

**Chapter III**

Business cycle and investment

The previous chapter discussed the determinants of long-term growth, highlighting the importance of structural change as a key vector of increases in productivity, aggregate demand and employment—the variables defining a virtuous pattern of growth. The forces that govern the long-run behaviour of the economy rearrange the patterns of international positioning and technology and productivity gaps, both external (in relation to developed countries) and domestic (within each of the Latin American economies, where a large proportion of jobs are still being created in very low-productivity activities). The previous chapter also stressed the need for economic diversification to absorb large contingents of workers in activities with increasing productivity, and thereby reduce inequality through the convergence of labour capacities and income.

Nonetheless, this long-term process is not immune from short-term shocks and fluctuations, particularly in a world where volatility has tended to increase. Short-term cycles overlay and interact with structural change. As analysed in chapter I, these fluctuations are partly caused by external shocks that affect the production matrix. This, in turn, determines the long-term equilibrium growth rate.

Positive external shocks can temporarily speed up economic growth. Where balance-of-payments dynamics are predominant, the challenge for macroeconomic and structural change policies is to absorb external shocks in a way that ensures that the exogenous and temporary abundance of resources is turned into a process of endogenous capacity-building and structural change. The building of authentic competitiveness would make it possible to increase and diversify exports and finance the imports needed for rapid growth. At the same time, aggregate-demand management policies may prevent external shocks from generating cumulative imbalances that result in serious crises, such as those experienced by many of the region's economies in the 1980s, the late 1990s and early 2000s. Managing the effect of shocks on macro prices (interest rate, exchange rate, wage rate) and on demand and investment, taking account of

their effects not only on short-term growth and employment but also on the production structure, is a key concern of a development-oriented macroeconomics.

This chapter is organized as follows. Section A discusses the characteristics of the business cycle in the region, identifying the cycles and their duration and amplitude and comparing them with those prevailing in other regions of the world. It shows that the Latin American and Caribbean region tends to have truncated expansion phases and that they tend to be shorter than in other regions. Short expansion cycles reflect the inability of the production structure to transform the momentum of demand growth into sustained endogenous economic growth (through linkages, spillover effects and virtuous circles). As discussed in chapters I and II, the region's production structure does not allow a virtuous internal dynamic to unfold between productivity increases and rising employment. This section also analyses the change in the growth trend in the 1980s, highlighting the adverse long-run effects of the investment crunch during the external debt crisis in a world where technology capacities are constantly changing.

Section B shows how external shocks have contributed to alleviating or intensifying balance of payment pressures and how they have triggered fluctuations and changed the growth trend in the region. The section also analyses capital movements and underlines the importance of the institutional changes that have occurred, both in the international economy since the end of the Bretton Woods regime and fixed-exchange-rate system in 1973 and in the region's economies following the reforms and trade and financial opening of the 1980s and 1990s.

Section C describes the trade and terms-of-trade dynamics that have influenced the region's production structure, strengthening a trend towards export reprimarization in natural resource exporting economies. It also highlights the growing impact of Chinese economic growth on agricultural and mineral commodity prices and on the composition of exports.

Section D discusses investment trends as a key variable linking the short with the long run. Investment forges the production and technology linkages that foster growth. The fact that investment responds weakly to expansions but contracts sharply in recessions explains why structural change is so slow and the spillover effects on the rest of the economy so weak. The section also highlights the low rates of investment that have generally predominated since the crisis of the 1980s, despite a recovery in recent years. The fact that public investment has been severely hampered by adjustment measures poses a major coordination problem for the economic system, since it is a key variable for attracting private investment and overcoming growth constraints —particularly in infrastructure sectors.

Section E looks at the features and dynamics of foreign direct investment (FDI) flows to the region, showing that in addition to providing a source of savings, FDI is taking on an increasingly important role in activities that involve natural resources and the tapping of domestic markets and export platforms. The section draws attention to the region's low profile as a destination for investment that seeks skilled and qualified resources to undertake advanced research, development and innovation.

Section F examines the dynamics and structure of savings, distinguishing between domestic and external, and private and public sources. Last, section G turns to microeconomic analysis, with a review of the profitability of the region's largest companies. It shows how business profitability reinforces the prevailing specialization pattern, which ultimately perpetuates the problems of poor job creation and income distribution, with their consequences for equality.

A. The business cycle in the region

The pattern of economic growth in the region's countries between 1990 and 2010 displays a significant cyclical component determined by external shocks (particularly in relation to access to international liquidity and terms-of-trade fluctuations) and procyclical policies. GDP tended to track terms-of-trade variations more closely in 1970-1979 and 2003-2007; shocks related to financial flows were more common in the late 1960s and in 1980-1990 and 1991-2002. The two phenomena acted in harness in 2008-2010 (ECLAC, 2010b).

Vulnerability to shocks has been accentuated by the liberalization of capital flows and a weak macroeconomic institutional framework that has failed to develop mechanisms to cushion them. Furthermore, with the exception of the 2008-2009 recession, the region has traditionally responded to external shocks with procyclical policies, which are studied in greater detail in chapter IV.

Based on the examination of the dynamics of the different phases of the cycle in 1990-2010, table III.1 shows that the average duration of recession phases in Latin America and the Caribbean, both region-wide and subregionally, is similar to those of the other countries in the sample (roughly four quarters) (see Pérez-Caldentey and Pineda, 2010 and Titelman, Pineda and Pérez-Caldentey, 2008).¹ In South America, the average recession lasts 5.6 quarters, whereas in Central America and the Dominican Republic, recessions tend to be shorter (3.0 quarters).

Table III.1
DURATION AND AMPLITUDE OF REAL GDP EXPANSIONS AND CONTRACTIONS, BY LEVELS,
SELECTED REGIONS AND COUNTRIES, 1990-2010

	Expansion		Contraction	
	Duration (quarters)	Amplitude of the upswing (percentage of GDP)	Duration (quarters)	Amplitude of the downswing (percentage of GDP)
South America	19.9	27.5	5.6	-8.0
Central America and Dominican Republic	20.5	26.3	3.0	-3.3
Mexico	23.0	25.6	4.3	-8.0
Brazil	14.3	15.6	2.8	-3.0
Latin America and the Caribbean	19.7	25.3	3.8	-6.2
East Asia and the Pacific	31.5	42.4	3.6	-9.4
Eastern Europe and Central Asia	29.1	52.3	4.0	-12.2
OECD member countries	34.0	29.8	4.3	-5.1

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

¹ A standard method described in the literature on business cycles was used to identify cycle turning points (maxima and minima) in real GDP series expressed in levels, using quarterly data from a sample of 59 countries for 1990-2010. The turning points made it possible to identify GDP expansion and contraction phases. Subsequently, the duration and amplitude of economic activity expansions and contractions were estimated for countries, regions and subregions. Duration refers to the length of a contraction between turning points and of the expansion phase. Amplitude refers to the change in economic activity between turning points. Appendix II.1 lists the regions and countries studied and provides details on the methodology.

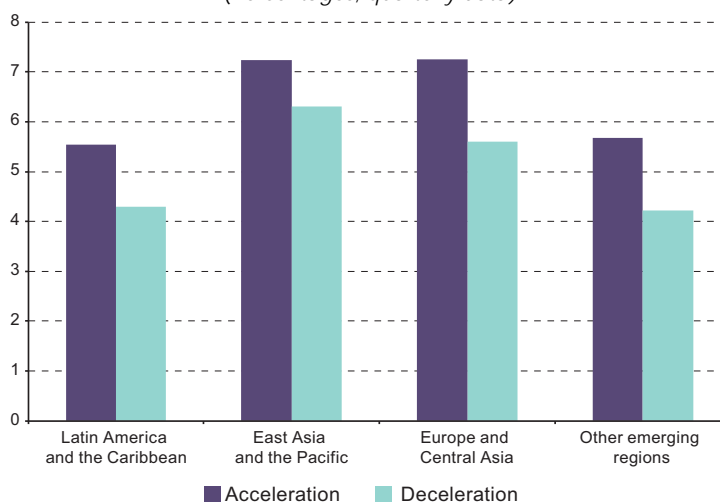
Expansion phases, on the other hand, tend to be shorter in Latin America and the Caribbean than in the other regions in the sample. The difference is particularly significant (12 quarters or more) compared with countries in East Asia and the Pacific and with Organization for Economic Cooperation and Development (OECD) countries. The difficulty faced by the region's economies in sustaining expansions has impaired their ability to reverse the effects of recessions on the production structure, which helps explain the low average growth rate over the past 20 years.

As shown in other analyses reported in the literature on business cycles (Male, 2011; Harding and Pagan, 2005), contractions tend to be sharper in developing countries than in developed ones. The average fall in the recession phase of the cycle in South America and Mexico is 8.0 %, whereas Central America and the Dominican Republic the drop is much less pronounced. This difference is explained by the fact that the strongest and most intense crises in the period under study —the Mexican crisis (1994-1995), the Asian crisis (1997-1998), the Russian crisis (1998) and the Argentine crisis (2001-2002)— had their epicentre in Mexico or South America. Contractions in East Asian and Pacific countries are similar in amplitude to those of South American countries (Titelman, Pineda and Pérez Caldentey, 2008).

The amplitude of expansions also varies sharply between regions. In East Asia and the Pacific, GDP has grown by 42.4% on average during expansions, which last almost 32 quarters (eight years). In contrast, in Latin America and the Caribbean average GDP growth in expansions is just 25.3%, with upswings lasting less than 20 quarters.

Overall, expansions in Latin America and the Caribbean tend to be shorter-lived and weaker than in other regions of the world. The contrast is particularly marked in comparison with East Asia and the Pacific, where expansions are steadier and longer. These findings are confirmed when the expansion is broken down into an acceleration phase (in which GDP grows at increasing rates) and a deceleration phase (GDP growing at declining rates) (see figure III.1). Latin America and the Caribbean is the region with the weakest average growth —5% in the acceleration phase compared with 7% for East Asia and Pacific and 6% for other emerging countries.

Figure III.1
DEVELOPING REGIONS: ANNUAL AVERAGE GDP GROWTH RATE IN THE ACCELERATION AND
DECELERATION PHASES OF CYCLE EXPANSIONS, 1990-2010
(Percentages, quarterly data)



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

The pattern varies across subregions (see table III.2). South America, followed by Central America and the Dominican Republic, shows greater capacity to leverage the acceleration phase. At the other extreme are Mexico and Brazil, with limited capacities to speed up growth in that phase.

Table III.2
ANNUAL AVERAGE GDP GROWTH RATE IN CYCLE EXPANSIONS, 1990-2010
(Percentages)

Subregion or country	Acceleration	Deceleration
South America	5.8	4.5
Central America and Dominican Republic	5.6	4.1
Mexico	4.3	3.6
Brazil	4.4	3.5

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

An analysis of fluctuations in the demand components of GDP shows that investment falls more sharply than other components in the downswing (see table III.3). Its behaviour is also clearly asymmetric, with drops during recessions being much sharper than increases during upswings. This is particularly the case with public investment in infrastructure, which contracts 12 times more sharply than GDP overall. As shown below, this category of investment ultimately serves as an adjustment variable during contractions. Government consumption is also highly procyclical, which is typical of the behaviour of fiscal variables generally until 2007.

Table III.3
LATIN AMERICA: DURATION AND AMPLITUDE OF THE VARIATION IN COMPONENTS OF AGGREGATE DEMAND IN RELATION TO GDP IN EXPANSIONS AND CONTRACTIONS, 1990-2007^{a,b,c}
(Quarterly data)

Components of aggregate demand	Expansion		Contraction	
	Duration (duration of expansion equal to 1)	Amplitude of upswing (change in GDP equal to 1)	Duration (duration of contraction equal to 1)	Amplitude of downswing (change in GDP equal to 1)
Private consumption	1.0	1.3	0.9	1.3
Government consumption	0.6	1.3	1.1	4.2
Investment	0.7	2.5	1.2	5.3
Public investment in infrastructure	-	1.9	-	13.5
Exports	0.9	1.9	1.1	2.9
Imports	0.6	2.1	1.1	4.2

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

^a The calculations include 11 Latin American countries: Argentina, Bolivarian Republic of Venezuela, Brazil, Chile, Costa Rica, Dominican Republic, Ecuador, Guatemala, Mexico, Paraguay and Peru (see annex II.1).

^b The figures in the "Duration" columns represent the quotient between the number of quarters of expansion or contraction of each component of demand and the number of quarters of GDP expansion.

^c The figures in the "Amplitude" columns represent the quotient between the percentage change in each component of demand and the percentage change in GDP.

While a lower rate of investment has short-term effects on aggregate demand and employment, it also affects the long-term path of the economy since it means less growth in the capital stock, thereby undermining the economy's capacity to create and sustain jobs. It also has an adverse effect on productivity by postponing the adoption of more capital- and technology-intensive production methods.²

In five of the region's countries (Argentina, Brazil, Chile, Colombia and Mexico) the fall in manufacturing industry labour productivity in relation to GDP, in the downswings between 1970 and 2008, was both sharper and longer-lasting than the recovery in the subsequent upswings. In contractions, productivity declined on average by three times more than GDP; in the following expansion it increased by about half of GDP growth (see table III.4). This can be seen as an asymmetry in the working of the Kaldor-Verdoorn law because the positive impacts of learning during upswings are weaker than the capacity losses during recessions.

Table III.4
LATIN AMERICA (SELECTED COUNTRIES): DURATION AND AMPLITUDE OF MANUFACTURING SECTOR
LABOUR PRODUCTIVITY CYCLE EXPANSIONS AND CONTRACTIONS IN RELATION TO GDP, 1970-2008

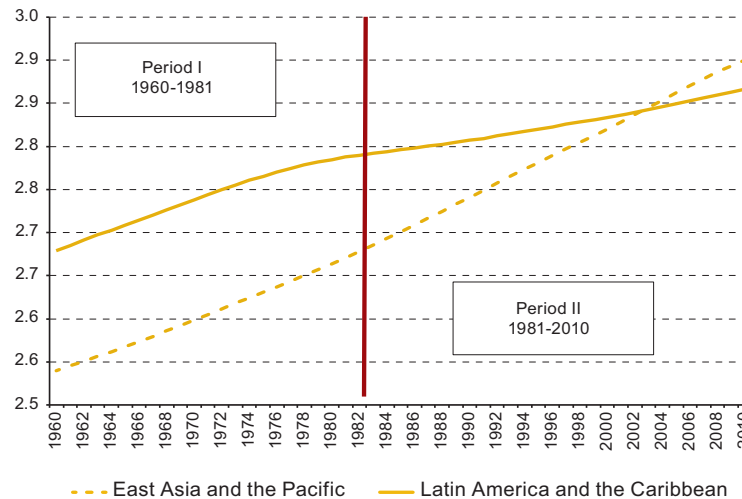
	Expansion		Contraction	
	Duration	Amplitude	Duration	Amplitude
Argentina	0.5	0.7	1.0	3.0
Brazil	0.4	0.4	1.3	5.9
Chile	0.3	0.4	1.0	2.1
Colombia	0.4	0.2	1.5	2.0
Mexico	0.6	0.6	0.8	2.4
Average	0.4	0.5	1.1	3.1

Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of the Industrial Performance Analysis Programme (PADI), 2011.

Both investment and the production structure have been seriously affected during crisis periods in Latin America and the Caribbean, and this has undermined the region's growth capacity. Not only does the fall in trend GDP reflect shorter expansions —it also reflects the adverse effects of the business cycle dynamic on the production structure. Figure III.2 shows trend GDP for Latin America and the Caribbean and for the East Asian and Pacific subregion for 1960-2010. Whereas the countries of East Asia and the Pacific have been able to sustain a rising GDP growth path throughout the period, there is a structural break in Latin America and the Caribbean in the 1980s. The GDP trend between 1960 and the early 1980s (period I) is similar to that in East Asia and the Pacific. Then, starting with the lost decade of the 1980s, it tends to decline and does not recover in the 1990s or the first decade of the 2000s, meaning that growth rates are lower than before the debt crisis (period II). The basic difference is between a virtuous model (such as that of East Asia, where there was positive structural change) and the Latin American and Caribbean model with its pattern defined by its static comparative advantages. Apart from the duration of business cycle phases, the measures taken in each case to improve the pattern of specialization and the production structure are also important. The region's cyclical behaviour and its impact on the growth path pose policy design challenges that will be discussed in chapter VI.

² See OECD (2009) for an analysis of the potential long-term effects of a fall in investment.

Figure III.2
TREND GDP FOR LATIN AMERICA AND THE CARIBBEAN AND EAST ASIA AND THE PACIFIC, 1960-2010^a
(Annual logarithmic data)^b



Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of World Bank, "World Development Indicators" and "Global Finance" [online] <http://www.gfmag.com/>.

^a The East Asia and Pacific region consists of 22 nations, including China, Japan, the Republic of Korea and Singapore.

^b Hodrick-Prescott method.

The persistent effects of the debt crisis are seen in the structural break in the region's GDP trend and in the fact that the economic policies implemented in the two decades after the crisis did not reverse those effects. Even in the period of fastest growth witnessed by Latin America and the Caribbean over the past 30 years (2003-2008), the countries of the region, with few exceptions, did not succeed in reversing the structural break or improving the trend. This is unlike what happened in Asia: the 1997 crisis, one of the severest to hit the countries of East Asia, did not change the path of trend GDP.

To summarize, the region's cycle dynamic is characterized, first, by unsustainable expansions that translate into shorter periods of economic growth. Second, investment rates drop sharply in recessions but do not rebound as strongly in expansions. And the more marked contractions in investment rates have effects that persist in the long term, as shown by the trend break in the 1980s.

B. External financial shocks

Financial globalization and greater access to international financing have made external financial shocks a more important factor in short-term cycle dynamics (Moreno-Brid, 1998 and 2002; Barbosa-Filho, 2002). Although the evolution of import elasticity is a reflection of the structural determinants of the long-term growth rate, this does not mean that there are unbreachable limits in the short term (McCombie and Thirlwall, 1999). The long-term growth rate can be surpassed in the short or medium term if the economy has fluid access to external financing or the terms of trade improve.

This section discusses the increased importance of international financial flows for the business cycle and volatility in the region, as well as the changing role of the different forms of capital inflows through time. Subsection 1 shows that starting with the economic reforms that began in the mid-1980s (some of which had already been attempted in the late 1970s in South America and brought increasing degrees of trade and financial liberalization), capital movements strongly influence the region's GDP. Subsection 2 discusses changes in the composition of those flows, such as the relative decline in foreign borrowing in the first decade of the twenty-first century, the increasing importance of FDI and portfolio investment and the key role of emigrant remittances in some countries, particularly in Central American countries.

1. Financial opening

The end of the Bretton Woods exchange-rate regime and the major transformations that the world economy underwent in the second half of the 1970s (as private international banks recycled “petrodollars” and eurodollars and transferred them to developing countries) redefined the region's mode of external insertion by allowing access to private sources of funding and reducing dependency on multilateral sources.³ These changes in the external environment were matched by changes in the region's institutional framework. It was in the mid-1970s that economies that were closed to capital flows, such as those of South America, made the first attempts at financial liberalization. But their impact was reversed by the 1980s debt crisis. External borrowing generated growing imbalances that made the desired integration unsustainable, as indicated in the title of the classic article by Diaz-Alejandro (1985): “Good-bye financial repression, hello financial crash”.

In the 1990s, the trend towards financial openness gained renewed impetus, as shown by the Chinn-Ito index in figure III.3.⁴ After falling during the debt-crisis years, the index in Latin America and the Caribbean began to rise in the 1990s. By the mid-1990s it had surpassed the levels seen in the 1970s (Stiglitz and others, 2006).⁵ This trend is widespread and seen in all subregions, although it is less intense in the Caribbean, where financial openness did not return to 1970s levels until the 2000s. As a result, by the late 2000s the economies of Latin America and the Caribbean had achieved the highest degree of financial-account openness of all developing economies (see table III.5). In Central America and the Dominican Republic the indices were close to those of developed economies. Growing financial openness was accompanied by an increase in foreign-currency assets in the region, which grew to represent 18%, 15% and 17% of GDP in South America, Central America and Mexico, and the Caribbean, respectively.

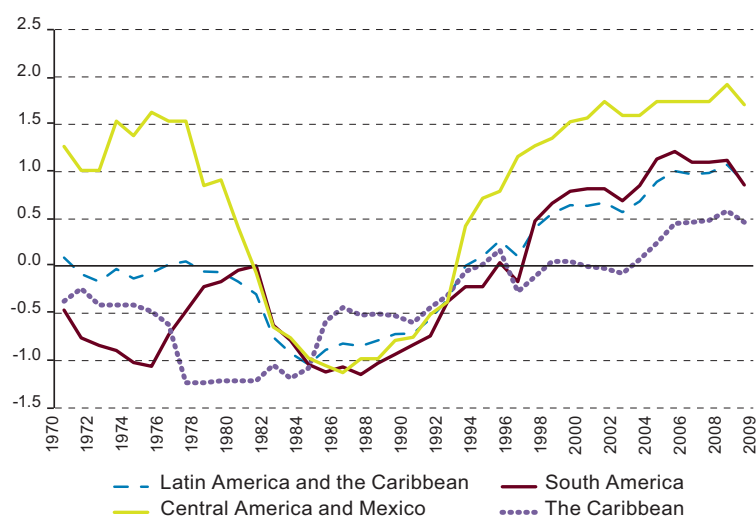
Increasing financial liberalization has led to closer synchronization between the liquidity cycles of some central economies —basically the United States and European countries— and the economic fluctuations of the countries of Latin America and the Caribbean (Rigobon, 2002). Figure III.4 shows that boom-bust cycles in foreign capital inflows are positively related (albeit with a lag) with their counterparts in economic activity.

³ For the purposes hereof, financial openness entails deregulation and the removal of barriers to capital movements, while financial integration refers to how this openness is reflected in terms of flows.

⁴ The Chinn-Ito index (KAOPEN), developed by Chinn and Ito (2006), measures a country's degree of financial account openness. The index is based on the dummy variables that codify the constraints on cross-border financial transactions reported in the International Monetary Fund *Annual Report on Exchange Arrangements and Exchange Restrictions*.

⁵ In South America both the financial liberalization of the 1970s and the subsequent slippage in the 1980s occurred somewhat later than in the other subregions.

Figure III.3
LATIN AMERICA AND THE CARIBBEAN: CHINN-ITO INDEX OF FINANCIAL OPENNESS, 1970-2009



Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of "The Chinn-Ito Index" [online] http://web.pdx.edu/~ito/Chinn-Ito_website.htm.

Table III.5
STANDARDIZED INDEX OF FINANCIAL OPENNESS, BY REGION, 2006-2009^a

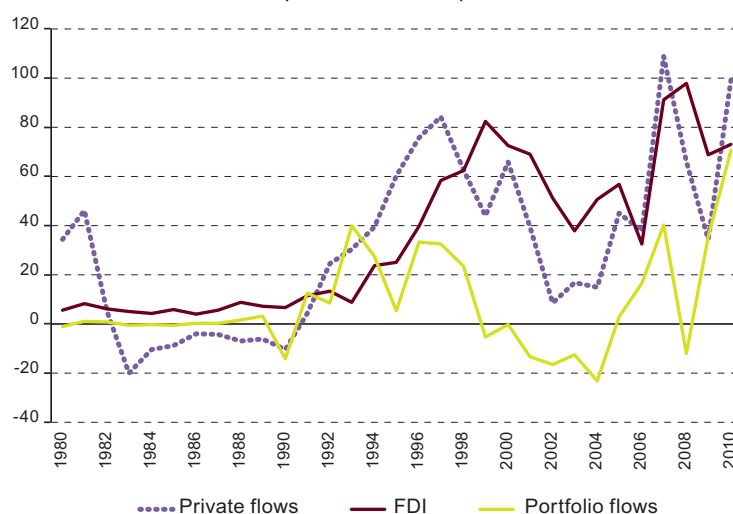
	2006	2007	2008	2009
East Asia and the Pacific	0.20	0.21	0.38	0.32
Eastern Europe and Central Asia	0.15	0.15	0.29	0.20
Latin America	0.55	0.56	0.60	0.50
Central America and Dominican Republic	0.72	0.73	0.82	0.73
Middle East and North Africa	0.16	0.16	0.17	0.16
South Asia	0.03	0.03	0.14	0.10
Developed countries	0.82	0.84	0.82	0.82

Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of "The Chinn-Ito Index" [online] http://web.pdx.edu/~ito/Chinn-Ito_website.htm.

^a The Chinn-Ito index is standardized from 0 to 1, with higher values indicating greater financial openness. The Caribbean is not included because the data are not compatible.

Financial openness brought greater volatility: identifying and quantifying financial shocks show that their frequency and magnitude increased following the period of trade and financial opening in the 1990s (Titelman, Pineda and Pérez Caldentey, 2008). The greater volatility seen in the second half of the 1990s and second half of the 2000s is not only found in financial flows —it impacts the behaviour of FDI as well.

Figure III.4
LATIN AMERICA AND THE CARIBBEAN: PRIVATE FINANCIAL FLOWS, 1980-2010
(Billions of dollars)



Source: International Monetary Fund (IMF), *World Economic Outlook*, 2011.

The period between the mid-1980s and the Asian crisis (1997-1998) saw a trend increase in private financial flows led by FDI (with the privatization of large public enterprises in the 1990s being a key factor in several countries). This expansion represented Latin America's return to international capital markets following the debt crisis, facilitated both by internal reform and stability and by external debt renegotiation. The Brady plan afforded relief in terms of external commitments, in clear contrast to the extremely disadvantageous terms that had prevailed in the 1980s.⁶ There were also major capital inflows during the 2004-2008 expansion, when Latin America and the Caribbean posted the strongest growth in three decades. In those years, the balance of capital movements went from US\$ 8.7 billion to US\$ 72.3 billion and climbed to US\$ 112.5 billion in 2007 (ECLAC, 2011b).

2. Domestic impact of external financial volatility

The deepening of financial globalization during the past few decades has been a decisive factor in the boom-bust cycles experienced by the region. The process has increased the influence of international financial markets on local markets and accentuated the effect of fluctuations stemming from changes in the world financial environment. Apart from the potential contribution of this process to the financing of investment, several countries have suffered increasingly volatile access to external financial resources. Volatility was often fuelled by unsustainable episodes of euphoria, followed by periods of panic and herd behaviour on the part of external agents. This has been facilitated by insufficient market regulation and supervision, both in developed countries and worldwide. Sometimes these fluctuations have been triggered by uncertainty about the payment capacity of the region's countries and, more recently, those of the euro zone.

⁶ The Brady Plan was a strategy implemented in the late 1980s for developing countries to restructure external debt and debt service with commercial banks.

Changes in the external financial scenario have unfolded in different ways depending on the extent of exposure to the more volatile financial flows, which has also not been uniform across the region. The domestic economic consequences have varied as well, depending on internal mechanisms that propagate shocks; one of the key factors is financial market depth.

A country's exposure to external financial fluctuations can be estimated directly from figures on its net foreign asset and liability positions, but these are not usually available. Instead, ECLAC (2011b) uses indicators of the region's sources of external financing, which correspond to flows and thus translate into changes in the net position in certain financial instruments. Noteworthy among them are net portfolio investment flows and other investment liabilities (including commercial credit and loans between central banks) held by non-residents, which are the most volatile. Table III.6 ranks the region's countries by degree of financial depth (which influences the propagation of external flows in an economy) and degree of exposure to external financial fluctuations in 2007-2009.

Table III.6
LATIN AMERICA AND THE CARIBBEAN: COUNTRY RANKING BY LEVEL OF EXPOSURE
TO THE MOST VARIABLE COMPONENTS OF EXTERNAL FINANCING
AND DEGREE OF FINANCIAL DEEPENING, 2007-2009

	Countries with less exposure	Countries with greater exposure
Less financial system deepening	Guyana Grenada Suriname Trinidad and Tobago Bolivia (Plurinational State of) Paraguay Ecuador Guatemala Honduras Venezuela (Bolivarian Republic of) Argentina Dominican Republic and Haiti	Antigua and Barbuda Dominica Belize Jamaica Saint Kitts and Nevis Saint Vincent and the Grenadines Saint Lucia Uruguay Peru
Greater financial system deepening	Mexico	Barbados Brazil Chile Colombia Panama Bahamas

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

Moving from the upper left quadrant to the lower right (from less capital-flow exposure and low financial deepening towards higher levels of both variables), the sources of external shocks change substantially. In the first group of countries, with less financial deepening and less exposure, external shocks stem mainly from external demand (changes in quantum and prices of goods and services) rather than from financial markets. As the domestic financial system deepens and external financial integration increases, the volatility of external goods and services markets is

compounded by financial-market volatility. Although fiscal and exchange-rate policies are decisive for the vast majority of countries, those with greater financial deepening will be able to implement monetary and financial policies, including macro-prudential regulation, that will give them more scope for action in the face of external shocks.

3. Composition of external financial flows

Private capital flows (technically referred to as unofficial capital flows) have become the region's most important source of external financing. Currently they account for over 80% of private financial flows received by emerging countries and over 90% of the total in the case of Latin America and the Caribbean. FDI is the main component of capital flows, on average representing about 42% of total flows in developing countries and 52% of the total in the region over the last decade (see table III.7). Portfolio investment flows have also grown over the last two decades, to account for 7% of total capital flows into the region. After Asia and the Pacific, Latin America and the Caribbean is the region most dependent on funding from these short-term flows. Income from external debt dropped sharply (from 30.1% to 5.6%) in Latin America between the start of the 1990s and 2010, while income from emigrant remittances has increased significantly.⁷ Along with FDI, remittances have become an important component of external financial resources and now represent 31.2% of total financial flows, exceeding 10% of GDP in some Central American and Caribbean economies.

The share of FDI has tended to grow over the past two decades, while that of external borrowing has shrunk, as shown by changes in the ratio between debt and debt plus FDI stock. The ratio has fallen in the past decade in Latin America and Caribbean, both for the region as a whole and in each of its subregions.

Figure III.5 shows, for the region as a whole, the long-term decline in interest payments on external debt plus repatriation of profits. This trend holds for all of the subregions except the Caribbean. Interest payments on external debt trended down in the 2000s while repatriation of profits and dividends from transnational enterprises to their parent companies increased from 5% of the value of exports to 17%. Within the general trend, Argentina, the Bolivarian Republic of Venezuela, Nicaragua and Panama are the countries where the interest-to-export ratio has fallen most. In contrast, countries in which the proportion of profit and dividend remittances has increased most are Colombia, Chile, Peru, Uruguay and a number of Caribbean economies.

In short, despite a growing supply of external resources, the net resource transfer has been negative —outflows have exceeded inflows— except in Central America (see table III.8). For South America, this reflects positive trade balance patterns and rising commodity prices. The combination of access to international capital, improving terms of trade and greater fiscal discipline enabled South America to deepen its financial openness in the 2000s under a different rationale from that prevailing in the 1990s. Access to international financial markets has become less segmented, and the subregion has reduced its risk levels (Damill and Frenkel, 2011). The situation is different in Central American and Caribbean countries, however. High levels of foreign indebtedness compounded by deteriorating terms of trade have aggravated external fragility in recent years and forced some countries to turn to the International Monetary Fund, as happened during international crisis of 2008-2009.

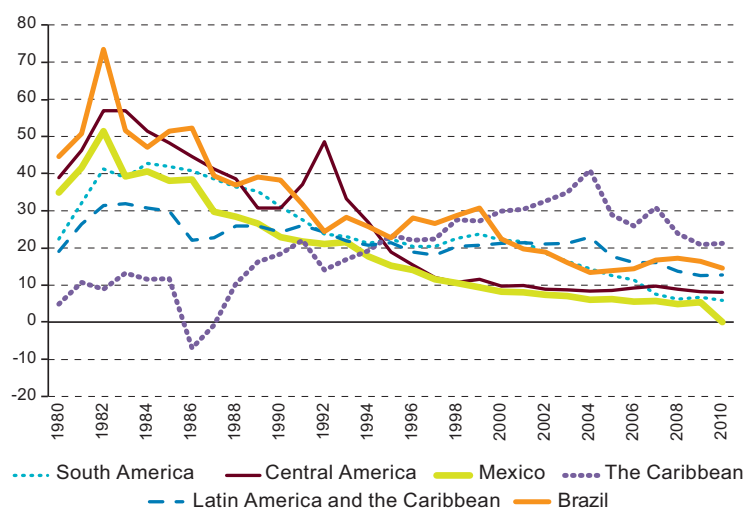
⁷ Table III.7 includes emigrant workers' remittances in financial income, owing to their growing importance as a source of external funding for many countries in the region.

Table III.7
COMPOSITION OF EXTERNAL FINANCIAL FLOWS AND REMITTANCES, 1970-2010
(Percentages of total)

	1970-1980	1981-1990	1991-2000	2001-2010
Foreign direct investment	7.3	13.6	28.5	42.2
East Asia and the Pacific	8.0	18.0	57.9	53.5
Europe and Central Asia	0.8	9.5	17.3	40.9
Latin America and the Caribbean	9.3	29.2	41.2	52.1
Middle East and North Africa	6.2	5.1	10.3	32.8
Sub-Saharan Africa	12.3	6.2	15.6	31.9
External debt	58.0	32.6	18.8	10.8
East Asia and the Pacific	54.3	50.6	15.1	10.3
Europe and Central Asia	72.4	9.7	34.8	33.7
Latin America and the Caribbean	80.3	35.6	30.1	5.6
Middle East and North Africa	38.0	30.7	5.1	-0.1
Sub-Saharan Africa	45.2	36.1	8.7	4.7
Official development assistance	26.7	26.1	25.2	15.2
East Asia and the Pacific	35.3	20.2	11.9	4.0
Europe and Central Asia	9.3	12.9	24.8	6.9
Latin America and the Caribbean	8.8	18.0	6.2	4.4
Middle East and North Africa	40.9	27.7	27.7	20.7
Sub-Saharan Africa	39.0	51.5	55.3	40.1
Portfolio investment	0.0	0.4	5.0	4.8
East Asia and the Pacific	0.0	1.1	2.3	8.3
Europe and Central Asia	0.0	0.2	2.4	2.4
Latin America and the Caribbean	0.0	1.0	9.5	6.7
Middle East and North Africa	0.0	0.2	1.2	0.5
Sub-Saharan Africa	0.1	-0.5	9.7	6.2
Worker remittances	8.0	27.4	22.5	26.9
East Asia and the Pacific	2.4	10.0	12.7	23.8
Europe and Central Asia	17.5	67.6	20.6	16.0
Latin America and the Caribbean	1.6	16.2	13.0	31.2
Middle East and North Africa	14.9	36.3	55.7	46.1
Sub-Saharan Africa	3.4	6.7	10.7	17.2

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

Figure III.5
EXTERNAL DEBT INTEREST PAYMENTS AND PROFIT AND DIVIDEND REMITTANCES, 1980-2010
(Percentage of exports)



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

Table III.8
LATIN AMERICA AND THE CARIBBEAN: NET RESOURCE TRANSFER, ANNUAL AVERAGE, 1982-2010
(Millions of dollars)

Region	1982-1990	1991-1996	1997-2002	2003-2007	2008-2010
Latin America and the Caribbean	-24 706	19 158	4 427	-52 772	-13 737
Latin America	-24 307	19 731	3 401	-51 312	-12 349
The Caribbean	-400	-573	1 026	-1 460	-1 388
Central America	-871	936	1 186	246	1 462
South America	-1 762	1 201	-612	-5 289	-2 470

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

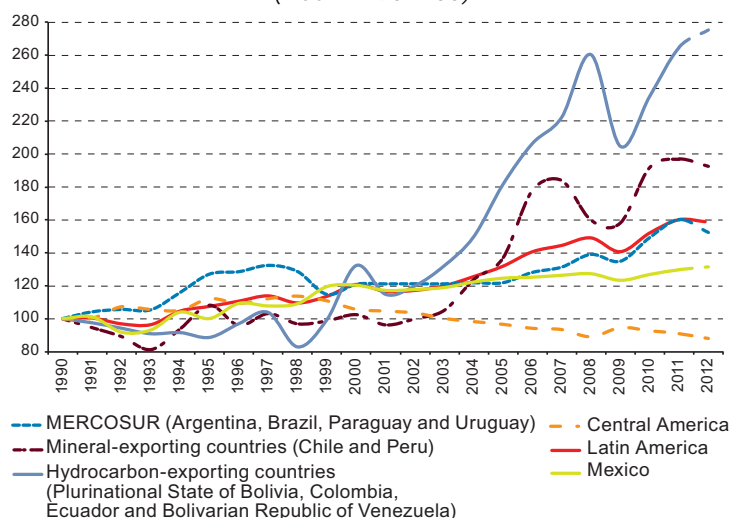
After periods of external constraints, the region has built up unprecedented international reserves, with stocks growing from just over 3% of GDP in 1990 to more than 14% in 2011. The Plurinational State of Bolivia and Trinidad and Tobago had the highest figures at the end of the period, at 52.4% and 43.8%, respectively.

Such a large accumulation of reserves, in conjunction with external deleveraging, suggests that external vulnerability problems have eased, at least for some economies in the region, despite more volatile terms of trade. Meanwhile, there is no guarantee that the demand for commodities will continue to expand. The current demand momentum should thus be seized as an opportunity to build a production base that will improve the region's resistance to terms-of-trade fluctuations and to the volatility of external capital flows. This issue is taken up again in chapter VI, underlining the need to keep the favourable outcomes of the past 10 years from triggering complacency.

C. The trade dynamic and terms of trade

Increased financial volatility was linked to and reinforced by terms-of-trade volatility, particularly since the mid-2000s (see figure III.6). This was due to widely fluctuating commodity prices, which have traditionally figured heavily in the international trade structure of the countries of the region—even more so over the past decade.

Figure III.6
LATIN AMERICA AND THE CARIBBEAN: TERMS OF TRADE, 1990-2011
(Index: 1990=100)

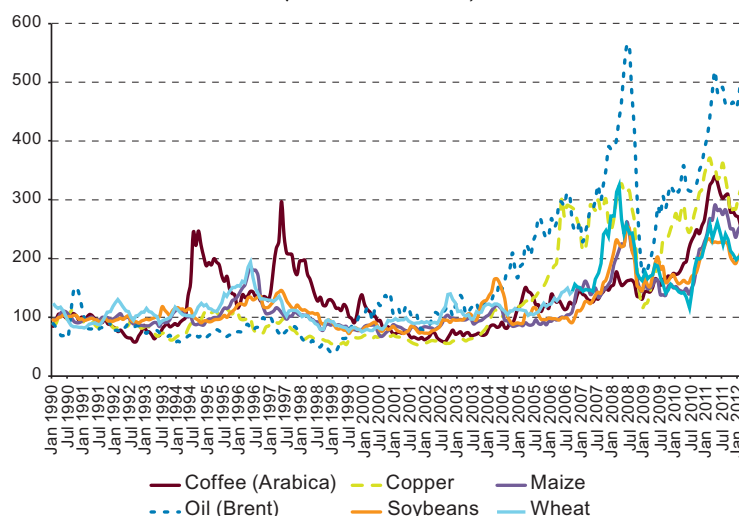


Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of official figures from the countries.

The behaviour of commodity prices shown in figure III.7 is partly explained by burgeoning demand fuelled by stronger economic growth in emerging countries, interacting with short-term supply rigidities and thus raising production costs. On the one hand, high and sustained growth rates in China and India, as well as in other emerging and developing economies, has boosted demand for raw materials and energy, putting upward pressure on their prices. On the supply side, low levels of investment in agriculture resulted in slow growth of agricultural productivity and a weaker increase in output, reducing stocks and making supply more inelastic. The rise in oil prices drove fertilizer and transport costs up, which fed through into higher production costs.

Commodity price patterns have also been affected by financial factors, such as fluctuating exchange and interest rates, particularly since the crisis that broke out in 2008. The depreciation of the United States dollar devalued assets denominated in that currency and encouraged portfolio recomposition in favour of commodity derivatives, which came to play a role as a “store of value”, feeding price rises caused by financial variables. Dollar depreciation also impacted profitability and production costs measured in dollars, so producers with market power in some cases tended to reduce supply and raise prices to compensate for declining profits. In addition, consumer (importing) countries whose currencies appreciated against the dollar saw their external purchasing power increase, which enabled them to sustain commodity demand and thus put upward pressure on their prices.

Figure III.7
 WORLD COMMODITY PRICES, ANNUAL AVERAGE, 1990-2011
 (Index: 1990=100)



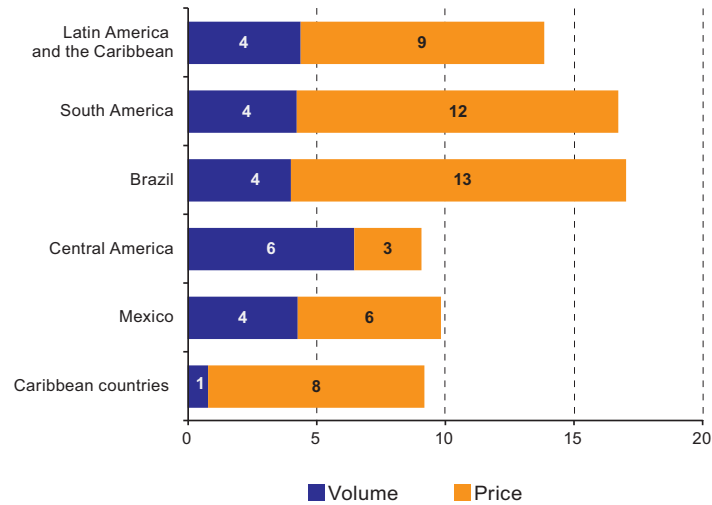
Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of official figures from the countries.

Interest rate cuts in the United States and other advanced economies also acted in the same direction, driving capital flows towards emerging countries. The interest rate cuts also affected yields on assets such as bonds, making other, commodity-linked, assets more attractive and pushing their prices up. Low interest rates reduced the opportunity cost of holding commodity inventories and further fuelled demand for them. Over the past 10 years, trading in commodity-based assets has risen disproportionately in comparison with the historical levels associated with commercial risk hedging (Basu and Gavin, 2011). The fact that futures markets are dominated by speculators rather than commercial investors seems to have driven commodity prices to irrationally high levels that do not reflect real supply and demand trends (De Schutter, 2010; Masters and White, 2008). Investors of this type are attracted to commodity derivative markets by the fact that price fluctuations for such products are usually decoupled from stock and bond market fluctuations. They generally operate with composite indices involving various commodities and allocate their funds independently of the economic fundamentals (supply and demand) underlying a specific physical market (UNCTAD, 2008, 2009 and 2011).

This price dynamic explains much (69%) of the region's export growth, which expanded at the rate of 13% per year between 2003 and 2011. Price rises far outpaced the growth of export volume, particularly in relative terms in the countries of South America that export hydrocarbons and minerals (see figure III.8).

Against this background, the region's exports to its three largest extraregional markets (Asia and the Pacific, the United States and the European Union) were concentrated in raw materials and natural resource-based manufactures. This reflects a trend towards reprimarization, driven by the high natural resource prices prevailing throughout most of the period (see figure III.9).

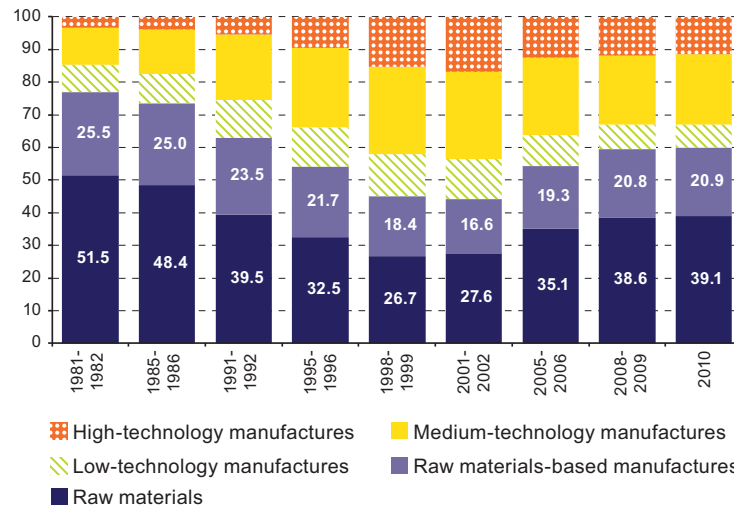
Figure III.8
LATIN AMERICA AND THE CARIBBEAN: ANNUAL RATE OF INCREASE OF THE VOLUME
AND PRICE OF GOODS EXPORTS, 2003-2011^a
(Percentages)



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

^a The figures for the Caribbean include data for Barbados, the Dominican Republic, Haiti, Jamaica, Suriname, and Trinidad and Tobago.

Figure III.9
LATIN AMERICA AND THE CARIBBEAN: EXPORT STRUCTURE BY TECHNOLOGY INTENSITY, 1981-2010^a
(Percentages of the total)



Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of United Nations Commodity Trade Database (COMTRADE).

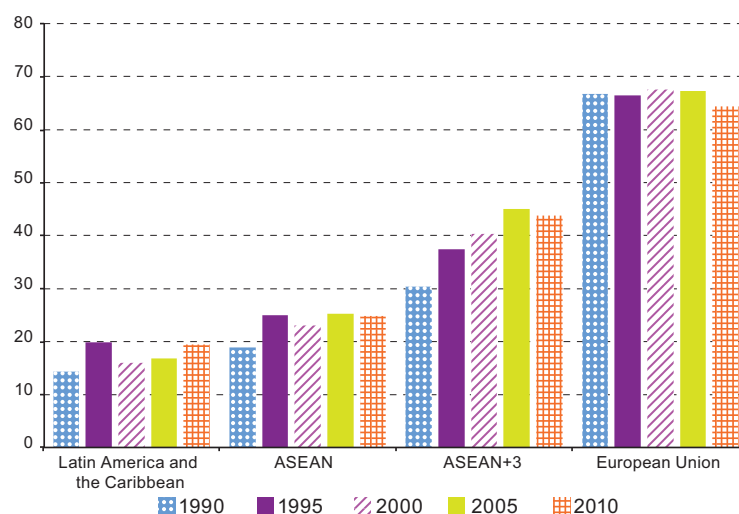
^a Cuba and Haiti not included. Data for Antigua and Barbuda refer only to 2007, and data for the Bolivarian Republic of Venezuela only to 2008; data for Honduras do not include 2008; data for Belize, Dominican Republic, Saint Kitts and Nevis, Saint Lucia, Suriname and Grenada (exports only) do not include 2009.

The region's share of exports to the United States shrank from 58% in 2000 to 40% in 2010; its share of imports from the United States dropped from 49% to 32% in the same period. The European Union, the region's second largest trading partner, saw its share in the region's exports rise slightly in the past decade (from 12% to 13%) while its share of imports from the countries of the region remained constant at 14%. In contrast, China absorbed 8% of the region's exports in 2010 compared with 1% in 2000, while also growing its share of the region's imports from 2% to 14% over the same period.

The region's exports to Asia are more concentrated than to its other markets. Commodities and natural resource-based manufactures (mainly processed minerals) dominate the region's exports to China, India, Japan and the Republic of Korea. Owing mainly to rising demand from China, raw materials are once again playing a leading role in the region's export structure, contributing to the reprimarization of the region's export sector in recent years (see ECLAC, 2009, 2010b and 2011c).

Latin America's intraregional trade has higher technology content than its extraregional trade. This is particularly important considering that trade within Latin America in 2010 accounted for just 19.5% of the total. In the European Union the corresponding figure is 64.4%, and in a group comprising the ASEAN member States plus China, Japan and the Republic of Korea, the figure is 43.8% (see figure III.10). Within the region, the Central American Common Market has the highest proportion of intraregional trade (26.7%), followed by the Caribbean Community (CARICOM) and MERCOSUR, where the share is around 16%.

Figure III.10
LATIN AMERICA: SHARE OF INTRAREGIONAL EXPORTS IN TOTAL EXPORTS, BY GROUPS OF COUNTRIES
(Percentages)



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

Note: ASEAN+3 includes the ASEAN member States plus China, Japan and the Republic of Korea.

Although the geographical export orientation of each subregion of Latin America and the Caribbean differs significantly, they share the problems of insufficient value added and low knowledge and technology content of their exports. The South American countries specialize in

exporting primary and processed products; this has been reinforced by strong demand from Asia, particularly China. The Central American countries and Mexico, in contrast, have shifted their export focus towards garments and a number of electronic and electrical products (plus the automotive industry in the case of Mexico). A large proportion of those exports are based on maquila assembly operations, often undertaken in free zones. And the Caribbean countries have intensified their export focus on services, particularly those relating to tourism and financial services, together with back-office and call-centre services.

The common denominator among these three patterns is specialization based on static comparative advantages, such as abundant unskilled labour and natural resources, with little value-added or knowledge content in the production process or in the final products. Irrespective of the group, the region's exportable products have been concentrated in commodities that are sensitive to economic trends in developed countries, with unstable prices. Moreover, some of those products are highly intensive in imported components (particularly those that are processed in maquila operations), which adversely affects the trade balance and produces few linkages with the rest of the production system.

The weak link between the international integration process and an economy's production structure means that increasing trade flows are reflected more intensely in expanding imports than in rising exports of goods and services. In fact, the region has been unable to significantly increase its share in world exports of goods over the past three decades. That share rose only marginally, from 5.1% to 5.7%, between 1980 and 2010. Despite the high prices of several of the commodities exported by the region between 2003 and 2008, its share of world goods exports at the end of the past decade was virtually identical to its share at the start, revealing very little growth in terms of export volume.⁸

D. Investment patterns and composition

1. General trends

Latin America's investment rate has historically been lower than that of other emerging regions, particularly the countries in developing Asia, where it rose from 27.8% of GDP in 1980 to nearly 35% of GDP in the mid-1990s and to more than 40% today. In contrast, in 2008, when the region posted its highest investment rate since 1980, it was just 23.6% of GDP measured in current dollars (Jiménez and Manuelito, 2011).

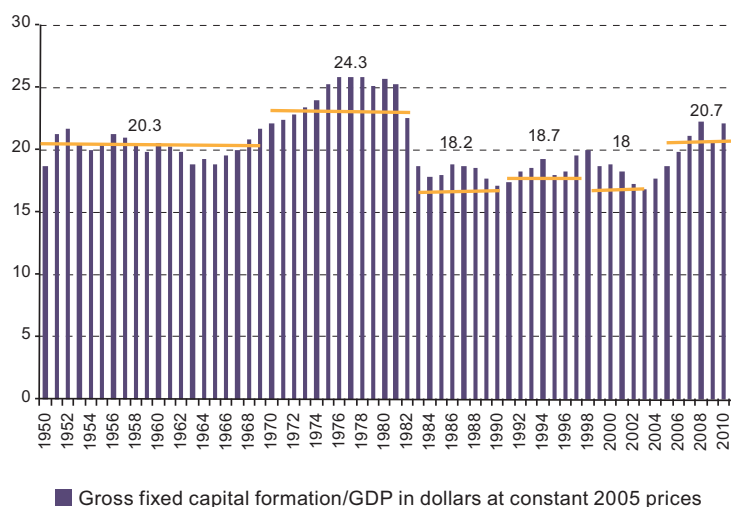
Figure III.11 illustrates the historical trend of gross fixed capital formation in Latin America between 1950 and 2010, measured as a percentage of GDP.⁹ The region attained its highest investment levels during the period between the early 1970s and 1982, when the annual average was 24.3% of GDP and sometimes even topped 25% of GDP. This period was preceded by two decades in which annual average investment rates were around 20%.

⁸ Also in the past three decades, the region's share in global service exports slipped from 4.5% in 1980 to 3.4% in 2010. Of even greater concern is the region's small share in "Other business services", the fastest-growing export category worldwide during the past decade. This category includes the most technology- and knowledge-intensive activities, such as engineering, architecture, design, information technology, and legal and accounting services.

⁹ Regional average measured in dollars at constant 2005 prices. Calculated as an average weighted by the relative share of each Latin American country in the region's total gross fixed capital formation.

Between 1982 and 2003, several factors combined to keep regional investment at very low levels: the debt crisis of the 1980s; the hyperinflation episodes recorded in several countries between the late 1980s and early 1990s; the financial crises of Mexico and Argentina in 1995; the consequences of the Asian crisis in 1997; and contagion from the financial crises of Brazil and the Russian Federation (1988), Turkey (2000) and Argentina (2001). It was not until 2004-2011, in a context of highly favourable external prices for its exports, that Latin America was able to regain the investment levels recorded in the 1950s and 1960s, but without matching historical peaks. As a result, in 2011, gross fixed capital formation amounted to 22.9% of GDP, roughly the same as in the second half of the 1970s.

Figure III.11
LATIN AMERICA: GROSS FIXED CAPITAL FORMATION, 1950-2010
(Percentages of GDP, in dollars at constant 2005 prices)

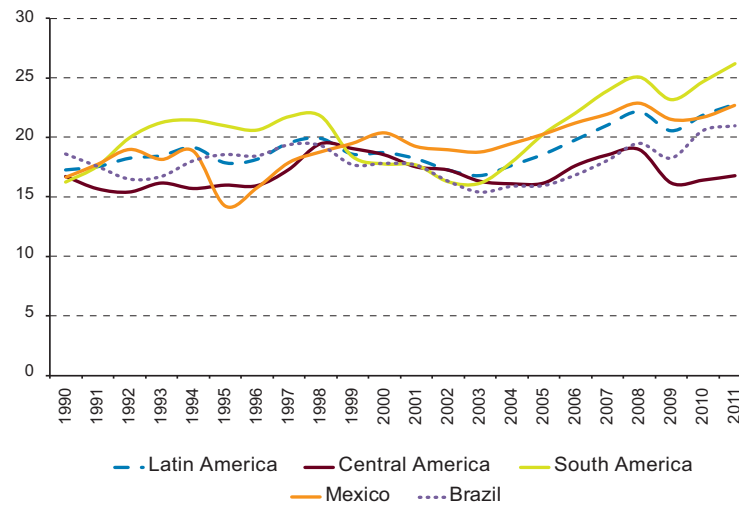


Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of official figures from the countries.

Investment patterns have varied across the subregions (see figure III.12). Unlike in 2004-2008, when investment rates climbed overall, in 2010-2011 the recovery was mainly confined to South American countries and Mexico. In Central America, investment rates fell off sharply in 2009 and have since remained at levels similar to those of the first half of the 1990s and well below the highs of 1998. In Mexico, although investment recovered after falling in 2009 the rate remains below 2008 levels. In both cases, sluggish investment is partly attributable to the impact of the global financial crisis on the main export market for these countries (the United States) and hence on prospects for growth. Domestic variables have also had an influence, such as unconsolidated fiscal positions which made it difficult to adopt countercyclical measures based on increasing public investment.

The available data show that in 1990-2011 gross fixed capital formation grew most strongly in the machinery and equipment components (see figure III.13). In 1990-2003 (the years leading up to the commodity export price boom), gross fixed capital formation grew by an average of 2.7% per year. Investment in construction grew at an annual average of 1.9%, and investment in machinery and equipment did so at 3.7%. These rates rose considerably in 2004-2011, as gross fixed capital formation expanded at an average annual rate of 8.5%, with investment in construction and in machinery and equipment climbing by 5.3% and 11.4%, respectively.

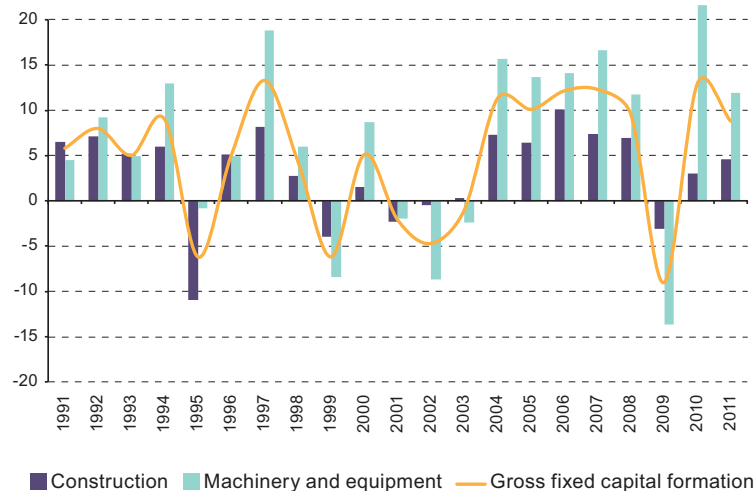
Figure III.12
LATIN AMERICA: GROSS FIXED CAPITAL FORMATION, BY SUBREGION^a
(Percentages of GDP, in dollars at constant 2005 prices)



Source: Economic Commission for Latin America and the Caribbean (ECLAC), *Preliminary Overview of the Economies of Latin America and the Caribbean 2011* (LC/G.2512-P), Santiago, Chile, December 2011. United Nations publication, Sales No. E.12.II.G.2.

^a Components of gross fixed capital formation: construction and machinery and equipment.

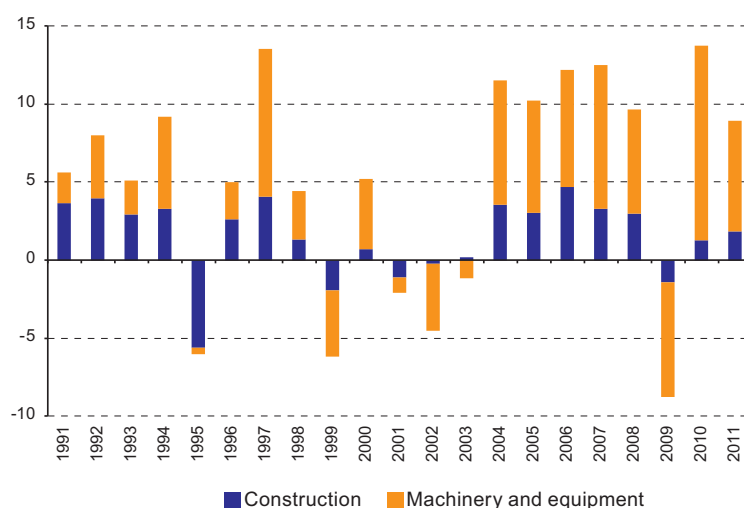
Figure III.13
LATIN AMERICA: GROSS FIXED CAPITAL FORMATION, YEAR-ON-YEAR RATES OF VARIATION, 1991-2011
(Percentages, in dollars at constant 2005 prices)



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

As a result, the contribution made by investment in machinery and equipment to gross fixed capital formation growth increased considerably as from the late 1990s. In the early 1990s, construction represented about 55% of total gross fixed capital formation, while investment in machinery and equipment accounted for around 45%. By the end of the first decade of the new century, these proportions had reversed.

Figure III.14
LATIN AMERICA: CONTRIBUTION TO THE GROWTH OF GROSS FIXED CAPITAL FORMATION, 1991-2011
(Percentages, in dollars at constant 2005 prices)



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

Investment patterns in the region have been heavily influenced by domestic and external crises. And sluggish investment is linked to the way governments have reacted to the crises, particularly in terms of public investment decisions. Tables III.9 and III.10 show public and private investment as a percentage of GDP for the countries of Latin America and the Caribbean during 1980-2010, divided into subperiods according to the years in which the countries were faced with turmoil that changed their GDP growth paths.

The composition of gross fixed capital formation by institutional sector in Latin America changed between 1980 and 2010. In the case of public investment, both regionally and as a percentage of GDP, the highest level was recorded in the years 1980-1981 (6.7%), after which rates declined gradually until 1999-2003 (3.9%) (see table III.9). In 2004-2010, there was a widespread recovery (4.8%) although the intensity varied across countries. In this period, average public investment in the region rose to its highest level since 1990. Nonetheless, in some countries (the Dominican Republic, El Salvador and Guatemala), the level of public investment remained persistently low throughout 1980-2010.

Aside from the recent improvement, the historically procyclical behaviour of public investment and its long-term downtrend are worrying because of their effect on growth. Martner, González and Espada (2012) note that for a sample of 18 Latin American and Caribbean countries between 1991 and 2010, a set of variables was positively related to per capita GDP growth. They are the rate of public investment, the rate of private investment, spending on education and the real exchange rate. In contrast, inflation and public debt were negatively related. The public investment elasticity of growth is high and significant (7%), underscoring the importance of this variable.

Table III.9
LATIN AMERICA AND THE CARIBBEAN: ANNUAL AVERAGE PUBLIC INVESTMENT BY PERIOD^a
(Percentages of GDP at constant prices in the local currency of each country)

	1980-1981	1982-1990	1991-1994	1995-1998	1999-2003	2004-2010
Argentina	2.2	1.5	1.6	1.5	1.2	2.5
Bolivia (Plurinational State of)	6.9	8.2	8.4	6.4	5.2	7.7
Brazil	2.2	2.2	3.2	2.2	1.7	1.8
Chile	1.9	2.4	2.0	2.5	2.4	2.4
Colombia	7.1	7.5	4.7	4.4	3.2	3.7
Costa Rica	8.0	5.5	4.8	4.2	2.6	2.0
Cuba	--	--	--	7.1	6.8	9.4
Dominican Republic	4.4	4.2	2.9	3.2	2.1	1.5
Ecuador	8.9	5.0	4.5	3.8	5.2	7.6
El Salvador	2.0	2.1	3.5	3.5	3.0	2.1
Guatemala	5.6	3.0	2.8	3.2	3.4	2.6
Honduras	8.3	7.4	9.1	6.8	4.9	3.9
Mexico	11.3	5.8	4.2	3.1	3.4	4.9
Nicaragua	10.5	10.5	7.7	6.6	5.7	3.9
Panama	8.9	4.4	3.4	4.6	5.0	5.9
Paraguay	5.0	5.1	3.7	3.9	2.7	3.1
Peru	6.3	5.0	4.3	4.5	3.5	4.1
Uruguay	5.3	4.3	4.1	3.3	3.1	4.3
Venezuela (Bolivarian Republic of)	16.0	10.0	10.0	9.5	8.8	16.8
Latin America ^b	6.7	5.2	4.7	4.4	3.9	4.8

Source: Economic Commission for Latin America and the Caribbean (ECLAC), *Statistical Yearbook for Latin America and the Caribbean*, various years; and "América Latina y el Caribe: Series históricas de estadísticas económicas 1950-2008", *Cuadernos estadísticos series*, No. 37 (LC/G.2415-P), Santiago, Chile, August 2009. United Nations publication, Sales No. S.09.II.G.72.

^a Public investment refers to general government gross fixed capital formation as a percentage of GDP.

^b Simple average of the countries in the sample.

The relative shares of public and private investment vary across the region. As a percentage of GDP region-wide, private investment fell from an annual average of 14.3% in 1980-1981 to an annual average of 11.1% in 1982-1990 (coinciding with the debt crisis) and then rose in 1991-1994 (14.1%) and 1995-1998 (15.6%). Between 1999 and 2003, private investment fell from prior-period levels (14.7%) owing to external fluctuations during the period that impacted growth expectations. Some examples are the dot-com crisis in the United States and domestic crisis such as the one that hit Argentina in 2000 (see table III.10). During 2004-2010, when the region's export commodity prices soared and growth prospects improved, the pace of private investment picked up substantially and brought the regional average up to 15.9%.

Private investment patterns vary from one country to another. In some cases, during 2004-2010 it remained below the levels posted in 1980-1981 (Argentina, Brazil and Paraguay). In others, the annual average for 2004-2010 is significantly higher than in 1980 and 1981 (Chile, Colombia, Costa Rica, Ecuador, El Salvador, Guatemala, Honduras, Mexico and Nicaragua). The Bolivarian Republic of Venezuela, the Plurinational State of Bolivia and Uruguay have the lowest levels of private investment. In Panama and Peru, the level of private investment in 2004-2010 was similar to the level recorded in 1980-1981 despite considerable volatility throughout the period. Except for the Bolivarian Republic of Venezuela, Ecuador and the Plurinational State of Bolivia, the increase in gross fixed capital formation as a percentage of GDP in 2004-2010 was primarily due to rising private investment. But it was not enough to fully offset the contraction of public investment.

Table III.10
LATIN AMERICA AND THE CARIBBEAN: ANNUAL AVERAGE PRIVATE INVESTMENT BY PERIOD
(Percentages of GDP at constant prices in the local currency of each country)

	1980-1981	1982-1990	1991-1994	1995-1998	1999-2003	2004-2010
Argentina	22.9	15.8	16.8	18.2	14.5	18.6
Bolivia (Plurinational State of)	7.1	3.5	6.3	11.8	10.8	7.2
Brazil	20.3	15.1	15.8	15.7	14.1	15.7
Chile	16.6	15.7	23.4	25.3	20.0	23.0
Colombia	10.0	9.0	15.1	16.4	10.9	18.6
Costa Rica	14.2	14.1	15.3	16.7	18.5	19.8
Cuba	...	...	...	4.7	4.5	2.4
Dominican Republic	16.8	14.3	13.4	17.8	20.0	17.8
Ecuador	13.5	13.1	21.2	20.8	18.2	19.6
El Salvador	10.6	10.5	14.0	15.7	16.3	15.8
Guatemala	6.8	6.0	7.1	8.1	12.8	14.6
Honduras	12.2	8.5	12.8	16.2	19.4	21.3
Mexico	14.3	11.4	14.7	14.0	16.4	16.5
Nicaragua	7.8	7.5	8.4	15.5	18.8	17.8
Panama	15.5	11.4	18.8	18.1	13.1	15.5
Paraguay	23.0	15.5	19.9	18.6	13.7	13.1
Peru	19.2	14.1	13.9	19.2	15.1	19.2
Uruguay	12.2	7.1	10.1	12.4	9.1	13.7
Venezuela (Bolivarian Republic of)	13.3	8.1	6.7	10.6	13.9	12.7
Latin America ^a	14.3	11.1	14.1	15.6	14.7	15.9

Source: Economic Commission for Latin America and the Caribbean (ECLAC), *Statistical Yearbook for Latin America and the Caribbean*, various years; and "América Latina y el Caribe: Series históricas de estadísticas económicas 1950-2008", *Cuadernos estadísticos series*, No. 37 (LC/G.2415-P), Santiago, Chile, August 2009. United Nations publication, Sales No. S.09.II.G.72.

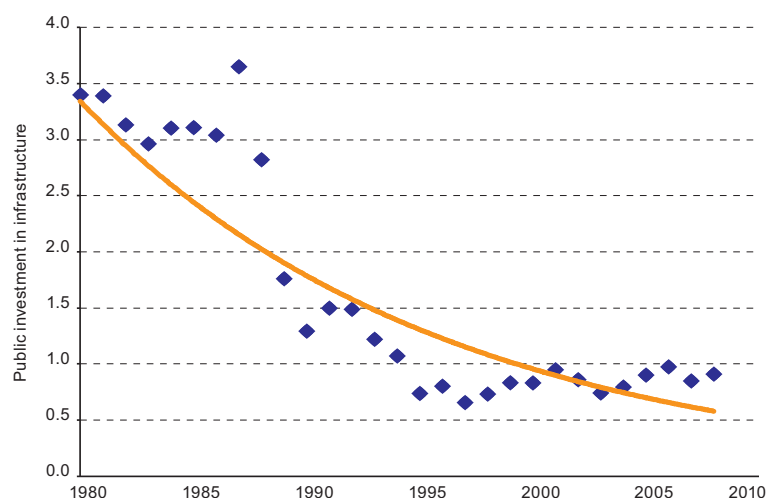
^a Simple average of the countries in the sample. (-) Figure not available.

2. Investment in infrastructure

Infrastructure is the main component of public investment. Figure III.15 shows the declining trend of this component, which was particularly pronounced during the lost decade of the 1980s and in the 1990s. The retreat of public investment largely reflects the shrinking footprint of government in the economy in most of the countries of the region, particularly owing to privatizations that mostly took place in the 1990s and the role of private actors in supplying goods and services that were previously provided by public agencies.

This downtrend continued throughout 2000-2004, with infrastructure investment amounting to just 0.8% of GDP. There was a slight reversal between 2005 and 2008, when it rose to 0.9% of GDP. Explanations for this increase include the restructuring of public accounts that, together with smaller debt, an improved debt profile and a build-up of international reserves, gave several of the region's countries additional space to implement public policies (ECLAC, 2010a).

Figure III.15
LATIN AMERICA AND THE CARIBBEAN: PUBLIC INVESTMENT IN INFRASTRUCTURE, 1980-2010
(Percentages of GDP)



Source: Georgina Cipoletta Tomassian and Ricardo Sánchez, *UNASUR: Infrastructure for regional integration* (LC/L.3408), Santiago, Chile, Economic Commission for Latin America and the Caribbean (ECLAC), 2011.

Public expenditure on infrastructure has been procyclical, except in the 2008-2009 crisis, which indicates that it has been used as an adjustment variable. As shown in table III.11 with data for six countries in the region, public investment fell by an average of 36% in the downswing of the business cycle.¹⁰ Drops in public infrastructure investment tend to be sharper than any increase during the recovery phase. In the sectors considered, the contraction is on average 40% greater than the subsequent expansion. In the power and telecommunications sectors, the difference between the decline in investment during a contraction and the increase during the expansion is even greater: 48% and 200%, respectively. Such a pattern has negative impacts on capital accumulation over time.

Table III.11
LATIN AMERICA (6 COUNTRIES): DURATION AND AMPLITUDE OF EXPANSIONS AND CONTRACTIONS
OF THE CYCLE OF PUBLIC INVESTMENT IN INFRASTRUCTURE, 1980-2010

	Expansion		Contraction	
	Duration	Amplitude	Duration	Amplitude
Total	2.7	25.6	2.2	-35.6
Power sector	1.9	34.7	2.0	-51.5
Roads and railways	2.1	32.3	1.7	-33.1
Telecommunications	1.8	28.1	1.9	-58.0
Water and sanitation	1.6	24.2	1.7	-23.8

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

¹⁰ Argentina, Brazil, Chile, Colombia, Mexico and Peru, which account for 85.5% of the region's GDP between them.

Public investment has a positive effect on medium- and long-term growth paths, so the countries should shield it from the ups and downs of economic activity. This means that public investment policies should be guided by their effects on the production structure rather than by the need for temporary adjustments to short-term fluctuations in aggregate demand (see chapter VI). This would make it possible to sustain the transformation of the production structure of the economies so as to permanently raise growth rates in line with the development needs of the countries of the region.

In the ongoing technology revolution, investment in broadband infrastructure is particularly important because it provides a platform for supplying a wide range of services that cut across sectors and directly impact economic growth and social inclusion. These include education (distance services and access to information, development of new teaching-learning models); health (remote diagnostic services); governance (greater transparency, citizen participation, access to government information); and environmental protection (Jordán, Galperin and Peres, 2010).

Despite the progress made in the last few years in some countries in the region, broadband remains expensive, both in absolute terms and in relation to per capita income. Its quality (measured by connection speed and latency) is poor. This has opened a considerable gap in terms of access and use compared with the more advanced countries. According to the International Telecommunications Union (ITU), in 2010 average fixed broadband access penetration was 7% in Latin America compared with 26% in OECD countries. For mobile access the figures were 8% and 57%, respectively.

As for the cost of access, in Latin America the average price for speeds of 1 megabit per second (Mbps) is US\$ 25; extreme cases can top US\$ 100. In Europe, for example in Spain, Italy and France, the average rate for access at the same speed is about US\$ 5. In the Republic of Korea it is less than US\$ 1. In Latin America, connection speed (a key factor in quality) is 3.1 Mbps for downloads and 1.3 Mbps for uploads, compared with 12.1 Mbps download speeds and 3.1 Mbps upload speeds in OECD countries.

The region lags significantly in terms of broadband infrastructure development, as shown by widening access, accessibility and quality gaps. Overcoming this problem requires stepping up both public and private investment to expand infrastructure, particularly international connections and the development of Internet exchange points (IXPs) within countries and between groups of countries.¹¹

In short, investment serves as a crucial bridge between the present and future, linking cycle and trend. This section showed the strong impact of crises on investment, which has still not regained 1970s levels despite a significant upturn in recent years. Public investment has not been forceful enough to have significant crowding-in effects, particularly in areas such as infrastructure where there are substantial shortcomings.¹² The fact that during crises it is easier to cut back public expenditure on investment than it is to make cuts in other areas has impaired the effectiveness of

¹¹ In the field of international connections and the development of Internet exchange points, ECLAC, with technical and financial support from the European Union, serves as technical secretariat of the Regional Broadband Dialogue, consisting of 10 mostly South American countries, and it has implemented the Regional Broadband Observatory (ORBA).

¹² The annual infrastructure investment needed to meet expected demand in the region is estimated on the order of 5% of regional GDP for 15 years (Perrotti and Sánchez, 2011).

this variable as a catalyst for private investment. And the abundant external funding available during certain periods only partially filled the void left by public investment. The key variable in investment decisions is not the availability of savings but the expected returns. Macro prices and scant public investment in times of volatility and uncertainty have hindered a private investment response in keeping with development needs, with the resulting effects on growth, productivity and employment.

E. Foreign direct investment

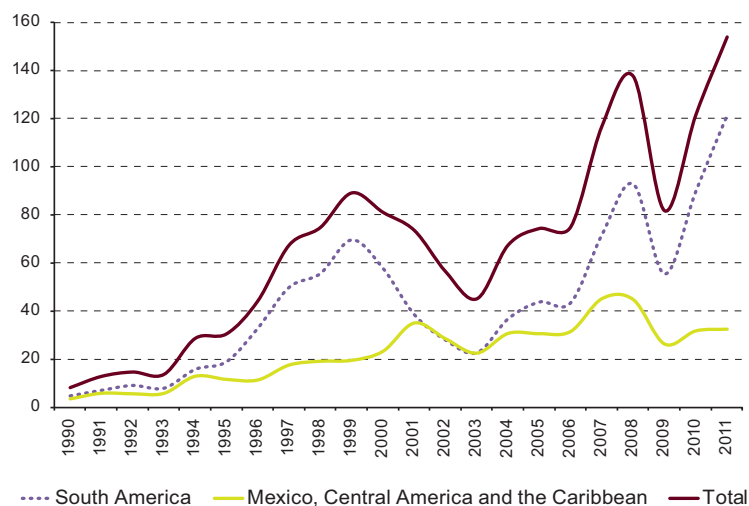
Foreign direct investment (FDI) flows to Latin America and the Caribbean have grown considerably in recent decades, and transnational enterprises have consolidated their position as a cornerstone of the production structure in the region's economies.¹³ After the market reforms era, FDI came to be seen as an engine of growth that automatically generated positive effects on the receiving economies. This view stressed the role of FDI as a complement to domestic savings and a source of new capital contributions, technology transfers and productivity spillovers. Amount was regarded as more important than quality, which led countries to seek to maximize FDI from transnational enterprises, the main actors. In fact, transnational operations generate value added equivalent to roughly 25% of world GDP, through their operations in countries of origin and in host countries. The foreign operations of subsidiaries of transnational enterprises account for over 10% of global GDP and a third of worldwide exports, making them increasingly important in global value chains (UNCTAD, 2011, p.24). Moreover, transnational enterprises are the main agents in research and development, accounting for about 50% of total research and development expenditure and over two thirds of private expenditure on research and development worldwide (UNCTAD, 2005, p.119). Against this backdrop, firms from emerging countries are increasingly involved. In Latin America and the Caribbean, the "trans-Latins" have been particularly dynamic in sectors such as telecommunications, cement, iron and steel, petrochemicals, airlines, banks, power generation, meat production and department stores (ECLAC, 2012).

FDI and transnational enterprises play a key role in the production structure of Latin America and the Caribbean, for various reasons. First, they are present in virtually all of the countries and all production and service activities. Many of them are industry leaders occupying oligopolistic positions in their respective markets. Second, FDI is conducted through two mechanisms: mergers and acquisitions, and greenfield investments (a component of gross fixed capital formation). Third, the positioning of transnationals is essential for understanding the international integration patterns pursued by the countries of the region, especially for their exports. Fourth, transnational enterprises are particularly important in the more modern sectors and in activities with greater technology content being carried out in the region. Fifth, transnationals figure heavily in research and development and in industry innovation in the region's largest economies, such as Argentina, Brazil and Mexico.

¹³ Foreign direct investment figures are for foreign direct investment inflows, less disinvestments (repatriation of capital) by foreign investors. The foreign direct investment figures do not include flows received by the main Caribbean financial centres. The data differ from those published in the 2011 editions of *Economic Survey of Latin America and the Caribbean* and *Preliminary Overview of the Economies of Latin America and the Caribbean*, which show the net balance of foreign investment, in other words direct investment in the reporting economy minus outward foreign direct investment.

Over the past few years, the region has enhanced its attractiveness as a destination for transnational enterprises. Between 2007 and 2011, FDI inflows to Latin America and the Caribbean averaged more than US\$ 120 billion per year (see figure III.16). Record inflows to the region in 2010 and 2011 amounted to roughly 10% of the world total.

Figure III.16
LATIN AMERICA AND THE CARIBBEAN: FOREIGN DIRECT INVESTMENT INFLOWS,
TOTAL AND BY SUBREGION, 1990-2011
(Billions of dollars)

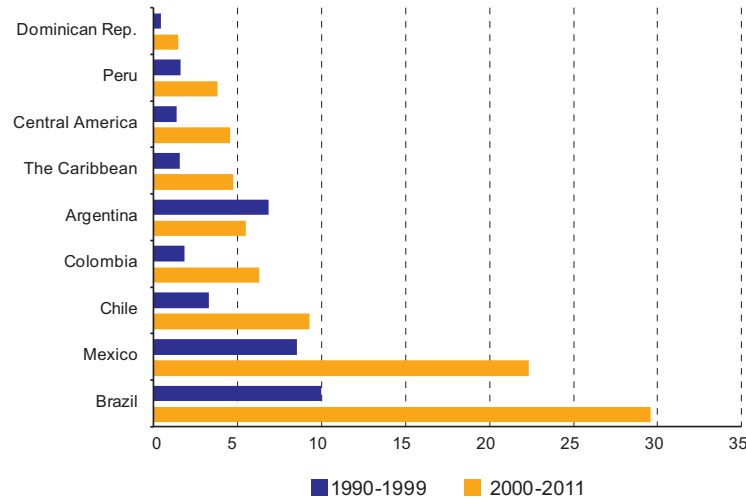


Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of official figures as of 16 April 2012.

Transnational firms have benefited from the region's buoyant economy, where they find attractive markets with strong growth potential. For all of the countries and subregions shown in figure III.17 FDI inflows rose sharply during the 2000s compared with the preceding decade, even counting the sweeping privatizations of State enterprises during the 1990s (in which transnationals were involved). The leading FDI recipients have been the region's two largest economies (Brazil and Mexico), followed by Argentina, Chile and Colombia. Nonetheless, Chile and the small Caribbean economies have received the largest amounts of FDI in relation to GDP (ECLAC, 2012).

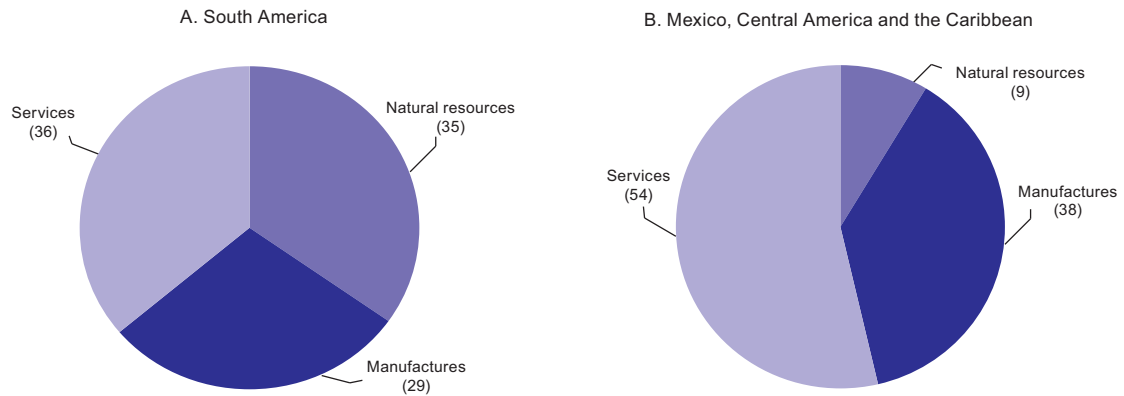
The services sector (including telecommunications, energy and retail trade) has received the largest share of FDI. Two patterns can be identified in the participation of FDI in goods production. In South America, it has been concentrated in the natural-resource sectors and, to a lesser extent, in manufacturing —mainly in Brazil, where major investments have been made in the automobile industry. In Mexico, Central America and the Caribbean, however, FDI flows to goods production sectors are more closely linked to export manufacturing and are heavily concentrated in the automotive sector (Mexico) and free zone maquila operations. The manufacture of products based on natural resources accounts for a small share (see figure III.18).

Figure III.17
LATIN AMERICA AND THE CARIBBEAN: MAIN FOREIGN DIRECT INVESTMENT RECIPIENT COUNTRIES, 1990-2011
(Billions of dollars, annual averages)



Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of official figures as of 16 April 2012.

Figure III.18
LATIN AMERICA AND THE CARIBBEAN: DISTRIBUTION OF FOREIGN DIRECT INVESTMENT FLOWS BY SECTORS, 2005-2011
(Percentages)



Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of official figures and estimates as of 16 April 2012.

Transnational firms tend to pursue strategies seeking raw materials, domestic markets, export platform efficiency, strategic technology assets and highly skilled human capital (Dunning, 2002). This frame of reference helps to understand the international insertion of the region's countries, which is heavily influenced by the presence of transnationals (see table III.12). Those pursuing a natural-resource seeking strategy have targeted the Southern Cone countries and have enjoyed a boom lasting several years, driven by the high price of raw materials. The main benefits of transnational firms operations are export growth, job creation in non-urban areas and increased tax revenue.

Table III.12
LATIN AMERICA AND THE CARIBBEAN: TRANSNATIONAL COMPANY OPERATIONS

Strategy	Natural resource seeking	Market seeking	Export platform efficiency seeking
Production of goods (by sector)	Oil and gas: Argentina, Andean Community Mining: Chile, Argentina, Andean Community	Automobiles: Brazil and Argentina Chemicals: Brazil Food and beverages: Argentina, Brazil and Mexico	Automobiles: Mexico Electronics: Mexico, Central America and the Caribbean Garments: Central America and Mexico
Services	Tourism: Mexico, Central America and the Caribbean	Financial services: Mexico, Chile, Argentina, Bolivarian Republic of Venezuela, Colombia, Peru, Brazil Telecommunications: Brazil, Argentina, Chile, Peru, Bolivarian Republic of Venezuela Commerce: Mexico, Brazil and Argentina Energy: Colombia, Brazil, Chile, Argentina, Central America Gas: Argentina, Chile, Colombia, Plurinational State of Bolivia	Business services: Mexico, Central America and the Caribbean

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

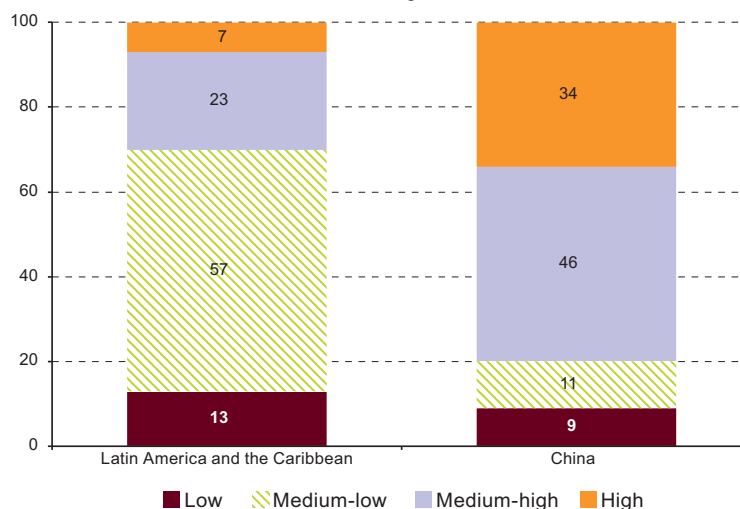
The main problems arising from FDI-financed activities have to do with the fact that they often operate in enclaves. Moreover, there is little processing of natural resources, as well as negative effects on environmental sustainability that have sparked major conflicts with local communities, and heavy dependency on raw materials price cycles. Moreover, because of the high degree of ownership concentration and the enclave rationale, productivity gains are concentrated in just a few firms, with little diffusion to other sectors of the economy.

Transnationals seeking local or regional markets have pursued this strategy mainly in larger economies of the region (Argentina, Brazil and Mexico), where FDI is concentrated in service sectors and the production of goods such as automobiles, chemicals and food and beverages. Over the past few years, transnationals have increased their investments under this strategy, taking advantage of the region's strong economic performance and a growing middle class with greater purchasing power (Franco, Hopenhayn and León, 2010). Their operations have created production linkages and helped develop the local business fabric in some sectors, such as food and beverages, and some play a key role in the dissemination of technology. In Brazil, transnationals account for some 50% of private sector spending on industrial research and development, especially in the automotive and electronics sectors. Brazil has consolidated its position as a destination for research and development investment by transnational firms, to the point that some subsidiaries have become important players in their parent companies' global innovation strategy.

The dominant strategy in Mexico, Central America and Caribbean has been to seek export platform efficiency (product assembly operations for export mainly to the United States). These activities have increased exports but have not done well in terms of technology transfer, human resource training, creating and deepening production linkages with local firms or, in a broader sense, changing export platforms into manufacturing hubs. The main disadvantages of this type of FDI are a focus on the production of low value-added goods and scant creation of production clusters.

It is useful to look at investment in greenfield manufacturing facilities (the key mechanism for increasing production capacity) by breaking down the target sectors on the basis of technology content. As shown in figure III.19, 70% of the FDI going to the manufacturing sector in Latin America and the Caribbean between 2003 and 2011 went to low- or medium-low technology content sectors (food and beverages, textiles, footwear, paper, mining and metals, among others). By contrast, in China, 80% is channelled to medium-high or high-technology sectors (automotive, pharmaceuticals, machinery, medical instruments and chemicals, among others).

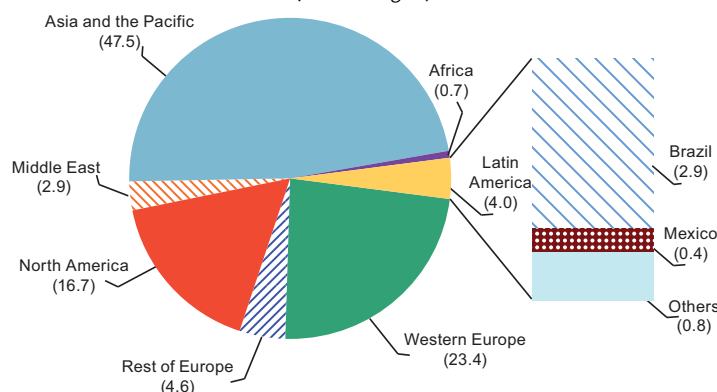
Figure III.19
LATIN AMERICA AND THE CARIBBEAN: DISTRIBUTION OF FOREIGN DIRECT INVESTMENT PROJECT AMOUNTS BY TECHNOLOGY INTENSITY, 2003-2011
(Percentages)



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

The region is a marginal player in terms of FDI associated with research and development, accounting for just 4% of such operations worldwide (see figure III.20). The countries of developing Asia receive about 50% of such investments. In Latin America and the Caribbean, they are concentrated in Brazil, the only country that has achieved significant participation in the internationalization of research and development operations by transnational firms. The major difference between the FDI received in the region and that targeting the more dynamic developing countries raises doubts as to the contribution of FDI in terms of capacity-building and technology spillovers.

Figure III.20
DISTRIBUTION OF CROSS-BORDER RESEARCH AND DEVELOPMENT PROJECT AMOUNTS, 2008-2011
(Percentages)



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

The move towards the service markets has taken in virtually the entire region, with firms taking advantage of the wide-ranging privatization processes of the 1990s to gain leading (in many cases oligopolistic) positions. Trends in the telecommunications, energy, banking, commerce and other sectors are now being set by major transnationals. Their operations have helped boost the systemic competitiveness of the host economies. The main difficulties are associated with regulatory issues and the lack of incentives to promote greater competition and thus pass on more benefits in terms of access and cost to broad segments of the population.

Available evidence shows that the impacts of transnational operations in the region have been very mixed. But it is clear that many of the impacts have to do, on the one hand, with each country's production, technology and human capital capacities and, on the other hand, with sector regulatory frameworks, particularly in the service sector.¹⁴ As a whole, these factors form a system that can either promote or restrict the benefits of FDI in the receiving countries. Thus, a set of policies that combines attracting FDI with efforts to promote structural change would not only draw higher-quality transnationals into sectors with greater spillover and capacity-building potential but would also facilitate their integration into local economies and enhance the various dimensions of development (ECLAC, 2012).

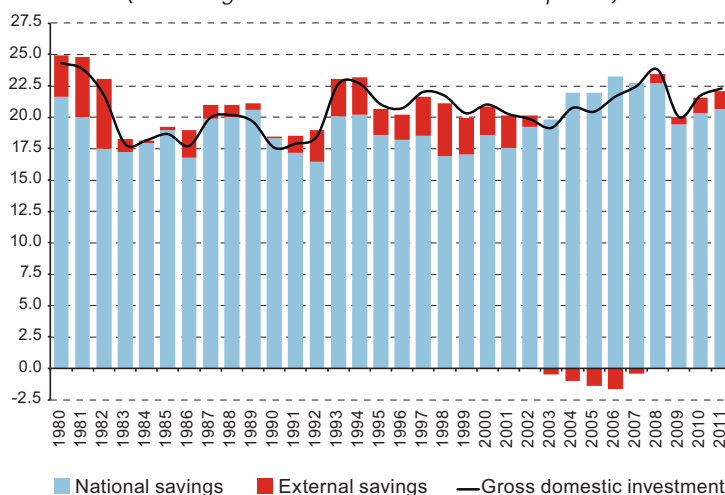
F. Financing investment

1. Sources of funding: national savings and external savings

In the long run, external funding, mediated by access to international capital markets, has contributed to the expansion of investment in the region. Periods when this type of funding was restricted as a result of changes in the global financial environment or domestic crises that exacerbated country risk have resulted in lower investment rates, at least between the start of the external debt crisis (in 1982) and 2003 (see figure III.21).

¹⁴ In general terms, criticisms of foreign direct investment in the region cite factors such as the crowding-out of domestic investment, loss of sovereignty, over-exploitation of non-renewable resources, greater external vulnerability, greater focus on non-competitive industries, degradation of the environment or failure to observe labour standards.

Figure III.21
LATIN AMERICA: FINANCING INVESTMENT, 1980-2011
(Percentages of GDP in dollars at current prices)



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

Several economies saw a significant change in this scenario in 2003-2008, when investment rates rose steadily and national savings surged, thanks mainly to a sharp rise in income.

There are differences between the countries of Latin America and the Caribbean. Tables III.13, III.14 and III.15 show total, national and external savings in national currency as percentages of GDP. Both region-wide and in most of the countries, total savings increased in 2004-2010 compared with earlier periods. Nonetheless, in many countries the average annual savings rates in that period were similar to or below those recorded in 1980-1981.

An analysis of the savings structure shows that national savings has increased gradually while the share of external savings has declined. The years 2004-2010 saw the highest levels of national savings during 1980-2010, although rates vary widely between countries. Mexico and the countries of South America, except for Brazil, Ecuador, Paraguay, the Plurinational State of Bolivia and Uruguay, have national savings rates above 20%. National savings rates in the Central American countries, except Honduras, are between 10% and 17%.¹⁵

External savings has trended in the opposite direction over the past few years (2004-2010), posting its lowest levels in reflection of stronger external accounts in most of the region's countries. Nonetheless, here too the figures are very heterogeneous. Several South American countries have negative external savings rates equal to 2.5% of GDP or even lower rates. The drop in external savings reflects stronger external accounts owing to soaring metal and hydrocarbon prices that fuelled a substantial rise in exports of goods and a marked increase in national income. The Bolivarian Republic of Venezuela and the Plurinational State of Bolivia are in this group.

The overall picture in the countries of Central America tends to be different, with external savings remaining high and positive. In conjunction with low levels of national savings, this illustrates these countries' dependency on external savings to sustain their investment levels.¹⁶

¹⁵ As table III.14 shows, the Bolivarian Republic of Venezuela has the highest national savings rate in the region (35%), well above that of the other countries. If Venezuela were excluded from the calculation, the regional average national savings rate would be 19.1%.

¹⁶ Appendix II.2 provides details of the dynamic of public and private savings.

Table III.13
LATIN AMERICA: TOTAL SAVINGS, SIMPLE AVERAGES, 1980-2010
(Percentages of GDP in dollars at current prices)

	1980-1981	1982-1990	1991-1994	1995-1998	1999-2003	2004-2010
Argentina	24.5	18.4	17.7	20.0	15.2	22.5
Bolivia (Plurinational State of)	15.8	13.5	15.8	18.7	16.1	15.1
Brazil	24.1	21.5	20.4	17.4	17.2	18.1
Chile	21.5	19.0	24.2	26.9	21.5	21.3
Colombia	19.8	19.9	22.5	22.2	16.2	22.1
Costa Rica	27.8	25.4	19.8	18.2	19.5	23.2
Cuba	...	25.4	8.0	12.8	10.7	11.0
Dominican Republic	23.7	21.0	18.2	17.0	21.4	17.8
Ecuador	12.8	17.1	14.1	13.8	13.8	16.9
El Salvador	...	13.9	18.1	17.0	16.7	15.3
Guatemala	16.5	12.6	16.4	14.7	19.1	18.6
Honduras	22.9	17.5	30.5	31.4	27.7	28.3
Mexico	27.3	21.2	22.3	23.3	22.3	25.0
Nicaragua	20.2	21.6	20.4	27.5	29.9	29.6
Panama	28.2	15.7	23.6	27.5	20.5	22.8
Paraguay	28.8	23.7	23.8	25.2	19.4	18.3
Peru	29.4	23.5	19.0	23.8	19.4	22.1
Uruguay	16.4	13.1	15.5	15.4	13.4	18.1
Venezuela (Bolivarian Republic of)	23.8	18.9	18.8	23.3	22.9	25.2
Latin America	22.6	19.1	19.4	20.8	19.1	20.6

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

Table III.14
LATIN AMERICA: NATIONAL SAVINGS, SIMPLE AVERAGES, 1980-2010
(Percentages of GDP in dollars at current prices)

	1980-1981	1982-1990	1991-1994	1995-1998	1999-2003	2004-2010
Argentina	22.0	16.5	15.4	16.6	16.2	24.8
Bolivia (Plurinational State of)	15.5	14.8	7.9	11.8	10.8	23.3
Brazil	19.3	20.2	19.9	14.1	14.3	17.7
Chile	10.8	13.3	21.5	22.9	20.6	23.3
Colombia	18.2	19.1	22.4	18.2	16.1	20.1
Costa Rica	12.8	17.1	14.1	13.8	13.8	16.9
Cuba	...	...	...	...	...	10.9
Dominican Republic	13.7	16.6	14.8	16.1	20.2	13.7
Ecuador	10.8	(0.2)	15.9	18.0	21.7	22.3
El Salvador	...	...	15.7	15.4	13.9	11.5
Guatemala	12.1	9.0	12.3	10.7	13.5	14.5
Honduras	5.1	5.4	15.9	21.7	16.7	20.8
Mexico	21.8	21.6	16.3	21.5	19.9	24.3
Nicaragua	(1.8)	5.7	(7.7)	6.8	10.2	13.6
Panama	25.7	24.4	25.6	24.1	18.3	22.6
Paraguay	23.4	18.8	21.3	22.3	19.5	18.6
Peru	24.2	20.5	13.1	16.9	17.2	22.2
Uruguay	10.8	11.8	14.5	14.1	11.5	16.0
Venezuela (Bolivarian Republic of)	30.8	21.3	18.3	27.2	30.5	35.0
Latin America	16.2	15.0	15.4	17.3	16.9	19.6

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

Table III.15
LATIN AMERICA: EXTERNAL SAVINGS, SIMPLE AVERAGES, 1980-2010
(Percentages of GDP in dollars at current prices)

	1980-1981	1982-1990	1991-1994	1995-1998	1999-2003	2004-2010
Argentina	2.5	1.9	2.7	3.4	(1.0)	(2.3)
Bolivia (Plurinational State of)	0.3	(1.3)	7.9	6.9	5.3	(8.5)
Brazil	5.0	1.3	0.5	3.3	2.8	0.3
Chile	10.7	5.7	2.8	4.0	0.9	(2.0)
Colombia	1.6	0.8	(0.8)	4.0	0.1	1.9
Costa Rica	15.0	8.3	5.6	4.3	5.7	6.3
Cuba	...	...	...	...	...	1.0
Dominican Republic	10.0	4.4	1.6	1.3	1.1	4.1
Ecuador	4.4	6.5	5.2	4.0	(0.3)	2.1
El Salvador	...	4.3	2.3	1.6	2.8	3.7
Guatemala	4.4	3.6	2.0	3.9	5.7	4.1
Honduras	11.5	5.2	8.2	3.8	5.8	6.7
Mexico	5.5	(0.3)	6.1	1.7	2.4	0.7
Nicaragua	22.0	15.0	28.3	20.7	19.7	16.0
Panama	2.5	(8.7)	(2.0)	3.4	2.2	0.2
Paraguay	5.4	4.8	2.5	2.8	0.1	(0.3)
Peru	5.3	3.0	5.9	6.9	2.1	(0.0)
Uruguay	5.5	1.3	1.0	1.3	1.9	2.5
Venezuela (Bolivarian Republic of)	(7.0)	(2.4)	0.5	(4.0)	(7.5)	(9.2)
Latin America	5.1	1.9	5.0	4.4	2.8	1.5

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

2. The financial system and funding the production sector

(a) The financial system

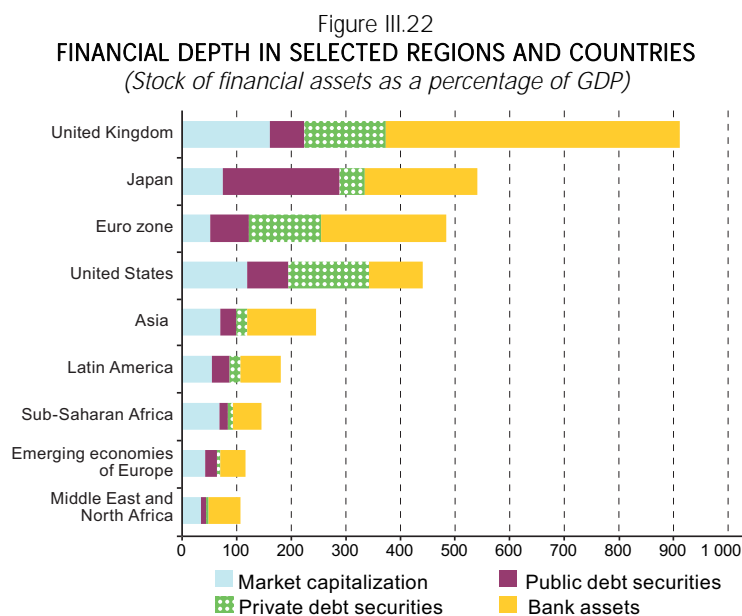
Financial-system development —specifically, the capacity of financial institutions to channel savings into the financing of production activities— is still unfinished business in Latin America and the Caribbean.

A more developed financial system would need to take account of the region's structural heterogeneity and be able to provide instruments and services that respond to the diverse production framework and the need to strengthen its linkages. The region's financial markets are segmented, and it is hard for most companies (especially microenterprises and small businesses) to access credit; this is a drag on job creation. Asymmetries in access to financing reinforce pre-existing inequalities in terms of capacities and participation in external markets, and they generate a vicious circle that increases the vulnerability of the smaller firms and makes it hard for them to expand (ECLAC, *Time for equality*). These asymmetries cramp innovation itself as well as the adoption of physical-capital-intensive and more skilled-labour-intensive innovations.

The banking system, which is the main component of the financial structure of the countries of the region, tends to offer short-term loans that are not always suited to the financing needs of investment projects. Bank credit markets are segmented, and it is the larger firms that find it easier to access credit. Most microenterprises and small businesses are not seen as creditworthy because they are unable to provide sufficient guarantees and are too small. Although financing through

external bank loans has expanded in recent years, it also tends to target the larger firms. Apart from the banking system, there are other sources of funding for the production sector, but these also are restrictive and access is segmented.

The stock of financial assets (including bank assets, market capitalization and the stock of public and private debt securities), which is the main indicator of the depth of the region's financial system, amounted to about US\$ 8.4 billion in 2010, equivalent to 180% of the region's GDP. This is much lower than the stock of financial assets in the United States (more than US\$ 64 billion, or 442% of GDP) and the euro zone (nearly US\$ 59 billion, equivalent to 484% of GDP) and even well below levels in Asia (see figure III.22).



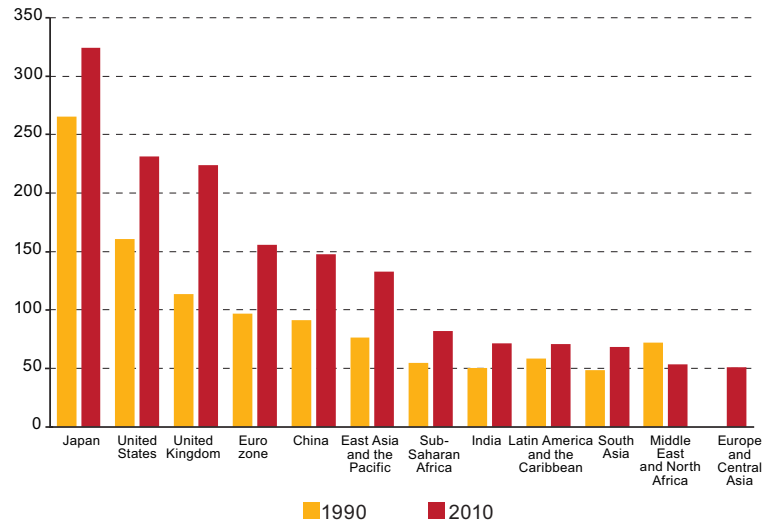
Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of figures from International Monetary Fund (IMF), *Global Financial Stability Report*, various issues.

The banking component of the region's financial system is less deep than in a number of developed countries and in other developing regions (see figure III.23). In 2010, domestic lending by the banking sector averaged 71% of GDP, about 62 percentage points below East Asian and Pacific countries. In addition, the loan-to-deposit ratio is low, reflecting the banks' preference for holding part of their assets in the form of government bonds, which limits the amount they can lend to private enterprises.

Private banks in general have behaved procyclically (which restricts credit expansion at times of reduced economic activity). Public banks, by contrast, have tended to play a countercyclical role, as in 2008-2009 in the wake of the global financial crisis (see figure III.24).

The bank business loan portfolio is made up mostly of short-term loans and working capital loans. The shift towards consumer credit over this past decade has tended to further accentuate the short-term bias of the bank portfolio. Longer-term mortgage loans have developed little, except in Chile where this type of financing grew from 19.4% of the total in 2000 to 25.5% in 2009 (Jiménez and Manuelito, 2011).

Figure III.23
**LATIN AMERICA AND THE CARIBBEAN AND OTHER SELECTED REGIONS:
 DOMESTIC LENDING BY THE BANKING SYSTEM, 1990 AND 2010^a**
(Percentages of GDP)



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

^a With the exception of the euro zone, only countries classified as developing countries are included in each region.

Figure III.24
LATIN AMERICA: AVERAGE RATE OF REAL VARIATION IN CREDIT^a

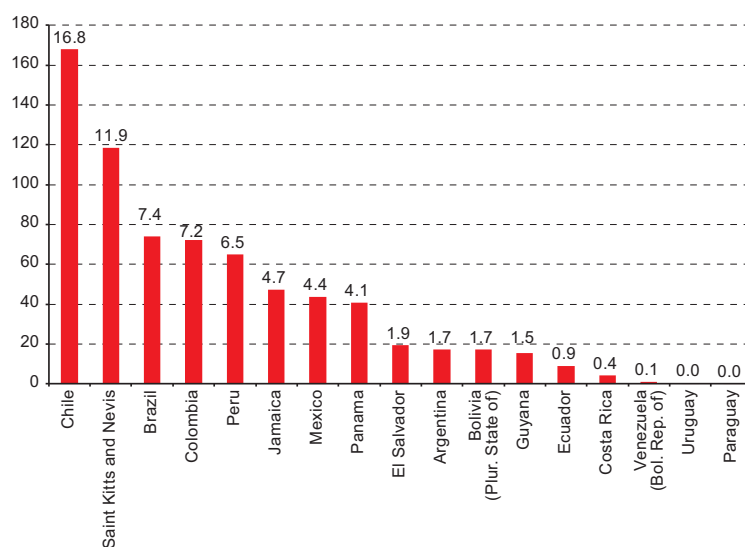


Source: Economic Commission for Latin American and Caribbean (ECLAC), on the basis of official figures from the countries.

^a Countries included in the calculation: Argentina, Brazil, Chile, Colombia, Costa Rica, Ecuador, El Salvador, Guatemala, Paraguay, Peru and Uruguay.

Equity markets, which offer long-term capital that is better suited to investment projects, are also little developed in most countries of the region. The depth of the equity market (market capitalization as a percentage of GDP) has increased in the last few decades, but it remains shallow compared to those of developed countries as well as other developing regions.¹⁷ Chile has the region's highest market capitalization rate, at almost 170% of GDP in 2010 (see figure III.25). The weakness of equity markets as a mechanism for financing investment is also shown in the small value of new share issues as a proportion of gross capital formation.

Figure III.25
MARKET CAPITALIZATION IN LATIN AMERICA AND THE CARIBBEAN, 2010
(Percentages of GDP)



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

The region's equity markets are also less liquid than those of developed countries and other developing regions. Measured by the turnover ratio (total volume traded in a given period as a percentage of average market capitalization), Brazil has the most liquid market, followed by Mexico.

A sector breakdown of market capitalization for the countries of the region shows that the leading sectors are banking, finance and insurance, along with manufacturing (see table III.16).¹⁸ There are sharp differences between countries; in Panama and El Salvador, for instance, the financial sector accounts for the largest share. In others, such as Colombia and Peru, mining firms are ranked first.

¹⁷ In 2010 market capitalization was less than 60% of GDP, in contrast, for example, to 117% in the United States, 93% in India and over 80% in China. The region's market capitalization ratio is also low compared with developing regions with lower per capita income levels than Latin America and the Caribbean. In South Asia and East Asia and the Pacific the capitalization ratios top 80%, and per capita GDP is 70% and 40% less than that of Latin America and the Caribbean, respectively. The euro zone has lower levels than the region, since the ratio fell by almost 50 percentage points (from 85% to 38%) following the crisis that broke out in 2007.

¹⁸ The information refers only to local firms quoted on the respective stock exchanges.

Table III.16
MARKET CAPITALIZATION STRUCTURE OF LOCAL COMPANIES BY ECONOMIC SECTOR, 2010^a
(Percentages)

	Manufacturing	Mining	Banking, finance and insurance	Agriculture	Retail sales	Communications and technology	Utilities	Others	Total
Argentina	54.6	...	20.7	...	...	...	13.7	11.0	100
Bolivia (Plurinational State of)	20.0	...	15.0	...	...	...	3.0	62.0	100
Brazil	21.4	11.3	26.5	0.1	2.4	5.4	8.4	24.5	100
Chile	6.1	...	12.2	...	16.8	2.2	...	62.7	100
Colombia	11.5	42.0	30.0	0.1	1.9	...	13.2	1.4	100
Costa Rica	66.0	...	28.0	...	...	4.0	...	2.0	100
Ecuador	44.2	...	28.2	0.4	24.2	...	...	2.9	100
El Salvador	...	...	82.0	...	...	18.0	...	...	100
Mexico	9.9	...	8.9	...	...	31.3	...	49.9	100
Panama	...	0.0	75.0	1.0	4.3	...	...	19.6	100
Peru	11.0	46.1	21.0	1.3	0.6	3.8	5.8	10.3	100
Uruguay	73.0	...	...	...	...	...	27.0	...	100
Average	31.8	24.9	31.6	0.6	8.4	10.8	11.8	24.6	100.0

Source: Ibero-American Federation of Exchanges (FIAP), *2011 annual report*.

^a The category "Others" includes the following sectors in each country: in the Plurinational State of Bolivia, oil companies; in Brazil, oil, gas and biofuels (17.87%) and others (6.58%); in Chile, commodities (15.54%), construction and real estate (1.15%), consumption (2.92%), utilities (14.25%) and others (28.79%); in Mexico, materials (15.90%), services and consumer goods (32.94%) and health services (1.05%).

The fact that equity markets operate in harness with banking systems (Beck and Levine, 2004) is important for firms with insufficient collateral to obtain bank financing, or those that gain access to bank financing but need to increase their capital to avoid excessive leveraging (Morales, 2009). In any event, a comparison with the situation in developed countries and in other developing nations, such as India and China, makes it clear that in Latin America access to equity markets remains concentrated in a few major companies. The number of listed firms has actually been decreasing in several countries.

The equity market has not played a key role in financing investment in most of the region's countries. In some cases, it has been virtually non-existent (Costa Rica, El Salvador, the Plurinational State of Bolivia, Uruguay) or very small (the Bolivarian Republic of Venezuela, Ecuador). Share issuance does play a role in Brazil, Colombia, Chile, Mexico and Peru, although the percentage is always lower than the investments financed by issuing shares in Spain and Portugal in 2007 prior to the onset of the crisis.

Another way firms can obtain capital financing is by being listed on foreign stock exchanges, such as those of London, New York (NYSE and NASDAQ) and Tokyo, either through American Depositary Receipts (ADRs) or through direct listing on those markets. Countries in all emerging regions have increased share issues on international markets, with Brazil the most active country in Latin America and the Caribbean. The fact that major companies in some Latin American countries increasingly issue shares on foreign stock markets could partly explain the slow rate of development of local equity markets in the countries of the region.

Bond markets in Latin America and the Caribbean are also shallow compared with other countries and regions. The average stock of bonds amounted to 33% of GDP in seven of the region's countries in 2000-2009, versus more than 100% of GDP in the G7 countries, 64% in other developed economies and 56% in Asian countries.¹⁹ Moreover, the region's markets are dominated by public-sector sovereign bond issues, with private firms accounting for a very small volume of issues. Public-sector bonds are considered necessary for the development of debt markets and thus for improving access to them by private firms. This is because they constitute a safe or a risk-free asset that acts as a benchmark for the cost of funds; they can also be used as collateral in financial operations, which helps to expand the scope of the market and allow new segments to develop (Jiménez and Manuelito, 2011). Nonetheless, when the yield on public securities is very high, banks have an incentive to channel their resources in that direction instead of lending for production investment. Nonetheless, the region's firms still tap the bond market very little as a source of funding. As is the case in the equity market, bond market liquidity is also very low by international standards.

(b) Other markets and key players

With few exceptions, derivatives markets are little developed in most countries of the region. These markets are effective for hedging risks but cannot be tapped directly to finance investment, although they can promote investment indirectly. The development of the derivatives market in emerging economies is positively related to trade, financial activity and, ultimately, per capita income (Mihaljek and Packer, 2010).

Brazil has the most developed derivatives market in Latin America, with daily turnover of about US\$ 184 billion in 2010, corresponding to 9% of GDP.²⁰ This stands in contrast to some US\$ 13.8 billion (36% of their GDP) in the advanced economies, while for emerging markets as a whole turnover was US\$ 1.2 billion, equivalent to around 6% of GDP (Mihaljek and Packer, 2010).²¹ Derivatives markets also have some importance in Mexico, with daily turnover equivalent to 1% of GDP.

The importance of these markets in Latin American countries in the future could affect the development of other financial markets, such as bond and equity markets. Once again, as in the case of complementarity between the banking system and the equity market, the parallel development of the different financial markets and subsystems could spark a feedback process that would improve the channelling of savings into long-term financing.

The region's financial systems have become more complex in recent decades as new players have appeared. In many countries, institutional investors such as pension funds, mutual funds and insurance companies are becoming more important (World Bank, 2011). Such investors need long-term assets and, therefore, could contribute to the development of equity markets and medium- and long-term corporate debt markets. Nonetheless, in several countries the financing of capital formation by these agents has been limited by their preference for investing in bank deposits and public securities—owing either to regulatory provisions or to the high interest rates that they offer.

¹⁹ The Asian countries considered are Indonesia, Malaysia, Philippines, the Republic of Korea and Thailand; "other advanced economies" include Australia, Finland, Israel, New Zealand, Norway, Spain and Sweden; Latin America (seven countries) includes Argentina, Brazil, Chile, Colombia, Mexico, Peru and Uruguay.

²⁰ Daily turnover is the total value of transactions per day, expressed as a daily average in dollars.

²¹ Daily turnover data is for April 2010. Daily turnover increased, on average, fourfold over the past decade.

Pension funds are the outcome of pension system reforms that replaced or combined the old pay-as-you-go systems with individually funded schemes. By 2010, these funds had grown to US\$ 456 billion, equivalent to 30% of the GDP of the countries included in table III.17. Chile was the first country in the region to implement this type of reform in the early 1980s; the countries where pension funds are largest are Chile (68.7% of GDP) and Panama (319.7%).²²

Table III.17
LATIN AMERICA: ASSETS MANAGED BY PENSION FUNDS
(Percentages of GDP)

Country	June 2004	June 2005	June 2006	June 2007	June 2008	June 2009	June 2010
Argentina	11.3	12.3	12.3	13.2	11.8	...	...
Bolivia (Plurinational State of)	19.5	20.1	21.0	22.0	25.2	22.6	28.9
Chile	62.6	63.9	63.2	68.5	65.1	59.9	68.7
Colombia	9.7	11.7	12.9	13.4	15.0	14.1	16.7
Costa Rica	2.1	3.0	3.9	4.9	5.0	5.9	6.8
Dominican Republic	0.4	1.7	1.7	2.2	2.9	3.7	4.7
El Salvador	12.7	16.4	19.5	19.6	22.8	25.5	24.1
Mexico	5.8	6.3	7.1	8.4	7.1	8.5	10.3
Panama	...	...	...	...	...	...	319.7
Peru	11.2	12.3	14.2	20.5	17.5	15.3	17.7
Uruguay	14.4	14.8	13.1	14.5	14.2	12.0	14.3
Total	11.4	12.5	13.7	15.9	14.0	15.6	30.1

Source: International Association of Pension Funds' Supervisory Organisations, *Boletín estadístico AIOS*, No. 23, June 2010.

As for other institutional investors, mutual fund assets account for 10% of GDP in seven Latin American countries (Argentina, Brazil, Chile, Colombia, Mexico, Peru and Uruguay), whereas insurance company assets represent 6% of GDP. The countries of the region have made more strides in developing pension funds than in developing the other kinds of institutional investor.²³

Institutional investors in the region have traditionally placed a large proportion of their portfolios in fixed-income securities or assets (public debt securities or bank deposits), which reduces the funds available for investments in corporate debt instruments and equity. For example, on average in 2005 pension funds held over half of their portfolio invested in government debt, and just 10.7% in shares. Although by 2010 the proportion of the portfolio invested in public securities had dropped to 26%, it was still high compared with levels in developed countries. In the Group of Seven, for example, pension funds held on average just 16% of their portfolios invested in government securities (World Bank, 2011). The corporate equity share grew only modestly in the region, from 10.7% in 2005 to 13.5% in 2010. Similar patterns prevail in the case of mutual funds, which invest a large proportion of their portfolios in

²² In comparison, in the Group of Seven countries assets managed by pension funds are equivalent to just 34% of GDP on average.

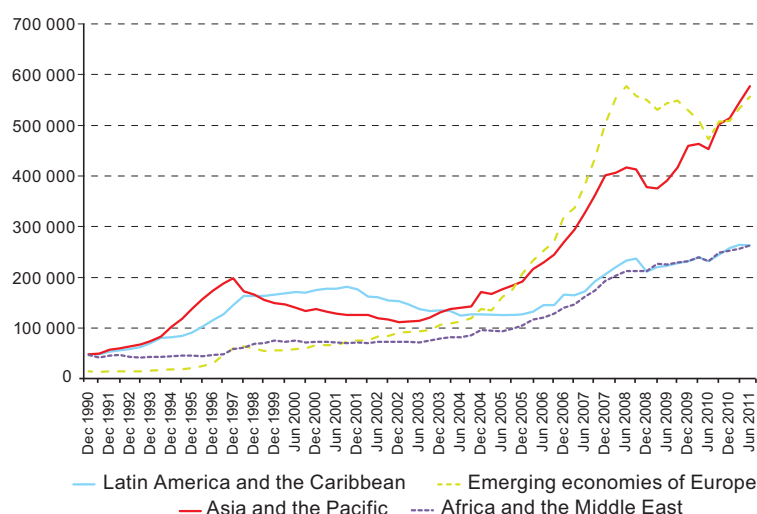
²³ There are differences between the countries of the region in this regard. In Brazil, for example, mutual funds are very significant, with total assets under management equivalent of 42% of GDP (World Bank, 2011).

government bonds and money-market instruments, although they, too, are also cutting down their public-debt holdings.²⁴

Two other types of institutional investors operate in the region: (i) private equity funds generally invest long-term in the shares of firms that are not quoted on stock markets and so are highly illiquid; (ii) venture capital funds take equity stakes in firms in dynamic sectors of the economy, from which they expect high returns in the short run. Both types of fund could be important sources of financing for smaller firms but, although their presence in the region has increased in the past decade, they are not yet very developed (World Bank, 2011).

Firms in Latin American and the Caribbean are increasingly turning to foreign bank loans as a source of funding, but growth of this form of financing is small compared with the percentage of GDP it accounts for in other developing regions. Foreign bank loans to firms in the region went from 4% of GDP in 1990 to 5% of GDP in 2011. Whereas in 1990 levels of foreign bank lending to the non-financial private sector were comparable to, or even higher than, those of other developing regions, by 2011 they were much lower (see figure III.26). In general, the economic agents that obtain such loans are larger companies while small and medium-sized enterprises find it hard to access external markets. Their growth potential is therefore limited by the shortcomings of local financial systems.

Figure III.26
FOREIGN BANK LOANS TO THE NON-FINANCIAL PRIVATE SECTOR
(Millions of dollars)



Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of information from the Bank for International Settlements (BIS).

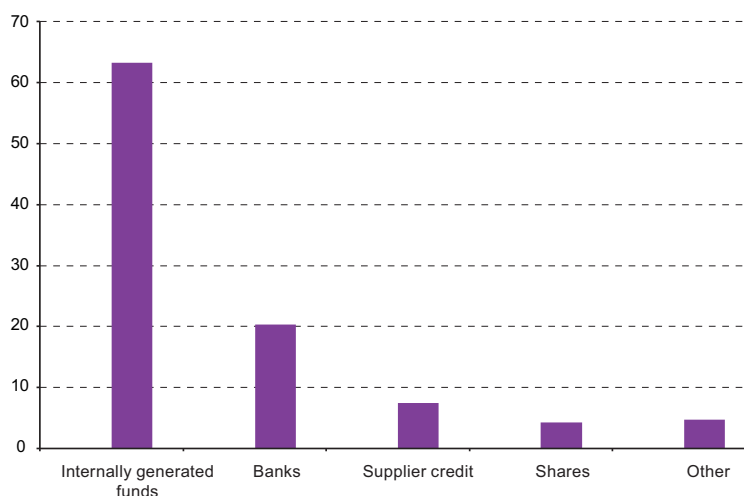
²⁴ For example, in Brazil, the share of government bonds in mutual-fund portfolios decreased from 73% in 2003-2004 to 48% in 2005-2009 (World Bank, 2011). In Chile, the share dropped from 14% to 6%; bank deposits continue to be the main component of the portfolio, with 63%, while local shares account for just 9% of the total portfolio.

(c) Financing for businesses

Financing needs in the production sector vary according to the stage of business development, ranging from seed capital and funding for start-ups to funding for working capital and investments and funding for capital increases for growth and expansion.

Given the scant development of the different components of the financial system in Latin America, funding for the production sector to cover those needs is generally in short supply. That is why the region's companies tend to finance investments themselves rather than turning to the financial markets (see figure III.27). The second most common method of financing business investments is bank loans; the third is supplier credit. Share issues account for a relatively small proportion.

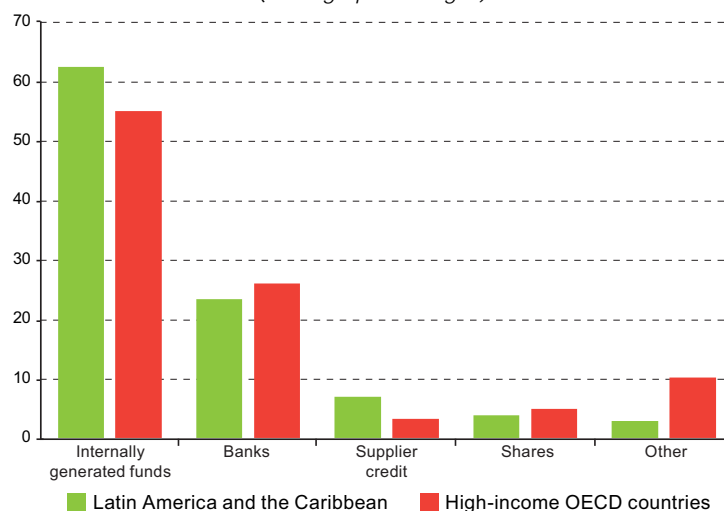
Figure III.27
LATIN AMERICA AND THE CARIBBEAN (31 COUNTRIES): BUSINESS INVESTMENT FUNDING, 2010
(Average percentages)



Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of business surveys conducted by the World Bank for 2010, except for Brazil, where the survey is for 2009.

The figure shows how heavily banks figure in the financial structure, as well as the weak development of equity and corporate bond markets. The tendency to self-finance is general, regardless of company size. Even large firms (with 100 or more employees) tend to finance a larger proportion of their investments with internal funds than their counterparts in high-income OECD countries (see figure III.28). Although the lower development level of the region's financial systems affects the financing available for all types of firm, in practice it harms smaller firms and start-ups particularly and thereby reinforces existing inequalities in production capacities and insertion in external markets. Moreover, in cases where small firms do obtain bank financing the cost is significantly higher than for larger firms.

Figure III.28
 LATIN AMERICA AND THE CARIBBEAN AND HIGH-INCOME OECD COUNTRIES:
 INVESTMENT BY MAJOR COMPANIES, BY SOURCE OF FUNDING, 2010^a
 (Average percentages)



Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of business surveys conducted by the World Bank for 2010, except for Brazil, where the survey is for 2009.

^a Data for Latin American and the Caribbean is for 31 countries in the region.

(d) Development banks

The region's financial systems are not very deep, and their degree of development is not conducive to structural change because they offer a very limited range of long-term instruments for funding investment. Development banks (whose evolution is tracked below) are in a position to play this role.

The region's development finance institutions are predominantly publicly-owned (70% of the total in December 2009). They have played a major role in providing medium- and long-term funding, thus supporting production investment and financial development in the countries by creating instruments and markets in segments where the private sector has shown little or no interest (ALIDE, 2010).

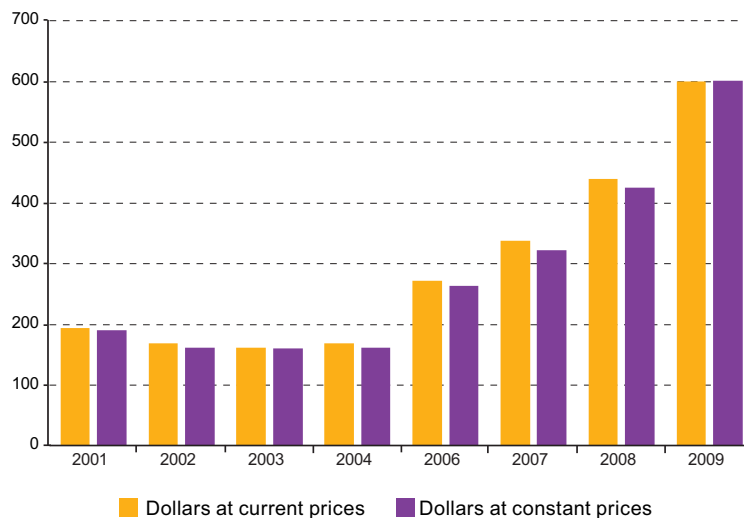
Direct investment support from development banks has consisted of identifying, promoting and financing business operations and promoting projects in keeping with national development strategies, including technology development. In promoting financial development they have encouraged the creation of new instruments (such as factoring, leasing, asset securitization, trust-fund management and the provision of guarantees), thereby expanding the range of instruments at the disposal of the production sector.

National development banks fulfil both first-tier and second-tier functions (lending to other institutions to finance development projects), complementing the role of the commercial banking sector basically by expanding access, financial innovation and risk management.

In the 1980s and 1990s the region's development banks saw their share of production finance slip; their role as second-tier banks became more important during the era of economic reforms. Since the 2000s they have gained renewed momentum, as their role in financing social and economic

demands has been recognized. Between 2000 and 2009, their loan portfolio grew by an average of 15% per year, tripling in that period to stand at some US\$ 600 billion in 2009 (see figure III.29).

Figure III.29
LATIN AMERICA AND THE CARIBBEAN: DEVELOPMENT BANK LOAN PORTFOLIO, 2001-2009
(Billions of dollars)



Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of figures from the Latin American Association of Development Financing Institutions (ALIDE).

This growth is reflected in the higher profile acquired by development banks in the financial systems of several countries in the region. In 2009, national development banks of the countries of Latin America accounted for nearly 30% of total lending to the private sector. The largest percentages were in Costa Rica and Uruguay, with nearly half of all loans, and in Argentina, Brazil and the Dominican Republic, with more than a third of the total (see table III.18). A similar pattern can be seen in national financial system deposits, with 24%, on average, channelled through development banks. Costa Rica stands out in this regard, as well, where development banks take in nearly 70% of total deposits, as do Argentina and Uruguay (about 45%) and Brazil and the Dominican Republic (with nearly a third).

Development banks have provided support for housing and infrastructure finance in the region. Argentina, Brazil, Chile, Colombia, Mexico, Peru and the Plurinational State of Bolivia have all made significant progress in mortgage loan securitization.²⁵ Project finance in partnership with public and private entities has gained ground in some countries. And the creation of guarantee funds in several countries is an example of the development of instruments that stimulate synergies between public and private financing targeting small and medium-sized enterprises.²⁶ Multilateral development banks have played a complementary role, as explained in box III.1.

²⁵ Loan securitization is an operation in which development banks buy portfolios of credit claims from first-tier banks, bundles them and places them on the securities market. This enables the banks to shift their credit risk to the securities market and take in new funding for lending.

²⁶ The supplier development programme through electronic factoring promoted by Nacional Financiera (NAFIN) in Mexico has resulted in timely and lower-cost financing for small and medium-sized enterprises.

Table III.18
SHARE OF DEVELOPMENT BANKS IN TOTAL LENDING TO THE PRIVATE SECTOR, 2009
(Percentages)

Country	Share
Argentina	37.7
Bolivia (Plurinational State of)	0.3
Brazil	37.0
Chile	20.8
Colombia	15.6
Costa Rica	49.0
Dominican Republic	36.3
Ecuador	18.6
El Salvador	8.0
Guatemala	22.0
Honduras	11.6
México	14.3
Panama	10.4
Paraguay	7.6
Peru	3.5
Uruguay	47.8
Latin America	29.9

Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of information provided by the Latin American Association of Development Financing Institutions (ALIDE) and Latin American and Caribbean Macro Watch of the Inter-American Development Bank.

Box III.1

MULTILATERAL DEVELOPMENT BANKS

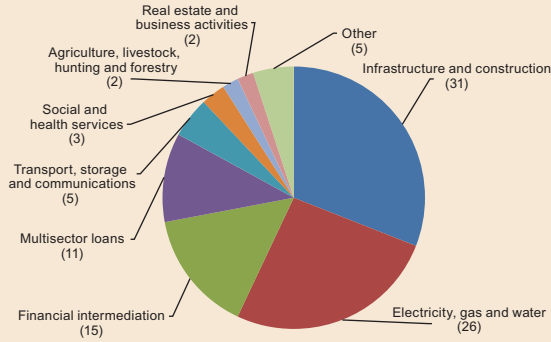
Multilateral development banks obtain funding in international financial markets under generally advantageous conditions because their risk rating is better than that of their member countries. In turn, they channel that funding to those countries. The multilaterals operating in the region include the International Bank for Reconstruction and Development (World Bank), whose scope is worldwide; the Inter-American Development Bank (IDB), which is regional; the Central American Bank for Economic Integration (CABEI); the Caribbean Development Bank (CDB); and the Development Bank of Latin America (CAF). At first, the multilateral development banks mobilized medium- and long-term resources for funding production investment in areas that promoted economic complementation. Gradually, regional and subregional development banks have taken on broader roles, engaging in indirect financial intermediation through loans to or investments in local financial institutions (for lending to businesses) or giving support (with venture capital and private equity funds) to companies with capital.

As is the case with national development banks, subregional banks lost some of their importance during the 1980s but started to regain it in the following decade. In the 2000s, subregional banks significantly increased their lending volume and relative share of total multilateral development bank lending to Latin America and the Caribbean. In 2011, subregional banks made almost US\$ 12 billion in loans to the region, representing 36% of total multilateral development bank lending to the region. The Inter-American Development Bank accounted for 34% of the lending, the World Bank for 30%. While these are large figures, they are far smaller than the loan portfolio of the region's largest development bank (BNDES) and Chinese loans to Latin America and the Caribbean in recent years (US\$ 73 billion, more than twice the amount granted by the World Bank) (Kevin Gallagher, China and the Latin American economies, paper submitted to ECLAC on 17 July 2012).

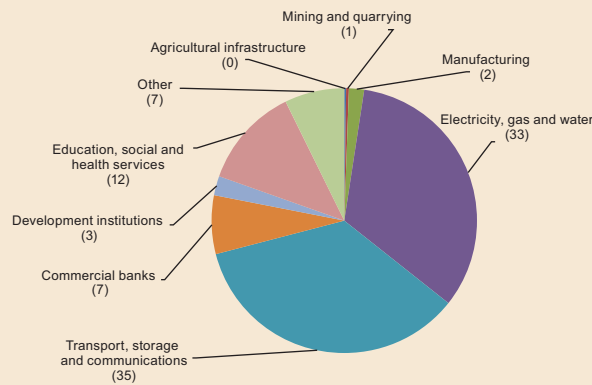
The following figures provide a sector breakdown of the portfolios of the Central American Bank for Economic Integration, the Development Bank of Latin America (CAF) and the Caribbean Development Bank.

Box III.1 (concluded)

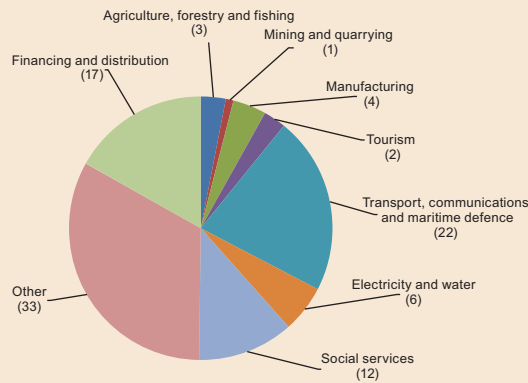
A. CENTRAL AMERICAN BANK FOR ECONOMIC INTEGRATION
(Percentages)



B. DEVELOPMENT BANK OF LATIN AMERICA (CAF)
(Percentages)



C. CARIBBEAN DEVELOPMENT BANK
(Percentages)



Source: Economic Commission for Latin America and the Caribbean (ECLAC) on the basis of annual reports published by the respective institutions.

G. Investment profitability and production structure inertia

1. The microeconomic dimension

In order to change a pattern of specialization, investment decisions made by economic agents must focus on new sectors instead of reinforcing old ones. For this to happen, the incentives structure (relative rates of return on investment) on which economic agents base their decisions must favour those new sectors.²⁷ Many inertia factors are a drag on diversification, particularly in Latin America and the Caribbean whose competitiveness is based on static comparative advantages instead of on technology capacities. There are marked asymmetries that explain the relatively low efficiency and profitability of the region's technology-intensive sectors. This is compounded by rising commodity prices, which have made natural-resource-intensive activities more profitable and thus encouraged investment in them by the main agents of production.

Investment decisions ultimately depend on the relative profitability of any given production structure. Particularly important are the investment decisions of major companies, because of the leading role they play in technology and production in so many dynamic sectors of the economy.²⁸

Relative sector profitability depends not only on the technology lag at any given time, but also on inertia in the evolution of technology and learning, which makes it hard to change course. This is known as “path dependence,” when certain situations or historical events can have major consequences for the future development of a system, with outcomes that are not necessarily optimal. The concept of path dependence assumes that there are increasing returns, or positive feedback, in which the advantages of a given technology path (or a certain type of decision) increase as they become more widely adopted. The resulting lock-in makes it increasingly costly to abandon the path (David, 1985; Arrow, 2000).

In lock-in situations, the decisions made by agents can hamper the review and correction of suboptimal outcomes. Such decisions reflect the current price structure and barriers to technology dissemination. In such cases, policy plays a crucial role in releasing the lock-in and in building institutions that foster a new path for learning and innovation. The State should intervene to change the production structure or transform the underlying relationships among agents (David, 2000). Absent such intervention, the existing pattern tends to be perpetuated, as seen below.

Instead of promoting a sustainable development path, public policy sometimes reinforces production structure lock-in—for instance, when driven by regulatory capture it subsidizes the consumption of fossil fuels and electricity to make mature, polluting activities more profitable (see table III.19 for the case of fossil fuels). In some countries, the amount of such subsidies exceeds public expenditure on health, for example (United Nations, 2012). This policy bias, together with a high correlation between energy consumption and income and a very low price elasticity of demand, hinders efforts to move towards a sustainable production pattern (Galindo and Samaniego, 2010).

²⁷ The incentives structure depends on static variables, such as the factors of production at a given point in time, and on the existence of policies aimed at turning static comparative advantages into dynamic ones (also referred to as competitive advantages).

²⁸ The presence of major Latin American companies in knowledge-intensive sectors has been limited, for various reasons. These include the macroeconomic context, public policies implemented in response to that context, institutional shortcomings, constraints on the implementation of industrialization policies, what is done to attract foreign investments, and issues related to management patterns and family control.

Table III.19
LATIN AMERICA (SELECTED COUNTRIES): FOSSIL FUEL SUBSIDIES, 2008-2010
(Billions of dollars and percentages of GDP)

	2008	2009	2010	2008	2009	2010
Argentina	18.1	5.9	6.5	5.5	1.9	1.8
Colombia	1.0	0.3	0.5	0.4	0.1	0.2
Ecuador	4.6	1.6	3.7	8.4	3.1	6.7
El Salvador	0.0	0.0	1.2	0.0	0.0	5.6
Mexico	22.5	3.4	9.5	2.1	0.4	0.9
Peru	0.6	0.0	0.0	0.5	0.0	0.0
Venezuela (Bolivarian Republic of)	24.2	14.1	20.0	7.8	4.3	5.1

Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of official figures from the countries and from the International Energy Agency (IEA), *World Energy Outlook 2011*, November 2011.

2. Microeconomic incentives and structure inertia

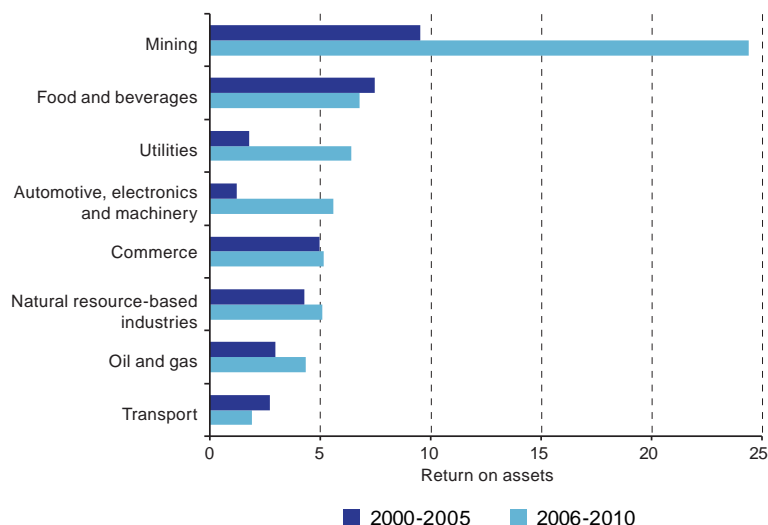
The production specialization dynamic depends on economic incentives and the behaviour of economic agents. This is important for understanding not only the pattern of specialization but also the forces that make it self-reinforcing and how external shocks impact the functioning of the development model. Differences between sector profitability determine where investment is channelled. If higher rates of returns on investment are associated with less knowledge-intensive sectors, the production structure will remain locked in a technologically less dynamic path. And if account is not taken of negative environmental externalities, cost and profit signals skew the growth model in an unsustainable direction. This blocks the development of new technologies that would, for example, open up lower-carbon-emission energy alternatives for transport, urban development and production.

Figure III.30 shows average return on assets, weighted by company size, across sectors for 2000-2005 and 2006-2010, permitting a comparison of the incentives to invest in different sectors. Knowledge-intensive sectors are not among the most profitable in either period. The return on assets in the electronics and computing, machinery and automotive industries is about 25% of the return on assets in the mining sector in 2006-2010.²⁹ Knowledge-intensive activities do not earn higher rates of return than mass consumption sectors (food and beverages) and public services.

Figure III.31 shows the return on assets for knowledge-intensive sectors compared with mining companies during the growth period of 2003-2010. The main reason for higher profitability in knowledge-intensive sectors starting in 2004 was domestic market growth (particularly for the automotive industry) and consistent policies favouring this industry, especially in the region's largest market (Brazil), where countercyclical fiscal and credit measures were deployed during the 2008-2009 crisis. The results contrast with high returns in the mining sector since the start of the decade in keeping with soaring international prices. This sample of firms shows marked differences in rates of return that explain why the current pattern of production specialization channels investment mainly towards natural-resource-based sectors.

²⁹ A look at the world's 500 largest companies shows that natural-resource sectors also display relatively high rates of return, although lower in absolute values than those seen in Latin America and the Caribbean. Another key difference is the lesser concentration of firms globally (and in certain regions) in these sectors.

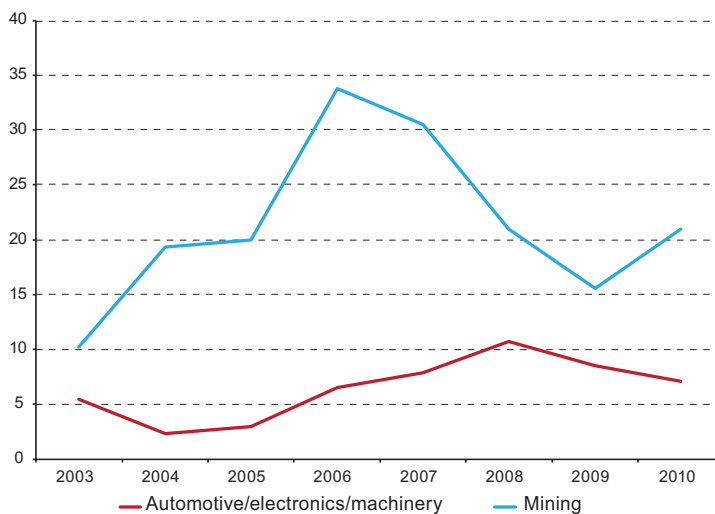
Figure III.30
 LATIN AMERICA: RETURN ON ASSETS BY SECTOR, WEIGHTED AVERAGE, 2000-2005 AND 2006- 2010^a
 (Percentages)



Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of information provided by the Special Studies and Projects Department of *América económica* magazine.

^a Weighting based on each company's share of sector sales. Natural resource-based industries include cement and aluminium, iron and steel, chemicals, petrochemicals, paper and pulp, and agribusiness.

Figure III.31
 LATIN AMERICA: RETURN ON ASSETS IN KNOWLEDGE-INTENSIVE SECTORS AND MINING, 2003-2010
 (Percentages)



Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of information provided by the Special Studies and Projects Department of *América económica* magazine.

In short, technology asymmetries between Latin America and the Caribbean, on the one hand, and developed countries on the other are more marked in knowledge-intensive sectors. These differences open a productivity gap, undermine competitiveness and make returns in these sectors lower than in sectors specializing in natural-resource-based export products. In the absence of active policies to change relative rates of return, the negative relation between technology intensity asymmetries and profitability will persist and help reproduce the existing pattern of specialization.

Against a backdrop of burgeoning commodity demand and rising prices, the open model pursued by the region consolidated a vector of incentives that led to the self-reinforcement of the specialization in goods that represented its initial competitive base. Investment decisions are strengthening the current path; macro prices are neither encouraging investments that could diversify the production structure nor creating forward and backward linkages. Overcoming this problem calls for redefining investment incentives and hence the structure of relative rates of return. This is a challenge that public policy cannot afford to ignore in the next few years if the aim is to bring about structural change that also creates quality jobs.