly. Secondly, the growing percentage of total employment accounted for by the informal sector is the root cause of the region's lacklustre performance in terms of average labour productivity, as evidenced by the fact that 7 out of every 10 new jobs created in the 1990s were in the informal urban sector.

In seeking to highlight the link between the external constraint and the production structure, the former is defined as a balanced trade account or a sustainable trade deficit. This assumes that exports are influenced, among other factors, by trends in domestic productivity vis-à-vis international productivity levels. Meanwhile, import levels are determined by their output elasticity and the availability of financing, among other variables.

Within this framework, as the economy's relative productivity rises, it will become more competitive, and its export capacity will therefore increase. This will permit it to finance a larger volume of imports, thus generating a virtuous circle of growth that will, in its turn, spur future productivity gains. In the opposite case —i.e., if the economy's relative competitiveness declines— then the smaller volume of exports will create a need for a higher volume of capital inflows to finance the economy's larger trade imbalance. The region's past experience demonstrates that when external financing requirements are on the rise, the situation becomes untenable and usually ends up triggering recessionary adjustments.

This analysis underscores the importance, within the context of open economies, of achieving productivity gains, since this is what ultimately drives export growth. If domestic productivity is determined by aggregate demand and the production structure's ability to absorb, generate and diffuse knowledge and innovations, then production policies should be designed to fortify these factors. Such policies can be divided into four main groups, depending on whether they focus on positioning the region within the international economy, technological development and innovation, enterprise development and job creation in the formal sector, or measures for strengthening the production structure. These four different types of policies are addressed in the four chapters comprising this portion of the document.

First of all, in order to sustain a rapid pace of export growth while at the same time augmenting its impact on the expansion of the economy as a whole, public policy must include a strategy for improving the Latin American and Caribbean countries' position in the external economy. Generally speaking, the traditional focus on promoting exports through the use of fiscal and financial incentives has gradually given way to an emphasis on various factors related to market access. Chapter 5 analyses the countries' burgeoning foreign trade activity, its concentration by destination market and by type of product, and the countries' differing export specializations. It then goes on to examine export promotion instruments and the constraints affecting them as a result of recent changes in multilateral rules and the additional restrictions imposed by multilateral and bilateral trade agreements. The discussion then turns to the impact of trade agreements as instruments for expanding and ensuring access to developed-country markets, along with the negative impacts for other countries of the trade diversion usually engendered by such agreements. Finally, a policy agenda is proposed for boosting exports and upgrading the Latin American and Caribbean countries' position in the international economy.

Secondly, in order to raise the Latin American and Caribbean's economies' relative productivity at the international level, public policies will be needed to promote the absorption, dissemination and development of innovations that provide a way of capitalizing upon the advantages associated with rapid technical change and economic liberalization. The successful experiences of other regions and countries indicate that the generation of knowledge is not a linear progression, but is instead a process of trial and error whose outcomes are uncertain. They also suggest that knowledge is specific in nature and entails a cumulative build-up of sectoral expertise and learning and, further, that an intense interaction between supply and demand is required in order to determine the most appropriate technological development path in each productive context. Chapter 6 analyses the transition that has been made from the technological policy model that was applied during the period of the State-led industrialization to the model associated with the period of economic reform and ultimately to the creation of technology funds. A typology of strategies for promoting innovation is then examined which distinguishes among the range of national situations found in the region. This section concludes with a number of guidelines for improving the coordination and complementarity of the various types of policies for promoting innovation, together with a discussion of their specific content and characteristics.

Thirdly, in order to strengthen business development and job creation in the formal sector, the differences that exist among the various entrepreneurial structures in the region's economies need to be recognized. Business leadership is often provided by the largest corporations, since their willingness to invest in large-scale projects, to open up new markets and to form production linkages with the rest of the business community have a significant impact on economic growth, on the economy's average productivity and on the technological learning path it takes. Small and medium-sized firms and new undertakings constitute another sphere of interest because of the important role they play in rejuvenating the production apparatus, enhancing innovation and creating new, higher quality jobs. The other component is enterprise development in the informal sector. The main focus of action in this respect is to help bring such firms and their workers into the formal economy and to strengthen their development capacity. Chapter 7 explores the concept of the entrepreneurial process which is implicit in measures and policies for the creation and modernization of enterprises in these three spheres of business activity. The discussion then turns to the various policy measures that can be used to foster the formation of business linkages of various sorts.

Finally, efforts to strengthen the production structure are aimed at contributing to the consolidation and development of sectors of strategic importance for the economy, whether because of their dynamism and export potential, their capacity for the adaptation, generation and diffusion of innovations, or their strong links with the rest of the production apparatus, among other reasons. In the past, sectoral (mainly industrial) policies were based on a combination of trade protection, direct

investment promotion, and fiscal and financial instruments. Gradually, however, another quite different approach has come to the fore. On the one hand, the industrial sector has ceased to be the predominant component in a strategy aimed at building up the competitiveness of an increasingly open and integrated economy. On the other, horizontal policies have come to be the main means of dealing with market failures, although use has also been made of some selective policies (in the automotive, informatics and forestry sectors, among others). In addition, the allocation of public resources for these purposes has lost priority relative to other aims, such as social expenditure, as the countries' fiscal position has tightened. Chapter 8 starts out by examining the practices associated with the various strategies being implemented in the countries of the region. It then goes on to analyse some aspects of the follow-up and evaluation of both their implementation and their impact. The chapter concludes with a series of policy guidelines for strengthening the production structure under the conditions now prevailing in the region.



Chapter 5

Policies for improving the Latin American and Caribbean region's trade linkages

Since the early 1990s, regional exports have maintained a marked upward trend, not only in comparison with trends observed in other parts of the world but also in relation to the region's own economic history. This growth, however, was far outstripped by the increase in imports, so that by the end of the last decade wide trade and current-account deficits had developed, highlighting, once again, the region's external vulnerability.

This strong export performance was not, however, reflected in the region's rates of GDP growth, partly as a result of the liberalization process itself, which, by definition, generates faster growth in exports—and imports—than in the level of economic activity.¹ This was compounded by the fact that the region's exports had little impact on the generation of domestic value added, as shown by certain indicators that will be discussed later.

In order to sustain steady export growth and, at the same time, increase its impact on economic growth, it is necessary, from the public policy perspective, to promote a strategy for improving the pattern of the region's external linkages. In this regard, the last few years have witnessed a shift in the policy approach from traditional export promotion based on tax and financial incentives to an approach geared towards facilitating external market penetration.

¹ Export elasticities averaged 3.7 and 2.9 for the periods 1980-2002 and 1990-2002, respectively. In the case of the Republic of Korea, the ratio of export growth to output growth stood at 4.5 in the major liberalization period, which extended from 1960 to 1980, then fell back to levels of close to 1.2 in the 1980s and 1990s once the process had been consolidated.

This chapter begins by analysing the region's experience in recent years in terms of the growth, concentration (by destination and by product) and structure of its exports, taking into account their degree of natural resource dependency and technology-intensiveness. It then looks at export promotion instruments and their relevance in the light of the constraints imposed by multilateral mechanisms and bilateral agreements. Next, it examines the role of trade agreements as instruments for penetrating different international markets, and assesses their impact on the signatory countries and their effects in terms of trade deviation, which many of these agreements generate. The chapter concludes with a general discussion of the points that should be included in a public policy agenda geared towards increasing the region's share of world trade and improving the pattern of its linkages with external markets.

I. Export performance and development

Exports can help to boost a country's rate of economic growth by: (i) generating the foreign exchange which will enable it to purchase the imports required for its economic expansion; (ii) creating economies of scale and specialization, based on the expansion of target markets for products made by local firms; (iii) giving rise to positive effects or linkages with other activities, which make it possible to harness underutilized material and human resources or stimulate new investments; (iv) reallocating resources to more productive activities and firms, thereby increasing the economy's average productivity; and (v) permitting greater contact with the international economy and exposing export activities and suppliers to the demands of competitiveness.

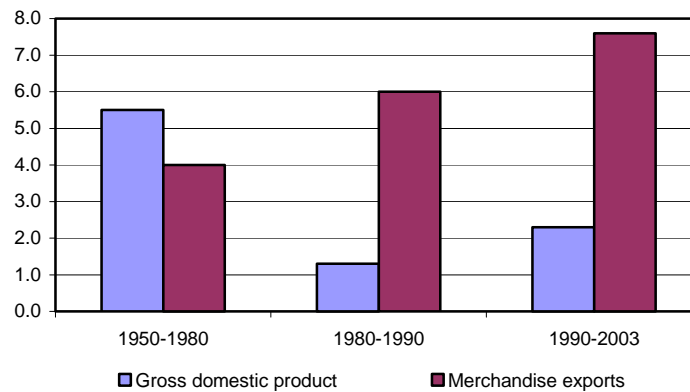
The more firms and productive sectors associated with exports, including suppliers of goods and services, the greater the impact on the production structure. Similarly, this impact increases along with the national capacity to absorb the knowledge acquired by export firms. This is why it is important to deepen the linkages between export activity and the rest of the production system and to improve mechanisms for the transfer and internal dissemination of technology, as well as human resources training.

Nonetheless, the closer the relationship between export activities and the economy as a whole, the more sensitive the economy will be to international market fluctuations and the more vulnerable it becomes to external forces, especially if the export basket is highly concentrated in terms of products and target markets. This underscores the need to diversify external sales; this issue will be examined later.

1. Export dynamics and regional openness

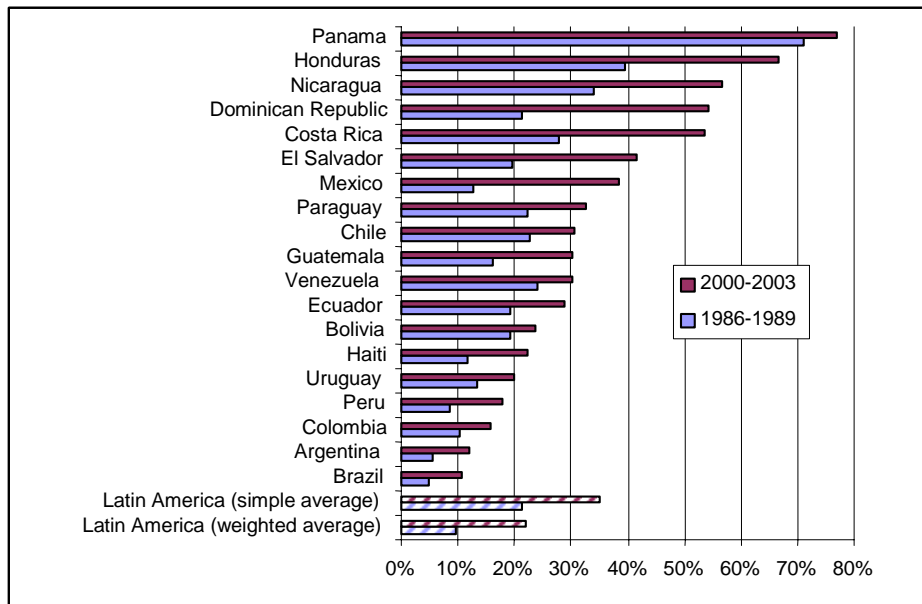
In the 1980s, the countries of Latin America and the Caribbean made strenuous efforts to generate foreign exchange to meet their external debt obligations (see ECLAC, 2002a, chapter 6). In the 1990s, in the context of the reforms being implemented in their economies, which placed considerable emphasis on openness to international goods and capital markets, exports continued to expand significantly and became the fastest-growing component of demand (see figure 5.1). Thus, exports as a share of output almost doubled, from an average of 11.7% in the period 1991-1993 to an average of 20.8% in the three-year period 2001-2003. Moreover, as can be seen in figure 5.2, the region's openness ratio —as a weighted average— rose from approximately 10% of GDP to more than 20% of GDP.

Figure 5.1
**LATIN AMERICA: GROSS DOMESTIC PRODUCT AND MERCHANDISE EXPORTS:
 1950-1980, 1980-1990 AND 1990-2003**



Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of official figures.

Figure 5.2
**LATIN AMERICA AND THE CARIBBEAN: TRADE OPENNESS RATIOS
 FOR GOODS AND SERVICES^a**
(Percentages in constant values)

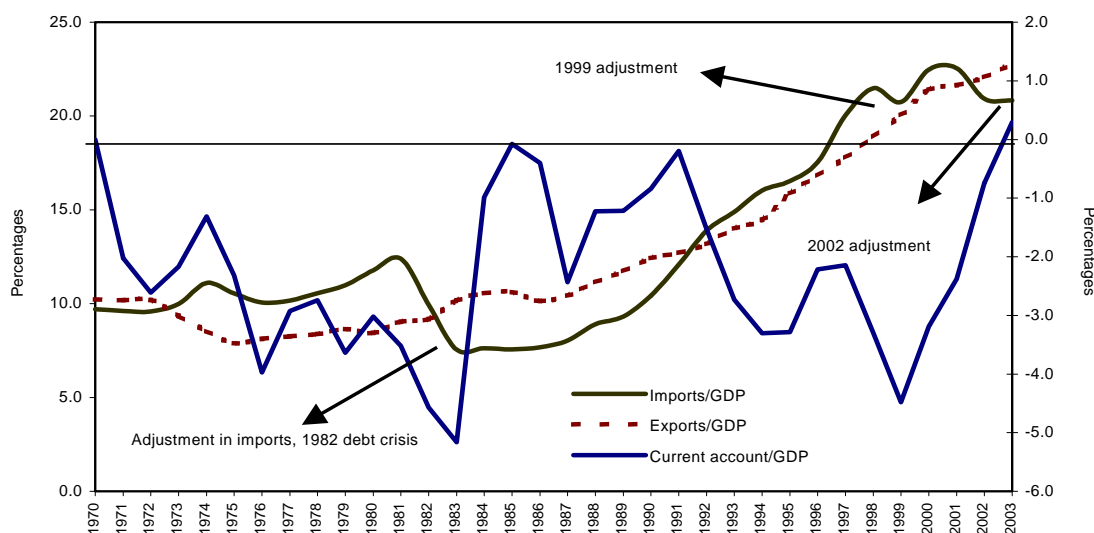


Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of official figures.

^a The openness ratios are defined as the ratio of half the sum of exports and imports of goods and services to GDP, all expressed in constant 1995 dollars.

However, as mentioned in the introduction, this export effort was not sufficient to offset the increase in imports, with the result that the countries built up widening trade deficits which, together with debt-servicing payments and profit remittances, generated large deficits in the balance-of-payments current account by the end of the 1990s. After two years of sharp import adjustments, associated with a contraction in consumption, in 2003 this trend was reversed and the region recorded its first current-account surplus in 50 years (see figure 5.3).

Figure 5.3
LATIN AMERICA AND THE CARIBBEAN: TRADE BALANCE AND CURRENT ACCOUNT
(Billions of dollars and percentage variations)



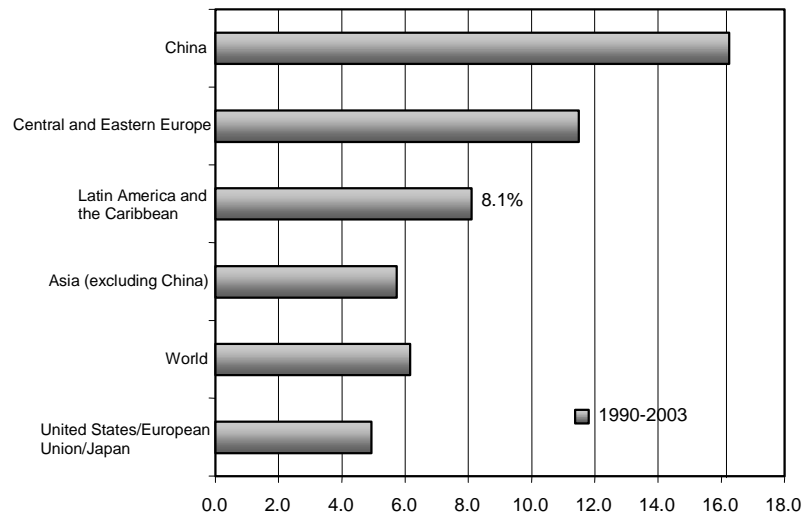
Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of official figures.

Comparatively, the region displayed one of the highest rates of growth in merchandise trade in both volume and value terms, as shown in figure 5.4. In this respect, it was exceeded only by China and the countries of Central and Eastern Europe. The expansion in exports was led by Mexico and some of the Central American and Caribbean countries, including the Dominican Republic, Costa Rica, Guatemala, Haiti and Honduras. These and the other countries in the area have continued to step up their maquila-based trade with the United States.

On the other hand, South America, with the exception of Chile, recorded much lower growth rates for its exports, as can be seen in figure 5.5, although this situation was reversed in 2001, given the slower growth of exports from Mexico and the faster growth of those from MERCOSUR.

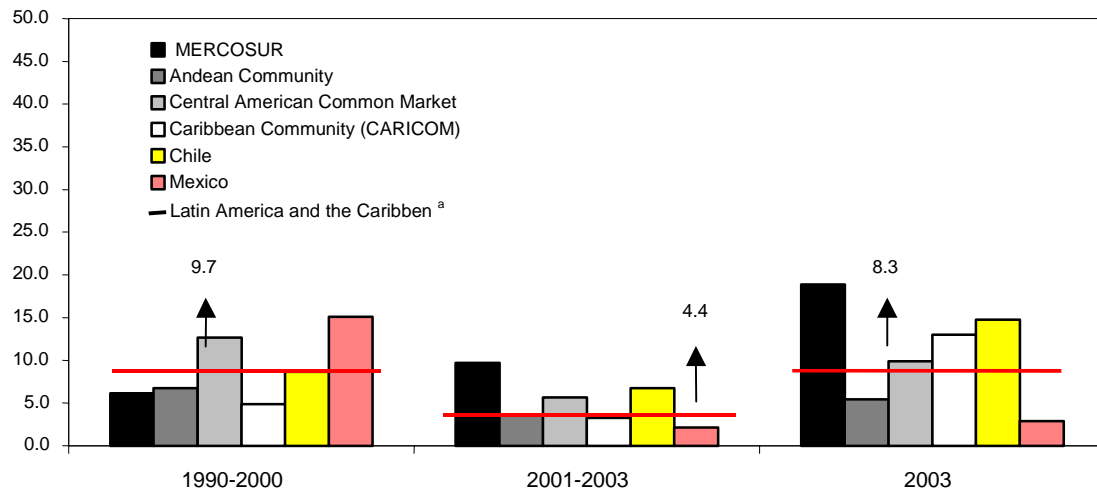
It is interesting to note that, in the early 1990s, when there was rapid growth in trade with all markets, intraregional trade and, in particular, trade generated within the framework of subregional agreements also grew steadily. Between 1991 and 1997, total exports increased by 81% as a result of a 213% expansion in intraregional exports and a 60% increase in those intended for extraregional markets.

Figure 5.4
EXPORT TRENDS: WORLD AND SELECTED REGIONS, 1990-2003
(Growth rates)



Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of official figures.

Figure 5.5
LATIN AMERICA: EXPORT GROWTH, 1990-2000, 2001-2003 AND 2003
(Percentages)



Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of official figures.

^a Includes 37 countries of the region.

Starting in 1998, the impact of the Asian crisis and the subsequent slowdown in growth in the developed economies dragged down the prices of exports and eroded the terms of trade of the non-oil-producing countries of the region.² Thus, despite the increase in real exchange rates in several of the region's economies, the fall in international demand and the need to reduce current-account deficits by cutting back on imports led to a sharp adjustment in domestic economic activity, as shown in table 5.1; this was accompanied by a severe contraction in intraregional trade, particularly within South America.

Table 5.1
LATIN AMERICA AND THE WORLD: GROWTH IN TOTAL GDP AND ITS COMPONENTS, 1990-2003
(Annual average growth rates, %)

	Latin America			World	
	Gross domestic product			Exports	GDP
	Total	Not exported	Exported		
1990-1994	3.1	2.6	7.1	5.3	1.5
1995-1997	3.3	1.9	11.2	7.5	2.8
1990-1997	3.2	2.3	8.6	6.1	2.0
1998-2003	1.3	0.3	5.5	4.3	2.5
1990-2003	2.4	1.5	7.3	5.3	2.2

Source: Calculations prepared by the Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of official figures for 19 countries, and World Trade Organization (WTO), provisional data for 2003.

As shown in figure 5.6, the increase in intraregional trade peaked in 1997, then plummeted within all the subregional integration arrangements except the Central American Common Market. The export drive in the region as a whole lost momentum, declining to 5.5% a year in the period 1998-2003, although this coincided with a recovery in extraregional exports. The region recorded growth of 1.3% during this period, which implies that the non-exportable component of GDP expanded by only 0.3%. Since both these figures were lower than population growth, their growth was negative in per capita terms.

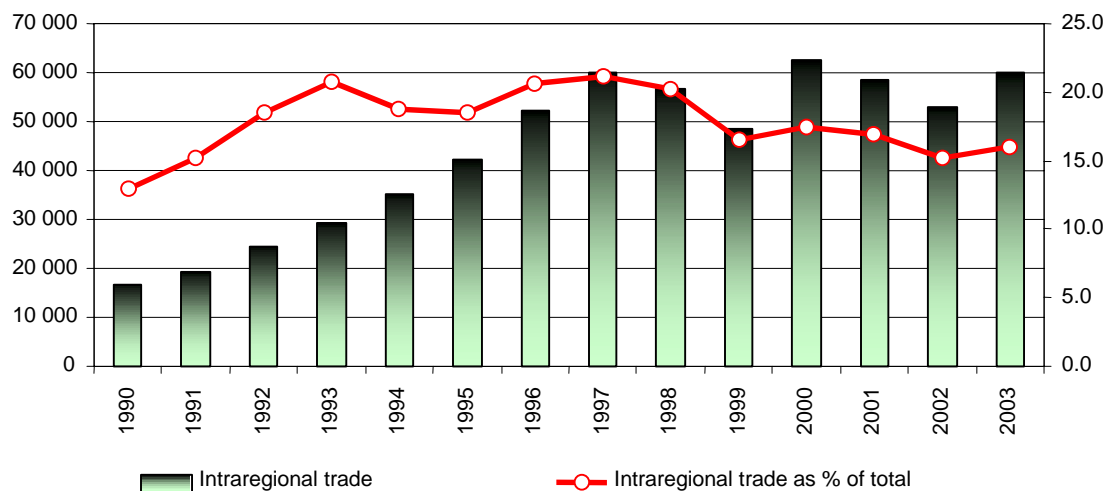
One characteristic of intraregional trade during the period under review was its procyclical behaviour, which was evident in all the subregional integration schemes, albeit with differences in the degree of expansion and contraction. In this regard, the recovery in intraregional trade in the past year may be seen as a reflection of the slight upturn in economic activity in the region. As shown in figure 5.6, although intraregional trade in 2003 was equivalent to its 1997 level in terms of value, it accounted for a considerably smaller share of the region's total exports.

2. Export patterns and trade composition

As pointed out earlier, export growth was uneven in the different countries of the region, so that the increase in the region's share of the world market can be attributed to the performance of a relatively small group of countries, made up of Chile, Mexico, the Dominican Republic and some Central American countries such as Costa Rica, El Salvador and Nicaragua. In 2003 exports from Mexico accounted for more than 40% of regional exports, or approximately 2.5% of world exports, compared to their level of the late 1980s, when these proportions were 25% and 1%, respectively.

² In 2001-2003, the terms of trade of the countries of the region were down by 10% from their 1997 level. The oil-producing countries, on the other hand, saw their relative prices improve by a similar percentage (9%).

Figure 5.6
LATIN AMERICA AND THE CARIBBEAN: TRENDS IN INTRAREGIONAL TRADE, 1990-2003
 (Millions of dollars and percentages)



Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of official figures.

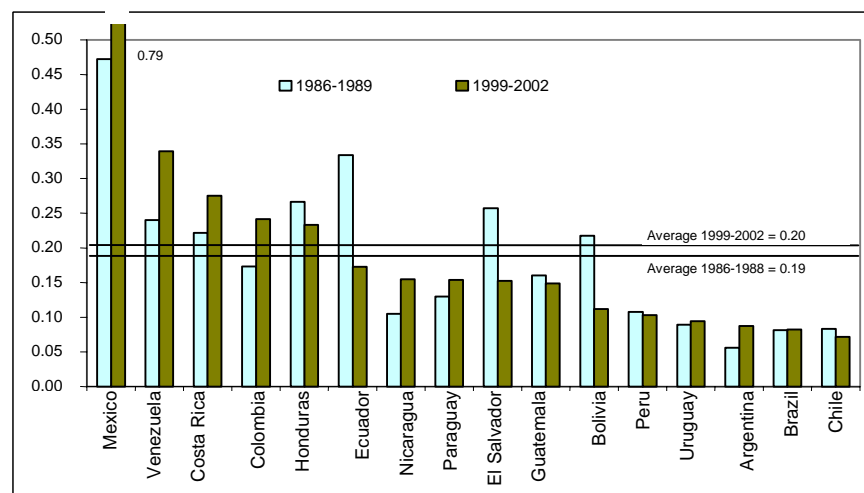
Three stylized patterns of export specialization seem to have been emerging in the region. These patterns influence both the diversification (by destination and by product) and the growth of exports.³ The first is based on integration into vertical flows of manufactures trade, with the maquila industry playing an important role. This is the case of Mexico, nearly all the Central American countries and some of the Caribbean countries. Figures 5.7 and 5.8 show that these countries' exports are fairly concentrated in terms of target markets, since they go mainly to the North American market, but are fairly diversified as regards the products that make up the export basket.

Conversely, the South American countries have, for the most part, been involved in horizontal trade networks consisting largely of resource-based products, although their target markets are more diversified, as intraregional trade among these countries has been intense (see figures 5.7 and 5.8). A distinction should be made between the Andean countries and the MERCOSUR bloc, since the former have a much more concentrated export basket in terms of both destinations and products.⁴

³ As with any stylized description, these classifications tend to simplify export structures and performances that in reality are more complex.

⁴ Venezuela is an extreme case, since the already high concentration of its target markets has become even more marked in the last decade, and the same has occurred in terms of the share of its crude oil exports.

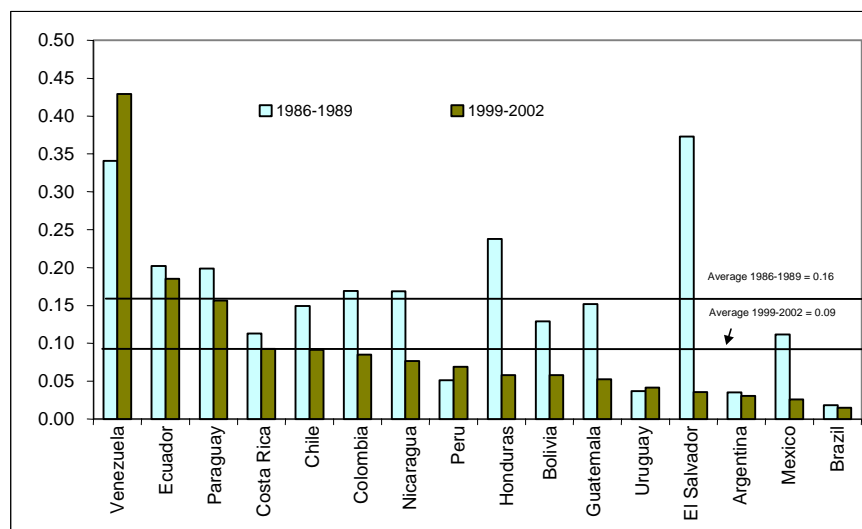
Figure 5.7
LATIN AMERICA (16 COUNTRIES): EXPORT CONCENTRATION BY DESTINATION
(Herfindahl index)^a



Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of official figures.

^a This index reflects the weight of each product and country in total trade; it ranges from concentrated (more than 0.18) to moderately concentrated (between 0.10 and 0.18) to diversified (less than 0.10).

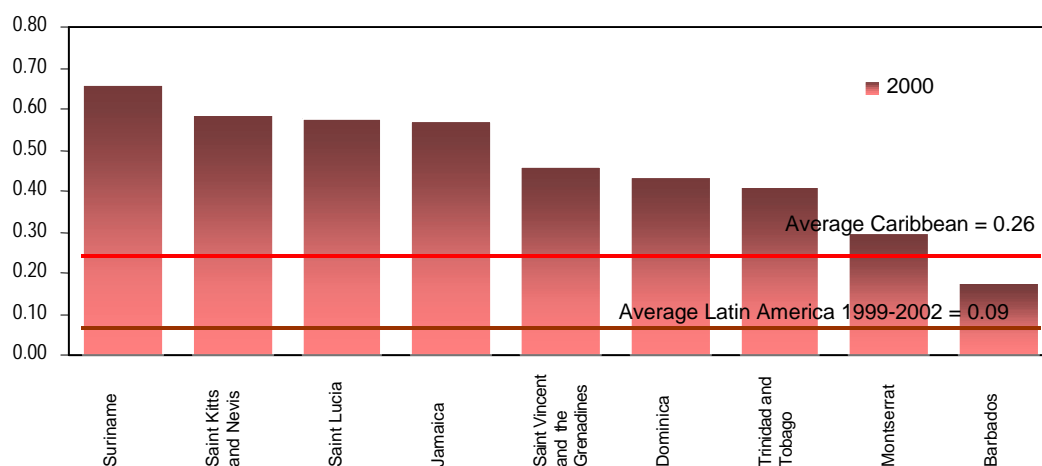
Figure 5.8
LATIN AMERICA (16 COUNTRIES): EXPORT CONCENTRATION BY PRODUCT
(Herfindahl index)



Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of official figures.

The third trade pattern, predominant in some Caribbean countries and Panama, consists of the export of services, mainly those connected with tourism, finance and transport.⁵ In Cuba, the Dominican Republic and some small island States, tourism-related services account for the bulk of service exports. In Panama, transport services linked to the canal represent more than half of such exports; this is complemented by trade connected with the Colón Free Zone, which contributed 86% of total exports in 2001. With respect to goods exports, the Caribbean countries' concentration indices (by product) are relatively high, as shown in figure 5.9.

Figure 5.9
CARIBBEAN COUNTRIES: EXPORT CONCENTRATION BY PRODUCT, 2000
(Herfindahl index)



Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of official figures.

Generally speaking, over the past 20 years Latin America has managed to significantly diversify the products that make up its export basket—with outstanding examples such as Central America and Mexico and, to a lesser extent, Bolivia—even as the concentration of its target markets has increased slightly,⁶ albeit with considerable differences between the countries.⁷

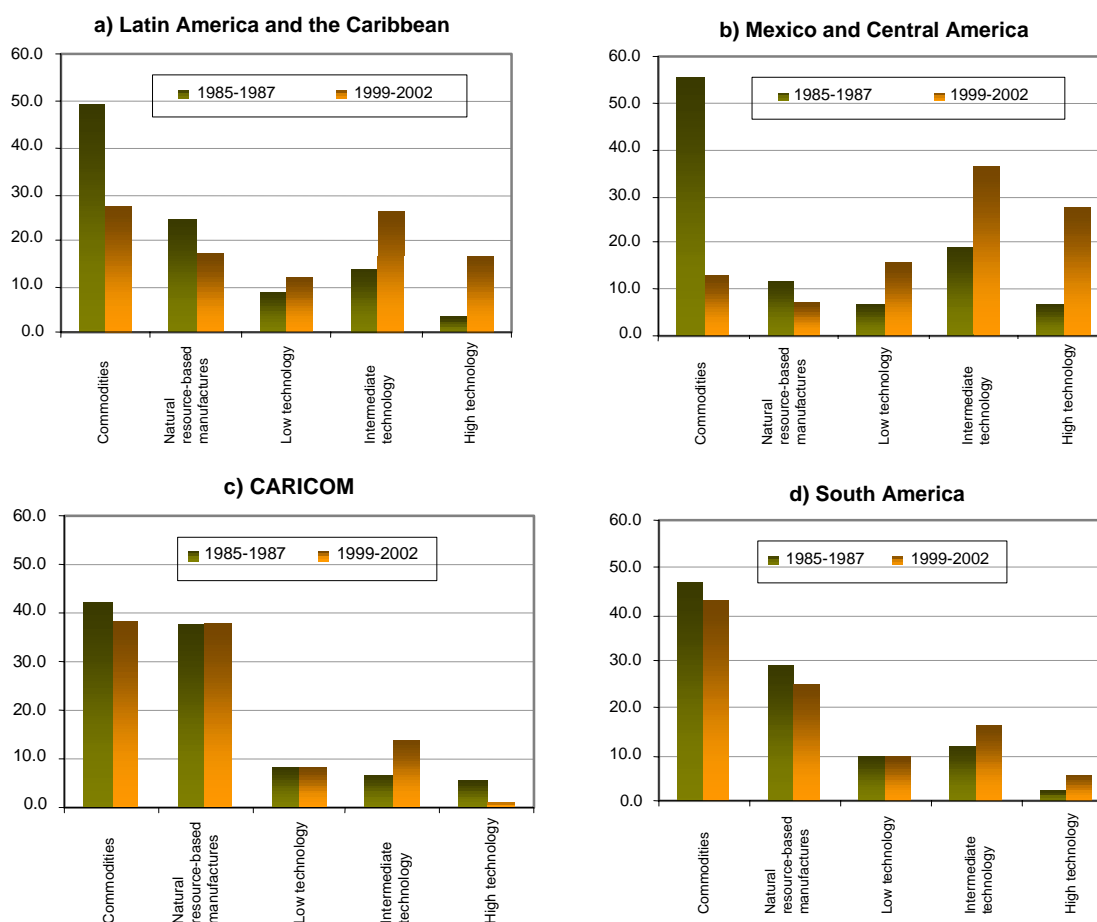
Since the 1980s far-reaching changes have occurred in the composition of the region's exports, not only in terms of value but also in relation to their technology-intensiveness. The proportion of commodity exports has declined steadily from levels of close to 50% between 1985 and 1987 to less than 30% between 1999 and 2002, while the share of manufactures exports, including maquila output, has risen from approximately 50% to more than 70% over the same period, as shown in figure 5.10(a).

⁵ For Latin America and the Caribbean as a whole, service exports accounted for 13.9% of total exports in 2002; for the countries of the Central American Common Market, however, the percentage was 24.5%, with Panama recording a percentage as high as 33.4%. In the Caribbean countries, these percentages were even higher, as illustrated by the following examples: Cuba, 66.7%; Dominican Republic, 40%; the CARICOM countries, an average of 42.4%; and the countries of the Organisation of Eastern Caribbean States (OECS), 72.2% (for further details, see ECLAC (2004b)).

⁶ For the same periods and following the same classification, the Herfindahl indices for the Republic of Korea are: (a) By product (exports to the world): 0.02 (diversified) in 1986-1989; 0.03 (diversified) in 1999-2002; (b) By destination: 0.18 (moderately concentrated) in 1986-1989; 0.08 (diversified) in 1999-2002.

⁷ The slight increase in the average level of concentration by target market is largely due to the increase in Mexican and Venezuelan exports to the United States.

Figure 5.10
**EXPORT STRUCTURE BY DEGREE OF TECHNOLOGY-INTENSIVENESS,
 1985-1987 AND 1999-2002**
(Percentages of total)



Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of official figures.

In South America, the trend towards diversification of the products that make up the export basket was particularly strong in the 1980s, but then stabilized in the early 1990s. The subregion continues to be heavily dependent on commodities (see figure 5.10(d)).⁸ Although the share of intermediate- and high-technology manufactures has increased, it still falls far short of the increases observed in Central America and Mexico. This positive trend is largely due to the expansion of trade in consumer durables and manufactures in MERCOSUR and the Andean Community.

Central America and Mexico have made much more progress in reducing their dependence on commodities. As shown in figure 5.10(b), they have completely changed their export pattern, moving from a basket in which commodities accounted for approximately 56% to one in which manufactures, including technology-intensive products, account for 87%. A similar, albeit much more limited, process has been observed in the Caribbean countries (see figure 5.10(c)). In all three cases, the changes referred to were attributable to the strong increase in the share of maquila exports out of the total (see table 5.2).

⁸ In Venezuela, Ecuador and Paraguay, the two main exports accounted for 82%, 55% and 45%, respectively, of total exports in 2001. In all three cases, they were commodities: crude oil and oil products, crude oil and bananas, and soybeans and tobacco, respectively. In Chile, copper accounted for 35%, while in Colombia, crude oil and coal accounted for more than 30%.

Table 5.2
IMPORTANCE OF THE MAQUILA INDUSTRY/EXPORT PROCESSING ZONES
(Millions of dollars and percentages)

	1980	1990	1995	2000	2001	2002
Mexico						
Total exports (A)	18 031	40 711	79 542	166 455	158 443	160 763
Maquila exports (B)	2 519	13 873	31 103	79 468	76 881	78 098
(B)/(A) (%)	14.0	34.1	39.1	47.7	48.5	48.6
Dominican Republic						
Total exports (A)	962	735	3 780	5 737	5 276	5 183
Maquila exports (B)	...	...	1 565	...	4 482	4 336
(B)/(A) (%)	...	...	41.4	...	84.9	83.6
Costa Rica						
Total exports (A)	1 001	1 354	3 482	5 813	4 923	5 259
Maquila exports (B)	...	307	910	3355	2692	2967
(B)/(A) (%)	...	22.6	26.1	57.7	54.7	56.4
El Salvador						
Total exports (A)	1 075	644	1 651	2 963	2 891	3 017
Maquila exports (B)	...	81	647	1612	1690	1758
(B)/(A) (%)	...	12.6	39.2	54.4	58.4	58.3
Guatemala						
Total exports (A)	1 520	1 211	2 158	3 082	2 860	2 629
Maquila exports (B)	...	285	699	1488	1612	1549
(B)/(A) (%)	...	23.5	32.4	48.3	56.4	58.9

Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of official figures.

The increase in maquila activity—which, as already pointed out, accounts for the fact that Mexico, Central America and the Caribbean have spearheaded the growth in regional exports—has also led to a sharp increase in these countries' share of world exports of technology-intensive products, as indicated in table 5.3.

Table 5.3
**EXPORTS FROM MEXICO, CENTRAL AMERICA AND THE CARIBBEAN:
 SHARE OF WORLD IMPORTS**
(Percentages)

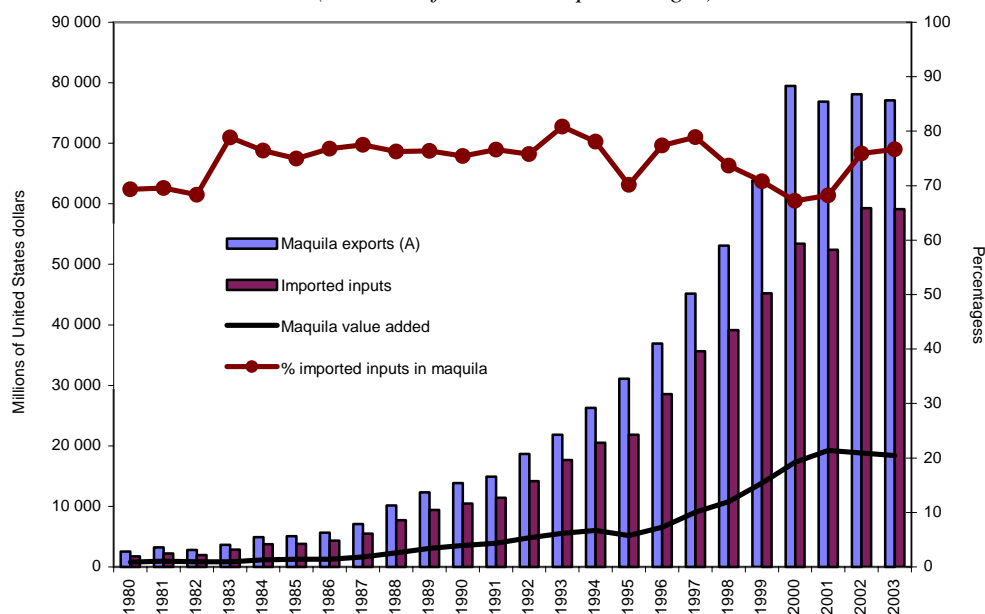
	1985	1990	1995	2000	Variation 1985-2000
Total share	2.39	1.96	2.40	3.35	40.2
1. Natural resources	5.01	3.56	3.28	3.54	-29.3
2. Natural resource-based manufactures	2.09	1.82	1.86	2.10	...
3. Non-resource-based manufactures	1.34	1.55	2.33	3.57	166.4
- Low technology	1.25	1.53	2.48	3.92	213.6
- Intermediate technology	1.27	1.64	2.51	3.68	189.8
- High technology	1.66	1.40	1.91	3.19	92.2
4. Other	2.06	2.01	2.37	3.27	58.7

Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of official figures.

The fact that these gains were based mainly on maquila activities does not necessarily mean that the industries concerned were inevitably dependent on the relative abundance of low-skilled labour and heavily reliant on imported inputs. In fact, as pointed out by Buitelaar, Padilla and Urrutia-Alvarez (1999), in the late 1990s Mexico and Costa Rica initiated a process intended to incorporate more highly skilled workers while gradually increasing the domestic value added of those countries' output. In the case of Mexico, however, this process seems to have stalled—and even to have reversed itself to some extent—, as illustrated by the trend in the import/export ratio shown in figure 5.11. Whereas value added in the maquila industry increased steadily between 1995 and 2001, as the import/export ratio was declining, value added has tended to level off since 2001, while the import/export ratio has returned to its historical average of between 70% and 80%.

Figure 5.11

THE MAQUILA SECTOR IN MEXICO: TOTAL EXPORTS AND IMPORTED INPUTS, 1980-2003
(Millions of dollars and percentages)



Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of official information of the National Institute of Statistics, Geography and Information (INEGI), Mexico City (<http://www.inegi.gob.mx/>).

In short, patterns of external linkage and export specialization in the region are determined by the static comparative advantages deriving from the abundance of natural resources or unskilled labour, or from geographical advantages linked to the region's proximity to markets with high purchasing power, such as those of North America.

Thus far these exports have not been able to produce the expected results in terms of growth and have not managed to generate an endogenous process of knowledge assimilation and dissemination that translates into a sufficiently diversified supply of exportable goods and services with rapid response capacity. Nevertheless, these exports can form a good foundation for implementing strategies directed at increasing their domestic value added; deepening and disseminating learning processes, technical progress and innovation; and, in general, developing systemic competitiveness.

Like the high-technology manufacturing sector, natural resource-based sectors have the potential to exhibit high rates of productivity growth and to afford opportunities to incorporate knowledge, transfer technology and forge linkages with other production sectors. Maquila

industries can generate employment and contribute to human resources training, while introducing modern business management practices and building local production capacities.

Nevertheless, if an integration pattern based on maquila activity, natural resources or any other activity is to yield the expected results, countries must invest in material and human resources and implement public policies to support productive development. Their international integration strategy must give priority to growth and must aim at the sustainable diversification of exports as a long-term goal; furthermore, it must integrate export activity with other economic activities and coordinate export promotion systems with industrial and technological development policies, as well as with labour policies.

II. Policies for developing linkages with the global economy

1. General context

Starting in the mid-1980s, most of the Latin American countries began to adopt trade liberalization policies⁹ which, above and beyond differences between the liberalization processes of individual countries, were characterized by a rapid and significant reduction of trade barriers, low tariffs and few or no tariff bands. Export subsidies were also eliminated, with the exception of drawbacks on import duties or indirect taxes paid by exporters on inputs incorporated into their exports.

Unlike what happened in Latin America and the Caribbean, economic liberalization in Asian countries was the result of a long, State-led process whose objective was to construct a production system oriented towards the international market. When imports were liberalized in Asia, the structural transformation of the economy was already under way, and exports of manufactured goods had been buoyant for some time. This was accompanied, in general, by a balanced macroeconomic situation, near-full employment and notably high rates of investment (30% of GDP or more). The Latin American and Caribbean countries, on the other hand, implemented far-reaching import liberalization at the same time that they launched their internationalization strategies, often in the midst of recessionary stabilization processes and low rates of capital formation (around 20% of GDP).

Furthermore, the balance-of-payments capital account was liberalized at the same time as the current account, just as flows of external capital were flooding back into the region, causing the countries' economic authorities to lose control over the exchange rate and giving rise to a considerable real currency appreciation in almost all of the region (see chapter 3).¹⁰ In some cases, this effect was heightened by the application of stabilization policies that used the exchange rate as an anti-inflationary tool, taking advantage of the relative abundance of foreign exchange in the region for much of the 1990s.

While economic reform, and particularly trade liberalization, involved the removal of incentive systems and institutions that were originally designed to protect production sectors that competed with imports, there was insufficient development of other institutional arrangements for promoting export-oriented production and no clearly defined incentive strategy for increasing systemic competitiveness through technological innovation, human resources training or the provision of infrastructure, among other elements. In extreme cases, the fiscal adjustments of the late 1990s and the belief that the market itself would provide the necessary competitiveness led to the disappearance of existing export promotion structures.

⁹ Chile was a pioneer in this process, given that it began liberalization in the mid-1970s. Far-reaching trade liberalization processes were initiated in Mexico and Bolivia in 1985, followed by Venezuela, Colombia, Peru and Argentina in the early 1990s.

¹⁰ The exchange-rate gap tends to be underestimated, given that the equilibrium level of the real exchange rate is higher after liberalization than it is before.

With few exceptions, the region's countries therefore currently lack a complete promotional infrastructure that combines fiscal and financial instruments with other ones aimed at facilitating market access and: (i) reducing the anti-export bias that persists in some countries in the region, as well as incentives for domestic-market-oriented production; (ii) offsetting the costs associated with the penetration of new export markets; and (iii) promoting greater export diversification in order to reduce the vulnerability of the region's economies to international shocks.

Moreover, the difficult task of designing policies and instruments to increase and improve the quality of the region's linkages with foreign markets is being pursued in an international context in which multilateral negotiations impose restrictions on export promotion measures. These restrictions are more stringent than those previously faced by industrialized countries and, more recently, the fast-growing East Asian economies.

Neither the Uruguay Round of multilateral trade negotiations nor the Cancún and Miami meetings that preceded the Doha Round talks helped to advance the liberalization of markets in which the region has comparative advantages or could develop them, such as markets for agricultural products. Furthermore, world trade is tending to become more segmented as a result of the increasing number of subregional and bilateral agreements that discriminate against non-member countries and impose new restrictions which, in some cases, go beyond those laid down in multilateral agreements.

2. Export promotion systems

As stated above, very few countries in the region have a balanced mix of traditional (i.e., fiscal and financial) incentives and other types of instruments aimed at diversifying the export structure in terms of both new exportable products and the opening of new target markets. An overview of the region shows that few countries provide incentives for upgrading the export supply (such as by introducing quality standards) or facilitating access to foreign markets through measures such as promotional and branding activities, investment in facilities abroad to make marketing easier or support for participation in wholesale distribution chains.

The export promotion mechanisms traditionally used in the region are financial and tax incentives (see ECLAC, 1995 and 2002e). As a means of boosting foreign sales while promoting labour absorption and the internationalization of technical progress, many Latin American and Caribbean countries have established specific promotional systems based on either the differentiation of export processing units, the exploitation of their advantages in service markets or the production of environmentally friendly goods.

(a) Fiscal incentives

Promoting exports through fiscal incentives is a long-established and widespread practice in the region, albeit with differences between countries (see tables 5.4 and 5.5). Argentina, Brazil, Chile and Colombia have offered a variety of incentives since the 1960s, whereas countries such as Nicaragua have introduced them more recently.

The most common form of incentive is access to inputs imported on preferential terms and exemption from value added tax and other indirect taxes. These measures are intended not so much to serve as export incentives per se as to offset the domestic tax burden, reflecting the international practice of applying indirect taxes in the target market. Some countries, such as those in Central America, still offer exemptions from the profit tax, which has already been eliminated in most of the region, for exports to countries outside Central America.

Table 5.4
SUMMARY OF FISCAL EXPORT INCENTIVES - SELECTED SOUTH AMERICAN COUNTRIES
(March 2004)

	Argentina	Bolivia	Brazil	Chile	Colombia	Ecuador	Peru	Uruguay	Venezuela
Rebates	Refund of indirect taxes (manufacturing, turnkey plants and exports from some regions) (1991)	Drawback certificate DS 21660 (until 1991)	No	Levels similar to tariffs	Tax rebate certificate (CERT), Law 48 of 1983. Replaced the CAT. Repealed in 2002	No	Refund of taxes paid following export (5% of the ad valorem value)	Yes	Yes
Tax credit certificates	No	Negotiable letter of credit certificate (CENOCREN) DS 21530	No	No	Tax credit certificate (CAT) Decree-Law 444 of 1967 (repealed)	Tax credit certificate (CAT). Agricultural Development Act (repealed)	Tax credit (tax refund)	Yes	Special tax rebate certificate ^a
Drawbacks	Refund of import taxes and charges (1960)	Refund of duties on imported inputs incorporated into exports (1991)	Refund of import taxes and charges (1964)	Refund of import taxes and charges (1988)	Duty drawback Vallejo Plan, created by DL 444/67 (until end of 2004)	Yes	Yes	Temporary admission mechanism with the exception of tariffs	Yes
Exemption from value added tax	Includes credit for pre-export stages	Tax refund certificate (CEDEIM) Law 1489 (16/04/1993)	Constitutional law since 1965	No	No	Yes (oil companies). Under government review	Tax credit (VAT). D.S. No. 126 (1994)	Tax refund mechanism	No
Exemption from other indirect taxes	Includes indirect exporters	No	No	No	No	No	No	Tax refund mechanism	No
Exemption from profit tax	No	No	No	No	Full exemption in industrial free trade zones	No	Full exemption in industrial free trade zones	No	Full exemption in industrial free trade zones
Export performance-based incentives	Industrial specialization regime (1993 - 1996), compensation regime for the automotive sector (1991)	No	Existed between 1972 and 1990	Simplified rebate (1985)	No	No	Simplified rebate for ex ante recognition of drawback, based on guarantee invoice.	No	No
Incentives for trading companies	No	No	Existed until 1990	No	No	No	No	No	No
Maquila/free trade/export processing zones	Yes	Yes (industrial free trade zone) DS 21660 16/04/1993. Temporary import regime for re-export (RITEX)	Yes (1967)	Yes (1974)	Yes (textile sector)	Yes Law No. 90 (3/08/1990)	Yes, Tacna free trade zone and CETICOS (industrial and commercial free zones). For firms that export 92% of their output	Yes	Yes
Deferred payment of customs duties	No	No	No	For capital goods	No	No	No	No	No

Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of official information from the countries and the following surveys: Tomás Uribe, "Promoción y fomento de las exportaciones en la Comunidad Andina de Naciones", Santiago, Chile, 2004; Alejandra Labarca, "Instrumentos de fomento exportador y su relación con la evolución de la estructura exportadora en Chile", Santiago, Chile, 2004; Roberto Villamil and Marcel Vaillant, "Promoción y fomento de las exportaciones en el Uruguay", 2004.

^a Until the mid-1990s. Special tax rebate certificate for non-traditional agricultural exports, depending on domestic value added (export bonds). D.881/75 (1992).

Table 5.5
SUMMARY OF FISCAL EXPORT INCENTIVES - MEXICO, CENTRAL AMERICA AND THE CARIBBEAN
(March 2004)

	Mexico	Guatemala	El Salvador	Honduras	Nicaragua	Costa Rica	Jamaica	Other Caribbean countries ^d
Rebates	No	Refund of customs duties ^b on imports and VAT (1989)	Refund of import taxes and other indirect taxes, ^c Refund of tax credit to exporters (Art. 77, VAT Law)	Sales tax paid on the purchase of inputs is converted into a tax credit for the firm (law on sales tax)	Tax refund of 1.5% of the value of exported goods	No	...	No
Tax credit certificates	No	No	No	No	Existed until 1997	Existed until 1999	...	No
Drawbacks	Refund of import taxes and charges (1960) ^a	For export or maquila enterprises	No	No	No	No	...	No
Exemption from value added tax	Includes pre-export stages (1985) ^a	Total added component export regime	Yes (with a zero rate)	Yes (1998). Sales tax	Yes (1991)	Yes (1972)	Yes	Yes
Exemption from other indirect taxes	Yes, for non-NAFTA members. Draft law on strategic zones submitted to Congress in December 2002	Total added component export regime	Yes	Yes (1998)	Yes (1991)	Yes (1972)	Yes	Yes
Exemption from profit tax	Yes, for non-NAFTA members. Draft law on strategic zones submitted to Congress in December 2002	For exports to countries outside Central America	For free trade zones	Yes (1998)	Yes (1992)	Existed until 1996	...	Grenada, Saint Lucia, Saint Vincent and the Grenadines, Guyana
Export performance-based incentives	Programme for export-oriented firms (ALTEX)	No	No	No	No	No	...	Guyana and OECS
Incentives for trading companies	VAT exemption (1997)	Waiver of taxes, customs duties and charges	No	No	No	No	...	No
Maquila/free trade/export processing zones	Various regions with maquila enterprises (1965)	Yes (1989)	Yes (1974). Reformed in 1998	Yes (1976)	Yes (1991)	Yes (1981)	...	No

Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of official information from the countries and the following surveys: Eduardo Alonso, "Promoción y fomento de las exportaciones en México y Centroamérica", Santiago, Chile, 2004 and Esteban Pérez, *Export policies in CARICOM & Caribbean economies*, Port of Spain, ECLAC Subregional Headquarters for the Caribbean, 2004.

^a For non-NAFTA countries.

^b Only under the duty rebate regime; otherwise, firms have a waiver or suspension of payment.

^c Refunds only amount to 6% of the f.o.b. value. ^d Includes Barbados, Grenada, Guyana, Saint Lucia and Saint Vincent and the Grenadines.

Other common mechanisms are export tax rebates (in Argentina, Chile, El Salvador and Guatemala) and drawbacks, or the suspension or refund of import duties on goods linked to an export operation (in most of the South American countries, El Salvador, Guatemala and Mexico).

However, relatively few countries (including El Salvador, Guatemala and Mexico) offer specific incentives to trading companies, although Brazil offered such incentives until 1990. Mexico and the Central American and Caribbean countries are the ones that have been most active in encouraging the creation of duty-free zones for imports, although these arrangements differ considerably in the various countries. There are, nonetheless, smaller-scale examples, often introduced as incentives for border or depressed areas, in most of the countries.

Lastly, export performance-based incentives have been gradually phased out since the second half of the 1980s as a result of fiscal constraints, agreements between countries involved in regional integration processes, the significant devaluations in the wake of the debt crisis or the rules laid down by WTO.¹¹

(b) Financial incentives

In financial terms, developing countries are hampered not only by their lower income levels, but also by the fact that their capital markets are less developed, which places them at a disadvantage in comparison to their competitors (see chapter 3). These limitations, particularly in terms of the cost of credit and the virtual absence of long-term financing, not only hinder economic activity in general, but also hold back the development of new export markets and new exportable products.¹²

The export financing mechanisms implemented in the countries of the region have therefore tended to involve the use of public resources. These mechanisms include direct financing, rediscounting of notes purchased from exporters, coverage of the spread between market interest rates and fixed rates set at a lower level and the provision of insurance and credits.¹³

As shown in tables 5.6 and 5.7, not all countries in the region have financial incentive systems for exports and, of those that do, not all have lines of credit specifically intended to serve the purpose of trade promotion, investments by exporters in fixed assets or mechanisms that facilitate access to financing for agents involved in the various stages of production.

Argentina, Brazil, Chile, Colombia, Jamaica, Mexico, Trinidad and Tobago, Uruguay and Venezuela all have pre- and post-shipment lines of credit, and most of them also offer financing for trade promotion. Brazil, Chile and Mexico also have credit lines for fixed asset financing (linked to export activities) and the development of exportable products.

Other instruments used in some South American countries, Jamaica, Mexico and Trinidad and Tobago are pre- and post-shipment credit insurance, guarantee funds for exports and coverage of bank loans to exporters. In addition, countries such as Argentina, Brazil, El Salvador and Mexico have various financing mechanisms specifically aimed at export-oriented SMEs.

The bulk of financing tends to go to final exporters, and few mechanisms exist for suppliers of inputs to the export sector. Despite the limitations outlined above, commercial banks play a key role in export financing in most countries of the region. In Central America, the use of financial instruments to support exports usually takes a back seat to fiscal incentives.

¹¹ At the Doha Ministerial Conference, it was decided that the process of phasing out incentives contingent upon export performance must be initiated by 2008 and completed by the end of 2009.

¹² There is a strong positive correlation between the availability of export financing and an increase in the share of manufactures exports out of total exports.

¹³ Credit insurance policies —particularly those for pre-shipment credits— are not entirely efficient, given that only those exporters who are in a position to provide collateral actually have access to credit. Thus, SMEs are largely excluded from these policies.

(c) Maquila or export processing regimes¹⁴

It has been fairly standard practice in the region to establish special regimes for export processing, either in the form of specific production units (maquilas) or areas in which firms enjoy special tax treatment (export processing zones, or EPZs).

EPZs are enclaves in which policies for duty-free imports and for export promotion can be applied without altering the trade regime or the structure of protection in use in the rest of the country.¹⁵ These zones are circumscribed areas that are outside the jurisdiction of the country's customs authority, and the most commonly used incentive is exemption from duty on imports of foreign merchandise. Generally speaking, EPZs produce light manufactures that involve the intensive use of labour.

In some of the region's economies, EPZs or maquilas have contributed significantly to job creation and to the development of more technology-intensive exports. Nevertheless, the net exports of EPZs are considerably lower than their gross exports, owing to the large proportion of imported inputs (Kuwayama and Durán, 2003). One of the weaknesses of EPZs, then, is that they have limited linkages with the rest of the production system, as reflected by their low impact on GDP growth.

Furthermore, the cost incurred by the government in providing the infrastructure needed for the establishment and operation of EPZs may substantially raise the cost of the jobs they create. Also, the concessions and incentives granted to firms located in EPZs have in some cases crowded out local producers whose facilities were originally located outside these special zones.

(d) Services and trade

Trade in services includes transactions in which: (i) residents of one country travel to another country to acquire services (as in the case of tourists) or to provide them (as in the case of consultants); (ii) services are incorporated into a physical medium and provided through transactions via electronic media; (iii) the exchange is between residents of the same country but the service provider is a foreign-owned enterprise; or (iv) the services are a means of support for the exchange of goods (transport or financial services).

The Latin American and Caribbean region's share of world trade in services is modest, at only 4% in 2001, and the region as a whole has accumulated a large trade deficit in this sector. While the situation varies considerably in terms of the importance of the different activities that make up the service sector in each country, tourism is the primary generator of foreign exchange and employment, especially, as noted in point II.2, for the economies of the Caribbean, Central America and Mexico. In Mexico and in other countries such as Brazil, the main service activities are those linked to commerce, transport, civil construction and, to a lesser extent, computer software.

The main fiscal incentives to promote merchandise exports can also be applied to service exports.¹⁶ Some of these incentives include: (i) the drawback mechanism applied in Argentina, Chile and the Dominican Republic; (ii) the refund of indirect taxes, as in Mexico; (iii) private export warehouses and export processing zones, such as those in Chile; (iv) deferred payment of tariffs on capital goods imports, as in Chile, Mexico and Uruguay; and (v) giving tourism services tax exemptions equivalent to those applicable to exports, as in Chile.

¹⁴ This subject is discussed in depth in ECLAC, Mexico, "La industria maquiladora", 1996, and Buitelaar, Padilla and Urrutia-Alvarez 1999.

¹⁵ The definition of EPZs as physical enclaves is not entirely accurate in all cases. A number of countries have export processing plants that enjoy differential tax and foreign-exchange treatment even though they are scattered over various parts of the country.

¹⁶ The justification for waiving indirect taxes on merchandise exports, including their transport, is that they are usually taxed in the destination market. This is not true of tourism services, given that users do not usually pay tax in their place of residence on services purchased abroad (or on goods purchased in duty-free shops). This tax exemption is thus an incentive for tourism (Prieto, 2003).

Table 5.6
SUMMARY OF FINANCIAL EXPORT INCENTIVES - SELECTED SOUTH AMERICAN COUNTRIES
(March 2004)

	Argentina	Bolivia	Brazil	Chile	Colombia	Ecuador	Peru	Uruguay	Venezuela
Pre- and post-shipment credit	Lines of credit from the Bank for Investment and External Trade (BICE) and commercial banks	No	From the National Bank for Economic and Social Development (BNDES) and the Export-Import Bank (EXIMBANK), for selected products	Financing of national inputs for exporters (Production Development Corporation (CORFO))	Line of credit from the Colombian Foreign Trade Bank (BANCOLDEX) through commercial banks	Private banks and credit from EXIMBANK through the National Finance Corporation (CFN)	Private banks	Line of credit from the Banco de la República Oriental del Uruguay (BROU) (1969)	BICE lines of credit through commercial banks
Post-shipment credit	Lines of credit from BICE and commercial banks	No	Resources from the Export Financing Programme (PROEX) for selected products	Financing for consumer durables purchasers (CORFO)	Line of credit from BANCOLDEX through commercial banks	Private banks	Private banks	Line of credit from BROU (1979)	Line of credit from the Foreign Trade Bank (BANCOEX) through commercial banks
Trade promotion	Banco de la Nación	Own resources as counterpart to ADC, IDB, World Bank and other projects	Resources from BNDES and EXIMBANK	Financing of the costs of marketing abroad (CORFO)	Transport subsidy from the Export Promotion Office (PROEXPORT) (abolished in 2002)	COERPEI ^a Guayaquil Chamber of Commerce ^a	Own resources; Peruvian Export Promotion Commission (PROMPEX)	Line of credit from BROU (1969)	BANCOEX ^a
Fixed asset financing for exporters	No	No	BNDES (2002), for locally-owned firms located abroad	Advance VAT refunds for export investment projects (2000)	Lines of credit from BANCOLDEX through commercial banks	Private banks and credit from EXIMBANK through CFN	Private banks; Guarantee Fund for Small Industry (FOGAPI)	Line of credit from BROU (1969)	Lines of credit from BANCOEX through commercial banks
Financing for development of exportable products	No	No	For SMEs (APEX) (1997)	CORFO line of credit	Lines of credit from BANCOLDEX through commercial banks	Credit from the United States Trade and Development Agency (TDA) and from the World Bank – CORPEI for pilot project studies	No	No	Lines of credit from BANCOEX through commercial banks
Pre-shipment credit insurance	Private insurers	No	Yes	Private insurers	Private insurers	No	Private insurers, insurance for exporters (SEPIMEX)/ Development Finance Corporation (COFIDE) ^c	No	Private insurers
Post-shipment credit insurance	BICE and private insurers	No	Mixed capital (public-private) insurer (1997)	Private insurers	Private insurers	No	Private insurers	No	Private insurers
Guarantee fund for exporters	No	No	Guarantee fund to promote competitiveness (1997)	Guarantee fund for exporters of non-traditional goods (1987)	No	No	No	No	No
Coverage of bank loans to exporters	BICE	No	Guarantee fund for exports (BNDES)	Coverage of bank loans (COBEX)	No	No	No	No	No
Financing for export-oriented SMEs	PYMEXPORTA (export programme for SMEs), BICE and commercial banks	No	No	No	No	No	(SEPIMEX/ COFIDE) ^a	No	No

Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of official information from the countries and the following surveys: Tomás Uribe, "Promoción y fomento de las exportaciones en la Comunidad Andina de Naciones", Santiago, Chile, 2004; Alejandra Labarca, "Instrumentos de fomento exportador y su relación con la evolución de la estructura exportadora en Chile", Santiago, Chile, 2004; Roberto Villamil and Marcel Vaillant, "Promoción y fomento de las exportaciones en el Uruguay", 2004.

^a Partial subsidy for participation in events, trade fairs and missions abroad. ^b Part-time export manager programme (GTP). ^c Credit insurance fund for exporters (SEPIMEX), allocated US\$ 50 million by the Ministry of Economic Affairs and Finance, covers 50% of the value of pre-shipment credit lines granted by private banks. Fund administered by the Peruvian Development Finance Corporation (COFIDE).

Table 5.7
SUMMARY OF FINANCIAL EXPORT INCENTIVES - MEXICO, CENTRAL AMERICA AND THE CARIBBEAN
(March 2004)

	Mexico	Guatemala	El Salvador	Honduras	Nicaragua	Costa Rica	Jamaica	Other Caribbean countries ^b
Pre-shipment credit	National Bank for Foreign Trade (BANCOMEXT) for manufactured products (1988)	Private commercial banks ^a	Private commercial banks ^a	No	Private commercial banks ^a	Private commercial banks ^a	National Export-Import Bank	Trinidad & Tobago EXIMBANK ^c
Post-shipment credit	BANCOMEXT resources (1985)	Private commercial banks ^a	Private commercial banks ^a	No	Private commercial banks ^a	Private commercial banks ^a	National Export-Import Bank	Trinidad & Tobago EXIMBANK ^c
Trade promotion	BANCOMEXT resources (1985)	No	No	No	No	No	Jamaica Promotions Corporation (JAMPRO)	Trinidad & Tobago (TIDGO), Barbados Investment and Development Corporation (BIDC)
Fixed asset financing for exporters	BANCOMEXT resources (1985)	Private commercial banks ^a	Private commercial banks ^a	No	Private commercial banks ^a	Private commercial banks ^a	...	...
Financing for development of exportable products	BANCOMEXT resources (1985)	Private commercial banks ^a	Private commercial banks ^a	Private commercial banks ^a and State support	Private commercial banks ^a	Private commercial banks ^a	...	...
Pre-shipment credit insurance	BANCOMEXT	Private insurers	Private insurers	Private insurers	Private insurers	Private insurers	National Export-Import Bank	Trinidad & Tobago EXIMBANK
Post-shipment credit insurance	BANCOMEXT	Private insurers	Private insurers	Private insurers	Private insurers	Private insurers	National Export-Import Bank	Trinidad & Tobago EXIMBANK
Guarantee fund for exporters	BANCOMEXT	No	No	No	No	No	National Export-Import Bank	Trinidad & Tobago EXIMBANK
Coverage of bank loans to exporters	BANCOMEXT	No	No	No	No	No	No	No
Financing for export-oriented SMEs	Mexican export programme (BANCOMEXT)	Private commercial banks ^a	Export development fund Technical assistance fund for exporters	Second-tier banking system: Central American Bank for Economic Integration (CABEI), Banco Grupo el Ahorro Hondureño (BGA), FICOHSA, Covelov Foundation, Honduran Private Enterprise Council (COHEP)	Private commercial banks ^a	Private commercial banks ^a	No	No

Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of official information from the countries and the following surveys: Eduardo Alonso, "Promoción y fomento de las exportaciones en México y Centroamérica", Santiago, Chile, 2004 and Esteban Pérez, *Export policies in CARICOM & Caribbean economies*, Port of Spain, ECLAC Subregional Headquarters for the Caribbean, 2004.

^a In all the Central American countries, private commercial banks play a major role in foreign trade activities, both through their own resources and through the management of lines of credit granted by international institutions such as the Central American Bank for Economic Integration or the Latin American Export Bank (BLADEX), which also extend loans to private banks in other countries in the region. Nonetheless, in some countries, such as Honduras, the private banking system is not used to full advantage.

^b Barbados and Trinidad and Tobago.

^c Also financed by the Regional Caribbean Exports agency.

The financing mechanisms that can be applied to services include: (i) financing for the acquisition of national services in foreign markets (as in Brazil and Chile); (ii) financing of investment abroad (as in Central America); (iii) export insurance; and (iv) financing for the development and dissemination of new products (as in Argentina, Brazil and Mexico).

Other instruments for supporting trade in services are international agreements on: (i) double taxation; (ii) double social security contributions; (iii) investment protection and promotion; and (iv) support for international mobility for service providers, among others.

(e) Non-traditional goods and services

One area with enormous and relatively untapped potential is that of non-traditional goods and services, particularly the “ethnic” and “nostalgia” markets, environmental goods and services and certain agricultural products (see box 5.1 and chapter IV). They can be produced in SMEs, which are a significant source of job creation, and they are usually met by buoyant demand, the potential of which is insufficiently exploited.

Limitations on trade in traditional agricultural products, which are often related to protectionist practices in developed-country markets or to changes in consumption habits, significantly darken the prospects for the future development of the agricultural sector. Although the development of a strategy for improving the quality of these products and adapting them to the increasingly stringent demands of consumers could help to remedy or eliminate those restrictions, this would require concerted and persistent State efforts to apply suitable public policies and strengthen the institutions responsible for their implementation.

Latin America's agricultural sector has lagged behind the changes that have taken place in international markets in terms of food quality and safety, and needs to make a special effort to continue competing in markets where prices and standards are high. This will require: (a) enhancing health regulations and control and certification methodologies; (b) developing rules, regulations and control and certification methods for agri-food products with specific qualities (such as labelling and traceability), while refining production protocols for products with special qualities, such as organic or non-genetically-modified products; and (c) developing the physical and commercial infrastructure required to market products that are differentiated according to special qualities that require the preservation of identity for segregated markets. Adapting regulations, procedures and material infrastructure may involve significant increases in marketing and investment costs, in terms of both material infrastructure and institutional development.

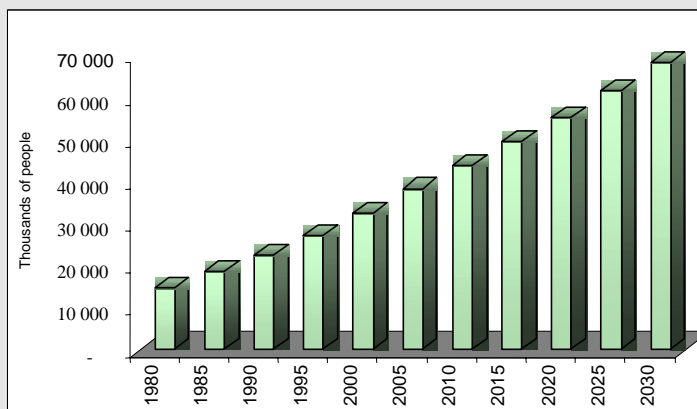
Lastly, the wealth of biodiversity and environmental services in Latin America and the Caribbean opens up new possibilities that should be carefully explored. Experience shows that, in a context of free trade in which the region's countries have biodiversity and the developed countries have a high level of technological development and innovation, and are often the owners of industrial patents, conflicts have arisen in relation to intellectual property rights.

Trade in biodiversity products is regulated at the international level by the WTO Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPs), which implies that rights to these resources are to be privatized, whereas the Convention on Biological Diversity regulates access to them and reaffirms countries' sovereignty over such resources. It might be beneficial for the countries of the region to open up new negotiations with developed countries to encourage local technological development as a way of ensuring that the exploitation of these resources does not go against the interests of the region's countries.

Box 5.1
**“ETHNIC” AND “NOSTALGIA” MARKETS: AN OPPORTUNITY FOR
 SMALL AND MEDIUM-SIZED ENTERPRISES**

Trade liberalization and the deregulation of financial flows were accompanied by an increase in international migration and, in the case of Latin America, a significant rise in migration to the United States. Almost 39 million people of Hispanic origin have emigrated to the United States, where they make up a large percentage of the population (13% in 2002) and are the fastest-growing ethnic group in the country. This, combined with the fact that these emigrants earn about five times the income they could have earned in their home countries, represents a potential source of demand for products made in those countries.^a This market niche has considerable potential for small- and medium-sized enterprises (SMEs) in El Salvador, Mexico and other countries in Latin America.

HISPANIC POPULATION OF THE UNITED STATES, 1980-2000, AND PROJECTIONS FOR 2005-2030



Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of Bureau of the Census, Department of Commerce, Washington, D.C., 2002.

This population group could generate strong demand for what are referred to as “nostalgia” or “ethnic” products (NEPs). Nostalgia products are goods and services that are part of the culture, tradition or consumption habits of specific populations or nations. Emigrant groups generally miss such products, which are hard to find in their new surroundings. Ethnic products are those that are associated with a particular country but are consumed abroad by both nationals and other segments of the population. Accordingly, ethnic products have successfully penetrated bigger markets. Both types of products span various industries, particularly those relating to food and beverages, furniture and handicrafts, clothing, music and even detergent and soap.

NEPs are not subject to uniform international quality standards, nor do they require costly technological innovation in order to position themselves in such markets. Furthermore, a virtue shared by some of these products is precisely the fact that they are handcrafted, meaning that if they are modified to meet international standards (primarily of a sanitary and phytosanitary nature), such products could gain access to a substantial market in the United States.

Although exports of ethnic and nostalgia products do not account for a significant proportion of United States imports, they amounted to US\$ 22.4 billion in 2001. A total of 190 subheadings of the Harmonized System have been identified under which nostalgia and ethnic products can be found. These products amounted to US\$ 16,245,000,000 in 2001 for Mexico and El Salvador. As there is no separate classification consisting specifically of nostalgia and ethnic products, this figure should be regarded as an estimate of such exports.

It is particularly important for SMEs that attempt to take advantage of such markets to have suitable distribution channels and to meet labelling, quality and health standards, among other requirements. It is equally or even more important to strengthen the connection between national and emigrant groups. In this way, the presence of trust between the parties, transparency in the management of financing, the full use of available marketing and computer technologies and training in various areas can spell the difference between success or failure for such companies.

Source: Miriam Cruz, Carlos López Cerdán and Claudia Schatan, *Pequeñas empresas, productos étnicos y de nostalgia: oportunidades en el mercado internacional; los casos de México y El Salvador (LC/MEX/L.589)*, Mexico City, ECLAC Subregional Headquarters in Mexico, 2003.

^a United States Census (2002); México (2002), II Informe de Gobierno y Banco Central de Reserva de El Salvador (2003).

3. Market access and penetration: a new institutional framework

Institutional structures for implementing policies to support linkage with the global economy vary from one country to another in terms of their format and their status in the hierarchy, although most of them tend to focus almost exclusively on trade information, the organization of participation in trade fairs and missions and basic export training courses. There is, however, growing recognition of the need to broaden the approach of international market access strategies, although much remains to be done in this respect.

The challenge facing public policies for increasing and improving the region's linkages with the global economy is to achieve greater diversification of both the export basket and target markets. This means that institutional frameworks must be redesigned to shift the emphasis from traditional export development and promotion policies to a comprehensive strategy aimed at boosting and facilitating access to foreign markets, covering the whole range of activities from the production of the goods to be exported (by encouraging the introduction of quality standards, for instance) to the marketing of the product in the target market (through investment in product distribution logistics).

Similarly, a strategy for diversifying the export basket should aim to at least partially cover the initial costs of opening a new market (either a new target market or a market for a new product) and to compensate pioneering export firms for the externalities associated with their activities, which pave the way for ventures by other producers.¹⁷

Furthermore, the proliferation of bilateral trade agreements and the need to participate in successive WTO market access negotiations make commercial diplomacy an essential element of the institutional support structure for exports. Facilitating market access, identifying new opportunities and combating the various practices that restrict free trade requires the preparation of high-level negotiating teams and the development of appropriate mechanisms for communication between these teams and the private sector and for keeping prospective exporters informed of the opportunities afforded by different agreements or preferential arrangements. The countries should also have expert groups that can assist them in making efficient use of the dispute settlement mechanisms established under trade agreements and in the context of WTO.

The fact that the vast majority of market access and export promotion activities are carried out by State institutions has the advantage of: (i) establishing government coordination of export financing and facilitation; (ii) forging alliances between promotional entities and export firms; and (iii) coordinating external trade policy with export promotion policy, including market access negotiations. However, making full use of these advantages requires that export promotion activities be centralized in a single body (or that the different entities carrying them out be effectively linked, when centralization is not possible) and that a channel for the free flow of coordination and cooperation be set up between the public and private spheres, possibly even involving the creation of mixed public-private export promotion entities.

In many countries, the network of diplomatic delegations and foreign branch offices of export promotion institutions plays a decisive role in facilitating access to the information needed for export operations and in furnishing background information to prospective buyers on the country's export supply. This network can also contribute by encouraging different types of partnerships between exporters that produce similar products or target the same markets, with a view to taking advantage of economies of scale and the externalities arising out of their combined presence in international markets. Making more active use of these institutions and their close ties of cooperation with trade associations of exporters or producers and with private businesses that offer complementary information services for export firms, as well as quality and environmental certification, is a key means of boosting export growth.

¹⁷ This subject is discussed in Ramos (2000).

Lastly, there are many actions that can be undertaken at the regional level to facilitate trade. Some of the priorities in this area are: (a) the exchange of experiences through meetings and contacts between government officials responsible for trade promotion policies; (b) cooperation in terms of commercial intelligence and development of the region's image to avoid duplication of effort in areas such as market studies; and (c) the adoption of government measures for the regional promotion and expansion of agreements on the mutual recognition of licences, technical accreditation and standards, double taxation and double social security contributions, investment protection and promotion and facilitation of the temporary movement of business people (through the use of regional business visas).

4. Market access and market penetration: multilateral, subregional and bilateral agreements

The Latin American and Caribbean countries have reached a consensus on the need to integrate themselves into the world economy, as a precondition for achieving higher and more sustainable rates of economic growth. Spurred by this conviction, the region's countries have undertaken rapid and profound trade liberalization processes. After several rounds of GATT and WTO negotiations, however, the developing countries have a growing sense of scepticism and discontent with regard to their real chances of obtaining easier access for their products to developed-country markets.

On the other side of the negotiating table, the developing countries have noted that, for developed countries, the logic of policy decisions on trade matters has much more to do with private or sectoral interests than with technical and economic considerations. As a result, debates on the design and application of international trade rules have been shaped by issues of power concerning (i) who makes the rules and (ii) how those rules affect the economies of different countries.

It is not surprising, then, that the Uruguay Round has not managed to bring down the high levels of protection found in the OECD countries, especially in respect of agricultural products, nor has it induced those countries to honour their promise to afford easier access to their markets. It is to be hoped that the Doha Round will help correct many of these deficiencies, although thus far, in the wide-ranging debate surrounding the various issues on which the countries are deeply divided, the different positions have been moving farther apart. Nowhere is this more evident than in the negotiations on agricultural issues.¹⁸

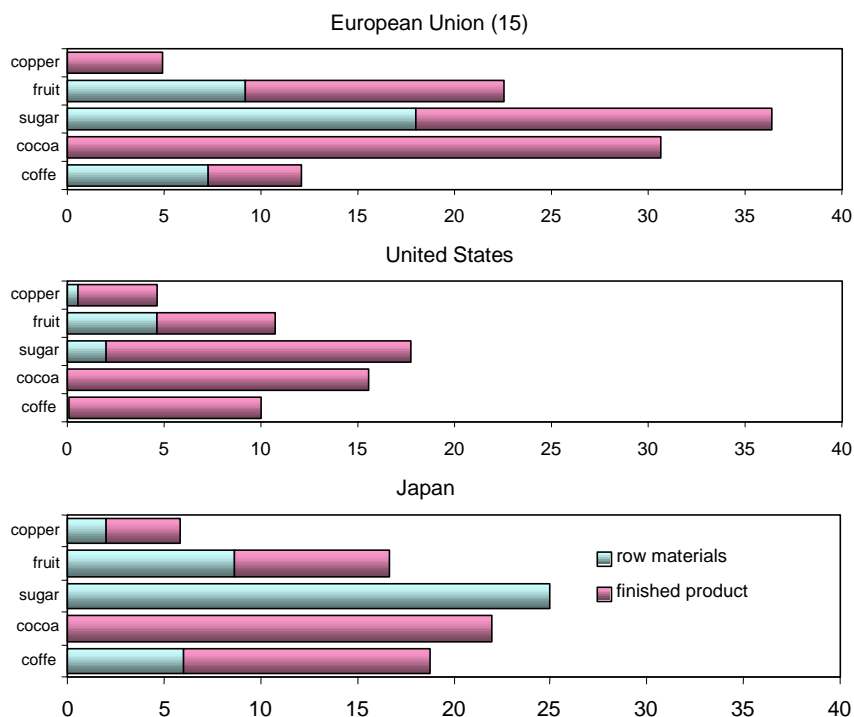
Agricultural policy negotiations have three dimensions: (i) market access criteria; (ii) export competition (criteria for the granting of export subsidies, export credits and other benefits); and (iii) domestic assistance measures. It is well known that the industrialized countries are very active providers of incentives for domestic production and of instruments for maintaining high levels of protection for their agricultural markets. Particularly problematic for Latin America and the Caribbean is the existence of tariff escalation, which, as shown in figure 5.12, discriminates against the incorporation of value added through the manufacture of agricultural raw materials.

In view of the lacklustre results achieved in the multilateral sphere, regional and bilateral agreements are seen as an alternative means of obtaining market access. Accordingly, the number of agreements registered with WTO has risen steadily and has resulted in the imposition of conditionalities on non-member countries and their negotiating teams, which have faced mounting

¹⁸ The proposals put forward by the Cairns Group and the United States are more liberal with respect to agricultural trade than the proposals of the European Union. The conciliatory Harbison proposal was rejected by the European Union, and at the meetings prior to the Cancún Conference the Republic of Korea, Japan and the European Union held out against significant liberalization of this trade. In the end, the document prepared for the meeting was closer to the European Union position, and the inter-ministerial counter-proposal drawn up by the developing countries was not supported by the Group of 20 (including China and India), whose export interests differ from those of Latin America.

technical and administrative difficulties in managing and processing a myriad of different agreements.¹⁹

Figure 5.12
TARIFF ESCALATION IN SELECTED INDUSTRIALIZED COUNTRIES
(Percentages)



Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of figures from World Bank.

The Latin American and Caribbean region has been no exception in this respect.²⁰ As can be seen in table 5.8, the proportion of Latin American and Caribbean trade carried out under bilateral, regional or extraregional agreements is growing. To cite a few recent examples, Chile signed a free trade agreement with the United States, which came into force on 1 January 2004, while the Central American countries held several rounds of trade negotiations with the United States that culminated in the conclusion of talks on a free trade agreement between that country and El Salvador, Guatemala, Honduras and Nicaragua. Afterward the Dominican Republic and Costa Rica also reached agreement with the United States; Costa Rica did so after obtaining special conditions for sensitive sectors and a longer deadline for opening up its telecommunications and insurance sectors (see box 5.2). Moreover, negotiations are to be opened between the United States and several Andean Community countries, although it has not yet been decided whether the Andean countries will participate as a bloc or on a bilateral basis.

¹⁹ Bilateral or plurilateral agreements impose differential market access conditions on products originating in the countries parties to these agreements in comparison to products from third countries, thereby diverting trade to the detriment of non-member countries. They also create new protectionist effects by applying rules of origin that give rise to problems of interpretation and implementation.

²⁰ The trend also includes the Asian countries that once supported multilateral agreements. Examples of this phenomenon include the signing of the trade agreement between the United States and Singapore and the negotiations between the Association of South-East Asian Nations (ASEAN) countries and China and between China and other countries.

Meanwhile, MERCOSUR expects to sign an agreement with the European Union in 2004. With respect to intraregional negotiations, both MERCOSUR and the Andean Community decided to strengthen their integration processes, as expressed in the Brazilian proposal “Target 2006” and in the Quirama Declaration, respectively.

Table 5.8
LATIN AMERICA (SELECTED COUNTRIES): PREFERENTIAL TRADE LIBERALIZATION AGREEMENTS, 1991, 1995 AND 2003
(Percentage of each country's total imports)

Region/Country	% intraregional preferential agreements			% extraregional preferential agreements			% total preferential agreements		
	1991 ^a	1995	2003 ^b	1991 ^a	1995	2003 ^b	1991 ^a	1995	2003 ^b
Latin America (19 countries)	7.4	10.4	11.8	0.0	25.9	42.3	7.4	36.3	54.1
Latin America (excluding Chile and Mexico)	11.4	16.0	20.8	0.0	0.0	0.0	11.4	16.0	20.8
Argentina	20.8	22.8	32.1	0.0	0.0	0.0	20.8	22.8	32.1
Bolivia	3.7	17.0	54.8	0.0	0.0	0.0	3.7	17.0	54.8
Brazil	10.7	13.8	15.4	0.0	0.0	0.0	10.7	13.8	15.4
Chile	3.9	7.7	37.4	0.0	0.0	40.2	3.9	7.7	77.6
Colombia	9.4	18.2	19.3	0.0	0.0	0.0	9.4	18.2	19.3
Costa Rica	6.7	12.9	13.6	0.0	0.0	0.0	6.7	12.9	13.6
Cuba	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.2
Ecuador	7.0	19.5	27.5	0.0	0.0	0.0	7.0	19.5	27.5
El Salvador	17.0	17.9	33.0	0.0	0.0	0.0	17.0	17.9	33.0
Guatemala	8.4	8.9	25.7	0.0	0.0	0.0	8.4	8.9	25.7
Honduras	8.9	17.7	28.0	0.0	0.0	0.0	8.9	17.7	28.0
Mexico	0.3	1.2	1.4	0.0	76.4	80.6	0.3	77.6	82.0
Nicaragua	17.3	23.8	38.2	0.0	0.0	0.0	17.3	23.8	38.2
Panama	0.0	0.0	7.1	0.0	0.0	1.3	0.0	0.0	8.4
Paraguay	30.0	41.8	55.3	0.0	0.0	0.0	30.0	41.8	55.3
Peru	14.8	14.9	34.9	0.0	0.0	0.0	14.8	14.9	34.9
Dominican Republic	0.0	0.0	2.4	0.0	0.0	0.0	0.0	0.0	2.4
Uruguay	41.0	47.5	48.2	0.0	0.0	0.0	41.0	47.5	48.2
Venezuela	3.6	12.7	16.9	0.0	0.0	0.0	3.6	12.7	16.9

Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of official figures.

^a The 1991 estimate considered the average import structure for 1990-1991 and the status of preferential agreements as at 31 December 1991.

^b The 2003 estimate considered the average import structure for 2000-2002 and the status of preferential agreements as at 31 December 2003, excluding agreements which had been fully negotiated but not yet implemented.

Often, the bilateral agreements to which the countries have turned out of frustration with the slow progress at the multilateral level restrict those countries' freedom to implement productive development policies even more severely than WTO rules. This underscores the importance of regional agreements, which, in turn, will make it necessary to introduce new issues on the integration agenda, as proposed in chapter 12.

As for the Free Trade Area of the Americas (FTAA), the eighth Ministerial Meeting, held in Miami in November 2003, ended with a decision to discard the “single undertaking” format, in which the issues were to have been negotiated as a whole, in favour of a mixed arrangement in which the countries would undertake a common set of obligations with regard to certain points, with the option of agreeing to additional commitments resulting from bilateral or plurilateral negotiations. This solution, which fragments the negotiating agenda, could be detrimental to countries with less bargaining power and to the interests of the region as a whole (see chapter 11).

Box 5.2

**UNITED STATES-CENTRAL AMERICAN FREE TRADE AGREEMENT (CAFTA)
NEGOTIATION OUTCOMES AND PRINCIPAL CHARACTERISTICS**

In December 2003 the ninth round of negotiations of the United States-Central American Free Trade Agreement (CAFTA) was held in Washington, D.C. El Salvador, Guatemala, Honduras and Nicaragua signed an agreement with the United States in this final phase, while Costa Rica concluded its negotiations with that country in January 2004.

The conclusion of the negotiation process has generated great expectations in the Central American countries with respect to both the consolidation and broadening of the trade concessions granted by the United States through the Caribbean Basin Initiative (CBI) and the establishment of clear rules and disciplines. It is anticipated that these provisions will bolster trade in new goods and services and direct investment in the subregion.

The free trade agreement with Central America is the third treaty which the United States has negotiated with Latin American partners, after the ones with Mexico (1993) and Chile (2003). The structure of CAFTA is similar to that of the agreement with Chile, and similar disciplines and rules were adopted in respect of areas such as labour, intellectual property, the environment, government procurement and services. With respect to market access, six staging categories subject to linear tariff removal and two to non-linear tariff removal were established; grace periods of 6 to 10 years were set for these categories, with a maximum elimination period of 20 years. An additional category was created for goods not eligible for tariff elimination, such as potatoes and onions in the case of Costa Rica, white maize for the rest of Central America and sugar in the United States.

Three types of safeguards (bilateral, multilateral and special agricultural) were created to protect domestic industries from increased imports during the transition period. A country can impose a special agricultural safeguard (SAS) if a set import volume is exceeded. This provision is particularly important for Central America, as it protects sensitive products such as beef, pork, poultry, rice, dairy products and oils, among others.

Sugar was one of the products for which Central America achieved the greatest benefits, as the region negotiated a higher quota for the first year that doubles its current volume and an annual growth rate of 2%. A reciprocal increase in the export quota for dairy products to and from Central America was also agreed upon, together with annual growth of 5%. As for beef, Central American countries granted the United States duty-free access to the Central American market only for fine cuts, while quotas for duty-free access were established for all other beef and pork products, as well as a 15-year non-linear tariff elimination scheme for such products (only El Salvador and Guatemala granted quotas for beef). Regarding poultry, the phased lifting of tariffs will conclude in 17 years in Costa Rica and 18 years in all the other Central American countries. Duty-free quotas were established for another sensitive subregional product, rice, for which tariffs will be progressively eliminated in 20 years in Costa Rica and 18 years in all the other countries of the subregion. The Central American countries also agreed to phase out tariffs on corn syrup imports within 15 years using a linear formula, and all of them except Guatemala agreed to impose a SAS if limits on import volumes are exceeded.

Central American textile products will enter the United States duty free, provided that they comply with rules of origin. Furthermore, a short supply list was negotiated that allows inputs that appear on the list to be imported from countries parties to the North American Free Trade Agreement (NAFTA), the African Growth and Opportunity Act (AGOA) and the Andean Trade Preference Act (ATPA) and to be regarded as originating goods. Costa Rica and Nicaragua were granted preferential treatment to use certain fabrics produced or obtained outside the region as though they were originating goods.

The benefits granted by the CBI for the duty-free admission of non-traditional industrial goods from the region into the United States were maintained and expanded. The newly incorporated products include canned tuna, footwear, jewellery and ceramic tiles. Additionally, rules of origin were established so that all the products' input supply structures could be maintained.

The measures adopted in the areas of intellectual property, the environment and labour are similar to those negotiated by the United States in other agreements. In the case of patents, for example, it was agreed that the protection period would be extended if the registration process exceeded five years; thus, the protection period for a patent could be extended at least three years beyond the standard period of 20 years set out in the Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPs). Regarding labour and the environment, it was agreed that a fine of up to US\$ 15 million could be imposed (to be paid by the government concerned) if applicable laws were infringed.

With respect to services and telecommunications –two particularly sensitive sectors in Costa Rica– a longer deadline was agreed upon for the liberalization of private information networks and Internet services (up to 2006) and for cellular telephone services (up to 2008), and for the enactment of a law to modernize and strengthen the Costa Rican Electricity Institute. A longer period was also granted for the liberalization of optional insurance (up to 2008) and some types of mandatory insurance such as vehicle and occupational hazard insurance (up to 2011).

The chapters on government procurement and investment set out the principles of liberalization, transparency and protection for investors and their investments. In the area of government procurement, the United States allowed the use of higher thresholds for the first three years after the agreement's entry into force. Lastly, the chapter on dispute settlement establishes a multi-phase mechanism, with the possibility of applying monetary assessments that may in some cases be paid into a fund for the implementation of initiatives to facilitate trade or to assist a country in carrying out its obligations.

Once the text of CAFTA is finalized, the respective legislatures of the six countries will debate the adoption of the agreement. The process is expected to extend through 2004, a year of presidential elections in the United States and El Salvador and a new administration in Guatemala. Nonetheless, the governments of the signatory countries expect the agreement to enter into force on 1 January 2005.

Source: Martha Cordero, *El Tratado de Libre Comercio entre Centroamérica y Estados Unidos: resultados de la negociación y características principales* (LC/MEX/R.854), Mexico City, ECLAC Subregional Headquarters in Mexico, March 2004.

III. Outstanding challenges with respect to the promotion of international trade linkages and development²¹

1. General framework

To improve the Latin American and Caribbean economies' linkages with the global economy in both quantitative and qualitative terms, simultaneous and coordinated efforts are needed in a number of policy areas that go beyond trade policy per se, within the framework of a systemic approach. If countries rely exclusively on trade policies and neglect both the macroeconomic environment and the need to develop their production systems, they may, at best, boost their exports, but without invigorating the rest of the economy. On the other hand, limiting export promotion to trade reforms and the preservation of macroeconomic equilibrium may lead to stability but not growth, and still less to the generation of endogenous processes of productivity and competitiveness gains.

Although there is no universally valid paradigm indicating what paths lead to improved international competitiveness and increased presence in foreign markets, general guidelines can be set out with respect to the elements that may contribute to the design of an effective strategy for enhancing the region's integration with the international economy.

Tariffs, non-tariff measures and incentives for non-traditional exports are core components of any trade policy. Together with the exchange rate, they determine the net incentive to export or to substitute imports. Any remaining anti-export bias must be eliminated through a combination of these incentives. It may even be advisable to introduce temporary measures in favour of non-traditional exports or new markets, which would create a mix of selective policies geared to overcoming market shortcomings and taking advantage of clear externalities.

There is still a certain bias in the region against value added in the production and sale of exportable goods and services, as tariffs on inputs, while usually low, do not always have an equivalent counterpart in terms of incentives to compensate exporters. Added to this is the failure, in general, to provide compensation to pioneering exporters for the externalities they generate, even though their activities may have all the earmarks of an "infant industry".²² The first firms to identify a new target market for exports or a new product that can be produced efficiently and sold on international markets at competitive prices are true innovators. They incur the costs and risks of penetrating a new market and, once they have done so, other firms benefit from their efforts.

Opening up the economy does not guarantee a high growth rate for exports, much less their diversification, as the region's experience has shown. It is also clear that liberalization has not been enough to ensure steady increases in GDP growth. Thus, there is a clear need for complementary measures directly aimed at promoting exports, facilitating the restructuring of import substitutes and improving systemic competitiveness. Experience shows, however, that incentives should be circumscribed and time-bound, should not deviate significantly from a neutral stance and should do so selectively. In addition, they should offset the specific anti-export biases generated by protection.

In other words, the sectoral composition of a country's external sales reflects its resource endowment, average productivity and technological advancement. The structure of comparative advantages and the removal of imperfections and distortions in the domestic market define what products a country can export today, while its policies on technology, investment and education determine what it will be able to export in the medium and long terms.

²¹ For an analysis and a more detailed proposal, see ECLAC (1995), chap. VI, and ECLAC (2002a), chap. 6.

²² This issue is analysed in Ramos (2000).

Moreover, when countries fail to invest in technology training, human resources development and infrastructure, their policies to promote and develop exports will probably not be viable, since firms will have to be compensated for the high systemic costs of producing each unit of the good or service to be exported. In the long run, there is a real risk that these exports will not be sustainable once subsidies are reduced or eliminated.

2. The importance of signals from the system of relative prices

It is important to send out clear signals on the desirability of investing and innovating with a view to expanding and improving export capacity, and of restructuring and rationalizing sectors that produce goods which compete with imports. To this end, a competitive and stable exchange rate must be maintained over time; that is, the exchange rate must reflect the currency basket of the country's external trade and must fluctuate on the basis of long-term determinants, while remaining relatively independent of cyclical economic conditions and as isolated as possible from short-term capital movements. Exchange-rate instability tends to hurt investment, especially in new exports, since the process of launching products on international markets is usually costly and will not be attempted unless it is fairly certain to be profitable.

One of the region's key economic policy challenges, then, is to find a way to keep the economy open to trade while maintaining a fairly stable real exchange rate in a context of considerable net capital inflows. To do this, countries must not only regulate these inflows, but also bolster domestic saving in order to keep the real exchange rate at a competitive level in line with its long-term determinants.

Furthermore, macroeconomic policy signals should be complemented by a legal environment favourable to investment and technological innovation. This means, among other things, that the legal system should guarantee respect for private property and for labour mobility under social protection regimes. Another prerequisite is a sufficient supply of factors of production that can meet the demands of producers of exportable goods or efficiently replace certain imports.

3. Export promotion instruments

The countries of the region should have active export promotion policies to offset the tariff structure's remaining anti-export bias and the shortcomings of capital markets for financing exports, and to take advantage of the positive externalities, economies of scale and learning opportunities generated by export activities. In the absence of an active export promotion policy, export activity tends to be concentrated in a few large firms and in products for which demand is less dynamic and more vulnerable in global markets.

The first instrument of such a comprehensive policy to promote external trade is a system for facilitating export firms' access to imported inputs at international prices, through either drawbacks of indirect taxes or temporary admission regimes. Such mechanisms could also be applied to indirect exporters—that is, domestic producers of inputs for exporters—as a way to encourage the integration of the value chains associated with export activity.

The governments of the region should support pioneering export firms by providing incentives for exports of new products or for penetrating new markets that help defray the high initial costs of these activities and that compensate firms for the positive externalities they generate for other firms that imitate them. These incentives, however, should be moderate, geared to facilitating the positioning of competitive or near-competitive products on foreign markets, time-bound and contingent on specific performance in terms of new products, amounts or markets.²³

²³ The simplified drawback system used in Chile may be an appropriate instrument, although its implementation is now subject to WTO restrictions based on the Uruguay Round agreements. Facilitating access to credit at international rates may be another way to

Another important element of any strategy for improving international trade linkages is active commercial diplomacy aimed at lifting existing barriers to the region's products, particularly in developed countries. The countries should likewise bring to the WTO negotiating table the possibility of expanding developing countries' room for manoeuvre, which has been severely limited as a result of the Uruguay Round. In particular, the countries would benefit from greater freedom to promote incipient export sectors, reinstate performance rules in certain cases to improve the internal linkages of export activities and, at least in the smaller countries, maintain some of the special benefits of free zones, which, under current rules, are to be dismantled in the coming years.

Moreover, the public sector should play a decisive role by providing institutional support for export activity, not only in the areas of export information, financing and insurance, management training and the promotion of the country's export supply abroad, but also through investment abroad to support export activities by facilitating participation in marketing chains or joint operations with firms in target markets, among other measures.²⁴

Countries can also improve their chances of diversifying their export supply by disseminating information on the requirements of export markets in terms of quality, environmental regulations, standardization, time frames and volumes, to facilitate the process of adapting domestic production to external market standards. It would also be useful to promote ties between domestic firms and international marketing companies, particularly in sectors in which the country has export potential.

The possibility of vesting responsibility for export promotion policy in a single institution with stable financing and qualified professional staff, or, should this prove unfeasible, of coordinating initiatives in the different areas involved would decisively boost the effectiveness of the strategy to be implemented. The same is true of close, systematic collaboration between the public and private sectors.

Access to financing and export insurance is another vital component, particularly for SMEs that do not have access to international capital markets. In view of the shortcomings that characterize the region's financial systems, which are described in chapter 3 of this report, it may also be advisable to promote the establishment of an investment banking industry or other private entities that specialize in channelling venture capital towards new activities or firms that seek to diversify the export base.

In general, the design of incentive mechanisms should take into account the fact that their primary aim is to promote exports of new products or to new markets; that the support they provide must be moderate so that it will attract firms that are really willing to share the cost of the programme; that the assistance must be temporary and must avoid permanent subsidies; that the programme's results should be subject to periodic external evaluations so that it can be modified or suspended if it does not help to increase and diversify exports; and that the programme must be designed and administered jointly by public—and private-sector entities. Lastly, it is essential that export promotion policies be approached as medium—and long-term strategies so that their continuity will be assured, regardless of changes in the government staff that implement them.

4. International negotiations

The Latin American countries are participating actively in a number of international negotiations on issues such as agricultural products, services and disadvantaged regions. The outcome of these talks will determine the characteristics of the international market for the region's export development in the next 20 years.

In addition to the debate on agricultural subsidies in developed countries, several issues of particular importance from the standpoint of developing countries will come up for negotiation,

support export activities, as this kind of measure is not considered a subsidy under WTO rules, but represents an attractive incentive for firms in the region, in view of the accessibility problems that characterize Latin American and Caribbean capital markets.

²⁴ Ramos (2000) notes that Japan spends about US\$ 5 per capita on such activities, which amounts to an overall figure several times larger than the amount spent by any country in the region.

including the reduction of tariff peaks, which encourage overly specialized production; the elimination of tariff escalation (see figure 5.12), which discourages the process of adding value through industrialization, particularly in the agricultural sector; and the achievement of a reasonable agreement on non-trade concerns that will provide legal security in international trade and will spell out clear rules for exporting countries on the requirements they must meet in order to gain access to developed-country markets.

Broadly speaking, the countries of the region, and developing countries in general, emphasize the need for new multilateral agreements to respect the progress already made and to recognize those countries' need to speed up their development. This recognition should take the form of special and differential treatment, meaning that concessions should not necessarily be reciprocal with regard to market access and that some degree of flexibility and discretionality should be maintained in developing countries' policies with respect to their own markets.

In particular, special and differential treatment should be manifested in the developing countries' right to implement comprehensive export promotion policies designed to guarantee the diversification of the export base and of target markets, as well as policies to improve national and regional production linkages in the activities most closely associated with international markets.

Trade-related aspects of intellectual property rights must not be allowed to become an obstacle to the transfer of new technology to developing countries or to make the process unduly expensive. They must be used as an effective instrument to protect areas in which developing countries have a strong interest, such as traditional knowledge and biological diversity.

5. The regional agenda and FTAA

As indicated previously, the Latin American and Caribbean countries face an increasing segmentation of regional markets due to the network of multilateral, subregional and bilateral agreements, which increases the cost of administering and coordinating regional policies. Furthermore, the tendency of countries in the region to conclude bilateral agreements with the United States may benefit the countries that thereby gain access to this market, but undermines the possibility of reaching a hemispheric agreement that benefits the region as a whole.

An agreement such as FTAA must be based on an acknowledgement of the asymmetries existing between the various countries of the region. This agreement will require the creation, and in some cases the reform, of national institutions and rules governing the protection of intellectual property, the development and administration of standards and the design and implementation of competition policy, among other things. The countries stand to benefit from the adoption of common disciplines that strengthen national reform processes.

This endeavour will also pose some difficult policy dilemmas, however, especially for less developed countries. For example, restrictions on the establishment of local-content or technology-intensiveness requirements can prevent countries from using these policies to foster the diversification of their economies and exports. By the same token, the complete absence of controls on capital movements may hinder the appropriate management of capital-account volatility and may thus make many countries more vulnerable to financial cycles, with the resulting effects on the sustainability of trade flows.

For the Latin American and Caribbean countries, the ability to benefit fully from increased market access and trade liberalization will depend on their ability to pursue active policies to increase systemic competitiveness and thus expand their exports. In addition, the diversification of exports to include products with higher value added and technological content and the expansion of their linkages with the rest of the production system are vital for translating increased export capacity into economic growth.

The countries will also need mechanisms for restructuring firms and, possibly, uncompetitive sectors, and for enabling SMEs to participate in hemispheric trade flows.

In summary, it may be said that the degree to which the Latin American and Caribbean countries benefit from trade liberalization and easier access to international markets will depend on their capacity to pursue active export promotion policies, in the framework of a broad-based strategy for increasing competitiveness, and on their ability to achieve greater coherence in international negotiations that will ensure the convergence of levels of development, prevent the diversion of trade and the segmentation of regional markets and enhance the efficiency of trade on a strategy of open regionalism.



Chapter 6

Policies to promote innovation and technological development

The economic growth process depends on the accumulation of factors of production (capital, labour, human capital and natural resources) and the incorporation of knowledge into production (generally referred to as “innovation”), either through capital goods, the skills and capabilities of workers, or changes in the organization of production or business management. Since technology determines the potential productivity of the whole set of factors and hence the competitiveness of an enterprise, the rate of innovation is the vehicle whereby the level of well-being of a country draws closer to or falls behind that obtaining in more highly developed areas of the world, which may be considered as being on the world technological frontier or close to it.

Innovation and learning represent efforts by enterprises to apply new production and management techniques, to refine them bit by bit and, in the long term, to develop new technologies. Constant strengthening of those capacities is essential in order to keep up the competitiveness of enterprises, which is the foundation for sustained growth of the economy in the long term.

In recent decades, the world economy has witnessed a notable increase in the rate and scope of technological change. Scientific and technological advances promote the constant appearance of new activities and new ways of producing, distributing and consuming goods, services and knowledge, as well as the restructuring of existing

activities. Exposure to international markets provides various stimuli for technological change. International competition stimulates the adoption of measures designed to reduce costs, raise quality and introduce new products; makes it possible to obtain economies of scale and, among other things, provides information on improvements in design and processes which speed up the growth rate of productivity. Uninterrupted access to technology and know-how generated in other countries is a key factor for all those who are behind the technological frontier and are trying to use the advantages of these changes to close the productivity gap with more advanced nations.

In open economies, international trade and investments, the importation of technologies embodied in machinery, equipment and inputs and of intangible or disembodied assets (specialized know-how, licenses, patents, trade marks, technical assistance, access to networks, etc.) is often the quickest and most effective way of acquiring the production, process, organizational and management know-how they need in order to narrow the gaps in productivity and quality with more technologically advanced countries. This is not enough in itself, however, because the acquisition of the knowledge that permits efficient use of the available technology and know-how is not automatic: it also involves the development of capabilities through a complex collective learning process in contexts marked by high macroeconomic uncertainty and endemically weak institutions.

The process of acquiring, adapting and developing technology runs up in some cases against the lack of markets or the existence of serious failures in their functioning. In particular, innovation and technology adaptation involve the interaction of various different national and foreign agents (enterprises, public research and technology institutes, and educational and financial institutions) in the existing markets or through other types of links, when those markets are non-existent or incomplete (ECLAC, 1996b). The system which brings together all these actors for the transmission of know-how and its application to production within a country has been defined as the “national innovation system”.¹

Technical progress, which is the fruit of innovation in all dimensions of production, is a systemic process involving a number of agents who interact with each other within the national innovation system. Each of them maximizes his own function, while the national system is the context within which the externalities and synergies characteristic of technological development take place. Ultimately, the growth rate of the productivity of a production system depends not only on individual investments but also on the density, depth and dynamism of the knowledge flows transmitted within the innovation system.

For these reasons, it is widely recognized that for the generation of technological capacity it is essential to encourage suitable private investments while at the same time adopting policies to institutionalize and promote relations between those engaged in scientific research and the business system and developing mechanisms to allow due advantage to be taken of the benefits provided by innovations. The national innovation system is a source of externalities which do not show up in the market, as well as of economies of scale; it is a network of links which can be institutionalized as markets or quasi-markets. This explains why public policies offer the possibility of promoting innovation both by favouring the development of technological capacity at the microeconomic level and by strengthening innovation systems.²

For decades, most of the countries of the region strove to expand their technological capacity on the basis of a policy approach centered on increasing the supply of the relevant services. As from the 1980s, however, there were important changes in the design of such policies and the policy instruments themselves. Together with economic reforms, the countries adopted more horizontal policies guided by the actual demand of the production system, while reforms were made in the

¹ Freeman, 1987; Nelson, 1993; Lundvall, 1992; Cimoli and Dosi, 1995; and ECLAC, 2000a and 2002a.

² Either at the national level or, within the national system, at the level of local or sectoral innovation systems.

institutional infrastructure and changes were made in the organizational methods of the institutions responsible for promoting science and technology (S&T).³

In spite of these changes, however, the technology policy model continues to be based largely on a linear logic and to be characterized by feeble links between economic actors and scant capacity for policy formulation and implementation. At the same time, the institutions responsible for the application of intellectual property policies and systems continue to be weak and those responsible for decision-making have only a marginal place in the structure governing public policies. Likewise, although most of the countries of the region have signed international agreements on intellectual property, they have not yet developed the institutional capacity needed to handle intellectual property regimes efficiently and to take advantage of the degrees of freedom that those regimes give them.

In short, the development of the production systems of economies that aim to narrow the productivity gap with more advanced countries demands the adoption of public policies to create and develop innovation capabilities that will make it possible to take advantage of rapid technological change and economic openness. In order to continue raising productivity and gain greater benefits from the importation of technology, it is essential to create a more suitable framework for the development of endogenous innovation efforts and capabilities. The specialized literature and the processes which have taken place in the most highly developed economies indicate that (i) the production of know-how is not linear; (ii) increasing the use of technology in the production process calls for contributions, on the one hand, by scientists and researchers and, on the other, by the market and demand; (iii) know-how is specific and an essential requirement for its acquisition is the existence of better sectoral learning processes and skills, and (iv) the generation of know-how is a trial-and-error process with uncertain results.

I. Promoting innovation in the region

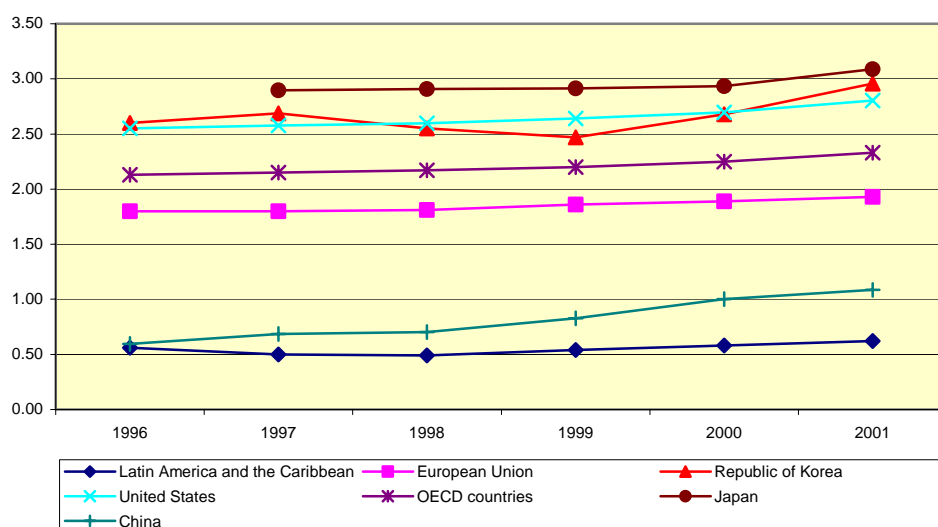
The insufficiency of the efforts made by the countries of the region in the field of research and development (R&D) becomes clear when they are compared with those of more highly developed economies. Thus, whereas the United States, Japan and the Republic of Korea invest between 2.5 and 3 points of their GDP in this field and the European Union invests nearly 2 points, Latin America and the Caribbean as a whole devote only half a point of their product to research and development: a volume comparable with that registered by China in 1996, but that country has now doubled this amount (see figure 6.1).

With the notable exception of Brazil, which spends nearly one percentage point of GDP on R&D,⁴ most of the economies of Latin America and the Caribbean devote less than half a percentage point of GDP to these activities. The most outstanding cases in 2000 were those of Chile and Cuba, with rather more than 0.5%, and Argentina and Panama, with slightly lower levels (see table 6.1).

³ See Casalet, 2003; Jaramillo, 2003; Pacheco, 2003; Vargas Alfaro and Segura Bonilla, 2003; and Yoguel, 2003.

⁴ Including financing of the public post-graduate studies system.

Figure 6.1
EVOLUTION OF EXPENDITURE ON RESEARCH AND DEVELOPMENT, BY REGIONS,
1996-2001
(As a percentage of GDP)



Source: Ibero American Network of Science and Technology Indicators (RICYT) and Organisation for Economic Co-operation and Development (OECD).

Table 6.1
EXPENDITURE ON RESEARCH AND DEVELOPMENT BY COUNTRIES
(Percentages of GDP)

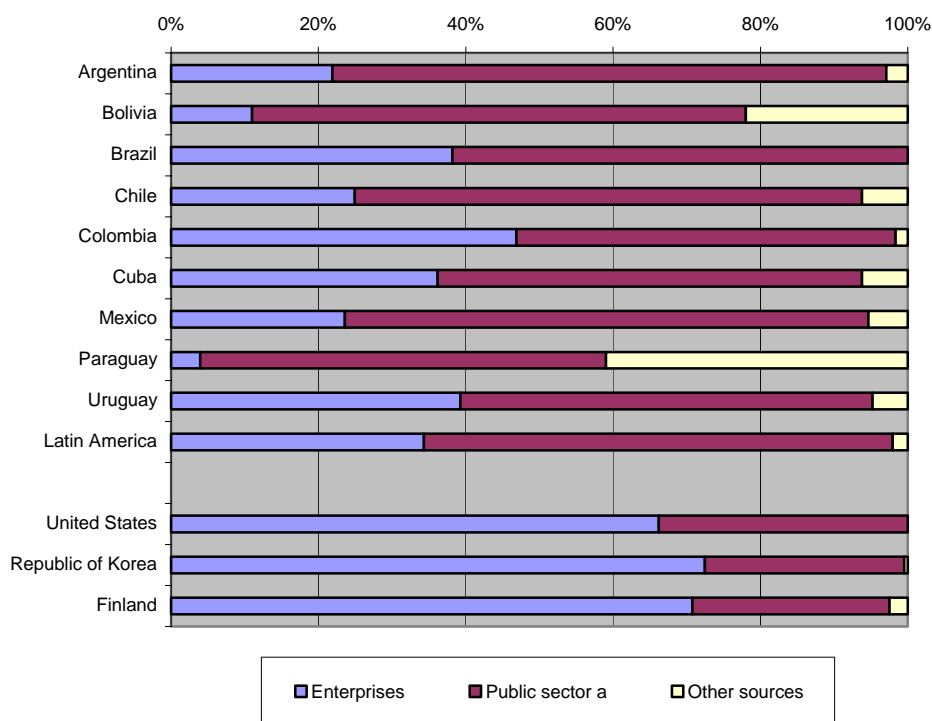
Latin America		1997	1998	1999	2000	2001
Argentina	0.42	0.42	0.41	0.45	0.44	0.42
Bolivia				0.30	0.29	0.34
Brazil	0.77			0.77	1.05 ^a	
Chile	0.58	0.54	0.54	0.55	0.56	0.54
Colombia	0.30	0.27	0.21	0.20	0.18	0.17
Costa Rica	0.21	0.21	0.20			
Cuba	0.38	0.44	0.54	0.51	0.53	0.65
Ecuador	0.10	0.09	0.09			
Mexico	0.31	0.34	0.38	0.43		
Nicaragua		0.15				
Panama	0.38	0.37	0.33	0.35	0.45	0.44
Peru		0.08	0.10	0.10	0.11	0.11
Uruguay	0.26	0.39	0.22	0.26	0.24	
Venezuela	0.29	0.33	0.35	0.33	0.34	0.44
United States	2.55	2.58	2.60	2.64	2.70	2.80
Republic of Korea	2.60	2.69	2.55	2.47	2.68	2.96
Finland	2.54	2.72	2.89	3.19	3.35	3.42

Source: United Nations Educational, Scientific and Cultural Organization (UNESCO).

^a If expenditure on postgraduate studies is excluded, the figure is 0.75.

Research and development in the region is mainly financed by governments, since enterprises only finance a third of the total. In most countries of the world, a substantial part of the expenditure (between a quarter and half) is covered by higher educational establishments and non-profit private organizations, while enterprises account for between one-fifth and a third of the total. In the United States, however, enterprises finance two-thirds of R&D, and something similar occurs in the Republic of Korea.

Figure 6.2
**COMPOSITION OF EXPENDITURE ON RESEARCH AND DEVELOPMENT,
 BY SOURCE OF FINANCE AND COUNTRIES**
(Percentages)



Source: United Nations Educational, Scientific and Cultural Organization (UNESCO).

^a Including expenditure financed through universities.

Apart from the above-mentioned proportions, it is impressive how little of R&D expenditure is accounted for by domestic enterprises. In the developed countries, investment by enterprises in R&D is equivalent to between US\$ 200 and US\$ 700 per inhabitant.⁵ The Latin American and Caribbean countries with the highest levels of R&D expenditure per capita by enterprises are Argentina, Brazil and Chile, with approximately US\$ 50, while Mexico spends US\$ 33 and Costa Rica, Uruguay and Venezuela spend a little over US\$ 20 per person. Per capita expenditure by Latin American governments on R&D, for its part, is between US\$ 20 and US\$ 36 in Argentina, Brazil, Chile and Mexico, compared with between US\$ 150 and US\$ 250 per capita in the developed countries.

⁵ Except for the minimal levels registered by Australia (US\$ 150) and Spain (US\$ 90).

Table 6.2
PER CAPITA EXPENDITURE ON RESEARCH AND DEVELOPMENT, 2001
(Current dollars, purchasing power parity)

	Total	Governments	Enterprises
I. Latin America			
Argentina	51	27 ^a	13 ^b
Bolivia	7	3	1
Brazil (2000)	56 ^f	25 ^f	31
Chile	51	36	13
Colombia	11	1	6
Costa Rica (1998)	25		
Ecuador (1998)	2	2	
El Salvador (1998)	4	2	
Mexico (2000)	33	20	9
Uruguay (2000)	20	4	9
Venezuela	24 ^c	13 ^a	7 ^b
II. Other countries			
Germany	633	200	418
Australia (2000)	336	155	154
China	44		
Republic of Korea	509	122	369
Spain	193	77	91
United States	962	259	659
France	527	205 ^d	279 ^d
Italy (2000)	260	133 ^e	112 ^e
Japan	875	162	639
Sweden (1999)	1 063	260	720
United Kingdom	459	139	213
Russia	83	47	28

Source: Developed countries and the Republic of Korea: UNESCO International Institute for Statistics; Latin America: Ibero American Network of Science and Technology Indicators (RICYT); and purchasing power parities: World Bank, *World Development Indicators* (WDI), Washington, D.C., various issues.

^a Corresponds to per capita expenditure by government on science and technology.

^b Corresponds to per capita expenditure by enterprises on science and technology.

^c Corresponds to per capita expenditure on science and technology.

^d Data on shares of government and enterprises in 2000.

^e Data on shares of government and enterprises in 1996.

^f Excluding public expenditure on post-graduate courses.

In addition, there is the question of the effects of the predominant role of the public sector in these investments in Latin America and the Caribbean. In 2000, this sector accounted for 58.2% of investment in R&D, whereas private enterprise accounted for only 33.3% (RICYT, 2003). In the most highly advanced economies, there is an opposite trend: in the United States in the same year, enterprises financed 68.4% of R&D expenditure, whereas government expenditure accounted for only 27.1% of the total. In the case of such a recently industrialized economy as that of the Republic of Korea, the distribution of expenditure is similar to that of the United States: in 2000 the

enterprises financed 74% of expenditure on R&D, whereas the public sector financed 26% (UNESCO, 2003). The scanty participation of the private sector in the financing of R&D activities in the region helps to explain its unsatisfactory performance in terms of applied research and pure research, as well as the difficulties experienced by local firms in applying the know-how thus obtained in an economically efficient manner.

The weak performance of the region in investment in R&D and the generation of knowledge, in both absolute and relative terms, and the scanty linkages between the public and private sectors with regard to these investments explains the persistence of a vicious circle which creates an unfavourable environment for the development of research and development activities and impedes the establishment of a virtuous circle as regards learning. The lags in terms of the production, dissemination and adoption of know-how accentuate the structural shortcomings of the region: namely, its inability to close the technology gap and its growing structural heterogeneity. At the same time, these shortcomings also reduce the incentives to make greater investments in R&D.

II. Changes in the technology policy model

1. The linear supply model

In the import substitution industrialization stage, the public sector played a fundamental role in giving direct and indirect support to the development of technological capabilities and the creation of an institutional infrastructure for science and technology (ECLAC, 2002a). In this period., policies were adopted which were marked by centralized and selective institutional supply, a downward and linear pattern of dissemination of know-how, and control over the transfer of technology.

Science and technology policies were fixed in line with the development priorities identified by governments and, together with the instruments for their implementation, were governed by the notion that coded knowledge and innovations were transferred in a linear, one-way manner from State research centres and universities (supply) to enterprises (demand). Because of the prime importance assigned to the development of public infrastructure, 80% of the expenditure on science and technology was of public origin and most of the relevant activities were carried out by public enterprises in the energy, telecommunications and transport sectors and State-owned technology institutes connected with the agricultural, energy, nuclear, mining, forestry and aeronautical sectors (ECLAC, 2002a).

This model arose in the 1950s, when public institutions began to be set up for the execution and dissemination of fundamental and applied research and scientific development (ECLAC, 2002a). It was at this time also that national R&D councils began to be established with responsibility for promoting research in institutes located both outside and within public universities.⁶ Specialized institutions to promote the training of high-level human resources were also established,⁷ as were public enterprises and institutions for scientific and technological research.⁸

⁶ National Council for Scientific and Technical Research (CONICET), Argentina, 1958; National Council for Science and Technology (CONACYT), Mexico, 1970; National Council for Scientific and Technical Development (CNPq), Brazil, 1951, etc.

⁷ In Brazil, the Department for the Coordination of Staff Training of the Ministry of Education (CAPES) and the Fund for the Financing of Studies and Projects (FINEP) formed, together with the CNPq, the institutional base for science and technology policy, along the lines of the United States model for promoting the supply of postgraduate training facilities through a system of institutional and personal fellowships (Pacheco, 2003).

⁸ In Argentina, the National Atomic Energy Commission (CNEA) was set up in 1954, followed in 1957 by the National Institute of Industrial Technology (INTI) and the National Institute of Agricultural Technology (INTA), responsible for the provision of industrial and agricultural technology services, respectively (Yoguel, 2003). In Mexico, the Technological Information, Consultancy and Training Service (INFOTEC) was set up in 1975 to provide assistance services on technical problems and support for the introduction of new technologies for urban development, expansion of the health system, and the creation of technological capabilities in the energy, transport, agricultural and forestry sectors. Following the same approach, the National Institute for Nuclear Research (ININ), the Electrical Research Institute (IIE), the Mexican Institute of Water Technology (IMTA) and the Mexican

The organizations forming the institutional infrastructure for R&D were run in line with an approach under which their objectives and internal organization were set by the government. The institutional infrastructure was organized on a pyramidal and hierarchical basis, while the priorities for the selection of research projects were determined by the interests of the public administrators and representatives of the scientific world in the decision-making bodies. The budget for R&D activities came entirely from public funds, and its size depended on the importance attached to those activities in each country's development strategy. Research institutes did not envisage self-financing as a way of obtaining funds, nor did they see it as an important source of resources.

This model facilitated the establishment of a production base, but it had serious structural limitations which detracted from its viability. Firstly, it was implicitly based on a determinist concept whereby scientific progress would in itself give rise to technological innovation. Secondly, the strategies for the development of an institutional infrastructure were not accompanied by the design of policies to ensure inter-agency coordination, leading to a fragmentary collection of different bodies, overlapping of initiatives, and waste of resources (Capdevielle, Casalet and Cimoli, 2000; Yoguel, 2003).⁹ Thirdly, the management models of the organizations were inflexible and were not adapted to the demands of the production sectors.¹⁰ While the productive sector required more know-how to improve processes and products, the dominant management model of the science and technology organizations led to growing isolation of the system, with consequent loss of competitiveness of the economies of the region.

2. The demand-side model

In the 1990s, many of the countries of the region took measures to increase the role of the market as an active promoter of development. In the science and technology circles of a number of countries, the supply-side approach began to be replaced by market incentives and consideration of the real demand of the production sector. The real demand for technology became one of the main criteria for defining policy priorities and allocating resources. In order to avoid interference with the way the market works, more horizontal and neutral policies began to be promoted. In line with this approach, foreign investment was expected to be the main source of technology, and new laws on patents were adopted in order to give them better protection.

In these policies, priority was given to the design and utilization of instruments to promote demand and support the functioning of channels for the transfer of technological know-how to the production sectors. On the one hand, demand subsidies began to be given for the allocation of resources through the selection of projects proposed directly by enterprises, while on the other, in order to increase and facilitate the access to information, specialists and consultants on production and technological management activities were placed at the disposal of enterprises.

Petroleum Institute (IMP) were likewise set up to promote and support scientific and technological research in the nuclear, electricity, water and petroleum sectors, respectively (Casalet, 2003). A sectoral institutional infrastructure was also developed in Brazil. Thus, the Brazilian Agricultural Research Enterprise (EMBRAPA) was set up in 1973 to promote R&D activities in the agricultural sphere, while the Aerospace Technology Centre (CTA) was established in the early 1950s. Research centres run by State enterprises operating in key sectors were also set up, such as the Leopoldo Américo M. de Mello Research and Development Centre (CENPES), established in 1995 and run by PETROBRAS, and the Electrical Energy Research Centre (CEPEL), set up in 1973 and run by ELETROBRAS (Pacheco, 2003).

⁹ The first attempt at such coordination in Argentina was made in 1970 with the creation of the Ministry of Science and Technology (SECYT), but this initiative failed without achieving the expected results. In Costa Rica, the lack of coordination was observed not so much at the inter- and intra-agency level as between the activities of the research centres and the needs of enterprises, because technology policy was not linked up with industrial policy (Buitelaar, Padilla and Urrutia-Alvarez, 2000).

¹⁰ Even at this time, however, there were discussions on the scope of the model. One line of opinion, associated with the national science and technology councils, held that resources should be transferred to researchers without any intervention by the agencies in the definition of priorities, a second line of opinion advocated the transfer of resources to priority areas, while a third (minority) view advocated the establishment of elite scientific universities along the lines of the Johns Hopkins University in the United States (Yoguel, 2003).

The transition from one model to another involved a reallocation of resources whereby financing for the science and technology institutional apparatus was reduced and a minimum of resources was provided for horizontal programmes.

In most of the countries of the region, these policies were subject to the receipt of loans from international organizations. In line with this approach, national laws and programmes were formulated and adopted to define a new legal frame of reference for science and technology activities.¹¹ In addition, financial instruments and fiscal incentives were adopted to facilitate innovation by enterprises, and in the whole region the importation of capital goods was liberalized as an important, albeit transitory, incentive for the updating of technology levels: an effect which was strengthened in some countries (Argentina, Mexico and others) by the additional reduction in the prices of such goods due to currency appreciation.

Colombia and Costa Rica are noteworthy for linking their technology policies with export promotion policies (Jaramillo, 2003; Vargas Alfaro and Segura Bonilla, 2003). In Colombia, national science and technology laws and programmes defined an action framework marked by the importance assigned to the competitiveness of enterprises in international markets and productivity. Innovations, whether of domestic or outside origin, were seen as a way of increasing the competitiveness of the production sector; hence, laws were adopted to encourage science and technology activities and national programmes designed to support the academic and productive sectors in their technological development activities (Jaramillo, 2003). Costa Rica adopted a set of science and technology policies which combine subsidies with the adoption of quality standards, promotion of the training of human resources, and greater collaboration between research centres and enterprises in the export sectors (Vargas Alfaro and Segura Bonilla, 2003).

With regard to instruments to facilitate the provision of services to small and medium-sized enterprises and promote their technological development, in Argentina resources were allotted to the portfolio administered by the Argentine Technological Fund (FONTAR) to provide non-repayable grants, loans and subsidies through public competition. In Chile, the most important change in this field was in the mechanism for handling financial aid for small and medium-sized enterprises, an increasingly large proportion of which is now being channeled through private institutions responsible for administering its allocation. Programmes such as Development Projects (PROFOS), the Technical Assistance Fund (FAT) and the Fund for the Promotion of Scientific and Technological Development (FONDEF) have been important elements in technological restructuring and the strengthening of outward-looking strategies.

In spite of their objectives of securing greater equality, horizontal promotion policies have not always been as neutral as intended and have thus helped to accentuate the heterogeneity of the production system still further. In practice, subsidies for the micro-level demand for technology which have not been duly linked and coordinated lead primarily to differentiation between those in a position to receive them and those who do not meet all the requisites. When access to them involves transaction costs, the enterprises that can face such costs are usually the most pro-active agents in technological terms, so that enterprises that do not have sufficient capacity to identify, formulate and handle their requirements are left out. No efforts have yet been made to overcome this problem through measures to spread and promote the use of these funds among potential beneficiaries.

At the same time, however, some new management models have been adopted for science and technology bodies. The hierarchical management model has been replaced by a performance-based model which includes incentives and systems of evaluation and rewards based on results, in which importance is assigned to self-financing as a method of operation of science and technology

¹¹ For a detailed analysis of the situations in the different countries, see Yoguel (2003) for Argentina, Casalet (2003) for Mexico, Vargas Alfaro and Segura Bonilla (2003) for Costa Rica, and Jaramillo (2003) for Colombia.

bodies and criteria for the allocation of functions in the organizations are applied. In addition, in this model priority is given to the functions of the “sale” and “provision” of technological services.

Beyond these common features, each country of the region developed specific patterns of management reorganization. In Argentina, modernization in this respect was based on increased capacity for coordination among activities and bodies, while political functions were separated from executive functions and efforts were made to create a technological services market (Yoguel, 2003). In Mexico, institutional reorganization policies centered on decentralization of the management and functions of science and technology bodies, as well as on management and administration tasks (Casalet, 2003). In Colombia, reorganization of the institutional infrastructure centered on the regionalization of the national science and technology system through the establishment of regional commissions and explicit consideration of this dimension in national science and technology programmes. In addition, the development of a technological services market for enterprises was promoted by strengthening cooperation between universities, research centres and the productive sector (Jaramillo, 2003). In Costa Rica, the main pillar of the reforms was the strengthening of private sector participation, especially in human resources training, but the measures taken in this field did not lead to the creation of the expected links between the production structure and science and technology bodies (Vargas Alfaro and Segura Bonilla, 2003).

3. Technology funds

One of the most novel elements of the science and technology policies adopted in Latin America in the 1990s was the establishment of sectoral funds to support science and technology activities (Casalet, 2003; Pacheco, 2003; Yoguel, 2003; Vargas Alfaro and Segura Bonilla, 2003; Jaramillo, 2003). The characteristics of these funds, the mechanisms for gaining access to their resources and the forms of administration varied from one country to another (see tables 6.3, 6.4 and 6.5), but two main systems can be identified, the first of which is based on demand subsidies (Argentina, Chile, Colombia, Costa Rica and Mexico), while the second (used in Brazil) places emphasis on coordination between supply (academic institutions and research centres) and demand (enterprises).

In the countries which adopted most of the elements of the first type of model, the system of funds to support science and technology activities operates with resources from the public budget, often in association with loans from international organizations. These resources help to form funds to which various actors can have access through competitions and evaluation procedures, in line with a horizontal management approach. In addition, provision is made for the possibility of co-finance by the private sector and for the allocation of resources in response to direct applications by prospective beneficiaries (enterprises or research centres). Generally speaking, these funds have three objectives: (i) promotion of innovation activities by enterprises; (ii) the creation and strengthening of a technological services market, including specific consultancy services, technical assistance and human resources training; and (iii) strengthening of the research and development capacity of universities and research centres and their links with enterprises. Argentina and Chile are examples of countries which use this policy model (see tables 6.3 and 6.5).

Table 6.3

THE ARGENTINE TECHNOLOGICAL FUND (FONTAR)

FONTAR programmes	Instrument used	Objectives	Beneficiaries	Form of allocation and financial contribution
Technological development (new products, services or production processes)	Non-repayable contributions	Increased competitiveness through innovation in products, services and processes	Micro-, small and medium-sized enterprises and brooder enterprises certified by IBEROEKA	By public competition. Up to 50% of project cost
	Loans for technological development projects	Finance for middle-income technology production projects	Micro-, small and medium-sized enterprises with research and development departments or teams, collaboration groups, and UVTs (Unidades de Vinculación Tecnológica - Technical Linkage Units) underwritten by the enterprise	Compulsorily repayable loans. Up to 80% of the total cost, allocated on an open window basis, with a maximum of 200,000 pesos for three years
Technological modernization (improvement of products and processes, training)	Fiscal credit programme	Assistance for the execution of research and development activities	Physical or juridical persons who own enterprises producing goods and services	Subsidies through Fiscal Credit Certificates obtained through public competition. Up to 50% of the total cost of the project
	Loans for modernization projects	Technological adaptation and improvement of products and processes with a low level of technical and economic risk	Enterprises with research and development department or groups. Collaboration groups, and UVTs underwritten by the enterprise	Special compulsorily repayable loans allocated on an open window basis. Up to 80% of the total cost of the project, with a maximum of 300,000 pesos for three years
	Loans to enterprises	To finance projects for the development of new production processes, products and modifications thereto	Enterprises, without any restrictions as regards size or sector. No finance provided for projects with a rate of return of less than 12%	Compulsorily repayable loans allocated on an open window basis. Up to 80% of the total cost of the project, with a maximum of 1 million pesos
Promotion of the technological services market (research centres and business research centres)	Subsidies for projects to develop business plans	Finance for business development projects based on research and development	Micro-, small and medium-sized enterprises whose projects are executed by UVTs	Subsidies allocated on an open window basis. Up to 50% of the total cost of the project, with a maximum of 20,000 pesos, for up to one year
	Loans to institutions	To promote the establishment and strengthening of structures for the provision of technological services to research and development enterprises and institutions	Public or private institutions providing services to the private production sector. The projects may be presented on an individual or associated basis	Obligatorily repayable subsidies allocated on an open window basis, up to a maximum of 2 million pesos
Training and technical assistance	Subsidies for training and retraining projects	Subsidies to support activities for the training and retraining of human resources in new technologies	Micro-, small and medium-sized enterprises whose projects are executed by UVTs	Subsidies allocated on an open window basis. Up to a maximum of 50% of the total cost of the project, or 20,000 pesos for up to six months
	Subsidies for project formulation	Support for the formulation of research and development projects, technology transfer or technical assistance	Micro-, small and medium-sized enterprises whose projects are executed by UVTs	Subsidies allocated on an open window basis. Up to a maximum of 50% of the total cost of the project, or 20,000 pesos for up to six months
Technological advisory assistance programmes. Strengthening the performance of technical small and medium-sized enterprises	Technological advisory assistance programme	Support for entrepreneurs in the diagnosis of technological problems through technological advisory assistance. Identification of suppliers of technological services	Micro-, small and medium-sized enterprises producing goods and services which incorporate technological added value	Subsidies allocated on an open window basis, individually or for groups, with a maximum of 50% of the total cost of the project or 110,000 pesos and a maximum of 20,000 pesos per participating enterprise

Table 6.4
MAIN SECTORAL FUNDS IN BRAZIL ^a

Sectoral funds	Objectives	Origin of financial resources	Activities
CT-PETRO (1999) Sectoral fund for the oil and natural gas sector. Instrument whereby established: Law No. 9487 of 1997	Sectoral development through promotion of research and development and human resources training	25% of value of royalties exceeding 5% of production of oil and natural gas	Collaboration in the definition of policies and the implementation of specific programmes. In 2001, 144 projects worth 7 million reales were approved by the CNPq. Expenditure between January and November 2003: 16,431,002.70 reales
CT-ENERG Sectoral fund for the energy sector. Instrument whereby established: Law No. 9991 of 2000	Sectoral development through promotion of research and development	Between 0.75% and 1% of the net income of enterprises with concessions for the generation, transmission and distribution of electricity	In 2001 the CNPq approved 132 research and development projects involving the investment of 8 million reales by the fund. In 2001 an association agreement was signed between the National Electric Power Agency and the CNPq to promote cooperation between research centres and enterprises. Total expenditure between January and November 2003: 8,397,738
CT-HYDRO Sectoral fund for water resources. Instrument whereby established: Law No. 9993 of 2000	Reduction of disparities between regions through investments in science and technology activities of importance for the sector. Strengthening of water resource sustainability	Made up of 4% of the financial compensation of electricity generation enterprises	Financing of scientific and technological development projects and programmes designed to improve water quality and use. In 2002, 28.6 million reales were invested, of which at least 4 million were for the training of specialized personnel. Expenditure between January and November 2003: 3,735,635.85 reales
CT-INFO Sectoral fund for information technology. Instrument whereby established: Law No. 10176 of 2001	Promotion of the competitiveness of the sector through research and development programmes and projects	At least 5% of the gross annual turnover in the domestic IP goods and services market of enterprises producing goods and services relating to information technology which receive fiscal incentives under the law to promote the IP industry	It is estimated that over 50 million reales are spent each year on the promotion of research and development activities in this sector. Expenditure between January and November 2003 was 9,971,983.70 reales
Sectoral fund for agribusiness. Instrument whereby established: Law No. 10332 of 2001	To consolidate the competitive position of products of this sector in international markets	Law No. 10168 of the year 2000 lays down the sources of financing for this fund, which receives 17.5% of the resources covered by that law	Financing of research and development and science and technology activities. Expenditure between January and November 2003: 2,140,277.92 reales
FVA "Green and Yellow fund". Instrument whereby established: Law No. 10168 of 2000	Promotion of technological cooperation among universities, research centres and enterprises	Contributions in the form of royalties from enterprises holding user licenses or acquiring technological know-how abroad	A minimum of 30% of the resources is devoted to technological training and modernization in the Northern, Northwestern and Centre-West regions. Expenditure between January and November 2003: 58,071,768.19 reales
CT-INFRA (2002) Infrastructure fund. Instrument whereby established: Law No. 10197 of 2001	Subsidies for maintenance and modernization of the technological infrastructure of public universities and research centres, in order to improve the competitiveness of the production sectors	The fund consists of 20% of the resources allocated to each sectoral fund from the National Technological Development Fund (FNDCT) and from the other funds for financing science and technology activities	In 2002, 100 million reales were provided to create suitable conditions for the execution of science and technology activities in science and technology bodies. The Northern, Northwestern and Centre-West regions are to receive at least 30% of the resources. Expenditure between January and November 2003: 70,284,331.74 reales

^a This table only includes the funds which spent more than 1,500,000 reales in 2003. The funds which were excluded on this account were the funds for mining, land transport, the space sector, telecommunications, health, biotechnology and the aeronautical sector.

Table 6.5
FUNDS TO SUPPORT SCIENCE AND TECHNOLOGY ACTIVITIES IN CHILE

Fund and administering body	Objectives	Beneficiaries	Origin and destination of financial resources
National Fund for Scientific and Technological Development (FONDECYT). Administered by CONICYT	To promote the development of fundamental scientific and technological research in order to create or improve methods and means of production of goods and services	Natural persons or research institutes using various financing programmes	Contributions allocated under the National Budget Law, legacies, and domestic and international donations which do not have any other specific purpose. The beneficiaries are selected by public competition
Fund for the Promotion of Scientific and Technological Development (FONDEF). Administered by CONICYT	To strengthen the scientific and technological capacity of universities and research centres in order to increase the competitiveness of enterprises. The fund finances projects in priority areas (natural resources, promising areas for the creation of added value, and others of high social impact)	Non-profit-making institutions, individually or in association, which carry on R&D activities and have legally existed for at least 5 years. The fund requires the participation of enterprises, especially those working in the area of technology	The fund finances up to 60% of the cost of projects, with a ceiling of 450 million pesos. Institutions and enterprises must contribute at least 20% themselves. The beneficiaries are selected by competition, by R&D projects, and on an open window basis for technology transfer projects
Development and Innovation Fund (FDI). Administered by CORFO	To promote technological innovation in areas with strategic impacts in terms of economic and social development	Non-profit-making institutions and technology centres engaged in R&D activities, technology transfer and related services. Technological-entrepreneurial consortia made up of at least 3 enterprises not related in ownership before the date of application, associated with one or more technology centres	Project competitions; tenders for the execution of specific lines of work; and open window arrangements (new form of allocation). The fund finances expenditure on operations, administration, human resources, subcontracts, and any other areas needed for the project
Associative Development Projects (PROFOs). Administered by CORFO	To improve the competitiveness of a group of enterprises which seek to solve management and marketing problems on a joint basis	Small and medium-sized enterprises with annual sales of between 2,400 and 100,000 UF. Minimum sales are 1,200 UF for agricultural enterprises, while the maximum sales rise to 200,000 UF in the case of manufacturing enterprises which are associated in groups of at least 5 enterprises	Open window basis: the enterprises must contact intermediaries of CORFO who will provide application forms and designate professionals to diagnose the stage of preparation of the project
Technical Assistance Fund (FAT). Administered by CORFO	Through consultants, to incorporate management techniques into the operations of enterprises or new technologies into their production processes	Chilean companies which require specialized outside support and have net annual sales of not more than 100,000 UF. The consultants are designated on an individual or collective basis (at least 3 companies in the latter case)	Open window basis (both cases): Individual FAT assistance: for the initial diagnosis, CORFO contributes 17 UF and the enterprise 3 UF, while CORFO subsequently finances up to 50% of the consultancy costs. In the case of collective arrangements, CORFO finances up to 50% of the consultancy costs, with a maximum of 100 UF per company
National Fund for Technological and Production Development (FONTEC). Administered by CORFO	To promote, guide and sponsor, through 5 lines of assistance, projects in the areas of technological innovation, associative technology transfer and implementation of technological infrastructure	Lines 1, 2, 3 and 5 finance private enterprises producing goods and services which can demonstrate the necessary technical, administrative and financial capacity and are not in arrears with their debts. They can apply individually or in association, provided in the latter case that they are not linked with each other commercially. Line 4 finances enterprises producing goods and services which belong to a single sector of production and are applying for assistance in tackling technological problems of an associative nature	Open window basis: for lines 1, 2, 3 and 5 an application for finance must be submitted to either FONTEC or CORFO, which will consider the project in line with their rules for applications, together with information on the legal and financial status of the enterprises. Open window basis: line 4 requires application for a diagnostic stage involving the preparation of a Relevance Analysis for FONTEC or CORFO

In Colombia, demand-based support mechanisms have not proved to be very effective. The support system for the innovation process is based on two mechanisms: the allocation of public resources to increase the demand of the productive sector, and fiscal incentives. The demand subsidies are not only limited in quantitative terms but are also little used because of the low level of demand by enterprises, due both to the low propensity of local entrepreneurs to make investments and to the scanty dissemination of information on the possibilities for financing R&D (Jaramillo, 2003; Salazar and Montenegro, 2003).

The supply and coordination scheme characterizing the system of funds developed in Brazil is based on a different approach (see table 6.2). In 1999, 14 sectoral funds were created for strategic sectors, financed with income from enterprises of those sectors.¹²

There are four features that define the way these funds operate. Firstly, the law lays down that part of the income of the sectors concerned must be set aside for the development of science and technology activities. Secondly, interaction between supply and demand is stimulated, since the law provides that the sectoral funds must be run according to a strategic approach agreed upon by management committees made up of representatives of the business sector, the scientific community, the sectoral ministries in question, the Ministry of Science and Technology, and the relevant regulatory bodies. Thirdly, a special fund has been set up specifically to promote cooperation among universities, research centres and enterprises, financed with contributions from enterprises which have technology user licenses or which acquire outside technology. Fourthly, this scheme provides for subsidies for the maintenance and modernization of the technological infrastructure of public universities and research centres, through a special infrastructure fund whose resources come from the other sectoral funds.¹³ Although the scheme raises some difficulties in terms of its management and administration, it ensures to a large extent the financing of R&D activities and increases the participation of all the actors in project planning and administration of the funds.

III. Strategic dimensions of the promotion of innovation and technical progress

Economies which are open to trade and investment receive innovations through various channels, especially the importation of equipment and inputs, the granting of licenses, and foreign direct investment. In addition, but to a lesser extent, there are innovations deriving from domestic R&D in enterprises and public institutions. In order to adapt and make effective use of imported know-how and to keep up to date with new technologies, however, it is essential to develop local capabilities in enterprises, so that merely opening up to trade and investment is not sufficient in itself: complementary investments in human capital, a basic store of knowledge, institutions and infrastructure are also needed, especially in the field of information and communications technologies (ICT). Furthermore, in order for the national innovation system to take full advantage of the presence of foreign enterprises with their own technology, it is essential to maximize the production linkages between those enterprises and the local system.

¹² Each of these funds is set up under a law which identifies the share of sectoral income to be devoted to support for science and technology activities. In the case of the petroleum sector, the fund is formed from royalties on oil and natural gas production, while in the electricity sector, between 0.75% and 1% of the net income of the companies holding concessions for the generation, transmission and distribution of electricity is set aside for this purpose.

¹³ The "Green and Yellow" fund, for technological cooperation among the various actors, and the infrastructure fund absorb the major part (76% in 2003) of the resources mobilized and invested by the entire system of sectoral funds (see table 6.4).

1. The magnitude of the resources required

Innovation processes mainly take place in enterprises. However, both the externalities arising from technological development and the absence or severe imperfections of the markets for technology and R&D finance lead to insufficient allocation of private resources to innovation. Public policy must pursue a dual objective as regards science and technology: on the one hand, it must provide incentives for enterprises to significantly increase their innovation efforts and R&D expenditure, and on the other it must take measures to provide support for innovation, such as the training of specific human resources, the formation of technological infrastructure and the establishment of links among the actors, as well as furthering projects selected for their impact on the national innovation system.

Even if both these objectives are pursued, however, per capita public spending on science and technology is unlikely to approach the levels invested by the developed countries. With the exception of Brazil,¹⁴ the amounts spent by the governments of the other countries of the region in support of innovation cannot be compared with those spent by the developed countries or the Republic of Korea (see table 6.2).

The private sector of the region could considerably expand its innovative activities. While not talking about R&D spending on the scale of that practiced by enterprises in developed countries, where the technological research centres of global enterprises are located, there is nevertheless a broad field for innovation based on copying, reverse engineering or training, as well as for collective learning, while not ruling out the selective development of new products and processes. Latin American and Caribbean enterprises should therefore be encouraged to significantly increase their R&D spending, optimizing it in terms of technological capabilities and innovations, through programmes whose cost is commensurate with the resources that middle-income countries can allocate to R&D.

Public policies can exercise broad influence over private local innovation, both by shaping the context in which such innovation takes place and by providing signals, incentives and selective finance to influence the direction of innovation and supporting (and even motivating) investment by enterprises in technological capacity. At the same time, actions by public institutions to provide links with the national innovation system will help to deepen it and make up for the lack of markets in important segments of the network of relations among the agents making up that system, thereby helping to raise systemic productivity. For these tasks it is necessary to significantly expand public resources and make headway in the restructuring of the present science and technology systems in order to be able to finance a meaningful set of policies to promote innovation.

The countries of the region have reached different levels of development of their technological capacity and national innovation systems. On the one hand, the aggregate gaps with respect to the technological frontier as represented by the United States are enormous, while on the other hand the differences in per capita income between countries of the region (a difference of 5 to 1 between the five richest and the five poorest countries of the region) clearly show that the technological capabilities of many countries of the region are not comparable with each other.

In these circumstances, only the public and private spending on research and development of the most advanced countries of the region reaches levels that represent a critical mass of resources that can be applied reasonably effectively to finance a varied range of innovation processes. In the less privileged countries, these resources are only enough to support a few selected innovation promotion programmes, plus a few actions to strengthen linkages within the national innovation system.

¹⁴ Where the amount spent, in absolute terms, exceeds the R&D spending of Spain or Australia.

Despite these limitations, all countries, regardless of their size or income level, must necessarily make a constant effort to innovate or —especially in the case of developing countries— master new technologies, since all their enterprises are obliged to use new technologies, in view of the rapid and widespread process of technical change (Lall and others, 2003), and if some of them do not manage to do this, this would further increase structural heterogeneity. Coping with this dilemma between growing demands and limited resources is the main challenge for the technology policies of the countries of the region.

In view of the foregoing, there cannot be a single technological development strategy for all the countries of the region. Each country can, however, put together its own strategy in line with its resources, technological capacity, production development profile and form of insertion in world trade by designing actions and allocating resources in different dimensions of an overall strategy designed to bring about a sustained rise in productivity, within which the different private actors will have different roles to play.

2. Transnational corporations

Transnational corporations (TNCs) can make a potentially important contribution to the technological development of a country through their investments or decisions to set up a local subsidiary. In principle, host countries should be able to expect to gain access to the advanced technology of those firms and their capacity to make effective use of new technologies. From this standpoint, investment by TNCs is the quickest and most effective way of deploying new technologies in developing countries.

Most likely, the establishment of a subsidiary of a TNC in the country will mean flows of technological know-how and the development of local suppliers and sub-contractors, together with the training of local human resources, or the innovations made in the TNC's own operations will spread to the local system. For a long time, it was considered that these “spillovers” of foreign direct investment take place automatically and are always positive. The more recent literature, based on case studies, however,¹⁵ suggests that these effects do not take place automatically and are not always positive.

The nerve centre of the TNCs' R&D activities is generally located at their headquarters or in some developed country, so that TNCs tend to transfer the results of their innovations but not the innovative capacity itself. Moreover, TNCs may transfer only the technology which is most appropriate for taking advantage of the static factor endowment of the host economy (for example, assembly activities which use unskilled labour), and they may leave the country when the factor prices ratio changes (UNCTAD, 2000). Nevertheless, there are sometimes cases of decentralization of activities from the main R&D programme of a TNC to developing countries which have a good scientific and technological infrastructure, offer special incentives and have patents legislation which protects the results of the R&D. An ongoing effort to identify such opportunities can have significant effects in terms of the creation of technological capacity, by involving either local technological enterprises or only qualified local personnel (take, for example, the case of CORFO, with its specialized labour exchange which is available to TNCs).

Consequently, in this dimension of innovation strategy it is not so much a question of trying to attract as much foreign direct investment as possible, but rather of securing fresh “greenfield” investments which are of high quality in terms of their spillover potential —for employment or innovation— for the local economy and, in these cases, exploring and motivating forms of interaction between the investor TNCs and particular segments of the national innovation system. This selective approach can be expressed in special incentives for TNCs which comply with these

¹⁵ Liu and others (2000); Branstetter (2000); Girma and Wakelin (2001); Barry, Georg and Strobl (2001).

requisites, either through tax exemptions or subsidies.¹⁶ At all events, the local human capital endowment would appear to be a key factor for attracting foreign investment in general (World Bank, 2002) and, above all, for making possible spillover processes a reality.

3. Local enterprises and strengthening of the national innovation system

The most important dimension of an innovation promotion strategy is the creation of local technological capacity, when technology and know-how come from abroad. In reality, the existing capacity for producing and marketing innovations is very scanty by international standards (Porter and others, 2000). This is also reflected in the fact that —unlike the OECD and Southeast Asian countries— in Latin America and the Caribbean the number of patent applications by non-residents grows much faster than that by residents (Aboites and Cimoli, 2001). The capacity to effectively adapt and master foreign technology, however, is just as important, if not more so. For both purposes, it is necessary to significantly increase the innovation efforts of local enterprises and to strengthen the infrastructure and linkages of the national innovation system.

This dimension of innovation promotion strategy means that, in terms of public policy, it is necessary to establish incentives and create a suitable context for a substantial increase in the endogenous efforts of the private sector in innovation activities, especially those designed to create skilled jobs, win new export markets and/or develop local suppliers. At all events, the strategy requires a substantial increase in the number of enterprises that make systematic endogenous efforts at innovation and redoubled efforts on the part of those firms that are already engaged in such activities. It also means promoting the creation of new technology-based enterprises. There are, however, countries with enterprises which are already on the international technological frontier in their activities and are carrying out the R&D work needed to keep them there; in these cases, public concern should concentrate on minimizing the obstacles in this field and seeking to make those enterprises play a dynamizing role in the national innovation system.

The situation prevailing in the region —insufficient endogenous technological capacity, incipient national innovation systems, and meagre resources for financing innovation processes— forms a vicious circle in which it is difficult to formulate effective policies. Furthermore, the possibilities of financing innovation promotion policies are only relative —relative to the size of the economy in question and the tax burden— whereas many innovation processes demand, as a minimum, certain absolute levels of resources. These restrictions mean that, in order to be effective, innovation promotion policies must set themselves goals which really are attainable in the light of the present characteristics of the national innovation system and, in particular, the innovation processes under way in local enterprises. In most cases, this means focusing promotion actions on segments of the innovation system that are clearly capable of being strengthened, increasing network economies, and committing public resources to a few programmes that really are capable of being brought to fruition.

Public efforts to strengthen the national innovation system can take various forms, depending on the potentialities and shortcomings of each country. In all cases, however, they should be designed to improve or expand the infrastructure needed to promote innovation at the enterprise level and effectively ensure the complementarities generated by these factors.

¹⁶ Setting low rates of corporate income tax as a way of attracting foreign direct investment is a matter of controversy, for if it is a generalized concession it would also extend to domestic enterprises, which do not necessarily have the desired characteristics. Even if it is only a question of tax exemptions for foreign direct investment, however, the argument that they are crucial for attracting such investment is only valid if a considerable number of small open economies are competing for this type of investment through exemptions (thus sacrificing tax income that could be used for their social expenditure) and above all if there are no other reasons for a TE to locate its operations in the country which are more powerful than the question of tax exemptions (Avi Yonah, 2001).

A special category of measures among those contained in policies to strengthen local innovation capacity is that relating to the formation of clusters of enterprises carrying out innovation activities regarding advantageous natural resources (whether long-standing or only recently developed) which offer the greatest possibilities of generating fruitful synergies and the possibility of creating new comparative advantages based on the incorporation of knowledge into the basic resource in question (World Bank, 2002). Strictly speaking, such clusters represent sectoral/regional innovation systems and thus permit a more specific definition of the key linkages.

Another special category in a technological development strategy is that relating to support for new science or technology-based enterprises (“start-ups”). These enterprises, which are naturally small but knowledge-intensive and are set up for the purpose of producing some kind of innovation, can make important contributions to the national innovation system, but they need promotional actions in keeping with their characteristics: uncertainty of innovation, high costs of creation and start-up, and intangible assets that will not take shape until they are protected by patents.

Innovation in agriculture also depends to a crucial extent on sectoral innovation subsystems. In the previous technology policy model, State institutions for research, development and dissemination of agricultural technology (such as INTA in Argentina, EMBRAPA in Brazil or CEMYT in Mexico) exercised clear leadership in the innovations made in this sector. More recently, transnational seed-producing corporations have linked up with these institutions and come to play a central role in technical progress in agriculture.

A special case is that of agroindustrial clusters, which have the potential to be internationally competitive while distributing their benefits throughout the value chain, providing that it is possible to create a local innovation system in which small producers play an active part, yet from which the big processing enterprises also derive benefits (Guaipatín, 2004).

4. Modernization of small and medium-sized enterprises (SMEs)

A key dimension of any strategy designed to promote innovation is that of the modernization of the SMEs, whose development is of key importance both for helping to raise systemic productivity and for strengthening the bases for the generation of greater well-being among the lowest income groups of the population. Chapter 7 describes and analyzes the various SME support programmes that have been carried out in the region. Here, all that we wish to do is indicate the place that the different classes of SME should occupy in any national-level innovation promotion strategy.

This broad group of enterprises, however, is quite heterogeneous, both in size and organization and hence also in endogenous capabilities and possibilities of modernization. Although, in principle, any enterprise can increase its innovation capacity, the potential for doing so varies with a firm’s size, form of management organization, and the branch of industry or services it operates in. Small enterprises (6 to 20 workers), which employ 10% of the urban labour force of the region (ILO, 1999) form a stratum which can be stimulated through relatively limited programmes to heighten their capabilities, including in particular measures to computerize production and management processes. Medium-sized enterprises (between 21 and 100 workers), which employ 13% of the regional labour force, provide greater possibilities for change through programmes aimed at the formation or strengthening of endogenous capabilities and dynamic integration into the national innovation system, but such programmes are complex in terms of design and execution and involve a difficult financing component. At the other extreme of the scale, informal micro-enterprises (which employ 16% of the urban labour force) are another heterogeneous group, part of which could be incorporated in the modernization programmes for small enterprises, but the greater part of which would be better served through anti-poverty employment and training programmes

which take advantage of the existing entrepreneurial thrust to develop micro-enterprises and put them on a more solid footing than at present.

5. The digital infrastructure

An important dimension of innovation promotion strategies consists of measures to spread information and communications technologies (ICT), and especially the establishment and development of an informatics platform to make possible the development of networks and connectivity with the Internet. The Latin American and Caribbean countries have made rapid progress on these fronts (ECLAC, 2002a), which are of crucial importance not only for computerizing production in many areas but also for facilitating the operation of networks in the national innovation system and making possible the installation in the countries of some of the R&D activities of TNCs.

The speed and vigour with which computerization is spreading in all kinds of activities ensures an abundant supply by their transnational producers of both infrastructure and elements for individual use in the telecommunications and information processing fields. Furthermore, although the digitalization of production is still at an incipient stage in Latin America and the Caribbean, the ICT-based technological paradigm is spreading worldwide, and this will demand an intensive process of innovation in production processes. Quite apart from whatever share the countries of the region may have in innovations relating to ICT, they will have to face the much greater challenge of digitalizing production and management, which will demand an adequate digital platform and trained human resources to use it.

Chapter 8 below analyzes the content and priorities of national strategies for the information society.

6. The science and technology infrastructure

This infrastructure, which was the main pillar of technological development strategy in the previous technological supply model, is now just one more dimension of that strategy, although it continues to be a key element, responsible for linking together the national innovation system. In general terms, the science and technology infrastructure, made up of research centres, laboratories and researchers, must be strengthened and improved in quality, and it must be more clearly focused on those areas of science and technology which are complementary to or required by the innovation efforts of enterprises and of public agencies struggling with the most pressing social problems. Part of the knowledge which it was previously necessary to develop locally in order to facilitate the adaptation of imported technologies now comes codified in the systems themselves. On the other hand, the countries of the region now have the opportunity and need to carry out basic research in the areas of natural resources in which they have comparative advantages, in order to heighten or stimulate them (as for example in the cases of salmon in Chile, shrimps in Ecuador, marine resources which are valuable for tourism in the Caribbean, or forests all over the region).

7. Investment in human capital

Even if it is only viewed in terms of the knowledge and cognitive skills of workers, human capital is an essential resource for propelling the processes of innovation and its dissemination. Skilled workers—including highly skilled workers—possess tacit knowledge and can generate codified knowledge in the innovation process. This makes the higher education system a key dimension of the national innovation system, while it also establishes a necessary link between research centres and the other actors of the system.

From this point of view, the educational system plays a central role in the knowledge society and represents a source of creativity which, if properly activated, will provide the ideal environment

for innovation. A good basic education is the foundation for a skilled and adaptable labour force. At the same time, in the present-day world lifetime education is an important requisite for the absorption of new knowledge and continuous adaptation to new conditions.

Hence, the innovation promotion strategy must be accompanied by a coherent strategy for investment in human capital. Both these elements form part of the effort to create new comparative advantages with a greater knowledge content, in order to draw closer to the levels of productivity and living of the developed countries.

As noted in chapter 10, the new production paradigm, which tends to replace the demand for qualifications with a demand for skills, demands a solid foundation of basic and secondary general education in order to be able to acquire the skills required by the new technologies, plus effective training to change the available skills for new ones. This means that innovation at the enterprise level is strongly conditioned by the quality of human capital. In this field, as in R&D activities, the roles of enterprises and of the State must be complementary to each other: the State must have a strategy to improve the quality and content of basic and secondary education, while the enterprises must be persuaded to invest more resources in training.

IV. Policy formulation and coordination

1. Policy instruments

(a) Fiscal incentives

These are a traditional form of incentive which modifies the incentives provided by the market, since in developing countries these tend to be weak in the case of investment in innovation.

According to the experience of the OECD countries (OECD, 1996b), the best practices in the design and application of tax incentives for R&D include: (i) these incentives must form part of a coherent strategy; (ii) the deduction of all eligible expenses must be carried out in the same year in which they are made; (iii) the incentives must be applied in a flexible manner to enterprises at different stages of development, and (iv) they must include more favourable treatment for small or new enterprises, in order to promote a spirit of enterprise and aid innovative start-ups.

Various fiscal incentives have been introduced in the region to promote R&D activities. They have generally consisted of systems of tax deductions and tax credits for particular types of R&D activities, according to the categories of actors involved.¹⁷ Although these incentives are provided for in the legislation, however, they are not used by enterprises as much as they should be. Various causes may be suggested for this phenomenon: insufficient or ineffective information on these systems of incentives (where, how and when they can be applied), high transaction costs, etc. The most basic reason, however, is the same as that which keeps R&D expenditure by enterprises at a low level: the weakness of the prevailing culture with regard to innovation. If little is spent, little is deductible and the deduction seems to be of only minor importance, yet in fact (depending on the proportion deductible) the State could co-finance a significant part of private investment in R&D. Furthermore, these types of incentives have the advantage that they leave it to the enterprise to decide what to invest in.

An incentive which could be effective is the exemption from tax (total or partial, through a tax credit or subsidy) on expenditure on the acquisition of outside technology, which could cover the transfer of disembodied technology and the purchase of national or imported capital goods related with innovation. As this expenditure is usually several times larger than that on internal R&D, it should at least receive the same tax treatment.

¹⁷ FONTAR, in Argentina, for example, allocates such incentives by competition to R&D projects for technological modernization (see table 6.1).

(b) Direct public credit

Credit incentives are used in many developed countries. Their most frequent form is that of loans by public development banks or similar agencies for technological innovation and the acquisition of technology which include an element of official subsidy in the terms on which they are granted (OECD, 1997a). These loans are generally adapted to the element of risk in investment in R&D, with preferential interest rates and long periods of grace and repayment. In some cases, the repayment of the principal is subject to the success of the project.

In Latin America and the Caribbean, countries with tight budgets and limited development bank facilities are not well placed for the use of this instrument. However, the possibility of standardizing financial products and processes by the development banks offers an opportunity to give specialized attention to clients such as those embarking on innovative activities (Titelman, 2003).

(c) Subsidies

Subsidies to support scientific and technological development through the provision of non-repayable finance for research projects are common in the countries of the region. Indeed, they are the main instrument used in technology funds in Chile and are one of the instruments used by FONTAR in Argentina (see tables 6.3 and 6.5). They are also the main instrument for the allocation of the resources of the technology funds in Brazil (see table 6.4). In most cases, they are allocated to projects by competition according to the ratings given to them in the light of their conformity with the eligible subjects. The breadth of the subjects laid down determines the degree of targeting of the results pursued under the innovation promotion strategy. In most cases, these subsidies are awarded to research centres rather than enterprises; this is the approach taken by funds as different in their conception as those of Chile and Brazil.¹⁸

(d) Improving the incentives of the official science and technology system

The relatively substantial resources currently allocated to official science and technology systems include those corresponding to research programmes or projects, which represent subsidies. On the whole, however, and as a system of incentives for R&D, the activities subsidized in this way often lack coherence and are of uneven levels of importance. A good deal of progress could be made, in terms of incentives for innovation in line with the technological development strategy, if these subsidies were made to comply with priorities which were more clearly established in the national innovation system and, in particular, if the incentives given rewarded research projects that make a real contribution to knowledge and to interaction with the private sector.

(e) Risk capital

Innovation is an uncertain activity, so that investments in it are of high risk. Both loans and equity finance for these activities involve higher risks than those involved in investment projects based on established technologies. Moreover, the situation of start-ups is different from that of mature firms: technology-intensive enterprises (which are small in today's conditions) involve higher start-up and initial costs than other small enterprises, while innovations are as yet untried and the size of the potential market is unknown, all of which makes it difficult to obtain loan finance (Melo, 2001b). For these reasons, financing innovation in start-ups depends to a large extent on obtaining risk capital or direct public finance.

In view of the shortage of local sources of risk capital in the region, direct investment by governments in equity for R&D projects is very important. In order to make it available,

¹⁸ Although, in the case of the latter, enterprises do take part in the definition of the research programme to be competed for.

governments can invest in private venture capital funds so that the latter can invest in the equity of technology firms, or else they can create their own risk capital funds.

(f) Observation missions

Quite an effective means of improving technological capacity at the microeconomic level, which can have a significant impact on the participating firms and —through them— on the local innovation system, consists of sending observation and study missions to leading-edge plants in the developed countries (Ramos, 2000). In view of the need to seek out, transfer and systematically disseminate on a massive scale the leading-edge technologies and practices most suitable to local conditions in all sectors of activity, programmes of observation visits lasting several weeks by local entrepreneurs, managers, engineers and technicians to leading-edge plants in the developed countries can represent a highly effective and relatively low-cost component in this search process.¹⁹

(g) Technology dissemination services for small and medium-sized enterprises (SMEs)

These programmes make it possible to create networks that help SMEs to use technology to improve their productivity. The technology dissemination process consists of providing these kinds of firms with well-established technologies with which they can make gradual improvements. For this purpose, they are supplied with facilities for determining and satisfying their needs or with individual technical advisory assistance (UNIDO, 2002).

(h) Laboratories for transferable R&D

Unlike the “creative” R&D work done in the more technologically advanced countries, whose aim is to obtain new products and processes, “transferable” R&D seeks to assimilate, adapt and improve technology from other parts of the world. Public laboratories for transferable R&D can provide SMEs with services for the transfer of technology which is normally beyond their own experimental possibilities (UNIDO, 2002).

2. Resources

The fiscal resources devoted by the governments of the region to R&D are, as we have seen, insufficient to cover a broad science and technology infrastructure as well as providing a meaningful amount of subsidies for research and development. They are, however, substantial in fiscal terms because of the proportion of the budget that they absorb.²⁰ On the other hand, as already mentioned, much of public spending on science and technology goes to the existing institutional structures; many of these are very necessary, but they nevertheless immobilize resources that could go to new R&D programmes. These budgetary limitations are perhaps the main reason for the meagre results of most of the horizontal programmes implemented (regardless of whether or not they are integrated with a technology fund).

Intensification of the efforts being made in the field of innovation calls for greater resources than those currently available, so that the countries of the region should make a systematic effort to gradually increase the resources provided for innovation. This effort, however, will come up against the intense competition for these resources for various other priority objectives.

¹⁹ The Marshall Plan technical assistance programme for countries devastated by the Second World War operated along these lines, and this was also an important component in the efforts by Japan and later by the Republic of Korea to acquire modern technology by developing their own capabilities on the basis of copying or demonstration (Ramos, 2000).

²⁰ Spending by Latin American governments on R&D is by no means insignificant: for example, if compared with the total expenditure on education it is equivalent to 15% of that amount in Brazil, over 10% in Chile, and rather more than 5% in Argentina, Mexico or Uruguay.

Rationalization of the official science and technology system along the lines described above could provide part of the needed resources, by increasing the effectiveness of the subsidies given to that system of institutions. Changing the tax credits for R&D activities provided for in the tax legislation into funds (subsidies) to be allocated by competition could stimulate the use made of a subsidy which exists in the legislation but is little or wrongly used. The system of allocating subsidies for R&D through competitions designed in conformity with the general innovation promotion strategy could be expanded through loans from the World Bank or the IDB for that purpose, repayable from the results of the innovation process.

A system which should be used more often is that in which public resources for research must, in certain cases, be matched by private counterpart finance. This system could be applied to funds for use as subsidies for enterprises and to certain of the resources allocated to universities.

Another source of funds for supporting innovation which is little used in the region is the formation of funds from the income of some natural resource-based sectors.²¹ The resources thus obtained could be used for R&D in research institutes designed to generate innovations in the sector, either for product diversification, research into new technologies, or development of the capabilities of suppliers.²² In the case of sectors exploiting non-renewable resources, which currently enjoy ample comparative advantages, the resources could be used to promote reconversion of the activity or area in question or to increase knowledge of the potential advantages of the region, which assume particular importance when the resource loses its current advantages or is depleted.

3. Managing intellectual property systems

Effective management of intellectual property systems is a requisite for the creation and dissemination of knowledge. This management should respect international commitments in this respect, while also being carried out in harmony with other policies for the promotion of innovation. Most of the countries of the region have incorporated the intellectual property (TRIPS) agreements negotiated at the Uruguay Round (1986-1994) in their legislation and homogenized their patents systems (ECLAC, 2002a).

Evidence has recently started to emerge about the effects of the homogenization of intellectual property systems on the developing economies. Among the negative aspects are the increased prices of patented products and technologies and the curbing or obstruction of national learning processes by blocking the practices of imitation and reverse engineering (Commission on Intellectual Property Rights, CIPR, 2002). Moreover, as already noted, in Latin America and the Caribbean the number of patents applied for by non-residents grows much faster than the applications by residents. This tendency is associated with the use of patents by foreign companies to promote the marketing and importation of their products, which often works to the detriment of the development of local technological capacity.

Furthermore, the management of intellectual property systems in the countries of the region is poorly coordinated with their innovation promotion and production development policies. This lack of a strategic approach gives rise to under-utilization of the potential flexibility and opportunities offered by the current legislation and weakness of the institutional structures responsible for applying the prevailing rules.

There are also considerable differences between the countries of the region as regards their institutional capacity for handling intellectual property systems. Generally speaking, marked

²¹ This is what happens in the case of some of the technology funds set up in Brazil (those established for the petroleum, electricity and water resources sectors), which are financed from levies on certain components of the income of the sector in question (see table 6.4).

²² Along the lines of the resources earmarked by the State oil companies in some countries of the region.

weaknesses are observed in their capacity to appraise the effects of international agreements and negotiations and the capacity of institutions and enterprises to secure legal protection for the results of their own R&D.

In order to cope with the restrictions imposed by the homogenization process, the Latin American and Caribbean countries should promote a strategy to permit the renegotiation and more flexible use of the existing rules. An example of this is the interpretation and extension of article 6 of the Doha Agreement, whose provisions affect differently the innovative capacity of the pharmaceutical sector and access to medicines of prime necessity.

Likewise, better management and better use of the flexibility offered by agreements could be obtained through regional or subregional accords which, by expanding the scale of production and range of capacities, would make it possible to use mechanisms such as those described below.

- *Compulsory licenses.* Through this instrument, a license for the use of a patented technology may be granted by the government of the country where the patent is registered if the user has unsuccessfully tried to obtain such a license on the terms laid down in article 31 of the TRIPS agreements. The use of compulsory licenses, however, comes up against some conditions which are difficult to fulfill, and it often happens that the potential producer lacks the know-how to carry out reverse engineering and does not have access to a market big enough to enable him to get back his investment.²³
- *Parallel imports.* Before a patent runs out, countries can take advantage of products manufactured under license in other countries or for other markets, thus making possible their importation at a lower price.
- *The Bolar Exception.* This clause, also known as “early working”, allows generic producers to import, manufacture and experiment on patented products before the patent expires, thus making possible scientific and technological progress in the countries of the region.
- *Utility models.* This is a mechanism —also known as “little patent”— which permits the patenting of incremental innovations or improvements in designs, products and production processes.

The free trade agreements which the countries of the region are signing with the United States, however, incorporate more rigorous rules on intellectual property than those included in the TRIPS agreements. A strong intellectual property regime existing side by side with a weak national innovation system could, as already noted, adversely affect the rate of technical progress. Apart from the need to negotiate in free trade agreements forms of legislation which, while more advanced in terms of individual protection, are not as strong as in other developed countries, it is increasingly important that bodies for monitoring competition should keep a close watch on the new United States and European legislation and analyze intellectual property as a possible source of abuse of monopoly power.

4. Policy linkage and coordination

The countries of the region are faced with the challenge of moving towards a conception of technology policy which is more pragmatic than those applied in the past, which incorporates the interaction between supply and demand in the innovation process and makes use, in support of these objectives, of more effective instruments for each case and the linking up of different instruments according to the level of development of technological capacity.

²³ Brazil is one of the few countries which has managed to overcome these difficulties and has included the use of compulsory licenses in its national STD/AIDS programme.

In general terms, what is envisaged is an array of horizontal policies —to which in principle any firm can have access— which are designed to spread public goods and remedy static market failures such as those affecting training, R&D incentives, and technological services for enterprises.

As far as possible, the new horizontal policies should be proactive and should be designed to attain a critical mass of resources for their beneficiaries, in order not to scatter the scarce available resources over a large number of small projects, with the aim of achieving effective results more quickly. The combination of these two conditions calls for some degree of targeting, which should be in keeping with the national technological development strategy. While the technological services to SMEs should be open to all such enterprises, in practice preference could be given to those which are willing to form clusters, to band together to acquire technology, or to form part of technological information networks.

Within this context of horizontal policies, however, it may be necessary to include some selective policies in keeping with the conception of technology policy or the projection of existing technological capabilities. This would be so, for example, in the case of the need to enhance the international standing of some enterprises in the network by improving supplier-client relations or, more generally, to turn the generation and circulation of knowledge into dynamic competitive advantages within the network.

Likewise, in some sectors where there are already specific regulations or instruments and in some knowledge-intensive activities, horizontal policies should be supplemented with selective or targeted sectoral innovation policies. Similarly, in some regions where there is potential for innovation or the development of clusters, regional innovation policies need to be formulated which combine horizontal (and possible sectoral) policies within a particular territorial area.

The combination and coordination of horizontal, vertical (and selective) policies and measures to improve their position in global production networks is a typical practice of the most successful economies (European Commission, 2002 and 2003).

Policy execution requires a model adapted to the institutional capacity and level of production complexity of each country. As countries improve their institutional capacity and develop more complex structures of production they can extend the scope of their policies and develop vertical and selective policies in conjunction with horizontal ones. The simultaneous use of horizontal, vertical and selective policies is characteristic of the models used in the most advanced economies and of their capacity to take a pragmatic approach to policy design and action.

A good example of the linking together of policy instruments based on the reconciliation of strategic visions with the combination of skills possessed by the various actors is that of sectoral technological funds in which enterprises, scientific institutes and the public sector all take part in project formulation and execution, as well as in the design of the rules and mechanisms for allocation of the funds' resources.

The deployment of an innovation promotion strategy in the various dimensions in question calls for considerable coordination both in the design of the strategy and in policy formulation and execution. Strengthening the national innovation system demands careful coordination of actions and interventions as diverse as those aimed at promoting interactions between enterprises, their suppliers and clients, universities, public and private scientific and technological institutes and financial institutions.

These interactions must be promoted at all levels, but it is at the local level and in the development of clusters that they have the greatest possibilities of generating fruitful positive synergies through these coordinated actions.

On the other hand, not all the components of the national innovation system respond favourably to direct intervention. It is therefore crucial for the State and the public sector to show

their leadership qualities in carrying through the innovation strategy. Furthermore, the State can produce a public good with considerable impact in terms of the directions and magnitude of innovations and the creation of technological capabilities: productive and technological scenarios which serve as a means to coordinate the innovation processes of enterprises and whose interactive discussion leads to the identification of attainable complementarities, as well as serving as a frame of reference for the design of public policies to promote innovation.



Chapter 7

Entrepreneurial development and production chains

A decisive factor in a country's or region's economic and productive development is the availability, capability and quality of its economic agents. It has always been wrong to assume that the mere presence of people ensures a satisfactory supply of entrepreneurial human resources. Innumerable social, educational, cultural and economic factors deriving from a society's historical development go to make up the "entrepreneuriality" (spirit, vocation, creation, consolidation and quality) of a country, territory or region. In recent years, furthermore, the importance of synergies arising out of the business environment and relationships among agents has become increasingly apparent. In fact, they are crucial for learning and for the rate at which overall productivity improves.

To analyse the role of public policy in strengthening and coordinating business, at least three broad areas or situations need to be distinguished. In a society, indispensable business leadership is provided by the largest companies and consolidated trading groups. Their willingness to invest in large-scale or leading-edge projects and to open up new markets makes a significant difference to overall productivity growth. Transnational corporations likewise play an important role through their linkages with the local business system and with governments, as they undertake large investments and create the conditions for leading companies to become global players.

A different area is the dynamic of small business creation and the modernization of existing small enterprises to bring them up towards international standards of competitiveness. Until a few years ago little attention was paid to the issue of new entrepreneurial development

in modern economic contexts, whether as regards the entrepreneurial stage or the different phases in the establishment of the business.¹ The growing academic and techno-political interest in the issue is the result of a range of arguments and evidence suggesting a positive relationship between business creation and economic growth (OECD, 2001a) and its important role in renewing the socio-productive fabric, enriching the innovation process and creating new jobs (IDB, 2001).

A third area is that of entrepreneuriality in the informal economy, a customary part of the most vulnerable groups' survival strategies. In this case, governments have adopted functions whose aim is to bring these businesses into the formal economy and create the conditions whereby they can develop some accumulation capacity.

Lastly, the greatest challenge is to find the best way of fostering synergy and positive externalities in this heterogeneous array of enterprises. An enormous number of initiatives have been launched in the region since the 1990s, not only by public-sector bodies but also by individual companies, employers' associations, universities, international development projects and private-sector consultants, in a quest to stimulate interaction and partnership among companies and thereby create a comprehensive strategic vision and lay the groundwork for collective improvements in efficiency and productivity.

Albeit with varying emphasis, the production and competitiveness policy platforms (different terms are often used) of the region's countries have been taking this concern on board, chiefly owing to the critical importance that the "entrepreneurial" factor (structure, availability, capabilities and quality) has for central aspects of a country's economic development: consolidation of production chains, linkage with large companies to amplify secondary effects, international involvement, technological dynamic, etc.

Although the key to overall economic development is the level of productivity and the speed with which it rises, this is largely dependent on the behaviour of economic agents in a given macroeconomic environment, their willingness to take risks, to innovate and to invest, the pressure put upon them by their competitors and customers, their determination to cut costs and improve efficiency, their willingness to be constantly seeking out new opportunities and markets, and the emergence of external economies as complementarity and synergy are created among companies, among other factors.

The determinants of collective learning are still little understood, but they include the intensity and quality of interaction between actors and their environment. A company learns by interacting with customers or consumers, competitors and suppliers, and similar organizations and institutions. This interaction is moulded by the characteristics and dynamic of the market, the regulatory environment, the business climate, public signals (relative prices and incentives), the institutional context and the degree of linkage with and participation in the international economy.

The nature and speed of change in business and technology entail not only increases in short-term competitive pressure (most national markets are "contestable"), but also a latent and persistent future tension. This increases the general uncertainty characterizing investment (shortening periods of maturity and return) and affects the development of production strategies (at the macroeconomic level) and business strategies (at the meso- and microeconomic levels) of anticipation, information tracking, intelligence (on markets and technologies), active participation in international regulatory institutions and forums, and implementation of preventive measures.

¹ Development of business initiatives and ideas, identification and evaluation of business projects, fusion of economic and non-economic factors, actual creation of new economic agents, demands and requirements for support at the different stages of the process, optimum sizes and technology levels at the outset of the business, company growth and expansion, improvements to productivity and competitiveness, construction of company networks and clusters, consolidation in markets and over time, transfers and sale, succession in family businesses, etc.

This structural instability is being increased not only by the progressive opening up of economies and the appearance of major new international “players”, but also by rapid and widespread technological changes that are permeating all production activities, opening up new business opportunities, facilitating ever greater product differentiation, setting new production processes in train and quickly rendering commodities, processed products and even production models obsolete for reasons of efficiency in relation to sanitary, bromatological and safety-related costs and measures, among others.

Given the scale and implications of these new production challenges, governments are taking it upon themselves to address them, adopting different positions and strategies as the interests of their national production systems and their view of the future dictate. These differences, combined with the lack of any track record of learning and experimentation to build up knowledge of the success or otherwise of measures taken and to extract lessons from policy failures, make it hard to identify common approaches or prototype solutions.

This chapter aims to sketch out some areas of action, identifying approaches taken in production policy, particularly as regards entrepreneurial development, singling out some obstacles to the development of new types of initiatives and actions and discussing some lessons already learned during this exploratory stage. The chapter consists of two main sections, one examining the entrepreneurial process concept implicit in company creation measures and policies and the main orientations of support policies, and the second concentrating on measures to encourage inter-company link-ups.

I. Policies to create and support business enterprises

This section is organized around the three entrepreneurial areas mentioned in the introduction. The first subsection discusses policies oriented chiefly towards large modern enterprises, although it obviously has relevance for all formal businesses. The second looks at policies for small-scale formal enterprises, concentrating on two specific issues: small agricultural enterprises and policies specifically aimed at women entrepreneurs. The third analyses the issues surrounding informal businesses.

1. Modernization of the legal framework and tax incentives for production activity and investment

To strengthen private enterprise in open economies that are integrated into global markets, it is necessary to adapt and modernize the legal framework in which business activity takes place. For this reason, the countries have had to update their legislation and their administrative and bureaucratic procedures to help their companies operate competitively.

One area of action has been the revision of commercial codes, especially as regards legal personalities, instruments and new forms of business and financial organization such as joint ventures, franchises, temporary groupings of companies, temporary import regimes, free-trade zones, collaborative groupings, leasing, factoring, export consortia, post-dated cheques, operations in local and foreign currency, and others. It has also been necessary to modernize legislation dealing with company bankruptcy and liquidation and with debtor registers and rating. The results of each of these instruments or alterations have to be considered from a systemic standpoint of coherence and consistency among themselves and with regulations governing the economy generally.

It has also been necessary to undertake public policy initiatives to promote both local private-sector and foreign investment. One area of action has been the adaptation of the tax structure and fiscal incentives, not only to strengthen public finances but also to enhance entrepreneurs' confidence in the stability and transparency of the tax regime (ECLAC, 1998a). Here, a key objective is to reduce corruption and tax evasion to bolster business confidence and enable private investors to plan for the long term.

Governments have also worked hard to create opportunities for investment and direct intermediation between potential private-sector investors and development projects. This effort, which in some cases has involved governments offering overlapping and sometimes excessive incentives, has had two main thrusts: attracting foreign direct investment (FDI), which in many countries is oriented towards tax-free export zones, and privatizing State enterprises. The "hard" instruments used to attract FDI have mainly been tax incentives, the creation of tax-free export zones and the like, and foreign debt conversion mechanisms.

Box 7.1

MAIN FISCAL MECHANISMS USED TO PROMOTE INVESTMENT IN LATIN AMERICA

- General tax incentives are being applied to investment in the form of exemptions for undistributed profits, tax credits, accelerated depreciation and spreading of losses over several tax years, among others.
- Tax incentives for foreign investment have been consolidated and homogenized by means of tax exemptions and periods of grace, tax stability guarantees and special agreements for major projects.
- Efforts have been made to simplify tax regimes and give special facilities to micro and small enterprises, while special tax management mechanisms have been adopted for large taxpayers.
- Fiscal regimes have been created or maintained for specific sectors, such as mining, forestry or tourism (although the duration of these mechanisms and the benefits they provide are often excessive, they are very difficult to alter once established); tax-free export zones and special regimes for less developed regions have also proliferated.
- In large federal countries, subnational authorities have often made use of fiscal exemptions and incentives financed out of local taxes; in some cases this has resulted in intergovernmental disputes.

Over time, the investment promotion work done by governments has been adapted to international trade and investment regimes, with an increased role being given to international treaties that guarantee investments and prevent double taxation, occasionally within the framework of international trade agreements. Almost all the countries in the region are members of the Multilateral Investment Guarantee Agency (MIGA) and the International Centre for Settlement of Investment Disputes (ICSID), and are signatories to numerous bilateral investment treaties.

Since the early 1990s, governmental investment promotion agencies have been tending to turn themselves into mixed organizations, with different institutional arrangements for participation by the public and private sectors in their management. Again, while some have expanded their activities to include export promotion and the provision of business assistance services and credit to local investors, others have concentrated on promoting their countries generally and bringing together investors and support organizations specializing in particular types of assistance. On the whole, it can be said that agencies have evolved away from a traditional approach centred on a few specific sectors and projects towards a multisectoral and multiregional approach.² Although sectoral and local specificity has been preserved in promotion activities, the number of sectors and geographical areas targeted has increased.

² Views as to what the State should do to support business have shifted over time, tending to become broader in the region. Thus, for example, the industrial, technology and foreign trade guidelines of Brazil dated March 2004 extend the scope of State activities to objectives such as support for Brazilian companies seeking to increase the scale of their production activities. Setting out from the recognition that export and innovation capacity is positively correlated with the size of the company or group of companies concerned, and that Brazilian firms are small by international standards, it indicates that the State may act by: (i) approving legal instruments that make it easier for consortia of companies to obtain financing and (ii) encouraging companies to merge or act

A review of different national and subnational agencies, numbering over a hundred, reveals the diversity of institutional arrangements and operating methods, and brings to light the emergence and current predominance of institutions that deal with both domestic and foreign investors. An institution offering a full range of investment promotion services, export incentives, business assistance and credit is not necessarily better than one that concentrates on investment promotion activities. Each model may be efficient on its own, although institutions that only promote investment need to forge links with institutions that provide support for exporters, technical assistance and credit.

Although almost all the countries in the region have made regulatory changes and sought to implement an active investment promotion policy, there is little convergence and the benefits of region- or continent-wide trade integration are diminishing (and even tending to disappear in some cases), particularly for companies in small and less developed countries. By their nature, these promotion instruments mainly benefit large modern companies, and only limited benefits come through to smaller, less advanced ones. This has led most countries to adopt specific policies for small and medium-sized manufacturing enterprises, both rural and urban.

2. The entrepreneurial development process, main areas targeted by public and private action

(a) Setting up companies

In the most recent research on Latin America (see for example IDB, 2002), a sequential methodological approach has been taken to the entrepreneurial development process, in which three main phases are distinguished: (a) gestation of the project, (b) start of trading and (c) the initial development of the firm.

The first phase includes factors and events preceding the formalization of the business: (i) the motivations (economic and otherwise) for starting the business, (ii) the spheres (family, education system, business structure, business institutions) contributing to the development of business agents, (iii) the sources of business opportunity, (iv) personal and opportunity networks and (v) availability of and access to relevant information.

The second phase involves the decision point and the actual creation of the business: (a) the decision to start the business, (b) access to factors of production and mobilization of the necessary resources and (c) sources of financing. The last phase comprises the critical first few years of life of the firm, when many new businesses fail and the venture comes to nothing. The main elements are: (i) market positioning, (ii) financing of current operations and (iii) formation of the workforce, recruitment and hiring of suitable staff (technical, professional and blue-collar).

Studies following this approach have revealed specific features of the business start-up process in Latin America that have major implications for the design and implementation of public policies. They have also identified the different types of problem that characterize the various phases, the different strategies adopted by entrepreneurs in their search for solutions, and differing degrees of difficulty/priority in the obstacles detected.³

Another important finding concerns the large differences in motivation and successful start-up rates among new economic agents from social structures with different levels of internal segmentation and social mobility. In countries and regions with more homogeneous levels of education and culture and less fragmented or rigidly stratified social structures, there is greater

together in the interests of technological development and competitive innovation or more active participation in international trade (MDIC, 2003, pp. 15-16).

³ For example, start-ups in sectors such as information technology and communications that survive the initial development period are founded by more than one person. Generally speaking, there is a group of people with different skills and responsibilities in the emerging firm, in contrast to the image of the lone hero or individual microenterprise.

scope for an entrepreneurial career, since both work experience and networks of personal contacts play a critical role in the early stages.

These studies and the experience of policies implemented in the region yield a number of lessons that may be useful in dealing with the strategic challenge involved in the development and continuous replenishment of a competitive business base. Three implications are worth stressing: first, the most successful policies are those that clearly aim at stimulating the creation of firms operating in open, competitive markets and surrounded by complex competitive pressures and tensions right from the outset, even though the instruments are designed to mitigate the difficulties encountered in hostile business environments.⁴

Second, the development of entrepreneurship and encouragement for the successful launch of new entrepreneurs must be regarded as an investment that is strategic for the national or local level and that has enormous social, economic and political importance. Although in most cases businesses arise spontaneously as a result of personal factors and local sociocultural circumstances that are hard to transform in the short term, public- and private-sector intervention (particularly if conducted through business foundations and institutions) to encourage this process and “actively contain” potential entrepreneurs can send out signals and have very substantial demonstration effects on the social and productive structure.

Third, the experience analysed reveals a wide range of specific policies dealing with issues such as the removal of barriers (simplification of procedures), reduction of gestation times (help with advice and financing), adaptation of incentives to the phases of the entrepreneurial development process, the establishment of a financing infrastructure, access to consultancy services and to guidance and consultation sessions between new firms and “veteran” entrepreneurs and, crucially, support for the construction of a broad institutional structure, strongly rooted in the private sector and technical disciplines, that works along the lines of an institutional value chain.

(b) Support for small and medium-sized enterprises

The policies designed in the region’s countries in the 1990s to support small and medium-sized enterprises (SMEs) make up a complex landscape. Despite national variations, one common characteristic is that these policies are subordinated to the objectives of macroeconomic and competitiveness policy. The strategies followed have generally tended to ignore medium-sized businesses and concentrate on small ones and, increasingly, on microenterprises, basically because of their importance for job creation.

The institutions designing policies are alike in that they count for little in government structures and are seriously lacking in effective policy instruments and/or substantial financial resources. Although there were changes over the decade that gave ministerial or vice-ministerial status to the public-sector agencies responsible for smaller businesses in a number of countries, this improved standing has not meant greater executive capacity. Nonetheless, in the mid-1990s there was a clear resurgence of interest in active policies to promote small and medium-sized businesses, and the end of the decade was marked by the emergence of innovative support instruments whose effectiveness is generally acknowledged, although they have had little impact and have so far reached only a fraction of small businesses (Peres and Stumpo, 2002).

⁴ These need to be clearly distinguished from public policies based on a different type of concern that is social in nature and relates to low incomes, extreme poverty, underemployment and unemployment. Socially oriented microenterprise policy strategies face a different set of issues and are conditioned by other factors. This argument obviously does not imply a value judgement on the relative importance of one and the other, but merely seeks to point out that, for initiatives and the ventures themselves to be successful and efficient, they need to be designed, implemented and financed along different lines. A clear example is the level of non-refundable subsidy that should be used to promote the two and the critical moments of financing.

These initiatives, of which the most dynamic and best funded are the Micro and Small Enterprises Support Service (Serviço de Apoio às Micro e Pequenas Empresas - SEBRAE) in Brazil and the Production Development Corporation (Corporación de Fomento de la Producción - CORFO) and Technical Cooperation Service (Servicio de Cooperación Técnica - SERCOTEC) in Chile, are supplemented by the activities of private-sector or mixed organizations. Examples of such organizations include the regional business competitiveness centres (centros regionales de competitividad empresarial - CRECE) in Mexico, entrepreneurial development centres (centros de desarrollo empresarial) in Argentina and the National Network of Productivity Centres (Red Nacional de Centros de Productividad) in Colombia. In the Caribbean countries, the main initiative is the project backed by the International Labour Organization (ILO) to create small enterprise development units.

The substance of small business support policies has tended to become standardized, and it usually includes export promotion, technology take-up and training, especially for management. Apart from these three issues, the government institutions supporting SMEs provide information, advice and consultancy services, business management instruments (sometimes including financing or incentives to engage consultants to provide technical assistance to individual companies) and, increasingly, business linkage support mechanisms, both for supplier development and for partnership among groups of companies (Dini and Stumpo, 2004).⁵

Although initiatives may be of good quality and withstand cost-benefit analysis, the coverage of SME support instruments is far from being sufficient to have an appreciable impact on the economy as a whole. In both large and small countries, the number of companies that can be helped in this way is only a small percentage of the total. For this reason, more and more effort has been put into finding ways of dealing with groups of companies rather than isolated units.⁶

In many small countries, the institutional or financial capacity of governments to administer services of this type is not sufficient to ensure the provision of good quality services. In these circumstances, public-sector support for SMEs has largely come to depend on international cooperation. Although external cooperation services can be of excellent quality, everything is up to the judgement of external donors, and this can raise serious difficulties when, as often happens, efforts are not sustained and initiatives are abandoned once the projects financing them come to an end. Again, project design can owe more to the priorities of external donors than to the needs of the recipient country.

(c) Support for women entrepreneurs

In business, gender inequity is manifested in economic conditions that make it hard for women to save and accrue wealth, but also in cultural factors which result in the creation of laws and rules (written or otherwise) that restrict women's access to land, capital or education. Although some progress has been made recently, particularly with education, few improvements have been seen where factors of production are concerned.⁷

⁵ The best example of a business information service is the Mexican Economic Information Service (Servicio de Información Económica Mexicano - SIEM), which is probably the most advanced and has been replicated in many countries. Advice and consultancy activities cover company registration, the legal and tax situation, information on market opportunities, technological support and help with business networking. Management support is provided directly in some countries, for example by making available the GTZ business management toolkit, especially in the small countries of the region; elsewhere there are fiscal incentives and financing for consultancy services provided by private-sector organizations certified by the State body.

⁶ Since 2003, most of the support instruments used by SEBRAE have had to be channelled through so-called "local production arrangements" or specialized, localized business groupings. In the Chilean agricultural sector, however, the experience of INDAP, which also confined its support instruments to collective or partnership initiatives in the early 1990s, showed that partnerships created under duress or heavy pressure did not produce the hoped-for results, so that this requirement is now being relaxed.

⁷ See Gálvez (2001) for a discussion of the economic dimension of gender equity.

Notwithstanding what was said in the previous paragraph, many countries in the region have a long tradition of women running businesses (especially microbusinesses) in areas such as catering, handicrafts, trading and others, but expansion is often hampered by severe restrictions on access to credit and to new technologies and knowledge.

If these inequalities and the causes giving rise to them are not considered in entrepreneurial development policies, there is a risk that the very success of entrepreneurial development initiatives might deepen them. It is for this reason that small and microenterprise development policies in the region have been giving ever greater recognition to the need to include the gender dimension (see box 7.2), although much remains to be done. Table 7.1 gives a list of business improvement projects that explicitly seek to include women in production activities, particularly where small enterprises and the informal sector are concerned.

Box 7.2

INCLUDING THE GENDER DIMENSION IN BUSINESS SUPPORT PROGRAMMES

Efforts to bolster the competitiveness of micro and small enterprises focus on training, productivity, quality and information access. Despite the breadth of these programmes' objectives, the gender specificity of the population tends to be overlooked, partly owing to a lack of information. Although some policy proposals present statistical data on the participation of women in microenterprises, there is generally no qualitative diagnosis to identify the specificities of businesses run by women as opposed to those run by men. While some programmes do include women in their target population, they usually do no more than mention them (GTZ, 1999). Many programmes contain projects that are aimed at women more on account of their vulnerability than of their economic contribution.

Women have traditionally been included in programmes for needy segments of the population (subsistence, women and indigenous segment) with little access to financial and real (non-financial) services. Many of these programmes promote partnerships as a strategy for improving their economic activity (MINEC CONAMYPE, 2000).

In the 1990s, albeit to an insufficient degree, all the countries in the region adopted national plans that included objectives and pursued programmes relating to the economic and employment rights of women. Following different approaches to programme and policy design and implementation, governments are gradually setting goals that aim at greater recognition of women as economic actors, seeking to give greater recognition to the contribution they make and providing benefits aimed at doing away with discrimination and exclusion that affect their quality of life and work, and thence society as a whole (Daeren, 2001).

The most successful programmes have a common characteristic: they are collaborative initiatives that often involve three key groups (women's business organizations, non-governmental organizations and government agencies) (Week and Seiler, 2001). Incorporating a gender perspective into productive development proposals designed to improve productivity and reduce heterogeneity does not mean "making projects for women" but explicitly applying measures and instruments that set out from a recognition of difference to create the general conditions for equalizing opportunities.

(d) Support for small agricultural producers

Although governments in a number of countries in the region have continued to intervene directly in staple grain markets owing to the large number of producers involved, such intervention has been progressively replaced by development instruments that are horizontal in nature and by productive development programmes targeted at small family farms. Priorities vary substantially from one country to another, as figure 7.1 shows.

In Brazil, Colombia, Costa Rica and Mexico, a large share of resources has gone into marketing support policies. In Colombia and Costa Rica there are national marketing support programmes in selected subsectors (e.g., milk and flowers in Colombia and fruit and vegetable production in Costa Rica). In Mexico and Brazil, intervention has concentrated on programmes to support the marketing of staple grains.⁸

⁸ In Brazil, increasing use of instruments such as the Production Distribution Premium (Prêmio de Escoamento da Produção) and sales option contracts have yielded substantial savings in the minimum price guarantee policy for wheat and maize (Gasques, 2001a). In

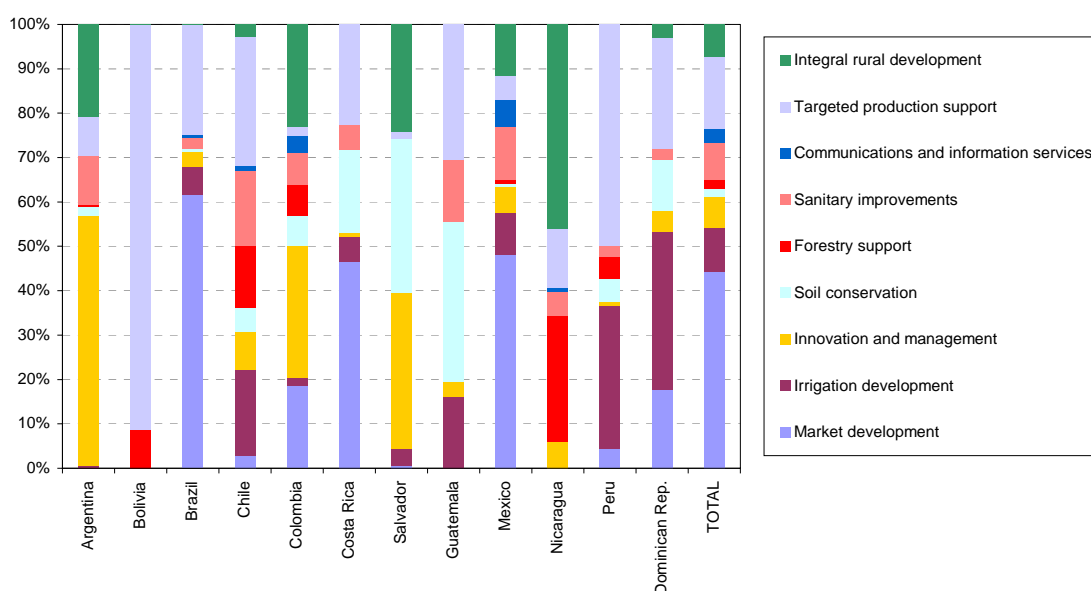
Table 7.1
**GOVERNMENT PROGRAMMES AND PROJECTS RELATING TO GENDER EQUITY
 IN BUSINESS AND COMMERCIAL DEVELOPMENT, BY
 IMPLEMENTING INSTITUTION, 1990s**

Ministry of economic development, industry or trade	
Bolivia	Vice Ministry of Industry and Internal Commerce: Action Programme for Women in Productive Microenterprises and Small Businesses (2000)
Guatemala	Ministry of Economic Affairs: National Microenterprise and Small Business Development Programme
Honduras	Ministry of Industry and Trade: Rehabilitation of 40 SMEs from one of the markets in the capital where 30% of owners are women Ministry of Industry and Trade: Reconstruction of food outlet booths owned by women
Paraguay	Ministry of Industry and Trade: Foreign Trade Promotion Project, formulated with a gender perspective and agreed with women's NGOs carrying out production activities with export potential Ministry of Industry and Trade (in conjunction with the Ministry of Labour and Justice and the Women's Bureau): System of Training Bonds for Microenterprise Ministry of Industry and Trade: Handicraft Promotion Service (80% of craftworkers in Paraguay are women)
Peru	Ministry of Industry, Tourism, Integration and International Trade Negotiations: Range of business sector support programmes in which a gender policy is being promoted
National machinery for the advancement of women	
Argentina	Global Credit Programme for Microenterprise and Small Businesses: training programme (1994-1997)
Cuba	Local project aimed at the small-scale marble-working industry
Dominica	European Union Stabilization of Export Earnings programme: Project skills training and microenterprise development (1995 to the present): intended to improve the socio-economic status of rural women
Haiti	Credit Project for women in poor areas of the capital
Paraguay	Women and Production Project: broom factory Project to improve household food-growing
Other executing agencies	
Brazil	Employment and Income Generation Programme (Programa de Geração de Emprego e Renda) (1995): Provision of credit to small producers Letter of Credit (<i>Carta de Crédito</i>) Programme: Women received a third of all financing granted between 1996 and 1998
Cuba	Production programmes in Pinar del Río, Havana and Granma
Dominica	Credit programmes: loans available on favourable terms to women through financing bodies (growing numbers of women are obtaining financing for economic activities) Poverty alleviation programme: empowerment for the most vulnerable
Mexico	Nacional Financiera: Women Entrepreneurs – Women Producers Programme, part of the Global Programme for Microenterprise Development (2000)
Peru	Microenterprise Development Fund (FONDEMI): 40% of beneficiaries have been women MIBANCO: Microfinance institution: Portfolio of 22,456 women as of 30/06/1999 Property Formalization Commission (COFOPRI) - Urban area: upholds principle of equality in the granting of title Natural Resource Management Project for Poverty Relief in Mountain Areas: supports business initiatives by women INIA: Systematic irrigation project for sustained vegetable production, targeting eight mothers' clubs in the department of Ayacucho

Source: Lieve Daeren, "The gender perspective in economic and labour policies: state of the art in Latin America and the Caribbean", *Mujer y desarrollo series*, No. 29 (LC/L.1500-P/E), Santiago, Chile, Economic Commission for Latin America and the Caribbean (ECLAC), February 2001. United Nations publication, Sales No. S.01.II.G.44.

Mexico, meanwhile, use of price support mechanisms has been cut back substantially in favour of the Direct Income Support Programme (Programa de Apoyos Directos al Ingreso - PROCAMPO) (Salcedo, 1999).

Figure 7.1
**COMPOSITION OF PUBLIC SPENDING ON AGRICULTURAL DEVELOPMENT
 AND RURAL SUPPORT, 2000**



Source: George Kerrigan, “Gasto público hacia el sector agrícola y desarrollo de las áreas rurales: tablas por países”, document presented at the seminar “Public Spending for Agricultural and Rural Development in Latin America and the Caribbean” (Santiago, Chile, 28-31 August 2001).

Bolivia is a prime example of a country that has targeted its production support programmes on small producers. Its resources come almost entirely from external donors, essentially the Food Security and Alternative Development programmes, whose main objective is to combat drug trafficking (Navajas, 2001). In this same category are programmes for land title and purchase for rural settlements (Costa Rica, Mexico and Peru), credit in kind, including machinery and inputs (Nicaragua and Peru) and technical assistance, training and credit for the improvement of small-scale farming, such as those implemented by the National Programme for the Improvement of Family Agriculture (Programa Nacional de Fortalecimiento da Agricultura Familiar - PRONAF) in Brazil and the Agricultural Development Institute (Instituto de Desarrollo Agropecuario - INDAP) in Chile.

As regards the provision of production support services, substantial progress has been made in most of the countries in the last decade, albeit to differing degrees. For example, Argentina, Chile, Mexico and Nicaragua have devoted a large proportion of public spending to agricultural development programmes designed to improve sanitary conditions in the sector (Kerrigan, 2001), yielding good results with the elimination of animal and plant diseases.⁹

Some countries have concentrated their agricultural support efforts on technology transfer, particularly to small producers. In Argentina, for example, resources have been switched away from research and towards agricultural extension services (Paulino, 2001). In Mexico, two public-sector agricultural extension programmes were created in 1996: the National Rural Extension Services System (Sistema Nacional de Capacitación y Extensión Rural Integral - SINDER) and the Elementary Technical Assistance Programme (Programa

⁹ See Ghezán, Mateos and Elverdín (2001) for the case of Argentina; Niño, Echávarri and Godoy (1999) for the case of Chile; OIE (2001) for the case of Mexico; and Rodríguez (2001) for the case of Nicaragua.

Elemental de Asistencia Técnica - PEAT).¹⁰ Nicaragua is also a case in point, the country having implemented a programme that includes both the provision of improved seeds to staple grain producers and a technical assistance component.¹¹

Lastly, some countries have invested a significant proportion of resources in programmes to support conservation of natural resources in the private sector, examples being the programmes to recover damaged soil in Colombia and El Salvador and the incentive programmes for forest management activities in Costa Rica and, more recently, in Guatemala.¹²

Despite these efforts, the coverage and quality of production support services are deficient by comparison with developed countries (IICA, 2003). This accounts for the growing participation of the private sector, for example in technology transfer and in the provision of technical assistance to producers, especially in the most dynamic subsectors.¹³ The role of the private sector is particularly important in the case of proprietary technologies such as genetically modified seeds (Portilla, 2000).

3. Policy towards informal enterprises

Although informal enterprises do not have a recognized status and are not subject to proper production and employment regulations, they produce and distribute goods in the markets and have numerous interrelationships with the formal economy. About two thirds of all new jobs created in the region during the 1990s were in the informal sector.

The way these enterprises are viewed from a public policy perspective betrays a certain ambiguity since, on the one hand, they are appreciated as a source of livelihood for vulnerable groups and are a seedbed of entrepreneurship while, on the other, they form areas of the economy where the lack of standards and regulations often undermines the common good and the profitability of formal enterprises.

Institutional and legal difficulties are among the main causes of informality. It is costly to register a company, in both time and money. Furthermore, once a company is registered its owner has to comply with all sorts of requirements concerning taxes, labour standards, protection of the environment and operating permits, which represent barriers to entry in the formal economy and hinder access to formal support mechanisms. Some countries have made efforts to reduce the formalities and costs involved in registering companies and substantial progress has been made in some cases although, as table 7.2 shows, there is still a long way to go.

¹⁰ SINDER concentrates on small and medium-sized traditional farmers, including those producing staple grains, coffee, oilseeds and milk. PEAT targets producers of staple grains, especially maize and beans. In the latter half of the decade the Mexican Government also created the "kilo for kilo" programme that allows farmers to swap their conventional seeds for improved ones (Salcedo, 1999).

¹¹ See Ministerio Agropecuario y Forestal de Nicaragua (2002).

¹² See Perry (2000) for the case of Colombia. For El Salvador, see FAO (2001a) and Acevedo, Barry and Rosa (1995). Costa Rica has two public-sector incentive programmes for the conservation of private-sector resources, Environmental Services Payment (Pago de Servicios Ambientales - PSA), whereby forest owners receive a subsidy for environmental services produced on their property such as protection of water and biodiversity and mitigation of greenhouse gases, and Forest Payment Certificates (Certificados de Abono Forestal - CAF), used to finance reforestation and subsidize forest protection and management activities (Arce, 2001 and Barrantes, 2002). Guatemala is implementing, albeit experimentally, a programme very similar to the Costa Rican Environmental Services Programme (Programa de Servicios Ambientales), the Direct Forestry Support Pilot Programme (Programa Piloto de Apoyos Forestales Directos), with IDB financing (Guatemalan Ministry of Agriculture, Cattle and Food, www.maga.gob.gt).

¹³ Such as poultry in Mexico (Salcedo, 1999), fruit and raspberries in Chile (Murray, 1999; Guaipatín, 2004b) and vegetables in Guatemala (Dirven and Ortega, 1996).

Table 7.2
COMPANY REGISTRATION PROCEDURES, SELECTED COUNTRIES AND REGIONS

Country/Region	Number of procedures	Time (working days)
Argentina	12.0	71.0
Bolivia	20.0	82.0
Chile	12.0	78.0
Colombia	17.0	55.0
Ecuador	12.0	141.0
Mexico	15.0	112.0
Uruguay	9.0	105.0
Venezuela	15.0	124.0
Latin America	13.5	92.7
Africa	12.0	83.0
Europe	9.3	59.5
Asia	10.0	71.1
United States	4.0	7.0

Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of information from World Bank.

The main issue being addressed by the countries of the region, directly or indirectly, is that of finance. The lack of accounting records, which impedes economic and financial evaluation of clients, and problems of scale, owing to the fact that small loans yield little or no profit for banks, debar this group of persons or organizations from the conventional financial system.

Institutions have been created in the region (non-governmental institutions, saving and loan cooperatives and associations, and informal organizations) to offer financial services to sectors that face obstacles to access where traditional financing is concerned. Helpful support has also been given by outside development agencies which, as well as granting access to revolving funds and additional sources for investment and operating expenses, have used innovative methodologies to set up lending programmes based on similar experiences in other countries.

Microfinance institutions have made progress in the last decade, increasing the resources from commercial institutions and capturing public savings. They are faced with a serious problem, however, in that they lack the reliable information mechanisms needed to attract commercial capital to their activities, and although progress has been made in key areas, microfinance has not so far reached the volume of funds required by this kind of company.¹⁴

The main cause of the problems suffered by microenterprises is their isolation, both from institutions and from real and financial markets. This isolation, which denies them technological know-how and information of importance to their businesses, stems in turn from the fact that these firms normally operate outside of laws and regulations. Thus, informal operations should not be viewed merely as a way of avoiding taxes or labour charges, but as the fundamental obstacle to the successful development of companies of this type.

As a result, strategies to support microenterprises may include measures to increase the resources available for financing their activities and/or instruments that help these companies obtain information of importance to their businesses or knowledge of the technologies most appropriate to their production processes, but they need to centre on the creation of mechanisms

¹⁴ Emphasis should be laid on the development of information technology systems adapted to the sector's needs, of internal and external control systems with information for the public, benchmarking against the standards of similar institutions and systems of rating and performance evaluation by specialist agencies. There has been institutional development of these systems, as in the case of the financial facility for carrying out such evaluations through an Inter-American Development Bank Fund that has financed the production of reports for 100 or so microcredit institutions (Microfinance Rating and Assessment Fund). See the Microfinance Gateway (www.microfinancegateway.org/highlight_donordependency.htm). In Mexico, for example, the percentage of urban microenterprises drawing on some type of credit has held steady at about 13% since 1992, despite the emergence of some successful microfinance institutions.

that facilitate and encourage access to formal operating conditions. Formalizing microenterprises will not by itself ensure that they live up to their full potential, but it is a first necessary step in that direction.

II. Entrepreneurial linkages

The entrepreneurial support policies outlined in the previous section cover a wide range of objectives and instruments. Where actual implementation is concerned, time and flexibility have inevitably been needed to adapt them to the progressive stages in the learning curve of policy design and execution. Not only the experience of Latin America itself, however, but the practice of more developed countries and the theoretical ideas drawn from this, have shown that policies oriented towards individual companies are not enough.

The seminal work of Porter coined the term “cluster” to designate geographical concentrations of specialized firms whose dynamic of interaction gives rise to increased productivity and efficiency, lower transaction costs, faster learning and the spread of knowledge. This approach was not entirely new, however, since in Europe (especially Italy) there was already a vast body of research into industrial districts that pointed to similar cluster-derived externalities.

The geographical situation, the business structure, the type and breadth of productive specialization and the institutional context are variables rooted in a long process of quasi-natural evolution.¹⁵ Recognition of the existence of these business configurations and of the strategies implicit in their evolutionary processes gave rise to a concern about how best to use economic policy to speed up or improve these processes. Other concepts were developed (“production chains”, “local production systems”, “networks”, “*filières*”, “*arranjos*”, “local innovation systems”), often as a way of better expressing certain phenomena that already existed in practice, often again to suggest particular forms of intervention.¹⁶

A good question is whether specialized business clusters in Latin America display characteristics of their own that differentiate them from their counterparts elsewhere. ECLAC has studied dozens of these business groupings and has been able to peruse hundreds of studies by other institutions, in Latin America and elsewhere. Box 7.3 below identifies two of these case studies.

Examination of these business realities and developments reveals certain key features of the most typical structures in the region. The characteristics that differentiate Latin American clusters from those found in more developed regions lie principally in the structure of their components and the type of product or function.

- **Heterogeneous structures:** Many Latin American clusters have a multipolar business structure, with companies of different sizes (from micro to large) and ownership types (domestic private-sector, public-sector, subsidiaries of transnational corporations) coexisting.
- **Basic products and functions:** Clusters are generally oriented towards products and functions that are relatively simple or for which a natural or inherited advantage exists: natural resources, services and products consumed on a mass scale in the domestic market, assembly processes that depend on global production chains.

¹⁵ See Enright (2001).

¹⁶ Again, policies to support clusters, chains, networks or districts have led to the emergence of a substantial number of consultancy firms specializing in their design and implementation.

Box 7.3

A CENTURY OF SUGAR IN THE VALLE DEL CAUCA

Over the course of a century, a production cluster based around sugar cane has grown up in the Valle del Cauca. This cluster, composed of hundreds of companies producing a great variety of goods and services, is the backbone of economic and social development in Cali and the surrounding region. The sugar production complex consists of some 1,200 cane growers cultivating 200,000 hectares; 13 refineries; more than 40 companies that process foods, drinks and spirits; two electricity cogenerators; a paper manufacturer; three sucrochemical companies; over 50 large specialist suppliers; 88 working partnerships and a workers' cooperative. The cluster also has the support organizations typical of the sugar sector and a large network of public and private institutions to back it. The base of the cluster alone, consisting of sugar growers, refineries and the companies that add value to the product, accounted for 1.4% of Colombia's national GDP in 2000, some US\$ 1.138 billion. In the immediate region, it accounts for about 10% of GDP and 42% of agricultural GDP.

The cluster supplies the whole of the Colombian sugar market and has been exporting a growing proportion of its output, chiefly to Andean Community countries, Sri Lanka, Chile and the Caribbean. Exports of sugar, paper, sucrochemicals and confectionery totalled US\$ 316 million in 2000. The cluster developed over the whole course of the twentieth century, in four phases: commencement, growth, integration and internationalization. In the different phases it is possible to identify distinct competitiveness strategies emerging with cumulative effect out of initiatives by leading companies and the public policies that grew up around them. The table below summarizes the stages of development, the external and internal events that marked each stage, the public policies associated with them and the business strategies characterizing them.

STAGES IN THE DEVELOPMENT OF THE SUGAR CLUSTER

Period	External and internal events	Public policies	Strategies
Commencement stage 1900-1925	<ul style="list-style-type: none"> - Opening of the Panama Canal - First World War - Rise in the international sugar price 	<ul style="list-style-type: none"> - Construction of the Cali-Buenaventura railway - Development of the port of Buenaventura - Creation of the Department of the Valle del Cauca - Highways to Cali, Bogotá, Medellín 	<ul style="list-style-type: none"> - Construction of the core business - Integration of independent value chains
Growth stage 1926-1958	<ul style="list-style-type: none"> - National economic emergency, 1925 to 1930 - Great depression, 1930 	<ul style="list-style-type: none"> - Adoption of the import substitution model - Integration of national connecting infrastructure - Creation of support institutions 	<ul style="list-style-type: none"> - Technological progress - Differentiation of the core business - Consolidation of negotiating power
Cluster integration stage 1959-1990	<ul style="list-style-type: none"> - Cuban Revolution, 1959 - Allocation of quota for exports to the United States - Rise in the international sugar price 	<ul style="list-style-type: none"> - Agrarian reform, 1966 - Adoption of the import substitution model with export promotion - Salvajina project, 1984 	<ul style="list-style-type: none"> - Inclusion of new growers - Cooperation strategy - Productive integration and diversification
Opening and internationalization stage 1991 to the present	<ul style="list-style-type: none"> - Andean integration process - Andean Tariff Preferences Act - World glut of sugar - Economic crisis and severe recession in 1999 	<ul style="list-style-type: none"> - Adoption of open economy development model - Domestic price stabilization mechanisms. 	<ul style="list-style-type: none"> - Rising exports - Investment abroad - Commitment to the environment - Change in core business

Source: Centro Nacional de Productividad - Colombia (CNP), "El conglomerado del azúcar del Valle del Cauca, Colombia", *Desarrollo productivo series*, No. 134 (LC/L.1815-P/E), Santiago, Chile, Economic Commission for Latin America and the Caribbean (ECLAC), December 2001. United Nations publication, Sales No. S.02.II.G.129.

Clusters have an evolutionary dynamic of their own, and it is in line with this that they are shaped, emerge and grow, cope with problems, contradictions and conflicts that often result in transformations and reorientations, and may mature, stagnate and collapse. Consideration of the cases studied and known about brings to light some typical tendencies in the dynamic of Latin American clusters.

- The clusters characteristic of the region are relatively new, particularly by comparison with European examples. In many cases they have developed surprisingly quickly. In 10 or 20 years, they may change their structure, type of specialization, marketing channels and styles, dynamism and markets, and not always for the better.
- Their emergence is often triggered by fortuitous circumstances that disrupt existing balances in the market. Wars, some local or international policy initiative, a large investment, the difficulties of some dominant producer, the appearance of a new technology or some other such event gives rise to a sudden business opportunity. Entrepreneurship is required to take advantage of this, as is a flexible legal and institutional framework that makes it possible to venture into new production activities.
- The cases studied in the first instance developed positively and successfully; of the perhaps more numerous “failures” there naturally remains little sign. The early stages of success are often a time of great dynamism, driven by private-sector investments and the individual strategies of pioneering firms, a clear “comparative” or “inherited” advantage in the market and a political environment that contributes with public-sector investment to the creation of the “hard” infrastructure needed for the scale of production to increase.
- The boom stage is followed by one of maturation, sometimes characterized by the emergence of small enterprises following the pioneers’ lead; the arrival of goods and services providers; a decline in dynamism and profit margins, and thence a search for greater productive efficiency. There may be periods of crisis owing to overinvestment and market saturation. Consequently, companies adopt strategies of diversification or reorientation towards other markets or products. The challenges for public policy multiply; success requires the creation of new competitive advantages through investment in human resources, research and technological development.
- In a few cases, clusters move on to a higher stage in which they come to occupy a leading place at the world level. This can only happen if they involve themselves with international logistics and distribution; invest outside their original markets; invest in the creation of new knowledge; and properly address their complex interactions with the environment and social setting in which they operate.

In Latin America, production clusters often exhibit an unsatisfactory pattern of development. They find it difficult to bring in higher value-added links in the production chain, and specialize in low-productivity activities. Very few have managed to build the foundations required to sustain superior competitive advantages, to use Porter’s term; very few indeed have become forces to be reckoned with at the world level.

To the question as to why Latin American clusters often do not display a satisfactory development pattern, the answer needs to be sought, in line with the argument above, in the inadequate quality and intensity of the interaction among firms. The creation of a system of interrelationships among companies and between these and their economic and institutional environment generates competitive advantages that no one company could achieve on its own (Bianchi, 1997; Schmitz, 1995).

The advantages that economic collaboration with other independent companies offers include cost reductions through bulk buying, access to markets with large volumes of demand (such as exports or large retail chains), the incorporation of technologies, and acceleration of the learning process through systematic sharing of experience, extension of the contacts network and specialization of production processes, among others.

The market does not guarantee that such systems of relationships among companies will emerge spontaneously, since the sum of information and coordination costs (Bianchi, 1997) and the habitual reluctance of business people to undertake projects jointly with their peers limit the scope for capitalizing on the potential benefits of partnerships and on the investment in learning that companies would have to make to adjust their set routines to the requirements of collaborative working.

Box 7.4
THE CHILEAN SALMON CLUSTER^a

Stage of the cluster	Initial learning 1978-1985 from 50 to 900 tons price: US\$ 9-10/kg.	Maturation 1986-1995 from 1,350 to 143,000 tons price: US\$ 4-5/kg.	Globalization 1996-2003 from 150,000 to 400,000 tons price: US\$ 2.9-4.5/kg.
Main objective	Survival of fish	Higher output	Higher productivity
Destination market	Fresh product for elite markets	Frozen product going mainly to Japan	Fillets and portions to United States Market diversification: Japan, United States, niches in Europe and emerging markets
Marketing channels	Direct sale and cooperatives	Brokers, Salmoexport (partnership)	Wholesalers (supermarkets) Strategic alliances or integration with retail outlets
Technological challenge	Experimental fish farming, fattening techniques	Backward linkages (fish farming) Quality certification Larger-scale production	Local production of eggs Forward linkages (processing) Automated control systems for water, light, etc. Vaccinations and food Sustainability of the complex
Public policies	Regulation Technology transfer Pre-competitive investment and research	Infrastructure Promotion and marketing (trade missions) Innovation and technological development of suppliers (cages, nets, foods)	Environmental management Higher productivity and technology transfer (technology missions) Biotechnology (diseases and genetic management)
Type of firm in the cluster	SMEs	SMEs with the presence of foreign groups	Large enterprises (integration and concentration) Some multinational corporations
Type of supplier	Few and undependable: companies in the cluster try to be self-sufficient	Outsourcing: companies in the cluster become more professional	Specialist local SMEs; large presence of highly specialized multinational corporations
Externalities	Demonstration effect	Access to providers Critical mass reached	Dissemination of good practice
Social capital	Pioneering public and private efforts	Partnership among producers	Production system integrated into a global production and marketing chain

^a Barely 25 years old, the Chilean salmon cluster accounts for about 98% of domestic production and 25% of world production and employs over 40,000 people directly and indirectly. The heart of the cluster currently consists of over 500 salmon farms, 34 processing companies and some 150 direct suppliers, as well as about 100 goods and services companies located in the area whose output goes partially or occasionally to the cluster. See Montero (2003).

For this reason, different mechanisms have been developed to support business linkage, both among groups of small and medium-sized companies (“horizontal networks”) and between large client companies and a number of small or medium-sized suppliers (“vertical networks”) (Dini and Stumpo, 2004). Likewise, there has been support for the development and growth of so-called “territorial networks”, a term which designates activities undertaken by a group of economic and

institutional actors in a given area with a view to securing competitive advantages that can be appropriated by its members (Schmitz, 1995), and the increasing involvement of these clusters in value chains (Pietrobelli and Rabellotti, 2004). Some experiences are outlined below.

1. Partnership among small enterprises: horizontal linkage

The programmes that have been applied in the region to stimulate SME partnerships embrace a range of objectives, including export development (PREX in Argentina, Export Committee of PROCHILE), technological modernization (PAIDEC and PCT in Mexico's CONACYT and FONTEC in Chile) and improved business management (FAT and PROFO in Chile, the Industrial Integration Programme (Programa de Integración Industrial) in Mexico and UNIDO programmes in Central America).

The financial constraints on public policy in the 1990s led to the increasing inclusion of collaborative schemes in development programmes as a way of responding to the need for lower programme operating costs by distributing the fixed cost of support activities among a larger number of beneficiaries and increasing their administrative efficiency.

At the same time, as already noted, this approach opens the way for side-effects that tend to increase the effectiveness of policy instruments. First, initiatives acquire greater visibility, and this reduces the problems of dispersion that affect programmes oriented towards very large numbers of companies. Second, the creation of inter-company cooperation systems stimulates the generation of competitive advantages and externalities which help consolidate and speed up the company modernization process and thence make it more likely that programmes will yield results (Dini, 2002).

Most of these programmes combine two elements: (a) provision of a non-financial subsidy, usually partial and subject to conditions, to help defray project operating costs; (b) technical assistance to forge links among companies, with professionals being engaged to provide information and technical support for the coordination of partnership activities with the aim of reducing risks and mistrust among participants and thus generating and consolidating collective projects.

2. Large and small enterprises: vertical linkage

Regarding policies to stimulate vertical linkage, the main efforts have gone into developing programmes to promote local suppliers for large enterprises, the idea being to establish long-term supply relationships among companies that go beyond mere procurement of standardized products in the marketplace. These may be contractual relationships among manufacturers and suppliers of inputs, or outsourcing relationships for finished or intermediate products (UNCTAD, 2001a).

The benefits hoped for from this type of linkage include higher productivity, access to new technologies and organizational practices, training of unskilled and technical workers, and market diversification, among others. The most important instruments for linkage of this kind include the creation and dissemination of commercial information and the promotion of contacts among businesses. Both instruments seek to remedy failures of information concerning the opportunities available in the market.

When large enterprises are subsidiaries of transnational corporations, efforts are concentrated on linking local suppliers with financing programmes in the home countries of these subsidiaries or with international financial organizations such as the Japan External Trade Organization (JETRO) or IDB, respectively.¹⁷

¹⁷ JETRO implements programmes to create and develop support industries that form the base for production chains in different Latin American countries. In Mexico, for example, there are programmes for the automobile and electronics industries (JETRO México).

There are many training programmes that seek to facilitate linkage between large enterprises and their suppliers. The most advanced initiatives in this field include government funding of training carried out by suppliers' organizations, partially government-financed programmes to provide training through large companies, and technical assistance from specialist institutions such as the Food and Agriculture Organization of the United Nations (FAO), the Instituto Interamericano de Cooperación Agropecuaria (IICA) and the United Nations Industrial Development Organization (UNIDO).¹⁸

Given that the technological capacity of suppliers largely determines their prospects of meeting the requirements that large enterprises, particularly subsidiaries of transnational corporations, lay down for their contractors, some governments have implemented technology scaling policies. The instruments used range from incentives to encourage certification, innovation or local supplier development to direct policies to finance placements of subsidiary managers in State organizations to help suppliers improve their technological capabilities and implement training and technology transfer programmes as a performance requirement.¹⁹

3. Encouraging territorial linkage

As part of their strategies to encourage interrelationships among companies, a number of Latin American countries have begun to include a territorial approach in their productive development and SME development policies, involving both the public and private sectors, to stimulate the growth of competitive capabilities in local production systems that might help narrow regional socio-economic differences at the subnational level.

One example of this trend towards local design and execution of productive development policies is the experience of the entrepreneurial development centres created in 1998 as part of a joint project between IDB and the Argentine Industrial Association (Unión Industrial Argentina), with support from local governments. This experiment is now operating at a very satisfactory level, as shown by an evaluation carried out by ECLAC (2001a), described in box 7.5.

In Mexico, the most important programme is the Industrial Integration Programme, a mixed scheme that combines policies oriented towards the development of a given region, but within a framework of incentives for local companies to integrate into production chains, an issue we shall return to later. Under this programme, whose financing is both public and private, four integration projects have been developed: the Centro de Desarrollo de Proveedores de la Industria Maquiladora de Chihuahua (CEDEP), the Centro de Desarrollo de Proveedores de la Industria Electrónica de Jalisco (CADELEC), the Centro de Apoyo al Sector Cuero y Calzado de León (INMODA) and the Centro de Apoyo al Sector de Tejido de Punto de Moroleón (MODITEC).²⁰

Other schemes to promote economic development at the subnational level that have also been tried in Mexico are those of the states of Aguascalientes, Baja California, Chihuahua and Querétaro, which have developed infrastructure for industrial activities and implemented an aggressive strategy to attract investments by means of tax incentives, provision of land at below market prices, the reduction or elimination of public service costs, staff training and help in negotiating with unions (Woo, 2003). This strategy has created advantages that partly explain the economic growth experienced by those states.²¹

2002). Since 1993, IDB has been applying a wide-ranging support programme called the Multilateral Investment Fund. This US\$ 1.3 billion fund has numerous components, one of which is the development of production chains (Castello, 2003).

¹⁸ UNIDO has two programmes of importance in this area: the Industrial Subcontracting and Supply Chain Management Programme and the Partnership Programme.

¹⁹ Some new international rules, both multilateral and bilateral, have limited policy options when it comes to promoting chain effects by laying down conditions for the subsidiaries of foreign enterprises. See chapter 1 of this document.

²⁰ Financing for the programme is provided in equal parts by beneficiary businesses, local governments and the UNDP/CONCAMIN programme.

²¹ In 2000, the economic development offices of nine Mexican states formed the Economic Group of the Centre-West Region (Grupo Económico de la Región Centro Occidente - GERCO). The following year they agreed to launch the Programme to Strengthen

Box 7.5

ARGENTINA: ENTREPRENEURIAL DEVELOPMENT CENTRES

ECLAC has conducted an analysis of some recent SME support measures in Argentina, as a form of benchmarking and a way of gathering information for a discussion on good practice and resource allocation. The subjects analysed during the research were the entrepreneurial development centres (*centros de desarrollo empresarial*) of the IDB-UIA project, based in Mar del Plata, Rafaela and San Rafael, which were compared with other projects implemented in the provinces of Buenos Aires, Santa Fe and Mendoza.

The evaluation was based on 10 areas of analysis: (a) Mission, affiliation and consistency, in which aspects of correspondence and consistency among the mission, institutional objectives and instruments and resources provided were considered; (b) Demands and needs, with reference to the mechanisms used to decide upon institutional activities and their relationship to the mission and to the requirements of potential users; (c) Coverage of users; (d) Effectiveness, in relation to the results achieved by the programmes and the activities implemented; (e) Strategic positioning, in relation to identification of the “sphere of action” both from the users’ side and in relation to the institutions with which it has political and functional interaction as determined by the missions and objectives decided upon; (f) Working and development practices and institutional consolidation; (g) Credibility; (h) Efficiency of operations, in relation to the execution of activities and the management of resources; (i) Sustainability orientation, the extent to which the continuation of operations over time is treated as one of the objectives of the mission, and (j) External technical assistance.

The entrepreneurial development centres have performed better than the other programmes that were analysed where most of the good practice criteria are concerned, exceeding the average in eight of the 10 areas analysed in the methodology. They have excelled most clearly in the areas of external technical assistance, mission and consistency, self-sustainability and credibility. The other areas in which the centres excelled, although to a lesser degree, were those of institutional consolidation and working practices, orientation towards demand and need, efficiency of operations and level of coverage. The centres performed less well than the average for other projects in two areas: effectiveness and strategic positioning.

Broadly speaking, it transpires that the following are among the reasons for the superior performance of the entrepreneurial development centres: (a) scores are highest for the programmes where the private business sector is most involved and active in the organizations responsible for strategic management of the project and where technical and administrative management is professionalized and less exposed to and pressured by political forces external to the actual service activity; (b) programmes and institutions whose mission is more circumscribed and which are more specialized as regards the type of firms dealt with generally have higher averages than the rest; (c) greater specialization (or geographical decentralization for operating purposes) seems to have a positive effect on the implementation of good practice and the achievement of better performance, and (d) programmes with international financing and supervision show better average results overall, very possibly because of the requirements and conditions that are tied to the financing.

In Bolivia, since 1998 all departmental prefectures have had an office responsible for promoting and supporting productive development in each department. The departmental prefectures have an agricultural service (SEDAG) whose mission is to raise agricultural and forestry production and productivity. Financial resources have been allocated to municipal governments for production projects, and their powers in areas involving promotion of municipal economies have been clarified and expanded.²²

In Ecuador, entrepreneurial development agencies (*agencias para el desarrollo empresarial - ADES*) use support instruments and one-stop shops to generate alternative sources of financing and help for entrepreneurs with activities such as setting up companies, obtaining records, training, access to venture capital and microcredits, and a system of permanent support and advice from government and universities. They are promoted as part of Ecuador’s National Competitiveness Agenda, which emphasizes work with micro, small and medium-sized enterprises as a source of job creation.²³

Production Chains (Programa de Fortalecimiento de Encadenamientos Productivos), whose objective is to improve the competitiveness of the region’s production chains by promoting local development and greater linkage among the economies of those states.

²² Ley del Diálogo Nacional of 31 July 2001.

²³ Some provinces, such as Pichincha, have developed provincial production and competitiveness agendas involving a comprehensive competitiveness programme for the agricultural, industrial and marketing sectors, supported by a special financing programme. The institutions most involved in applying this initiative are the business management centres and the Banco Provincial del Desarrollo. In

An overview of the mosaic of local initiatives in Latin America suggests that:

- (i) Territorial and local variables are increasingly being brought into productive development issues, partly on the initiative of local governments themselves as they become convinced that, territorially, there is scope for greater coordination, effectiveness and strategic and systemic orientation of instruments and programmes. There is still great dispersion, however, and initiatives often overlap, which is indicative of the difficulties facing policy coordination.
- (ii) This process has taken place despite the shortcomings of local institutions and their lack of experience with productive development issues. Many institutions, programmes and instruments have been created in the last decade to support local productive development, and these will probably restructure and merge over the coming years in the interests of greater professionalism and service quality. Little has been done to evaluate the results obtained, and this makes it hard to carry out a more exhaustive analysis of the balance between local actions and initiatives and instruments of a national nature.
- (iii) Programmes and instruments do not always have the resources they need to operate. In some countries there seem to be more good intentions than action; local productive development features in government plans, but less so in budgets. One way of getting around this problem, at least in part, is to involve the private sector and international lending organizations as sources of funding, an approach followed quite successfully in some cases.
- (iv) Local productive development has growing public legitimacy, but government commitment to decentralization is still limited. Without lasting political commitment, isolated efforts by individual territories will not be enough to implement strategies of national impact.

The strategy of encouraging the creation of production complexes is not limited to regions with a high level of technological development, information technologies or sophisticated electronic products. In less advanced regions, this strategy can engage a range of elements such as mobilization or utilization of low-productivity local resources, be they natural, human or financial, and reduction of barriers to entry represented by the investment levels required in view of the risks, which could not be implemented on the basis of isolated and unsystemic efforts. An interesting example is the Peruvian alpaca cluster described in box 7.6.

4. Promoting strategic management in clusters

From a public policy point of view, publications on the subject not only recognize a shift in focus away from individual firms and towards clusters, but identify a number of efficiency gains when initiatives involving public resources are implemented to meet the demands of production groupings and complexes.

First, these production systems offer a better framework for designing and organizing service provision and channelling support, as they are oriented towards collective needs and focus on interdependent requirements. Second, dealing with the needs of a production complex indirectly means working with territorial advantages, since in the operation of clusters both aspects (sector and territory) interact in a systematic way.²⁴

January 2002 the “Loja competitiva” pilot project was launched, and this has since been extended to seven border provinces (Esmeraldas, Carchi, Imbabura, Sucumbios, Napo, Morona Santiago and El Oro).

²⁴ A typical example are retraining programmes that, while dealing with new labour requirements, improve both human resources generally and interaction with the institutions involved.

Box 7.6

THE PERUVIAN ALPACA CLUSTER

The success of this cluster is due to a number of factors. It is based on the production culture of an existing activity, has a demanding market, exercises great social influence, is vertically and horizontally integrated and has more than one subproduct, and there exists the political will to promote the activity. The alpaca cluster is concentrated in the departments of Puno, Cusco and Arequipa. While the first two of these engage mainly in breeding, Arequipa is the main centre for the alpaca yarn and textile industry.

The main production chain consists of the following phases: (a) Alpaca rearing, carried out by a large number of small and medium-sized pastoral producers. Alpaca shearing is done by hand in these same units by the small-scale breeders, who shear and mix the different fibres without regard to thickness or quality; (b) Spinning, involving large and medium-sized enterprises that produce industrial yarns and semiprocessed yarns (tops) for domestic consumption and export; (c) Fabrics and garments, involving a number of companies (large and medium-sized) specializing in the industrial production of woven apparel for export. The largest exporters of alpaca garments are the industrial groups producing yarns and tops. There are a number of small artisanal firms that make fabrics and wearing apparel for local use and the tourist trade. Other economic spin-offs from the main chain in the cluster are activities related to the consumption of alpaca meat, alpaca hides and the export of live camelidae.

Public- and private-sector support services for the main firms in the cluster include: (a) some research initiatives whose aim is the genetic development of camelidae, mainly with a view to producing higher-quality fibre, but whose results have not been widely publicized; (b) public road infrastructure in the southern part of Peru where the rearing of camelidae and the industrialization of their fibre are concentrated, the main objective being to improve access to ports and airports in the area, and (c) rural credit, of which there has been very little since the Banca de Fomento closed down, despite the appearance of other financial institutions oriented toward small farmers.

About 85% of alpaca production is carried out by small producers, some with plots of less than 5 hectares on which they raise herds of 50 animals or fewer, and others organized into peasant communities. Small producers face serious limitations of scale, considering that, according to the International Alpaca Association (IAA), 2,000 heads is the minimum herd size needed for alpaca rearing to be commercially viable. Medium-sized producers account for some 10% of output. There are also some private-sector companies that raise alpacas by pastoral methods; they are few in number and their output does not exceed 5% of the national total.

As regards the processing of camelidae fibre, the Arequipa industry is the most advanced thanks to the comparative advantages of its geographical location and the experience it has built up over the last 50 years. Proof of its competitiveness is the fact that some small alpaca fibre producers in the United States take their fibre to Arequipa to be processed in textile plants there, as in this way they avoid the complications involved in adapting the production methods of the sheep wool processing industry in their own country to the specifications of alpaca fibre.

There are a large number of public-sector institutions and private-sector organizations that support some or other of the stages in the agro-industrial alpaca fibre chain. The public institutions providing the greatest direct support to the alpaca cluster, most of which have concentrated mainly on helping small breeders, include: the National Camelidae Council (Consejo Nacional de Camélidos), a decentralized public agency of the Ministry of Agriculture responsible for promoting, advising and supervising the development, conservation, handling and improvement of camelidae and their hybrids, and the Technological Innovation Centre specialized in the alpaca, which carries out technological innovation and specialist training with a view to raising the competitiveness of activities based on alpaca rearing and adding value to their products through product differentiation and improvements to design, fibre quality, fabric and garment making. The geographical dispersion of producers has complicated the work of these organizations and limited the impact of their results.

Private-sector organizations promoting the alpaca cluster include producers' associations such as the IAA, whose members are industries and some breeders engaged in the production, processing and marketing of alpaca, llama and other camelidae fibre, and the Peruvian Registered Alpaca Society (Sociedad Peruana de Alpacas Registradas), the National Society of Vicuña Breeders (Sociedad Nacional de Criadores de Vicuña), a not-for-profit civil partnership created to represent the peasant communities on whose land the vicuña is found and aiming to protect, conserve, manage and exploit vicuña and guanaco resources in an organized and rational manner, the Specialist Group for South American Camelidae (Grupo Especialista en Camélidos Sudamericanos), whose aims are research, protection and sustainable use of wild camelidae, and the Institutional Support for Producers' Organizations and Intermediate Organizations (Refuerzo Institucional de Organizaciones de Productores y Organizaciones Intermedias) operated by the Canadian Cooperation Office, whose objective is to support non-governmental organizations which promote the development of small and medium-sized alpaca producers.

Source: Esteban R. Brenes and others, "El cluster de los camélidos en Perú: diagnóstico competitivo y recomendaciones estratégicas", working paper, Andean Development Corporation (CAF), Andean Competitiveness Project, September 2001.

Promoting entrepreneurial and productive linkages is the central challenge for a policy of networks or clusters. This policy does not, therefore, belong in a different and independent category from others (financing, training or innovation); on the contrary, cluster policy entails linking all these up with one another and with private-sector competitiveness strategies.

Table 7.3 illustrates the multiplicity of initiatives, projects and programmes that form part of the search for ways of intervening in the strategic management of clusters. The examples have been taken more or less randomly and do not imply any value judgement by ECLAC. There are undoubtedly hundreds of projects like these in Latin America.

Table 7.3
EXAMPLES OF STRATEGIC MANAGEMENT POLICIES FOR CLUSTERS

Origin of the initiative	Project name	Institution
International financial institution	Programa Andino de Competitividad	Andean Development Corporation
International agency	CADIAC	IICA
National government	Foro de Competitividad and Red Colombia Compite	Various bodies President of the Republic
Local government	Programa Territorial Integrado State competitiveness councils	CORFO, Chile Various state governments in Mexico
Employers' association	Cresce Minas	Industrial Federation of Minas Gerais
Public-private alliances	Fondo para la Investigación y el Mejoramiento de la Competitividad	FIM-Competitividad, Venezuela
University	Pesquisa en Cadeias Produtivas	Federal University of Rio de Janeiro
Commercial	Geranegocio	Geranegocio, Brazil

The ECLAC secretariat also has some experience of its own with the design and execution of projects of this type. Supported by international agencies such as Canada's IDRC and the German Technical Cooperation Agency, it has assisted with the design of integrated territorial programmes in Chile, particularly in relation to the mining cluster in the Antofagasta region and the tourism cluster in the Aysén region. It has also collaborated with the Government of Colombia to design the country's national productivity and competitiveness policy, with special reference to cluster policy.

5. Towards an evaluation of linkage initiatives

In Latin America over the last six years, there must have been at least 100 initiatives to create strategic linkage capacity among agents wishing to improve the productivity of a particular business activity in a particular geographical area. Although these have been little studied on the whole, the following observations can be made:

- (i) Initiatives work best when they are targeted on a problem or opportunity whose existence is perceived by many of those concerned and which cannot be addressed through the unaided efforts of a single person, company or organization. Initiatives tend to become bogged down when they arise from a situation that is not entirely standard or are delayed pending the results of a detailed diagnosis.
- (ii) Perceived problems are solved through participatory planning; initiatives resulting from a preconceived proposition tend to be confined to one-off, short-term solutions.

- (iii) More important than the quality of the solution or initiative is the quality of the process. If this process is open, non-exclusive and transparent, it will yield lessons that can improve the proposals or initiatives adopted.
- (iv) Initiatives need to be “owned” by the interested parties and developed under their leadership. Initiatives driven mainly by consultants or outside financing institutions are usually not sustainable over time.
- (v) Successful projects invariably involve a recognition that actors have interdependent interests and objectives. Good projects produce a shared strategic vision and a collective identity.
- (vi) Processes entail a high level of management and models are not easy to replicate. Running participatory strategic planning processes seems to be an art that is not yet rationally understood in its entirety, and that depends partly on subjective factors affecting the interaction (“chemistry”) among individuals, especially those leading shared initiatives.

III. Overview

In the recent past, the countries of Latin America and the Caribbean have experienced a wide variety of entrepreneurial development policies whose scope, results and impact have not yet been sufficiently studied and whose characteristics have generally depended on the development level and public-private leadership capacity of each country or territory. Although the range of policies is vast and the conceptual framework and strategic vision of intervention models are not fully defined, the initiatives put into practice can be grouped under the key concept of linkage.²⁵

These coordination efforts have their main justification, not always an explicit one, in the argument that interaction among companies stimulates learning, reduces transaction costs, and thus accelerates productivity growth. The justification is similar for programmes designed to improve the links between companies and support organizations, especially in the areas of training and technological research and development, and for policies to link companies with markets, such as export promotion policies and those oriented towards domestic markets.

Linking policies and policy instruments among themselves is a challenge for coordination and efficient resource allocation, considering the number of bodies potentially involved, the diversity of the issues included and the financial constraints on public budgets. Coordination is needed among the local, intermediate (i.e., states in federal countries and provinces, regions and departments in unitary ones) and national levels, among government agencies (economic affairs, science and technology, education, work, etc.) and between these and international organizations, often a major source of financing and technical assistance.

Lastly, there is also a need in all cases for a high degree of coordination and complementarity between the public and private sectors. What is ultimately at work is a different way of conceiving, designing and implementing policies that is marked not only by its open market orientation, but also by the fact that these policies are conceived under the auspices of democratic institutions.

²⁵ All the countries are experimenting with strategies and programmes. Thus, the Brazilian Ministry of Development, Industry and Foreign Trade has identified at least 200 production support programmes and funds in ministries and specialized agencies at the federal level, while there are a similar number at the subnational state level. In Chile, the number of development programmes and projects undertaken by government agencies is close to 100, while in Mexico over 150 programmes of this type have been identified (MDIC, 2001; Silva and Sandoval, 2003; Villagómez, 2003).



Chapter 8

Policies to strengthen the productive structure

Although some changes had begun to be discernible earlier, the 1990s witnessed a shift in the dominant economic paradigm in Latin America, from import-substituting industrialization (ISI) oriented towards the domestic market, to a pattern of productive specialization based on static comparative advantages aimed at increasing the region's participation in external markets.

This shift was accompanied by a redefinition of the role of the State, which entailed curtailing its intervention in markets to allow the latter to set prices on a deregulated basis, while also reducing the State's role as a producer of goods and services and thereby promoting the private sector as the economy's driving force.

These developments spawned far-reaching changes in the way the region's countries participated in the international economy (see chapter 5), together with a major reorganization of production and a greater role for foreign firms (especially in the maquila sector) and large locally owned economic groups.¹ Although there is no conclusive evidence on how small and medium-sized enterprises (SMEs) fared in coping with the changes that arose from the new economic paradigm, the trend towards economic concentration that

¹ A key feature of this period was the growing participation by foreign firms (and to a lesser extent by large domestically owned enterprises) in the provision of public services, in place of the public enterprises that had traditionally fulfilled this function. For an interesting description of the changes that took place in the economic structures of the region's countries, see Katz and Stumpo, 2001.

characterized those years seems to indicate that the relatively smaller firms probably grew less than the average of the economy as a whole.²

There were also significant changes relating to the topic that concerns this chapter. The creation of new sectors, which was at the heart of industrial policy under the ISI model, aimed to complete a country's industrial structure by absorbing the expansion of demand domestically. The main instruments used for this involved a combination of trade protection, promotion of direct investment (frequently by the State or foreign enterprises), and financing from national development banks.³

Sectoral policies guided the expansion of domestic supply and played a fundamental role in planning and programming the structure of production. Three inter-related factors strengthened this role: (i) the public-sector development apparatus was organized into sectoral and even subsectoral structures;⁴ (ii) private enterprise was also organized in sectoral chambers, which were the principal defenders of the pattern of trade protection; and (iii) international trade negotiations (for example, in the framework of LAIA, CACM, CARICOM or the Andean Pact) were based on sectoral preference lists. Policies tended to focus on the agricultural and manufacturing sectors, although the weight of the latter was such that the term "sectoral policy" tended to be confused with "industrial policy".

From this central position, sectoral policies steadily lost legitimacy during the 1980s and increasingly came to be replaced by horizontal policies, or else were relegated to the state or provincial domain.⁵ There were several reasons why sectoral policies lost favour: economic liberalization, which significantly reduced the possibility of using tariff protection as a promotion tool; the privatization or closure of public enterprises that invested directly in new sectors; the need to balance public finances by eliminating subsidies, in particular fiscal ones and the subsidy components of credit operations; and the very widespread perception that many investments suffered from bad planning, poor project management and, in some cases, even corruption.

Although the results of the new economic paradigm were positive in some respects (lower inflation; smaller fiscal deficit; increased exports, particularly non-traditional ones), they were quite disappointing in terms of growth and productivity, as discussed in chapter 2. Dissatisfaction with these results increased following the crisis that hit several countries in the region, gradually rekindling government interest in productive development policies, especially those that would make it possible to close the productivity gap with developed countries.

Nonetheless, the new policies deployed to promote productive activity differed in several ways from those applied in the ISI period. Firstly, the manufacturing sector steadily lost pre-eminence as a policy target in a strategy that aimed to enhance the competitiveness of the economy as a whole, in a context of openness and integration into the global economy.

Secondly, and as a consequence of this, horizontal policies designed to solve market failures gained pre-eminence, albeit coexisting with selective support policies, such as in the automotive industry in Mexico or the MERCOSUR countries, information technology in Costa Rica and Brazil, or the forestry sector in Chile, to mention just a few examples. In reality, it would be more accurate to say that one can find both vertical (selective) and horizontal (neutral) policies both in ISI and in

² On this issue, see Peres and Stumpo (2000); although it should be noted that many of the country papers summarized and analysed in their work use statistical data that does not go beyond the middle of the decade, just when the prevailing model was starting to show signs of severe strain.

³ The most outstanding examples in the 1970s before the external debt crisis were the Second National Development Plan in Brazil, and the National Industrial Development Programme, 1979-1982 in Mexico, which was in force during the boom that accompanied the expansion of the oil export platform.

⁴ For example, Ministries of Industry, Agriculture, Mining and others, and within them, general directorates for food, metal manufactures and machinery, chemicals, capital goods and others.

⁵ A good example is the so-called "fiscal war", in which various Brazilian states struggled with each other to attract investments (Bonelli and Motta Veiga, 2003). In the case of the automotive industry, considered below, incentives were provided at state level in addition to those arising from national policy.

the economic model that prevailed as from the 1990s. What distinguishes the two is the degree to which they combine the different types of instrument.⁶

Another major difference in practice is that because of the increasing constraints on public budgets in most of the region's countries, funding for productive development policies became increasingly scarce, especially as the demand for fiscal resources to tackle social issues increased.⁷

Adapting the taxonomy used in Melo (2001a), the productive development policies of the 1990s can be divided into four broad areas: (a) international integration; (b) innovation and technological progress; (c) entrepreneurial development; and (d) strengthening of the productive structure. The first three areas are analysed in detail elsewhere in this document; the fourth is considered in this chapter.

I. Practice and strategy of productive policies

Policies aimed at strengthening productive structures in the region's economies encompass a very wide range of fiscal, financial and trade instruments. Most of these tools are of the "horizontal" type and target the economy as a whole, but they are combined with other more selective instruments aimed at promoting specific sectors or regions.

Horizontal policies were mainly implemented through financial instruments. As many as 15 of the region's countries have a public development bank that extends medium and long-term loans and provides a range of financial services.⁸ Most of these institutions operate as second-tier banks and charge market interest rates on their loans. The most frequent lending modalities are medium-term credits to cover working-capital requirements, and long-term loans to purchase capital goods for investment projects.

Nonetheless, the menu of credit alternatives is very broad and encompasses financing for liabilities restructuring, consulting services, environmental studies, pollution abatement or the recycling of toxic waste, improvement of trade practices, capital goods leasing and others. In addition, venture-capital operations are beginning to be undertaken which involve the purchase of equity holdings of private firms in order to provide them with the funds needed to carry out a profitable project.⁹ Another interesting financial instrument involves extending credit to promote associations among small and medium-sized firms, or participation by such firms in supplier development programmes.¹⁰

Horizontal fiscal incentives are used much less frequently than financial instruments, except in a number of Caribbean countries. Nonetheless, there are some interesting cases of tax breaks for investments, for example in Chile and Uruguay.¹¹

⁶ Strictly speaking, the selectiveness or neutrality of vertical or horizontal policies is more relative than absolute. Horizontal policies are not necessarily neutral between sectors or regions (for example, a policy to promote SME activity affects the textile sector differently from the iron and steel sector).

⁷ As Ramos (2000) points out, one of the events that triggered the crisis in the ISI model was the debt crisis of the early 1980s, among other reasons because of its impact on public finances. Social spending in the region grew from 10.1% of GDP in 1990-1991 to 13.8% in 2000-2001, and from 41.5% of total public expenditure to 48.7% over the same period.

⁸ See Melo (2001a).

⁹ The National Bank for Economic and Social Development (BNDES) of Brazil has various programmes including capitalization of technology-based enterprises, a small firms programme, a mutual fund for investment in new enterprises, and a mutual fund for investment in medium-sized firms preparing an IPO.

¹⁰ Chile, CORFO operates a credit line to promote associations between groups of SMEs, covering management issues or the marketing of shared productive projects. Also, Chile (through CORFO) and Mexico (through NAFIN) offer this type of loan for SMEs operating as suppliers to a large enterprise.

¹¹ Chile offers two forms of tax incentive for investment: (i) accelerated depreciation of new fixed assets, both local and imported; and (ii) tax exemption on undistributed profits. In Uruguay, there is a tax exemption for reinvested profits and a reduction in capital tax by allowing industrial equipment to be valued for tax purposes at 50%.

As mentioned above, while most productive development strategies used horizontal instruments, a review of the policies adopted by the region's countries in the 1990s also reveals a number of selective measures aimed at promoting specific sectors.

Firstly, there are policies following the line developed under the ISI model which aim to expand a given sector and deepen it by integrating new segments, through a combination of trade protection, and tax and financial incentives. The regimes covering the automotive industries of the MERCOSUR countries and Mexico, which aim to organize and expand the investments of final-product producers and autoparts enterprises, provide a clear example of this type of initiative (see box 8.1).¹²

Box 8.2 shows the scope of sectoral incentives applied by members of the Organization of Eastern Caribbean States (OECS). The comments made there also apply to Barbados and Guyana, of which the latter maintains the most wide-ranging package of incentives in the region (Pérez, 2003).

Numerous examples can also be found of policies aimed at stimulating agricultural and mining production. Although these vary from country to country, they have generally been much more stable than the incentives given to manufacturing activities. Even in sectors with clear comparative advantages, such as large segments of the agriculture sector, it has frequently been necessary to design support schemes in response to short-term crises, or to meet longer-term challenges arising from the relative loss of competitiveness.¹³

Also in the agriculture sector, several countries (including Central America, Brazil and Colombia) intervene directly in basic grain markets (wheat, maize, rice) in view of their importance for food security and the large number of producers involved.¹⁴ Nonetheless, direct market intervention (through guaranteed prices, for example) and the granting of subsidized loans through programmes targeting small-scale producers (who tend to be the hardest hit by trade liberalization) are progressively being replaced by horizontal instruments (such as expenditure on animal and plant health, irrigation, or land titling programmes). Measures with a geographic or local scope are also gaining ground (e.g., tax incentives in poor regions, or comprehensive rural development programmes, that combine investment in infrastructure with training and technical assistance), as analysed in chapter 7.

Secondly, a number of policies originally targeted on specific sectors have developed into policies that impact the economic system as a whole. This is the case of policies for the electronics and computer industry, which began as import substitution policies for hardware, and later shifted to supporting the development of an intangible product (software), before being subsumed under policies for the development of information and communication technologies, in the framework of what has come to be known as the "information society", which is analysed in the appendix to this chapter.¹⁵

¹² The region also provides sporadic support to sensitive sectors (of weak competitiveness) which are threatened by competition from imports, such as textiles, clothing, footwear, electronic products and toys, although it is hard to classify these as sectoral policies.

¹³ Examples of the first type include tax exemptions extended to sheep meat producers during the foot-and-mouth crisis in Uruguay, mentioned by Scarone (2003). Significant sectoral support is also being provided in Brazil according to data for 2003 (Balbi, 2003). Examples of the second factor include "sun and sand" tourism in much of the English-speaking Caribbean (Hendrickson, 2003), or the productive restructuring that seeks crops of higher potential, value-added and market opportunities, as a goal of the Alianza para el Campo in Mexico (Villagómez, 2003).

¹⁴ See FAO (2001b) and ECLAC (2003c).

¹⁵ See Bonelli and Motta Veiga (2003), for Brazil; Scarone (2003), for Uruguay, and Henry (2003), for the Caribbean.

Box 8.1

SUPPORT POLICIES FOR THE AUTOMOTIVE INDUSTRY IN MEXICO AND MERCOSUR

In an initial stage (1962-1994), Mexican policy, which promoted active and interventionist measures based on import goals substitution (basically autoparts), shifted towards more passive measures that sought to promote vehicle exports while also lowering performance requirements. Assembly firms were no longer obliged to export autoparts, nor were they subjected to production quotas. A system for vehicle exports was authorized requiring just 30% national content, facilities were given for imported inputs of maquila firms serving the export market, and later in the domestic market. Rules were also relaxed on the foreign-currency budget, and in terms of foreign-ownership restrictions in autoparts enterprises. Policy goals consisted of gradual convergence with the corporate strategies of assembly enterprises established in the country to supply external markets.

The second stage of the policy was materialized in the rules of FTAs —especially NAFTA in 1994 and with the European Union (FTA EU-MEX) in 2000. In the first case, tariff protection fell from 9.9% in 1994 to 0% in 2004 (with quotas), and obligatory national content was reduced from 34% in 1994 to 0% in 2004 for vehicles and from 20% to 0% for autoparts. The regional content percentage for the product to be counted as originating in North America (rule of origin) was raised from 50% in 1994 to 62.5% in 2004, and has remained at this level. The policy implicit in FTA EU-MEX is similar, albeit with reduced coverage and scope. A recent automotive-sector agreement with Brazil guarantees a certain level of access to the Brazilian market and allows assembly and autopart firms with branches in both countries to specialize their production. From 2004 onward, practically the only policy instrument supporting the Mexican automotive industry's access to external markets will be FTA rules of origin.

In the post-Second World War period, the automotive industry enjoyed pride of place within the sphere of public policy in Argentina and Brazil. In those years, Governments promoted sectoral development through ever tighter restrictions on imports, together with more stringent national content requirements; and these measures were complemented in the mid-1970s by initiatives to increase exports. The MERCOSUR automotive regime began with a trade agreement between Argentina and Brazil, which established a compensation mechanism that would be extended to other partners in this trade bloc. In December 1994, the Ouro Preto Protocol established three basic criteria under which, as from 1 January 2000, the trade bloc would have a uniform regime in each of its four member countries: a common external tariff; total trade liberalization with a zero tariff for intra-zonal trade; and a ban on granting investment incentives. The importance of the automotive sector in economies with an established productive base and a domestic market with growth potential (Argentina and Brazil) generated diverging interests between these countries and others where demand was basically supplied by imports (Paraguay and Uruguay); and this situation complicated negotiations aimed at achieving a common regime.

In response to the establishment of a timetable for subregional integration of the industry, the need to reduce vehicle imports and guarantee sectoral investments in the face of competition from the Argentine automotive regime, Brazil established its own regulatory framework in June 1995. Similar measures were announced to those implemented a year earlier by the Argentine authorities: (a) production incentives linked to export performance; (b) investment incentives; and (c) quantitative restrictions on vehicle imports. As a result of these measures, the automotive industry was the only Brazilian industrial sector with a broad range of incentives after trade liberalization. The main results included new producers entering the market and a capacity expansion of about 80% between 1995 and 2000.

In late 1996, a new regime was established in Brazil which gave additional incentives to final producers to set up plants in the least developed regions of the country. To avoid negative reactions in WTO, the measures were justified in terms of stimulating regional development. The fact that 70% of the new investments in the sector in 1996-2001 were concentrated in the favoured regions clearly demonstrated the impact of this policy. The special regime included the following incentives: (a) imports of parts and components with a 90% reduction in import duties; (b) purchases of machinery and equipment manufactured in Brazil gave entitlement to a 200% voucher for imports, and the purchase of tools manufactured in Brazil gave rise to a voucher of 150%; and (c) tax exemptions and relief. These benefits last until 31 December 2010.

This regime encountered problems within WTO, particularly with the United States, but the dispute was overcome in March 1998 with the signing of a memorandum of understanding between the two Governments. The regime also involved granting subsidies to establish automotive enterprises in different states; these subsidies were considered excessive by Argentina, and, as a result, trade liberalization did not take place in 2000, as had been scheduled. Instead, it was decided to maintain balanced trade (to ensure production occurred in Argentina) for a further five years, maintaining the idea of gradually approaching full liberalization.

Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of information from the Institute of Applied Economic Research (IPEA).

Box 8.2

SECTORAL INCENTIVES IN THE COUNTRIES OF THE ORGANIZATION OF EASTERN CARIBBEAN STATES (OECS)

While applying the Fiscal Incentives Harmonization Act of 1973, the CARICOM economies also promoted a broad package of domestic tax incentives as part of their national development policies. These were adapted to the specifics of each country and made major reforms to regional incentives. Today, national plans are still the main vehicle for fiscal incentives and for developing sectoral policies.

In OECS member States, fiscal incentive policies mainly aim to promote the manufacturing and services sectors. These are mostly based on fiscal incentives laws dating from the 1970s or 1980s, together with assistance for the hotel sector in the form of a “Hotel Aid Ordinance” and a range of tariff exceptions. Some of these are included on the list of conditional exceptions from the common external tariff, while others are granted by Government on a discretionary basis. In some cases, such as Dominica and Saint Kitts and Nevis, they are complemented by the granting of residence rights in order to attract foreign direct investment.

In Antigua and Barbuda, Dominica, Grenada, Saint Lucia and Saint Vincent and the Grenadines, fiscal legislation grants tax exemptions under specific criteria, including local value-added content and the export orientation of production. Local value-added is defined as the difference between sales achieved over a 12-month period and the cost of imported raw materials, components and parts, fuels and services, and wages and salaries. The fiscal incentives legislation also allows duty-free importation of machinery, equipment, spare parts, construction materials, raw materials and packaging materials. The law to assist the hotel sector provides for a tax holiday of up to 20 years on approved projects to build hotels and tourism complexes in Antigua and Barbuda and Dominica. Under the same law in Grenada, hotels, apartments and guesthouses enjoy tax exemptions on their profits for a 10-year period, in addition to exemptions from customs duties and taxes on articles such as hotel equipment, service vehicles, and construction materials for remodelling, renovation and expansion of hotel properties. Dominica has also passed legislation on enterprise development assistance, granting tax exemptions on raw materials, inputs, materials, tools, plant, machinery and construction materials used in manufactures, factory building, hotels and packaging activities. Between 1996 and 2000, firms in the tourism sector accounted for 53% of all enterprises benefiting from tax incentives, with the manufacturing sector accounting for a further 45%.

In Grenada, Saint Lucia and Saint Vincent and the Grenadines, tax concessions have been expanded still further. In the first of these countries tax relief was provided on profits earned from exports of approved manufactured products. The authorities have also granted exemption from import duties on products included on the list of conditional exceptions to the CARICOM external tariff in the case of firms that are not covered by the fiscal incentives law, and which have local production value of at least 40%. Similar measures have been introduced in Saint Lucia. In 1999-2000, the authorities of this country announced an additional incentive, consisting of exemption from customs duties and a consumption tax rebate for the following fiscal year. The profits of agricultural enterprises are also tax-free in this country.

The cost of fiscal incentives has been extremely high, as shown in the case of Saint Kitts and Nevis, where over 58% of imports (equivalent to 31% of GDP) are exempt from import duties, 50% from consumption tax and 39% from service tax. Of this total, the fiscal incentives law is responsible for exemption from import duties, consumption tax and service tax on 14% of all imports (representing 7.3% of GDP).

OECS economies also use other complementary tools, such as marketing agreements, to regulate the production and supply of agricultural commodities.

Source: Esteban Pérez Caldentey, “Policies for productive development in Caribbean economies”, Port of Spain, ECLAC Subregional Headquarters for the Caribbean, August 2003.

A third group of policies focuses on activities that are highly concentrated as a result of scale and network economies (electric power, telecommunications, oil and natural gas). Policies for these sectors, nearly all of which were decided upon following privatization processes, have aimed to develop efficient regulatory frameworks, including creation and strengthening of regulatory bodies, adaptation of the legal framework, and efforts to link the expansion of sectoral investments to greater coordination with suppliers located in the country, the intensity of which varies from case to case.¹⁶ Some issues relating to the provision of goods and services characteristic of these sectors are considered in detail in chapter 4.

¹⁶ See Sergeant, Racha and James (2003), for Trinidad and Tobago. In Brazil, technology funds were created to support scientific and technological development programmes in each of the sectors in question, using funds obtained from royalties paid by the firms. In Mexico and Brazil, State-owned oil companies (PEMEX and Petrobrás, respectively) operate supplier development programmes and channel major resources into innovation activities.

A fourth group consists of policies to support clusters, a subject that is discussed extensively in chapter 7. Although this approach has become increasingly important in Andean countries and Central America, virtually all of the region's countries have programmes of this type.¹⁷ The legitimacy they enjoy, even among international financial organizations, has facilitated their acceptance by Governments and resulted in actions being included in this category that have neither a productive-chain nor a geographic-conglomerate scope.¹⁸

Table 8.1 shows the existence of financial and fiscal incentives aimed at specific sectors. Although this is a qualitative type of review since the information available does not make it possible to calculate the value of implicit subsidies in credit operations and fiscal incentives, the constraints that have hampered public accounts in the recent past, together with the emphasis placed on horizontal instruments, suggest that the amounts are significantly less than those deployed during the ISI period.

Similarly, table 8.2 gives details of activities carried out by public development banks which extend loans with a sectoral focus in a number of countries in the region (Brazil, Colombia, Costa Rica, Mexico and Peru). Excluding banks that finance foreign trade, the table shows that BNDES in Brazil is the only development bank engaging in large-scale funding.

Unlike the previous model, which promoted manufacturing, the most favoured activities now are: tourism (especially in Central America, see box 8.3); primary-sector activities such as oil, mining and forestry; and various services (ranging from infrastructure to cinematographic services). BNDES is the exception to this rule, since it continues to play a key role in funding the manufacturing sector, with operations amounting to US\$ 5.8 billion in 2002 that account for nearly half the total portfolio.

The importance of policies targeting the agriculture sector varies greatly between individual countries of the region, when measured by the public expenditure that implements them (including programmes of productive development, investment in rural infrastructure and social spending in rural areas).¹⁹ Public-sector banks make a major contribution to funding the agriculture sector in countries such as Argentina, Brazil, Costa Rica, Dominican Republic or Mexico (Acevedo, 2002). Generally speaking, credit is extended on near-market conditions, although subsidized interest rates are applied in programmes to strengthen small-scale farming.

¹⁷ Significant measures to develop clusters have been implemented in countries such as Mexico and Brazil. These include support for the footwear sector in Guanajuato, Mexico (Unger, 2003), or measures implemented by SEBRAE "Local SME productive and innovative systems" project in Brazil. In that country, policies implemented by the states also had a major sectoral component and were concentrated in the automotive industry (subsidies and even capital contributions from Governments in a number of states), electronics and information technology, textiles, clothing and footwear. See Bonelli and Motta Veiga (2003).

¹⁸ See Velasco (2003) on sectoral agreements in Colombia.

¹⁹ In Chile and Mexico, annual expenditure per producer amounted to US\$ 900 in 2000, compared to under US\$ 50 in Bolivia. In that same year, agricultural expenditure as percentage of sectoral GDP was 35% in Mexico, 21% in Chile, and slightly over 5% in Bolivia (Kerrigan, 2001).

Table 8.1
FINANCIAL AND FISCAL INCENTIVES FOR SPECIFIC SECTORS

Country	Loans to specific sectors, except agriculture	Fiscal incentives to specific sectors
Argentina	Capital goods	Mining, forestry
Bahamas		Hotels, financial services, beer and alcoholic beverages
Barbados		Financial services, insurance, information technologies, tourism
Belize		Mining
Bolivia		Mining
Brazil	Oil and natural gas, textiles, clothing, footwear, shipping industry, electric power, telecommunications, software, cinematographics	Automotive, electronics
Chile		Forestry, oil, nuclear materials
Colombia	Cinematographics	
Costa Rica	Various sectors	Forestry, tourism
Ecuador		Mining, tourism
El Salvador	Mining, and services (tourism, transport, software and others)	
Guatemala		
Guyana		Agribusiness, forestry, mining, tourism, fisheries, construction, ICT
Haiti		
Honduras	Transport, shrimp	
Jamaica		Cinematographics, tourism, bauxite, aluminium, factory construction
Mexico	Cinematographics	Forestry, cinematographics, air and maritime transport, printing and publishing
Nicaragua		Tourism
Panama		Tourism, forestry
Paraguay		
Peru		Tourism, mining, oil
Dominican Republic		Tourism, agribusiness
Suriname		
Trinidad and Tobago		Hydrocarbons, tourism, construction
Uruguay		Sheep meat, wine and vineyards, hydrocarbons, printing, forestry, military industry, airlines, newspapers, radio stations, theatres, cinematographics
Venezuela		Hydrocarbons and purchases of capital goods and services for investments in primary sectors (oil, mining, agriculture and fishing)

Source: Alberto Melo, "Industrial policy in Latin America and the Caribbean at the turn of the century", *Research Department Working Paper series*, No. 459, Washington, D.C., Inter-American Development Bank (IDB), August 2001.

Table 8.2
PUBLIC-SECTOR FINANCIAL INSTITUTIONS THAT PROMOTE DEVELOPMENT: CREDIT OR PORTFOLIO STRUCTURE BY ECONOMIC ACTIVITY, 2002

	Agriculture and fishing ^a	Mining	Construction ^b	Industry	Commerce	Transport	Tourism	Other services	Other ^c	Total
Millions of dollars										
Credit approved										
BNDES (Brazil)	1 516	84	264	5 811	417	894	47	3 509	0	12 542
BANCOMEXT (Mexico)	1 650	n.a.	651	3 557	n.a.	n.a.	326	809	0	6 993
COFIDE (Peru)	125	15	100	102	42	18	3	32	0	437
Portfolio										
BANCOLDEX (Colombia)	223	30	n.d.	619	n.a.	n.a.	n.a.	41	239	1 152
BNCR (Costa Rica)	133	n.a.	25	130	162	11	29	115	449	1 053
NAFIN (Mexico)	2	9	209	12	158	0	0	84	16 256	16 730
Percentage structure										
Credit approved										
BNDES (Brazil)	12.1	0.7	2.1	46.3	3.3	7.1	0.4	28.0	0.0	100.0
BANCOMEXT (Mexico)	23.6		9.3	50.9			4.7	11.6	0.0	100.0
COFIDE (Peru)	28.7	3.5	22.9	23.4	9.5	4.2	0.6	7.2	0.0	100.0
Portfolio										
BANCOLDEX (Colombia)	19.4	2.6		53.8				3.5	20.7	100.0
BNCR (Costa Rica)	12.6		2.3	12.3	15.4	1.0	2.7	10.9	42.6	100.0
NAFIN (Mexico)	0.0	0.1	1.2	0.1	0.9	0.0	0.0	0.5	97.2	100.0

Source: Banco de Comercio Exterior de Colombia (BANCOLDEX), *Cifras históricas*, Bogotá, 2003; Banco Nacional de Costa Rica (BNCR), *Estados financieros auditados*, San José, 23 January 2003; Banco Nacional de Desenvolvimento Econômico e Social (BNDES), *Operating Statistics*, Brasília; Banco Nacional de Comercio Exterior (BANCOMEXT), *Informe anual 2002*, Mexico City, 2002; Corporación Financiera de Desarrollo (COFIDE), *Operaciones aprobadas*, Lima; Nacional Financiera (NAFIN), based on information from the Latin American Association of Development Financing Institutions (ALIDE).

^a For BANCOLDEX and BANCOMEXT, figures include the agribusiness sector.

^b For BANCOMEXT and NAFIN, figures correspond to financing extended for public-enterprise infrastructure projects.

^c For NAFIN, the activity breakdown only includes the private sector. Others include: the financial sector, the public sector, the external sector, other non-specified activities, and interbank credit. For BANCOLDEX, the figure corresponds to unclassified loans in portfolio, excluding discounted bills amounting to US\$ 6.3 million. For BNDES, figures exclude stockmarket operations amounting to US\$ 270 million.

The countries of the region display increasing interest in intensifying productive chains, particularly those with export potential, in order to increase local value-added content in the production of final goods. This is a promising policy area, since it is generally based on some kind of competitive advantage—either natural resource abundance, or proximity to markets with major purchasing power.

Furthermore, this type of initiative does not require major funding in terms of monetary incentives, since the power of public policy lies more in the possibility of the State acting as mediator and coordinator between private interests than in establishing fiscal or financial stimulus mechanisms. Although the latter may continue to be important, the salient feature of these policies is the fact that they exploit the unique capacity of Governments to convene all sectors of society on behalf of the common interest, and the possibility of establishing a network of institutions capable of acting in different areas. This is linked to another unique feature of this type of policy, namely the requirement of consistent and coordinated use of instruments in the different areas of Government. Although the set of instruments actually used may vary depending on the specific chain in question, a permanent characteristic of initiatives to intensify value chains is their integrative nature.

Box 8.3

CENTRAL AMERICA: REGIONAL TOURISM INTEGRATION, PROMOTION AND NATIONAL INCENTIVES

In 1993-2001 Central America posted the fastest tourism growth rate in the hemisphere, both in terms of the number of visitors and in revenues generated. Efforts made by Central American countries demonstrate the importance of joint policy measures for the region's country groupings.

Working through its integration system (SICA-SITCA), Central America has tried to resolve tourism issues collectively, developing the sector in terms of destinations and by attracting investment and tourists from within the region and elsewhere. The Mundo Maya organization, a joint effort to promote an image and a series of shared activities between countries that have links to the Mayan culture, is expected to be complemented by the tourism initiative of the Puebla-Panama Plan, which embraces the other Central American countries along with nine states from the south-southeast of Mexico. In this framework, projects are envisaged to help develop the organizational and institutional aspects of the sector, in addition to promotion. Projects include the generation of subregional satellite accounts, certification of services with a regional sustainability symbol, and the development of thematic-regional tourism circuits complementary to the Maya route (coffee, ethnocultural, ecological, maritime and cruises).

In addition, countries are again enforcing existing laws at the national level to promote investment in the sector; or establishing new mechanisms to attract capital into tourism, particularly in socially or geographically excluded zones. Competition to attract international capital to countries that are unable to generate sufficient domestic saving to renew, maintain and create basic communications and tourism infrastructure could become an obstacle to development of the sector. Similar incentives are being applied to imports of goods and equipment for construction, business operation and expansion, and for their replacement, including tourism vehicles, aircraft and ships in some countries. Exemption from import tariffs and other duties vary between countries in terms of percentages and timeframes (for example, in Panama imports are duty-free for three years after the start of operations); and there are also income-tax exemptions (in Honduras, Nicaragua and Belize for periods ranging from five to 10 years), and exemptions from VAT, real-estate or sales taxes. Some countries also establish priority development zones with additional incentives (Honduras, Nicaragua and Panama).

Source: Prepared by the Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of ECLAC studies on tourism in Central America (www.eclac.cl/mexico) and information on the sector in Central America (www.sgsica.org/turismo).

Several countries in the region have taken an explicit decision to strengthen a small number of productive chains, specifying the measures to be implemented and the instruments to be used in each case. In Mexico, the 2002 Economic Policy for Competitiveness specifies a total of 12 priority sectors as the targets of sectoral programmes, of which four are currently in operation (fibres-textiles-clothing; leather-footwear; electronics and high-technology industries; and software). Progress was also made in relation to the automotive industry, maquila exports and the chemical industry.²⁰

In Colombia, public-policy documents distinguish between pre-existing productive chains that need to be strengthened and developed, and those in which the country does not have a major presence and ought to enter.²¹ The policies defined are of general scope, and their stated aims include promoting cooperative relations between firms belonging to a chain, which may give rise to projects with shared benefits, and undertaking activities in the fields of technological innovation and human capital formation. In March 2004, the Brazilian Government announced Guidelines on Industrial, Technology and Foreign-Trade Policy, which set out its strategic sectoral alternatives in four knowledge-intensive activities: semiconductors, software, pharmaceuticals and medicines, and capital goods.²²

²⁰ The five remaining activity sectors are: aeronautics, agriculture, tourism, commerce and construction. Economic Policy for Competitiveness (website of the Ministry of Economic Affairs, Mexico, October 2003).

²¹ Information from Ministerio de Desarrollo Económico de Colombia.

²² The document in question states that those sectors were selected because: (i) they display growing and sustained dynamism; (ii) they represent significant amounts of international investment in research and development; (iii) they open up new business opportunities; (iv) they are directly related to innovation in processes, products and modes of use; (v) they increase the density of the productive fabric; and (vi) they are important for the country's future and have potential for developing dynamic comparative advantages.

Although these programmes and others promoted elsewhere in the region have generally not yet been implemented, or else are in the initial stages of implementation and cannot yet be evaluated, they represent an interesting trend in productive development policies. On the one hand, the demands they make on the public sector can be met even in a context of severe fiscal constraint: authority to convene on behalf of common interests, and coordination capacity between sometimes conflicting sectoral positions, in order to maximize joint benefits. They also start by recognizing the changes in specialization patterns which, for good or bad reasons, occurred in the 1990s, and are put forward as an effort to deepen productive integration, exploiting competitive advantages arising both from natural resource endowments and geographic location.²³

The creation of new activities sporadically appears as a policy objective, the most important cases being efforts, of varying intensity depending on the country, to introduce and deepen the use of information and communication technologies (as analysed in the annex to this chapter and in the chapter on innovation policies), or the promotion of forestry activity in many of the region's countries.

In most of the region's countries policies to attract foreign direct investment have been the key mechanism for developing new sectors. Examples include a set of policy initiatives ranging from a deepening of the export platform in Mexico in the framework of NAFTA (automobiles and autoparts, electronics and clothing) to investments in privatizations carried out in South American countries in the services and primary sectors, and embracing the most elementary activities of first-generation maquila industries in a number of Central American and Caribbean countries (clothing) (Mortimore, Vergara and Katz, 2001).

The instruments used to attract foreign enterprises can be classified into three broad groups (Mortimore and Peres, 1998): (i) attraction on the basis of incentives, essentially of the free-zone and fiscal type; (ii) attraction based on rules, i.e. generating efficient business conditions —rule of law, transparency, assured access to international markets, efficient infrastructure, etc.— and (iii) attraction based on the creation of specialized factors of production, particularly skilled labour. Although the region's countries have applied these three types of instrument with varying intensities, with few exceptions the first two have predominated.

II. Evaluation of implementation and impact

Evaluation of the implementation and impact of the policies that have been applied is hampered not only by a lack of available information, but also because the design of the instruments deployed seldom explicitly establishes the criteria and mechanisms to be used to evaluate them. This is further compounded by the technical complexity involved in evaluating policies that contain numerous objectives and lines of action.

In addition, data on the financial resources channelled into programmes or projects are scarce, which makes it hard to conduct an overall assessment.²⁴ Nonetheless, with few exceptions, it appears that many of the policies announced in the region have not actually been implemented —as shown in Peres (1997), and in particular the analyses of Alonso (2003a) on the situation of the five Central American countries, and by Fairbanks and Lindsay (1997) on the Andean countries that designed competitiveness strategies based on a cluster approach.

²³ Brazil could be an exception to this characterization, largely because it possesses a more complex productive structure and has successfully entered international markets for products with greater technological content.

²⁴ The best documented cases relate to funds allocated to agriculture policies, in particular in the framework of large-scale programmes such as PROCAMPO, Alianza para el Campo, and the marketing support programme in Mexico; see Kjällerström (2004); Villagómez (2003), for Mexico, and Scarone (2003), for Uruguay.

The factors that can be blamed for widespread implementation failures and the consequent shortfall between what was decided and what was actually executed in the studies mentioned above are:

- (i) The inclusion of non-operational or unachievable goals in policy design, which shifts the real decision on effective implementation to the budgetary allocation stage. In this regard, an evaluation of success factors in the 41 Colombian sectoral agreements shows that: (a) those with well-structured, quantifiable commitments and specific time horizons are easier to monitor and fulfil; (b) agreements with few and simple commitments tend to be more successful; (c) the leadership and decision-making power of the individuals who negotiate the agreements play a fundamental role; and (d) chains in which work is carried out prior to the agreements achieved better results (Velasco, 2003).
- (ii) Lack of human and financial resources to implement policies —particularly serious in the smaller and poorer countries, which often depend on external funding (loans or grants) to design and implement their programmes.
- (iii) Nearly all of the region’s countries have weak institutional capacity for policy implementation, even in policies that are not complex. This shortcoming is greater when policies aim to approach “best international practice,” rather than respond to the needs of the countries in which they are applied. This results in designs that are disconnected from reality, often promoted by State mechanisms of little weight in the power structure of Governments or business associations that are unrepresentative and have little economic and political weight, which makes the situation even more difficult. This problem is further aggravated by the regional tendency to separate the design and the implementation of policy instruments.
- (iv) Government agreements to implement policies with the private sector are weak, as can clearly be seen when executing public expenditure or investment commitments in conjunction with the private sector. There is also a proliferation of plans and programmes designed merely to respond to political pressures from economic stakeholders, obtain international funding or comply with legal or constitutional provisions.

Implementation failures and the perception that “policies do not work” undermine their legitimacy and the interest they arouse, especially among their main targets, namely entrepreneurs. This gives rise to the paradox that entrepreneurs bemoan the lack of resources available for policies, while at the same time failing to make full use of what is available. Overcoming these implementation failures and making sure that instruments designed actually function, is one of the key challenges facing productive development policies.

Despite the problems outlined above, progress has been made on relations between public authorities and business chambers for policy design and, in some cases, implementation. Although stand-off situations still persist, as mentioned above, significant progress has been made on developing public-private dialogue; and there have even been cases where leadership on policy proposals has been exercised by business entities.²⁵ In some countries it is even possible to speak of public-private co-responsibility in policy formulation, rather than mere policy consensus (Peres, 1997).

²⁵ Examples include the Asociación Nacional de Industriales (ANDI) of Colombia, the Confederación de Cámaras de la Industria de Transformación (CANACINTRA) in Mexico, the Asociación de Industriales in the Dominican Republic, the Cámara de Industrias in Costa Rica, or Federación de Cámaras Industriales de Centroamérica (FECAICA), which promoted the industrial modernization agenda in Central America.

Business chambers have also participated actively in negotiating forums to design measures in support of competitiveness, such as the National Competitiveness Council in Colombia, the Productive Development Forum in Chile, or the sectoral chambers in Brazil, to mention a few. In some cases, long-term proposals have even been made to stabilize policy design beyond government terms of office, as happened for example with “Visión 2020” promoted by the Mexican Confederation of Industrial Chambers (CONCAMIN).

Policy coordination with other civil-society bodies has been much weaker. Although labour unions have participated in discussion forums, in general their presence has not been decisive for the dynamic of such mechanisms. An exception, however, is the role played by unions in the sectoral chamber of the automotive industry in Brazil. Other bodies have played an even smaller role, apart from participation by the academic sector in the efforts made by the National Competitiveness Council in Colombia.

The situation is equally unsatisfactory in terms of impact evaluation. Although there are evaluations of certain specific programmes, such as those in support of small businesses in Chile, together with general assessments of what happened after policy implementation, these do not make it possible to specify the causes of the events they describe.²⁶ Examples include the expansion of non-traditional exports in chains with sectoral agreements in Colombia (Velasco, 2003); growth of mining exports in Peru (Fairlie, 2003); income growth among rural producers, and even increased productivity of their land plots, based on large-scale Mexican agricultural programmes (Villagómez, 2003); and discussion on whether or not self-employment incomes have risen among producers supported by the National Institute for Agricultural Development (INDAP) in Chile (Kjöllerström, 2004).

III. Final comments

In the mid-1990s dissatisfaction with the results of the new economic paradigm, which had replaced ISI, gradually rekindled interest among the region’s countries in applying productive development policies to complement the work of markets rather than replace them.

In addition, economic liberalization and increasing competition for scarce fiscal funding, aggravated by the need to address urgent social issues, have reduced the potential for implementing sectoral policies of the type that were characteristic of ISI, not only because they involved intensive use of public funds, but especially because it became increasingly difficult to use import tariffs on a widespread basis.

In view of this situation, it becomes essential to establish clear priorities for the areas to be addressed and the instruments to be used when designing a productive development strategy. Various chapters of this document have analysed the different lines of action (strengthening of clusters, promotion of SMEs, improved international participation, and others) which are worth persevering with. These horizontal lines of action, however, can and must be complemented by more selective policies.

As mentioned above, there is a clear regional trend in terms of initiatives to encourage the integration of productive chains, increase local value-added content and incorporate knowledge into activities with proven capacity to compete successfully on international markets.

Policy-target sectors vary according to the countries considered, forming a wide spectrum ranging from primary products (crops and livestock, forestry, aquaculture and mining) to services (such as tourism), also including manufactures —generally natural-resource-intensive or linked to maquila export activity, but also a number of sectors that export goods of high technological content.

²⁶ In the case of Chile, see the evaluations made of development programmes in that country reported in Silva and Sandoval (2003).

This is a practice that needs to be deepened, strengthening productive linkages (both upstream and downstream) in order to increase locally-sourced value-added and diversify the productive structure, creating new sectors, as shown by the successful experiences of a number of countries that have generated a complex and sophisticated productive structure based on a relatively abundant endowment of natural resources.²⁷

Emphasis on these sectors, however, does not rule out the possibility of selectively promoting initiatives aimed at creating new sectors that are not necessarily closely associated with the region's comparative advantages, at least from the static point of view —as exemplified by information technology in Costa Rica, or aircraft production in Brazil. The aim of generating dynamic comparative advantages based on new productive activities should form part of any comprehensive productive development strategy.

It is impossible to define a single policy agenda for the region, as this will depend on the constraints imposed by the size of national markets and accumulated capacities in each country. Nonetheless, it needs to be borne in mind that the definition of areas to be promoted and the design of available policy instruments, should prioritize selectiveness and austerity in the management of public funds; recognizing that is only possible to apply much weaker incentives than those that were characteristic of the ISI strategy.

Institutional capacity can also be a major constraint, especially in the short run; this does not mean it is impossible to implement productive development policies, rather that their scope should be in accordance with those capacities. In other words, the alternative is to focus efforts down rather than “shooting wildly into the air”. In any event, improving the institutional capacity of the State is a necessary condition, both to implement policies to strengthen productive structures aimed at speeding up growth in the region's economies, and to implement social policies aimed at achieving a fairer distribution of the benefits of that growth.

In addition, in a setting where competition for available fiscal resources is increasingly fierce, it is essential to work on issues relating to the legitimacy of productive development policies.²⁸ Implementation capacity needs to be improved, to narrow the gap between policy design and institutional capacity for effective implementation, the persistence of which undermines policy credibility. The strengthening of public-private dialogue and the establishment of participation channels for bodies that represent productive sectors will contribute towards this objective. Progress also needs to be made in evaluating the impact of initiatives implemented in terms of their ultimate objectives: economic growth, technological progress, increased productivity, etc. Some progress has been made on this issue, but much remains to be done.²⁹

²⁷ A case in point is Finland, which has used its forestry wealth to generate productive linkages that enabled it, over time and at different stages, to become highly competitive in the production of furniture, chemicals and capital goods, and even to enter the cellular telephony market. See Ramos (1998) and World Bank (2002).

²⁸ This point is emphasized in Peres (1997), Stallings and Peres (2000), and Peres and Stumpo (2002).

²⁹ An interesting example is the Business Development Programme of Mexico 2001-2006, which explicitly mentions quantitative targets. The programme proposes to create a public evaluation system including strategic indicators, control and coordination mechanisms, and participatory evaluation, periodic accountability and a monitoring unit for micro, small and medium-sized enterprises, as an information source (p. 56).

Appendix

National strategies on information and communication technologies (ICT)

1. The development of public agendas

Countries in Latin America and the Caribbean have been developing national strategies for the information society since the late 1990s. Table 8.1-A summarizes the most important features of such strategies in 12 of the region's countries; although there is no single model, the table reveals a number of common patterns.

The formulation, institutionalization and implementation of strategies for the information society are highly complex processes, which engage various public-sector authorities since crosscutting issues are involved. The success of a strategy depends on a number of factors, such as explicit support given by the Head of State, the selection of issues, the rank and decision-making power of the individuals responsible for it, efficiency in institutional coordination, and the availability and management of resources.

The development of national strategies —whose preparation and implementation times vary from 18 months to five years— typically follows a three-stage evolutionary process. The first phase consists of constructing a strategic vision and setting out basic principles in guideline documents. During the second phase —which most of the region's countries have now reached— policies are formulated and institutional structures defined. This stage includes defining goals, resources and responsibilities for the different participants in the national strategy. The third phase —which has now been attained by countries such as Chile, Colombia and Mexico— involves implementation and monitoring, and is characterized by operational management of projects. In this stage, continuous monitoring of strategy performance is an essential step, which few countries have achieved.

Nearly all national strategies were launched through government decrees. Chile and Argentina were the first countries to publish these, initiating their discussion in 1997 and promulgating them in 1998; Brazil followed in 1999, and then Colombia and Venezuela in 2000. The other countries began to prepare strategies in 2001-2003. Contrary to expectations, most national strategies have survived changes of Government; nonetheless, they tend to suffer operational adjustments even though new administrations broadly adopt the strategic vision of their predecessors.

In terms of thematic priorities, the deployment of a universal and modern ICT infrastructure, reduction of the “digital divide” and electronic government —i.e., the harnessing of ICTs to create a more transparent, effective and efficient public sector that is closer to citizens— occupy much of the attention of the countries of the region. In some cases, e-government is becoming the key issue, around which the national strategy is developed, especially where programmes of State and public administration reform and modernization are unfolding.

Another common theme is ICT dissemination in schools. Countries such as Brazil are promoting the use of open-source software to create a broader user base.³⁰ Given the evolutionary process of national strategies, new issues such as content, privacy, consumer confidence and the legality of digital activities should soon occupy an important place on the policy-making agenda.

³⁰ By using open-source software such as Linux, users are free to execute, copy, distribute, study, change and improve programme code (GNU project, 2002).

Table 8.1-A
NATIONAL STRATEGIES FOR THE INFORMATION SOCIETY

	Argentina	Bolivia	Brazil	Chile	Colombia	Ecuador	
Stages	Current stage	Strategic vision	Policy formulation	Policy formulation	Implementation and monitoring	Implementation and monitoring	Strategic vision
	Principal coordinator in the current stage	PSI, SGP and SeCyT www.psi.gov.ar www.sgp.gov.ar www.secyt.gov.ar	Agency for the Development of the Information Society in Bolivia (ADSIB) www.adsib.gov.bo	Executive Committee on Electronic Government	Digital Action Group www.economia.cl	Connectivity Agenda www.agenda.gov.co	National Connectivity Commission www.conectividad.gov.ec
	Guideline document	Strategic: NO Operational: NO	Strategic: YES Operational: NO	Strategic: YES Operational: NO	Strategic: YES Operational: YES	Strategic: YES Operational: YES	Strategic: NO Operational: NO
	Launch date	March 2000	March 2002	December 1999	July 1998	February 2000	August 2001
	Decree	Decree 1018/98, amended by Decrees 252/00 and 243/01	Supreme Decree 26553, March 2002	Decree 3294, December 1999	Supreme Decree of 1/7/1998 and Decree of June 2000	CONPES 3072 February 2000	Executive Decree 1781
	Existence of previous programmes	YES	NO	YES	NO	NO	NO
Change of Government	YES	YES	YES	YES	YES	YES	
Topics	Three main thematic areas	Infrastructure, e-training, e-government	e-government, infrastructure, e-training	e-government, generic services, infrastructure	e-government, infrastructure, e-training	e-government, infrastructure, e-business	Infrastructure, e-government, e-training
	Leading topic	-	e-government	Previously science and technology, now to be defined	e-government	Neutral	Infrastructure
Hierarchical level	Hierarchical level of strategic design	D PSI, SGP, SeCyT under various ministries	B Office of the Vice President in interministerial coordination	C SOCINFO programme coordinated by the Ministry of Science and Technology	A Presidential commission	A Office of the President	B Interministerial
	Hierarchical level of the operational secretariat	- Various programmes at different government levels	B Office of the Vice President	- Various programmes and different government levels	D Undersecretariat for Economic Affairs	B Management board headed by the Ministry of Communications	D CONATEL
Coordination	Coordination style in strategic phase	Parallel networks	Decentralized network	Previously: centralized network, now: decentralized network	Decentralized network	Centralized network	Decentralized network
	Coordination style in operational phase	Parallel networks	To be defined	Previously centralized network, now to be defined	Decentralized network	Centralized network	-
	Telecom regulator	+++	++	++	+++	++	L
	Ministry of Education	+++	++	0	+++	++	+
	Ministry of Economic Affairs	0	+	+	L	+	+
	Ministry of Health	0	0	0	0	0	+
	Private sector	+	+	0	++	+	0
	Academia	0	+	0	+	+	0
	Civil society	0	+	0	++	+	0
	NIC/ DNS	+	+++	++	+	0	0
State reform programme	+++ The Public Administration ADSIB works on e-Secretariat (SGP) is one of the leaders	Does not exist, but ADSIB works on e-government	The Ministry of Planning, Budget and Management is part of the new initiative	+++ The General Secretariat of the Office of the President (PRYME) is part of the Digital Action Group	The Public Administration Renewal Programme (PRAP) forms part of the connectivity agenda	+++The National Modernization Commission (CONAM) is part of the National Connectivity Commission	
Resources	Human resources in the central secretariat	-	3 in ADSIB	8 coordinators of 8 workgroups	2 in the Undersecretariat for Economic Affairs	21 in the Connectivity Agenda	2 in the National Connectivity Commission
	Source of funding	Treasury, external funds	Treasury, internally generated revenues, external funds	Treasury, external funds	Treasury, external funds	Treasury, external funds	Treasury, external funds
	Coordination of financial resources	Parallel	Decentralized coordination	Previously centralized, now to be defined	Decentralized coordination	Centralized coordination	Decentralized coordination

Table 8.1-A (conclusion)

	Jamaica	Mexico	Peru	Dominican Republic	Trinidad and Tobago	Venezuela	
Stages	Current stage	Policy formulation-implementation	Implementation and monitoring	Policy formulation	Policy formulation	Strategic vision	
	Principal coordinator in the current stage	Central Information Technology Office (CITO)	National system e-México www.e-mexico.gob.mx	Multisectoral Commission for Development of the Information Society (CODESI)	CNSI for strategy UDD for operational stage	Steering Team of the National Information and Communication (ICT) Plan www.nict.gov.tt	Ministry of Education, Culture and Sport, Ministry of Infrastructure, and Ministry of Science and Technology
	Guideline document	Strategic: YES Operational: YES	Strategic: YES Operational: NO	Strategic: YES Operational: In preparation	Strategic: NO Operational: NO	Strategic: in preparation Operational: In preparation	Strategic: NO Operational: NO
	Launch date	March 2002	May 2001	June 2003	August 2002	October 2002	May 2000
	Decree	-	National Development Plan 2001-2006, and Sectoral Plan for Telecommunications and Transport 2001-06	Ministerial Resolution 181-2003-PCM June 2003	Decree 686 2002	To be approved in November/December 2003	Decree 825 in May 2000
	Existence of previous programmes	NO	NO	NO	NO	NO	NO
Change of government	YES	NO	YES	NO	NO	NO	
Topics	Three main thematic areas	e-training, e-government, infrastructure	e-services. Infrastructure, integration of efforts	Infrastructure, e-government, e-training	Infrastructure, e-government	Infrastructure, e-government, e-training	Infrastructure, e-training, human capital
	Leading topic	Neutral	Generic services	-	-	-	-
Hierarchical level	Hierarchical level of strategic design	B Interministerial	C Ministry of Communications and transport	B Office of the President of the Council of Ministers	A Technical Secretariat of the Office of the President	B Ministry of Public Administration and Information in interministerial coordination	C Three different ministries
	Hierarchical level of the Operational Secretariat	D Independent, linked to the Ministry of Trade and Science and Technology	C Ministry of Communications and Transport	D Vice-Ministry of Communications of the Ministry of Transport and Communications	A Technical Secretariat of the Office of the President	B Steering Team	C All ministries
Coordination	Coordination style in the strategic phase	Centralized network	Centralized network	Decentralized network	Centralized network	Decentralized network	Parallel networks
	Coordination style in operational phase	Decentralized network	Centralized network	To be defined	Centralized network	To be defined	Parallel networks
	Telecom regulator	++	+++	++	L	+++	+++
	Min. Education	++	+++	+++	++	++	L
	Min. Economic affairs	L	+++	+	++	++	0
	Min. Health	+	+++	++	++	+	0
	Private sector	+++	+	++	+	+++	+
	Academia	++	+	+	+	+++	0
	Civil society	+	+	++	+	++	0
	NIC/ DNS	0	0	+++	0	++	+++
State reform programme	+ Public Sector Reform Unit (PSRU)	+++ The Civil Service Secretariat is part of e-México	+++ The Office of the President of the Council of Ministers is part of CODESI	++ State Reform and Modernization Programme (PARME)	+++ The Public Sector Transformation Project is part of NICT	Does not exist	
Resources	Human resources in the central secretariat	5 in CITO	12 coordinators in e-México	8 coordinators of 8 workgroups in the Vice Ministry	4 managers in the UDD	2 in Steering Team, 4 in Planning Secretariat, 2 external consultants	-
	Source of funding	Treasury, external funds	Treasury, external funds	Treasury, external funds	Treasury, external funds	Treasury, external funds	Treasury, external funds
	Coordination of financial resources	Decentralized coordination	Centralized coordination	To be defined	Centralized coordination	Centralized coordination	Parallel

Note: Hierarchical level: Office of the President = A; Interministerial commission = B; Ministry = B; Ministerial undersecretariat = D. Resources: External funds consist of loans, foundations and grants. Coordination styles: Relates to August-December 2003. L = the body leading the strategy; +++ = very close cooperation between the leading coordinator and this body; ++ = close cooperation between the leading coordinator and this body; + = some cooperation between the leading coordinator and this body; 0 = no cooperation between the leading coordinator and this body.

2. Institutional coordination

There are three styles of coordination in the region: decentralized network, centralized network and parallel networks. A decentralized network implies coordination of a wide variety of authorities and thematic areas, which requires a collective effort to ensure a comprehensive vision of the information society rather than one limited to specific issues.

A centralized network, in contrast, implies the existence of an entity that carries out most of the tasks related to the information society, with “satellite” units contributing through work and experience on initiatives proposed by the central body. In large countries with a complex federal public apparatus, such as Mexico, in which local governments develop their own strategies for the information society, the aim is to centralize coordination in the operational stage. In contrast, in smaller countries, such as Chile and Jamaica, it has been possible to establish a decentralized coordination network with many participants from different areas.

Parallel networks, for their part, mean the coexistence of different authorities each developing their own visions, agendas and projects. A case in point is Argentina, where there are several programmes and initiatives with no official links coordinating their actions. The most active agencies are the National Programme for the Information Society (PSI) of the Ministry of Communications, which is executing infrastructure programmes; the Undersecretariat for Public Administration (SGP), with e-government programmes; and the Ministry of Education, Science and Technology, with programmes on education and productive innovation.

All countries have key institutions for preparation of national strategies. The telecommunications regulator, for example, has very active participation both in strategy definition and during the operational stage; and this explains why many countries develop strategies focused on ICT infrastructure.

Other important factors include education ministries that run programmes to incorporate ICT in schools. In Chile and Jamaica, the education ministries have played a leading role in this area. Participation by health ministries in national strategies is infrequent —except in Mexico where the health ministry agenda includes initiatives and projects on connectivity and development of electronic services; and in Peru, Dominican Republic and Trinidad and Tobago, where health ministries participate in strategy definition.

In nearly all countries, participation by the private sector, academic institutions and civil society is still very limited, thereby revealing a lack of genuinely participatory strategic planning. In the case of authorities that manage registries of Internet domain names (NIC, Network Information Centre), as these have an exclusively administrative role, most countries see no need to include them in strategy preparation and implementation.³¹

As regards work organization, the authorities concerned with strategic planning are generally of a higher rank than those responsible for operational implementation. In eight of the 12 cases analysed, the strategic work is being carried out through a Presidential Commission or an interministerial committee, whereas responsibility for implementation of the operational part of the strategy generally falls to a Ministry or Undersecretariat.

In the case of the Connectivity Agenda in Colombia, the fact that policy formulation was the responsibility of the Office of the President of the Republic seems to have had a positive effect on institutionalization of the strategy, helping to establish it within the public sector without losing consistency between the different lines of work. In the operational phase, the Connectivity Agenda was transferred from the Office of the President to the Ministry of Communications.

³¹ In some countries (such as Argentina, Bolivia, Colombia and Venezuela) NICs form part of the public sector. Elsewhere they are the responsibility of civil society (Peru), academic institutions (Chile and Mexico) or a private firm (Ecuador).

In Chile, the Undersecretariat for the Economy coordinates the Digital Action Group, an interdisciplinary unit consisting of various stakeholders responsible for government projects. The Undersecretariat for the Economy directly reports to the President of the Republic on progress achieved in the strategy, thereby creating a link that boosts the hierarchical status of the Undersecretariat and connects the national strategy directly to the highest level of State.

3. Financial resources and policy characteristics

All countries make use of funding drawn from the national budget and also from external sources, which they manage through a centralized or decentralized coordination system. Colombia represents an example of centralized fund management for the national strategy, where the Connectivity Agenda has its own resources and budget.³² In Mexico, the national e-México system has two different funding sources: firstly an annual budget; and secondly the e-México Trust Fund, which is a special fund for long-term projects through which donations and credits can be obtained from public and private institutions, both national and international.³³ In Jamaica, the Technical Secretariat of the Central Information Technology Office (CITO), a body that reports directly to the Minister of Trade, Science and Technology uses a decentralized coordination model in managing its financial resources. CITO is authorized to supervise the expenditure and operational efficiency of ICT plans in the various ministries; and the latter have to submit their annual budgets for its approval.

Given the budget constraints faced by the Governments of Latin America and the Caribbean, policies to provide phone lines, computers or Internet access to all homes in the region, which would constitute a genuine “universal service”, are unrealistic. The most frequent practice is to pursue “universal access”, by assuring the population’s right to obtain ICT services at accessible prices and at a “reasonable” distance from their place of residence or work (James, 2000; Proenza, Busch and Montero, 2001), by extending telephone lines to isolated rural areas and providing free Internet access to low-income sectors through community telecentres. Table 8.2-A describes the funding sources and uses made of universal access funds in seven countries of Latin America and the Caribbean.³⁴

The provision of online public services (e-government) is also a priority in many countries. When the Government puts its services on line, firms that have to carry out numerous procedures and transactions with the public sector are forced to incorporate ICT into their daily life. In this sense, e-government acts as an indirect catalyst for the digitalization of productive processes among firms. Some of the region’s countries, such as Brazil, Chile and Mexico are carrying out public procurement online (e-procurement), aiming not only to encourage firms to adopt this new mode of transaction, but also to guarantee transparency in government purchase and contracting processes, and to encourage saving and efficiency in public expenditure.

Even if Governments succeed in implementing ICT initiatives that provide useful services, there is no guarantee that the public will make use of them. Accordingly, several countries are launching mass dissemination campaigns to raise awareness among the population and provide training in ICT use. In 2003, for example, the Government of Chile trained some 100,000 people in the use of computers and Internet through its National Digital Literacy Campaign. This will last until 2005 and offers 18-hour courses on the use of computers, word processors and Internet navigation for workers and microentrepreneurs (Government of Chile, 2003). In the long term, the public school system can also play an important role in disseminating ICT knowledge, through programmes to provide access to computers and Internet in schools. Such programmes already exist in several countries of the region, including Brazil, Chile and Costa Rica (Hopenhayn, 2003). Box 8.1-A provides data on ICT dissemination in the region.

³² In 2001-2003 the Connectivity Agenda had a budget of approximately 15.575 billion Colombian pesos (US\$ 7 million).

³³ The 2002 budget amounted 673.5 million Mexican pesos (US\$ 74 million), but this was cut to 328 million pesos (US\$ 32 million) in 2003 as a result of federal Government budget constraints.

³⁴ Generally speaking, these funds are maintained by a special tax on telecom operators (normally 1% of operating revenues).

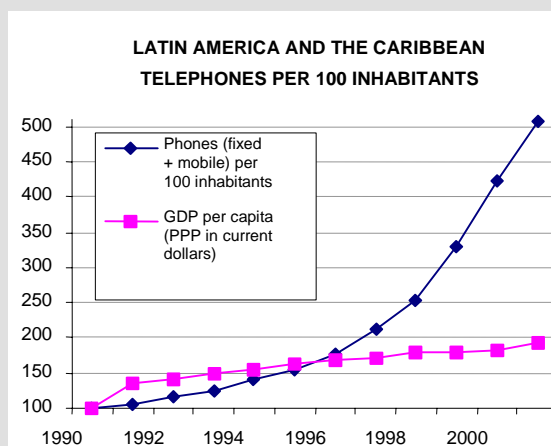
Table 8.2-A
EXAMPLES OF FUNDS FOR UNIVERSAL TELECOM ACCESS

Country	Name of fund and year created	Administrating body	Funding	Use
Argentina	Universal Service Trust Fund (FUSU), governed by the General Universal Service Regulation (RGSU) (1999)	Ministry of Economic Affairs	The RGSU requires telecom service providers to pay to the fund 1% of their total revenues earned from provision of telecommunications services.	The fund aims to encompass all citizens who for various reasons have been excluded from telecom services, with education and public health being promoted
Brazil	Telecom Services Universalization Fund (FUST) (2000)	Ministry of Communications	The fund consists of a 1% levy on sales by telecom firms, other revenues arising from payments for concession rights or permits, and contributions established in public budget laws.	Serves various segments: libraries, health services, remote areas, localities with less than 100 inhabitants, and public health organizations, through Internet, telephone and teleconferencing services.
Chile	Telecommunications Development Fund (FDT) (1994)	Undersecretariat for Telecommunications (Subtel)	The fund is formed from transfers under the Public Sector Budget Act, and it can also receive other contributions.	The fund has subsidized rural telephony installation in 6,059 localities. It also subsidized the establishment of various telecom services, including Internet access centres.
Colombia	Programa Compartel de Telecomunicaciones Sociales (1999)	Ministry of Communications	This programme is State funded. In addition, the local telephony service allows for a cross-subsidy between users. The State allocates funds arising from concessions for the provision of mobile and long-distance phone services, which pay 5% of gross quarterly revenue to the Communications Fund.	A total of 7,415 community telecommunication points have been installed, in places of public access in a variety of rural localities.
Dominican Republic	Telecommunications Development Fund (FDT)	Dominican Telecommunications Institute (INDOTEL)	FDT funding mostly comes from the Telecommunications Development Contribution (CDT) consisting of a 2% levy paid by users on invoices for public telecommunications services (phone companies and cable).	The fund finances public telephony projects, although there are also tele-education, tele-medicine and tele-community centres in pilot projects.
Mexico	Fund for Telecommunications Social Coverage (FCST) (2002)	Ministry of Communications and Transport (SCT)	The federal Government contributed US\$ 75 million to the fund through the SCT.	Its objectives are to increase the coverage, penetration and diversity of telecom services among low-income populations in rural and urban areas.
Peru	Telecommunications Investment Fund (FITEL) (1993)	Regulatory body for Private Investment in Telecommunications (OSIPTEL), Ministry of Transport and Communications	Regulations for the Telecommunications Act require operators of both carrier and final public services to contribute to FITEL 1% of total gross annual revenues invoiced and received. In addition to these transfers, which are channelled through the Public Treasury, there are financial revenues generated from FITEL funds, credits of domestic or foreign origin, and other contributions.	FITEL resources finance investment, operations together with maintenance and/or complementary activities needed for the functioning of telecom services. Covers engineering studies, acquisition of equipment and materials, civil works, transport, equipment installation and testing, access and preparation of content on the Internet, together with training programmes in the use of such services. Funds cannot be provided as a direct subsidy to users, however.

Box 8.1-A

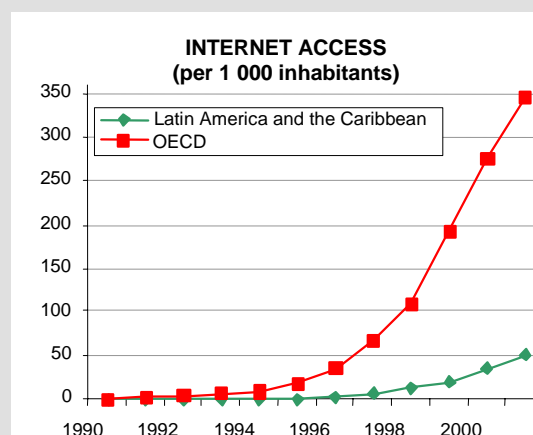
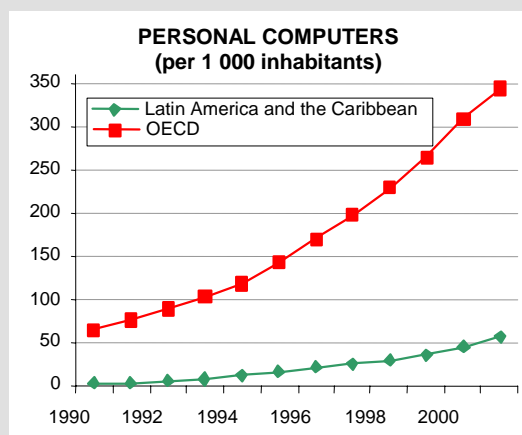
DISSEMINATION OF INFORMATION AND COMMUNICATION TECHNOLOGIES

Notwithstanding the digital divide that exists between the region and the developed world, ICT dissemination has progressed in specific areas.



For example, while still lagging far behind the technological frontier and levels achieved in Europe and the United States, access to fixed and mobile phone services is similar to the world average, and there has been a steady increase in global penetration (fixed plus mobile telephony), in recent years far outpacing per capita GDP growth in the region.

In contrast, the number of personal computers and Internet users (per 1,000 inhabitants) is well under the world average, and even further below levels in the most advanced economies, although in Argentina, Brazil, Chile, Costa Rica, Mexico and Uruguay the gap is much narrower than the average.



Source: Economic Commission for Latin America and the Caribbean (ECLAC), based on World Telecommunications Database.

4. Lessons

The process of disseminating new ICTs in Latin America and the Caribbean is tending to replicate the heterogeneity that characterizes the region's economies. Overcoming this digital divide between countries to ensure productive use of ICTs requires government intervention through national strategies that have a comprehensive vision and an in-depth understanding of domestic economic and social problems (Regional Preparatory Ministerial Conference of Latin America and the Caribbean for the World Summit on the Information Society, 2003).

Strategies that are successful enjoy high-level political support with efficient coordination of the different agents involved in preparation and implementation; and they do not focus exclusively on infrastructure problems. In particular, public policies need to take account of the obstacles faced by less developed sectors, in order to guarantee universal access to a low-cost information and communication infrastructure. Moreover, to ensure that ICTs are used productively, public policies also need to focus on learning processes at the enterprise and personal levels.



Part four: Employment, social protection and education: towards a covenant of social cohesion



Introduction

Over the last decade Latin America has witnessed a sharp increase in employment-related problems. According to ECLAC estimates, the urban unemployment rate climbed from a low of 6.9% in 1990 to an all-time regional record of 10.6% in 2003 (ECLAC, 2004d). Data compiled by the International Labour Organization indicate that employment in the informal sector swelled from 42.3% of total non-agricultural employment in 1990 to 46.5% in 2002. The increase was even steeper in the case of women. In fact, women joined the labour force in ever larger numbers as they sought to protect their families' level of well-being in the event that the main breadwinners were to lose their jobs.

Thanks to this latter trend, the employment rate dipped only slightly (from 53.4% to 52.1%) and this, in conjunction with an increase of nearly 15% in real average wages between 1990 and 2003, translated into a reduction in poverty at the household level—from 41.0% in 1990 to 36.1% in 2002—despite higher unemployment and the growth of the informal sector.¹ These figures attest to the significance of women's entry into the labour market, especially the informal sector, which has served as a means of protecting their households in the absence of an ample social protection network that could cushion the population from the impact of the increasingly precarious nature of employment.

¹ The individual poverty rate declined from 48.3% to 44.0% during this period.

This process has unfolded against a backdrop of sharp external imbalances that are associated with the volatility of international financial capital flows, which has, in turn, often been triggered by contagion from international crises. The region grew by a scant 2.6% during the decade, which is too slow to create enough productive jobs for a workforce that is expanding by 2.5% per year. The shortage of jobs turned the region's economic vulnerability into social vulnerability, thus revealing the lack of a system of social protection that can effectively shield workers from the risks associated with unemployment and underemployment.

No significant headway from the standpoint of social well-being and growth has been made since 1990. The term "flexi-insecurity" has been coined to denote the policy mix in place during this period, a mix that helped businesses adapt to changing international conditions but failed to develop a solidarity-based system to protect people from the new risks and uncertainties associated with the change in the production structure.²

The chapters in this section describe the conflict that has arisen in the region owing to the convergence of the demand for flexibility required by a market economy in order to allocate production resources efficiently and the demand for the social protection required by the population in order to cope with the risks associated with a reorganization of the production structure. Special reference is made in this connection to mechanisms for the development and protection of human resources. Chapter 9 discusses measures that could be taken to enhance both flexibility and social protection at one and the same time (Tokman, 2004), and a covenant of social cohesion is proposed. This covenant would be in keeping with a macroeconomic stabilization policy and would combine active policies concerning the formal and informal segments of the labour market with the design of solidarity-based components for financing social protection services within a framework of fiscal responsibility. In concrete terms, this would involve changing over from a "flexi-insecurity" model to a fiscally responsible model of "flexi-security". The covenant of social cohesion would stand on four components: coherence with fiscal and income politics; explicit recognition of active policies to create employment and in support of the informal sector; a generous but financially viable social protection program and a large emphasis on education and training.

Chapter 10 focuses on the need to upgrade education services in order to achieve long-term gains in competitiveness. Recommendations are made for the adoption of measures to improve such services and their financing and to build up their technology-absorption capacity by strengthening research and development. The concept of a "covenant" advanced in this chapter constitutes a recognition of the on-going need to adapt the educational system to the challenges of competitiveness. This, in turn, means that the region needs to increase its secondary-school graduation rate, tailor the educational system to the demands of the labour market and narrow the digital divide at the international and social levels. The reduction in public primary-school repeater rates and the increase in secondary-school enrolment rates now being seen in the region are not comparable with the improvements occurring in other competitive regions. These factors, together with the low productivity of the education services provided to poor sectors of the population due to an improper distribution of resources, place constraints on the region's productive development that need to be rectified (Carlson, 2003).

² This alludes to the term "flexi-security" coined by Kongshoj Madsen in referring to the successful Danish model, which combines adaptability to a changing international situation with a solidarity-based social protection system that shelters the population from the brutal consequences of structural change (Madsen, 2002).



Chapter 9

Employment and social cohesion in open economies

The labour market is one of the main links between changing production patterns and social equity. The earned income of its working-age members is the principal means of financing the basic needs of the great majority of families in the region. Earned income ranges from a minimum of 63% of the income of families in Brazil, a country where there are major transfers, to a maximum of 90% in Nicaragua (ECLAC, 2002a, p. 18). It is not surprising, therefore, that the sharp increase in unemployment that occurred in Latin America and the Caribbean between 1990 and 2003 has aggravated problems of social equity in the region.

Two factors contributed to the rise in unemployment. Firstly, a low and unstable growth rate associated with reform processes that reduced employment demand per production unit. Two of the most important reforms were: (i) a rapid process of trade opening, which heightened the need to acquire capital-intensive and skilled labour-intensive technology, in turn reinforced by a change in relative prices, which increased the relative cost of labour; and (ii) the privatization of public enterprises which, in most cases, considerably reduced their manpower levels. Secondly, there was a labour supply dynamic that stemmed not only from demographic factors but also from economic, social and cultural changes. This reflected a growing need for family members to include two or more paid workers in order to allay the insecurity of family income, which has led to a higher percentage of women entering the informal labour market.

As is customary in the region, the rise in unemployment was accompanied by a rise in informal employment —yet another indication that informal work has become a resource for the unemployed. More than 63% of the working members of the poorest 40% of families in the region work in the informal sector and spend all

their earned income on subsistence.³ Thus, it is even more crucial to design specific policies for the informal sector.

Labour flexibilization policies without social protection arising from trade and financial liberalization have aggravated the problems already existing in the labour market. Production patterns are changing faster and their effects on employment and working conditions have undermined social equity. The process of liberalization and trade opening that began in the mid-1980s failed to include a comprehensive policy of social protection to cover the risk, not only to those in ‘unprotected’ sectors associated with informal urban employment and traditional agricultural employment, but also to those experiencing growing job insecurity because they needed to accept jobs without a stable contract or social protection (ECLAC, 2002a).

New technologies have also led to a demand for specialized skills in the labour market. Teaching and apprenticeship curricula, relevance and changes, as well as the relations between school, family, businesses and the social and territorial environment, have failed to provide for the rapid adaptation of displaced workers. According to assessments of the quality of education in Latin America (student educational achievements), the region ranks lower than desired, and its students score less well than in countries with equal or higher levels of development.⁴ This limits the capacity of vocational training systems to enhance the employability of the labour force. In turn, vocational training systems suffer from serious shortcomings, since they have targeted the formal sector of the economy, under the guidance of employers’ associations that favoured the urban environment and industrial training, with inflexible and centralized public provision.

This chapter analyses institutions and public policies in the field of employment, education and training which govern the labour market, in their dual role as providers of employment opportunities and income and as guarantors of social protection for the economically active population. It examines their role in changing production patterns by analysing the rules governing social welfare and the conditions of employability of temporarily unemployed workers. It emphasizes the importance of labour flexibility in enabling businesses to adapt to the new conditions imposed by globalization, as well as the need to review social protection systems to gear them to new forms of work organization. To promote the above, this chapter recommends a social cohesion covenant based on four pillars: (i) consistency between labour and macroeconomic policies; (ii) active employment policies aimed primarily at the informal sector; (iii) wider coverage for social protection systems, which have been limited by defined contribution schemes that have proven to be exclusive; and (iv) adapting education and training systems to the heterogeneous development of the production sector.

This chapter is divided into four sections. After analysing labour market trends and prospects, focusing on changes in job quality, the chapter discusses, in turn, the current status of ‘labour institutionality’ and possible avenues for extending social protection coverage; the aim of job creation policies; and the key role of vocational training in improving working conditions and economic security.

³ According to the International Labour Organization (ILO), the informal sector is a labour-market segment characterized by unstable, low-productivity jobs with poor salaries in marginal sectors. It includes the following categories: (i) non-professional self-employed workers and family workers; (ii) domestic workers; and (iii) workers in establishments with fewer than five employees. ILO has developed the concept of decent employment, the components of which are: good quality, secure, productive employment; protection and respect for workers’ rights; decent income; social protection and tripartite consultation (government, employers and workers), social dialogue, trade union freedom, collective bargaining and participation. By contrast, casual employment is associated with insecure, poorly paid, vulnerable jobs and with various forms of abuse, including a greater risk of losing jobs, instability, lack of protection, insecurity and social and economic vulnerability.

⁴ Some developing countries achieved the target for 15-year-old pupils, in mathematics, science and language (Poland), or exceeded it (South Korea). Brazil and Mexico which, along with Chile, were the best performers in Latin America in the 1998 primary education tests of the United Nations Educational, Scientific and Cultural Organization (UNESCO), dropped far behind in that test. In 2000, the Programme for International Student Assessment measured the reading comprehension and mathematical knowledge of 15-year-olds in 41 countries. The countries of the region that participated in the study scored the lowest, whereas Thailand and Malaysia, which have a similar per capita GDP, achieved relatively high scores (see also chapter 10).

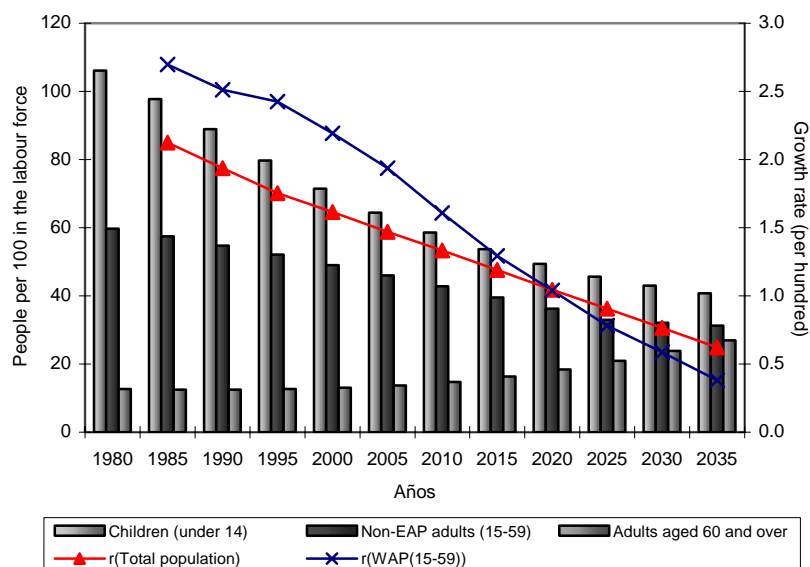
I. Employment and the labour market

1. Family welfare and labour supply

The demographic trend towards rapidly decreasing fertility, which had already begun in most Latin American countries more than two decades ago, has affected labour markets in the region. The growth rate of the working-age population (between 15 and 60 years of age)⁵ has dropped and life expectancy has increased.⁶ This sociodemographic dynamic has two effects on labour policies. Firstly, the decline in fertility is associated with women's greater willingness to participate in the labour market. Secondly, the economic dependency ratio (children, non-working adults and retired people over the age of sixty will drop to a minimum and then rise due to the rising proportion of retired people over the age of sixty). Since this increase leads to greater demand for health services and pension benefits, it puts pressure on financing arrangements for social protection in those fields (Titelman and Uthoff, 2003).

With respect to the participation rate, the factors that prompt individuals to become economically active may be classified into three groups,⁷ according to whether they involve a need to participate (such as insecure family income); opportunities to do so (such as the existence of jobs for household members' level of qualifications); or constraints on participation (such as the inability to combine employment with caring for the home and children).

Figure 9.1
LATIN AMERICA: TOTAL POPULATION GROWTH RATES AND ECONOMIC
DEPENDENCY RATIO



Source: Latin American and Caribbean Demographic Centre (CELADE) - Population Division of ECLAC, total population and economically active population projections.

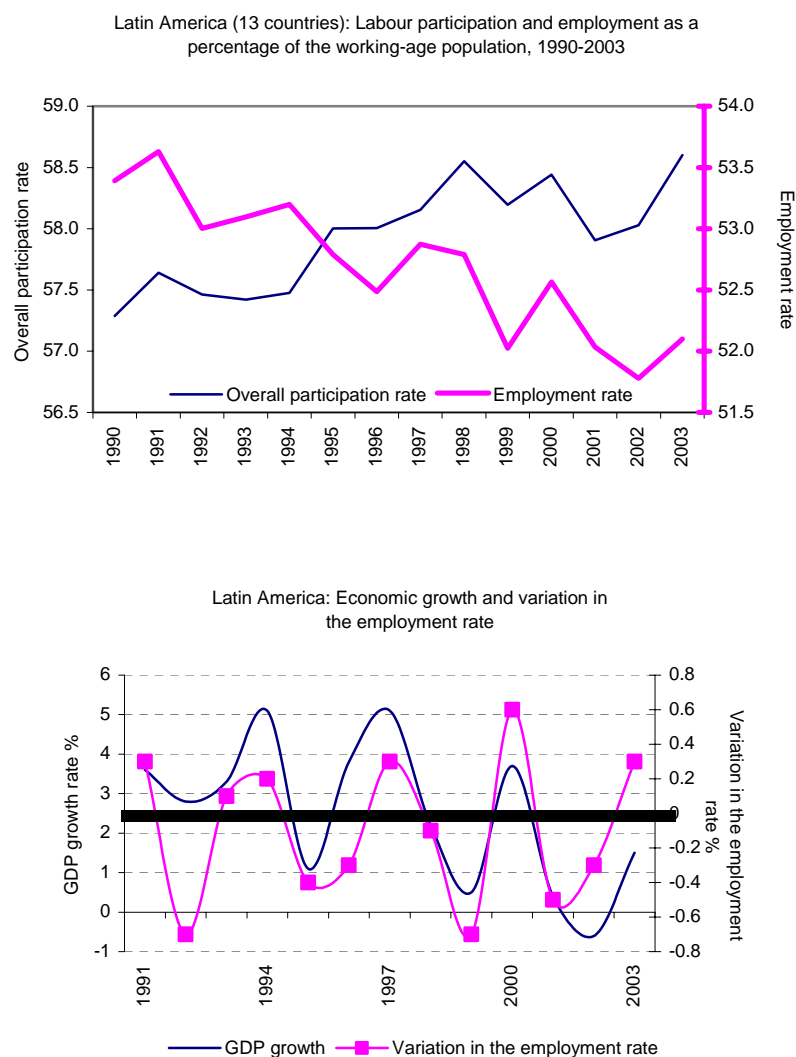
⁵ The age range of the working-age population, from 15 to 60, does not necessarily coincide with the standard range used by individual countries. In fact, participation rates in economic activity are calculated as from the age 10 in order to include child labour. The fast-declining growth rate of the working-age population, which is always greater than the population growth rate, shows that there has been a very fast decrease in fertility.

⁶ The fast-declining growth rate of the working-age population, which is always greater than the population growth rate, shows that there has been a very fast decrease in fertility.

⁷ However, the results may differ from one source to another owing to the different ways of measuring economic activity and the survey method used. This is reflected in the differences observed between the CELADE estimates, which are based on standardized participation rates, and those of ILP, based on effective participation rates.

The need to participate on account of job insecurity and declining fertility have accelerated the entry of women into the world of work. These factors have contributed partially to these different trends in the participation rate and the rate of employment, which measures the number of employed persons in relation to the number of persons of working age. As shown in figure 9.2(a), the participation rate follows an upward trend, which contrasts with the decline in the employment rate. On the other hand, the employment rate behaves procyclically in relation to the level of economic activity (figure 9.2(b)), although the nature of this relationship has tended to change in recent years.

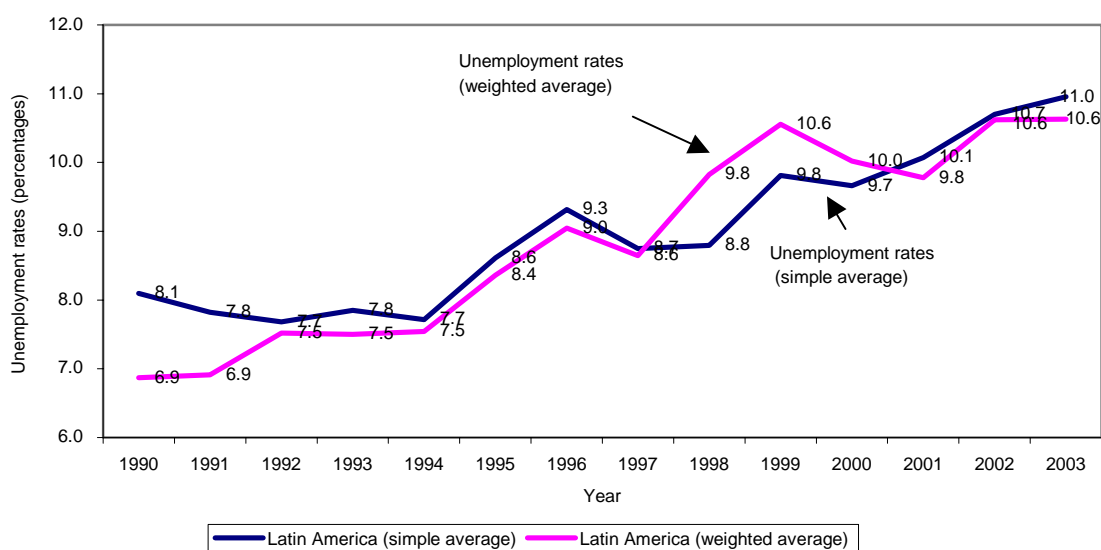
Figure 9.2
LATIN AMERICA: DYNAMICS OF GROWTH AND OF RATES OF EMPLOYMENT AND PARTICIPATION IN ECONOMIC ACTIVITY



Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of official information.

The behaviour of these variables has resulted in rising unemployment. In the last thirteen years the region's unemployment rate rose with ups and downs to unprecedented figures, from 6.9% in 1990 to 8.6% in 1997, 10% in 2000 and 10.6% in 2003 (see figure 9.3 and tables 9.1 and 9.2).

Figure 9.3
LATIN AMERICA: UNEMPLOYMENT RATE
(In simple and weighted averages)



Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of official data. Weighted average for the working-age population, as a simple average. For countries like Bolivia, Nicaragua and Paraguay, which do not yet have the 2003 unemployment rate available, the rates for 2002 were used, since these countries have maintained the trend.

The second effect of demographic trends, the economic dependency ratio, makes it necessary to consider the job quality of the economically active population, since their jobs are meant to guarantee funding for social protection. As shown in the following section, the adaptation of businesses to new conditions of demand, which in turn is a result of the economic cycle and changing competitiveness, led to far-reaching changes in labour recruitment conditions. There was a rise in the proportion of workers with fixed-term or temporary contracts, workers with no employment contract and workers without adequate levels of social protection.⁸ All in all, the economic insecurity of families increased.

⁸ In Argentina, the proportion of workers with no employment contract rose from 22% to 33% between 1990 and 1996 and in Peru, from 30% to 41% between 1989 and 1997. In Chile it rose, but to a lesser degree, and dropped only in Colombia. The increase is concentrated in small and very small enterprises, where the relative proportion of such workers is twice that of establishments with more than five workers (ECLAC, 2002a). In Peru, 90% of new employees with no employment contract were employed in microenterprises, in Chile 74% and in Argentina 53%. However, larger enterprises also had employees with no contract: in Argentina, 47% were employed by larger enterprises, in Chile 26% and in Peru 10%. What is more, over half of new salaried jobs came without a contract: 63% in Peru, 51% in Chile and 100% in Argentina. In Peru, the proportion of wage-earners with a fixed-term employment contract rose from 29% in 1989 to 55% in 1997; in Chile, it rose from 11% in 1994 to 17% in 1996; and in Argentina and Colombia it remained constant. In Argentina, Chile and Peru, the net increase in wage-earning jobs covered by a registered contract corresponded to temporary jobs. In Colombia, the increase in temporary jobs was 30% greater than that of permanent contracts (Tokman and Martínez, 1999a).

Table 9.1
LABOUR MARKET ADJUSTMENT AND POVERTY INDICATORS

	1980	1985	1990	1995	1997	2000	2001	2002	2003
Unemployment in Latin America ^a			6.9	8.4	8.6	10.0	9.8	10.6	10.6
Employment rate in Latin America ^b									
Latin America: weighted average			53.4	52.8	52.9	52.6	52.0	51.8	52.1
Informal employment in Latin America ^c			42.8	46.1		46.9		46.5	
Men			39.4	42.7		44.5		44.3	
Women			47.4	51.0		50.3		49.4	
Overall participation rates in Latin America ^d									
Weighted average			57.3	58.0	58.2	58.4	57.9	58.0	58.5
Real average earnings index (base 1995=100) ^e									
Latin America (11 countries)	139.3	115.5	89.2	100.0	101.8	107.2	108.0	106.7	103.6 ^f
Poverty in Latin America ^g									
Households	34.7		41.0	37.5	35.5	34.5	35.0	36.1	
Individuals	40.5		48.3	45.7	43.5	42.5	43.2	44.0	

Source:

^a Economic Commission for Latin America and the Caribbean (ECLAC), data adjusted for a change in methodology in Brazil.

^b ECLAC, labour force/working-age population (13 countries. Weighted average adjusted for new Brazil series).

^c International Labour Organization (ILO), *Panorama laboral 2003*, Lima, 2004.

^d ECLAC, Latin America (13 countries).

^e ECLAC, Latin America (11 countries).

^f Simple average for 2003 refers to nine countries.

^g ECLAC, *Social Panorama of Latin America 2002-2003* (LC/G.2209-P/I), Santiago, Chile, August, 2002. United Nations publication, Sales No. E.03.II.G.185.

Table 9.2
LABOUR MARKET ADJUSTMENT AND POVERTY INDICATORS, BY COUNTRY

	Urban unemployment (a)		Informal non-agricultural sector (b)		Total poverty of country(c) Population	
	(In percentages)		(In percentages)		(In percentages)	
	1990	2003	1990	2002	1990	2002
Latin America	6.9	10.6	42.8	46.5	48.3	44.0
Argentina	7.4	15.0	52.0	44.5	21.2	41.5
Bolivia	7.3	...	...	...	...	62.4
Brazil	4.3	12.3	40.6	46.0	48.0	37.5
Chile	7.8	8.5	37.9	38.0	38.6	20.6
Colombia	10.5	16.7	45.7	55.6	56.1	54.9
Costa Rica	5.4	6.7	41.2	44.8	26.2	20.3
Ecuador	6.1	9.8	55.6	55.0	62.1	49.0
El Salvador	10.0	6.4	...	...	54.2	48.9
Guatemala	6.3	3.4	...	...	61.1	59.9
Honduras	7.8	7.7	57.6	65.1	80.5	77.3
Mexico	2.7	3.2	38.4	41.0	47.8	39.4
Nicaragua	7.6	...	...	54.4	73.6	69.3
Panama	20.0	15.6	36.0	42.6	...	34.0
Paraguay	6.6	...	...	60.9	...	61.0
Peru	8.3	9.4	52.7	56.2	47.6	54.8
Dominican Republic	...	...	...	...	46.9	44.9
Uruguay	8.5	16.9	39.1	42.2	17.8	15.4
Venezuela	11.0	18.3	38.6	52.4	40.0	48.6

Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of official information; special tabulations from household surveys in the respective countries and *Social Panorama of Latin America 2002-2003* (LC/G.2209-P/1), Santiago, Chile, 2002. United Nations publication, Sales No. E.03.II.G.185; International Labour Organization (ILO), *Panorama laboral 2003*, Lima, 2003.

Explanatory notes:

- (a) Unemployment: 2003: Preliminary figures. Argentina: national urban, average for May and October. Bolivia: up until 1988, official estimates; as from 1989, capital cities and the city of El Alto; as from 2000, all urban areas. Brazil: metropolitan areas of Rio de Janeiro, São Paulo, Belo Horizonte, Porto Alegre, Salvador and Recife, average for twelve months. Chile: national total, average for twelve months; as from 1986, data combined with the sample in use as from 1996; in 1985, estimated on the basis of data for the Metropolitan Region. Colombia: seven metropolitan areas, average for March, June, September and December; as from 2000, 13 cities, average for twelve months. Costa Rica: urban national, in July. Ecuador: up until 1986, total for the country, official estimates; in 1987 and as from 1999, Quito, Guayaquil and Cuenca; from 1988 to 1998, urban national; includes hidden unemployment. El Salvador: urban national. Guatemala: national total; official estimates; as from 2002, the urban total was measured. Honduras: up until 1986, total for the country, official estimates; in 1987, Distrito Central, San Pedro Sula and five cities; as from 1988, urban national. Mexico: includes a growing number of urban areas, totalling 48 in October 2000. Nicaragua: national total, official estimates; as from 1993, urban national; as from 2001, based on household surveys. Panama: metropolitan area, as from 1998, urban total, includes hidden unemployment; 1980, figure taken from the population census, August of each year; 1996 average for March and August; 1997 and 1998, average for March, June, August and November; 1999, average from March, June and August. Paraguay: Urban total, up until 1993: metropolitan area of Asunción. Peru: metropolitan Lima; 1985 and 1988, official estimates; between 1995 and 1999, urban national. Uruguay: urban national, average for twelve months. Venezuela: urban national, average of two half-years; as from 1997, national total; as from 1999, average for twelve months. Latin America: Data adjusted for a change of methodology in Brazil.
- (b) Informal employment: Data for Brazil, Uruguay and Venezuela refer to 2001, whilst that for Chile and Colombia refer to 2000.
- (c) Poverty: Includes people under the poverty line or in a situation of extreme poverty. The poverty figure for Argentina refers to the metropolitan area. The figure for Uruguay and Ecuador refers to the urban total. In Venezuela, since 1997, the survey design does not show the urban/rural breakdown; therefore the figures refer to the national total. The Peruvian figure comes from Peru's National Institute for Statistics and Informatics. These values are not comparable with those for previous years due to the change in the sampling framework of the household survey. According to the institute, the new figures present a relative overestimation, with respect to the previous methodology, of 25% in poverty and 10% below the poverty line. The figure for Latin America is an estimate for 19 countries in the region.

2. Competitiveness, technological innovation and labour flexibility

The use of labour flexibility as a policy for allowing businesses to enhance their capacity to meet the demands of competitiveness disregarded the fact that unemployment and informal employment are deeper rooted and therefore require more complex solutions. Also, labour flexibility was promoted within a context of globalization, which led to greater economic and financial integration into the world economy. Financial integration exposed the fragility of the international financial architecture and of national supervision and regulation systems, and made the region's economies vulnerable to international crises (ECLAC, 2003a). For its part, trade openness has tended to reduce the costs of capital in relation to that of labour, leading to the corresponding substitution and raising unemployment.

In many countries, the adjustment processes accentuated labour market insecurity.⁹ Even though the deregulation of dismissals and of employment stability facilitated the rapid adaptation of businesses to the new economic conditions, in the long run lack of employment and its casualization turned economic weakness into social vulnerability. What is more, they left without protection the unemployed and workers who were forced to move to jobs with no social protection coverage.

The reforms were designed along the lines of the Anglo-Saxon model, which is characterized by heavy reliance on labour flexibility, despite its negative impact on social equity.¹⁰ Also, the budgetary constraints facing most governments limited the use of alternative models such as the European one, which makes greater demand on social protection systems. In the last decade, the deregulation of regional labour markets did not promote sufficient worker recruitment to offset job losses owing to low growth and production-cost rationalization. The particular circumstances in which the model was applied—namely, weak, volatile and at times negative growth, economic opening and changes in the global organization and location of production—led to employment insecurity in the region. The policy of labour flexibility, in a context of low and unstable growth, led to greater unemployment and contracts without social protection. Budgetary constraints and the new institutional frameworks for social protection, which gave precedence to employees with stable contracts, decreased the coverage of social protection systems. All in all, labour flexibility without social protection gave rise to employment insecurity (see table 9.3).

Added to the above-mentioned factors are the marked changes brought about by the economic policy, that is to say, tariff reductions and national currency appreciation, a trend which was reversed only at the end of the period.¹¹ Technological innovation, which calls for skilled labour, and business rationalization, with a resulting increase in the relative cost of labour compared with capital goods, had negative effects on employment and earned income. The relatively rapid introduction of new technologies, especially in the service sector, affected structures for producing and distributing earned income, for domestic demand and for job training requirements.

⁹ In a globalized world, and during an accelerated process of technological innovation, much of the burden of adjustment falls on employment, due to the fact that there is less possibility of using monetary, exchange and fiscal instruments. In addition, because of the high level of indebtedness, the region has had difficulties in maintaining a countercyclical management of fiscal policy, so that external, real or financial shocks, have had stronger impacts on activity and employment (ECLAC, 2003a; Tokman, 2003 and Titelman and Uthoff, 2003).

¹⁰ Certain labour regulations, such as raising the minimum wage within reasonable limits, would certainly result in job cuts, but possibly also—depending on the elasticity of labour demand—in a better distribution of income and a reduction in poverty.

¹¹ Currency appreciation occurred within a context of capital mobility and inflow (direct foreign investment and short- and long-term financial capital) and an abundance of international, institutional and commercial credit resources for the public and private sectors.

Table 9.3
PERCENTAGE OF URBAN WAGE-EARNERS

Country	Year	Percentage of wage-earners lacking social security coverage				
		Percentage of wage-earners		Size of establishment		
		Without a contract	Not permanent	Total	Up to 5	Over 5
Argentina	1990	21.9	-	29.9	65.2	18.3
	1997	33.0	17.9	37.3	73.7	22.7
	2002	-	17.5	43.5	75.8	30.3
Bolivia	1989	-	-	57.3	89.2	49.7
	1997	-	-	61.8	90.7	46.9
	2002	54.2	-	54.2	86.9	40.0
Brazil	1990	35.1	-	26.9	-	-
	1996	46.3	-	34.0	63.5	28.8
	2001	-	-	35.5	64.0	30.3
Chile	1990	15.1	-	20.2	42.4	13.4
	1996	21.1	19.3	19.9	42.7	13.4
	2000	22.5	19.7	22.3	47.7	15.7
Colombia	1989	37.5	-	-	-	-
	1996	31.0	-	28.5	62.5	19.0
Costa Rica	1990	-	9.4	22.6	64.4	11.9
	1997	-	9.5	26.3	68.0	14.2
	2002	-	10.6	25.1	67.0	12.3
Ecuador	1997	-	45.1	-	-	-
	2002	-	29.0	60.9	89.5	47.5
El Salvador	1997	-	33.4	45.6	81.0	35.5
	2001	63.4	27.6	33.3	86.0	17.9
Guatemala	2002	59.0	64.7	49.1	86.5	32.2
Honduras	2002	-	27.5	-	-	-
Mexico	1989	29.9	-	32.9	-	-
	1996	35.1	-	32.1	72.0	17.4
	2002	36.6	-	31.9	69.4	15.5
Nicaragua	1993	-	-	48.6	83.4	38.2
	2001	-	-	60.7	92.5	47.4
Panama	2002	17.4	-	21.0	63.0	10.1
Paraguay	1995	64.9	-	59.8	86.4	52.7
Peru	1989	29.9	-	-	-	-
	1997	41.1	-	-	-	-
Dominican Republic	2002	-	-	44.6	80.3	40.1
	1981	-	-	2.8	5.9	1.9
Uruguay	1997	-	-	3.9	7.0	2.8
	1997	-	15.4	38.8	79.1	24.5
Venezuela	2002	-	-	35.3	71.5	20.7

Source: On the basis of special tabulations from household surveys and Economic Commission for Latin America and the Caribbean (ECLAC), *Globalization and Development* (LC/G.2157(SES.29/3)), Santiago, Chile, 2002.

Notes: The table was supplemented with table 10.11 of *Globalization and Development*, ECLAC (2002a), in the following cases: in the column relating to wage-earners without a contract, Argentina in 1990 and 1997, Colombia in 1989 and 1996 and Brazil in 1996; in the case of wage-earners without social security, Colombia in 1996 and Venezuela in 1997.

At the same time, the privatization of state enterprises involved similar processes of rationalization, which reduced employment and confirmed the trend towards subcontracting, decentralization and worker displacement (ILO, 2003).

There was a far-reaching sectoral restructuring of employment, which led to a decline in agricultural, industrial and public-sector jobs and to a high concentration of new jobs in private tertiary sector activities.¹² This type of adjustment increased unemployment, although it did create skilled employment in highly competitive, highly paid activities in the financial, telecommunications, energy and social service sectors. It also created employment jobs with low entry barriers, average productivity and pay, in informal trade and certain personal services.¹³ Labour flexibility therefore increased unemployment and the number of displaced workers, and reduced permanent jobs and average incomes (Weller, 2001).¹⁴

According to estimates in table 9.3, in most countries of the region, more than two-thirds of wage-earners working in microenterprises have no social security coverage and this figure has continued to rise. The problems of social security coverage are worse in the case of self-employed workers, employers of microenterprises and domestic service workers (see table 9.4).¹⁵

Table 9.4
EMPLOYMENT IN THE INFORMAL SECTOR IN LATIN AMERICA, 1990-2000^a
(Percentage of total urban employment)

	Simple average	
	1990	2000
Informal sector	47.7	48.6
Microenterprises ^b	15.2	16.1
- Employers	3.0	3.4
- Wage-earners	12.2	12.7
Domestic employment	6.5	5.8
Self-employed workers ^c	26.0	26.7

Source: Economic Commission for Latin America and the Caribbean (ECLAC), based on household surveys.

^a Includes 13 countries.

^b Refers to establishments employing up to five workers.

^c Unskilled.

3. “De facto” flexibility: informal employment and wage-structure determination

In recent decades, the informal sector has grown countercyclically. Thus, during periods of negative growth, not only does the unemployment rate rise but the informal sector also expands, acting as an alternative to unemployment and lack of income. Due to easy access to many informal sector jobs, incomes adjust fairly automatically to increases in the number of informal workers competing in the same job market. This shows that de facto labour market flexibility, which has always existed, has become more accentuated and diversified, so making the informal sector an alternative to unemployment.¹⁶

¹² In the 1990s, agricultural employment fell for the first time in absolute terms. In some years, agricultural employment rose in relative terms because of the lack of dynamism of the economy as a whole. The share of manufacturing employment is also falling, in line with global trends, owing to major technological change (ECLAC, 2002a, pp. 47-50).

¹³ The dynamism of many of the activities in the financial, telecommunications, energy and social services sectors has diminished in recent years.

¹⁴ It is hoped that such asymmetries will be counteracted in periods of recovery, whether short- or long-lived and that employment demand will respond fast enough to enable workers to benefit from labour flexibility as well.

¹⁵ The figures for table 9.4 correspond to the urban labour force, unlike the ILO figures for table 9.1, which correspond to the non-agricultural labour force.

¹⁶ In fact, available labour supply—at least in the case of unskilled labour—is much greater than the unemployment figures would indicate.

The informal sector is a complex combination of an insufficiently dynamic economy, technology selection, increasingly insecure family income (which gives rise to survival strategies based on increasing labour supply), production decentralization and flexibility, and regulatory evasion. The relative validity of interpretations varies according to the period and country. However, incorporating the informal sector into the reforms, particularly labour reforms, is one of the key points to consider (Tokman, 1995 and 2001).

Evidence shows that it has never been easy to guarantee good employment opportunities to everybody. Traditional labour market regulations promoted stability and social protection, which could be guaranteed only by means of employment in the public sector and in large and medium-sized enterprises in the private sector, where opportunities for expansion were safeguarded by protected domestic markets. As a result, a heterogeneous labour structure took shape, in which jobs were distinguished by their conditions of access, productivity, stability and social protection.

The informal sector has traditionally been considered as marginal in the transition towards a more modern and institutional context and so reforms have focused on the problems and characteristics of the formal sector. However, the informal sector is becoming increasingly important as a source of employment and income for the poorest people. In 2000, 63% of the poorest 40% of workers were employed in the informal sector, earning an income equivalent to 54% of the wages of all those in this income stratum. The poorer the stratum to which the worker belongs, the greater the proportion is. The situation varies from country to country; in countries where informal employment is more widespread, incomes from informal employment represent around 70% of the wages of the poorest workers (see table 9.5).

Table 9.5
**LATIN AMERICA (2000): SIZE OF THE INFORMAL SECTOR
 IN TERMS OF EMPLOYMENT AND INCOME**
(In percentages of employment and earned income)

	Informal		Percentage of earned income
	Employment	Earned income	
10% poorest	74	64	77
40% poorest	63	54	82
10% richest	35	27	76
Total	51	36	80

Source: Economic Commission for Latin America and the Caribbean (ECLAC), based on household surveys and Victor Tokman, "Las dimensiones laborales de la transformación productiva con equidad", Santiago, Chile, 2004, ECLAC, unpublished.

If the size of the informal sector is used as an indicator of labour market imbalances, the relationship between informal employment and wage differentials favours the highest qualified formal workers the most, for two reasons. Firstly, the new model of innovation and technological dissemination (which is highly concentrated in formal frontier sectors) and the labour flexibility system increase informal employment and the average wage differential between the formal and informal sectors. Secondly, when the economy revives, they widen the income gap with the highest skilled workers before the existing gap with less skilled workers. They also reduce informal employment, widening the wage gap still further.

In fact, whereas technological development is concentrated in frontier sectors in the formal sector, informal employment encompasses easily accessible activities (limited requirements for capital and technology), which result in low productivity. In situations where there is an abundance

of available workers but a concentration of innovation and dissemination of technical progress, informal employment is virtually the only alternative for people unable to earn income from jobs in the highest productivity sectors. As a result, the relative increase in the number of self-employed workers and employees in informal sector microenterprises and the stiffer requirements for recruitment to formal jobs have tended to widen the wage gap between the formal and informal sector. This has produced a new system of wage determination which has accentuated the average wage differential between the formal and informal sectors, rising from 59% in 1990 to 72% in 2000. It has also expanded the wage differential between wage-earners in large enterprises and microenterprises, but it has reduced the differential between self-employed workers in the informal sector and wage-earners, especially microenterprise employees.

Table 9.6
INCOME DIFFERENTIALS BETWEEN WORKERS IN LATIN AMERICA, 1990-2000^a

	Simple average	
	1990 ^b	2000 ^c
Ratio between: ^d Total formal-sector labour force/Total informal-sector labour force	1.59	1.72
Public-sector wage-earners/Private-sector wage-earners	1.53	1.55
Wage-earners in enterprises > 5/Wage-earners in enterprises < 5	1.46	1.54
Self-employed workers/Private sector wage-earners	1.04	0.79
Self-employed workers/Wage-earners in enterprises < 5	1.51	1.25

Source: Economic Commission for Latin America and the Caribbean (ECLAC) based on household surveys and Victor Tokman, "Las dimensiones laborales de la transformación productiva con equidad", Santiago, Chile, 2004, ECLAC, unpublished.

^a Includes 12 countries.

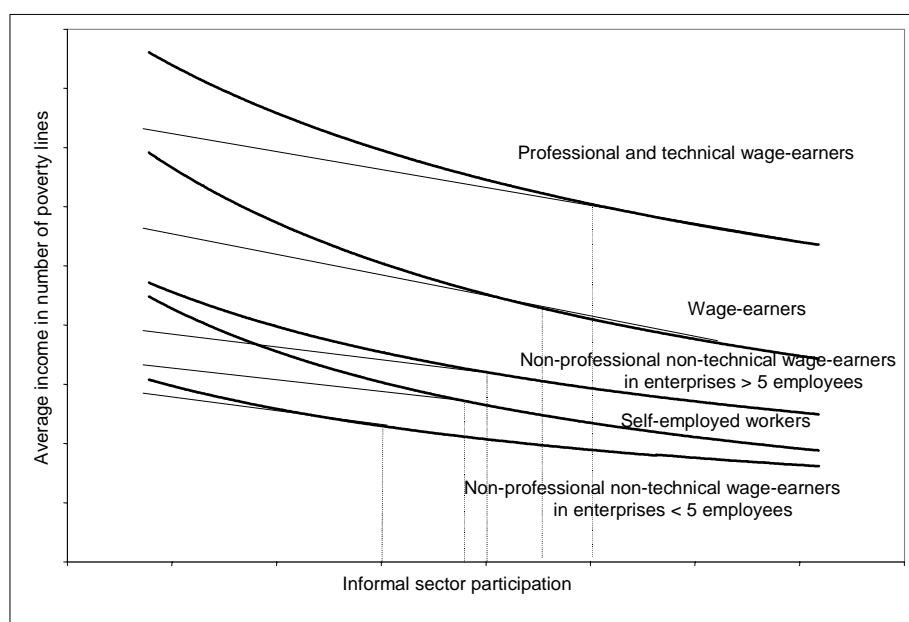
^b Figures for 1990 correspond to 1990-1991, according to availability.

^c Figures for 2000 correspond to 1998-1999 or 2000, according to availability.

^d Ratio between average income per worker, according to sector and occupation.

It is to be expected, therefore, that the resulting expansion and reduction in informal employment will bring a faster increase in the wages of skilled formal workers than of informal workers. This is shown by a cross-section analysis relating the size of the informal sector with these gaps. According to this analysis, the gaps increase as informal employment decreases, starting with the highest-skilled jobs. This confirms that informal employment acts as an alternative to unemployment, especially in the case of the least skilled workers. It also shows that, unless they are accompanied by high levels of employment for this category of workers, development phases leading to employment formalization can compound income gaps in line with levels of qualification and negatively affect wage distribution (see figure 9.4).

Figure 9.4
**LATIN AMERICA: AVERAGE INCOME PER OCCUPATIONAL CATEGORY IN
 NUMBER OF POVERTY LINES AND SIZE OF THE INFORMAL SECTOR
 IN THE ECONOMICALLY ACTIVE POPULATION**



Source: Economic Commission for Latin America and the Caribbean (ECLAC), *Social Panorama of Latin America, 1998* (LC/G.2050-P), Santiago, Chile, 1999. United Nations publication, Sales No. E.99.II.G.4.

^a Regressions of pooled data from 17 countries, with one to five data sets between the years 1981 and 1997 (a total of 38 observations) for the variables of average income (in number of poverty lines) for each category and that of the informal sector in the economically active population. The informal sector includes private non-professional non-technical employees of establishments with up to five employees, and to non-professional non-technical self-employed workers.

II. Policy and “labour institutionality” geared to the formal sector

The aim of ‘labour institutionality’ is to improve the terms of the contractual relationship between employers and employees, the terms of the employment relationship and retirement, and working conditions. Latin American labour markets have adjusted by increasing levels of unemployment and informal employment, without a coherent and comprehensive system of social protection. Reconciling labour flexibility with productivity incentives and access to social protection is a task that still has to be achieved. Doing so would enable the labour market to adapt to the upheavals, without depriving unemployed workers of social protection. It is essential to improve the labour regulations that defend the status of structurally weaker actors and provide them with protection. ‘Labour institutionality’ should aim to make social security benefits ‘portable’, particularly those relating to health, pensions and unemployment, and to guarantee permanent access to a basic social protection system (health, education and food), irrespective of the beneficiaries’ particular employment relationships. The design of private social protection systems, characterized by ‘portable’ individual contracts and defined contributions has excluded a large proportion of the population from benefits and left the State responsible for protecting them (Gill, Packard and Yermo, 2003, chapter 9; Titelman and Uthoff, 2003).

In the short term, greater flexibility has tended to benefit the economic efficiency of businesses, but it has also undermined stability and equal access to social protection. In the long term, institutions and regulations that encourage investment in human and physical capital help the production apparatus to incorporate technological change. However, economically active people can have limited access to such opportunities if they lack social protection, since it obliges them to accept casual jobs with a high opportunity cost in terms of training.

1. Reforms based on labour flexibility

The emphasis on labour flexibility responds to a need to increase efficiency in a more competitive and volatile economic environment.¹⁷ It reflects concern over the high cost of dismissals, which reduced the adjustment capacity of businesses.¹⁸ It is argued that a rapid adjustment of jobs and earnings can be made to cope with an upheaval, and that, once the impact has been absorbed, economies can also be revived more rapidly and enough employment can be created to reabsorb those affected.

In this context, the reforms introduced in the 1990s focused on five aspects, which contributed to labour flexibility but, in most instances, neglected social protection. Firstly, the trial period was extended, which, in some cases is exempt from social security charges and protection. Added to the typical indefinite employment contract were a series of new, more flexible contractual employment relationships.¹⁹ Consequently, subcontracting systems were facilitated, which lessens responsibility for protection and costs. Promotional contracts were also established to facilitate the employment of young people, women, the unemployed and other groups. Secondly, labour flexibility was introduced at company level, by introducing conditions of dismissal that were more favourable to companies, including extending the definition of fair dismissal and abolishing the obligation to reinstate employees in the case of unfair dismissal. To the same end, the cost of dismissals was reduced, by decreasing severance pay. Thirdly, labour costs were lessened, especially non-wage labour costs. For example, there has been a trend towards financing social security contributions by increasing the share of individual contributions from workers or through general taxes, which, on account of low coverage and constraints on the social protection budget, has increased exclusion. Other employers' contributions were also reduced, involving services of direct benefit to workers, including childcare, vocational training and social housing. In some cases, the scope of application and amount of the minimum wage were reduced. These cost-reduction strategies segmented workers on the basis of their responsibilities, rights and learning possibilities. Fourthly, wage determination, working hours and collective bargaining processes and subjects were decentralized to branch or sectoral level. The aim was to provide the necessary flexibility to adapt wages and working hours to business productivity and stability. In the fifth place, innovations in unemployment insurances were made, by introducing individual accounts with contributions from employers and the State (Velásquez, 2003).

¹⁷ There are four models of labour flexibility, ranging from Anglo-Saxon defensive decentralization to Japanese offensive decentralization, and including the offensive social democratic model of Sweden and Austria, and the hybrid models of France and Italy. In the Anglo-Saxon defensive decentralization model, adjustment is external to businesses, and is produced by reducing employment and increasing salary dispersion, job instability, employee turnover and labour market segmentation. In the Japanese offensive decentralization model, adjustment takes the form of mobility within a single enterprise and among enterprises in the same conglomerate, and is characterized by low turnover, a larger proportion of long term employment contracts, high investment in retraining and multiskilling, and performance-related salaries. In Japan, there is a general commitment to full employment, a social protection system, and active and passive labour market policies, which have given rise to a dynamic process of innovation. The hybrid models represent intermediate situations, which combine active and passive policies, albeit on a lesser scale, with staff dismissals and an ever-increasing array of employment contracts.

¹⁸ In the case of workers, the adjustment capacity is reduced where legislation rewards remaining in a specific job and punishes mobility and, in the case of employers, where the direct and indirect costs of a dismissal or wage rigidity discourage recruitment or favour high turnover, since such situations encourage the selection of capital-intensive technologies. These protectionist distortions also hamper job creation in terms of quantity, composition and increased formality.

¹⁹ The cost of taking on a worker without an indefinite employment contract is, on average, 60% less than employing the worker on an indefinite contract. A temporary employment contract is 40% cheaper than an indefinite contract.

These new legal provisions encouraged businesses, especially large ones, to replace indefinite contracts with cheaper and more flexible forms of contract, which led to a situation of ‘flexibility in the margin’ (Tokman and Martínez, 1999b). Its excessive application in a low-growth context has exacted enormous economic and social costs and aggravated the negative impact of labour market flexibility, which recognizes and fosters the creation of poor quality jobs.²⁰

The reforms relating to labour flexibility have highlighted existing de facto employment relationships, adapting regulations to the real workings of the labour market. Thus they may have helped to “formalize” contractual and employment relations of broad groups of workers that were not clearly recognized in former legal provisions. However, many workers lost formal-sector jobs with contracts and social protection and were obliged to accept legal contracts with fewer guarantees, designed to encourage temporary and casual employment. Differentiated contracts entail different levels of stability, protection and pay. They therefore increase polarization and inequality in the labour market and weaken systems of solidarity between workers.

2. Labour flexibility, social protection and job training

Labour flexibility can increase insecurity and inequity where, as a consequence of changing production patterns in a context of limited growth, the number of workers displaced from jobs with social protection in high productivity sectors exceeds the number employed in new occupations with similar or better conditions. If those losing their jobs and social protection are unable to do without a replacement job, any vocational and skills training programmes that fail to incorporate the financing of the worker’s opportunity cost will suffer serious shortcomings.

Companies can also limit training when it is not planned for a worker to stay long. In particular, where the specific knowledge is not transferable, employers and workers perceive learning as more of a cost than an investment. A temporary employment relationship or one with no contract results in a lack of incentives for training investment and undermines the commitment to increasing productivity. This means that training investment diminishes due to a lack of incentives for both parties. As a result, no positive dynamic is created between flexibility, innovation and changing production patterns. In turn, opportunities to invest in human capital are reduced and so the level of knowledge of the company’s employees stagnates and incentives to increase productivity diminish (Tokman and Martínez, 1999a).

Since access to social protection is heavily dependent on people being in jobs, changes in the labour market impact on demand, as well as on access to basic social services and funding for them. Recruitment flexibility, which modified job continuance and working hours, did not always take into account the legal relationship with the social security issue. Even where ‘portable’ systems of defined contributions were introduced, the crisis and rise in unemployment highlighted that no novel ways had been planned to ensure that workers employed under new forms of contract were tied into the social security system. By contrast, the changes strongly favoured workers who continued in a typical employment relationship in countries where social security health benefits were extended to the other members of the worker’s household.

It is essential to extend primary protection systems to cover employment- and income-related risks, so as to ensure that workers do not suffer a drastic loss of basic benefits (ECLAC, 2000a). At present, programmes and systems are geared to passive or active labour market policies. Passive policies offset the loss of income of people who have lost their jobs and include unemployment benefits.²¹ Active labour market policies include special programmes of employment, training and income, which are traditionally weak in the region.²²

²⁰ Such jobs are characterized by instability, low pay, lack of social protection and inadequate working conditions.

²¹ Passive policies also have an economic function because of their anticyclical effect, albeit to a far lesser extent. Indirectly, they help to enhance the efficiency of labour intermediation by reducing the pressure of lack of income during the job-seeking period. The

3. Positive and reasonable labour flexibility with social protection

Higher macroeconomic and microeconomic risks have increased the economic and social risks to workers and so have increased demand for social protection, falling on insufficiently developed systems. The labour policy must be built on a more substantial foundation. The new systems, many of which are aimed at creating new market relations in social protection systems (by providing public services and merit goods) must address the problems of equity and access opportunities (ECLAC, 2000a).

Flexibility must be combined with social protection. Two conditions must therefore be established for flexible contracts: (i) there must be an upper limit on the number of flexible contracts in a company, in proportion to the number of indefinite contracts; and (ii) any contract, regardless of its flexibility, should be tied into the social security system.²³ Countries such as Spain, Argentina, Brazil, Colombia, Chile and Uruguay have adopted this approach in recent reforms.²⁴

All cases include labour flexibility solutions that are sustainable over time and do not undermine basic workers' rights. A positive way of achieving this is to have open dialogue between the parties, which much take place within the framework of collective labour agreements. For example, in order to improve training incentives and re-establish conditions of job stability, it is possible to design indefinite contracts that include other more flexible conditions, such as a longer trial period.

It is crucial to set a reasonable cost for a company to terminate an employment relationship. If the cost is excessive, it discourages indefinite recruitment and job continuance, which leads to informal employment, lack of protection, excessive turnover in the company and mobility in the labour market. One way to increase labour flexibility, whilst at the same time maintaining unemployment protection for workers, is to limit the number of working years required for entitlement to severance pay. Alternatively, special savings accounts can be introduced, with contributions from the company, the worker and, in certain cases, the State. This can have the drawback of reducing both training incentives and severance pay.

Other working conditions that can be made more flexible, yet do not undermine basic workers' rights, include the distribution of working hours or days; flexible schedules and flexitime; working-time banks for periods of weeks, months or years; holiday periods; and public holidays. In the Netherlands, a part-time promotional contract was introduced which, when renewed, grants workers the same labour rights as regular contracts. This instrument has been useful in encouraging job creation among women, guaranteeing protection after a reasonable period of time (Tokman, 2004).

In the area of wages, 'participative wages' have been promoted for some years. Under this model, labour costs and workers' incomes vary according to the level of economic activity. This makes it possible to protect employment and to mitigate its procyclical behaviour. At an aggregate

coverage of unemployment insurances in the countries of the region varies from 4% to 29% of unemployed people. They are financed by means of contributions from employers and employees, together with government funding to cover shortfalls (Velásquez, 2003).

²² There is the complex system in Brazil, with a combination of three payment mechanisms for unfair dismissal, and the recently created insurance in Chile. The proportion of GDP earmarked for active labour market policies in Latin American countries equals one seventh that of European Union countries (they include the costs of transparency and intermediation in the labour market).

²³ Alternatively, or in addition, it is possible to reduce fixed-term contracts to a minimum by increasing the trial period.

²⁴ To reduce high severance payments, Spain pioneered atypical contracts in 1981. A counter-reform was introduced in 1997, making the introduction of atypical contracts subject to collective bargaining. Under a similar approach, in Argentina, numerous atypical promotional contracts were introduced in the 1991 and 1995 reforms, which were limited by the reforms of 1998 and 2000. In Brazil, such atypical contracts were adopted in 1998, although they were tied to the actual creation of new jobs and the decision on upper limits was transferred to collective bargaining.

level, it has an anticyclical effect, since it prevents or curbs rises in unemployment and informal employment.

Applying a minimum wage has a variety of outcomes, depending on the amount and context. In some cases, the minimum wage has helped to maintain a certain income level and so has had a positive impact on poverty, even though it can certainly discourage the creation of low-income jobs. To prevent the minimum wage causing a significant macroeconomic imbalance and undermining formal employment, when the minimum wage is fixed, account must be taken of the wage level in microenterprises and its evolution must be in line with productivity.

4. Flexibility and transparency in the labour market

It is crucial to have information on employment opportunities and labour supply in order to improve the labour market, especially information for workers, which also benefits businesses and promotes productivity. It is essential to develop better systems of information and labour intermediation. These foster positive mobility, within a single sector and between sectors, as well as geographically, and they provide important information for training programmes.

Even though intermediation is a cheap and effective instrument, the necessary efforts have not been deployed to extend its coverage. This calls for incorporating new technologies and establishing various types of cooperation between the public and private sectors. To exploit their potential to the full, intermediation and information systems must be tied in more closely with active labour market policies, including training, production and technological development, job promotion for specific groups of workers, and passive labour market policies that compensate workers for loss of jobs and income.

An assessment by the Organization for Economic Cooperation and Development of job-search support and training programmes identified four lines of action: (i) job-search support programmes, which turned out to be cheap and successful;²⁵ (ii) training programmes, which turned out to be expensive and gave conflicting results, somewhat better in the case of training activities with work experience for small groups of adult women; (iii) policies targeted at young people, which turned out to be inappropriate in terms of employment, but positive in reducing the school drop-out rate, especially at an early age; and (iv) vocational training, which does not create employment but modifies the labour supply structure and improves employability. However, the assessment of vocational training yielded ambiguous results, more encouraging when targeted at dynamic economic sectors and at the poorest and most needy. Vocational training must be decentralized (locally-based and targeted in nature) and be geared to the creation of entrepreneurial skills.

III. Labour demand

1. Job creation policies

Macroeconomic, horizontal, sectoral or territorial policies can be used to increase labour demand and, above all, policies for increasing employment by means of specific programmes and for encouraging labour recruitment in the private sector. Macroeconomic policy encompasses numerous fiscal, currency and monetary instruments (see chapter 3). These are crucial to an employment policy because, in absolute and relative terms, they impact on the level and composition of output and of employment and wages, due to their ability to reduce the instability

²⁵ By reducing transaction costs and unemployment periods caused by lack of information, job-search programmes provide a cheap and effective instrument for supporting other types of public decision, such as the design and promotion of certain training curricula.

and external volatility associated with international financial and commodity markets, as well as affecting savings for financing investment.²⁶

Policies for developing the production sector, discussed in other chapters of this book, indirectly increase employment demand by enhancing the workings of the production apparatus. They include policies to improve the situation of small and medium-sized enterprises, the regional development of certain production complexes and incentives for promoting labour-intensive activities, such as tourism and building low-cost housing. Job training programmes, credit and technological modernization chiefly benefit small enterprises with between five and 20 permanent workers, mainly operating in a country's local or regional markets. In this case, the rise in productivity is aimed at increasing local competitiveness in order to cope with external competition.

In crisis situations, it has been customary in the region to implement direct job creation programmes, financed from taxes and implemented almost entirely via municipal councils. Such programmes respond more effectively to the varying demands of individual districts and are more closely monitored by the community. However, in many countries, like Chile and Argentina, direct job creation programmes produced employment haphazardly, with no register to control targeting. Also, they were subject to strong political pressure from mayors and members of parliament on the central authority responsible for the programme, which gave rise to a sort of patronage system around the mayor, coupled with jobs that tended to perpetuate themselves and failed to encourage the subsequent integration of beneficiaries into other jobs.

To enhance the efficiency of direct job creation policies, there need to be: (i) registers of labour-intensive projects compatible with the employment policy; (ii) criteria for selecting eligible beneficiaries, based on reliable registers; (iii) prioritization of regions and municipalities, according to employment-related guidelines; and (iv) an individual subsidy amount that does not cause unfair competition in the local labour market. To supplement family income, it is possible to offer education voucher programmes to women heads of household or to women with school-age children.

In any case, such programmes can exert political pressure on the central authority, perpetuate themselves and create patronage system around the mayor.

Policies to encourage employment demand from the private sector usually consist of state subsidies for the recruitment of additional workers, covering some or all wage and other labour costs (Acosta and Ramírez, 2004). In most cases, such subsidies are aimed at small enterprises, which normally make more intensive use of direct labour. This is a novel scheme in the region, and is still in its infancy, although there are known precedents in other countries, such as Spain in the 1980s. In Chile, such subsidy programmes have been introduced in a decentralized manner and by considerably increasing transparency. They include training contributions for private labour recruitment, support for microentrepreneurship via social investment funds, and community investment via private contractors.²⁷

The following selection criteria are used in tenders: (i) the project's targeting and location; (ii) the project's cost-effectiveness and its compatibility with regional, municipal or other development strategies; (iii) shared financing; (iv) local impact; (v) the existence of private

²⁶ Macroeconomic policies help to reduce instability when they favour demand, especially household demand, which results in a significant increase in the consumption of products from small national enterprises (which then generate more employment), creating virtuous economic and social circles and easing difficult periods.

²⁷ This is achieved by four means: (i) a contract subsidy to support training for a period of months, consisting of a wage subsidy proportional to the minimum wage and a fixed amount for training, which are assigned by tender; (ii) community investment, which includes the contribution of wages and supplies to finance the implementation of labour-intensive projects for improving infrastructure and urban amenities. The proposals are tendered to private contractors, NGOs, or parafiscal entities, such as hospitals; (iii) support for microentrepreneurship, by means of joint measures with public financing, aimed at training beneficiaries and providing capital to back their projects; and (iv) using other components, like educational upgrading programmes to keep potential workers, especially young people, in the education system or labour intermediation, which facilitates contact between enterprises and unemployed workers.

contractors and non-profit organizations; and (vi) other impacts above and beyond job creation. It is customary to create regional or local committees to select and prioritize projects, forge strategic alliances, verify the quality of contracts, supervise projects, deal with administrative obstacles and update diagnoses.

The implementation of employment subsidy programmes in the private sector has drawn a number of criticisms. They include the following: (i) workers are dismissed and then recruited via the subsidy; (ii) workers are recruited who would have been employed anyway, even without the subsidy, especially for some seasonal activities;²⁸ (iii) workers are dismissed at the end of the subsidy period, which hampers the achievement of longer-term training and employability objectives; (iv) very similar microenterprises are created, which leads to an oversupply of certain jobs; (v) subsidy programmes could merely be providing public financing for informal employment rather than reducing unemployment; (vi) there is a lack of cheap and flexible assessment systems to rapidly reorient subsidy programmes if they turn out to be unsuited to achieving the stated objectives or to adapting to new circumstances; and (vii) criteria, timetables and political dynamics are imposed which have nothing to do with an employment policy.

2. Policies directed towards the informal sector²⁹

(a) Need for specific measures to reduce heterogeneity

A policy alternative for the informal sector continues to be boosting economic growth in order to recruit workers into modern sectors. This involves shifting workers into higher productivity sectors, which improves their performance and income, as well as those of workers remaining in informal employment. However, expectations have been dashed, both because expansion has been limited and unstable and because its effect on the creation of formal employment is slow, and it takes time to successfully integrate large contingents of workers. Therefore the production capacity of informal workers needs to be increased, so as to fully incorporate them into economic activity, reduce heterogeneity, improve social equity and reduce poverty. This strategy includes rural non-agricultural employment (see box 9.1).

Informal activity has the potential to adapt to changes in the economic regime. Its principal characteristics are production based on product diversification, customer proximity and after-sales service. Its weakness is that its production is organized on the basis of personal relations and autarchy. The sector needs to be geared to new market conditions, which call for a change of behaviour and discipline regarding delivery leadtimes and quality. This means promoting a cultural change as part of a wider strategy to promote hitherto limited access to 'economic citizenship'. It is necessary to expand networking with other producers, and with financial institutions and the government, which operate under different codes of practice, which in the past has set them a world apart from informal producers. The differences in productivity and income between the informal sector—which includes very small business activities (in terms of employment or capital) and individual ventures by unskilled workers—and the rest of the economy are a major cause of low average productivity as well as lack of equity (Tokman, 2001 and 2004).³⁰

²⁸ In the countries of the Organization for Economic Cooperation and Development it was found that, in many cases, the subsidies benefited employers that would have hired workers even without the subsidy and that workers already employed by the programme beneficiaries were being replaced.

²⁹ Tokman (2004) has made an extensive study of the issue.

³⁰ It is estimated that, on average, the informal sector contributes the equivalent of 20% of GDP and 36% of all earned income. Recent technological change has the potential to improve the viability and competitiveness of small-scale production. As a result, some SMEs and small production units develop and operate in close integration with more modern sectors and enterprises, to which they supply intermediate and final products, as well as cheaper labour. After a period of trade opening, which involved breaking some existing links, further restructuring should make it possible to expand markets for small production units, facilitate the incorporation of new technologies and improve product quality.

Box 9.1

RURAL NON-AGRICULTURAL EMPLOYMENT IN MEXICO

In recent years the idea of promoting employment in non-agricultural activities as a viable alternative for combating rural poverty has gained in popularity. Rural non-agricultural employment has been consolidated as a useful means of diversifying income, distributing consumption over time and managing the risk inherent in agricultural and livestock farming in rural Mexico and Central America. According to ECLAC estimates, in Mexico, this occupational category accounts for around 44% of male rural employment and 80% of female rural employment.¹ Also, a series of factors relating to education, geographic location and access to infrastructure are decisive in people entering non-agricultural employment. For example, people who had studied beyond secondary education were found to be five times more likely to be non-agricultural wage-earners.

Non-agricultural employment covers a wide range of jobs. This is why any detailed analysis requires workers to be classified into at least two categories: wage-earners and self-employed workers. The aforesaid ECLAC study concluded that wage-earners earn higher incomes in rural non-agricultural employment: on average they earn 22% more than farmworkers and 12% more than self-employed workers in non-agricultural activities. There are also differences with regard to factors determining employment in the different categories. In the case of wage-earners, labour participation fundamentally relies on educational level, whilst for self-employed workers it relies on access to infrastructure and services (water, electricity, telephone). Also, the wage-earning sector has a concentration of younger people, who certainly tend to have a higher educational level.

In both cases, a higher female participation was found, particularly in self-employment. However, the study revealed that women are at a disadvantage compared with men, in that they earn poorer pay in non-agricultural activities. This is due to a number of different factors. Firstly, the results confirm that patterns of wage discrimination against women in rural Mexico continue to exist. What is more, in a large number of cases, women's earnings are likely to be considered as a secondary contribution to a rural household's income. So, in addition to carrying out her household tasks, a woman holds down an easily accessible, poorly paid, part-time non-agricultural job.

As in the case of participation, it was concluded that not only gender, but also education and access to production infrastructure, are very important variables in determining earnings. Taking as a basis of comparison uneducated, unmarried women with no access to infrastructure, employed in farming activities, it can be established that: studying for six years increases income by 8.3% and studying for a further six years, by 16.4%; access to infrastructure increases income by 26.5% and participation in non-agricultural employment, by 10.1%. These results indicate that public spending on literacy, technical training and intermediate and higher education programmes, as well as on programmes to provide rural areas with electricity, water and means of communication, is one of the principal means for reducing rural poverty.

Source: Economic Commission for Latin America and the Caribbean (ECLAC), *Empleo e ingreso en las actividades rurales no agropecuarias de Centroamérica y México* (LC/MEX/L.577), Mexico City, ECLAC Subregional Headquarters in Mexico, October 2003.

Thus, any policy for developing the production sector should promote the inclusion of informal workers excluded from development possibilities, through a combination of policies for promoting informal production activities and supporting citizens' rights, geared in their favour.

(b) Support for promoting informal production activities

A great deal of experience has been amassed in promoting informal production activities. By changing the organization of production or demand, the aim is to break the isolation of small-scale production. Such policies focus on access to production resources and to more dynamic markets and, in some instances, include new forms of organization, linked with the application of social policies in informal-sector production.

In informal units, the family and business are fused.³¹ This is why a lack of social welfare coverage and of an insurance market suited to their needs stands in the way of their proper economic operation. By contrast, proper coverage protects informal producers and their families, and helps to prevent the collapse of their individual and family productive system. Social protection for informal workers can have a positive impact on their activities, since they are poor producers (with insufficient family income). Access to healthcare lessens the vulnerability of small enterprises in cases where the microenterprise manager falls sick, since managers do not usually have insurance

³¹ A small business is a combination of employment and family relationships. Many of the resources are fungibles, and capital goods are both investment goods and for family use.

coverage. Access to housing also lessens vulnerability, since it is used for both accommodation and business premises.

Access to production factors raises their productivity and enhances their inclusion. Business expansion requires an amount of capital (per worker) that small-scale informal producers are unable to self-finance. To provide informal producers with access to credit capital, their knowledge and administrative management skills must first be enhanced, as well as giving them access to technology information. To have a significant impact, all programmes, especially the most common type—credit programmes—must be general in scope.³² Training and assistance to achieve technical and administrative improvements in production processes improve the choice of consumables, quality standards, machinery and support aspects of the production process (tax system, labour legislation, urban regulations and so on). The aim is for employers and their workers to take an interest in and adopt such issues.

Another way of assisting workers in small informal production units is to promote mechanisms for horizontal partnerships between producers, with various forms and aims (Fadul, Ramírez and Lesaca, 2004). Access to dynamic new markets is one of the means for expanding opportunities and breaking the vicious circle of ‘informal producers and poor consumers’. There are many concrete examples of marketing support and development, such as initiatives to expand the scale of production, centralize purchasing power, gain access to public procurement, penetrate export markets, group producers to attract greater demand, disseminate information on prices and markets and conclude payment agreements with buyers’ monopolies.

The lack of sustainable and comprehensive policies makes it difficult to effect major changes. Such programmes must have very wide coverage, be constant over time and present different combinations of components, such as credit, training technology, management and markets. Known programmes have not achieved sustainability and comprehensiveness, either in terms of coverage or public investment. Job creation, the shift towards higher income activities and improvements in productivity and quality have been limited. Lastly, the huge diversity of national, regional and sectoral situations makes it hard to meet the challenge of improving productivity and incomes.

There has been an enormous and varied growth in the financial market for microfinancing (Szalachman, 2004).³³ Microfinance aids the development of the production sector, provided that it is to finance quality projects. Microfinance can have an additional impact on poverty if it contributes to job creation, although jobs are often casual and poor in quality. A series of obstacles must be removed, and appropriate economic policy measures devised, to increase competitiveness and efficiency in smaller enterprises. Continual institutional innovations are needed. Solutions must be geared to the specific circumstances of each country, that is to say, both the initial conditions of the financial systems and the political, economic, social, demographic, cultural, labour and institutional framework in which they are required to operate.

Microfinance services in the region are provided by very different institutions, such as state and private banks, NGOs, cooperatives, savings and credit associations, and informal institutions. The scarcity of long term funding and the need to reconcile the private profitability objective with

³² Credit poses a number of problems, the main one being lack of collateral to secure credit, the high cost of informal indebtedness, segmentation of the credit market and the inability of credit institutions to meet the requirements of the informal sector. There is no single recipe for addressing these issues. Responses have ranged from granting unsecured loans to setting up joint and several guarantees, or the ad hoc recognition of informal capital. In some cases, the cost has been covered by means of interest-rate subsidies (although these have tended to die out) and, primarily, by more efficient intermediation of available resources. There are also various types of institutional arrangement, ranging from the adaptation of traditional banks to the creation of a specialized bank for the poor. Assessments point to advantages and drawbacks, which makes it hard to determine best practice but does provide precedents for meeting a diversity of local needs.

³³ In Central America, microfinancing networks have been developed; in Bolivia, credit NGOs have been formalized by converting them into regulated institutions (private financing funds); in Chile, pioneering programmes have been put into practice; in El Salvador, a law on non-banking intermediaries was promulgated; and, in Guatemala, service coverage in the microfinance sector was expanded.

promotion and development have, in many such cases, warranted granting administrative cost subsidies, which has extended banking services to lower-income sectors. In some countries, microcredit institutions have expanded by more than 20%. Total lending by some microcredit institutions is close to that of commercial banks and covers a wide spectrum of the population. The common denominator of such experiences has been significant State support, by designing special strategies. Where there are no such instruments, people on lower incomes have to resort to informal credit channels, at a much higher financial cost than in the formal system.

The sustainability of microcredit institutions continues to be tenuous, due not only to the nature of microentrepreneurship but also to the unfavourable macroeconomic environment and the lack, or scant development, of credit and capital markets, internal and external sources of financing, regulation and supervision procedures geared to microcredit institutions, financial and credit technology, information systems, innovative guarantee schemes, financial products (in terms of geographical coverage and diversification) and housing finance plans.

(c) Towards an inclusive form of citizenship: formalizing the informal

From an economic and social rights standpoint, policies must create virtuous circles which not only extend the coverage of the regulatory framework, but also create conditions enabling all citizens to benefit from development, and to discharge their obligations and benefit from the entitlements of full citizenship. This means shifting the emphasis from obligations to rights, which, moreover, unleashes positive synergies in terms of economic progress. This provides the incentive required for informal workers themselves to become the main stakeholders in formalization and transformation, and to act as agents of change, both for their own benefit and for that of their families. In a broad sense, it is a question of encouraging new attitudes and behaviour so as to create an environment more conducive to the integrated development of microenterprises and their workers.

Two complementary hypotheses about informal employment both focus on state requirements and regulations, because they either consider them to be excessive and inadequate or unsuited to the basic nature of informal employment (De Soto, 1986 and 2001; and Tokman, 2004).³⁴ The aim of both hypotheses is to make informal workers a legal and integral part of society and the economy. The regulatory framework and its procedures, which were designed for organized enterprises, hamper the incorporation of small enterprises into the formal sector. The chief limitations come from inadequate information and training to develop legal formulas.

Up to now, most policies have ignored, prosecuted or concealed informal employment. Explicit formalization, by means of regulations covering informal workers, should be made a key instrument (although not the only one) for facilitating the incorporation of informal workers into a process of modernization. It should help to guarantee their access to full economic citizenship, which they need in order to participate and to compete with greater chances of success. Regulations that consider the living and working conditions of informal sector workers are justified, not from the perspective of organized sectors, but by the benefits which access to formal employment affords for the development of informal sector activities and workers. At present, while the legal non-existence or partial integration of informal workers avoids costs, it fails to take advantage of the opportunity to incorporate them fully into modernization processes. Formalization can serve as a vehicle, not only for securing legal recognition, with its benefits in terms of citizenship, but also for growth, because it allows access to capital, information and markets. Formal employment can be conceived as a public good that the State must provide and which contributes to social cohesion.

³⁴ A widely-acknowledge factor that some reforms have addressed is the need to recognize property. This means simplifying the ownership procedure in order to determine the legal existence of property and to adapt it to the widespread form of de facto ownership that exists among certain informal workers, as a formalization and credit-access mechanism. In the mobile trade, the recognition of a stable and legalized physical space in which informal workers can carry out their activity reduces the costs of informal employment and can provide opportunities to access new markets and production resources.

A major process of transition is required to promote the incorporation of informal activities into the formal sector, providing the necessary incentives to harness the interest and commitment of potential beneficiaries. For informal workers, the costs of legality or formalization are high. Not only do they include economic costs proper, but also time spent and inefficiency in completing the various formalities, due to unfamiliarity and complex procedures.

This policy calls for a key decision to be taken between adopting a general system, which is the same for all types of enterprises and workers, or establishing special regulations (dual or preferential) for the informal sector, unlike the regulations in force for enterprises, activities and workers in more organized sectors. There does not appear to be much doubt that differentiation is needed for some aspects, such as simplified tax systems, preferential interest rates or labour issues which are not included in core labour standards.³⁵ Procedural simplification and reduction are designed to reduce barriers to access. For instance, by facilitating registration, informal workers are able to complete formalization requirements, and by introducing the separation of estate between individuals and businesses, as well as by setting up companies under different legal regimes, informal workers are able to conclude contracts and access promotion mechanisms.³⁶

Such differentiations are roundly rejected by critics of their drawbacks, which include: (i) a loss of regulatory effectiveness; (ii) possible tax evasion; and (iii) limiting business expansion by imposing a ceiling on capital, employees and sales. However, the best-founded criticism is that they potentially infringe the equality principle with regard to workers' rights. Indeed, even though informal employment is associated with job insecurity, in many cases due to the inability of microenterprises to pay, it is sometimes used to evade the contractual obligation (ILO, 2000; ECLAC, 2002a). Therefore, the application of more flexible regulations may undermine the discipline of companies to comply with employment obligations, especially where there is inadequate supervision. To prevent this, strict contractual recognition of employment relationships would need to be promoted, so as to permit the full incorporation of workers into employment protection systems, and to ensure that (micro)employers comply with formal employment relationships. With these provisos, it is worthwhile exploring the possibility of labour flexibility and the reduction of non-wage labour costs in each context, in order to ease the barriers which informal workers face in accessing basic protection systems.

IV. Labour market, education and vocational training

The restructuring of education and vocational training systems to bring them into line with changing realities has been a recurrent issue in the region, especially in recent years. However, many problems still remain to be resolved, and they are becoming ever more important as the goal of universal basic education in the region comes closer. Today, the world of new technologies makes it urgent to increase the minimum number of years of compulsory secondary education, as well as to improve the educational profile of graduates, in terms of educational quality. Completion of secondary education has a marked impact on incomes and on people's professional careers (ECLAC, 1997).

The demand for new skills and for updating existing skills is tied with technological change, production restructuring and competitiveness (Novick and Gallart, 1997). Machinery specialization involves the acquisition of specific knowledge, since specific training is usually included when purchasing technology. Also, technological change and new forms of organization

³⁵ Core labour standards are human rights in the employment field and, as such, are compulsory and universal. They include freedom of association and the right to collective bargaining, the prohibition of any form of forced labour, the elimination of discrimination and the eradication of child labour. On occasion, a dual de facto situation is tolerated, though not legally sanctioned, with regard to certain workers' rights, which serve as goals to achieve and are promoted, monitored and assessed for progress.

³⁶ Companies could, for example, adopt the form of an individual limited liability company. Also, corporate status could automatically be granted when a company manager is registered.

call for multiskilled workers who are able to take decisions more independently and with less supervision. Changing production patterns mean that the population must have a solid basic general education upon which they can build the job skills needed for modern forms of production. Workers must be capable of integrating specific abilities and knowledge with general principles to give them the autonomy required for new occupational roles.³⁷ It is therefore becoming increasingly essential to link core basic training (normally provided by the education system) with specialized vocational training (provided by public, business and academic institutions). Thus, basic education is the foundation for training to achieve and improve productivity.

1. Advances in formal education

In order to improve job opportunities, intensive efforts have been made over the past 15 years to enhance levels of education in the region, focusing heavily on secondary education (see chapter 10). The best proof of the priority being given to education is increased public education spending in recent years, for investment (building schools and educational facilities), as well as for running costs (more teachers and higher pay). On average, Latin American and Caribbean workers have almost eight years of schooling.³⁸ The years of schooling of the economically active population rose from 6.1 in 1990 to 7.6 in 2002 (see table 9.7).³⁹ In spite of advances in education, wage gaps have been widened by new technologies, which expand demand for more highly skilled labour (ECLAC, 2003a).⁴⁰ Since this limits the ability to compete in a globalized world, it weakens the development of the production sector and the labour market, with the consequences analysed above.

International studies have illustrated that, in spite of quantitative advances, the quality of education leaves much to be desired, especially when compared with other more competitive countries (see chapter 10). In addition, the quality of education differs within individual countries according to region, rural or urban district and social stratum. In the absence of a policy of quality public education provision, access is increasingly determined by factors of income and location. Such differences act as mechanisms for the intergenerational transfer of inequalities, since they affect people's ability to access job opportunities. Unemployment alternatives for poor rural populations reflect not only the meagre productivity of the corresponding labour markets, but also discrimination against the low standard of education of poor rural workers and social stigmatization against them when they migrate to other areas.

³⁷ Since the early 1990s, this type of approach has featured in documents by ECLAC-UNESCO (1992) and CINTERFOR/OIT (1990).

³⁸ The level of education of workers (economically active population) grew in all countries in the region in the 1990s, both overall (rising from 6.1 to 7.0 years) and when broken down into men (up from 5.8 to 6.8) and women (from 6.3 to 7.2), into urban sectors (from 7.8 to 8.6) and rural sectors (from 4.5 to 5.3), into people in employment (from 5.5 to 6.4) and the unemployed (from 6.7 to 7.6) and into age groups (from 7.4 to 8.2 years for the 15-29 year age group, from 6.6 to 7.6 years for the 30-49 age group and from 4 to 5 years for the 50 plus age group).

³⁹ Based on the current rate of progress, it is forecast that workers will have an average of 12 years of schooling by the year 2043.

⁴⁰ See ECLAC, 2003a.

Table 9.7
**LATIN AMERICA: AVERAGE NUMBER OF YEARS OF SCHOOLING OF THE ECONOMICALLY ACTIVE POPULATION AND OF THE
LABOUR FORCE, ACCORDING TO GENDER AND GEOGRAPHICAL AREA, 2002**

Country	Public education expenditure % of GDP 1990-1991 2000-2001		Average number of years of study																				
			Economically active population			Total labour force			Employed persons aged 15-29			Total labour force by area and gender						Employed persons aged 15-29					
												National		Urban		Rural		National		Urban		Rural	
												Men	Women	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women
Latin America Simple average	2.9	4.2	7.6	9.2	5.0	7.6	9.2	4.9	8.3	9.7	6.2	7.3	8.1	9.1	9.4	4.9	5.3	7.9	9.2	9.4	10.3	6.0	6.9
Argentina	3.6	5.0	...	10.6	...	...	10.7	...	...	11.1	...	...	...	10.3	11.2	...	...	...	...	10.5	11.8	...	...
Bolivia	...	6.5	7.3	9.2	4.5	7.2	9.2	4.4	8.4	10.0	6.3	7.8	6.4	9.8	8.4	5.3	3.3	8.6	8.1	10.2	9.8	6.7	5.5
Brazil	3.7	3.8	6.9	7.6	3.5	6.8	7.6	3.4	7.7	8.3	4.6	6.4	7.4	7.2	8.2	3.2	3.8	7.1	8.6	7.7	9.1	4.3	5.3
Chile	2.4	4.1	10.5	11.6	7.1	10.6	11.1	7.1	11.3	11.8	8.8	10.3	11.2	11.0	11.4	6.8	8.3	11.0	12.0	11.5	12.5	8.5	9.7
Colombia	2.7	3.9	8.3	9.5	5.5	8.2	9.4	5.3	8.9	10.1	6.5	7.7	9.0	9.2	9.8	4.9	6.2	8.2	10.0	9.7	10.6	5.9	8.1
Costa Rica	3.8	5.0	8.4	9.5	6.7	8.5	9.6	6.7	8.5	9.5	7.0	8.0	9.4	9.3	10.1	6.3	7.8	8.0	9.4	9.1	10.2	6.7	8.0
Ecuador	2.9	3.0	...	9.9	...	...	9.9	...	...	9.9	...	...	...	9.8	10.0	...	...	...	...	9.6	10.3	...	...
El Salvador	...	2.6	6.9	8.4	4.2	6.9	8.5	4.2	7.8	9.5	5.6	6.3	7.2	8.7	8.8	4.1	4.3	7.4	8.7	9.3	9.8	5.4	6.1
Guatemala	1.6	2.6	5.1	7.6	3.3	5.0	7.5	3.2	5.9	8.2	4.4	5.1	4.8	7.9	7.0	3.4	2.8	5.9	6.0	8.4	8.1	4.5	4.2
Honduras	4.3	5.8	5.5	7.4	3.6	5.4	7.4	3.5	5.9	7.6	4.3	4.9	6.5	7.1	7.7	3.4	4.1	5.3	7.2	7.2	8.1	4.0	5.3
Mexico	2.6	4.1	8.2	9.3	6.1	8.0	9.4	5.6	9.2	10.1	7.5	7.9	8.2	9.3	9.5	5.6	5.6	8.9	9.7	9.8	10.6	7.4	7.7
Nicaragua	4.3	6.1	5.7	7.1	3.4	5.6	7.0	3.4	6.1	7.7	4.1	5.1	6.5	6.7	7.4	3.1	4.0	5.3	7.8	7.0	8.7	3.7	5.4
Panama	4.7	6.0	9.2	10.7	6.3	9.3	11.0	6.3	9.6	11.1	7.1	8.6	10.7	10.5	11.8	6.0	7.5	8.8	11.1	10.4	12.1	6.8	8.1
Paraguay	1.2	4.0	7.4	8.9	5.3	7.3	8.9	5.3	8.1	9.4	6.4	7.1	7.6	8.9	9.0	5.3	5.2	7.6	8.8	9.2	9.8	6.2	6.8
Peru	1.7	2.5	8.4	10.0	5.3	8.3	10.0	5.2	9.5	10.8	7.3	8.8	7.6	10.4	9.5	6.1	4.1	9.6	9.3	10.8	10.7	7.7	6.5
Dominican Republic	1.2	3.0	8.2	9.4	5.8	8.1	9.4	5.5	8.9	9.9	6.9	7.4	9.4	8.9	10.1	5.0	7.1	8.1	10.7	9.2	11.1	6.1	9.4
Uruguay	2.5	3.4	...	9.8	...	...	9.9	...	...	10.2	...	...	...	9.4	10.6	...	...	...	...	9.5	11.2	...	...
Venezuela	3.4	5.0	8.6	...	...	8.6	...	...	9.0	...	...	8.1	9.4	...	...	...	...	8.3	10.2	...	...	...	...

Source: Economic Commission for Latin America and the Caribbean (ECLAC), *Social Panorama of Latin America 2002-2003* (LC/G.2209-P/I), Santiago, Chile, 2002. United Nations publication, Sales No. E.03.II.G.185.

2. Technical education and vocational training institutions

In the 1940s, almost all the Latin American and Caribbean countries created vocational training systems and institutions to provide workers (particularly manual labourers) with the specific training they needed for a job.⁴¹ Vocational training institutions were not created and run in close association with the formal education system. Instead they were designed to meet the needs of large and medium-sized enterprises, due to the inclusion of employers' associations in their boards of directors, whereas small enterprises had little involvement in training policies and their benefits (Gallart, 2001).

The most universalist and equitable projects promoted by vocational training institutions were criticized because formal enterprises considered that their contributions would constitute a transfer (or tax), rather than contributing to their objectives. The technical and human infrastructure of vocational training institutions therefore rapidly became obsolescent and the costs and obstacles for updating teaching personnel constrained their modernization.

There are two dimensions to vocational training: general technological training; and specific training for handling machinery or carrying out concrete tasks, or for teaching knowledge and procedures required for specific production organizations.⁴² This calls for interactive and alternating theoretical and practical training, which speeds up the acquisition of job skills and adaptation to different production processes and technologies.⁴³

In order to extend the coverage and enhance the relevance of vocational training to meet changing job requirements, the business world needs to be involved, since that is where new technologies are disseminated. Innovative technologies and working processes call for ever more creativity, initiative and versatility, and less prior specialization. Education must therefore aim to develop core competencies rather than specific skills, so as to provide workers with a basis of knowledge which they can then use to adapt more effectively to new activities.

An innovative training system consists of programmes of continuing and modular (flexible) training. These encompass a wide variety of processes and workers' job and business careers and are aimed at rapidly assimilating technological change. They include complete training or skill acquisition courses and continuing training or retraining activities, with different combinations of theoretical and applied training, together with work experience and information days. Businesses play a crucial role as training and technological appropriation vehicles, through flexible

⁴¹ The pioneering institutions were Brazil's SENAI and SENAC (national industrial and commercial apprenticeship services), which came into operation in the mid-1940s. Subsequently, in the 1950s and 1960s, national vocational training institutions were created in all countries of the region (except Mexico, Argentina and Uruguay, which adopted different strategies). These institutions were: *Servicio nacional de aprendizaje*, 1957 (Colombia); *Instituto nacional de cooperación educativa*, 1959 (Venezuela); *Servicio nacional de adiestramiento en trabajo industrial*, 1961 (Peru); *Instituto nacional de aprendizaje*, 1963 (Costa Rica); *Instituto nacional de capacitación profesional*, 1966 (Chile); *Servicio ecuatoriano de capacitación profesional*, 1966 (Ecuador); *Servicio nacional de promoción profesional*, 1971 (Paraguay); *Instituto nacional de formación profesional*, 1972 (Honduras); *Servicio nacional de formación de mano de obra*, 1972 (Bolivia); *Instituto técnico de capacitación y productividad*, 1972 (Guatemala); and *Instituto para la formación y aprovechamiento de recursos humanos*, 1973 (Panama). The Dominican Republic's *Instituto nacional de formación técnico profesional*, created in 1980, is one of the most recent vocational training institutions. Since Argentina's *Consejo nacional de educación técnica* (national technical education council) and Uruguay's *Universidad del trabajo* (university of labour) are predominantly for technical school education, they do not strictly form part of this group. The International Labour Organization's Inter-American Research and Documentation Centre (CINTERFOR) played a major role in dissemination and technical consulting to put these vocational training centres into operation. More industrialized countries like Mexico and Argentina never developed strong vocational training institutions. In Mexico, the Labour Ministry organized major long-term training programmes but without a vocational training institution. In Argentina, the *Consejo nacional de educación técnica* was responsible for creating and disseminating a formal technical education model within the Ministry of Education, and for the belated and relatively limited development of vocational training. Following the decentralization of formal education to the provinces and the expansion of training programmes within the Ministry of Labour, vocational training is now coming to play a major role in training policies.

⁴² It is difficult to draw a clear line between general and specific training and their content. Training is a combination of specific instruction and general training.

⁴³ An example of this combined model of theoretical and practical training is Germany's dual training system.

mechanisms like work placements, consultation and information days, apprenticeship contracts and involving businesses in curricular design and redesign.

There are two alternatives for assigning funding to such a system. The first is to train workers in frontier processes and technologies, with a high level of productivity and limited scope, there being a scarcity of such workers at present. The second alternative is to provide vocational training to a wide range of people in relatively common and inexpensive technologies, which fits workers for basic jobs, as well as for continuing to amass knowledge. An example of the second alternative is the recent development of vocational training programmes for groups of unemployed people with specific problems, namely young people and women with a low standard of education, as well as people working in low-productivity, low-income activities, such as self-employed workers and microenterprise managers (Acosta and Ramírez, 2004).

3. Combining public and private initiatives and vocational training

As from the 1990s, training institutions became diversified, the number of private institutions increased and the State started to confine itself to financing and regulation functions.⁴⁴

Current institutional reforms have sought to curb, or even abolish, the monopoly of vocational training institutions and to create quasi vocational training markets, by changing the way training programmes are financed and introducing decentralization and subcontracting. There is a growing tendency to hand over responsibility for implementing programmes to institutions competing amongst themselves, which have the capacity to gear their provision to technological change and to production restructuring more flexibly and at a lower administrative cost.

The organization of vocational training therefore calls for separating the functions of: (i) financing; (ii) training provision; and (iii) regulation of training programmes and equivalence criteria, together with skill accreditation and certification. These functions must be implemented directly or indirectly by the State. In the region, it is common to find combined situations in which the functions of fund administration, training programme implementation and regulation of training provision are separate. A number of alternatives are presented below.

(a) Vocational training provision

The most widespread measure has been to decentralize the implementation of programmes through traditional vocational training institutions. Such decentralization has been carried out in line with the demands of economic sectors or national subregions. Decentralization ranges from devolving functions to shifting decision-making to the sectoral or territorial level. It also involves gradually contracting public and private institutions (which may or may not come under the public organization contracting them) to take charge of a wide range of activities and responsibilities. In many cases, market incentives are provided by means of project tenders among a variety of entities.⁴⁵

Other systems of vocational training provision take a wide variety of institutional forms: (i) in Chile and Mexico, contracting is by means of competitive tender, geared to the demands of the production sector; (ii) in Colombia, there are independent public vocational training institutions partially geared to demand; and (iii) in Brazil, the national industrial apprenticeship service has modified its relationship with the State and businesses, although it continues to be administered by the employers' federation (Gallart, 2001).

⁴⁴ In spite of the changes, traditional institutions still make up a large proportion. It is estimated that, in 2000, more than seven million workers were trained in vocational training institutions. CINTERFOR (1995) estimates that three vocational training institutions (Colombia's national apprenticeship service and Brazil's national industrial and commercial apprenticeship services cater for around 85% of these users.

⁴⁵ These include NGOs, schools, private training institutions, universities and sections of public organizations.

The subcontracting strategy has the advantage of allowing the quality and relevance of vocational training programmes and curricula to be adjusted more rapidly. However, subcontracting is constrained where there are insufficient training institutions with the required infrastructure, human resources and organization.⁴⁶ Contracting surpluses or lack of planning can fragment supply and undermine the ability to ensure continuous individual training and effectively meet demand from businesses. Fragmentation of service provision can also hamper the production of educational material, which requires a great deal of consultation and updating, and is not normally compulsory for individual providers. Consequently, training programmes and curricula must be structured in line with the opinion of the State (at national and regional level), employers' and academic organizations and workers.

(b) Earmarked public funding

Whilst, in many countries, appropriations for vocational training and training providers still come from specific funds, derived from an employers' contribution proportional to the amount of wages paid, recent fiscal reforms have tended to abolish this mechanism. These new forms of financing come from annual budget appropriations or from special programmes with more than one budgetary period. Thus, there is more than one form of financing in the region, and even in a single country.⁴⁷

This has provoked a heated debate, since it has been argued that the reduction or abolition of the employers' contribution is out of proportion with amount of vocational training spending for developing the production activities of enterprises and individuals.

Furthermore, the lack of a supply of training in certain areas that are considered to be socially important makes it appropriate to collect and earmark public funding explicitly or preferentially for such areas. This applies to training for peasant farmers and self-employed informal workers and training in trades at risk of dying out. It also applies to longer-term processes which, without proper regulation, are not considered or provided for by the market, as well as programmes requiring major investment.⁴⁸ It can also include the development of educational programmes (curricular design, educational research and production of teaching material) and new programmes and areas, training for trainers, as well as the provision of information, and mechanisms for disseminating it. The latter requires information and guidance services for users, which can be networked with private or community employment services.

Guaranteeing access to vocational training for poorer aspirants can enhance the employability of workers at risk of exclusion due to long-term unemployment or to the inability to afford the market price for acquiring key technological skills. Public or mixed financing of private State-regulated training provision can be a suitable basis for creating vocational and skills training markets.

⁴⁶ By subcontracting public contractors it is possible to decentralize implementation and to finance contractor schools. In the Dominican Republic, many of the training courses financed by the national technical and vocational training institute are provided by private collaborating centres. However, the lack of quality providers made it impossible to cover all needs, which has led to the development of a number of institutions with funding and technical support. Mexico and Chile subcontract by means of competitive tender, mostly to private organizations. In Brazil, the Ministry of Labour's Vocational Training Plan makes use of subcontracting, whilst the national industrial apprenticeship service uses it only on a small scale and for courses aimed at the informal sector.

⁴⁷ It is common to see combined forms of financing. In the Dominican Republic, the budget appropriation is added to employers' contributions on wages and private enrolment fees. In Brazil, the Ministry of Labour's Vocational Training Plan finances special vocational training programmes in the states and locally, whilst the national industrial apprenticeship service finances itself from a payroll tax, specific contributions from enterprises and the sale of services. In Mexico, there is combined funding from the employment fund, payroll taxes and financing for special vocational and skills training programmes as part of SME investment and development projects.

⁴⁸ One of the chief market failures is that institutional provision is concentrated in training schemes that require less investment, geared to administration and the tertiary sector, and neglects training for skilled jobs in the manufacturing sector, in technologies requiring infrastructure, equipment and laboratories with increasingly short obsolescence periods.

Instead of being earmarked for directly financing vocational training institutions, public funding can be earmarked for demand subsidies, by seeking to make supply respond more effectively to short term changes in demand. Vocational training subsidies to meet demand from companies have the advantage of targeting measures at the needs determined by companies themselves. However, they also present structural and specific limitations. Structural limitations stem from the fact that individual companies neglect strategic areas of training (including areas in which people with low purchasing power work) and focus almost exclusively on specific training. Even though this benefits the company, it results in relatively fragmented activities, with little continuity, and training programmes and courses that have little or no connection between them. This prevents professional development based on the gradual acquisition of knowledge, makes little contribution to more general training (which creates core competencies) and nor does it provide training for adapting to production and institutional changes (Agüero and Labarca, 1998). Other specific limitations, which are easy to regulate and monitor, include a tendency to finance training for middle and top company managers, which leads to greater income concentration.

Demand subsidies can also be channelled towards sectoral or regional training centres, usually associated with employers' organizations. This allows for closer links between training activities and businesses. Even though more opportunities are being created to ensure that training benefits more than one company, because such programmes tend to be targeted at very specific groups of workers and skills, which usually correspond to specific bottlenecks, limited coverage is achieved. Contact with small and medium-sized production organizations is nevertheless positive because, as collective users of vocational training, they support the technical services of training institutions (laboratories, management support).

Lastly, there are subsidies to meet the needs and demands of workers themselves. These are targeted at training for workers facing a critical risk, such as long-term unemployment (young people, women and adult workers displaced by production restructuring), forced migration or geographical relocation, demand for which cannot be satisfied in any other way. In this case, public responsibility goes beyond the cost of training. To derive the greatest benefit, it must cover the opportunity cost of trainees and the cost of certain basic needs, like food, transport, health insurance and so on.

(c) Regulation and supervision

In any vocational training and technical education system where direct provision of services is transferred to a wide range of private and public entities, one of the primary requirements is to strengthen the public regulation and supervision function. In view of the wide range of service providers for what is considered a public good, the State must ensure that the different actors comply with regulations. Service provision must be governed by rules on training programmes, covering the type of training (attendance, continuous or modular training, duration and intensity, work experience), the professional background and quality of teachers, research activities, infrastructure, and administrative and financial management.⁴⁹

Regulating demand should promote priority vocational training, as well as equitable access to services. It should include training investment incentives, which provide individual and collective benefits. When designing such incentives, it may be necessary to share provision and regulation costs among the State, businesses and workers. The State contribution can be made directly by means of refunds or indirectly by means of tax discounts. The contribution from workers can be

⁴⁹ In Mexico, the *Consejo de normalización y certificación de competencia laboral* (council for the standardization and certification of job skills) was set up for this purpose.

established by linking job continuance and compensation. Allowances could be reduced in cases of voluntary retirement or vary according to the characteristics of workers, training or jobs.⁵⁰

V. A social cohesion covenant

Greater economic vulnerability worldwide and its impact on the labour market in the past decade has heavily restricted stable employment relationships, which contribute to social cohesion. The employment problems in Latin America and the Caribbean were made more acute partially because, in order to increase employment demand, less rigid recruitment regulations were enacted, in a context of instability and low economic growth. In the end, the labour market reinforced de facto labour flexibility by increasing informal employment and made it more complex by creating new forms of job insecurity.

Improved competitiveness resulted in greater unemployment and informal employment, as the labour market adjusted to more systemic and structural factors. Average growth in the region was low and volatile and the employment rate was procyclical. In the absence of comprehensive social protection mechanisms, labour supply moved countercyclically in line with families' need to overcome income insecurity via the employment of their working-age members. This accentuated the trend for women to enter the labour market. Production processes favoured mechanization because exposure to competition in a context of increasing market opening and currency appreciations raised the cost of labour compared with the cost of capital goods and accelerated the adoption of advanced technologies in frontier sectors. New production technologies, involving an intensive use of skilled labour, undermined income distribution to the detriment of workers without tertiary education.

The emergence of jobs with fixed-term contracts and temporary jobs with no contract or no social protection, together with a drop in the wages of unskilled workers to the income levels of the informal sector, aggravated traditional employment problems. The working population faced an unstable job situation, which eroded their development prospects and training and productivity incentives. Social protection systems failed to cover these new risks and, in addition, were affected by a shortage of public funding and new institutional mechanisms that linked benefits to job stability in each individual institution.

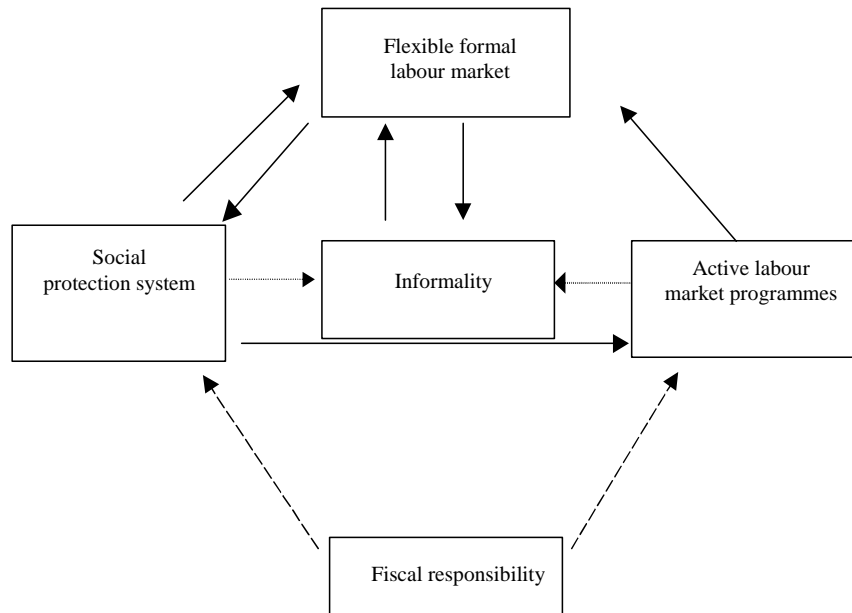
The current situation calls for more complex solutions, which go to the very root of employment problems and the ability of social protection mechanisms to cope with the new risk structure facing workers. The wide variety of proposed solutions call for active social and economic policies, hinging on a social cohesion covenant resting on four pillars: consistency with the foundations of macroeconomic policy; job creation; social protection; and education and training.⁵¹ A social protection system should be developed so that budgetary resources permitting, people can find a new place in the job market after a short period of unemployment or, failing this, through the assistance provided by active labour-market-oriented programmes, before being reinstated. If, on the contrary, they remain in informal jobs, active job-market-oriented programmes should seek to improve the productivity of informal enterprises, adapt social protection systems to their characteristics and/or promote their formalization through institutions that promote their development.

⁵⁰ In Chile, for example, there is a tax exemption of up to 1% of the payroll for businesses investing in training, which can also be used for upgrading the basic education of workers with incomplete schooling. Also, the cost of the training agreed between young workers aged 15 to 18 and the employer, can be deducted from the retirement allowance, up to an equivalent of one year of allowance. A new bill widens this type of contract to include workers of up to 24 years of age and extends the deduction to cover the entire allowance.

⁵¹ On this point, see Weller (2001), IDB (2003b), Titelman and Uthoff (2003) and ECLAC (2003a).

In order to achieve these objectives, authorities should introduce a social cohesion covenant whose components match those illustrated in figure 9.5. The continuous lines indicate workers' mobility, the short dotted lines indicate allocations of resources, which must be strengthened towards the informal sector, both in terms of active programmes oriented towards this segment of the labour market and in terms of adapting social protection to its characteristics. The long dotted lines indicate solidarity-based financing for protection systems under a fiscally responsible system. The interactions should revolve around three components, in addition to sheer labour flexibility.

Figure 9.5
SOCIAL COHESION COVENANT



Firstly, there must be consistency with macroeconomics so as to avoid generating wage and price inflation and opening up a debate on the tax burden and the tax yield. This should be reviewed in its capacity to generate solidarity-based financing for socially acceptable protection goals.

Secondly, there should be consistency with new designs for social protection which include unemployment, disability, old age and death benefits and access to health services which provide coverage, in accordance with the new risk profiles associated with changes in the production structure.

Thirdly, there should be consistency with active support programmes for the generation of employment, information systems, informal productivity and training and skills development.

The covenant recognizes that labour policies do not, on their own, generate employment. They require recovery of the demand for employment and active labour policies to make sure that there is a supply of appropriate skills and to avoid other possible bottle necks. If there is not rapid growth in demand, labour flexibility must go hand in hand with a good unemployment insurance coverage, active public employment policies and support policies for the informal sector. The covenant therefore combines the labour flexibility necessary to adapt to the new conditions for competitiveness in the global market with a fiscally and socially responsible level of economic protection for workers. In order to formulate an agreement that takes into account the current state of development of the social protection system and the gradual development of active policies

oriented towards the formal and informal labour market, the proposal must be adjusted using different configurations according to the context in which it is applied.

1. Social cohesion and macroeconomic constraints

The majority of empirical studies on high-inflation situations have shown that, in the long term, increases in real net wages resulting from a productivity increase are sensitive to labour market imbalances. Hence, full indexation to inflation goals and transferral of productivity increases to workers' pay and earnings could become an appropriate long-term rule. This should lay down solid foundations for wage bargaining between workers and employees and encourage investment and productivity growth, based on training as part of the production process. The adoption of such practices would lead to wage flexibility, by means of a 'participative wage' policy, which would avoid company restructuring in crisis periods and allow for profit sharing in boom periods.

Chapter 3 of this book proposes focusing on an intertemporal and countercyclical approach to manage public finance. This goes to the very root of the social cohesion covenant's viability, since it means improving the measurement, monitoring and management of fiscal responsibilities (contingent liabilities) and their medium-term impacts. There are two corollaries from the above. Firstly, the need to devise a social inclusion policy by establishing state guarantees for families with insecure income, which would guarantee their access to education and training support systems, unemployment benefits, emergency jobs, and health benefits and pensions. Secondly, the need for a citizens' debate on the tax burden and on more efficient tax collection, in order to assume the fiscal responsibilities deriving from the contingent liabilities associated with the aforementioned guarantees.

2. Social cohesion and employment

Job creation in the production sector is essential to social cohesion. Savings requirements for funding investment and policies to develop the production sector are analysed in other chapters of this book. However, such policies call for new forms or aspects of labour flexibility to be devised, to allow the labour market to adjust to the new conditions of the production structure. Employment contract flexibility should never be pursued without full social protection. Mechanisms of labour flexibility include: (i) the abolition of fixed-term contracts and their replacement with an extended trial period or setting a 'suitable' ratio between indefinite contracts and more flexible fixed-term contracts; (ii) the possibility of introducing flexible working hours (distribution of working hours or days; special schedules; use of working-time banks for varying periods; and defining holiday periods, work on public holidays and trial periods); (iii) the use of collective bargaining to set reasonable limits on allowances or to replace such allowances, at least partially, with individual savings accounts, to which companies and the State contribute;⁵² (iv) the facilitation of fair dismissal and the legal ratification of some special contracts;⁵³ and (v) flexible conditions for determining pay.⁵⁴

⁵² In a crisis situation with high unemployment and labour mobility, this insurance mechanism would have to adjust benefits significantly, because, if not, the solidarity fund would quickly reach its ceiling. Therefore, it is useful only for workers with little probability of becoming unemployed and remaining so. Given that there is a waiting period of more than one year for entitlement to benefits, it does not appear likely to have a positive impact in the immediate term. However, it is a useful medium- to long-term instrument.

⁵³ An example of such special contracts is promotional contracts for disabled people, for example, or apprenticeship contracts for workers with insufficient work experience returning to the labour market. Such workers frequently require relatively specific training, in a particular company or job, which takes up a period or a major percentage of the worker's time, during which the worker does not contribute fully to the company's production.

⁵⁴ For some years now, 'participative wages' have been promoted, which reduce labour costs and workers' incomes in times of economic crisis, but which protect employment (job, income and social protection). Another fundamental aspect of schemes like these is that they mitigate the procyclical nature of crises, maintain employment and income levels and, in aggregate terms, they have an anticyclical impact.

There are three types of public labour market policy: (i) active policies: targeted at groups suffering structural problems, such as a lack of information or opportunities matching their vocational training. They include active measures for subsidizing recruitment or job-seeking, generating temporary employment via direct job creation, incentives for microentrepreneurship and tendering out labour-intensive local infrastructure works; (ii) passive policies: targeted at unemployed groups, consisting of paying workers an allowance whilst they are temporarily unemployed (unemployment benefits); and (iii) social welfare policies: targeted at groups that are excluded by current labour market conditions and need a network of direct funding support.

Active job creation programmes with tax contributions combine direct financing of jobs, recruitment subsidies through job training, intermediation for job-seeking, venture capital support for microentrepreneurship, and contracting works and activities of benefit to the community. In order to apply these measures, the authority must have credibility, which it acquires by means of planning with clear policies, goals and instruments, transparency with regard to operators and institutions, together with efficient management, financing, regulation and supervision.

In order to increase informal workers' productivity and incomes, it is necessary to promote their activities by giving them access to production resources, more dynamic markets and new forms of organization. It is also necessary to apply social policies that take into account their capacity as producers, as well as their need to earn a living.

From a financial standpoint, the main challenges are lack of collateral to secure credit, the high cost of informal indebtedness, segmentation of the credit market and the inability of credit institutions to meet the requirements of the informal sector. There have been a variety of responses to these challenges, ranging from granting unsecured loans to setting up joint and several guarantees, or the ad hoc recognition of informal capital. In some cases, the cost has been covered by means of interest-rate subsidies (although these have tended to fade out) and, primarily, by more efficient administration of available resources. There have even been attempts to use remittances as security for families with members working abroad (ECLAC, 2003a). There are also various types of institutional arrangement, ranging from the adaptation of traditional banks to the creation of a specialized bank for the poor, which has advantages and drawbacks (see chapter 3).

However, it must be acknowledged that it is impossible to reach a large number of informal workers using this mechanism. The chief objective of any general policy must be to increase formalization, at least from a legality standpoint. It must be borne in mind that informal employment has also been a response to excessive and inadequate State regulation that treats evident and recognized activities as legally non-existent because they take place outside the regulatory framework.

Explicit formalization, by means of regulations that cover informal workers, must be made one of the key instruments for facilitating the incorporation of informal workers into a process of modernization. Informal employment does not respond solely to a desire to evade rules, or to cultural practices, but also to the real inability of informal sector units to comply with social and labour regulations. Therefore, above and beyond legal recognition and its consequences in terms of citizenship, formalization gives broad sectors access to specific resources and audiences. It is possible to set up simplified tax systems, preferential interest rates or labour issues that are not included in core labour standards. It is worthwhile exploring the potential for labour flexibility and for lessening non-wage labour costs in each context, in order to reduce the barriers which informal workers face in accessing basic protection systems.

Access to dynamic new markets is one means for breaking the vicious circle of "informal producers for poor consumers". This includes centralizing purchasing power, including for public procurement, penetrating export markets and physically grouping producers to attract greater demand. Other solutions include creating horizontal partnerships between producers, promoting subcontracting and setting up production chains between small and large enterprises. Manpower

service companies and labour-intensive cross-border assembly plants must take advantage of the benefits of decentralization, without instigating patterns of exploitation and lack of protection.

Social welfare policies aimed at informal sector workers and their families form part of poverty-reduction policies, due to the low incomes of such households and individuals. A small business is a blend of employment and family relationships. Capital goods are both investment goods and for family use, and resources are fungibles. Consequently, the lack of social security coverage or of an insurance market geared to their needs can stand in the way of their proper economic operation.

3. Social cohesion and social protection

Any labour market reform aimed at strengthening social cohesion must promote labour flexibility associated with social protection. Otherwise, in times of recession, lack of protection results in precarious employment, shifting responsibility to the State for protecting workers with no coverage, even though the State's ability to provide protection is limited by budgetary constraints. Hence the first measure required, as detailed in chapter 3, is to reduce the economy's vulnerability to international crises by adopting macroeconomic policies with clear countercyclical criteria.

Fiscal constraints limit the ability to finance the enormous demands arising from social risks. In turn, the design and implementation of social protection system reforms, which involve new public and private combinations, impact heavily on the need for fiscal resources. Indeed, they affect the efficiency of resource allocation and management, coverage via contributory systems, and financing for solidarity mechanisms and transition costs. Factors involving the economic cycle and structural variables impact on demand for social security services. The labour market is one of the main channels through which the economic cycle impacts on the sources of contributory financing and on the burden of social security systems. The unfavourable evolution of the Latin American labour market presents challenges for reforming social security systems.

Furthermore, social protection should not be based on labour flexibility; instead it requires an explicit risk provision policy, combining private and public financing. Labour flexibility is a means for achieving better economic and social outcomes and should not be considered an end in itself, but rather a means of adapting to new circumstances. Therefore, reforms of social security systems should contribute to labour mobility, by designing schemes for 'portable' rights and obligations. This calls for a protection system geared to people rather than to jobs, which reduces workers dependency on a company for their protection. It also means increasing and diversifying social protection in line with changing new labour market structures. Nowadays, job instability is proof in itself that unemployment-related economic risks, involuntary inactivity and precarious employment are not being covered by social protection systems, and that the design of contributory systems tends to exclude the most vulnerable.

Social protection systems should incorporate solidarity financing mechanisms, to guarantee coverage irrespective of people's ability to contribute. From a health standpoint, this includes the creation of a solidarity fund to collect contributions based on the economic capacity of its members and to distribute funds in accordance with the risk coverage offered by insurance companies. In the case of pensions, it includes strengthening the basic pillars using contributory and non-contributory resources and setting upper limits on guaranteed benefits which do not undermine the incentives of the contributory pillars. In the case of unemployment insurance, it means setting up a solidarity fund.

4. Social cohesion, education and training

A fourth component of the social cohesion covenant is to enhance workers' production skills by means of education and vocational training. The universalization of complete basic education is the most effective policy for promoting equal opportunities. Access to technical and higher education offers a high return.⁵⁵

Nowadays, complete secondary education (11-12 years of schooling) has become the minimum level of instruction needed to access virtually all jobs and hence earn a decent living. Equal opportunities between people from different socio-economic backgrounds and geographical locations must be pursued by increasing the relevance of curricula in line with their territorial realities, with special emphasis on specific groups which are acutely vulnerable and economically and socially insecure. Lack of education infrastructure, financing, quality and curricula makes it necessary to take measures as quickly as possible, particularly in rural areas.⁵⁶ The countries of the region have made significant financial efforts to increase education spending. However, in terms of the percentage of GDP, it is a far cry from the 5% share most developed countries devote to education, even though the region has a younger population.⁵⁷

Vocational training systems have begun to be reformed. It is essential to gradually separate the State functions of financing, implementing and regulating vocational training programmes. In the region today there are many different institutional forms for providing and contracting vocational training.

Through its regulatory and supervisory role, the State is still able to identify and prioritize certain objectives and sectors deemed to be strategic and to define training beneficiaries (companies, sectors, regions, trades and workers).⁵⁸ It must provide for training in jobs at a low risk of dying out and training in processes and subject matter required for certain sectors, enterprises and groups of workers, but which the market is unlikely to provide. Its definition must be flexible to allow it to adapt to changing circumstances in such areas as technology and market rules. However, it must not be radically changed in the short-term, because its effectiveness hinges on medium-term agreements between actors (i.e., between the State, companies and workers). Indeed, in order to extend the coverage and enhance the relevance of vocational training, coherent mechanisms are needed which facilitate and increase business involvement and which are in line with the opinion of the State (at the national and regional levels), academic organizations and workers. Once the equity objective has become a major factor in guiding vocational training programmes and results, it becomes necessary to redesign programmes to match them more closely to the requirements and possibilities of the targeted population. Various demand subsidy options are in operation, in accordance with State-regulated systems of vocational training provision and contracting.

⁵⁵ New forms of production call for general, rather than specific, skills. This means that workers must have a solid basic general education as a foundation for acquiring specific job skills, in part in the workplace.

⁵⁶ Providing for and recognizing economies of scale promotes dialogue and regional agreements, as a means for building on countries' complementarities and experience.

⁵⁷ According to a calculation based on the Global Education Digest 2003 of the UNESCO Institute for Statistics, education spending as a percentage of GDP for the two-year period 1999-2000 was 3.74% in five Central American countries, 4.1% in 10 South American countries, 4.25% in 19 representative African countries, 4.45% in eight countries of Asia (Pacific), 5.25% in the United States and Canada and 20 European countries, 5.5% in Australia and New Zealand and 6.1 in 11 Caribbean countries.

⁵⁸ To secure the necessary support for a public policy, it is first necessary to build broad and sustainable consensus to collectively define social priorities.



Chapter 10

Education and productive development

At the end of the 1970s, there were differences in educational progress and policy among the region's countries, but there was generally a marked reduction in illiteracy, an increase in the coverage of primary education and major expansion at the secondary and tertiary levels. Decreased social spending as a result of the debt crisis and the subsequent structural adjustments had an impact on investment in the education sector. Enrolment rates in the countries of the region were lower than in other countries with comparable or greater levels of development; teachers' salaries fell; school infrastructure deteriorated; and curricula became obsolete. Rapid changes in how knowledge is acquired in the industrialized countries aggravated the region's disadvantageous position vis-à-vis those countries, in regard to the teaching methods, materials and technology used in the public education system.

By the 1990s, education spending had increased. Teachers' salaries and investment in educational infrastructure regained some of the ground they had lost. Educational reform led to more adequate funding and better management and administration. Efforts were made to modernize educational systems, use resources more efficiently and improve the quality of education. Nevertheless, there was little progress in educational quality, and the equity of educational supply and demand across the socio-economic spectrum improved little (ECLAC, 2000a).

Salient, from the point of view of productive development strategy, are the new demands on the educational system being made by enterprises active in international markets. Better ways are needed to measure skills and human capital, and to certify workers' skills (Akerlof, 1970; Amjad, Raboani and Sziraczki, 2001; Bravo and Contreras, 2001). In this respect, the internal dynamics of the educational system have not succeeded in responding fully to the challenges of competitiveness, which involve three objectives: (i) increasing the coverage of secondary and higher education, developing science and technology and creating closer links with the productive sector; (ii) developing new skills to respond to the need for flexibility in today's labour market; and (iii) satisfying the demands of small and medium-sized enterprises.¹

Education and culture also need to deal with the impact that the rapidly changing "information society" has had on production and communications. Educational advances must be brought into harmony with these changes, and communication and dialogue via interactive media must be facilitated. This is of decisive importance not only for competitiveness, but in terms of cultural identity and citizen participation. Thus, the relationship between education and culture on the one hand, and new information and communication technologies (ICTs) on the other, is crucial (Hopenhayn, 2003).

Following the introduction, this chapter is divided into five additional sections. The first provides information on the region's poor level of progress in education, compared with progress in developed countries and other emerging economies. The second considers how to design educational reforms so as to promote equity. The third examines the role of education in improving competitiveness. The fourth argues for using new information and knowledge technologies in education, so as to create compatibility between the educational process and the new forms of production and work. It also stresses new ways of exercising rights, affirming cultures, acquiring information, communicating over distances and participating in networks. The fifth and final section offers policy recommendations.

I. Advances in education

The ECLAC Equity, Development and Citizenship report (ECLAC, 2000a) emphasized various features of the Latin American educational system. The first of these is the relatively low coverage and high degree of segmentation in regard to the quality found in the countries' educational systems. All the countries in the region made significant strides in terms of access to secondary education, but the progress made in Bolivia, Brazil and Chile was remarkable (see table 10.1). Nevertheless, there are persistent gaps compared with the countries of the Organisation for Economic Co-operation and Development (OECD) and with their competitors in South East Asia. In 12 of the 20 countries in the region, net or real enrolment rates were 10 percentage points lower than gross enrolment rates and are affected by the rates of repetition and by the percentage of over-age and under-age pupils.²

While secondary education is better than average for other developing countries, it is far from comparable to what is available in developed countries.³ In terms of gender equality, the situation in Latin America and the Caribbean may be described as acceptable. Indeed, the degree of equality between the sexes is rather advanced compared to developing countries as a whole, and more closely approximates the situation in developed countries. Educational quality differs, however, from one social stratum to another, and between rural and urban areas.

¹ Schooling at all levels also needs to move further in educating young people for citizenship, so as to strengthen the region's democratic systems.

² The net rates in Table 10.5 should be interpreted cautiously. They are not an entirely accurate description of reality, since they are based on ratios in which one term reflects the enrolment figures customarily provided by ministries of education, while the other is taken from census figures for population in the age bracket corresponding to each grade or cycle of the educational system. This is why figures are above 100% in some cases.

³ The issue of the region's educational development in comparison with industrialized or recently industrialized countries is dealt with in section II.2 of this chapter.

Table 10.1
**GROSS AND NET SECONDARY ENROLMENT RATES AND SECONDARY-SCHOOL
 GRADUATION RATES FOR OLDER-AGE STUDENTS, 1980 AND 2000**

Country	1980		2000/1		2000/1
	Gross enrolment rate	Net enrolment rate	Gross enrolment rate	Net enrolment rate	Secondary-school graduation rate for older students (%)
Cuba	81	66	85	82	..
Argentina	73	55 ^a	97	82	48
Jamaica	67	64	83	76	65
Chile	53	37 ^b	85	76	62
Uruguay	62	..	98	74	..
Brazil	34	20	108	74	62
Trinidad and Tobago	69	..	81	73	..
Bolivia	37	16	80	67	..
Panama	61	46	69	65	..
Peru	59	46	86	64	50
Mexico	49	40	75	62	32
Colombia	39	..	70	59	..
Venezuela	21	14	59	55	..
Ecuador	53	..	57	49	..
Costa Rica	48	40	60	49	..
Paraguay	27	23	60	48	35
Dominican Republic	42	..	59	45	..
Nicaragua	41	22	54	38	..
El Salvador	24	..	54	..	..
Guatemala	19	13	37	25	..
Latin America and the Caribbean (simple average)	48	..	73	60	..
OECD (median)	86	..	106	92	74
Canada	88	77 ^b	106	98	..
United States	91	..	95	89	74
Republic of Korea	78	70	94	91	97
Thailand	29	..	82	..	45
Malaysia	48	..	70	70	67

Source: Beverley A. Carlson, "The education and human capital chapter", Santiago, Chile, Economic Commission for Latin America and the Caribbean (ECLAC), unpublished, 2003, on the basis of World Bank, United Nations Educational, Scientific and Cultural Organization (UNESCO), Organisation for Economic Co-operation and Development (OECD).

^a 1975.

^b 1985.

Secondly, the ECLAC report stresses the “devaluation” of educational achievement. As the society’s average level of schooling increases, more and more training is required for a given job. Meanwhile, job creation lags behind educational progress. This decreases the return on primary education, while increasing income gaps as a function of schooling. Between 10 and 12 years of schooling (varying according to country) are needed at this point for an individual to be relatively sure of avoiding poverty. As the coverage of secondary education increases, the labour market demands more and more schooling for a given job (see table 10.7).

The report identified five ways of overcoming these problems: (i) educational continuity as a means of achieving universal coverage for secondary education as quickly as possible; (ii) increasing the quality of education by updating approaches to learning and teaching; providing schools with computers and audiovisual technology, in order to give students new information and knowledge acquisition skills; improving curricula and teacher training; extending the school hours and providing better infrastructure; (iii) increasing equality of educational opportunity by raising the level of teaching, better equipping schools and improving school management—all in a manner that highlights equal opportunity throughout the system and across the general population. This approach can reduce the gap between elite schools and public schools, facilitate more equal access to knowledge, provide the most dispossessed sectors with a type of education that will keep them in school longer, ensure them an adequate education, and hence provide them with more options, social mobility and occupational mobility in future life; (iv) adapt educational systems to productive demands and to global competitiveness, incorporating technical advances by training for the skills needed in the information society and required for productive development; and (v) education for modern citizenship and democracy, based on interactive communication, public debate, informed processing of the demands of different social groups, and cultural self-affirmation, all of which are essential in the forms of social life that are emerging today.

In order to achieve these objectives and approach educational levels typical of developed countries, governments have undertaken major educational reforms over the last few decades (Gajardo, 1999). The reforms essentially attempt to increase funding, efficiency and quality in education.

Retention rates for students in higher secondary education must be increased. The percentage of students who graduate from secondary school is much lower in Latin America than in the OECD countries and fewer years are spent training at this educational level. In order to compete effectively in a global economy, a competitive industry needs to use workers with secondary education in a productive way. The increase in qualifications at the secondary level also helps to reduce the inequity currently generated by the region’s educational systems. The region shows huge lags with respect to other competitive regions and countries in the critical expansion of its educational attainments at the secondary and non-university tertiary levels. These levels are the basis for the training of a skilled labour force. Just as in the industrialized countries, access to complete secondary education should be the objective of all the countries of the region.

Achieving adequate coverage for secondary education is a complex process, involving many factors. Among other things, it requires good teachers, good management and good curriculum, funding to implement programmes, well-nourished students who are motivated and prepared to learn, adequate study facilities and good classrooms. Exhaustive review of educational reform in the region has shown that the main goals have been to improve administration and the decentralization process, enhance equity and quality, improve teacher training and achieve more adequate funding levels. Seven specific policy objectives have been identified in relation to these concerns (see table 10.2).

Table 10.2
EDUCATIONAL REFORM: SELECTED CASES

Policy objectives	Countries with reforms underway
Institutional reorganization and decentralization of management	Argentina, Brazil, Chile, Colombia, El Salvador, Mexico, Dominican Republic
Bolstering school autonomy (curricular, pedagogical, financial)	Bolivia, Chile, El Salvador, Brazilian states, Guatemala, Nicaragua, Paraguay
Improving quality and equity by creating consistent, targeted programmes, equipping the schools properly and improving infrastructure	Argentina, Brazil, Chile, Colombia, Costa Rica, Bolivia, Guatemala, Paraguay, Peru, Dominican Republic, Uruguay
Curriculum reform	Argentina, Bolivia, Brazil, Chile, Costa Rica, Mexico, Dominican Republic, Uruguay,
Longer school day	Chile, Colombia, Uruguay
Giving dignity to teaching and providing teacher training	Argentina, Brazil, Chile, Colombia, Costa Rica, Guatemala, Nicaragua, Dominican Republic, Uruguay
Increasing investment in education	Argentina, Bolivia, Brazil, Chile, Colombia, Costa Rica, Guatemala, Mexico, Panama, Paraguay, Uruguay

Source: Marcela Gajardo, *Reformas educativas en América Latina: balance de una década*, Programa de Promoción de la Reforma Educativa en América Latina y el Caribe (PREAL), Santiago, Chile, 1999.

1. Education spending and its distribution

Funds are needed to expand educational systems, improve their quality and ensure equitable access. Most Governments in the region attach a great deal of importance to ensuring that their citizens have access to education. A review of education spending and how it is distributed between the different levels and types of education shows the difference between a commitment to an education policy underpinned by the effective availability of resources and a declaration of political will which has yet to be put into practice.

The proportion of gross domestic product (GDP) allocated to education varies from country to country, ranging between 1.1% and 8.5% (2000 figures). The average for the region is 4.4% of GGP, a poor statistic compared to the 5.3% of gross domestic product (GDP) allocated by high-income countries, where the school age population represents a much lower percentage of total population. These figures may be interpreted as a reflection of countries' educational priorities and the seriousness with which they are attempting to reach their goals. However, the amount invested may bear little relation to the quality and results of the educational system, as shown by the educational achievements referenced in Section 2. This is due, in large part, to the great differences between countries in the way that public resources are transformed into concrete educational results.

Table 10.3
EDUCATION SPENDING 1980 AND 2000
(As a percentage of GDP)

Country	Public		Total
	1980	2000	2000
Cuba	7.2	8.5	
Jamaica	7.0	6.3	
Panama	4.8	5.9	
Bolivia	4.4	5.5	
Colombia	...	5.1	
Nicaragua	3.4	5.0	
Brazil	3.6	4.7	
Mexico	4.7	4.4	5.2
Costa Rica	7.8	4.4	
Chile	4.6	4.2	7.2
Honduras	3.2	4.0	
Trinidad and Tobago	4.0	4.0	
Argentina	2.7	4.0	5.8
Peru	3.1	3.3	4.6
Uruguay	2.3	2.8	3.0
Dominican Republic	2.2	2.5	
El Salvador	3.9	2.3	
Guatemala	...	1.7	
Ecuador	5.6	1.6	
Haiti	1.5	1.1	
Latin America and the Caribbean weighted average	3.9	4.4	
Canada	6.9	5.5	6.6
United States	6.7	4.8	6.5
Malaysia	6.0	6.2	
Thailand	3.4	5.4	
Republic of Korea	3.7	3.8	6.8
Low-income countries	3.4	2.8	
Middle-income countries	4.4	4.5	
High-income countries	5.6	5.3	

Source: Beverley A. Carlson, "The education and human capital chapter", Santiago, Chile, Economic Commission for Latin America and the Caribbean (ECLAC), unpublished, 2003, on the basis of World Bank, United Nations Educational, Scientific and Cultural Organization (UNESCO), Organisation for Economic Co-operation and Development (OECD).

There is a pronounced difference in the importance that governments assign to the different educational levels. The Asian countries shown in the table allocate a major portion of current budgetary resources to secondary schooling. The Latin American and Caribbean countries whose policies most closely approximate these priorities are, in descending order, Jamaica, Cuba, Argentina, Mexico, Uruguay and Brazil (see table 10.4).

Table 10.4
**CURRENT PUBLIC SPENDING ON EDUCATION, ACCORDING TO EDUCATIONAL LEVEL, AS
 A PERCENTAGE OF TOTAL SPENDING, 2000-2001**

Country	Primary	Secondary	Tertiary
Jamaica	35.2	43.1	21.7
Cuba	45.4	38.2	16.4
Argentina	44.4	37.1	18.5
Mexico ^a	44.0	36.8	19.2
Uruguay ^a	41.9	36.4	21.7
Brazil	42.3	36.1	21.6
Chile	52.3	34.8	12.9
Panama	40.1	33.9	26.0
Trinidad and Tobago ^a	42.6	32.0	25.4
Peru ^a	50.1	29.6	20.3
Paraguay	52.8	28.4	18.8
Costa Rica	51.8	28.0	21.2
Bolivia	48.0	22.6	29.4
El Salvador ^a	73.8	7.1	19.1
Latin America and the Caribbean (simple average)	45.5	32.5	22.0
Malaysia	33.2	36.7	30.1
Republic of Korea	47.7	41.1	11.2

Source: Beverley A. Carlson, "The education and human capital chapter", Santiago, Chile, Economic Commission for Latin America and the Caribbean (ECLAC), unpublished, 2003, on the basis of World Bank, United Nations Educational, Scientific and Cultural Organization (UNESCO), Organisation for Economic Co-operation and Development (OECD).

^a 1998.

When per-student spending is standardized for each educational level, so that it accords with each country's level of development (see the ratio of spending to per capita GDP in table 10.5), Cuba is seen to be the country allocating the greatest amount of resources to secondary education, as well as to education in general. Jamaica, Panama and Costa Rica compare favorably with the United States and Malaysia, allocating one fifth of per capita GDP to education. However, some Inter-American Development Bank studies indicate that these countries have not enjoyed benefits similar to those enjoyed by the Asian countries, because they allocate a lesser percentage of the spending to secondary education (IDB, 2001 and 1999).

There are two major issues in the region's educational systems: the need to improve and equalize the quality of education in all secondary schools within a country, and the need to keep young people in the system until they graduate from secondary school. Increased retention in the final years of secondary school has an important short-term effect, as do policies that emphasize technical and vocational programmes in these years and at the tertiary level.

Table 10.5
CURRENT PUBLIC SPENDING PER STUDENT ACCORDING TO EDUCATIONAL LEVEL, AS A PERCENTAGE OF PER CAPITA GDP, 1980 AND 2000

Country	Primary		Secondary		Tertiary		Average for all levels
	1980	2000	1980	2000	1980	2000	2000
Cuba	...	34.7		41.9		101.7	43.5
Jamaica	12.7	16.2	18.0	26.8	185.5	80.0	24.2
Panama	...	15.8	10.2	24.4	26.5	47.7	22.2
Costa Rica	10.0	14.9	24.5	19.4	72.4	55.7	19.1
Argentina	5.0	12.5	11.0	16.4	29.8	17.7	14.7
Chile	9.2	13.9	15.7	15.2	107.8	21.9	15.4
Trinidad and Tobago	17.0	16.2	12.4	14.8	56.4	147.9	16.2
Mexico	4.2	11.7	10.0	13.8	25.5	45.2	15.0
Brazil	....	12.5	....	12.6	....	72.8	15.5
Guatemala	....	4.9	....	12.1	....	....	....
Uruguay	8.9	8.2	13.6	12.0	27.0	21.3	11.3
Bolivia	....	13.3		11.0	...	45.2	15.9
Peru	6.9	8.0	8.0	10.6	4.7	22.0	9.9
Ecuador	...	4.3	12.5	8.9	23.0	....	....
Latin America and the Caribbean (weighted average) ^a	5.9	9.1	14.8	13.1	30.4	27.2	
United States	....	17.9	17.3	22.4	47.8	....	....
Malaysia	....	11.2	20.5	19.9	140.9	86.1	20.8
Thailand	8.8	12.5	9.8	12.8	59.7	38.2	15.9
Republic of Korea	13.0	18.3	9.1	16.8	15.7	8.0	15.0

Source: Beverley A. Carlson, "The education and human capital chapter", Santiago, Chile, Economic Commission for Latin America and the Caribbean (ECLAC), unpublished, 2003, on the basis of World Bank, United Nations Educational, Scientific and Cultural Organization (UNESCO), Organisation for Economic Co-operation and Development (OECD).

^a 1985 and 1995.

Statistics indicate that the proportion of students in the region who finish secondary school is lower than in OECD countries. Nor have the region's countries kept pace with other competitive regions in terms of expanding coverage at the secondary and non-university tertiary levels. This limits their ability to produce the skilled labour needed to improve competitiveness in industry, agriculture and services.

Equal access to education and equal opportunity to complete secondary schooling should be a basic right, as is the case in the industrialized countries. However, this goal remains a distant one for Latin American societies.⁴

⁴ Despite the progress it has made, education in Argentina is an example of the need to improve very low levels of retention. A recent study of a cohort of students found that of 100 who entered primary school, 84 made it to seventh grade, 76 to ninth and only 40 to the last year of secondary school, while 35 enrolled in university and a mere 7 graduated (World Bank, 2000).

2. Principal data regarding access and quality

Progress toward universal secondary education has been much slower than in other competitive regions (ECLAC, 2003f).⁵ This is a result of continuing flaws in the scope and quality of secondary education. The result is that young people tend to drop out before finishing secondary school. Nevertheless, the current generation of young people is more educated than preceding ones, though to differing degrees in different countries, due to major differences in income levels, social structure and rural-urban distribution of population.

Sluggish economic growth and lack of job opportunities have contributed to the increasing “devaluation” of educational achievement. The return on education is substantially less in rural than in urban areas; when only a few years of primary schooling are completed, this return is poor, and it is relatively low for non-university post-secondary education, though it is high for university education. The quality of education provided to low-income students is much poorer than that available to wealthier families. The majority of lower-income students attend public schools, and they do not have access to high-quality tertiary education. The stratification of educational quality helps to perpetuate income inequality, as well as to limit the spread of productive development and growth. Another obstacle to high-quality education is the acute lack of well-trained teachers—in terms of both pedagogical skills and knowledge in a specific discipline.

The poor functioning of educational systems—an additional explanation for the region’s low productivity levels—is independent of the level of educational spending as a percentage of GDP. Educational systems require infrastructure and equipment, but most important, they require qualified teachers, motivated students and appropriate material. Enormous institutional and organizational efforts are required to achieve these conditions.

Country comparisons of the inputs and results of the educational process have been possible for the first time recently, with international studies of educational quality.⁶ Almost invariably, studies show great variation from country to country (more in terms of results than in funding levels). They also reveal a gap between Latin American countries and more developed regions. The performance of Latin American education is one third to one half that of OECD countries. Of course, Latin America spends less per student. Average spending per student in OECD countries is US\$ 6,300 from the primary to the tertiary level, while Chile, Mexico and Brazil spend US\$ 2,600, US\$ 1,700 and US\$ 1,200 per student, respectively. However, the net graduation rate for secondary school in OECD countries is 70%, as against 40% in Argentina, Brazil, Chile and Mexico. In OECD countries, 10% to 15% of 15-year-old students reached level 5 in reading, as compared with 1% in Mexico. The student-teacher ratio in primary schools in Sweden, Norway and Finland is between 12 and 17 to 1. By way of contrast, the student-teacher ratio in Chile is 29.4 to 1. Average schooling in OECD countries is 17 years, as against 15 in Chile and Brazil, and only 13 in Mexico. Though the percentage of 15- to 65-year-olds with reading problems is close to 30% in Finland, Norway and Sweden, it is more than double that in Chile (Schieffelbein, 2004).

The first results of an OECD study to measure math, science and language skills among 15-year-old students in 32 countries showed that developing countries such as Poland equal the average schooling level of OECD countries, or exceed it, as does South Korea. Brazil and Mexico, on the other hand—the only Latin American countries included in the study—were far behind. It should be noted that these countries, along with Chile, were among the best in tests that UNESCO administered to a set of Latin American primary school students from 13 countries in 1998. The region’s performance on reading comprehension and mathematical calculation tests conducted by

⁵ Secondary education is essential in today’s workplace. It is needed to achieve a certain level of competence in basic mathematics, language and scientific knowledge, which, in turn, facilitate computer use, reasoning and communication over a worker’s lifetime.

⁶ Education at a Glance (OECD, 2000d), Literacy in the Information Age (OECD 2000c), the OECD PISA indicators (reading and math), PIRLS (Progress in Reading Literacy Study) (IEA, 2001), UNESCO/LLECE Evaluación de la calidad de la Educación, (2001), UNESCO/OREALC The State of Education in Latin America, (2001), and others.

the Programme for International Student Assessment (PISA) in 2000 to measure the skills of 15-year-old children in 41 countries was also poor (OECD/UNESCO, 2003 and OECD, 2001d).^{7 8}

Overcoming these problems is not an easy task. In many cases, such as that of Chile, public, as well as private spending has increased, but results are disappointing. Gaps between private and public (which, in some cases, means municipal) schools persist, and reading comprehension and mathematical calculation tests continue to show a widening gap in relation to more developed countries. The UNDP human development index shows that the percentage of professionals and technical workers in the region's labour force continues to be lower than in countries such as Finland, Holland, Ireland or New Zealand. Deficiencies in the educational system are a major factor limiting the increase of productivity and competitiveness in Latin American economies. Because of them, many workers will be excluded from the world of technological modernization and will be restricted to low-productivity sectors (Katz, 2004).

II. Education, equity and the intergenerational transfer of inequality⁹

The reduction of dropout and repetition rates has a positive impact on reducing poverty and inequality, since (i) repetition and school dropout are greatest in the most vulnerable segments of the population —i.e., among the poor and, above all, the rural poor; (ii) major educational achievement has appreciable intergenerational returns, given the major effect of parents' levels of schooling —especially mothers'— on children's educational performance; and (iii) there is a clear correlation between poor women's education and their families' health conditions, since female schooling is a determining factor in reducing infant mortality and morbidity, improving family health and nutrition and reducing fertility rates.

ECLAC (2000a) has indicated that if conditions do not improve, education will continue to be a vehicle for the intergenerational transmission of inequality. The average schooling of heads of household, as well as of the employed members of a household, is highly correlated with the distribution of income and education. The greater the education, the greater the income.¹⁰ The future opportunities of 48% to 64% of young Latin Americans in urban areas are limited by the homes from which they come, and the situation is even more serious in the case of rural youth. For this large population, insufficient education will translate into a lifetime of poorly paid work, placing great constraints on their welfare as individuals and on the welfare of the households they form.

Access to education continues to be unequal as a function of socio-economic background. In other words, opportunity is largely determined by the reigning patterns of inequality in the prior generation. Despite major expansion of educational coverage in the region over the last decade and a half, pronounced inequality of opportunity for young people from different socio-economic strata (reflected in their likelihood of completing secondary school) have persisted. This, in turn, leads to a high degree of rigidity in the social structure, since the low educational level of many young people blocks their path to mobility. The likelihood that income distribution will improve and benefit them in the medium term is seriously affected as well, since, for the majority of the

⁷ Chile participated in the 1999 test, and its students scored below students from other countries with comparable per capita GDPs, such as Thailand and Malaysia.

⁸ Quality in education cannot be evaluated solely on the basis of students' and schools' scores on standardized tests, because the characteristics of students in the different schools vary. In some countries, national and international tests are given, often in the fourth, eighth and tenth grades. The results, when aggregated for each school, provide a snapshot of the institution's performance, and are a measure of the effectiveness of educational policy. This is the method used in Chile's System to Measure the Quality of Education (SIMCE).

⁹ Based on the ECLAC (2000a) proposal. Equity, development and citizenship, volume II, chapter 4.

¹⁰ Eighty percent of urban young people come from households where parents have less than adequate educational capital (less than 10 years of schooling), and 60% to 80% of these young people fail to reach the basic educational threshold needed to ensure their welfare, which is currently around 12 years of schooling (ECLAC, 1997).

population, educational capital (years of schooling and quality of education) constitutes the main resource for obtaining jobs and achieving social mobility.

In addition, increased schooling has not been enough to improve equality of opportunity, which continues to be a function of students' socio-economic origins. For young people who completed 12 years or more of schooling in recent decades, these increased levels of schooling, as compared with their parents' generation, have not sufficed to improve the position of those from poor backgrounds vis-à-vis job opportunity. Young people from families where the parents have lower educational levels have incomes 30% to 40% lower than their peers from households where the parents have higher education (see table 10.6).

1. Educational continuity and community commitment

In the mid-1990s, the region's gross secondary schooling rate was 57%, and less than one third of students completed secondary school (ECLAC, 2000a, volume II, p. 61). Figures at the beginning of the twenty-first century revealed only slow improvement (see table 10.5), with the enrolment rate at a mere 60%. Three elements play a role in educational continuity: (i) actual classroom attendance; (ii) steady progression through the educational process, which involves minimizing grade repetition and (iii) remaining in school, which involves minimizing dropout. Low attendance leads to grade repetition, and repeating multiple grades leads to dropout. This can be seen in analyzing the factors responsible for the high region's secondary entry rates, in contrast with its low graduation rates at that same level. It is in the poorest and most sparsely populated areas, as well as among urban families with lower incomes, that we see particularly high levels of grade repetition and dropout, as well as low attendance.

In order for children of families with low incomes to attend school, remain in school, and progress from year to year, the school must not only provide a high-quality education, but must also meet various other needs. It must: (i) lengthen the school day in order to compensate for limitations in the family environment (parents' low educational level, insufficient infrastructure and disarray within the family, which, among other factors, are obstacles to the learning process); (ii) provide nutritional supplements, and even subsidies for the opportunity cost of not entering the job market and (iii) develop educational content that users will find relevant, motivating and useful, so that low-income families and students will have a different perspective on the opportunity cost involved in remaining in school and will feel more motivated to attend.

Improving access to school and retention rates requires community participation. Support for the community and for educational demand is of particular importance for low-income families, especially in rural areas, where educational discontinuity and dropout are related to the educational environment in the home and the seasonal nature of work in rural areas. Support measures should target specific problems and be comprehensively conceived. Most important, they must be designed to compensate for the disadvantageous educational environment within poor homes. Parents' associations, community organizers, social workers, non-governmental organizations with strong community roots, planners, executors of social support programmes—all of these must be mobilized as actors who can contribute to improving the conditions surrounding the demand for, and use of, educational offerings.

Table 10.6

LATIN AMERICA (18 COUNTRIES): MEDIAN AND AVERAGE SCHOOLING OF 20- TO 29-YEAR-OLDS WHO WORK 20 OR MORE HOURS PER WEEK AND COMPLETED 12 OR MORE YEARS OF SCHOOL, ACCORDING TO PARENTS' LEVEL OF SCHOOLING, URBAN AREAS, 1999

Country	Schooling	Total		Occupational classification						
				Professionals and technical workers		Administrative and accounting employees		Salespeople and dependents		
		Median income	Average schooling	Median income	Average schooling	Median income	Average schooling	Median income	Average schooling	
Argentina	1999	Total	4.7	13.8	6.0	15.7	4.2	13.2	4.0	12.6
		0 to 9	4.2	13.4	4.9	15.5	4.2	13.0	3.6	12.4
		10 or more	5.0	14.1	6.5	15.8	4.3	13.3	4.4	12.8
Bolivia	1999	Total	3.9	14.0	4.8	15.5	4.2	13.3	2.6	13.3
		0 to 9	2.5	13.8	2.7	15.3	2.9	13.2	2.0	13.2
		10 or more	5.3	14.2	6.4	15.6	5.8	13.5	3.4	13.4
Brazil	1999	Total	3.9	12.2	5.5	13.3	3.5	12.0	2.9	11.4
		0 to 9	3.4	11.9	4.4	12.7	3.2	11.8	2.7	11.3
		10 or more	5.4	13.1	7.2	14.2	4.2	12.4	3.7	12.1
Chile	2000	Total	4.9	13.6	7.1	15.0	3.9	12.9	3.5	12.6
		0 to 9	4.1	12.9	5.8	14.0	3.7	12.8	3.4	12.3
		10 or more	5.8	14.3	7.8	15.5	4.1	13.2	3.7	12.9
Colombia	1999	Total	3.5	13.1	5.1	14.9	3.0	12.4	2.6	12.0
		0 to 9	2.9	12.5	3.9	14.3	2.7	12.1	2.2	11.7
		10 or more	4.8	14.1	6.5	15.4	3.4	13.1	4.0	12.8
Costa Rica	1999	Total	5.9	13.4	7.0	14.7	5.1	12.5	4.8	12.3
		0 to 9	5.3	12.9	6.5	14.4	4.8	12.2	4.5	11.9
		10 or more	6.5	14.1	7.4	15.0	5.7	13.2	5.2	12.9
Ecuador	1999	Total	2.5	14.0	3.1	15.8	2.4	13.4	2.1	13.2
		0 to 9	2.1	13.5	2.6	15.2	2.1	13.1	1.7	12.9
		10 or more	3.1	14.8	3.5	16.4	2.9	13.9	3.0	13.9
El Salvador	1999	Total	3.9	13.5	4.9	15.1	4.1	12.9	2.9	12.4
		0 to 9	3.7	13.3	5.0	15.0	3.6	12.7	2.9	12.4
		10 or more	4.5	13.9	4.8	15.2	4.9	13.2	2.7	12.5
Guatemala	1998	Total	3.0	13.0	3.3	13.2	3.3	12.9	1.1	12.6
		0 a 9	2.6	12.8	2.8	12.9	3.3	12.8	0.7	12.4
		10 or more	3.9	13.6	4.7	14.1	3.3	13.0	1.1	13.4
Honduras	1999	Total	2.4	13.0	2.6	13.9	2.4	12.4	1.7	12.8
		0 to 9	2.0	12.5	2.2	13.1	2.2	12.2	1.1	12.2
		10 or more	3.5	14.6	3.7	15.9	3.2	13.3	3.6	14.4
Mexico	2000	Total	3.6	14.3	3.9	15.3	3.4	13.7	3.5	13.7
		0 to 9	3.1	13.8	3.3	14.9	2.9	13.5	3.2	12.9
		10 or more	4.2	14.8	4.4	15.7	4.2	14.0	3.8	14.5
Nicaragua	1998	Total	3.0	13.2	6.0	15.1	2.3	12.0	2.3	13.0
		0 to 9	2.5	13.0	3.5	14.6	1.5	12.0	2.3	13.0
		10 or more	6.7	14.4	11.8	16.3	2.4	12.1	2.6	13.0
Panamá	1999	Total	6.1	14.6	7.6	15.8	5.5	14.1	5.0	13.7
		0 to 9	5.1	14.1	5.5	15.2	5.4	13.8	3.9	13.4
		10 or more	7.0	15.1	8.8	16.1	5.5	14.5	6.3	14.0
Paraguay	1999	Total	3.0	13.7	3.6	15.1	2.8	13.3	2.7	12.8
		0 to 9	2.8	13.5	3.3	15.0	2.8	13.1	2.4	12.6
		10 or more	3.3	14.1	4.3	15.6	2.9	13.7	3.7	13.4
Peru	1999	Total	3.4	13.4	3.4	14.7	4.6	13.2	2.5	11.9
		0 to 9	2.9	13.2	3.0	14.5	3.3	13.2	2.0	11.9
		10 or more	4.2	13.7	3.7	14.9	6.2	13.3	2.6	11.9
Dominican Republic	1997	Total	4.7	14.3	7.2	16.0	3.7	13.8	3.8	13.5
		0 a 9	4.4	14.1	5.9	15.9	3.1	13.4	3.2	13.5
		10 or more	5.2	14.7	8.1	16.2	4.5	14.3	5.7	13.5
Uruguay	1999	Total	3.9	13.5	4.3	14.6	3.8	13.3	3.7	12.6
		0 to 9	3.5	13.0	3.8	13.9	3.5	12.8	3.3	12.5
		10 or more	4.3	13.9	4.7	15.0	4.1	13.6	4.3	12.9
Venezuela ^a	1999	Total	3.3	13.5	4.2	15.2	2.9	12.8	2.4	12.4
		0 to 9	3.0	13.1	3.5	14.7	2.8	12.5	2.3	12.1
		10 or more	3.8	14.3	5.1	15.8	3.1	13.4	2.6	13.3
Simple average	1999	Total	3.9	13.6	5.0	14.9	3.6	13.0	3.0	12.7
		0 to 9	3.3	13.2	4.0	14.5	3.2	12.8	2.6	12.5
		10 or more	4.8	14.2	6.1	15.5	4.2	13.4	3.7	13.2

Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of special tabulations from household surveys in the respective countries.

^a National total.

In order to combine targeting, a comprehensive approach, and mobilization of the range of relevant agents, there must be networks to help students stay in school and enhance the educational performance of children from low-income families. These networks can be built through community centers that support schools by providing advisory support to members of the school community, including principals, teachers, parents, etc. Such networks can help develop strategies to improve students' performance, and can facilitate timely access to information for low-income households via the media, community organizers and neighborhood information centers. This comprehensive approach makes it possible to detect and address educational problems earlier, develop a greater variety of proposals to bring the school in closer contact with the local population's needs, and provide targeted support for overcoming the most pressing needs. These measures can also increase the educational capital in the home, which directly affects students' performance.

Support for the community assumes special importance in rural areas, where those who perform best in school tend to migrate to the cities, drawn by the better opportunities awaiting them there. This, in turn, reinforces the vicious circle of rural poverty. The situation is also affected by the increased coverage of primary education, along with greater economic and cultural demands, which have displaced the goal of remaining in school to the secondary level. Action is needed to remedy the situation of the poorest sectors, which suffer most from outdated education offerings—offerings that fail to reflect developments in the labour market and new patterns of social integration. Students from these poor sectors have the highest dropout and grade repetition rates in secondary school.

The public funding required to keep students in school through the secondary cycle is not insignificant, but it is within reach. According to ECLAC estimates, the amount that would be needed to significantly increase the percentage of the population completing secondary school is within countries' means. Annual spending on secondary education would need to increase by between 0.5% and 1% of GDP in order to make a significant difference. In the countries with the lowest secondary enrolment rates, more funding is needed if the greater change required is to be produced within the same timeframe. These cases require spending on the order of 2% of GDP.¹¹

2. Pre-system, intra-system and post-system equity

Students' school careers are affected by a combination of pre-system and intra-system equity factors, and students from different socio-economic backgrounds typically perform at different levels. The term "pre-system equity" refers to the fact that the social, cultural and overall environment surrounding the educational system are strong determinants of achievement within the system. "Intra-system equity" is a reference to the need for educational offerings to be equivalent across socio-economic sectors and different physical surroundings, though not necessarily composed of the same content.

"Post-system equity" refers to employment opportunities and the capacity for social and cultural development that students from different socio-economic strata show once they leave school. In post-system equity, links between the school system and the work world play a key role.

Intra-system equity receives the greatest attention, the aim being to improve the quality of education itself. However, progress has also been made in pre-system equity, mostly in the form of supplementary food programmes, bilingual education for indigenous populations whose mother tongue is neither Spanish nor Portuguese, programmes to make the system more accessible to populations in rural areas, and community participation programmes, all of which reduce obstacles to entering the school system. In terms of post-system equity, mention should be made of some

¹¹ See ECLAC (1996) for a calculation of the cost-time ratio involved in keeping more students in school and increasing the percentage of the population completing secondary school for different countries, grouped by average schooling level. The examples include one country with a high educational level (Uruguay), one with an intermediate level (Costa Rica) and one with a lower level (Brazil).

programmes that offer primary- and secondary-level alternatives for those who leave school before completing their studies, providing options for continuing studies in a range of technical programmes.

A diverse variety of policies is required, and the particular combination needed depends on the local or national environment. In practice, resources have been focused on the most vulnerable groups, providing compensatory measures in areas where academic performance is generally poor, funding intersectoral programmes to increase poor families' access to formal education in a more systemic way, strengthening and expanding targeted programmes that have succeeded in improving the performance of more vulnerable groups over time and by mobilizing communities to improve the conditions surrounding educational demand among the poor. Of course, it is precisely in the most educationally disadvantaged sectors that the quality of education is negatively affected by a greater number of variables. Thus, the comprehensiveness, duration and intensity of equity-enhancement policy measures must be inversely proportional to the pre-existing educational capacities of the group targeted by the policy.¹²

Within the educational system, no gender inequity is evident. Female and male enrolment at the various levels are nearly equal, and the median performance of females is generally superior to that of males. In the job market, however, women's options are more limited in various ways—in terms of the duration of their work life (which is shorter) and level of pay (which is lower), and based on role incompatibility (responsibility for housework, children and the elderly, which creates serious constraints). In addition, wage structures clearly discriminate against women. With the same educational level, or in jobs requiring similar skills, women's salaries are notably lower than men's. The fact that greater access to formal education has often failed to improve either the income curve of women graduates at various levels of the educational system, or their participation in decisionmaking in the society, points to major problems of educational quality that have an impact on equity and impede the pattern of values needed to create a less discriminatory society. Post-system equity requires a cultural change that will lead women to opt for more highly paid careers. It also requires that government policy be designed to systematically narrow the male-female wage gap.

3. Adequate and timely education: towards complete secondary schooling

As the number of young people completing secondary school rises (it is currently between 35% and 65% in the various countries, as shown in table 10.1), a society's systemic competitiveness increases, and its ability to assimilate technical advances and make intensive use of information and knowledge expands. As average schooling increases, overall productivity also rises.

ECLAC stresses the importance of investing in human resources at the secondary level of the educational system, rather than resorting to compensatory training programmes at a later stage. Compensatory adult training programmes not only narrow the scope of the education received; they are also far more costly than providing four years of regular secondary education. The increased income that results from secondary schooling represents great benefits for students and their future families, as well as for society as a whole. Investment is efficient in terms of monetary resources and time to the extent that it achieves greater educational goals. An education of low quality and short duration involves both individual and social costs. For individuals, this means less access to paid work and a lower level of overall well-being, while, for the society, it represents higher costs incurred by grade repetition, job training and adult education.

The inference to be made here is that it is economically more advantageous, and produces greater positive externalities, to invest in education at the proper age. Timely education increases

¹² Though it is true that at a lower level "a little can do a lot," it is also true that "in a short time, a lot of deterioration can take place."

young people's cultural and social development, complements activities in other areas, such as health education and sex education, contributes to the educational environment within the home and to the household's capacity as a socializing force, and provides preparation for those who aspire to higher education. It also improves the future educational environment in the home, which is a highly important variable in the educational performance of the next generation.

III. Education, competitiveness and productive development¹³

To increase the systemic competitiveness of an economy, relying on technical progress rather than on low wages or excessive exploitation of natural resources, requires systemic improvement in the quality of human resources, and in acquiring new skills. It is not enough to have productive elites at the technological frontier; technical progress must be incorporated across the board, in an integrated manner. This increases an economy's general competitiveness, raising incomes in all income brackets. Well-educated and thoroughly-trained young people are needed to nourish the economically active population. Not only must the low graduation rates prevalent in nearly all of the region's countries be improved, but the quality and relevance of both secondary and tertiary education must be enhanced. Education must adapt to the characteristics of each country's productive systems and labour markets. Intensive technological innovation is also important, and this requires universities capable of training a greater number of skilled engineers and scientists.

The region's countries are clearly behind their principal industrialized competitors in terms of semi-skilled and highly skilled labour, which is indispensable for increasing productivity and achieving greater competitiveness in the global market. As may be seen in table 10.1, during the last two decades, the recently industrialized Asian economies, including Malaysia, the Republic of Korea and Thailand, have overtaken Latin America and the Caribbean in both secondary and tertiary education. At the same time, the gap between OECD countries and the Latin American and Caribbean region has increased. The problem is not only that the Latin American and Caribbean are lagging behind their competitors in terms of the level of secondary and tertiary schooling, but that the pace of progress is much slower.

1. Education and mobility in a context of diversity

The integration of the working population into a productive system where differences are becoming more acute means a greater gap in terms of human resources, technical progress and pay. While one sector of the economy is close to the frontier of technological progress and takes advantage of new forms of organizing work, another (often representing the majority of workers) features out-dated conditions that represent decades of technological and organizational lag, and has little in the way of connection with larger markets.

The structural differences associated with industrial modernization over the last few decades may be aggravated by the appearance of new productive horizons resulting from the information and knowledge revolution. There is a latent threat that the differences will be increased if the dissemination of new technologies and forms of knowledge continues to be as concentrated as it now is, and if there is but limited dissemination of the skills needed for a new environment in which information and knowledge are primary factors.

Return on education is highly variable in situations where productive systems have not generated sufficient jobs (see preceding chapter).¹⁴ Unemployment has recently been concentrated in lower-income deciles, reinforcing the vicious circle of poverty and unemployment. Low-productivity activities that offer little protection for workers absorb a growing proportion of the employed population in the informal sector, and a large number of the young people entering the

¹³ See Katz (2004).

¹⁴ See, for instance, Rifkin (1995).

labour market. The wage gap between workers with low and high levels of education (especially the gap between workers with tertiary education and those without) has widened, as has the gap between workers in large enterprises and those in small (Morley, 2000; Weller, 2000).¹⁵

People need training in using today's new media and adapting them to their productive environment, and education needs to make an intensive effort to teach lower-income students the productive skills needed for this. The educational system must therefore institutionalize the intimate connection between education and labour markets. By incorporating the business sector, it can contribute significantly to job mobility in the most disadvantaged sectors. Moreover, since most of the economically active population entering the labour market is absorbed by small and medium-sized businesses, education must also, either through the formal educational system or in training programmes, teach the skills needed to raise productivity in this sector and foster its integration in broader markets.

In addition, international systems of integrated production have displaced local production of components and parts, subcontracting this activity to international providers. They have achieved economies of scale and operate as "enclaves", but with less need for local engineering. They are thus isolated from local production and technological innovation (Cimoli and Di Maio, 2002). They enjoy commercial advantages within the company, but the lesser degree of integration in local production that comes with the advantages limits local technological development. The maquila is an extreme case. It makes export growth possible, but not by increasing value added or fostering national technological development. Rather, its advantage lies in low wages, which attract corporations. Efforts to reverse this situation face World Trade Organization (WTO) constraints, which do not take account of the demands that firms locating in a foreign country should incorporate value added in their output. There are exceptions to this problematic trend: Costa Rica's experience with Intel, Chile's negotiations with the software industry in Palo Alto, Argentina's with Motorola and IBM, and Brazil's experience with automotive manufacturers such as Volkswagen, Fiat and General Motors. These cases should be studied in developing future strategy. They include local operations as "centres of excellence" and as platforms for particular technologies and products produced for the world market (Quadros and Quieroz, 2001).

2. Higher education and scientific and technological development

At the tertiary level, education plays a crucial role in enhancing competitiveness, since it creates, incorporates and disseminates progress in knowledge that then makes it possible to increase productivity in various productive areas. Government has an essential role to play by promoting greater articulation between academic activity, programmes and activities that foster innovation, and the participation of private enterprise. Government must co-finance research and development.

Institutional reforms that promote articulation between the public sphere and the private sector in higher education face a gamut of problems that must be corrected. Though the State cannot renounce its fundamental responsibility to help finance public universities, it needs to update its systems in order to produce and obtain knowledge, and evaluate the quality of teaching and research. It must also promote more links with the international university system, and develop funding schemes that involve flexible and adaptable mechanisms to which other actors, such as businesses and foundations, as well as students and their families, contribute. Private universities channel a considerable volume of private resources into higher education, diversify education by offering a variety of approaches, and compete for students. All of this raises the quality of education available. The State must take responsibility for certifying the quality of private higher education,

¹⁵ According to Weller, the labour market is increasingly segmented, with well-paid, stable jobs being performed by highly educated workers, and poorly-paid, unstable jobs with less benefits by less-educated workers.

ensure transparency of information for students and teachers, and provide the infrastructure needed for ensuring access to knowledge.

Many areas of the economy and society require specific solutions, calling for local research and development. This is the case for many components of social protection, as well as of the environment and education. This is particularly true in connection with natural resource exploitation—fishing, forestry and mining. Given advances in molecular biology, genetics and immunology, the region's countries are in a position to improve their technology and achieve efficient sustainable development. Along with greater investment in research and development, there is a need for new institutions that will strengthen educational systems, respect intellectual property and enhance links between business, Government and universities. Small and medium-size businesses are a special case of absorption of technology and training of local businesspeople. It is essential to take advantage of the spread of technology and incentives such as patents, government subsidies, open bidding for public funds, etc., all of which support activities that foster the development of knowledge.

Achieving greater systemic competitiveness requires creativity. The region needs to make the world of science and technology accessible, give people greater familiarity with it, and innovate. Close links must be forged between research and production, foreign technology must be acquired and adapted for efficient use in the local setting, and the technology must be disseminated and put into practice. This will narrow the gap between local and international practices, diminish discrepancies of economic efficiency between businesses in different sectors and of different sizes, generate new scientific and technological knowledge, and form human resources capable of carrying out the activities connected with these processes.

IV. Education, communication, the information culture and productive development¹⁶

For a decade, ECLAC and UNESCO have been warning that “since knowledge will be the central element of the new paradigm of production, educational change will become a fundamental factor for developing the qualities of innovation and creativity, together with integration and solidarity, which are key aspects both for the exercise of modern citizenship and for attaining a high level of competitiveness” (ECLAC/UNESCO, 1992, p. 113).¹⁷ As is generally recognized today, competitiveness depends on the ability to generate and process information, and to adapt to changes in productive processes. Competitiveness requires the creative integration of new techniques with new forms of production. It requires using communicative rationality in negotiating and decision-making processes, and calls for new approaches to producing and disseminating knowledge by combining education with elements of industrial culture.¹⁸ Also necessary are a willingness to change, adaptability to new challenges, a capacity for multiple ways of thinking, a readiness to think critically when selecting and processing messages, a capacity for interactivity and management, skill in translating information into learning, an ability to create different messages for different interlocutors, and a capacity for teamwork. All of this points to leadership, interaction

¹⁶ Based on Hopenhayn (2003).

¹⁷ In a similar vein, this work affirms that “The transmission of values, the ethical dimension and the forms of behaviour typical of modern citizenship, together with the generation of capacities and skills which are essential for international competitiveness (which is increasingly based on technical progress), receive a decisive boost from education and the production of knowledge in a society. Reform of the system of production and dissemination of knowledge is consequently a crucial instrument for tackling both the internal challenge, which is that of building citizenship and the external challenge, which is that of competitiveness. It will therefore be understood why this dimension has a central place in the ECLAC proposal on changing production patterns with equity” (p. 17).

¹⁸ ECLAC and the UNESCO Regional Office in Latin America and the Caribbean have defined the codes of modern society as “the knowledge and skills required in order to participate in public life and play a productive role in modern society.” The skills “are usually defined as those required to do basic arithmetic; to read and understand a written text; to engage in written communication; to observe, describe and analyse one’s environment; to receive and interpret the messages of modern communications media; and to engage in teamwork” (ECLAC/UNESCO, 1992, p. 149).

and critical thinking as basics. Teaching these modern skills and codes requires a redefinition of learning, which involves a change of culture. Emphasis must shift from memorization to comprehension, from incorporating information to differentiating messages, from encyclopedic to selective acquisition of knowledge, and from “learning” to “learning to learn”.

Reforms of teaching methods and curricula must take advantage of the multimedia culture industry to develop the intellectual capacity of school-age individuals and provide them access to information, with emphasis on the ability to learn, rather than the acquisition of specific knowledge.¹⁹ The tensions and complementarities that exist between the culture industry and the school make it increasingly vital to think and teach in terms of multiple literacies and different “readings of the world”. Students should have the opportunity to express themselves with the tools of the multimedia environment, and should see literacy as an ongoing process involving the different “alphabets” that are used in a world of diverse media, multiple cultures and rapid change.

The use of audiovisual resources in the classroom must continue to proliferate. Not only can their use increase students’ attention, motivation and absorption, but critical reflection on these media and what they offer can lead to more selective and thoughtful consumption of culture.

1. Differences in access, and ways of remedying them

Interactive communication, on which both the productivity of labour and symbolic integration depend, is an increasingly important element in understanding cultural trends, due to the increasingly important role that information and communication technologies play in making culture visible. In late 2002, the density of communications in the region varied widely. While most households had television, 16% had landline telephones, and 20% had cellular phones, only 8% enjoyed Internet access and a mere 0.3% had broadband access (Hilbert, 2003).

In terms of connectivity, there are major contrasts between countries. Moreover, urban and metropolitan areas are far ahead of rural areas, and there is major segmentation by social strata.^{20 21 22 23} The same is true for access to communicational goods and cyberspace.^{24 25} As a counterpoint to these discouraging statistics, the region’s “Internet community” has expanded more rapidly than in other regions, in relative terms. In 1999, the number of computers storing information from websites grew by 30% in Europe, 61% in Asia and 74% in North America, while the increase in Latin America was 136% (Hilbert, 2001a). This expansion is paralleled by an expansion of electronic commerce, which began around 1998 and by 2002 had reached US\$ 20 billion, or 1% of Latin America’s GDP (ECLAC, 2003f).

¹⁹ Access to this industry is socially stratified in Latin America and the Caribbean, but the pace of technological renewal is such that costs fall rapidly, permitting mass access to these educational and informational resources.

²⁰ Connectivity is understood to mean access to interactive electronic networks.

²¹ While the United States had 63 personal computers, 54 Internet users and 37 hosts per 100 inhabitants, among Latin American countries Uruguay led in number of hosts (2.1 per 100 inhabitants), Chile in number of users (20) and Costa Rica in number of personal computers (17) (ITU, 2003). Hosts: computers that store website information.

²² In Argentina, around 1999, 87% of websites and their physical domiciles were in the Federal Capital and Greater Buenos Aires. In Chile, the concentration of Internet users in Santiago is proportionately greater than the concentration of population or GDP, and the percentage of e-mail in the capital is double the percentage of the national population living in the capital.

²³ According to the estimates of Emarketers, at the beginning of 2000, 18.1% of the wealthiest 15% of the Latin American population was connected, but this was only 2.7% of the total Latin American population. It is anticipated that in 2004 68.9% of the wealthiest 15% of the Latin American population of 14 years of age and above will be connected (Hilbert, 2003), but only 10% of the total population of this age bracket. According to the same source, it is expected that in Brazil around the year 2004, 81.8% of the wealthiest 15% of the population will be connected, representing 12.3% of the total population.

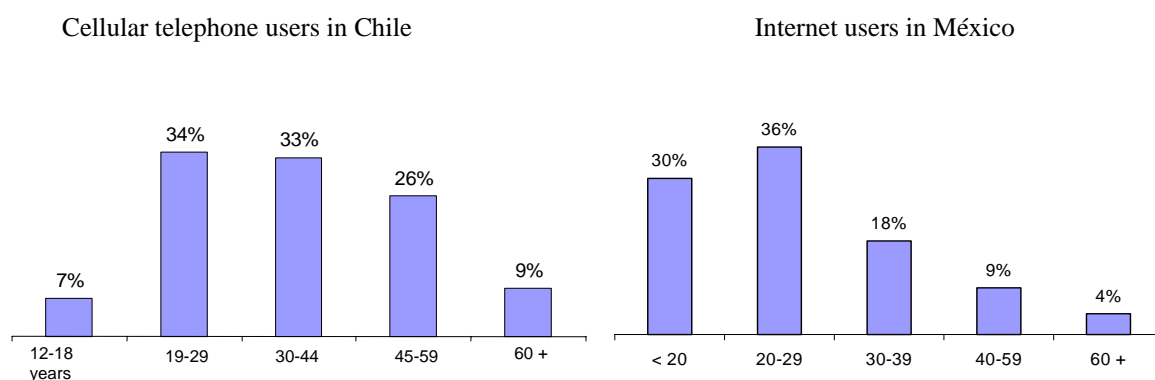
²⁴ The 20% of the world population living in the poorest countries has only 1.5% of the world’s telephone lines, while the 20% of the population in the wealthiest countries has 74%. Only 2.4% of the world’s population has access to the Internet—essentially in industrialized nations (UNDP, 1999)—and 80% of communication over the Internet was in English (Brunner, 1999). In 1999, the region represented 8% of the world’s population, but it represented only 4% of the virtual world, and though its contribution to world GDP was 7%, its contribution to e-commerce was only 1% (Hilbert, 2001a).

²⁵ In 2000, Brazil absorbed 69% of Latin America’s e-commerce (Hilbert, 2001b). In general, the expected increase in e-commerce is exponential: from almost 0 in 1999 to nearly US\$100 billion in 2004 (Hilbert, 2001b).

Internet access is surprisingly segmented by age. The generation gap in Internet access produces not only differences in productivity, but asymmetries in access to information and knowledge, among other asymmetries.²⁶ Data on the use of cellular telephones and the Internet in Chile and Mexico are also eloquent evidence of the greater impact that these technologies have on the young population (see figure 10.1).

The data on access to audiovisual goods and information technology (IT) also reflect ethnic discrimination. Homes with computers are five times as frequent in the non-indigenous population than in the indigenous population. The gap for televisions is only twofold (see figure 10.2).

Figure 10.1
**PENETRATION OF INFORMATION AND COMMUNICATION TECHNOLOGIES,
 BY AGE BRACKETS, 2002**
(In percentages of each group)



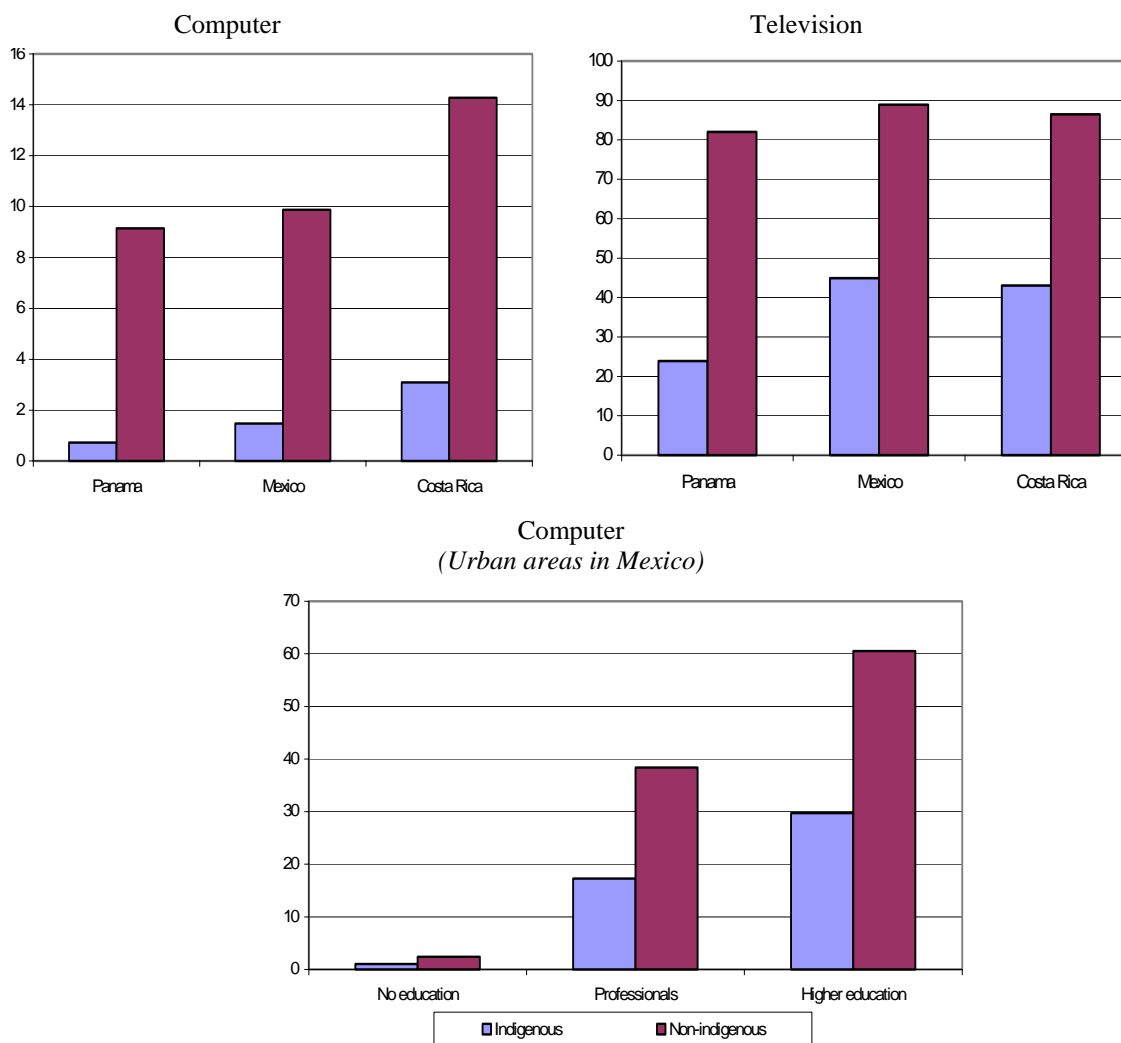
Source: Subsecretaría de Telecomunicaciones de Chile (SUBTEL), *Informe estadístico 4. Caracterización socioeconómica de los servicios de telefonía y tecnologías de la información y comunicación*, Santiago, Chile, 2002, and Taylor Nelson Sofres (TNS), *Latin America Online: Demographics, Usage & eCommerce*, eMarketer Inc., October 2002.

To date, the democratization of connectivity has been approached in three ways. The first consists of highly targeted programmes by non-governmental organizations (NGOs), as well as some central-government or municipal programs, providing connectivity for circumscribed groups, such as indigenous movements and community organizations, though even this is on an experimental basis. The second approach is to create venues for public access, with an arrangement whereby users pay less per unit of time the more time they spend surfing the Web. The third approach, which probably has the greatest potential for democratizing access, consists of government programmes that provide networked computers in public schools as a part of educational reforms designed to incorporate electronic networks in the learning process within the formal educational establishment.²⁷

²⁶ In Brazil, according to 1999 data, 15.8% of 14- to 19-year-olds had used the Internet, as compared with 11.3% of 20- to 35-year-olds, 5.6% of 36- to 45-year-olds and 3% of those over 46. The corresponding figures for personal computer use were 27%, 19%, 13.7% and 6.3%, according to figures from the Brazilian Health Ministry, cited by Hilbert (2001b).

²⁷ In countries such as Peru, Internet use is growing not through computers in the home, but through public cafes and kiosks, while growth in Brazil, Chile, Costa Rica and Mexico is based on school facilities. Chile is the most connected country in Latin America today, primarily because of its programme to install interconnected terminals throughout the educational system. It is in the schools that access can truly be democratized. In addition, the shared use of terminals in the schools leads to positive synergies in learning IT languages, gaining skill and confidence in cyberspace, and using electronic networks to process information and build knowledge related to the school curriculum.

Figure 10.2
**PERCENTAGE OF THE POPULATION WITH COMPUTER/TELEVISION
 IN THE HOME, BY ETHNIC ORIGIN, 2000**



Source: On the basis of microdata sets from Panama, Mexico and Costa Rica, 2000 census round.

Brazil has a National Programme for Computers in Education, known as ProInfo, and has used the communications media to implement the National Distance Education Programme, also known as *TV Escola* or School TV, which has a television channel dedicated exclusively to education. The Brazilian programme also addresses teaching methods and technologies for public school teachers, and provides support materials for classroom work. Costa Rica's Educational Computer Programme was begun throughout the country by the Ministry of Public Education and the Omar Dengo Foundation in 1988. It is designed to improve the quality of education by making computer use a part of public primary schooling. In Chile, the *Red Enlaces* or Links Network project, which was developed by the Ministry of Education, has created a communications network in the schools. Computers are available to students, teachers, and professionals in other institutions related to education. The project began on an experimental basis in 1992, and as of 2001, 62% of the country's primary schools and 89% of secondary schools were connected to the Internet. In other countries, including Argentina, Cuba, Mexico and Uruguay, work is underway to install and extend Internet access for schools.

Teachers must be freed from some of their teaching hours so that they can take computer training within the school, since they do not necessarily have access to computers at home. Continuous updating and maintenance of computer equipment subsequent to its installation in schools requires an ongoing investment. This is beyond the scope of the programmes, which are designed merely to provide initial equipment.

2. Differences of meaning between information and communication technologies, culture, and education

Many features of the information technology paradigm, such as interconnection, porosity and flexibility, also become features of the general culture. It is not easy for Government to control what happens in education in this context of new sources of information, culture, knowledge and entertainment, where the educational and IT functions of the “light” culture industry mix with those of the “heavy” culture industry. In education, information and communication technologies constitute a powerful tool for widening and democratizing opportunities for learning, evening the playing field for different income groups. They enrich teaching and learning methods, make all types of up-to-date knowledge and information available to students and teachers, revolutionize teacher training, facilitate distance education, make educational management more efficient and encourage a more participatory learning process.

However, computer technology requires that new skills be compatible with a legacy of critical training. It is important for past pedagogical experience not to be swept away in the process. As powerful new learning tools are put into practice, the deeper meaning of learning must be borne in mind. Critical thinking must not give way to instrumental thinking. Selectivity must be exercised in order to exploit the power of technology for the transmission of messages, while taking care not to reduce thinking to the mere logic of transmission. Caution is called for to keep media content from becoming a mere sequence of stimuli, or an overdose. A personally assertive attitude is important, if one is to avoid losing oneself in the seductive multiplicity of textures crossing the screen.

The challenge for education is to use potential new learning inputs to democratize access to productivity, citizenship, communication and diversity in everyday life. However, the culture’s historical legacies must also be invoked, so that the centrality of the user remains clear as these new devices burgeon. Schools must move away from their defensive position vis-à-vis the mass media, using the power of the media to spread, gather and combine knowledge. They must help organize the mosaic of stimuli for students to prevent the trivialization of knowledge, and must nourish selective thinking amidst an “ecstasy of communication”.

The classroom might well be opened to debate on the presence and content of the media, accepting that the school is one of many institutions competing for hegemony in the field of knowledge. Schools must foster students’ ability to express themselves in a multimedia environment, and to understand literacy as an ongoing process involving the different “alphabets” of a rapidly changing post-modern world of multiple media and cultures.²⁸

V. Policy recommendations

The state of Latin America’s educational system suggests that we need to think collectively about how to address the demands of young people from low-income backgrounds, about how to reshape education so that it is responsive to the demands of productive development, and about how to provide access to computers in a way that will create the foundations needed for scientific and technological research and development. Traditional education must be transformed to meet the

²⁸ See Orozco, 1996.

changing needs of the productive sectors. Curricula must be fine-tuned in the light of surveys that monitor the experience of students after graduation and register the views of employers on a periodic basis.²⁹ Curricula must respond flexibly to the needs of the labour market, encouraging “deprofessionalization” (Castro and Levy, 2000). Traditional educational methods must adjust to the new media through which knowledge and culture are communicated today.

The education policy agenda must stress the principle of equity, since inequality in the region is a factor that hinders change and the progress of countries. In order to hold their own in a globalized world, improve their chances of achieving sustained growth and equip individuals to maximize their full potential, countries must: (i) prioritize the completion of higher secondary education and provide universal opportunities for secondary education which include technical training, based on the labour market and school, giving priority to the poorest students; (ii) improve access to tertiary education, by offering scholarships and introducing school loans and working programmes for students, subject to budgetary resources; (iii) ensure that higher education in general is an alternative for traditional vocational options; and (iv) improve financing and the efficiency of education systems and explore partnerships with the private sector in order to achieve a rapprochement between education and the corporate world. The main emphasis, nevertheless, should be on establishing a stable body of competent, highly motivated principals and teachers, who should be recruited and maintained in the poorest areas of the cities as well as in the more remote regions of the countries.

The basic model for professional training, under which a great deal of government policy in general, and educational policy in particular, has been designed, is being questioned. Enrolment is producing more professionally trained people than the market needs, and graduates are doing work that does not take advantage of their training. In the resulting process of educational “inflation” or “devaluation”, professional degrees too often serve simply as credentials to obtain better jobs than are available to those without higher degrees, though these same jobs were previously performed by secondary school graduates. Meanwhile, some secondary school students drop out of school to join the labour market. If they have technical education, they typically go into jobs to which they would not have access without some secondary schooling, but where the specific skills needed are acquired on the job.

Education, insofar as it is a vehicle for the transmission of symbolic assets (useful skills and knowledge), can contribute to improving the distribution of material assets (income, goods and services), and hence to equity. Therefore, it is important for educational reform to take equity into account in designing educational offerings, and in evaluating school performance and job opportunity for those leaving school. Particular attention must be given to advancing the situation of the poor. The socio-economic segmentation of educational quality must be reduced, and the factors affecting access to the educational system for the most disadvantaged students must be dealt with, so that the educational system can help these students build capital. The system must provide opportunities for all students to develop their potential and use it productively after graduation in a way that contributes to self-realization. This means improving student retention, addressing factors of inequity within and outside the educational system, and improving the quality of education itself.

Educational policy and action must be part of a comprehensive package of reforms that take labour demand into account and generate what is needed to create highly productive jobs. Thus, as public education confronts the complex challenge of increasing coverage throughout the primary and secondary schooling cycles, it must include in its calculations the labour market’s increasing demand for job skills, as well as the individual’s and the society’s greater expectations from technical and vocational training at the upper secondary and tertiary levels (Carlson, 2002; Bravo and others, 2001). The presence of a stable, motivated and qualified teaching force is of paramount importance, and makes a great, and measurable, difference in student performance. High turnover, low qualifications and poor motivation among teachers immediately produce low performance in students.

²⁹ In Denmark, for instance, industry representatives, including even heads of large companies, are members of boards within university departments, as well as at technological training establishments, and provide advice on educational and research priorities.

University systems must be an active part of national systems for innovation, and must increase their scientific and technological research and development activity significantly. The region's countries are losing ground to the industrialized world on an almost daily basis in this area, and a collective effort is needed to overcome the problem. The effort requires more independent, decentralized public institutions for research and development, capable of raising funds and administering them autonomously. With this goal in mind, performance-based pay systems have been developed, as well as internal markets for the allocation of resources and demand subsidies. There are also provisions for technological and engineering services to be sold to the private sector to obtain extra-budgetary funds. If the systems are to play a more dynamic role in supporting increased productivity and international competitiveness, a number of factors are essential: increasing association between research and development entities and private enterprise, new negotiations with international corporations, and the development of demand incentives to improve the competitiveness of research and development institutions and make them more responsive to local demand.

The installation of computer equipment in schools and school libraries, along with training in its use, ensures that students will be familiar with computer language and the uses of IT— an indispensable prerequisite for access to higher education, productive employment, new forms of symbolic exchange and distance communication. The spread of this technology in the schools, where it is available to children who do not have access to computers at home, is a force for equity, and thus an important element of reform. It will be one determining factor in who is able to become part of the online dialogue process, join the productive job market and obtain timely access to information and knowledge. Equal future opportunity, then, in the educational reform context, must be conceived in terms of mass—not elite— access to, and use of, computers and the Internet. The challenge is urgent, because the gap between people with computer knowledge and those without is already pronounced, and is growing rapidly.

Introducing information and communication technologies in the school system is a slow process, the pace of which is associated more with the gradual rhythm of cultural change than with the short-term shifts of elected Governments. Innovation must be incremental and empathetic. Hence, the dissemination of these technologies must be guided by teachers' needs, and teachers must be supported with equipment, software, and user-friendly manuals. It is a mistake to attempt to make resources and capacities uniform throughout the system. On the contrary, they must be adapted to the different needs of teachers and students in widely varying learning environments. It is important to coordinate this aspect of educational reform with others, in order to create synergy between school IT programmes and other aspects of the learning environment, such as classroom library programmes, changing curricula, development of transverse curricula, etc. (Jara Schnettler and Pávez, 2001).

An exhaustive study (Cuban, 2001) carried out in the United States in the 1990s suggested taking a cautious approach, rather than succumbing unthinkingly to the enthusiasm of businesspeople and experts who increasingly believe in more and better computer technology in the schools as a means of synchronizing learning with job needs in today's modern market economies. The study offers four conclusions that suggest reason for doubt. The first is a lack of real consensus regarding what computer literacy means—whether it consists simply of being able to use a computer with basic programmes, or whether it means also being able to download programmes and update them, among other things. The second cautionary note is that, in the 1990s, the United States did not show any major changes in the quality of teaching and learning (as measured by academic achievement among urban, suburban and rural students) that could be attributed to greater computer access. Third, teachers continue to be limited and sporadic users of the new technologies insofar as teaching methods and classroom activity are concerned, even though computers are widely used for administrative purposes. Lastly, the impact of school equipment on young people's access to well-paid work is not clear, because those former students who are best positioned in the labour market attribute their skill to the use of computers outside school.

Table 10.7
**LATIN AMERICA (16 COUNTRIES): AVERAGE YEARS OF SCHOOLING FOR THE ECONOMICALLY ACTIVE POPULATION (EAP),
 BY SEX, AGE BRACKET AND EMPLOYMENT STATUS, 2002**

(In percentages)

Country	Year	Area	Sex	Total			15 to 29 years of age			30 to 49 years of age			50 and older		
				EAP	Employed	Unemployed	EAP	Employed	Unemployed	EAP	Employed	Unemployed	EAP	Employed	Unemployed
Argentina	2002	Urban	Both	10.6	10.7	10.0	11.0	11.1	10.8	10.8	11.0	10.1	9.4	9.6	7.9
			Male	10.1	10.3	9.3	10.4	10.5	10.1	10.3	10.5	9.4	9.4	9.7	7.7
			Female	11.2	11.2	11	11.8	11.8	11.7	11.5	11.6	10.8	9.4	9.5	8.7
Bolivia	2002	National	Both	7.3	7.2	9.5	8.5	8.4	9.8	7.7	7.6	9.6	4.4	4.3	5.5
			Male	7.9	7.8	10.0	8.7	8.6	10.5	8.5	8.4	10.4	5.4	5.4	5.5
			Female	6.5	6.4	9.2	8.3	8.1	9.4	6.7	6.6	9.1	2.9	2.9	5.3
		Urban	Both	9.2	9.2	10.1	10.1	10.0	10.5	9.5	9.4	10.2	6.7	6.7	5.9
			Male	9.8	9.8	10.2	10.3	10.2	10.7	10.2	10.2	10.7	8.0	8.0	5.9
			Female	8.5	8.4	10.0	9.8	9.8	10.3	8.7	8.6	9.9	5.0	5.0	5.9
		Rural	Both	4.5	4.4	4.9	6.2	6.3	5.8	4.2	4.2	3.0	2.2	2.2	2.2
			Male	5.3	5.3	6.8	6.7	6.7	8.6	5.3	5.3	4.2	3.1	3.1	1.4
			Female	3.3	3.3	4.2	5.5	5.5	4.9	3.0	3.0	2.7	1.0	1.0	3.0
Brazil	2001	National	Both	6.9	6.8	7.3	7.7	7.7	7.9	7.1	7.1	6.5	4.6	4.5	4.9
			Male	6.5	6.4	6.8	7.1	7.1	7.5	6.7	6.7	6.0	4.5	4.5	4.7
			Female	7.5	7.4	7.7	8.5	8.6	8.3	7.5	7.6	6.9	4.7	4.6	5.2
		Urban	Both	7.6	7.6	7.4	8.3	8.3	8.0	7.7	7.8	6.6	5.5	5.5	5.0
			Male	7.2	7.2	6.9	7.7	7.7	7.6	7.3	7.4	6.1	5.4	5.4	4.8
			Female	8.1	8.2	7.8	9.0	9.1	8.4	8.1	8.3	6.9	5.6	5.6	5.2
		Rural	Both	3.5	3.4	5.6	4.7	4.6	6.2	3.4	3.4	4.5	1.8	1.8	3.2
			Male	3.3	3.2	4.9	4.4	4.3	5.6	3.2	3.1	3.5	1.7	1.7	2.8
			Female	3.8	3.8	6.2	5.4	5.3	6.7	3.8	3.7	5.3	1.9	1.9	3.8
Colombia	2002	National	Both	8.3	8.2	9.1	9.2	8.9	9.8	8.6	8.6	8.8	6.0	6.0	6.1
			Male	7.8	7.7	8.8	8.5	8.2	9.5	8.2	8.2	8.7	5.9	5.8	6.2
			Female	9.0	9.0	9.3	10.0	10.0	10.0	9.2	9.2	8.8	6.2	6.2	5.8
		Urban	Both	9.5	9.4	9.7	10.2	10.1	10.3	9.8	9.8	9.5	7.2	7.3	6.7
			Male	9.2	9.2	9.5	9.8	9.7	10.1	9.6	9.6	9.5	7.3	7.3	6.9
			Female	9.8	9.8	9.9	10.6	10.6	10.5	10.0	10.1	9.5	7.1	7.1	6.4
		Rural	Both	5.5	5.3	6.8	6.7	6.5	7.8	5.4	5.4	5.8	3.6	3.6	3.9
			Male	5.1	4.9	6.4	6.1	5.9	7.5	5.0	5.0	5.5	3.5	3.5	4.0
			Female	6.4	6.2	7.1	8.1	8.0	8.1	6.1	6.1	6.1	3.8	3.8	3.7

Table 10.7 (continued)

Country	Year	Area	Sex	Total			15 to 29 years old			30 to 49 years old			50 and older		
				EAP	Employed	Unemployed	EAP	Employed	Unemployed	EAP	Employed	Unemployed	EAP	Employed	Unemployed
Costa Rica	2002	National	Both	8.4	8.5	7.6	8.4	8.5	7.6	9.0	9.0	7.8	7.0	7.0	6.0
			Male	8.0	8.0	6.9	7.9	8.0	7.0	8.5	8.5	7.2	6.7	6.7	5.5
			Female	9.3	9.4	8.3	9.3	9.4	8.4	9.7	9.8	8.3	7.7	7.7	7.1
		Urban	Both	9.5	9.6	8.2	9.4	9.5	8.1	10.0	10.1	8.7	8.3	8.4	6.6
			Male	9.2	9.3	7.5	8.9	9.1	7.4	9.7	9.7	8.3	8.3	8.4	6.0
			Female	10.0	10.1	9.0	10.0	10.1	9.1	10.5	10.5	9.0	8.3	8.4	7.7
		Rural	Both	6.7	6.7	6.4	7.0	7.0	6.6	7.1	7.2	6.1	4.5	4.6	4.4
			Male	6.3	6.3	6.0	6.6	6.7	6.3	6.8	6.8	5.7	4.4	4.4	4.4
			Female	7.7	7.8	6.9	7.9	8.0	7.0	8.0	8.1	6.8	5.2	5.2	4.6
Ecuador	2002	Urban	Both	9.9	9.9	9.7	9.9	9.9	10.1	10.6	10.6	10.0	8.0	8.0	6.7
			Male	9.8	9.8	9.5	9.7	9.6	10.0	10.6	10.6	10.2	8.2	8.2	6.5
			Female	10.0	10.0	9.8	10.2	10.3	10.1	10.6	10.7	9.9	7.6	7.6	7.0
El Salvador	2001	National	Both	6.9	6.8	6.9	7.9	8.3	7.9	7.4	6.3	7.4	4.0	3.0	4.1
			Male	6.7	6.4	6.7	7.4	7.7	7.4	7.3	6.1	7.4	4.2	3.1	4.3
			Female	7.2	7.6	7.2	8.7	9.6	8.7	7.4	6.6	7.5	3.8	2.5	3.8
		Urban	Both	8.4	8.1	8.5	9.5	9.5	9.5	8.9	7.4	9.0	5.6	4.2	5.7
			Male	8.6	7.8	8.7	9.2	8.9	9.3	9.2	7.2	9.3	6.3	4.7	6.4
			Female	8.3	8.9	8.2	9.9	10.8	9.8	8.6	7.9	8.6	4.6	3.1	4.7
		Rural	Both	4.2	4.5	4.2	5.7	6.0	5.6	3.9	4.1	3.9	1.6	1.5	1.6
			Male	4.1	4.4	4.1	5.5	5.8	5.4	4.0	4.1	4.0	1.7	1.5	1.7
			Female	4.4	4.9	4.3	6.2	6.6	6.1	3.8	4.0	3.8	1.4	1.4	1.4
Guatemala	2002	National	Both	5.1	5.0	8.0	6.1	5.9	8.8	4.9	4.8	7.5	2.5	2.5	3.9
			Male	5.1	5.1	7.6	6.0	5.9	8.5	5.1	5.1	7.2	2.7	2.7	4.3
			Female	5.0	4.8	8.5	6.2	6.0	9.1	4.5	4.5	7.9	2.1	2.0	3.1
		Urban	Both	7.6	7.5	9.6	8.4	8.2	9.7	7.6	7.6	9.2	5.1	5.0	9.3
			Male	8.0	7.9	9.5	8.5	8.4	10.1	8.2	8.2	7.9	5.7	5.6	9.6
			Female	7.2	7.0	9.7	8.2	8.1	9.4	6.9	6.8	11.3	4.0	4.0	8.3
		Rural	Both	3.3	3.2	3.6	4.4	4.4	5.0	2.8	2.8	3.6	0.9	0.9	0.0
			Male	3.5	3.4	3.7	4.5	4.5	4.3	3.1	3.1	5.7	1.1	1.1	0.0
			Female	2.8	2.8	3.3	4.2	4.2	6.4	2.1	2.1	0.0	0.6	0.6	0.0

Table 10.7 (continued)

Country	Year	Area	Sex	Total			15 to 29 years old			30 to 49 years old			50 and older		
				EAP	Employed	Unemployed	EAP	Employed	Unemployed	EAP	Employed	Unemployed	EAP	Employed	Unemployed
Honduras	2002	National	Both	5.5	5.4	7.3	6.0	5.9	7.5	6.0	5.9	7.4	3.3	3.3	5.0
			Male	5.0	4.9	6.6	5.4	5.3	6.9	5.5	5.4	6.7	3.2	3.1	4.9
			Female	6.5	6.5	8.3	7.2	7.2	8.3	6.9	6.8	8.7	3.7	3.6	5.8
		Urban	Both	7.4	7.4	7.9	7.6	7.6	8.2	8.0	8.0	7.9	5.2	5.2	5.9
			Male	7.1	7.1	7.2	7.2	7.2	7.5	7.8	7.8	7.1	5.4	5.4	5.6
			Female	7.8	7.7	9.0	8.2	8.1	9.0	8.3	8.3	9.4	4.9	4.8	7.4
		Rural	Both	3.6	3.5	5.2	4.3	4.3	5.6	3.6	3.6	4.9	1.7	1.7	2.0
			Male	3.4	3.4	4.9	4.1	4.0	5.3	3.4	3.4	4.8	1.7	1.7	2.3
			Female	4.2	4.1	5.7	5.3	5.3	6.0	4.1	4.1	5.1	1.7	1.7	0.0
Mexico	2002	National	Both	8.2	8.1	9.7	9.4	9.3	10.1	8.5	8.5	9.6	5.1	5.1	6.9
			Male	8.1	8.1	9.3	9.2	9.2	9.8	8.6	8.6	9.6	5.3	5.3	6.1
			Female	8.2	8.2	10.7	9.7	9.6	11.0	8.5	8.5	9.6	4.7	4.7	10.1
		Urban	Both	9.3	9.3	10.1	10.1	10.0	10.5	9.5	9.5	10.0	7.0	6.9	7.9
			Male	9.3	9.3	9.8	9.9	9.9	10.2	9.6	9.6	10.0	7.2	7.2	7.2
			Female	9.3	9.3	10.8	10.3	10.3	11.1	9.4	9.4	9.8	6.4	6.3	10.3
		Rural	Both	6.1	6.1	8.6	8.1	8.1	9.2	6.4	6.4	8.0	3.0	3.0	3.4
			Male	6.2	6.1	8.3	8.1	8.0	8.9	6.5	6.5	8.2	3.1	3.1	2.7
			Female	6.0	6.0	10.1	8.2	8.1	10.5	6.2	6.2	6.6	2.8	2.8	8.7
Nicaragua	2001	National	Both	5.7	5.6	6.8	6.3	6.1	7.4	6.1	6.0	6.7	3.2	3.2	3.3
			Male	5.2	5.1	6.7	5.6	5.3	7.0	5.8	5.7	7.0	3.1	3.1	3.8
			Female	6.6	6.5	6.9	7.8	7.8	7.8	6.5	6.5	6.3	3.5	3.5	2.6
		Urban	Both	7.1	7.0	7.8	7.8	7.7	8.3	7.4	7.3	7.8	4.6	4.6	4.6
			Male	6.8	6.7	7.6	7.1	7.0	7.7	7.3	7.2	7.8	4.8	4.8	5.5
			Female	7.5	7.4	8.2	8.8	8.7	9.2	7.5	7.5	7.8	4.2	4.3	3.2
		Rural	Both	3.4	3.4	4.3	4.2	4.1	5.2	3.4	3.4	3.2	1.3	1.3	1.6
			Male	3.2	3.1	4.3	3.8	3.7	4.9	3.4	3.4	4.6	1.3	1.2	1.6
			Female	4.1	4.0	4.3	5.4	5.4	5.5	3.5	3.6	1.4	1.6	1.6	1.6

Table 10.7 (continued)

Country	Year	Area	Sex	Total			15 to 29 years old			30 to 49 years old			50 and older		
				EAP	Employed	Unemployed	EAP	Employed	Unemployed	EAP	Employed	Unemployed	EAP	Employed	Unemployed
Panama	2002	National	Both	9.2	9.3	8.6	9.7	9.6	10.2	10.0	10.1	9.6	6.5	7.0	4.2
			Male	8.5	8.6	8.1	9.0	8.8	9.6	9.3	9.4	8.5	6.3	6.6	4.6
			Female	10.4	10.7	9.2	11.0	11.1	10.9	11.2	11.3	10.6	6.8	8.2	3.7
		Urban	Both	10.7	11.0	9.4	10.9	11.1	10.6	11.3	11.5	10.1	8.6	9.6	5.3
			Male	10.3	10.5	8.9	10.3	10.4	10.0	10.8	11.0	9.0	8.9	9.5	5.9
			Female	11.3	11.8	9.9	11.8	12.1	11.3	12.0	12.1	10.9	8.2	9.7	4.6
		Rural	Both	6.3	6.3	6.2	7.4	7.1	8.7	7.1	7.1	7.6	3.6	3.8	2.5
			Male	5.9	6.0	5.7	7.0	6.8	8.1	6.6	6.6	6.5	3.6	3.7	2.8
			Female	7.3	7.5	6.7	8.5	8.1	9.5	8.3	8.3	8.9	3.5	4.4	2.0
Paraguay	2000	National	Both	7.4	7.3	8.3	8.2	8.1	9.0	7.6	7.6	7.7	5.2	5.2	5.3
			Male	7.2	7.1	8.1	7.8	7.6	9.0	7.4	7.4	6.8	5.5	5.5	5.8
			Female	7.7	7.6	8.6	8.8	8.8	9.1	7.9	7.9	8.6	4.8	4.8	3.6
		Urban	Both	8.9	8.9	8.8	9.5	9.4	9.5	9.3	9.3	8.1	6.8	6.9	5.7
			Male	8.9	8.9	8.5	9.2	9.2	9.4	9.1	9.2	7.3	7.6	7.7	6.4
			Female	9.0	9.0	9.2	9.8	9.8	9.7	9.5	9.5	9.0	5.9	6.0	3.6
		Rural	Both	5.3	5.3	6.8	6.4	6.4	7.2	5.2	5.2	6.7	3.5	3.5	3.3
			Male	5.4	5.3	6.8	6.3	6.2	7.8	5.3	5.3	5.2	3.6	3.6	3.2
			Female	5.3	5.2	6.8	6.7	6.8	6.4	5.1	4.9	7.7	3.3	3.3	3.6
Dominican Republic	2002	National	Both	8.2	8.1	8.9	9.0	8.9	9.4	8.6	8.6	8.3	5.5	5.5	7.0
			Male	7.5	7.4	8.4	8.2	8.1	8.8	8.0	8.0	8.3	5.4	5.3	6.3
			Female	9.4	9.4	9.2	10.3	10.7	9.8	9.5	9.8	8.3	5.9	5.8	8.7
		Urban	Both	9.4	9.4	9.5	9.9	9.9	10.0	9.8	9.9	9.1	7.1	7.0	7.5
			Male	8.9	8.9	8.9	9.2	9.2	9.2	9.4	9.4	8.8	7.2	7.2	7.2
			Female	10.1	10.1	9.9	10.8	11.1	10.5	10.3	10.5	9.2	6.8	6.8	8.1
		Rural	Both	5.8	5.5	7.4	7.2	6.9	8.1	5.9	5.8	6.5	3.0	2.9	5.9
			Male	5.2	5.0	7.2	6.4	6.1	7.8	5.4	5.4	6.8	2.9	2.9	4.1
			Female	7.2	7.1	7.5	8.9	9.4	8.2	6.9	7.2	6.4	3.5	3.0	10.0

Table 10.7 (continued)

Country	Year	Area	Sex	Total			15 to 29 years old			30 to 49 years old			50 and older			
				EAP	Employed	Unemployed	EAP	Employed	Unemployed	EAP	Employed	Unemployed	EAP	Employed	Unemployed	
Paraguay	2000	Urban	Both	10.7	11.0	9.4	10.9	11.1	10.6	11.3	11.5	10.1	8.6	9.6	5.3	
			Male	10.3	10.5	8.9	10.3	10.4	10.0	10.8	11.0	9.0	8.9	9.5	5.9	
			Female	11.3	11.8	9.9	11.8	12.1	11.3	12.0	12.1	10.9	8.2	9.7	4.6	
		Rural	Both	6.3	6.3	6.2	7.4	7.1	8.7	7.1	7.1	7.6	3.6	3.8	2.5	
			Male	5.9	6.0	5.7	7.0	6.8	8.1	6.6	6.6	6.5	3.6	3.7	2.8	
			Female	7.3	7.5	6.7	8.5	8.1	9.5	8.3	8.3	8.9	3.5	4.4	2.0	
		National	Both	7.4	7.3	8.3	8.2	8.1	9.0	7.6	7.6	7.7	5.2	5.2	5.3	
			Male	7.2	7.1	8.1	7.8	7.6	9.0	7.4	7.4	6.8	5.5	5.5	5.8	
			Female	7.7	7.6	8.6	8.8	8.8	9.1	7.9	7.9	8.6	4.8	4.8	3.6	
			Urban	Both	8.9	8.9	8.8	9.5	9.4	9.5	9.3	9.3	8.1	6.8	6.9	5.7
			Male	8.9	8.9	8.5	9.2	9.2	9.4	9.1	9.2	7.3	7.6	7.7	6.4	
			Female	9.0	9.0	9.2	9.8	9.8	9.7	9.5	9.5	9.0	5.9	6.0	3.6	
Rural	Both	5.3	5.3	6.8	6.4	6.4	7.2	5.2	5.2	6.7	3.5	3.5	3.3			
	Male	5.4	5.3	6.8	6.3	6.2	7.8	5.3	5.3	5.2	3.6	3.6	3.2			
	Female	5.3	5.2	6.8	6.7	6.8	6.4	5.1	4.9	7.7	3.3	3.3	3.6			
Dominican Republic	2002	National	Both	8.2	8.1	8.9	9.0	8.9	9.4	8.6	8.6	8.3	5.5	5.5	7.0	
			Male	7.5	7.4	8.4	8.2	8.1	8.8	8.0	8.0	8.3	5.4	5.3	6.3	
			Female	9.4	9.4	9.2	10.3	10.7	9.8	9.5	9.8	8.3	5.9	5.8	8.7	
		Urban	Both	9.4	9.4	9.5	9.9	9.9	10.0	9.8	9.9	9.1	7.1	7.0	7.5	
			Male	8.9	8.9	8.9	9.2	9.2	9.2	9.4	9.4	8.8	7.2	7.2	7.2	
			Female	10.1	10.1	9.9	10.8	11.1	10.5	10.3	10.5	9.2	6.8	6.8	8.1	
		Rural	Both	5.8	5.5	7.4	7.2	6.9	8.1	5.9	5.8	6.5	3.0	2.9	5.9	
			Male	5.2	5.0	7.2	6.4	6.1	7.8	5.4	5.4	6.8	2.9	2.9	4.1	
			Female	7.2	7.1	7.5	8.9	9.4	8.2	6.9	7.2	6.4	3.5	3.0	10.0	
Uruguay	2002	Urban	Both	9.8	9.9	9.3	10.1	10.2	9.9	10.2	10.4	9.1	8.7	8.7	7.7	
			Male	9.3	9.4	8.9	9.5	9.5	9.4	9.7	9.8	8.7	8.4	8.5	7.5	
			Female	10.4	10.6	9.6	10.9	11.2	10.3	10.7	11.0	9.3	9.0	9.2	7.9	
Venezuela	2002	National	Both	8.6	8.6	8.8	9.1	9.0	9.3	9.0	9.1	8.6	6.5	6.5	6.5	
			Male	8.1	8.1	8.2	8.4	8.3	8.6	8.5	8.5	8.2	6.5	6.5	6.5	
			Female	9.4	9.4	9.5	10.2	10.2	10.1	9.7	9.8	9.1	6.6	6.6	6.6	

Source: Economic Commission for Latin America and the Caribbean (ECLAC) on the basis of special tabulations from household surveys in the respective countries.



Part five: Institution-building and governance



Introduction

Although institutions cannot initiate growth on their own, they play a pivotal role in determining the climate and general frame of reference for economic decision-making. What is more, once an economy has begun to grow, the ongoing adaptation and modernization of its institutions are essential in order to sustain the development process.

Thus, economic development hinges upon the harmonious operation of a wide range of institutions. In addition to the institutions inherent in any democratic system, economic institutions are necessary for the development and proper operation of markets, the promotion of competition and the regulation of imperfect markets, the achievement and maintenance of macroeconomic and financial stability, and the provision of social protection and the redistribution of income.

In Latin America and the Caribbean, the institutional dimension of development has gained forward momentum as a result of the demands being placed upon it by two different sources. On the one hand, there is the demand deriving from the continued operation of a political democracy, which must reconcile the operation of these institutions with a level of social exclusion that disregards the basic economic, social and cultural rights of many citizens. On the other hand, there is the demand for the adaptation and creation of institutions that is being generated by the myriad dimensions of the current globalization process.

A regional integration process that goes beyond the sphere of trade to include other areas of activity can make it easier to meet these demands by providing the countries with more manoeuvring room and by opening up opportunities for shared learning, for mounting joint efforts on various fronts and for building bonds of solidarity in the search for greater social cohesion. Progress in these directions is neither linear nor free of difficulties, however, as has been demonstrated by the vicissitudes of the region's four imperfect

customs unions and the lack of tangible advances in the negotiations on the Free Trade Area of the Americas.

Chapter 11 addresses the issue of the modernization of the Latin American and Caribbean countries' institutions, particularly their economic institutions. After clarifying a number of conceptual points in order to set the frame of reference for the discussion, the relationship between economic growth and institutional change is examined. The discussion then turns to the economic reforms undertaken by the countries of the region in the wake of the liberalization of their economies. The political management of the reforms in the regional context is considered from the perspective of public institutions as both an object and a subject of the reform process. It is noted that the use of public policies to promote productive development will require institutional modifications, with emphasis on transparency and evaluation procedures.

Chapter 12 looks at the potential for regional efforts to expand the countries' manoeuvring room in various directions and at the dilemmas now facing the Latin America and Caribbean countries in the sphere of integration. An overview of trends and key aspects of intraregional trade is followed by a discussion of various options and a review of some of the initiatives that have been launched in an attempt to carry the integration process beyond the bounds of trade activity as such. Policies discussed in this connection include those focusing on the promotion of competition, trade facilitation, health and sanitation measures, physical infrastructure and sustainable development, macroeconomic and financial coordination, and social cohesion. The final portion of the chapter is devoted to a description of the different internationalization strategies adopted by the countries of the region and an analysis of their implications for regional and hemispheric integration processes.



Chapter 11

Institutional strengthening

The importance of institutions has not gone unnoticed in economic thought, particularly in the debate on development; and ECLAC was among the first to recognize this.¹ Attempts to characterize “development styles” in Latin America, and insistence on the need for an integrated approach to economic phenomena in the region, show that interest in correctly understanding the institutional role in development is nothing new.² Although vast amounts of analysis have failed to produce a systematic and conceptual reflection on the theory of development and institutional change, it is hard, if not impossible, to imagine fields of economic policy action that could be applied independently of their political and institutional setting. For that reason, on numerous occasions ECLAC has highlighted the specific features of the regional context and the need for economic-policy design that takes them into account —hence its suspicion of unique remedies, founded on models whose abstraction conceals important aspects of the reality that motivates policy decisions.

The institutional dimension of the development process has attracted renewed attention in recent years. In Latin America and the Caribbean this debate raises two relatively new issues compared to those discussed in previous decades: firstly, the presence and intensity of the globalization phenomenon, which transcends the strictly economic domain to influence the functioning, adaptation and creation of institutions; and secondly, the consolidation of democratic practices in the region’s countries —a phenomenon that entails a rule for changing Governments that has wide-ranging repercussions on other institutions.

¹ The issue has been addressed from a wide variety of approaches, firstly by the classical authors (Smith, Ricardo and Marx). The neoclassical tradition took it up again under the notion of transaction costs (North), and this approach has been adopted by a large number of institutionalist authors. A different starting point is represented by the theory of social choice, which also attempts to offer an integrated interpretation of economic and political aspects.

² Numerous studies and authors have undertaken research of this type. Examples include the writings of José Medina Echavarría, Aníbal Pinto and Osvaldo Sunkel (ECLAC, 1998c).

This chapter considers the modernization of institutions in the region, their influence on economic growth and equity, and which of them are most important from the productive development standpoint, as discussed in earlier chapters. In the first two sections, the aim is conceptual, with the intention of establishing the general terms of the analysis. Various aspects of the term “institutions” are discussed in terms of their relation to economic-growth and institutional-change phenomena. The third section deals more specifically with the Latin American and Caribbean case, aspects of “second-generation reforms,” and the creation of institutions appropriate to an open-economy regime. The fourth and final section is devoted to political management of the reforms in the regional setting.

I. Institutions and their relation to economic growth

Institutions can be defined as formal and informal rules supported by compliance mechanisms, which affect the behaviour of individuals and organizations in society; organizations and individuals pursue their objectives and define their conducts in the framework of a given institutional structure. Laws and other government regulations are a special institutional category. Their sanction presupposes a collective decision-making mechanism, and their compliance is guaranteed by the coercive power of the State, which itself is the outcome of constitutional rules. Among other basic definitions, the latter determine the separation of powers, their balance, principles of representation, and specific mechanisms that legalize and legitimize the structure of judicial rules with which the institutional edifice is constructed.³

This analysis is particularly concerned with the institutions that are relevant to economic events. In this sense, markets are institutions —as the locus of exchange transactions performed according to certain guidelines and pre-established rules for the completion and fulfilment of contracts. Both resource allocation and the quality of decisions taken by economic agents in markets are influenced and determined by the specific institutions that govern those markets. In its traditional formulation, economic analysis attributes a series of properties to the outcome of market interactions, without explicitly referring to the importance of institutions. This is merely an analytical simplification, which in no way denies their crosscutting importance. Adam Smith’s classic formulation of the “invisible hand” clearly presupposes the presence of a State and a legal framework —and even upholds the validity of moral principles which operate as laws, albeit unwritten in this case, that are a fundamental determinant of individual conduct.

As a framework for economic decision-making, institutions have a key role to play in the economic and social development process. Basic exchange relations or complex investment alternatives require rules, both formal and informal, to be implemented and complied with through time. Belief in their importance for growth has spawned numerous studies that attempt to measure the extent to which institutional quality can explain differences in the growth of per capita income across countries. Some of the main results of these studies can be summarized as follows. Firstly, there is a positive correlation between the two variables, but it is not easy to establish causality —i.e., whether institutions contribute to economic growth, or whether the creation of an appropriate institutional environment is instead the fruit of economic progress and a response to the increasingly complex web of economic transactions. The available data tend to support causation of the first type, suggesting that growth alone does not lead to institutional development.⁴ Nonetheless, the issue is not free from controversy, because institutions are also created in response to contextual needs. A distinction can be made between innovative institutional responses designed to meet a specific existing need, and other more settled institutions which stand the test of time. From this standpoint, institutional consolidation would favour growth. Secondly, there is some consensus that

³ According to this line of reasoning, some authors recognize the existence of an institutional “hierarchy” (Tommasi, 2002).

⁴ See Hall and Jones (1999); Acemoglu, Johnson and Robinson (2001); and Easterly and Levine (2002). The claim that economic growth is a causal factor of institutional development is refuted in Kaufmann and Kraay (2003).

institutional change is a very long-run phenomenon, with correspondingly long-term effects on growth. Thirdly, a review of the empirical research literature also suggests that there are substantial measurement problems (Kaufmann and Kraay, 2003). While doubts concerning the per capita income indicator are well-known but clearly defined, it is not clear how to express the value of institutions in a category and quantify it on a reliable basis; nor is it clear which institutions, from the entire range possible, are the most important for economic growth.

Although law and order and property rights are certainly essential, they are not the only economically important institutions. Some authors have recently proposed other complementary categories, such as regulation, stabilization and legitimacy (Rodrik and Subramanian, 2003). Regulatory institutions are created to correct market distortions, including those attributable to economies of scale, imperfect information and the various externalities. Stabilizing institutions are intended to create appropriate macroeconomic conditions in terms of low inflation, management of the business cycle, bank supervision and financial regulation. Fiscal policy—with its wide range of mechanisms and functions, both in terms of public expenditure management and taxation—is a clear example of a stability institution. Furthermore, the rules governing fiscal-policy decision-making in themselves represent key institutions for the functioning of the economy. The same is true of the attributions and governance of central banks.

Lastly, legitimizing institutions are those that provide social protection and redistribute income. As is well known, many functions in this field are also channelled through taxation and public-spending instruments. For this reason, and from a similar standpoint but restricted to public finance, other authors speak of the stabilization, allocation and redistribution functions of fiscal policy (Musgrave and Musgrave, 1992). Nonetheless, the redistribution function (analogous to the concept of legitimacy) can cut across the fiscal plane and embrace a broader set of institutions and actors. Thus, for example, the social cohesion pact presented in chapter 9 of this document involves coordination of elements of macroeconomic policy, labour-market regulation and social-protection rules.

The above implies that acceptable economic performance requires harmonious functioning of the wide range of institutions involved in the creation and functioning of markets, and in regulation, stabilization and redistribution. Institutions that are important for the economy are intimately interwoven with the political and social domains. Economic strategies and the most basic economic-policy definitions do not exist in a vacuum; they start to become effective once they are incorporated into decisions which subsequently become regulatory mechanisms and laws. In other words, policies are materialized and applied through institutions.

Bearing in mind the multiple dimensions involved in constructing the institutional edifice, along with the need to measure their contribution to growth through indicators and to have relevant data available to calculate them, other studies have proposed constructing indices based on variable “clusters”. This is the idea that inspires the governance project being carried out by the World Bank, whose database contains systematic and homogeneous data on 198 countries since the mid-1990s.⁵

II. Stability and institutional change

As mentioned above, the institutional structure contains a number of more permanent elements that change very slowly over time, and others that change more quickly. Constitutional rules are an example of the first kind,⁶ while the laws, decrees and rules that underpin the economic strategy of a government programme are of the second type. Institutions are in a permanent state of

⁵ This project understands governance as “the traditions and institutions by which authority in a country is exercised.” For this purpose, these institutions are translated into six groups of indicators (Kaufmann, Kraay and Mastruzzi, 2003).

⁶ In his analysis of governance in the Andean region, Solimano (2003) draws attention to the high frequency of constitutional changes in the countries of that region. This paper was prepared as part of a project on economic policy in the Andean region implemented by ECLAC and Inter-American Dialogue, with financial support from the Ford Foundation.

flux, although not necessarily undergoing comprehensive or universal change. In other words, while constitutional reforms are highly sporadic, public decisions are taken and informal rules are constructed on a daily basis.

Institutions, and particularly those of an economic type, are constantly torn between immobility and change. The economic interests of groups, organizations and individuals continually pull in one or other direction, either to conserve what they perceive as established advantages and privileges, or else to induce change aimed at promoting and benefiting other groups and other interests. Political representation mechanisms mediate interest-group actions of this type. In some situations political parties have major capacity for dialogue with social stakeholders and receptiveness to their proposals, in which case they bear a large part of the mediation task. In this way issues on the public agenda are shifted to the political agenda, through interaction and pressure; and, depending on circumstances, they then become embodied in government or legislative decisions which create new institutions or modify existing ones. In contrast, when representation mechanisms are weaker, interest groups can capture the State. This situation is classified by a number of authors as an extreme form of corruption (Kaufmann and Kraay, 2003).

The above reveals the complex relation between institutions —viewed as the scaffolding that frames and sustains a series of complex production and exchange relations— and economic growth. In particular, expectations as to the evolution of institutions and their fulfilment through time are central for long-term decision-making. Although institutions alone do not cause the investment process that fuels expansion, they nonetheless provide the general climate and framework conditions in which investment decisions are taken. Moreover, once growth has been sparked, the speed and effectiveness with which existing institutions adapt and modernize is fundamental in sustaining the capital-formation process (Rodrik, 2003).

Institutions are not reformed nor do they change of their own accord. The factor that governs change is a collective decision mechanism in which real-life social and political actors participate. Having said that, decisions can either be taken according to conventional principles of legality and legitimacy, i.e. validated by existing institutions, or else by the simple wielding of power. Naturally, legality and legitimacy assume the validity and permanency of emerging institutions; so the capacity of stakeholders to change institutions is essentially an outcome of the exercise of politics and, above all, the ability to reach effective agreements that allow for adjustment as circumstances require.

III. Latin America: “second-generation” reforms and institutional modernization

In recent years there have been frequent calls for structural reforms especially in institutions that are essential for the functioning of the economy, with talk of “second-generation reforms” encompassing the judicial system, education, and the provision of social-security services, among others. Chapter 2 of this document showed that classifying institutional reforms in generational stages is doubly deceptive, since it suggests a linear evolution in a predetermined sequence, and because it indicates a universal pattern. Both are inconsistent with the historical interpretation and theoretical frameworks with which these problems are analysed. Nonetheless, the expression can be detached from previous connotations and be used merely for descriptive purposes. Recent reforms introduced in Latin America have profoundly altered existing economic structures and institutions, with broadly similar policies being implemented in countries across the region, in reflection of relatively common circumstances, the exhaustion of the previous model and attempts to find new answers. Trade openness, public-utility privatization, deregulation of financial markets and design of a macroeconomic policy compatible with this new climate comprised the economic strategy applied in the 1990s. In many countries, a large proportion of the economic institutions most closely

related with this strategy were overhauled. As is analysed in greater detail elsewhere in this document, the design of regulatory frameworks and the corresponding organizations were a natural outcome of the privatization of public services.

Demand for a second wave of reforms is shorthand for a more complex process. Strictly speaking, this assumes that certain decisions require, almost as a logical consequence, other issues and other areas to be drafted into in the institutional updating process, which maintain the characteristics of the economic structure under transformation. It could be argued that deeper institutional reforms are needed to achieve compatibility and consistency with policies applied earlier. If carried out, the outcome would be an institutional structure that is more efficient for market functioning, and clearly also more functional for the new economic and social stakeholders that have a greater weight in decisions and policies in the emerging model. Nonetheless, it cannot be denied that many of the reforms deemed to be “pending” are consistent with any development model (education, social security, judicial power, etc). In this case second-generation reforms should be seen as reforms that were not carried out earlier, either because they were not considered relevant or, in some cases, because of short-term emergencies. In other words, emphasis on “new” reforms in some cases reflected the need to make the new rules of the game compatible; but, in many other cases, it was an argument subsequently used to justify failures in generating growth from the first wave of reforms.

Clearly, the pattern of the region’s international participation has changed and, along with it, the basic attributes of the regime under which national economies operate; and this requires institutional change. The economic institutions that prevailed during the import-substituting industrialization (ISI) phase can be characterized as follows. Firstly, under blanket tariff protection, funds were channelled to national industry through fiscal subsidies of a sectoral or regional nature. Secondly, and in complementary fashion, the financial system, designed for a closed economy, captured savings which were then made available for investment, also using transfer and subsidy mechanisms, but separate from the public budget. Thus, fiscal expenditure and redistribution through the financial system generated a major resource transfer that went almost completely unnoticed among social actors, especially those that were net contributors in this income and wealth redistribution process. Inflation was an effective vehicle for concealing this phenomenon. Thirdly, the presence of public enterprises also gave the State appreciable purchasing power, which was used, both directly and indirectly, to promote domestic industry through the provision of inputs, infrastructure and capital goods. Lastly, fiscal and monetary instruments pursued the same goals: underpinning the business cycle and selectively promoting certain sectors of domestic industry. As is now common knowledge, the model generated rapid growth over a relatively long period of time, but its inability to adapt with the times was one of the reasons for its exhaustion and the emergence of increasing conflict, particularly over distributive issues. When budget constraints were systematically ignored the result was burgeoning inflation, which in some cases degenerated into a hyperinflationary process.

The response to the crisis was trade and financial liberalization, together with reduced participation by the public sector in the production of goods and services, albeit with various stages and intensities that varied from country to country. Economic openness has spawned a new set of institutions. Policies have mostly lost the economic rationale they had in the past, as a result of globalization and inter-industry trade, compounded by the impossibility of using robust and widespread protection as a promotion tool, as in the past, and the fiscal constraints associated with reducing inflation and rising demands for social expenditure. Policies in support of productive development therefore need to be rethought, since the need to compete in open economies reduces the space available for public-policy action. In particular, it is now increasingly important to enhance the transparency and evaluation of horizontal and vertical subsidies, while encouraging growing public-sector partnership. Conglomerates have become the natural target of productive-development policy. Similarly, the financial system cannot fulfil the functions it exercised in the

past; in an open-economy setting, solvency is an essential requirement of performance. Accordingly, attempts are being made to establish relatively common rules on supervision and minimum capital that are in line with international standards, in order to compete internationally and avoid losing the ability to attract external saving. Nonetheless, the degree of concentration in the financial industry, and the demands under which it operates in this new framework, result in funds for sectors of higher credit risk being rationed. Hence the need to develop specific funding mechanisms for small and medium-sized firms, which requires public-policy involvement. Collateral funds, trust funds, or explicit budgetary subsidies are mechanisms aimed at reducing the cost of credit for sectors that otherwise would be excluded from the formal financial system, either to meet their investment needs or to obtain working capital (see chapter 3).

In addition, private provision of public utilities has led to the construction of regulatory capacity and promotion of competition. The previous situation was characterized by vertically integrated state monopolies that controlled the market in question and offered a variety of services. Cost and pricing rules were weakly applied, and there were major cross-subsidies. The reform of public utilities entailed adapting the regulatory framework, but here and elsewhere institutions lagged behind the reforms and were not contemporaneous with them. This generated high economic and social costs; and when the negative consequences became visible, different regulatory mechanisms were put forward. In this stage, the region displays a wide variety of situations, while at the same time providing a clear example of the difficulty of institution building. The task has been a comprehensive one, encompassing the breakup of monopolies, organization of competition, and the design of regulatory frameworks and supervisory bodies. In addition, rules to promote competition have also been needed with controls to avoid monopoly concentration in certain markets, in view of the simultaneous boom in foreign investment together with burgeoning enterprise mergers and concentration.⁷ An overview of the situation in the region reveals clear progress: infrastructure has been modernized, capacity expanded and new technologies incorporated. Nonetheless, the magnitude of the tasks that remain is daunting. In many cases regulatory frameworks have proven deficient and they have had to be revised, which introduced an element of uncertainty causing investment to retreat. It has been necessary to create technical capacities in regulatory bodies, but the process is profoundly asymmetric: while firms have the necessary human and technical resources and also operate in a global context, the region's States have had to discharge their functions under inferior conditions. This asymmetry has complicated oversight and in some situations even led to regulatory capture. Expansion of services and new investments are fundamental for the future, for the privatizations of the 1990s have placed infrastructure in private hands. The challenge now facing the new institutional framework is to achieve balanced growth among the various sectors, to satisfy demand in terms of both quality and price and avoid supply bottlenecks in essential facilities.⁸

The high inflation that was a feature of many of the region's countries during the 1980s was decisive for redefining some of the key economic-policy institutions. The functions of central banks and the public sector came under extensive scrutiny. In the former case, reform attempted to restrict the competencies of central banks to the basic task of controlling inflation, which was accorded prime importance. In open economies, with a predominance of flexible exchange rates, the monetary anchor is a key to stability. Given the importance of domestic credit control, the aim has been to isolate central banks from other traditional considerations of economic policy, and even from the task of supervising the financial system, in order to consolidate independent central banks which, in theory, should discharge their functions free from all considerations relating to the political cycle and sectoral interests. A similar task was undertaken with respect to the public sector.

⁷ Problems of competition caused by greater concentration were seen most clearly in certain service sectors, since economic openness reduced the power of monopolies or oligopolies in the production of internationally tradable goods.

⁸ Electric-power transmission lines, railway stations, refineries or connections in the telecommunications sector, among others, are examples of "essential facilities". As these are difficult to reproduce, control over them gives rise to monopoly power and reduces competition (OECD, 1996a).

The overarching idea has been to construct fiscal solvency and implement a series of reforms (tax system, social security, regional and territorial decentralization, among others) to enhance the efficiency of services provided by the State. Here again, the results are ambiguous. Greater awareness of budget constraints and the need to build sound public finances have not been seen in practice. Entire chapters of the reforms already carried out will require drastic revision. The issue of pension systems, once again in crisis in several of the region's countries, is an almost emblematic case in point; so too are quality shortcomings among State social services provided. Improving services is not just a matter of additional funding; changes in incentives, oversight of results, organization, decentralization of levels, among others, are all elements that should be included in any policy in this area.⁹ Once again, modernization of these social services requires profound and complex institutional reform. Consequently, an overall view reveals that sequentiality is not applicable in the reform process. As some authors have pointed out, in many cases it has become necessary to "reform the reforms" (Ffrench-Davis, 1999b).

The momentum for reforms does not stem from the domestic domain alone. Bilateral, regional, hemispheric and multilateral trade negotiations have raised the need for new institutions or adaptation of existing ones,¹⁰ such as trade protection regimes, rules on intellectual property, dispute settlement arbitration panels, and constraints on the application of targets or conditions for foreign investment by trade partners. Countries also assume new commitments as a result of closer financial integration, such as compliance with standards for publishing information on the financial system, rules of supervision and agreements on money laundering. These new rules of the game, and the standards that are developed on this issue, also pose a challenge to countries. In addition, there is a deep-seated problem: globalization thus far has generated an increasing flow of goods and services, affecting the distribution of income and the fortune of specific regions, among other things. But, as mentioned above, it has also indirectly affected local institutions, partly because of the need to compete in this globalized world. Multilateral and regional agreements increasingly involve larger imports not only of goods and services, but also of institutions. One may wonder to what extent these international agreements are tending to displace mediation through the political process. In some cases it could be considered positive that new institutions are introduced through international agreements, given the "indiscipline" or inability of society to create new institutions or to generate credibility in those that already exist. In certain cases this is probably advisable—rules that favour competition or reduce exaggerated discretion on trade issues in response to pressures exerted by domestic groups, for instance. In other cases, however, the rules imposed compress the field of public-policy action, without clear effects on citizens' welfare. A case in point are the restrictions the United States imposes in bilateral agreements on the use of instruments to control financial capital inflows.

Apart from the challenges that these mechanisms generate in countries that are striving to assure their own policies and institutions,¹¹ a word of caution is in order regarding the true impact of these agreements on the institutional set-up.

There has been much speculation in the recent literature regarding the beneficial effects of integration, and especially North-South agreements, on institutional quality. Doubtless, increased trade, the presence of investments in the integration space, and greater economic activity generally, are a powerful spur for rethinking institutions. Nonetheless, the effects and timeframes of the phenomenon should not be overstated. Firstly, not all institutions are influenced by integration; and the intensity of influence is clearly not uniform. In many

⁹ Chapter 10 of this document discusses aspects relating to the reform of primary education, aimed at social cohesion and changes in productive structure.

¹⁰ See the discussion of trade and regional integration in chapter 12.

¹¹ Although international agreements are usually approved by parliament, in developing countries the decision parliaments have to adopt is whether to accept or reject an agreement as a whole, rather than alter specific clauses. This considerably restricts political mediation in institution building.

countries there is a risk of replicating the dualism typical of societies in the region, only this time with institutions. Secondly, countries cannot wait for the repercussions of these effects to unfold in their own time. They must embark on their own reform agenda, which will include and take note of the integration process, without having to wait for modernization that stems merely from the importation of institutions. Revision of obsolete legislation, reinvention of public organizations that have been overtaken by circumstances, and human resource training, in the public and business domain are costly tasks that require investments.

To summarize, in recent years institutions have also been renewed as a result of deepening integration and the proliferation of trade agreements, which have added their own elements to national policy orientations. In the future these trends will very likely consolidate in line with the functioning of the global economy. Clearly the elements mentioned in relation to construction of the new institutional framework prove, beyond any doubt, that there are major differences compared to the situation that prevailed during the import substitution industrialization stage. It seems realistic to assume that this new institutional setting—with its current shortcomings and dimensions to be provided by the dynamic of integration and globalization—is the framework in which productive development policies must adapt and operate.¹² Nonetheless, as mentioned in chapter 1, we believe that developing countries should participate in international forums that attempt to change elements of the institutional framework, whether in terms of the international financial architecture, or migration or issues relating to intellectual property. The Doha Round raised as yet unfulfilled expectations of a change in the institutional framework for international trade and development that would promote the interests of the developing world. Developing countries should also try to prevent the new web of bilateral and regional agreements from compressing the space available for productive development policies in the region's countries to previously unseen levels.

Even in this new international scenario there is room to apply the productive development policies mentioned in this document. Chapter 2 has proposed strategic guidelines for applying differentiated support and incentive policies for productive units. Three basic strategies have been mentioned—inclusion, modernization and densification. The specific actions to be applied in each of these domains need to rely on effective institutions to fulfil their brief, backed by a public policy that is capable of linking its various components. For example, the drive to incorporate informal activities into the formal economy involves a variety of fronts: tax simplification, specific credit programmes for microenterprise and small businesses, provision of management training, etc. For these to be efficient and command consensus within the countries, it is essential to generate more transparent institutions with frequent evaluation mechanisms. In addition, a new institutional framework needs to be created, aimed at greater social inclusion; in other words institutional policies for greater flexibility in the labour market should go hand-in-hand with others that ensure various mechanisms of social protection. As argued elsewhere in this document, the debate is not about the advisability or otherwise of adopting active policies, but how to reconcile instruments and limited institutional capacities in the current configuration of the region's open economies.

¹² See an analysis on productive development policies in the new regional framework in Ramos (1998 and 2000), and in Rodríguez Claire (2003).

IV. Reform deepening: institutional efficiency and political management of the reforms

The analysis of the previous section would appear to contradict the arguments deployed in the first two. Firstly, it has been claimed that design of the structure is closely dependent on the history and circumstances of each country. Secondly, it would seem that the guiding principles of the second wave of reforms in the region have been convergent, in other words different countries have implemented relatively similar initiatives. Consequently, the reforms seem to have traversed borders without suffering changes of identity. It has been claimed that this uniform direction in many cases reflects shortcomings or gaps in the first-phase reforms; in other cases, it reflects the need to reconcile changes wrought by liberalization, which were imposed on top of the previous economic structure—hence the concept of a sequence between first- and second-generation reforms—with the dynamic of integration and globalization. There is also a third influence that should not be ignored, which has helped give a common direction to the reforms, namely the multilateral financial support they have received. As the supply of funding reflected the interests of the countries, a certain degree of uniformity prevailed. It is not surprising that institutional designs were proposed mainly with the aim of changing the economic functions of existing arrangements. The institutional revision was undoubtedly inspired in a fundamentally economic approach, which called into question the advantages and efficiency of the existing model.

There is nothing questionable about this, provided the analysis correctly identifies the constraints and data corresponding to each reality.¹³ Institutional design does not exist in a vacuum. In addition, although the economic approach may help to identify the costs and benefits of alternative solutions, it is not in itself an effective guide for action. As North (1994) correctly points out, economic theory explains how markets function, but not how they develop. Possibilities for change depend on political resources and how these affect the capacity for collective decision-making. Even where the analyst can propose new institutional designs aimed at increasing the efficiency and effectiveness of economic transactions, the strategy invariably followed, and the reforms introduced, produce “winners” and “losers”. There are no unique institutional models; solutions exist that are more effective for market functioning, macroeconomic stability and social inclusion, but these are not abstract designs. The way the actors leading the process harness political and other resources to tilt the public and government agenda in line with their interests is fundamental. To the extent that this task is undertaken effectively (in the sense that technically appropriate reforms are proposed to resolve existing problems) and is seen as legitimate, institutions adapt to change and are long-lasting. If this does not happen, reform stagnates, institutions fail to “modernize”, and indefiniteness in the public agenda continues, accompanied by uncertainty and lack of clarity on future courses of action.

The question as to whether Latin America needs to deepen institutional reform can only be answered in the affirmative: any institutional structure is susceptible to improvement. As shown by the table in the appendix to this chapter, average regional institutional quality is below the world average. Even allowing for doubts as to the validity of the corresponding indicators, the wide variety of situations displayed in the region shows that the reform agenda is more urgent in some countries than others. In any event, the changes of the past decade, which redefined the region’s international participation, have altered the traditional functions of the State and spawned new economic actors, without resolving the problem of social exclusion. There is therefore a need to deepen the process of reconciling existing institutions and design of the emerging economic structure. Productive development policies in a framework of social cohesion should contribute in this direction.

¹³ Rodrik and Subramanian (2003) argue that the essential ingredient of institutional reform is a consideration of local specifics and reality: “... institutional solutions that perform well in one setting may be inappropriate in a setting without the supporting norms and complementary institutions. In other words, institutional innovations do not necessarily travel well.”

It is impossible to suggest specific recipes for the generic task of institutional modernization to adapt to new economic parameters. As mentioned above, one can identify ways of making institutions function more efficiently for every case and circumstance. Nonetheless, the major problem in the region has never been technical difficulty in consolidating institutions that are compatible with the economic growth model. Whenever appropriate circumstances presented themselves during the ISI period, a large number of institutional responses expressly designed for that strategy emerged. There are no major constraints on technical capacity to formulate public policies suited to whatever type of situation needs to be corrected; the difficulty lies in mobilizing the necessary political resources.

In several of the region's countries, the "reversal of reforms" has been associated with opposition from interest groups that question the validity of the chosen strategy. Although dissatisfaction among vast sectors of the population is understandable, in several cases this questioning has been channelled from outside the mechanisms provided for in the democratic system, and has even impaired institutional functioning. The cancellation of strategies and policies is made more difficult, however, when there has been a regional integration process, as in the case of Latin America. Directional changes not only affect the national domain but undercut the process of convergence with "partners" in regional agreements which, by their nature, involve obligations and rights that transcend government terms of office and become State policy.

Consequently, political governance and consensus-building are essential ingredients for deepening institutional reforms that contribute to development and to a more equitable society. When governance is not guaranteed and it is difficult to harmonize the conflicting viewpoints of different interest groups—whether in the economic domain or elsewhere—public institutions and policies will be subject to permanent questioning and the possibility of radical change of course. This introduces a large dose of volatility and uncertainty in economic decisions. In an open-economy setting with free capital mobility, doubts surrounding institutional stability encourage saving and investment to seek safer havens. Global competition occurs not only in the domain of trade and recognized comparative advantages, but also in terms of institutional quality.

This does not mean that it would be hypothetically feasible to envisage a unique scenario, in which economic openness and globalization themselves define a standard for all institutions to adapt to, particularly those most relevant for economic decisions. The conceptual error of the "unitary and uniform solution" has already been alluded to. On the contrary, the analysis demonstrates the importance of respecting local peculiarities in the construction of institutions. Yet this is not to deny that the survival of national economies and States in a globalized environment poses certain requirements; and in this regard the countries of the region display a dual weakness. Firstly, governance is not assured in several cases. In others, where it is, significant population groups question the authority of the State and its institutions, and this has a negative effect on the surrounding economic space. Despite the seriousness of this type of situation, the intensity and scope of the conflict is less than in other regions of the world. Secondly, severe social exclusion prevails in nearly all of the region's countries. In many cases, social marginality has not threatened the functioning of institutions or the channelling of conflict; intermediation mechanisms have emerged that have allowed a degree of convergence in consensus building. But the equilibrium is always precarious—based on exclusion, inequality and lack of social integration on the one hand, and on pressure, stemming from the validity of political rights, public voice and participation on behalf of overcoming exclusion, on the other.

In conclusion, the main point of the foregoing analysis is worth reiterating. Latin America needs to modernize its institutions by creating specific solutions that are suited to competition in the global economy. Institutional design is not an obstacle: the limiting factor is not a lack of technical knowledge to promote institutional modernization in one direction or another. The key difficulty lies in the management and political acceptance of the reforms, because the region's countries have to reconcile the functioning of political democracy with levels of social exclusion that are incompatible with basic conditions of human dignity, which, legitimately, claim citizen participation.

LATIN AMERICA AND THE CARIBBEAN: GOVERNANCE INDICATORS, 2002 ^a

Country	Voice and accountability		Political stability		Government effectiveness		Regulatory quality		Rule of law		Control of corruption	
	Value of indicator	Rating ^b	Value of indicator	Rating ^b	Value of indicator	Rating ^b	Value of indicator	Rating ^b	Value of indicator	Rating ^b	Value of indicator	Rating ^b
Argentina	0.12	3	-0.74	4	-0.49	5	-0.84	7	-0.73	6	-0.77	5
Bolivia	0.01	4	-0.20	3	-0.53	5	-0.11	5	-0.60	5	-0.82	5
Brazil	0.28	2	0.17	2	-0.22	4	0.26	4	-0.30	4	-0.05	3
Chile	1.12	1	1.04	1	1.19	1	1.50	1	1.30	1	1.55	1
Colombia	-0.55	5	-1.78	6	-0.39	5	-0.04	5	-0.75	6	-0.47	4
Costa Rica	1.16	1	1.06	1	0.37	2	0.74	2	0.67	2	0.88	2
Dominican Republic	0.19	3	0.18	2	-0.41	5	-0.17	5	-0.43	5	-0.39	4
Ecuador	-0.06	4	-0.70	4	-0.96	6	-0.60	6	-0.60	5	-1.02	6
El Salvador	0.06	3	0.35	2	-0.53	5	0.04	5	-0.46	5	-0.54	4
Guatemala	-0.48	5	-0.43	3	-0.61	5	-0.09	5	-0.84	6	-0.71	5
Haiti	-1.11	6	-1.34	5	-1.56	9	-0.95	7	-1.76	8	-1.70	7
Honduras	-0.15	4	-0.14	3	-0.73	5	-0.37	6	-0.79	6	-0.78	5
Mexico	0.33	2	0.22	2	0.15	3	0.49	3	-0.22	4	-0.19	3
Nicaragua	0.09	3	0.15	2	-0.87	6	-0.41	6	-0.63	5	-0.44	4
Panamá	0.50	2	0.36	2	-0.14	4	0.49	3	0.00	3	-0.24	3
Paraguay	-0.53	5	-1.33	5	-1.29	8	-0.56	6	-1.12	7	-1.22	6
Peru	0.22	3	-0.67	4	-0.47	5	0.24	4	-0.44	5	-0.20	3
Uruguay	0.95	1	0.91	1	0.51	2	0.48	3	0.56	2	0.79	2
Venezuela	-0.41	5	-1.20	5	-1.14	7	-0.54	6	-1.04	7	-0.94	6
Latin American countries ^c	0.09		-0.22		-0.43		-0.02		-0.43		-0.38	
East Asian countries ^d	0.35		0.76		1.12		1.04		0.96		0.86	

Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of information from the database on World Bank indicators of good governance, 1996-2002, Washington, D.C.

^a Governance indicators are measured in units ranging from -2.5 to 2.5. The highest values correspond to the best results in terms of governance. The world average of all indicators is 0.

^b The rating for each indicator is based on the range of possible values for governance in each country, using 90% confidence intervals. The number of groups per indicator depends on the degree of similarity between the countries, calculated on the basis of dispersion and overlap between confidence intervals.

^c Average of 19 countries.

^d Average of selected countries and territories (Hong Kong Special Administrative Region of China, Republic of Korea, Malaysia, Singapore, Thailand, and Taiwan Province of China).



Chapter 12

The key role of regional and subregional spaces

Regional integration offers attractive possibilities for market expansion, larger-scale production and, finally, more dynamic economic growth. It also plays a key role in attracting investments, enhancing productivity, creating jobs and diversifying exports. Trade expansion fostered by geographic proximity engenders physical, social and cultural integration phenomena that give the regional space a strategic value in terms of participation in the global economy. Despite the specific characteristics of Latin America and the Caribbean, the process of integration in Europe, and its positive effects, have influenced efforts made in this direction in our continent.

In fact, intraregional trade has generated significant growth among non-traditional and differentiated exports, including higher value-added products which tend to be knowledge-intensive (Kuwayama and Durán, 2003). This contrasts with trade outside the region, where export expansion has been founded on a relative abundance of productive factors such as natural resources and unskilled labour. In view of these trade-flow trends, ECLAC has advanced the view that regional markets could serve as an excellent training ground for operations in external markets, especially for smaller firms; regional markets could thus nurture the development of export activities among new firms and new sectors (ECLAC, 1994 and 2002a).

During the past decade, the countries of the region gave active support to various regional integration schemes. The momentum of integration grew steadily as national economies lowered tariffs, eliminated a number of other trade barriers and implemented reforms to harness the liberalization process. This gave rise to the term “open regionalism” coined by ECLAC to refer to a phenomenon that is substantially different from past experience in the region. In the framework of this new regionalism, subregional accords have been signed which, starting with the creation of imperfect customs unions, aim to establish common markets and even more complete forms of integration. This category of agreement encompasses the region’s four large subgroupings: MERCOSUR, the Andean Community, CARICOM and the Central American Common Market (CACM). Alongside these changes at the subregional level, countries have increasingly entered negotiations aimed at signing free-trade agreements with other countries and trade blocs —an example being Mexico in relation to other members of NAFTA and the European Union, and bilateral agreements such as the one recently signed by Chile with the United States. At the same time, negotiations to create the Free Trade Area of the Americas (FTAA) by the start of next year are also moving ahead. The region is thus involved in trade integration in several directions at once: regional subgroupings, bilateral agreements with countries within the region and elsewhere, and hemispheric integration. Looking beyond the specific forms adopted in each case, it is clear that the whole process is aimed at a form of trade opening in which local economies seek varied forms of partnership in order to compete more effectively in the global economy.

In these circumstances, subregional accords tend to become less relevant since they cannot progress beyond simple trade agreements. Indeed, if the Free Trade Area of the Americas comes into being with the initial orientation of its hemispheric project intact, the subregional agreements will be subsumed under this broader framework. Not only that: the current proliferation of bilateral treaties is threatening subgroupings with trade deviation and breakup of their membership. For one reason or another, existing subregional agreements need to pursue deeper integration with the ultimate aim of creating a common market.

I. Mechanisms to deepen integration

Although vocation and political commitment towards integration are essential ingredients, the process cannot move forward in an abstract sense. If the aim is to progress beyond agreements in their current embryonic stage, countries must deepen trade integration by eliminating remaining barriers and facilitating trade in services. Trade is a driving force for other changes and also stimulates greater coordination, making it possible to establish the institutional mechanisms needed to move political decisions in the desired direction. There are several specific areas in which measures are needed to strengthen exchange: improve market regulatory frameworks (rules on competition and public-utility regulation); coordinate technical standards and phytosanitary rules; create trade-facilitation and dispute-settlement mechanisms; make progress in negotiations on services; and develop a basic infrastructure platform that enables the region to increase the productivity of economic agents and make them more competitive both in the domestic market and internationally. These initiatives, in conjunction with efforts in the social domain (e.g. social cohesion and migration) and on the environment, suggest the advisability of taking a comprehensive approach to regional integration. Measures are also needed in a complementary area, namely harmonization of macroeconomic management tools. The following sections of this chapter identify and analyse measures for furthering the integration process, through an appropriate combination of national efforts with regional cooperation.

1. Competition policy

Although countries have established rules to facilitate competition and protect consumers' rights as part of their national reforms, in several cases such rules have been adapted to the integration process. The MERCOSUR, Andean Community and CARICOM agreements display efforts made in this direction, and in some cases supranational bodies have been created for their implementation (Tavares and Tineo, 1999). Regionwide extension of competition rules applied in domestic markets pre-empts the use of defensive mechanisms such as antidumping and other practices that hinder international trade.

There is also an incipient lesson to be drawn on this subject in the context of bilateral trade agreements, several free trade treaties and a few economic cooperation agreements, which indicate the general principles of free competition that enterprises in signatory countries, particularly State-owned firms, need to respect (FTAA, 2002a).¹ Given the diversity of integration schemes and the heterogeneous development of national competition systems, a chapter on competition policies is currently being negotiated in the FTAA framework, and a willingness has been expressed to include disciplines on this subject in the process of trade and investment liberalization. Although the clauses under discussion relate fundamentally to nontradable goods, they nonetheless have a favourable effect on trade.

2. Trade facilitation

The region urgently needs to adopt new measures to facilitate trade and business activities. In particular, customs operations need to be improved by reforming and modernizing the functioning of the corresponding national systems of regulation and control.² Another urgent reform consists of implementing a common customs code within the region, since this would solve many of the problems of registration and verification that currently hamper merchandise trade. In the Americas, NAFTA has made significant progress on trade facilitation, going further than the integration systems consisting exclusively of Latin American and Caribbean countries (MERCOSUR, Andean Community, CACM and CARICOM).³ There are also weaknesses in individual Latin American and Caribbean countries and significant differences among them. Both in the case of NAFTA and in the other systems mentioned, progress on trade facilitation has mainly been focused on customs issues.

Nonetheless, efficient international cooperation (both technical and financial) is needed to allow the relatively less developed countries to build capacities to implement satisfactory customs reforms. This is not only necessary domestically, but also highly relevant at the intraregional and bilateral levels; and it is particularly important in trade facilitation for smaller enterprises. Such efforts, would result in improved regional integration, and would also help to raise the competitiveness of Latin American and Caribbean goods and services on world markets.

In addition to customs procedures as such, attention should be paid to other related domains, including the need to harmonize quality standards, technical regulations and sanitary requirements, and increase the efficiency with which the rules of origin of the region's integration schemes are applied, especially by improving procedures for issuing and verifying certificates of origin (Izam, 2003). Other areas that warrant special attention within the broader domain of trade facilitation are agreements on: (i) avoidance of double taxation; (ii) investment protection and promotion;

¹ In addition to these processes, a few countries in the region are participating in other plurilateral agreements (APEC, OECD), and most are members of the WTO multilateral trading system.

² For example, the Meso-American Initiative on Trade Facilitation and Increased Competitiveness included in the Puebla-Panama Plan contains a major project to modernize customs and border posts. This aims to establish a standard computerized procedure for international merchandise transit, entailing a one-stop declaration of the relevant data which is then distributed to all bodies involved in border control (customs, health, transport, migration and others) (IDB, 2003).

³ FTAA developments on trade facilitation are also worth mentioning. In a relatively early phase of the negotiations, about 20 specific (albeit non-binding) measures were established, which started to be applied in 2000. The key measures relate to customs issues (Izam, 2001).

(iii) avoidance of double social-security contributions; (iv) the international movement of business people and service providers; and (v) mutual recognition or harmonization of accreditation, licensing and technical standards (Prieto, 2003b).

3. Sanitary and phytosanitary measures and technical barriers to trade

In order to ensure that negotiations on enforcing sanitary and phytosanitary measures and technical regulations achieve their goal and make it possible for the region to reap the benefits of integration, it is essential for countries to have suitable national institutional structures in place to administer the agreements and enforce the commitments entered into. Most Latin American countries need to strengthen and modernize their institutional structures, to enable them to maintain a suitable and flexible system for timely diffusion of national, regional and international data, making it possible to fully exploit economic advantages (Larach, 2003).

The countries of the region could therefore be well advised to make progress in harmonizing sanitary and technical rules and regulations, firstly in the regional domain and then internationally.⁴ The establishment of equivalence between measures adopted by the signatories of regional or subregional agreements is advantageous, partly because it reduces the potential for product discrimination among them and streamlines the import process. Harmonization of measures could then become a positive factor and an example allowing for mutual recognition of sanitary and phytosanitary regulations in other trade treaties (Larach, 2003).

Several regional commitments exist to harmonize quality standardization systems, together with measures to encourage certification and achieve mutual recognition, equivalence of sanitary and phytosanitary regulations, and harmonization on biotechnological safety. Accordingly, joint efforts among Governments to promote appropriate production practices are clearly justified. As this is likely to benefit national consumers in addition to regional or subregional importers, such measures should be viewed as public policies that are highly beneficial for production, consumption and trade.⁵ Regional collaboration also helps in coping with the various difficulties that countries face in this domain, as indicated in the section on the multilateral system.

4. Physical infrastructure and sustainable development

There are many issues and major challenges in the field of infrastructure and sustainable development in the region that have motivated regional cooperation.⁶ Transport and tourism are representative examples.

The issue of transport has gained importance in the debate on instruments to promote trade and investment in a world of low tariffs and progressive elimination or harmonization of non-tariff barriers, since lower transport costs directly encourage exports and imports and are equivalent in effect to a tariff reduction. At the same time, market failures and imperfections that raise transport costs tend to concentrate industrial and economic activity in areas that are already endowed with suitable human and physical infrastructure (Venables and Gasiorok, 1998).⁷

⁴ Adoption of this initiative, in line with the modern food safety and quality systems, would doubtless help the region's countries to provide better health protection for consumers while remaining competitive on the international agricultural market.

⁵ For example, Andean Community countries have agreed to implement the Andean System of Standardization, Accreditation, Testing, Certification, Technical Regulations and Metrology (Decision 376). An earlier resolution (Decision 238) defined the equivalence of national sanitary and phytosanitary regulations between member countries. This type of agreement, in which the Andean countries signed a pact on transborder movements of genetically modified organisms, is an example of the harmonization of national regulations on biotechnological safety. MERCOSUR has a commitment to harmonize sanitary and phytosanitary measures, and maintains a technical standardization committee whose mission is to deepen regional cooperation on this issue.

⁶ The chapter on infrastructure and sustainable development in this document analyses other aspects of the issue that complement the discussion presented in this section.

⁷ On the nature and dynamic of trade within subregional groupings in South America, see Hoffman, Pérez and Wilmsmeier, 2002.

High transport costs undermine the competitiveness of Latin American products on international markets. Border crossing delays also unnecessarily raise the cost of intraregional trade. In many cases, these bottlenecks could be eased by institutional changes, such as planning transport routes on the basis of trade between countries, harmonizing regulations and streamlining border procedures.

Transport is one of the main pillars of physical integration, within the broader and integrated multisectoral domains of cooperation, as manifested in the South American Regional Infrastructure Integration Initiative (IIRSA) and the Puebla-Panama Plan (PPP). The Association of Eastern Caribbean States has also set up a programme entitled “Unifying the Caribbean by Air and Sea”, which aims to harness public and private efforts among member countries, and stimulate regional cooperation mechanisms.⁸ Caribbean countries will also cooperate in implementing air transport training programmes.⁹

At the present time, the solutions adopted also need to include regulatory components. Experience in the region has shown that private investment in transport services needs to be accompanied by a suitable regulatory framework, in order to ensure better quality and lower cost. In addition, to be efficient, trade promotion needs to include other components to facilitate border procedures, by using modern information technologies. This would help to improve the competitiveness and efficiency of regional and international transport (Hoffman, Pérez and Wilmsmeier, 2002).

In this context, IIRSA is particularly important, since it highlights investments in infrastructure and the regulatory framework, and it views the development of transport, energy and telecom networks as an integrated goal. The main purpose of this initiative is to make South America a more competitive region by expanding its infrastructure and making the most of its geographic space. The elements of strategic programming are the pillars of integration and development through which it is intended to intensify economic activity, promote regional development and achieve physical and economic integration between neighbouring countries.

The integration initiative is a multinational because it embraces 12 sovereign countries in South America; multisectoral, because it encompasses the transport, energy and telecom sectors; and multidisciplinary, because it involves economic, legal, political, social, cultural, and environmental aspects among others. IIRSA includes mechanisms for coordination among Governments, multilateral financial agencies and the private sector, with a view to combining the political and strategic vision of South America, reaching consensus on investment plans and programmes, and prioritizing the pillars of integration and development, in addition to specific projects in each case.¹⁰ All of these elements have aroused growing interest among participating countries, both at the national and subregional levels.¹¹

⁸ In the case of sea transport for example, efforts are being made to create and implement a database in order to increase competition, facilitate decision-making processes and make port operations more transparent among shipping companies and transport operators generally. This initiative is supported by organizations with experience in the area such as ECLAC, the Central American Commission for Maritime Transport (COCATRAM), the University of New Orleans and the Caribbean Shipping Association (CSA).

⁹ For further details see Association of Eastern Caribbean States (2003).

¹⁰ In relation to the objectives, achievements and progress made by IIRSA, see Technical Coordination Committee, IIRSA, 2003; INTAL, MERCOSUR Report 2001-2002. For information on progress up to July 2003, see also Technical Coordination Committee, IIRSA, 2003.

¹¹ This interest is shown, for example, in the broad support given by the Presidents of Peru and Brazil at the signing of an economic complementation agreement in late August 2003. The two leaders pledged their unconditional support to the initiative, in order to speed up implementation of the hubs of integration and development that will structure the South American domain, agreeing in particular to promote the Amazon and Southern Transoceanic hubs that unite the two countries. In addition, the future framework agreement between the Andean Community and MERCOSUR is expected to go beyond simple liberalization of trade in goods, services and investments, to also embrace physical integration, thereby giving the new agreement a level of generality that distinguishes it from those traditionally signed between the region's countries.

The Puebla-Panama Plan (PPP) promotes regional cooperation for sustainable exploitation of the wealth and comparative advantages of the Meso-American region, to correct its historical physical infrastructure deficit, and reduce its high poverty indices and its vulnerability to natural disasters. The integration measures contained in the Puebla-Panama Plan also aim to strengthen the Meso-American region, which is being challenged by growing engagement in a globalized economy. When PPP entered into force on 25 June 2001, it consisted of eight initiatives covering different areas of cooperation, embracing a variety of regional projects (IDB, 2002b and 2003a). Since then, the plan has evolved to embrace new areas of collaboration, such as rural development and support for indigenous communities.¹²

Major progress has been made on initiatives in the widest variety of fields covered by the Plan during its short lifetime. This has happened in the basic infrastructure area, which has already obtained major funding, and in the energy sector through cooperation in areas such as electrification and energy provision to rural zones, and encouragement for the use of renewable energy sources. Major steps have also been taken in other fields, such as trade facilitation, telecommunications and tourism (IDB, 2003a). Future steps should aim to strengthen the process of deliberation and joint action among member countries, permanently consolidate the achievements obtained, and put other issues on the agenda relating to social, environmental and human development, with greater participation from business, civil society organizations and ethnic communities.

In many of the region's countries, tourism has a vital role to play given its importance as a component of GDP and its high job-creation capacity. Generally speaking, this activity attracts a large volume of foreign investment in partnership with national capital. Recognition of its importance has given rise to several broad-scope initiatives, such as the Meso-American Tourism Initiative in the framework of the Puebla-Panama Plan (IDB, 2002b and 2003a) and the Sustainable Tourism Zone comprising the countries of the Caribbean Basin. These projects promote low-impact tourism that fosters integration and economic and social development among participating countries, together with conservation and sustainable management of natural resources, and respect for ethnic and cultural diversity.

The central aim of the Sustainable Tourism Zone is to modify growth patterns in the sector, by adopting a model that guarantees an increase in employment and foreign-currency inflows, promotes conservation of environment and culture, and involves local communities in planning activities. As a result of economic and environmental considerations, participating countries are increasingly interested in strengthening international tourism projects.¹³

In terms of sustainable development, the Latin American and Caribbean region has a characteristic that distinguishes it from all others, both in terms of the wealth and importance of its natural resources and in the global risks implied by the rapid process of environmental degradation (ECLAC, 2002a). Given these circumstances, the current structure of the region's environmental institutions needs to be reformed, starting by consolidating the role of the Forum of Environment Ministers, and the environmental programmes of bodies linked to subregional integration mechanisms (ECLAC 2002a).¹⁴

¹² Geographically the Puebla-Panama Plan covers the Central American countries, Panama and the south-southeastern states of Mexico, embracing about 64 million inhabitants, of whom 18% are indigenous. Given the severe constraints facing the economic and social development of this area of the world, the main problems include poverty, and unequal access to services such as healthcare, sanitation and education. For that reason, the Plan contains provisions on sustainable development, human development, natural-disaster management, tourism, trade and infrastructure (IDB, 2002b and 2003a).

¹³ This interest stems mainly from the following factors: (i) the need to reconcile the interests of member countries that have competed intensively to attract tourists and international operators; (ii) overexploitation or inappropriate management of resources; and (iii) changes in consumer preferences.

¹⁴ Subregional mechanisms include the Central American Commission for Environment and Development, the Amazon Cooperation Treaty, the Environmental Agreement of the Andean Community, and the Programme of Action for the Sustainable Development of Caribbean Small Island States.

In recent years, several major regional proposals have emerged in this domain. The eight signatory countries of the Puebla-Panama Plan adopted the Meso-American Sustainable Development Initiative as a strategic and cross-cutting framework to ensure that all relevant projects, programmes and measures contain appropriate environmental management practices, and promote conservation and sustainable management of natural resources.¹⁵ Another important example is the Regional Biodiversity Strategy for the Tropical Andean Countries—a wide-ranging initiative for this subregion that represents one of the world’s richest zones in terms of natural resources, containing about 25% of the biological diversity of the entire planet. The strategy is one of the first attempts by the subregion to develop a comprehensive platform of community action, promoting cooperation between member countries and projecting them with a new and unique identity to the international community. It is also one of the first community strategies adopted on this issue by a group of signatory countries of the Convention on Biological Diversity, and makes a specific contribution towards fulfilling its objectives (CAN, 2003b).¹⁶

5. Coordination of macroeconomic policies and financing for development

Although this chapter has so far considered measures that directly and indirectly facilitate trade, the agenda extends beyond issues of this type. Recent years have seen increased interest in coordinating macroeconomic policies within country subgroupings, and this has led to dialogue between the authorities of member countries on exchange-rate, monetary and fiscal policies. Despite this progress, it has not proved possible to establish systematic coordination, with the necessary institutional framework.¹⁷ Furthermore, the absence of clear positions on adopting cooperation commitments in this area suggests that the countries involved are doubtful of the specific advantages to be gained from them.

A key issue that needs to be addressed at the outset concerns the strategic aims of the integration process. If the intention is merely to establish free trade zones, then there is less need for macroeconomic coordination. In such cases, the partners are not pursuing more ambitious long-term objectives, such as those that come into play in the more complex systems that result from deeper integration, moving towards the creation of common markets. In such cases it is practically impossible to avoid general coordination for two fundamental reasons. The first relates to management of the business cycle, and the second to exchange-rate volatility, and macroeconomic instability in a broader sense.

As regards the business cycle, its origin (exogenous or endogenous) and frequency (synchronous or asynchronous) pose alternatives in terms of ease of coordination and willingness to coordinate. The most advantageous extreme is the synchronous cycle of external origin, in which case, policies should be aimed in the same direction and participating countries can clearly see the benefits to be gained from calibrating their policy instruments and the resources available to them. Furthermore, from the conceptual standpoint, this synchrony in the aggregate behaviour of economic activity, driven by exogenous factors, has traditionally been viewed as favourable for monetary union. In such cases, the benefits of a common monetary policy outweigh the costs of

¹⁵ The Meso-American Sustainable Development Initiative attaches special importance to the development of standards and procedures in strategic environmental impact assessments, which will enable participating countries to design suitable environmental mitigation and management plans in advance, exploit the synergy between projects, and ensure conservation and sustainable use of natural resources.

¹⁶ The Regional Biodiversity Strategy was adopted through Andean Community Decision 523, and approved by the Andean Council of Foreign Ministers in Lima, on 17 July 2002. It covers a five-year period and has activities in several areas, with goals relating to conservation and sustainable use of biological diversity, fair distribution of benefits, protection and strengthening of knowledge, and strengthening of the subregion’s negotiating position (CAN, 2003b).

¹⁷ An issue not discussed in this chapter concerns the “institutions” of integration. Unlike what happened in the past, the new regionalism has been very cautious in setting up institutions to accompany the process. In one sense, this means that the initial consolidation phase has yet to be completed. In addition, weak institutions significantly hamper the progress of integration. On this issue and its application to the case of MERCOSUR, see Motta Veiga, 2003.

being unable to manage domestic credit. At the other extreme, when cycles are asynchronous and associated with endogenous decisions, there is little fertile ground for cooperation. The natural reaction is to keep a prudent distance from the “partner with problems” in the belief that such conduct yields greater benefit in the short-term, although its practice weakens and calls into question the very essence of the commitment and advantages of integration.¹⁸

The design and adoption of a given exchange-rate regime also requires coordination. Volatility in bilateral exchange rates not only hampers trade and economic activity, but also sends contradictory signals for decisions on the allocation of investment within the common economic space. The consequences are not only confined to the trade domain, but also extend to the political economy of the process. Instability in the real exchange rate spawns defensive strategies in the sectors affected, which normally express themselves through pressure to raise protectionist barriers. As result the dynamic of integration is impaired and the general course of the process is called into question.¹⁹ Reducing exchange-rate volatility is thus a crucial factor in moving integration forward on sound foundations.

The difficulties that arise are objective and not merely a justification for macroeconomic cooperation and dialogue. In practice, it is very hard to distinguish factors that trigger the cycle; macroeconomic management is naturally a highly sensitive issue at the national level and, in some cases, there are short-term benefits to be gained from a lack of cooperation. What has happened in Europe over the last few years is instructive for Latin America, especially in terms of the sequence and rationale of the fiscal and monetary convergence criteria adopted (ECLAC, 2002f). The first point to be highlighted in this case is that the process was nonlinear and subject to advances and retreats; and the nucleus of the effort centred around exchange-rate policy. In fact, the history of the European Union in this area has been the search for an efficient exchange-rate regime, particularly since the abandonment of the Bretton Woods fixed parities. The existence of solid commitments on exchange-rate design subsequently made it possible to set more ambitious targets in the monetary and fiscal domains. Building on this core of economic decisions, other practices and arrangements were implemented that strengthened the dynamic of integration, including the publication and dissemination of agreements to enhance transparency, information dissemination, and the decision that commitments entered into would transcend the authorities that signed them. This was accompanied by the gradual installation of supranational bodies with independence and authority to judge the performance and decisions of member countries. Macroeconomic coordination in Europe thus developed alongside progress on other fronts. These different domains have benefited from mutual feedback: trade deepening and economic integration were favoured by macroeconomic coordination, which they themselves had also helped to initiate.

Bearing in mind the history of the region and the characteristics of its various subgroupings, macroeconomic coordination in practice allows for greater stability. Here too one can draw an analogy with the path travelled by the European Union, in which macroeconomic coordination both facilitated and fuelled economic exchange and transactions. This is the natural space in which incentives for coordination arise.²⁰ In this regard, it is essential to establish common targets for inflation and fiscal policy, specifically the key deficit and debt indicators. Complementary work can then be carried out on other related areas that comprise an agenda for convergence and macroeconomic stability in the institutional domain: central bank independence, stabilization of subnational fiscal relations, and the creation of supervisory bodies for the financial system and capital market, among others. In this context, it is not a matter of adopting uniform institutional models, but rather of applying models with similar incentives and compliance mechanisms.

¹⁸ See IDB, 2002b, chapter 8.

¹⁹ See Machinea 2003 on this issue. Eichengreen (1993) presents a similar analysis for the European case.

²⁰ Heymann (1998) analyses the factors that give rise to a “demand for coordination” in the integration process within MERCOSUR.

Given the regional situation, consolidation of stability should be a means of allowing progress to be made in the other area mentioned, namely reduction of exchange-rate volatility within regional subgroupings. Past experience seems to show that the choice of exchange-rate regime is a key element in harmonization. Incompatibilities in the exchange-rate regime between close trading partners can generate imbalances that undermine trade and affect investment decisions within the common economic space. Nonetheless, the situation of the Latin American and Caribbean countries is considerably more difficult than that facing Europe several decades earlier. For one thing, the region is not only more exposed to capital flows and external financing shocks, but also lacks a reserve currency as existed in the European case. For this reason the objectives of the exchange-rate regime, especially the width of flotation bands, need to be less ambitious in the case of regional subgroupings.

These elements suggest that there are sufficient grounds to develop momentum and dialogue on macroeconomic cooperation based on very specific actions. The specifics and deadlines obviously have to be decided according to the economic needs and policies of each regional space. Even so, the macroeconomic coordination that is both necessary and possible given the characteristics of the region may become unproductive if the strategic goals of deeper integration disappear from view. Coordination and the mechanisms to make it viable only become possible when there is a conviction of the need to create a common economic space. Conviction must be more than a simple expression of willingness; it needs to be based on a favourable evaluation of the costs and benefits involved. There are major lessons to be learned from the European experience in this domain also, where the dynamic of integration reflected an vision of the union as an achievement in terms of reputation and concrete economic benefits. Hence the determination of member countries to defend common standards to preserve such capital; and hence also the motivation of other countries to join the agreement. This means that the signatories of the agreement must value the advantages of membership and develop common rules of behaviour that help consolidate and materialize the benefits of integration.

6. Social cohesion

Experience in Latin America and the Caribbean has shown that regional integration processes cannot ignore problems affecting the economic and social conditions of people's lives. Transborder displacements intensify when trade expands, and the attendant creation and disappearance of activities affect the labour market and labour skills. In some cases, such effects are exacerbated by glaring asymmetries in terms of the relative size and strength of the participating countries. Consideration of the social dimensions of regional integration is nothing new, and the path followed by the European Union is also an important example for Latin America and the Caribbean in this regard.²¹ The policies that are usually proposed to moderate the repercussions of integration are not inspired by social equity alone; greater social cohesion facilitates the integration process and stimulates convergence between the interests of political, social and economic actors.

Nonetheless, despite their acknowledged importance, social dimensions have not been adequately addressed in integration agreements. Implementation of the social agenda has been slow or postponed. There are many agreements that recognize the importance of that agenda in subregional integration processes, and in some of broader scope, but their application is very limited (di Filippo and Franco, 2000). Specific problems relate not only to conceptualization of the social dimensions of integration, but also to practical issues such as financing. If the arrangements existing today have not yet worked on specific instruments, one wonders what specific sources and levels of fiscal funding will be needed to address the costs of compensatory policies.

²¹ The European Union has numerous formal instruments and a long list of programmes targeting vulnerable economic and social groups and different regions, in order to promote equity. This shows that the economic and social cohesion funds of the European Union have played a major role in its integration process. See Bustillo and Ocampo, 2003; and Assael, 2004b.

It would therefore be useful to identify areas of intervention which, in principle, do not require major resources. In fact, there are two issues that seem particularly important: worker migration and education.²² It is essential that migration be fully included on the regional agenda, since easier geographic mobility tends to equalize wages across regions, and even between workers with different skill levels. Although free mobility of labour reduces income inequality, the globalization process has been characterized by liberalization of goods and services and capital markets, while stringent restrictions continue to be applied on the international mobility of workers. This asymmetric liberalization of markets has regressive effects worldwide, by benefiting the more mobile factors of production (capital and highly skilled labour) and damaging those subject to more restricted mobility (unskilled labour). Despite this situation, activities that stimulate and facilitate labour mobility cannot be embarked upon without preparation. The size of the migrant population may be significant, particularly when countries display wide differences in per capita income. This raises the need for strict monitoring of sectors and regions that act as poles for attraction and expulsion of population, in order to formulate timely policies to address the needs raised by migratory movements, including the expansion of urban infrastructure and education services.

The members of MERCOSUR, the Andean Community, the Central American Integration System, CACM and CARICOM have already taken major steps to extend the scope of measures beyond specific agreements on trade, and are beginning to tackle issues relating to the social agenda, in which migration needs to be explicitly recognized. Some issues that are closely linked to migration—including border transit, worker circulation, social security and recognition of studies and personal qualifications—could be more effectively addressed in regional or bilateral agreements (ECLAC, 2002a).

In the Andean Community, for example, work is currently going on to update regulations governing the movement of persons and labour migration; and another set of measures are expected to be adopted with the aim of creating conditions for free movement of tourists in this subregion. There is also an agenda that aims to allow professional and technical workers to provide their services in any member country.²³ In addition, as part of the initiatives adopted in the Puebla-Panama Plan framework, including the Meso-American Human Development Initiative, consideration is being given to creation of a system of statistical information on migrations, in order to ascertain and monitor the scale of migration between, from and to the countries of Central America and the south and southeastern states of Mexico (IDB, 2002b and 2003a). Lastly, migration clearly needs to be viewed as a priority issue in the hemispheric integration process.

In the field of education and training, progress can be made in establishing regional exchanges and networks of experts, Governments and organizations, either through direct contacts or electronic communication. This can be harnessed to share good practices, successful and creative experiences, information on the strengths and weaknesses of reforms, pedagogic methods, and programmes for computerizing the school system, among other items. It is also important to exchange ideas on educational content, computer programs, web portals and textbooks; comparison of achievements, establishment of standards by level, professional aptitude criteria, and implementation of teacher refresher programmes. Apart from helping to strengthen national education systems, these activities would make it possible to strengthen regional accreditation systems and help streamline procedures for recognition of qualifications (ECLAC, 2002a).

In general terms, and as integration deepens, it is necessary to design social policies with multiple objectives in this area: working towards universalization of social protection systems; reducing the disparities that arise in access to training and employment (among women, young

²² On these issues, see ECLAC (2002a, chapters 8 and 4).

²³ The tourism measures include simplification and reduction of police and customs procedures, and provisions on security and mutual trust. In the case of professional and technical workers, this involves approval of a community regulation allowing for recognition of academic degrees and professional qualifications.

people and the long-term unemployed); and helping less prosperous states and regions to achieve economic development comparable to the levels attained elsewhere. Clearly, actions of this nature have a cost, and they can be executed by a supranational authority under principles agreed by the participants. Another alternative is for countries to address these needs from their own budgets. In either situation there are financial constraints, which would require a review of territorial expenditure priorities and the design of public programmes for education, infrastructure and health development, among others, bearing integration needs in mind.

II. Regional integration and North-South integration initiatives

As indicated in previous sections, nearly all countries in the region are involved in integration processes between subregional blocs, but these are far from uniform. Other countries have chosen unilateral liberalization strategies, the most obvious example being Chile. Mexico, apart from participating in NAFTA, has signed a number of free trade agreements with other countries and trade blocs. The process is also multi-directional: active steps are simultaneously being taken to establish free-trade agreements with the United States, Canada and the European Union, to mention just the most important cases. Progress also continues to be made in negotiations to create the Free Trade Area of the Americas, although the aims have diverged somewhat from the original proposal. The agreement now seems to centre on a reduced core of common clauses that countries would undertake to apply, with remaining issues being left to the discretion of the countries, in a “variable geometry” arrangement. This solution has been used as a device to overcome the difficulties that have arisen in the negotiations. As is well-known, the existence of diametrically opposed positions on the dismantling of agricultural subsidies, and differences in market access conditions, have led to the formulation of a more restricted hemispheric agreement.

In view of these circumstances, the United States has signed bilateral free trade agreements with a number of countries in the region, and this alternative has been welcomed by them. Such agreements provide certain benefits, including access to the largest market in the hemisphere, consolidation of positions and preferences that were formerly subject to discretionary concession, and the possibility of growing trade openness. There are also costs, however: intraregional trade will probably be subject to deviation in the North-South direction, and countries that are not included in these agreements are likely to suffer net losses. Furthermore, countries that have been favoured by an agreement tend to lose interest in a more ambitious regionwide treaty. As a result, the position of Latin America and the Caribbean now seems to be less cohesive in terms of multilateral negotiations in light of the Doha Round. Moreover, as developed countries achieve the goals of their agenda through agreements of this type, their motivation and commitment to that negotiating round also diminishes.

In view of the current status of agreements signed, one may wonder whether there is any chance of refocusing the FTAA to make it an effective instrument for hemispheric integration. There are many elements in play. Any results achieved necessarily depend on the effort and leadership invested in negotiations on agriculture, which is a key issue for several countries, especially members of MERCOSUR; and on other issues that are important for the United States. Provided balanced convergence is achieved on these issues, there are clear advantages in a hemispheric integration project that would make it possible to overcome several of the limitations of the scenario that is currently emerging.

III. Conclusions

The simultaneous and multi-directional trade-policy processes that have been described in this chapter raise questions as to the future of regional subgroupings. Their current situation corresponds to an imperfect customs union, where steps to define a common external tariff and deeper customs integration have been hampered by specific difficulties in each subregion. It will be hard for blocs to remain in this embryonic state of integration for much longer, given the trends developing in trade negotiations. If countries were to chose bilateral treaties, these could be less and less compatible with a deepening of subregional agreements, especially in cases where the members of a customs union are at the same time signatories of a free-trade agreement. The elements of such a union would tend to break up in response to a weakening of the common external tariff, the proliferation of rules of origin, and loss of bargaining power among subgroupings, among other factors. Another alternative is to speed up efforts to overcome the lack of definition that has tended to plague subregional groupings. If specific progress were to be made on this, member countries could reap the benefits traditionally attributed to this form of "open regionalism", namely the dismantling of costly rules-of-origin mechanisms applicable between trading partners; enhanced bargaining power with other blocs; more effective action by members on activities and goods that receive discriminatory treatment internationally; and, in general, a strengthening of the multilateral negotiating process. For the immediate future, however, this alternative also requires concrete measures to be adopted on the relation between subgroupings, which encourages the signing of free trade agreements between them. In current circumstances, this represents a defensive strategy to avert the possibility of trade deviation arising from the proliferation of free trade agreements. It is clear, therefore, that if existing agreements make it possible to overcome some of the historical obstacles, and, as a result, faster progress is made in terms of trade and economic integration, subregional spaces will then be compatible with an expansion of exchange in the hemispheric and multilateral domains.



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