Chapter I

Structural change for development

This chapter introduces the main ideas of the document and analytically integrates three dimensions of the concept of development: structural change, growth to reduce internal (within the country) and external (with respect to the developed world) income and productivity gaps (convergence), and the promotion of equality. These three dimensions interact and evolve together, determining the output, productivity and employment growth paths of the economy over time. A pattern of virtuous growth, compatible with the concept of development, requires sustained increases in productivity and employment that enable the economies that have lagged behind to catch up with those on the global technology frontier and to allocate an increasing share of total employment to quality jobs with rights.

Development is the process by which progress is made on the three fronts of structural change, convergence and equality. The countries of Latin America and the Caribbean have made progress, at different times, on one or another of these fronts, but it has not been enough. Moreover, progress has rarely been made on all three fronts simultaneously. In particular, over the past decade, the region has reduced the income gap with the developed world, but not the technology or productivity gaps. It has improved distribution through the revitalization of the labour market and more vigorous social policies but has not succeeded in creating as many quality jobs as are needed. A good portion of the region's production system continues to be characterized by informality.

Structural change aimed at closing the productivity gap and opening up quality jobs for most of the workforce has been notably absent since the 1980s. This is the challenge that this document seeks to address: to offer a comprehensive analysis of the various dimensions of economic development that will lead directly to policy responses (coordinated and complementary) that act on these fronts.

Another central aspect of the analysis that is proposed is an integrated way of looking at the short and long terms, cyclical fluctuations and the growth trend, all part of the same process. The long term does not lie behind cycles as a separate line around which fleeting shocks occur that are absorbed without a trace. Shocks and policies, macroeconomic and industrial alike, with their

effects on production levels and macro prices (wages, interest rate and exchange rate) leave marks on the structure that affect the growth path in subsequent periods. These lasting marks are related to changes in the level, composition and allocation of investment. A temporary fall in investment or a change in its composition is more than a transitory setback. The very movement of the international technology frontier —which has been accelerating over the past two decades— creates new conditions. So, once the impacts of a shock have been absorbed there is no return to the situation immediately preceding the shock but rather to a situation in which production structures have fallen behind the economies at the leading edge of innovation.

This chapter is organized as follows. Section A describes the characteristics of growth in Latin America and the Caribbean since the 1970s, providing a framework for the discussion that follows. Section B explains how the structuralist approach to development sees the relationship between business cycle and structural change. Section C expands on the structuralist perspective, defining desirable structural change, Keynesian (growth) and Schumpeterian efficiencies of the production structure (dynamic efficiency) and their relationship to employment and equality. Section D explores the challenges of desirable structural change in the context of the current technology revolution and the opposing forces that are emerging from it, as well as the trends towards concentration or deconcentration of production and services in terms of countries, sectors and firms. Section E compares the performance of the countries of Latin America and the Caribbean with that of the Asian countries, discussing their growth patterns based on the productivity and employment dynamic. Special note is made of the absence of a virtuous pattern in the region, i.e. a pattern of simultaneous sustained growth in productivity and employment. This lack of a virtuous pattern is related to weak structural change. Section F discusses the links between the business cycle, external shocks —arising from shifts in capital inflows or terms of trade— and the production structure in the various periods of the region's economic history over the past 50 years. It also covers the relationship, in each of these periods, between growth and external equilibrium, noting the role of macroeconomic and industrial policies. Last, section G focuses on income distribution and equality, in conjunction with growth, and on the territorial dimension of heterogeneity. It takes another look at the distribution effects of growth in the different periods of the region's economic trajectory, pointing up the important role that distribution policies have played in recent years and the challenges posed by the coming decades to the advance of equality.

A. Growth in Latin America and the Caribbean

Economic growth in Latin America and the Caribbean between 2003 and 2011 enabled the region to recover from a lacklustre period that began with the debt crisis of the early 1980s. However, these recent growth rates do not match the rates achieved in the 1970s by the region's countries or the rates currently seen in other developing countries (see table I.1). The difficulty that the region is experiencing in returning to a faster growth path is seen when comparing the evolution of its per capita income with that of the fastest growing economies in South Asia.[1]

[1] For example, per capita income in the most successful East Asian economies, such as the Republic of Korea and Taiwan Province of China, which had trailed that of many sub-Saharan African nations in 1950, had already risen above the Latin American and Caribbean average by the 1980s.

Table I.1
ANNUAL GDP GROWTH RATES BY REGION (SIMPLE AVERAGES), 1971-2010
(Percentages)

	1971-1980	1981-1990	1991-2000	2001-2010
Sub-Saharan Africa	3.7	1.9	2.3	5.2
North America	3.3	4.4	3.4	2.1
Latin America and the Caribbean	**5.7**	**1.3**	**3.2**	**3.8**
East Asia and the Pacific	4.8	4.7	3.1	4.2
South Asia	3.0	5.4	5.2	7.5
Europe and Central Asia	3.2	2.4	1.9	2.0
Middle East and North Africa	8.6	1.8	4.1	4.8
Arab countries	...	1.5	3.9	4.9
World	3.9	3.5	2.9	3.0

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

Improved performance since 1990 (except for the lost half decade) gathered further momentum in 2003, with several countries in the region managing to sustain this level of growth despite the decline in economic activity brought on by the international recession of 2008-2009. The economic growth rates of the past two decades have been more volatile than in other regions of the world, developed and developing alike, a trend that characterizes the region to this day.

Naturally, within this larger whole, there are significant differences at the subregional level. In the two past two decades, two upswings may be distinguished (1991-1997 and 2003-2011), separated by five years of stagnating —and in some cases falling— activity levels (1998-2002). During both growth phases, the region's overall good performance was driven by Central and South America. In the 2003-2011 period in particular, the two subregions achieved the highest growth rates of their recent history and weathered the impacts of the 2008-2009 global recession better than Mexico and the Caribbean.

Table I.2
GDP GROWTH RATES BY SUBREGION, 1971-2010
(Percentages)

	1971-1980	1981-1990	1991-1997	1998-2002	2003-2010
South America	**5.6**	**1.0**	**4.1**	**0.3**	**5.0**
Argentina	2.6	-1.0	6.1	-3.1	7.5
Brazil	8.8	1.7	3.0	1.7	4.0
Chile	2.8	3.1	8.2	2.5	4.0
Colombia	5.5	3.4	4.0	0.7	4.4
Central America	**4.3**	**1.0**	**4.5**	**3.5**	**4.3**
Mexico	6.6	1.9	2.9	3.2	2.2
The Caribbean	...	**1.6**	**1.9**	**3.0**	**2.9**
Latin America and the Caribbean	**5.9**	**1.5**	**3.6**	**1.3**	**4.2**

Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of CEPALSTAT [online database] http://websie.eclac.cl/sisgen/ConsultaIntegrada.asp/, 2012.

Note: Calculations based on 2005 constant values. The GDP of the subregions is the sum of the GDPs of the countries of each subregion.

As will be discussed later, the behaviour of the region's economies between 2003 and 2010 can be explained by internal as well as external factors. Within the region, a series of policies were implemented that paved the way for a relatively balanced evolution of the most important macroeconomic variables. And outside the region, there was an improvement in the terms of trade for commodity-exporting countries, an increase in foreign direct investment and fluid access to international financing, as well as foreign income from tourism and migrant worker remittances. This combination —not exempt from contradictions and sudden changes, as evidenced during the 2008-2009 crisis— helped to prevent or alleviate historical tensions on the external front, especially in countries that export natural resources.

The period of stagnation between 1998 and 2002 can essentially be attributed to the South American economies, since Mexico, Central America and the Caribbean grew at average annual rates of over 3%. The poor performance of South America during this period was directly associated with the growth pattern of the second half of the 1990s, when mounting external imbalances gave rise, among other manifestations, to the crises in Brazil (1999) and Argentina (2001). Specific conditions in individual countries notwithstanding, the tendency to combine stabilization programmes built around the exchange rate as the nominal anchor with economic reforms —trade and financial liberalization— led to significant exchange rate appreciation to the detriment of the real economy, especially the tradable sectors.

Between 2003 and 2011, following the five-year period from 1998 to 2002 known as the "lost half-decade", most of the countries of Latin America and the Caribbean experienced their fastest growth since the 1960s, outpacing the global average and the advanced countries. This led to a significant improvement in the living conditions of the population, as seen in social and labour indicators. Not only was major headway made in reducing unemployment, poverty and indigence, but also for the first time in several decades, a sizeable subset of countries in the region achieved positive results in terms of income distribution (ECLAC, 2010). This was also a period of relative macroeconomic stability, with growth accompanied by single-digit annual inflation on average, despite the spike in international prices for oil, grains and other commodities. The region's countries were able to take advantage of the favourable external environment, pairing economic growth with fiscal surpluses and falling external debt levels.

In the period 2003-2011, as happened in a number of countries in the previous decade, the nominal exchange rate also served as an anchor to contain or reduce inflation. Heavy inflows of primarily short-term capital caused local currencies to appreciate in real terms. This had the effect of concentrating export growth in the natural resources sectors and limited their capacity to pull along the rest of the economy. It also discouraged capital formation in the tradable sectors and drove down output. The drive to specialize in natural resource-intensive products was consistent with the relative price structure induced by the external shock and exacerbated by stabilization policy.

Though fiscal reform continues to be an item of unfinished business in the region —especially in terms of the low tax burden, the regressive effects of taxation and much of fiscal spending, and the share of indirect taxes in total taxes— several key aspects of public finances took a turn for the better in 2003. Evidence of these improvements is seen in, among other indicators, the lower levels of external public debt and fiscal deficits, as a percentage of GDP in both cases, in many of the region's countries. Aside from the factors that in each case made these gains possible, the near-universal reduction in public debt levels as a percentage of GDP and in interest rate spreads on sovereign debt

—a reflection of lower country risk— created more economic policy space to manage the short-term cycle, as seen in the region's ability to respond to the contraction in external demand that followed the Lehman Brothers crisis in the third quarter of 2008. Unlike in the 1980s and 1990s, the improvement in public finance did not come at the expense of cuts in social spending or infrastructure investment. Indeed, public spending increased significantly and infrastructure investment rose moderately.

There are important differences with respect to growth rate and economic performance between the subregions of Latin America and the Caribbean. These are associated with (i) the varying degrees of global financial integration, which mean different levels of exposure and vulnerability to the liquidity cycles of key countries; (ii) exposure to the real cycle of the advanced economies, particularly the United States (as in the case of Mexico and the countries of Central America and the Caribbean); (iii) the effect of international commodity price movements on the terms of trade; and (iv) the different initial conditions, institutional settings and policy measures in place in each economy. These differences led to various behaviours in terms of investment and exports and their capacity to lift the rest of the economy and thus raise GDP.

Notwithstanding these differences, the performance of the region in general has been satisfactory in recent years. The resilience shown by the countries of Latin America during the economic crisis that hit the industrialized world offers proof of this. However, this positive result must not engender complacency in the region. For example, this period did, after all, hold benefits for many countries in the region in the form of high prices for agricultural and commodity exports, very favourable conditions of access to external financing and a steadily expanding international market, which goes a long way in explaining their strong performance.[2]

These outcomes have taken place in the framework of a global economy that has undergone profound transformations over the past 10 years. Among the more significant is the emergence of China as a dominant player in global trade and investment. China's ascendancy confirms the general trend among developing countries in Asia towards larger roles on the global stage. For some countries in the region, the most obvious impact of this new pre-eminence has been the increase in demand for natural resources, especially metals and hydrocarbons, which have noticeably improved their terms of trade. In addition, the incorporation of the Asian labour force has impacted the dynamics of global labour costs, especially inasmuch as they figure increasingly heavily in international markets for manufactured goods. This has real consequences for the countries of Latin America and the Caribbean, more or less favourable depending on their degree of integration in the global marketplace.

For most Central American and Caribbean countries, which are net importers of food and energy, the impact of China's growing presence and changing terms of trade was negative and exacerbated their external account problems, especially in the countries that have tended to specialize in exporting labour-intensive manufactured goods (in direct competition with Asian production). Thus, instead of benefiting from rising commodity prices and growing Chinese

[2] The remarkable response and recovery capacity demonstrated by the region during the worst part of the crisis in 2008-2009 occurred in a larger context of sweeping proactive macroeconomic policy measures on a global scale, driven by key countries and China. This relatively coordinated countercyclical fiscal and monetary response included an unprecedented measure to support the functioning of the international monetary system of the past three decades, namely the allocation by the International Monetary Fund (IMF) in the third quarter of 2009 of Special Drawing Rights equivalent to US$ 250 billion. For more detailed information on the countercyclical policies adopted in the region, see ECLAC (2009).

demand for inputs, they were hurt by increased competition with China and Asia in general for the United States market, their largest foreign market. Although income from tourism and migrant worker remittances partially offset these effects, their extreme dependence on the business cycle of the developed economies, especially the United States, injected substantial volatility into their growth rate and robbed them of momentum.

For net exporters of natural resources, both in South America and the Caribbean, the foreign trade boom has mitigated (but not eliminated) the threat posed by the debt and balance-of-payment crises. This larger trade cushion does not mean that the countries benefiting from it are on a sustainable high-growth path in the long term. The key structural problems that have historically plagued the region persist. There are challenges that must be faced, not only by the economies of the region that have been adversely affected but also by those that have profited from these new trends in the external environment.

The countries that have benefited from the commodities boom are very susceptible to a reversal in the terms of trade trend. But even if these favourable external conditions were to persist, there are reasons to be concerned about the trends in the production structure, particularly with the reprimarization of export specialization.

History indicates that specializing in low value-added assembly work or in commodities is associated with weak gains in productivity, job creation and economic growth in the long term. The short-term benefits of this type of production specialization should be weighed against the long-term cost. This trade-off is crucial when it comes to shaping macroeconomic and industrial policy agendas for structural change. The need for structural change as a cornerstone of development has been and continues to be the key challenge facing the region and will assume even greater importance in coming years.

Understanding this challenge calls for revisiting the contributions of the pioneers in development theory.[3] Economic development involves not only high growth rates but also qualitative changes in the production structure and, especially for open economies, in the pattern of specialization and integration in the global markets. These changes should increase the share of knowledge-intensive sectors in total production, which will enhance the skills, knowledge, and learning processes that occur in conjunction with production and investment. Technological know-how, production structure diversification and the potential for economic growth are closely interrelated.

Not all structural change is good for development. Structural change entails transforming the composition of output and international trade, employment and the pattern of specialization. Virtuous structural change is defined by two interrelated aspects. First, it is characterized by an increase in the contribution of knowledge-intensive sectors or activities to output and trade and a denser and more diversified production matrix, with higher productivity growth paths and technology spillovers and externalities that benefit the entire system. Second, desirable structural change should also lead to insertion into high-growth global markets so as to boost aggregate demand, production and job creation, with the ensuing favourable effects on income distribution. Structural change that meets both criteria is indispensable for placing an economy on a long-term high-growth path that is not compromised by disequilibrium on the external front. This type of

[3] There are several authors who can rightly be described as classics in the field of economic development, including Rosenstein-Rodan, Gerschenkron, Nurkse, Lewis, Hirschman, Prebisch and Furtado.

change is consistent, in particular, with a rate of export growth that systematically covers the import bill and factor payments (e.g. interest), so the current account balance as a percentage of GDP remains at manageable levels.

The concept of virtuous structural change implies a distribution structure designed to reduce inequality. This does not occur spontaneously but rather requires developing and strengthening economic, social and public institutions so they are able to ensure that the fruits of technical progress are broadly distributed instead of excessively concentrated. In the medium term, desirable structural change should lead to better income distribution and access to production factors. In the transition from a concentrated structure to one with better distribution, structural change should be accompanied by social protection pillars for sectors whose incorporation into production activity requires longer lead times as well as by policies to develop the skills that will enable these sectors to move into quality employment more quickly.

By encouraging the creation of new sectors and the dissemination of technology throughout the entire system, structural change generates job opportunities in high productivity sectors. A virtuous pattern of structural change, at the core of the development process, pairs high productivity and output growth with a drop in open unemployment, informal and subsistence employment, which reduces poverty and inequality in the economy. This last aspect is especially important in Latin America and the Caribbean, a region that stands out internationally for persistently high levels of inequality.

B. Structuralism: Macroeconomics and development

Structural change has always been at the heart of development theory, so it is striking that until recently it had been relegated to the sidelines of the dominant orthodoxy on growth theory. That marginalization has lessened in recent years as growth analysis has assigned an increasingly important role to structural change, as the leading thinkers on development and the ECLAC manifesto of 1949 proposed. Since the 2008 crisis, the idea that structural change and policies to foster it are indispensable for achieving high growth with a better distribution of income has won increasing acceptance, even in circles that tended, at most, to view it as a topic for books on the history of economic thought.

According to the orthodox approach that prevails in some academic circles and among international financial organizations, the long term is conceived as a steady state of growth towards which an economy converges if market mechanisms are allowed to operate. From this perspective, macroeconomic policy should address inflation and short-term fluctuations, while the long term and the growth trend are handled by "God and the engineers," as Joan Robinson put it. This approach has been increasingly challenged by economists from different schools of thought (Lall, 2000), who are very far from a consensus on the idea that if the central bank concentrates only on inflation, then output will automatically stabilize very near its potential level (the so-called "divine coincidence").

Meanwhile, according to the structuralist approach, the relationship between the production structure and macroeconomic policy runs in both directions. Macroeconomic policy shapes the production structure, and the production structure in turn determines the space available for macroeconomic policy, as well as its effects on the economy. From this perspective, it is more accurate to speak of cycle and trend as coevolving phenomena than as two separate dimensions of economic growth. This point —that cycle and trend are interrelated— is highlighted in the document and will be taken up again later.

There are three transmission mechanisms between macroeconomic policy and production structure: (i) the effect of policies on the rate of capacity utilization, which in turn influences investment rates (accelerator effect); (ii) the effect of an increase in aggregate demand on the rate of technological progress and productivity growth (Kaldor-Verdoorn effect); and (iii) the effects of policies on macro prices, which influence the expected profit rates in different sectors and thus the direction and composition of investment. The functioning of transmission channels is complex and also includes intermediate effects on income distribution and consumer demand.

These effects connect macroeconomic policy with the productivity and employment paths and are a link between the long and the short term, between trend and cycle. Given its influence on the level and composition of investment, macroeconomic policy shapes future growth. A related factor is the irreversibility of supply: whereas the recessionary phase of a cycle of economic activity can permanently destroy installed capacity ("a firm can be destroyed in a day"), the corresponding expansionary phase, of the same duration, can be insufficient to replace the lost capacity due to various reasons, chief among them being the lead time needed for individual and institutional learning processes ("a firm is not built in a day").

Managing aggregate demand and its effect on the degree of utilization of production capacity helps to determine the level of investment. A highly restrictive approach to demand management, which results in long periods of underutilization of installed capacity, reduces the investment stimulus and curbs both the expansion and modernization of the stock of capital assets. This compromises the future growth of productivity —and thus output and employment— in a global context characterized by swift technological change. At the same time, the expansion of aggregate demand and output in the short term generates learning-by-doing processes that boost productivity. Productivity tends to rise when production increases owing to increasing returns on economies of scale and the accumulation of experience and learning, which expands the skill base. Accordingly, macroeconomic policy that unnecessarily reduces the rate of growth means that the economy might start the following period with a technological platform that is relatively less developed. Naturally, aggregate demand alone is insufficient to make investment grow at the same rate as demand, so caution is needed when the capacity utilization rate is already high. Supply can respond endogenously to demand within certain limits and periods of time. Aggregate demand management policy should recognize this problem and be properly blended with policies to increase productivity, particularly with industrial policy.

In as much as fiscal, monetary, and exchange rate policies affect relative sector profitability, they will have effects on the allocation of investment (Cimoli and Katz, 2003). When firms make decisions about which sectors to invest in, they are also making decisions about the future configuration of the production structure, and thus the growth path. In recent years, the effect of the real exchange rate on the composition of output between tradable and non-tradable goods and services, and in turn on sectors or branches of economic activity with varying degrees of technological intensity, has been widely noted as an important factor linking macroeconomic policy to growth (ECLAC, 2010, chapter 2; Frenkel and Rapetti, 2011). However, the real exchange rate is not the only possible transmission channel. For example, higher interest rate and more restrictive credit conditions may have an adverse effect above all on small and medium-sized firms and on innovative activities with more uncertain rates of return.

The external sector —more precisely the behaviour of the balance of payments— is key to understanding the coevolution of cyclical fluctuations in production activity (business cycles) and

the long-term expansion trend or path of the economy. Modern history in Latin America and the Caribbean provides numerous experiences that illustrate this relationship. There have been episodes of strong growth driven by abundant foreign currency, the result of substantial improvements in the terms of trade and access to the global financial market (for example, in the period following 2003, with the exception of the worldwide great recession of 2008-2009). There have also been cycles of economic expansion accompanied by persistent current account deterioration and exchange rate appreciation, which subsequently led to severe external sector crises, capital flight, recession and job loss (as occurred in several countries in the region in the 1990s and in most of them in the 1980s).

The relationship between external shocks and macroeconomic policies has key implications for the growth and stability of the region's economies. These implications reflect the central role that the balance of payments has had (and continues to have) in the macroeconomic performance of emerging countries, especially those in the region (Cimoli, 1992; ECLAC, 2007; Ocampo, Rada and Taylor, 2009; Thirlwall, 2011). This predominance is based on the dynamic of four elements:

(i) net exports (exports minus imports);

(ii) remittances from migrant workers, earnings on foreign capital and interest payments;

(iii) effects of the terms of trade; and

(iv) access to external financing and the volatility of short-term capital flows.

Historically, the first three components dominated the external sector dynamic. Among them, in economies that were less open to international financing than now, net exports clearly exerted the most weight. The trade balance is closely related to the production structure and the pattern of specialization. When financial globalization began to take root in the 1970s, the fourth component became significantly more important and, as a result, the financial components of the balance of payments played a larger role. And the importance of foreign direct investment has increased as well.

Balance-of-payment shocks associated with terms of trade and liquidity shocks (items (iii) and (iv) above) are key to the cyclical dynamic, along with policy responses. These shocks affect not only the short term but also long-term growth inasmuch as they have structural effects via investment, which is to say that shocks modify the structural component that determines long-term growth.

If fluctuations in access to capital markets are significant and sudden (for example, due to a massive influx of short-term capital that leads to exchange rate appreciation and creates stock or real estate market bubbles), it can have deep and lasting effects on gross fixed capital formation and, by extension, on the production structure and the pace of economic and job growth. These destabilizing effects are more potent in a globalized world, particularly in economies that do not have instruments for regulating or managing international capital flows, as is the case with most of the countries of the region.

The relationships between macroeconomics and structure, between business cycle and growth trend and between short and long term call for rethinking the role of macroeconomic policy and addressing it in conjunction with the role of industrial and technology policy (Cimoli, 1992). Macroeconomics for development should look at the business cycle and stability (real and nominal) in the context of structural change and an increase in the pace of long-term growth. As proposed in ECLAC (2010, chapter II, p. 51), there is a need for "an approach that makes

production development an explicit priority and levels up skills and social opportunities." This is macroeconomics in which the management of aggregate demand in the short term does not lose sight of its long-term effects on the amount and composition of investments and recognizes that structural limits (and, with them, the factors that determine future stability and growth) are redefined throughout the cycle (Cimoli, Porcile and Rovira, 2010). According to this perspective, the macroeconomic authorities should take into account that their decisions shape subsequent cycles and affect access to the labour market and skills development. In short, growth and distribution should be among the key objectives of macroeconomic policy, together with nominal stability. In this process, coordination with structural change policies (such as industrial and technology policies) assumes a central role.

C. Characteristics of structural change

The economic literature has made strides in analysing why some economies are able to follow virtuous growth paths with high rates of output, productivity and employment growth while others fall behind (Reinert, 2000). A review of experiences around the world reveals that there are few cases in which there has been a substantial reduction in the per capita income gap between a developing economy and the advanced economies. However, there are success stories that offer lessons on the factors favouring such a convergence. These lessons can be summarized as follows:

(i) Economic development requires reallocating resources to sectors or activities that are knowledge-intensive and show higher rates of technological innovation. It is also necessary to diversify to sectors and activities that are experiencing rapid growth in domestic and external demand, so this demand can be met by domestic supply and exports and imports can grow in a balanced way without generating unsustainable pressures on the balance of payments. Thus, development is associated with a production structure having two types of efficiency that can be considered "dynamic" in the sense that they represent faster paths to productivity, output and employment growth over time. The first is referred to as "Schumpeterian efficiency" because there are sectors that are more knowledge-intensive with higher spillovers of capabilities to the economy as a whole. These sectors are innovation leaders, driving productivity gains both in their own sector and in other sectors. The second is "growth efficiency", also referred to as "Keynesian efficiency". It is associated with the pattern of domestic and external demand for goods produced in the country in question. If a country does not produce goods for which demand is growing quickly, its businesses will have no incentive to step up investment or output. Dosi, Pavitt and Soete (1990) and Soete (1990) regard Keynesian or growth efficiency as the one that is compatible with trade balance equilibrium.

(ii) Both efficiencies are dynamic in the sense that they induce higher GDP growth in the medium and long term, in contrast with what is known as "Ricardian efficiency," which increases GDP a given moment in time due to better allocation of resources based on factor endowments at that moment (Dosi, Pavitt and Soete, 1990). Structural change is precisely about moving away from a static model of efficiency (Ricardian) towards a model with greater dynamic efficiency (Schumpeterian and Keynesian). It is crucial that structural change strengthen dynamic sectors not only in terms of technology but also in terms of demand, since productivity gains that are

unaccompanied by a parallel increase in demand could lead to underemployment or unemployment (Cimoli, 1988). The two types of efficiency generally occur together since the most knowledge-intensive sectors tend to also experience higher demand growth over time.[4]

(iii) Keynesian (or growth) efficiency should allow a high rate of growth without generating unsustainable disequilibria in the balance of payments, which entails, as mentioned, a pattern of specialization that prevents sharp asymmetries in the rate of expansion of exports and imports of goods and services. Basically, this means that the current account to GDP ratio must be kept from spiraling out of control, holding it on an acceptable path so external agents can continue to finance current account deficits. If the pattern of specialization were such that goods and services imports plus factor payments grew at a much swifter pace than exports, at some point it would be necessary to reduce absorption (and growth) to restore balance to the external accounts. This constraint (the need to hold the current account to GDP ratio at manageable levels) should prevail in the long term. GDP growth must be adjusted to ensure that the ratio does not exceed critical limits.[5] As mentioned, this means that the rate of growth must be held close to the rate with external equilibrium in the long term (Moreno-Brid and Pérez, 1999; Moreno-Brid, 2003; Barbosa, 2002; Alleyne and Francis, 2008, Cimoli and Porcile, 2011).

(iv) Keynesian efficiency implicitly assumes that the fiscal and monetary policy will contribute to keep the rate of growth of the economy close to the long run rate of growth with external balance. In no sense is this the "ideal" or desirable rate because it can be slower than the rate needed to reduce inequality and informality. The desirable rate and the equilibrium rate are the same only if industrial and macroeconomic policy work in tandem to build a dynamically efficient production structure. In this context, external equilibrium does not have the meaning of "steady state" that is usually assigned to it in economics. The long-term growth rate is an attractor that can change over time depending on policy focus and structural change.

(v) The two types of dynamic efficiency are very closely related; generally, the sectors with the fastest growing demand are also the sectors that are the most technologically robust and knowledge-intensive. There are important exceptions, associated with what Díaz-Alejandro (1983) called the "commodity lottery," in which a country temporarily achieves high growth because it has a resource that is benefiting from an especially favourable phase of the global demand cycle. However, history suggests that developing countries that have succeeded in converging with the more advanced countries have done so through the accumulation of technological capacity, innovation and knowledge, not on the basis of rents from natural resources. Rents can promote

[4] Demand growth depends not only on products and changes in their income elasticities due to innovation or consumer preferences, but also on the existence of trade barriers or agreements that asymmetrically affect the products and countries participating in global trade. The rules of the World Trade Organization (WTO) have reduced these asymmetries but not completely eliminated them.

[5] This perspective is consistent with what McCombie and Thirlwall (1999, p. 49) define as the balance-of-payments constraint on growth, which occurs when the performance of net exports and the international financial market's expectations regarding this performance impose on the country a growth ceiling that is lower that what would be possible with full use of the country's factors of production.

long-term development if they are leveraged to change the production structure so as to create new comparative advantages that generate rents on knowledge, are not depleted over time and produce increasing returns (ECLAC, 2007).

(vi) Desirable structural change is defined and evaluated according to its aggregate effects on the economic system. Structural change is not virtuous if it merely creates more high-technology enclaves or if changes are concentrated in the most efficient parts of the production structure. Virtuous structural change should ensure that technology spillovers and rising demand drive not only a small group of large export firms but also the rest of the economy through forward and backward linkages. As part of this process of structural change, new agents emerge and the workforce increasingly moves away from low productivity sectors to new sectors that populate the space between pioneering activities and subsistence activities. Out of this process comes a more even distribution of medium and high productivity activities, which in turn creates a denser production matrix.

(vii) Employment dynamics form a central element in any process of virtuous structural change. Developing economies have strong structural heterogeneity, with a significant portion of the workforce engaged in the informal sector or in subsistence activities.[6] This contingent of workers has very low rates of productivity, to the detriment of income distribution and average income in the economy. With virtuous structural change, new sectors and activities are created that absorb the reserve of workers into more productive, better quality and higher paid jobs. The force that reduces heterogeneity is the diversification associated with structural change.

(viii) Virtuous structural change requires both macroeconomic policy that is committed to development and stabilization and industrial policies that create the necessary incentives. Transitioning to new sectors and expanding the technology base are not the spontaneous result of a free-market price system. Specialization determined by dynamic comparative advantages and production diversification must first overcome very strong production structure inertia arising from the wealth of experience amassed by firms in developing capacity and to problems with the coordination and financing of investments, among other challenges. An important role of policies is to build institutions that complement market forces and generate the set of relative prices —or as Amsden (1989) states, the set of price "distortions"— that are needed to redefine, through structural change, the path of economic growth (Cimoli and Dosi, 1995; Wade, 1990; Chang, 2003). Building institutions that contribute to the effective implementation of these policies remains an item of unfinished business in the region.

The challenges of structural change become increasingly complex as the technology revolution now under way picks up speed, as discussed below.

D. Technology revolution and structural change

Structural change is driven by process and product innovation based on new technologies and the generation of knowledge. The shifting technology frontier determines which production structures are most efficient and will take the lead in the long run. Countries that are not at the

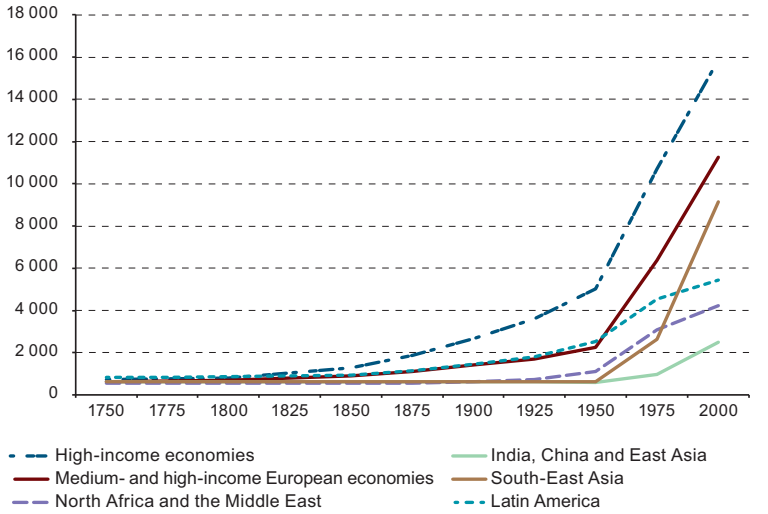
[6] In the words of Arthur Lewis, they are dual economies with an infinitely elastic labour supply.

forefront of technological change at a given juncture should implement industrial policies that send the economic signals needed to steer investment and jobs towards sectors that will make technology convergence possible.

The dominant technology paradigm is presently undergoing changes of such magnitude that they have been described as a new technology revolution. This is based on the coevolving paths being charted in nanotechnology, biotechnology and information and communications technologies (ICT). Each of these fields is evolving rapidly on a separate path, but what is most important is that they are tending to combine in mutually reinforcing processes. The convergence of these technologies could lead to a new industrial revolution given their potential applications, particularly in terms of the digitalization of production, the generation of new materials, the synthesis of biologically active substances and a less intense environmental burden (van Lieshout and others, 2008).

The confluence of progress in these areas will transform economic, political, institutional and social structures on a global scale and with greater speed than previous industrial revolutions. Those revolutions brought about enormous increases in production capacity, which led, for the first time ever, to sustained increases in per capita income and improvements in quality of life for much of the population of the countries that led the way. However, the scale of dissemination and rate of adoption were not even, and unprecedented levels of social and economic inequality ensued, as illustrated in figure I.1. Circa 1800, the average per capita income (in 1985 dollars) of the richest countries was nearly twice that of the poorest; in 2000 the ratio was six to one, largely due to international asymmetries in the intensity of technological diffusion.

Figure I.1
EVOLUTION OF PER CAPITA INCOME, BY WORLD REGIONS, 1750–2000
(Dollars at constant 1985 prices)



Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of World Bank, World Development Indicators (WDI) [online database] http://databank.worldbank.org/, and Robert E. Lucas, "The Industrial Revolution: past and future", May 2004.

Innovations in digital technology are converging to transform various aspects of daily life. In production, these advances have transformed the management, marketing and distribution of products, as well as furthered new business models based on the Internet. This radical transformation has now extended to manufacturing, which is benefiting from advances in robotics, the proliferation of virtual communities and the spread of personal fabrication technologies,[7] which will change not only how but also where products are made, reshaping the structure and dynamics of global production.

The revolution now under way is producing economic and social trends in opposing directions: concentration and deconcentration. On the one hand, it is concentrating production among large companies with a global presence that operate in markets with strong economies of scale, generally in countries that are near the technology frontier and have high innovation capacity.

There are three forces driving concentration: (i) the economies of scale resulting from increasing returns in storage, management and energy with the installation and operation of large data centres;[8] (ii) the economies of networks, whereby the value of a network increases as more users join it, a phenomenon that is particularly important in social media and networks;[9] (iii) advances in robotics, which are sharply reducing the wage component of costs and encouraging production to return to the developed countries, which have the technology and capital to make use of robotics.[10]

Although this process is well under way in metalworking industries (such as the transport equipment industry and the electronics industry), it is gradually taking root in other areas, such as agriculture, the food industry, the production of labour-intensive consumer goods (such as apparel and footwear) and the production of equipment for renewable energy and energy savings. The effect on employment is not yet clear. Initially, jobs could be lost to the substitution of workers performing codified tasks. In the medium term, as was the case in previous technology revolutions, more jobs would be created in new activities requiring new skills, but the specific nature of these jobs is difficult to predict (IFR, 2011).

On the other hand, there are forces driving market deconcentration. The technologies that enable products and services to be personalized generate niche markets, where economies of scale are less important. This type of dynamics would pave the way for deconcentrating the production of goods and services, creating opportunities for the countries furthest from the technology frontier and for small firms. This will be possible so long as the capacities needed to operate in the new technology paradigm (electricity, data centres, low-cost, high-quality broadband networks and adequately skilled workers) are developed. These capacities are built in systems with mutually reinforcing complementarities (Jordán, Galperin and Peres, 2010).

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7 Personal fabrication technologies use the same manufacturing methods as industrial technologies but are smaller, less expensive and easier to use. These technologies include, for example, 3D printers, desktop moulding and milling machines, laser cutters and programmable sewing and knitting machines, as well as design and modeling software (Lipson and Kurman, 2010).

8 Hamilton (2008) evaluates the cost savings of operating data centres hosting more than 50,000 servers in comparison with small data centres hosting around 1,000 servers. The cost ratios are on the order of one to seven.

9 The widespread connection of all kinds of machines and devices (including electronics, home appliances, mechanical devices and even automobiles) to the Internet has given rise to the Internet of things, with corresponding demands in terms of bandwidth and speed. By 2008, the number of objects connected to the Internet had already surpassed the world population. In 2012, the volume of Internet traffic between things equaled the volume of traffic between people. According to Cisco IBSG, by 2020, approximately 50 billion objects will be connected to the Internet, providing an unprecedented array of smart applications and services. See [online] http://www.cisco.com/web/about/ac79/docs/innov/IoT_IBSG_0411FINAL.pdf.

10 "A third Industrial Revolution" *The Economist*, 21 April 2012 [online] http://www.economist.com/node/21552901.

Two additional technological developments are shaping concentration and deconcentration trends. First, cloud computing is driving deconcentration by allowing computational and storage resources to be shared based on an on-demand, pay-as-you-go model (utility computing),[11] which helps small enterprises obtain access to highly efficient software, platforms and hardware. On the other side of the equation, the provision of these services is concentrated among large companies with the financial and operating capacity to install and run large data centres (Harms and Yamartino, 2010; Armbrust and others, 2009).

Second, social networks are generating unprecedented volumes of big data that, when processed using online analytics, become an input for designing production and marketing strategies. Big data make it possible to develop more and better forecasts and fine-tune decisions based on complete real-time information. The range of applications includes everything from product design and pricing to customer care.[12] Firms thus acquire the flexibility to respond to a more changing suite of demands and especially to more personalized preferences. This reduces the costs associated with data collection and management for small firms, but it also has concentrating effects. In practice, it is large companies that use these tools to model patterns of consumer behaviour and preferences based on analyses of the complete universe of observations rather than on statistical samples.

Social networks reposition the individual consumer at the heart of value creation and help organize communities with shared interests. The numbers of collaborative online communities are soaring in various areas, including financing (crowdfunding)[13] and product manufacturing (crowdsourcing),[14] which is leading to radical changes in business models. In the first case, access to credit is provided by creating financing options for projects that would otherwise go unfunded based on the guidelines and requirements of the conventional credit market; this reduces the obstacles to starting up new businesses. In the second case, production is crowdsourced through communities that offer online product design, fabrication and manufacturing services.[15] Lower production costs reduce the entry barriers associated with the initial investment and allow products to be manufactured anywhere in the world, changing the geography of supply chains (moving them closer to innovation hubs) and the weight assigned to labour costs in decisions about production strategies.

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11 Efficient use of cloud computing requires high connection speeds, i.e. operation on ultrafast networks (over 100 Mbps).

12 For example, the social network Dell Community has become a research and development laboratory for the company, where users comment on products, suggest new ideas and report on product deficiencies; Telefónica I+D uses Twitter to find collaborators and customers; LG promotes its products on Facebook.

13 Networks are created of individuals who are interested in raising funds to finance certain activities. The funds can be transferred directly to those who are requesting them, either as a contribution in exchange for some expression of gratitude or recognition or as a monetary investment with some type of financial return expected by the investor. Although these initiatives were first conceived as charitable transactions, they have evolved to become microcredit options for financing start-ups, microenterprises and small businesses (*Technology Review*, 2012 [online] http://www.technologyreview.com/article/427675/crowdfunding/).

14 *The Economist*, "All together now. The advantage of crowdsourcing", 21 April 2012.

15 This model is made viable by personal fabrication technologies, especially 3D printers. With these printers, a product designed on a computer can be "printed," creating a solid object through the successive layering of material (known as additive manufacturing). The materials used range from plastics to metals and alloys, ceramics, and rubber-like substances. Some machines are able to combine materials, making many different kinds of objects. By combining this technology with biotechnology, living tissues such as skin, muscle and short stretches of blood vessels can be produced. In the future, it may be possible to make organs and other parts of the human body (The Economist, "Layer by layer", 21 April 2012 [online] http://www.economist.com/node/21552903).

ICT, including bioinformatics, have revolutionized genome and biotechnology sciences.[16] Genomics, which was originally a set of laborious methodologies for mapping and sequencing limited regions of DNA, has not only sequenced the entire genome of model species but has also compared hundreds of these genomes with each other and thousands and millions of sequences of all the species that can be sequenced. Beyond sequencing, there is now an emerging understanding of how genomes are organized, how genes and non-coding regions interact, the identical efficiency in how small and enormous genomes work, and the function and origin of essential DNA strands, RNA and proteins that were hitherto unknown or regarded as irrelevant.

Nanometric-scale research in optical electronics and probes has great potential for medical diagnostics and other nanoelectronics and biomechanical applications. Interactions with molecular and synthetic biology, bioinformatics and ICT are points of convergence and innovation with enormous potential for development over the medium term.

Advances in digital technologies are being combined with innovations in materials. The focus in this area is on improving existing materials and creating new raw materials with a dynamic structure, greater functionality and a smaller environmental impact. In the first case, traditional inputs are being imbued with new functionalities, making them lighter, stronger, more durable and easier to handle and recycle.[17]

The most radical change is the development of new materials based on nanotechnology that will have countless uses by virtue of their changing structure. These are smart materials that in response to certain stimuli are able to go from being flexible to rigid and vice versa, as well as expand and contract, change their shape, repair themselves and change color or transparency. This creates opportunities for product design, especially for environmental sustainability.

The new course of development seeks to make use of green technologies, which are the product of a combination of advances in recycling and water and gas treatment; electricity generation from renewable energy sources (wind, solar, hydraulic, kinetic) and hydrogen fuel cells; fuels derived from biotechnology (biodiesel, bioethanol); smart control networks in urban systems (buildings, traffic) and power grids (smart grids); and an increase in the energy efficiency of a great many machines and devices, including automobiles.

These advances, though recent, depend directly on some innovations made under earlier paradigms that did not spread throughout the region and are therefore limiting dissemination and appropriation. A notable case in point is electricity, which is still not available to a significant portion of the population, particularly in the less advanced countries and in rural areas.

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[16] This has been possible thanks to a combination of technologies that can generate gigantic amounts of data, computer data processing capacity and the requisite framework of theory for analysing the data in a way that is useful for scientific, medical and agricultural development and for other biotech applications. From the development of a complete genealogical tree showing the links between all living species on Earth, to the discovery of genes with unknown and potentially useful functions, to gene and genome therapy and the synthesis compounds and molecules that are extremely useful for medicines, agriculture, food and manufacturing, genome research today is inconceivable without bioinformatics.

[17] Materials such as hydrogels, bioplastics and bioadditives have been developed as substitutes for plastic. Carbon fibre is replacing steel and aluminum. Properties can be added to metal (metal foam, liquid metal) and to renewable inputs like wood and bamboo to expand their applications, tailoring them to more complex design requirements. Innovations such as conductive textiles are emerging that could revolutionize the electronics and apparel industries.

The present technological revolution is paving the way for stronger growth and new opportunities for leapfrogging. In order to take advantage of these opportunities, technical advances must be adopted and institutional, production and social restructuring must be pursued. In such processes, past trends have a strong bearing on the possibilities for action (path dependence). Technological innovation and dissemination require cumulative knowledge, appropriate infrastructure, skilled workers and an enabling institutional and regulatory context (Dosi, 1988, Cimoli and Dosi, 1995). The ability to make use of these advances depends a good deal on progress achieved under the previous technology paradigm. Nevertheless, the development of countries like the Republic of Korea demonstrates that it is possible to narrow the technology gap by taking a systemic policy approach that encompasses structural change, technology absorption, environmental efficiency and skills development.

The industrial revolution is redrawing the global production map and will surely lead to activities and sectors (including some that are now labour-intensive) moving back to the more advanced countries, with the resulting impact on employment in regions such as Latin America and the Caribbean. Against this backdrop, policies that might have been considered proactive and even cutting-edge just a decade ago are now inadequate to the task of narrowing the technology gap. The challenge of structural change, technology absorption and training for more complex jobs is taking on special importance and urgency.

Given the gaps between the countries of Latin America and the Caribbean and the more developed countries, both in production (investment, productivity and innovation) and in the social sphere (poverty, exclusion and unequal distribution of income), if the region fails to make structural changes in line with this new revolution it will increasingly compromise its potential for convergence. Selecting and targeting sectors and activities to promote, so the region can take part in a swiftly changing world, are at the heart of the industrial policies proposed in chapter VI of this document.

E. Patterns of productivity and employment growth

In a process of virtuous growth, productivity and employment expand at the same time (though not necessarily at the same rate) without exerting unsustainable pressures on the external sector. Whereas in the more successful countries outside the region productivity and employment grow continuously, in Latin America and the Caribbean there are periods when productivity grows slowly or declines. So, there are development models in the region where no country has managed to pair, over the long run, strong job growth (a prerequisite for reducing the domestic income gap) with productivity gains (a prerequisite for reducing the productivity gap in a world experiencing a full-fledged technology revolution). A virtuous growth pattern must be grounded in structural change for dynamic efficiency, as illustrated in table I.3.

Table I.4 shows productivity and employment growth and the output elasticity of employment in Latin America (simple and weighted averages); table I.5 presents the same information for several of the region's economies (Argentina, Brazil, Chile and Mexico) between 1960 and 2010. A comparison is made with the Republic of Korea, which is used as a point of reference because it represents one of the most successful cases of technology convergence and structural change (see, also, chapter II).

Table I.3
DEVELOPMENT PATTERNS

Employment growth		Productivity growth	
		Low	High
Strong		**Employment absorption**	**Virtuous circle**
	Macroeconomy	Strong aggregate demand growth	Strong aggregate demand growth
	Technological progress and innovation	Low or no productivity growth	Strong productivity growth
	Type of structural change	Weak structural change	Strong structural change
Weak		**Vicious circle**	**Defensive adjustment**
	Macroeconomy	Weak aggregate demand growth	Weak aggregate demand growth
	Technological progress and innovation	Low or no productivity growth	Strong productivity growth
	Type of structural change	No structural change	Structural change limited to enclaves

Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of J.A Ocampo, "The quest for dynamic efficiency: structural dynamics and economic growth in developing countries", *Beyond Reforms, Structural Dynamics and Macroeconomic Vulnerability*, Stanford University Press, and R. Astorga, M. Cimoli and G. Porcile, "Technological upgrading and employment: patterns from developing economies", 2012.

Table I.4
LATIN AMERICA: GDP, PRODUCTIVITY AND EMPLOYMENT GROWTH, 1961-2010

		Latin America *(simple average)*	Latin America *(weighted average)*
1961-1973	GDP	5.43	6.12
	Employment	3.09	3.26
	Productivity	2.42	2.86
	Employment-output elasticity	0.56	0.52
1974-1981	GDP	4.12	4.81
	Employment	3.44	3.37
	Productivity	0.72	1.46
	Employment-output elasticity	0.91	0.75
1982-1990	GDP	1.63	1.30
	Employment	3.63	3.35
	Productivity	-1.95	-2.01
	Employment-output elasticity	0.70	1.17
1991-1994	GDP	5.22	4.52
	Employment	3.10	3.05
	Productivity	2.08	1.48
	Employment-output elasticity	0.75	0.91
1995-1997	GDP	4.18	3.24
	Employment	2.34	2.03
	Productivity	1.81	1.18
	Employment-output elasticity	0.68	0.75
1998-2002	GDP	1.25	1.01
	Employment	2.11	1.72
	Productivity	-0.84	-0.68
	Employment-output elasticity	0.47	0.32
2003-2010	GDP	4.85	4.35
	Employment	2.88	2.50
	Productivity	1.90	1.79
	Employment-output elasticity	0.60	0.58

Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of CEPALSTAT [online database] http://websie.eclac.cl/sisgen/ConsultaIntegrada.asp/, University of Groningen 10-Sector Database [online database] http://www.rug.nl/feb/onderzoek/onderzoekscentra/ggdc/data/10sector, and the World Bank, World Development Indicators (WDI) [online database] http://databank.worldbank.org/, 2012.

Table I.5
LATIN AMERICA (SELECTED COUNTRIES) AND REPUBLIC OF KOREA: OUTPUT AND LABOUR PRODUCTIVITY GROWTH, 1965-2010
(Percentages)

Period	GDP	Employment	Productivity
Argentina			
1965-1975	4.20	1.28	2.65
1976-1981	1.52	1.84	-0.29
1982-1990	-0.90	2.34	-3.19
1991-2001	3.86	1.29	2.53
2002-2010	5.56	3.51	1.92
Brazil			
1965-1981	7.22	3.60	3.77
1982-1992	1.99	3.73	-1.68
1993-1998	3.33	1.71	1.60
1999-2010	3.38	1.93	1.45
Chile			
1965-1973	2.96	1.35	1.91
1974-1981	4.03	0.87	3.24
1982-1985	0.25	2.39	-2.07
1986-1998	7.28	3.29	3.88
1999-2010	3.43	1.08	2.33
Mexico			
1965-1981	6.69	4.69	1.83
1982-1994	1.87	3.46	-1.55
1995-2000	3.51	2.72	0.73
2001-2010	1.81	1.18	0.62
Republic of Korea			
1965-1980	8.20	3.64	4.71
1981-1990	8.74	2.84	5.76
1991-2000	6.19	1.61	4.46
2001-2010	4.16	1.35	2.77

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

Note: The periods used are specific to each country and were chosen based on the principal shocks and policy changes in each one.

Two important findings emerge from the table. At no time did the Republic of Korea experience a decline in productivity along the lines of the one seen in Latin America during the lost decade of 1981-1990 or in 1998-2002. This decline, in the case of Latin America, was accompanied by job losses in high productivity sectors and a migration of workers to subsistence activities and underemployment (in what is called a vicious circle). This migration tended in turn to bring down the average productivity of the economy. This shift is the other face of regressive structural change. Except for the 1960s, productivity never grew more than 2% (weighted average).[18] By contrast, changes in the pattern of specialization in the Republic of Korea have brought about an expansion in demand and output, creating jobs in high productivity activities for workers previously engaged in lower productivity activities (see table I.4) and improving income distribution (ECLAC, 2007; McMillan and Rodrik, 2011).

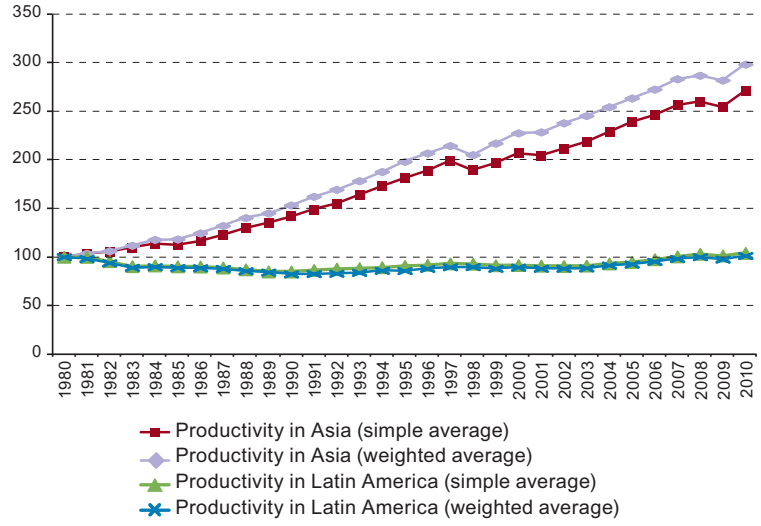
Since the 1990s, the Republic of Korea's growth has been propelled more by productivity than by employment, as is to be expected in an economy that has already absorbed most subsistence workers (substantially raising real wages) and that increasingly competes on quality. The same dynamic has not been seen in Latin America, not even during the post-2004 boom.

[18] As figure I.4 shows, during certain periods some countries (Brazil during part of the 1960s and 1990s, Chile during the 1990s) achieved a virtuous circle, but not for very long.

Furthermore, productivity growth rates in Latin America since the mid-1970s have remained far below those observed in the 1960s. The output elasticity of employment shows the other side of this process: it has been stable for nearly four decades in the Republic of Korea, which reflects a clear strategy of structural change and growth, whereas it has fluctuated sharply in Latin America and the Caribbean, even in the most successful economies. The rupture represented by the debt crisis of 1982 and the lost decade that followed weakened the region's capacity for accumulation, growth and incorporation of technological progress over the long term, and it only started to move forward in that regard in the mid-1990s.

Figure I.2 focuses on the years beginning in 1980 when slackening productivity growth in Latin America opened a large gap with East Asia.[19] In 2010, labour productivity in the region was only slightly higher than it had been in 1980, whereas it had nearly tripled for a sample of Asian countries. A similar conclusion is reached when an alternative methodology, growth accounting, is used. The simple average of growth in total factor productivity for 16 of the region's countries between 1981 and 2010 is close to zero (see table I.6). Recent analyses by ECLAC (2012) show that the contribution of total factor productivity to GDP growth is barely 0.9%. This contrasts sharply with the data of Lau and Park (2003), which show that the multifactor contribution in Hong Kong Special Administrative Region of China, the Republic of Korea, Singapore and Taiwan Province of China averaged 3%, 3.3%, 2.7% and 3.3% per year, respectively (Guerrero de Lizardi, 2009). Another aspect of low productivity growth is that the jobs that are created are poorer quality. Often, these jobs provide only tenuous refuge from open unemployment and do nothing to prevent inequality levels from rising.

Figure I.2
LATIN AMERICA AND ASIA: PRODUCTIVITY GROWTH, 1980-2010
(Index 1980=100)



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

[19] A recent ECLAC study (Fuentes and Sergeant, 2011) further notes that even though total factor productivity grew in all of those countries until the early 1980s, from that point on it fell.

Table I.6
LATIN AMERICA (SIMPLE AVERAGE OF 16 COUNTRIES): GDP, EMPLOYMENT, CAPITAL AND TOTAL FACTOR PRODUCTIVITY GROWTH RATES, 1981-2010
(Percentages)

Period	GDP	Employment	Capital	Total factor productivity
1981-1989	1.3	1.6	1.2	-1.5
1990-1998	3.9	1.7	1.3	0.9
1999-2002	2.3	1.1	0.9	0.4
2003-2010	4.8	1.8	1.7	1.2
1981-2010	3.0	1.6	1.3	0.0

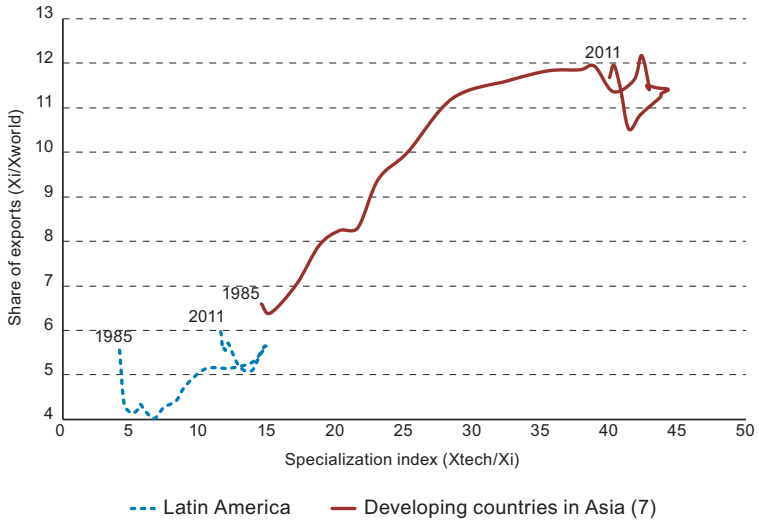
Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of data from the LA/KLEMS project.

The divergence between Asia and Latin America and the Caribbean was associated with changes in the pattern of specialization that enabled Asia to benefit from expanding global trade, achieve economies of scale and sustain growth with external equilibrium. The Asian economies, particularly the strongest performers such as the Republic of Korea and Singapore, had macroeconomic policies in place to complement their industrial and technology policies. But both kinds of policy were weak or nonexistent in Latin America and the Caribbean. In Asia, deliberate policies that substantially changed the system of relative prices and incentives in favour of activities capable of driving structural change redefined the patterns of specialization and technology paths.

Some countries of Latin America and the Caribbean adopted policies for structural change, with varying degrees of success, in the 1960s and 1970s only to abandon them (with few exceptions) in the early 1990s as a corollary to the economic reforms implemented following the external debt crisis. Industrial policies were cast aside for a long period of time, with no other policies implemented in their stead. As seen in chapter VI, they only began to be reinstated in the mid-2000s. Meanwhile, in the Republic of Korea, there has been a consistent pattern of continuity with industrial policies, which have been adapted and reformulated based on past experiences and specific technology and global trade framework challenges in each new period. Beyond the forms that industrial policies have taken, there has been a strategic decision to industrialize and compete in the market by producing goods with high technology content and near the knowledge frontier in the target sectors.

The relationship between structural change, specialization patterns and an increasing presence in global markets is illustrated in figure I.3, which compares two groups, one comprising Latin American and Caribbean countries and the other made up of seven developing East Asia countries. Along the horizontal axis, the figure shows an indicator of change in the pattern of specialization (participation of high-tech sectors in the total exports of each group of countries). Along the vertical axis, it shows an indicator of global competitiveness (the group's share of total global exports). The first indicator reflects the rate of technology growth (Schumpeterian efficiency). The second indicator shows the rate of demand growth (Keynesian or growth efficiency).

Figure I.3
LATIN AMERICA AND DEVELOPING COUNTRIES IN EAST ASIA: PATTERN OF STRUCTURAL CHANGE AND SHARE OF EXPORTS, 1985-2011 [a]
(Percentages)



Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of United Nations Commodity Trade Statistics Database (COMTRADE) [online database] http://comtrade.un.org/db/default.aspx.

[a] Technology exports are defined according to the classification used by Lall (2000). Latin America includes Central America, South America and Mexico. The developing countries of East Asia are Hong Kong Special Administrative Region of China, Indonesia, Malaysia, the Philippines the Republic of Korea, Singapore and Thailand.

The Asian countries rapidly changed their export profile, moving towards high-tech sectors between 1985 and 2011, while also obtaining a larger share of the global market (reflecting their capacity to boost growth compatible with external equilibrium over the long run). This process did not occur with the same level of intensity in the Latin American countries, which did not match the level of competitiveness achieved by Asia back in 1985 until the mid-2000s (Cimoli, Porcile and Rovira, 2010).

In the Asian countries, the two types of policy (macroeconomic and industrial) generally acted in concert with the objectives of promoting growth and maintaining stability.[20] The same level of coherence and coordination is not seen in Latin America, which has been subject to cycles of exchange rate appreciation, debt, fiscal adjustment and recurring balance-of-payment crises in which sudden stops of capital flows and episodes of financial contagion played a role (ECLAC, 1998; Krugman, 1999; Calvo, 1998). The absence or withdrawal of industrial policies was especially damaging in this context of real and nominal instability, and it dampened investment, especially in tradable goods.

To sum up, structural change has been weak in Latin America and the Caribbean, as can be seen in the growth trend and in the evolution of productivity and employment. This long-term trend interacts with short-term cycles. This joint movement of trend and cycle is the subject of the next section.

[20] At the same time, the array of macroeconomic policy instruments was significantly more complex than what is accepted today due to the prevailing focus on discipline. Lending guidance policies, revenue policies, regulation of prices of wage goods —to cite a few instruments— were an integral component of the macroeconomic policy toolkit.

F. The coevolution of structure and business cycle

1. Structure and external shocks

The coevolution of the production structure and the business cycle is based on transmission mechanisms that enable these variables to interact and shape each other over time. First is an examination of the structural factors that affect the short-term cycle. Subsequent segments discuss causality in the opposite direction, that is, how the cycle dynamics affects structural change. The analysis is premised on the idea that the balance of payments plays a central role in the macroeconomic dynamic and explores the way in which structural factors related to trade and specialization are associated with shocks that come from the financial markets and the terms of trade.

One condition that the production structure imposes on short-term fluctuations is the economy's capacity to respond to external shocks. The link between the production structure and these fluctuations can be seen most clearly in economies whose export basket consists of a handful of commodities that are subject to highly volatile demand and prices set by the international market. In this case, the cycle of economic activity, and thus employment, is heavily dependent on the ups and downs of just a few markets. This is precisely one of the mechanisms identified in the literature to explain why dependence on natural resources can slow long-term growth: the volatility associated with this dependence compromises investment, and by extension, long-term growth. At the other extreme are economies that concentrate on producing knowledge-intensive goods and services for export; in them there is more division of labour and diversification of skills. This diversity of expertise and skills enables the economy to respond more efficiently and rapidly to a negative shock. Knowledge provides a degree of flexibility and the ability to adapt to changing conditions. A diversified economy is in a position to grow in a more sustained manner over time, with fewer fluctuations in output, employment, wages and trade flows.

Another key variable in analysing the coevolution of cycle and trend is the constraint that a long-term growth rate compatible with external balance imposes on the expansion of public and private spending. As indicated earlier, this long-run rate is determined largely by the production structure and the pattern of specialization. If economic growth outpaces this rate, current account imbalances will require a correction through lower absorption. The correction will take the form of a reduction in autonomous public and private spending, in different proportions depending on the initial conditions and the degree of policy leeway. In the long run, fiscal policy is determined by this rate of growth with external equilibrium. If a structural change raises this rate and all other factors remain constant, it would be possible to increase fiscal spending without generating destabilizing pressures on the current account.

Macroeconomic policy and the business cycle also have effects on the production structure. The transmission mechanisms from policy to structure vary according to the type of business cycle, as discussed below.

2. From import substitution to liquidity cycles

Latin America's production structure has not allowed it to take full advantage of growth in global demand or in its own domestic demand. This has been a long-standing concern at ECLAC. Due to the prevailing pattern of specialization in Latin America, the income elasticity of exports is very low in comparison with the income elasticity of imports, so when growth accelerates in the region —a sine qua non condition for absorbing underemployment, reducing heterogeneity and promoting equality— imbalances in net exports of goods and services emerge that slow expansion and have often unleashed balance-of-payments crises. Capital inflows can temporarily finance unbalanced growth, but over the long run a higher rate of growth is sustainable only if the production structure changes.

The structuralist approach links growth to the production structure under the assumption that income elasticities of imports and exports reflect or are determined by the pattern of specialization and the density of the production fabric. These elasticities are a composite expression of the degree of coordination that exists between the evolution of internal and external demand, and the capacity of local production to supply that demand. If there is a dense production structure that is innovative and technologically sophisticated, it is more likely that local production will be able to respond dynamically to expanding domestic and external demand, and specialization will be strengthened by a more diversified export base.

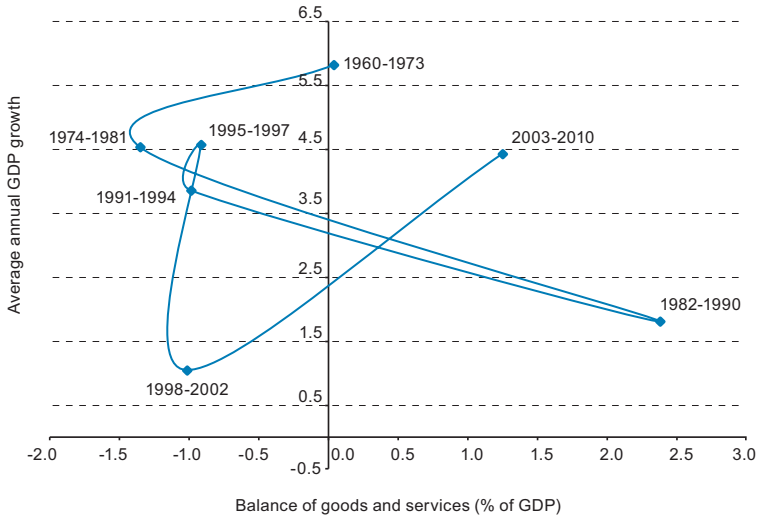
The region's high degree of global financial integration (a process that began in the 1970s and was consolidated in the first half of the 1990s after coming to a standstill in the 1980s with the international debt crisis) translated into greater global capital flows. In the context of financial globalization, trade factors are less important in the short term while the components of the balance-of-payments capital account assume greater importance.

In order to better illustrate this relationship and place it in its historical context, figure I.4 contrasts the evolution of the average economic growth rate of the region (vertical axis) with the goods and services balance as a percentage of GDP (horizontal axis) in Latin America between 1960 and 2010. This figure and table I.7, which divides Latin America into South America and Central America, help discern three patterns in the relationship between these variables (see heading 4 under Section F, which contains a similar exercise, by subregion and period, based on the current account balance).[21]

The first pattern corresponds to the import substitution period, characterized by stop-and-go growth cycles, which ran through the mid-1970s. The second pattern is one of growth that is unsustainable because of the external imbalance. It is seen at two points in time: the second half of the 1970s and in the 1990s. Each period ended in crisis and economic recession: the lost decade of the 1980s (1982-1990) in the first case and the lost half-decade (1998-2002) in the second. The third pattern is the one being experienced today by the largest net exporters of natural resources, especially in South America and in Caribbean countries like Belize, Guyana, Suriname and Trinidad and Tobago. In the third pattern, greater global demand for commodities and improved terms of trade are spurring growth while reducing external vulnerability, although not completely eliminating it, as will be seen.

[21] The variable presented in figure I.4, which is a country-weighted average, basically reflects what happened with the larger economies, particularly Argentina, Brazil and Mexico, which account for nearly two thirds of the GDP of Latin America. The history that emerges from the aggregate does not apply to all countries in the region. The subregional cases are presented in table I.7.

Figure I.4
LATIN AMERICA: GOODS AND SERVICES TRADE BALANCE DEFICIT AS A PERCENTAGE OF GDP AND GROWTH RATES, 1960-2010
(Percentages)



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

Table I.7
SOUTH AMERICA, CENTRAL AMERICA AND MEXICO: GOODS AND SERVICES BALANCE AND GDP GROWTH, 1960-2011
(Percentages, averages of each period)

	1960-1969	1970-1979	1980-1989	1990-1999	2000-2005	2006-2011
			Trade balance *(percentages of GDP)*			
South America	1.0	-0.5	1.8	-0.6	3.4	1.8
Argentina	0.2	0.8	2.4	-0.7	8.2	4.2
Brazil	-0.1	-1.9	2.0	-0.2	2.1	0.3
Central America	-2.6	-3.5	-3.8	-6.1	-8.7	-10.6
Mexico	-1.5	-1.9	2.5	-1.5	-1.7	-1.6
			Average annual GDP growth *(percentages)*			
South America	5.5	5.8	2.0	2.7	3.0	4.5
Argentina	4.7	3.0	-0.7	4.1	1.8	7.0
Brazil	6.3	8.0	3.1	1.7	3.0	4.1
Central America	5.7	5.7	1.8	4.7	3.6	4.7
Mexico	7.2	6.5	2.2	3.4	2.7	2.0

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

Growth patterns with import substitution and external funding booms are examined below. The ensuing segment discusses the pattern generated by the commodities boom.

The first pattern is the oldest; it spanned the period from the end of the Second World War to the mid-1970s. In that phase of import substitution industrialization, which arose under very different internal and external conditions, the State played a decisive role in guiding the allocation of resources (Bértola and Ocampo, 2010).

In the 1960s, the region grew at annual rate of over 5% with a small trade balance surplus that turned into a deficit at the beginning of the 1970s (see figure I.4). These were the peak years of import-substituting industrialization in most of the region's economies. The idea was to minimize external imbalances by implementing protectionist measures to reduce the income elasticity of imports. These barriers, together with relative exchange rate appreciation, had a negative effect on exports. To offset that effect, some governments in the region adopted export promotion measures.[22] Although a certain degree of export diversification was achieved in some countries, the economy was unable to move away from the stop-and-go cycles in which incentives to boost growth in domestic demand became external deficits and currency devaluation pressures. In very closed economies, devaluation had recessionary effects: wages and domestic demand declined (Krugman and Taylor, 1978) without a sufficiently robust neutralizing response from the export sector.

The second pattern is associated with abundant external funding prompted by improved terms of access to international financial markets. Imbalances accumulate and eventually spark a strong reversal. Examples of this second pattern can be seen at two points in time: in the second half of the 1970s and in the 1990s. As seen in figure I.4, there were externally funded goods and services balance deficits in each period. In most of the region's countries, during the market reform era of the late 1980s and early 1990s, and in the Southern Cone economies (Argentina, Chile and Uruguay) in the second half of the 1970s, greater reliance on foreign capital occurred alongside rapid trade opening, the liberalization of capital flows and deregulation of the domestic financial system. The main characteristics of this growth pattern are described below, with attention drawn to the relationship between the business cycle and the growth trend.

The expansionary phase of the business cycle was in response to easy access to external credit, which drove exchange rate appreciation. Appreciation was boosted by macroeconomic policies that, by making price stability a priority, used the exchange rate as a nominal anchor to reduce inflation expectations.[23]

Appreciation, in turn, generated a "wealth" effect that caused a sharp rise in consumption and in some cases led to a mini-cycle of increased investment. Initially, appreciation had a procyclical effect on aggregate demand. At the same time, net exports lost momentum and deficits emerged that found abundant funding in the global market. Gradually, the current account deficit to GDP ratio climbed to dangerous levels, while a climate of greater uncertainty prompted an exit of short-term capital. In response to these risks, governments adopted contractionary economic policies (higher interest rates, lower public spending and exchange rate depreciation) to slow economic expansion and induce a shift in production towards tradable goods and services. The adjustment often came at a high cost in terms of declining economic activity and rising unemployment.

These movements impacted structure. In the boom years, investment was oriented more towards non-tradable sectors or traditional natural resource-intensive tradable sectors that were often less technology-intensive.[24] During the adjustment, fixed capital formation was the element

[22] The problems of excessive protectionism and limited export incentives were cause for concern at ECLAC in the early 1960s (see Prebisch, 1950).

[23] In the late 1970s Argentina, Chile and Uruguay adopted a system of preannounced devaluations that was intended to bring about a convergence between external and internal inflation.

[24] Chapter II returns to the role of the real exchange rate in production diversification.

of aggregate demand that contracted most. This had an adverse effect on the structure of the production apparatus and its global competitiveness in both phases of the cycle by delaying modernization and the application of equipment and machinery to the production process. The consequences of this lag were especially serious against the backdrop of a globalized world with a swiftly advancing technology frontier.

The impacts of external shocks and the policy responses in terms of macro prices —and particularly the real exchange rate— have fueled a long-standing debate in the region that resurfaces with some regularity. Appreciation that is inconsistent with the dynamic of productivity and structural change can gradually become a major source of instability as business competitiveness erodes and deficits in the external sector accumulate. A Brazilian finance minister in the 1970s, Mario Henrique Simonsen, coined a well-known phrase: "inflation cripples, but the exchange rate kills." Simonsen's warning referred to the importance of the exchange rate in shaping competitiveness in new goods and thereby determining whether there is access to the economies of scale and the more learning-intensive processes fostered by the global market (ECLAC, 1998; Bresser-Pereira, 2008; Frenkel and Taylor, 2006). Recently, the International Monetary Fund (2011) has addressed problems caused by very strong short-term capital movements, which can depress the exchange rate and distance it from values compatible with external stability.

Action to devalue the exchange rate is often postponed for fear of its inflationary effects (pass-through to prices of tradable goods and services) and adverse wealth impact (on agents holding debt in foreign currency). The high and rising levels of risk and cumulative imbalances mean that any external shock or shock in expectations will reveal that the situation is unsustainable. The result tends to be maxi-devaluation, sharp cuts in public spending and a credit crunch, followed by real wage declines, job losses and business closures. Exchange rate appreciation generates imbalances in the external sector that deepen instability (real and nominal) by making drastic adjustments in the exchange rate and output inevitable, especially when there are sudden stops in capital flows and the supply of external funding. Seemingly achieving nominal stability through exchange rate appreciation creates conditions that lead to greater real instability (which inevitably ends up undermining nominal stability).

Macro prices and instability are not the only factors that compromise investment. Inasmuch as the production structure implies a long-run rate of growth compatible with external equilibrium which is normally below the rate of growth required to fully employ the factors of production, there is a tendency for some underutilization of capacity. This is another factor that discourages investment and creates a drag on production capacity. Thus, the underutilization of installed capacity has a structural component (owing to the pattern of specialization) along with a cyclical component that derives from exchange-rate appreciation and policies that constrain aggregate demand.

The speed and costs of exiting a crisis largely depend on the conditions under which external liabilities are renegotiated, the strength or position of the tradable goods sector and the recovery incentives, as well as the global economy's capacity to absorb exports from debtor countries. In that regard, the crises that have hit the region's countries over the past three decades occurred under very different conditions. When the crisis of the 1980s erupted, Latin America was facing a world with deteriorating terms of trade and numerous economies that were seeking to increase their exports at the same time. Given those conditions and the heavy

burden of debt repayment obligations and conditions, the costs of the crisis were enormous, with very negative effects on investment and on the potential for economic expansion in the short term and especially the long term. The 1980s broke Latin America's growth trend, which was weaker after that.

The effects spilled over into the 1990s. As seen in table I.7, South America and Mexico, while running trade deficits as a percentage of GDP that were similar to those of the 1970s, posted much lower growth in the 1990s. Central America, while maintaining a relatively similar growth rate, saw its trade deficit nearly double. In other words, the negative impacts of the relationship between micro- and macroeconomic dynamics in previous decades resulted in a production structure that, in the 1990s, was not capable of sustaining such a high growth rate with the same level of deficit as in years past.

Conditions were quite different at the time of the crises of the 1990s and early 2000s. These began with the Mexican crisis in 1994, continued with the Brazilian crisis in 1999 and culminated with the most dramatic crises, in Argentina and Uruguay in 2002. The Russian crisis of 1998 struck nearly all the economies in the region, albeit with varying levels of intensity. Through different mechanisms, however, they absorbed its effects; exchange rate devaluations contributed to this recovery, at least in some of the region's economies.

In summary, liquidity shocks generated an unsustainable boom, not because full employment was achieved or installed capacity was put to maximum use, but rather as a result of their destabilizing impact on the external sector. Other contributing factors have been exchange rate appreciation (which has played an important role in stabilization programmes) and the uncertainty and volatility that have discouraged investment. The spending multiplier has weakened as demand switches increasingly to imports. The accelerator effect has also deteriorated due to the underutilization of capacity and declining returns on tradable goods, which dampens investment, and by extension, innovation and technological progress. As a result, during the cycle, the production structure undergoes changes that may adversely affect the long-term growth rate compatible with external equilibrium. There are hysteresis effects associated with the relative contraction of investment in the tradable goods sector, the loss of capacities and technology lag, which translate during subsequent periods into a production structure that is less dense and has less capacity to sustain high growth.

3. The 2000s: Commodities boom and external shocks

(a) Subregional responses

The global economy has seen significant changes since 2004. Not only is there fluid access to the capital market, but also the terms of trade have shifted in favour of exporters of natural resources, particularly minerals and hydrocarbons. Although international liquidity levels remain high, the principal shock generated by the cycle of the 2000s was the expansion of global trade in commodities and an improvement in international prices. As illustrated in figure I.4, the region as a whole began to run trade surpluses, with higher growth rates. This new landscape, which is emerging as the Asian countries (especially China) come to account for a greater share of global demand, has very different effects across the region. It benefits most of the South American countries, a few of the Caribbean countries and, to a lesser extent, Mexico, all of which are net exporters of natural resources. But it has a negative effect on Central

America and part of the Caribbean (especially the service-based economies), which are in the opposite situation in this regard.[25]

The problems and opportunities sparked by this new era of global trade are, accordingly, different in each case. In South America, a path to faster economic growth is opening that is, nonetheless, not without long-term risks due to its effects on the production structure and slackening investment in tradable sectors not tied to natural resources. In the case of Central America and some economies in the Caribbean, new pressures are being generated on the external sector as most of these economies are net importers of energy and food. Furthermore, the increase in global agricultural prices introduces an imported inflation component, affecting food prices and creating adverse distribution effects. The situation also has negative fiscal impacts, since government budgets are under pressure to cover a larger oil bill and grant subsidies to offset the impact on basic food basket prices.

As shown in table I.7, in the South American countries that export minerals, hydrocarbons and natural resource-intensive goods, the trade balance in the period 2006-2011 moved from deficit to surplus, alongside fast economic expansion. Unlike in the 1980s and early 2000s, the shift towards trade surpluses reflects an easing of the balance of payments, not an effort to pay down debt.

Some common trends are observed among net exporters of natural resources. The first is the decline in external debt service payments as a percentage of export earnings.[26] Between 2000 and 2008, every country in South America substantially reduced its foreign debt-to-GDP ratio and changed its debt stock profile, holding less short-term debt as a percentage of total debt and borrowing at lower rates. A second aspect has been the sizeable increase in foreign currency reserves, which combined with an improved fiscal position and lower inflation, has facilitated access to international credit at lower interest rates. This is one of the factors underlying the region's unprecedented resilience in coping with the latest global crisis, of 2008 and 2009.

The situation in other subregions is more heterogeneous. Whereas some economies in the Caribbean have high external debt levels (above 60% of GDP in Belize, Granada and Jamaica, and above 40% of GDP in Dominica, Guyana and Saint Vincent and the Grenadines) in others, including the Bahamas, Suriname and Trinidad and Tobago, the levels are below 10% (Alleyne, Hendrickson and Amonde, 2011). Conditions in Central America are also diverse. Whereas external debt climbed between 2002 and 2010 in Costa Rica, El Salvador, Guatemala and Panama, it fell sharply in Honduras and Nicaragua (ECLAC, 2011). It should be noted, further, that in Central America and some Caribbean countries, two important variables are helping to alleviate external vulnerability problems. These are export diversification based on assembly-for-export operations, and foreign currency remittances from emigrants, an increasingly important component in the balance of payments.

[25] See an analysis of the impact of the commodities boom on the Caribbean economies and the varying effects based on the participation of each in global trade (services- and goods-based economies) in ECLAC (2002), chapter 11 and ECLAC (2003).

[26] For example, in Colombia and Peru, interest payments on debt as a percentage of total return to foreign capital fell from as high as 82.8% and 93.7% in 1999 to 26.3% and 9.3% in 2010, respectively.

These trends on the external front in Latin America and the Caribbean have been accompanied by changes in macroeconomic strategy that to some extent reflect lessons learned from negative experiences with fixed exchange rates in the 1990s. During that decade, as mentioned above, some countries had stabilization programmes that used the exchange rate as a nominal anchor for inflation expectations. There was a general shift away from this type of strategy in the 2000s. Aside from the countries that have adopted the dollar as their currency (Ecuador, El Salvador and Panama) and some of the smaller and more open economies in the region that have maintained their fixed exchange rate parity regimes (for example, Barbados, Belize and the member countries of the Eastern Caribbean Currency Union (ECCU)),[27] other economies adopted more flexible exchange rates, such as the inflation targeting regimes instituted in Brazil, Chile, Colombia, Mexico and Peru in the late 1990s and early 2000s. This strategy consists of maintaining a nominal price anchor (determined by the target towards which inflation expectations are meant to converge) but with an exchange rate that can be adjusted to help reduce external imbalances. Under this monetary regime, the main stabilizer is the short-term interest rate, which is used to influence the portfolio decisions of economic agents and the various components of aggregate demand.

(b) Implications for business cycle dynamics

The region has responded to the trade expansion of the first decade of the twenty-first century with strong growth and moderate inflation.[28] South America has entered an expansionary cycle with stronger performance in the external sector, but at the same time (especially in Brazil and Colombia) exchange rate appreciation trended steeply upward towards the end of the 2000s, sparking strong import pressure. This appreciation reflects the combined effect of better terms of trade and heavy capital inflows attracted by the higher interest rates in the region, as well as by exchange rate appreciation expectations and higher returns on foreign direct investment (see chapter IV). The recent protectionist measures adopted by Argentina and Brazil to try to stem the tide of imports are an example of the problems that the countries face in attempting to sustain domestic production and pursue diversification in a context of appreciation.[29]

These problems manifest as a phenomenon referred to in the literature as "Dutch disease," whereby a boom in exports of natural resources can induce the exchange rate to appreciate to such an extent that other tradable sectors are shut out, leading to a less diversified production structure.

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[27] In contrast, some of the larger economies in the Caribbean (Guyana, Jamaica and Trinidad and Tobago) have a flexible exchange rate (see Alleyne, Hendrickson and Amonde, 2011, table 2).

[28] Although trade balances were favourable in 2011, current account balances have, over the past few years, been sending warning signs about the continuity of the external equilibrium. Most countries moved from twin deficits in the 1990s to twin surpluses in the 2000s, but this panorama has shifted. Some countries are again running twin deficits, especially since 2008. This development, in which exchange rate appreciation is also a factor, suggests that external vulnerabilities are always a latent risk. The repatriation of earnings by foreign companies operating in the region is also playing a growing role in this changing landscape.

[29] In small open economies with low levels of financial intermediation, the exchange rate tends to be the main channel by which monetary impulses are transmitted to prices. Precisely because the exchange rate channel is so efficient, the authorities tend to react quickly to an increase in the nominal exchange rate (by raising the reference rate, directly intervening in the currency market or both) in order to prevent its pass-through to prices, but they do not react as strongly to a falling rate. As a result, there is a certain degree of asymmetry in how change is managed in developing countries or countries with low levels of financial intermediation, which tends to spark appreciation (Ffrench-Davis, 2006 and 2008; Ocampo, 2011; Bresser-Pereira and Gala, 2008). In recent years, there has been greater concern on the part of monetary authorities —and government authorities in general— regarding excessive exchange rate appreciation (see chapter IV).

In many of the region's economies, an already high level of concentration in natural resource exports has risen even more as external demand has expanded, fuelling an appreciation trend and higher returns in those sectors. In South America this increase has been described as the "reprimarization" of the export pattern. As previously mentioned, in some of the Central American and Caribbean economies that have not benefited from improving terms of trade, the commodities boom has placed more pressure on the external accounts (see table I.7). Trade deficits have been mounting since the 1960s and climbed sharply in the second half of the 2000s. These external problems were exacerbated by declining remittances from workers abroad during the crisis in the United States, as well as by shrinking tourism revenue, another source of foreign currency for several economies in that subregion.

The balance-of-payments improvement made possible by the commodities bonanza and higher growth rates among the net exporters of these goods created conditions conducive to reducing the weight of public debt after 2003. However, there is still work to be done, primarily in terms of creating more fiscal space, a challenge associated with the low tax burden that characterizes most of the region's economies. This structural funding deficit limits investment in infrastructure, as well as the ability to effectively pursue industrial and technology policies. In fact, public investment is a major component of any industrial policy meant to diversify the economy. A highly restrictive fiscal policy or one that reduces spending in the trough of the cycle compromises the investment capacity of the public sector and the crowding-in effect of private investment. Another key aspect of fiscal policy is its relationship to equality. Through taxes and, especially, public spending, fiscal policy is a crucially important tool for promoting equality. Creating more fiscal space and strengthening the effects of fiscal policy in the low phases of the cycle is essential, not only in the long term (due to the aforementioned effects on investment and structure) but also in the short term, as a way to mitigate the effects of the cycle on inequality.

In summary, the boom in commodities and capital flows to the region did away with balance-of-payments problems in the countries that are net exporters of natural resources, particularly minerals, starting in 2004. This contributed to balanced fiscal budgets and low inflation, though in recent years twin deficits (i.e. a fiscal deficit alongside a current account deficit) have returned in some countries and inflationary pressures are back in others. There does not appear to be a high short-term risk of major exchange rate or payment crises along the lines of those in the past. In South America, the main cause for concern is the trend towards "reprimarization" of the export structure and the diminished weight of tradables (especially non-traditional tradables, which have more knowledge content and greater potential for spreading technological progress) in the production structure, since this can cause the growth trend to falter. Meanwhile, in Central America and the Caribbean, because they are net importers of food and energy, the terms-of-trade shock after 2004 put greater pressure on the balance of payments. This is reflected in weaker investment in this subregion compared with South America. At the same time, that shock exacerbated distribution problems inasmuch as higher food prices hit the poor hard and have not been entirely offset by government-funded social programmes.

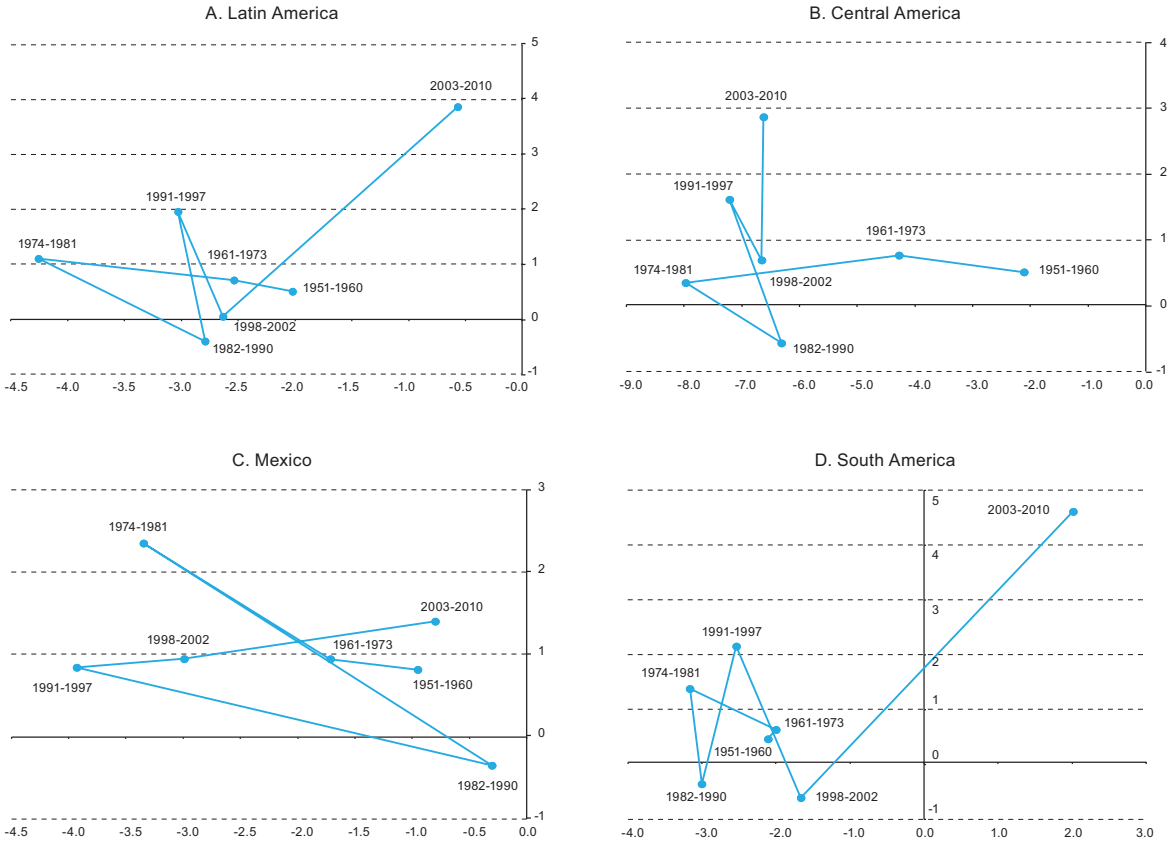
4. Convergence and divergence

A core objective of development is to reduce the per capita income gap with the developed economies. In order to prevent external funding problems, this convergence must be consistent with moderate current account deficits. Figure I.5 illustrates the relationship between the rate of convergence (ratio of the growth rate of the region or subregion to the growth rate of a sample of developed countries), represented on the vertical axis, and the current account balance (as a percentage of GDP), represented on the horizontal axis, for various periods. Values above (below) one on the vertical axis indicate convergence (divergence), with the region growing faster (slower) than the developed countries. Positive (negative) values for the current account balance in the period indicate less (more) vulnerability to external shocks. Negative current account balances mean that growth is not guaranteed. If there is a steady accumulation of external deficits, output may have to be adjusted downward to restore balance to the current account. A current account deficit can be funded with direct foreign investment, migrant remittances, portfolio investment and debt flows. In the examination set out herein, persistent deficits suggest greater vulnerability to changing external conditions.

Four subregions (Latin America, Central America, Mexico and South America) are considered across seven subperiods, in order to isolate different phases of the international and regional context: (i) 1951-1960, a period dominated by dollar scarcity and import substitution in the region; (ii) 1961-1973, a boom period following the collapse of the Bretton Woods system, with a rapid expansion in global trade; (iii) 1974-1981, a period of recession in the industrialized countries and considerable capital liquidity in the global financial system; (iv) 1982-1990, the lost decade for Latin America and the Caribbean owing to the external debt crisis; (v) 1991-1997, a phase that saw the return of foreign capital, the liberalization of trade and finance (reign of the Washington Consensus model) and the new era of borrowing; (vi) 1998-2002, the lost half-decade in the wake of the Asian and Russian crises; and (vii) 2003-2010, with the commodity export boom (temporarily interrupted by the international great recession of 2008-2009).

Several elements stand out upon examination of figure I.5. First, there are no extended periods of sustained convergence, but rather only brief interludes. The periods of convergence that coincide with external vulnerability (the 1970s in Mexico and South America, and the 1990s in all subregions) are followed by periods of adjustment marked by divergence and reductions in current account deficits, though not necessarily moves to surplus. Second, the period 2003-2010 saw the effects of the macroeconomic boom period and rapid recovery from the 2008-2009 crisis. Third, both Central America and Mexico have persistently faced significant pressures on the external front, inasmuch as they have run current account deficits as a percentage of GDP in every period. For the region as a whole, current account deficits continue to be cause for concern. The period 2003-2010 (convergence without external vulnerability) was exceptional for South America and there are signs that problems in the external sector may resurface for some countries. The figure also shows the cycle dynamics: the interaction over time between recurring external imbalances and their impact on growth. Phases of convergence tend to coincide with cycles of fluid access to funding or improvements in the terms of trade. The subsequent macro price dynamic, growing current account imbalances and weak investment (in terms of rate and mix) pave the way for a new phase of divergence.

Figure I.5
LATIN AMERICA AND SUBREGIONS: CONVERGENCE AND CURRENT ACCOUNT BALANCES, 1951-2010
(Percentages)



Source: Economic Commission for Latin America and the Caribbean (ECLAC), Organization for Economic Cooperation and Development (OECD) and International Monetary Fund (IMF).

G. Convergence and equality

There are two complementary mechanisms for moving towards greater distribution equity. Historically, these have been combined in various ways. One mechanism is through the tax system and consists of taxing higher-income sectors and extending benefits to disadvantaged ones. Social policies are often the vehicle for assisting the latter. Another path to equality is what is known as "politics of productivity," which consists of introducing mechanisms to endogenously create jobs and build capacities through a more diversified production matrix, with a larger number of high productivity activities. This path can eliminate or reduce structural heterogeneity and bring more people into the world of employment with rights.

When the production structure is highly polarized, purely redistributive mechanisms do not solve the problems of inequality and weak growth (Alesina and Rodrik, 1994), are not sustainable in the long run and tend to spark political tensions that threaten the very foundation of a harmonious democratic society (Prebisch, 1981). In particular, if the most profitable sectors obtain their earnings from favourable movements in the terms of trade instead of from gains in productivity, it is highly unlikely that redistribution can continue for long. If the elite earn their

income primarily from rents instead of productivity gains, tensions will rise over who is entitled to those rents. Sooner rather than later, policies must be geared towards creating job opportunities and developing skills against a backdrop of structural change, as mentioned in section A. Consideration should be given to adopting industrial policies to drive this transformation, together with social policies, as a key component of any inclusive development model that has equality among its main objectives.

Policies for structural change are not incompatible with social and redistribution policies. The literature and international historical experience indicate that the two types of policy are complementary. In fact, there are several reasons for pairing them with industrial policy. The first reason is to improve distribution and reduce informality in the short term and allow time for structural change policies to work, since their effects take a longer time to be felt. Second, these policies guarantee minimum income levels for a large contingent of the population, enabling them to step up their participation in the marketplace as consumers. The resulting increase in demand helps to reduce the underutilization of installed capacity, particularly in sectors that produce consumer wage goods. Income distribution thus promotes dynamic efficiency in the economy. Third, social policies should protect the most disadvantaged sectors from the disruptions in the production fabric that are generated by structural change as well as those that stem from external shocks. The emergence of new sectors and the disappearance or retooling of others entail costs for many producers, as well as for workers, and can lead to protectionist responses that impede these processes. Social cohesion must be strengthened in order for society to accept structural change. This means that workers must be given protection and the tools necessary to adapt to and participate in the new sectors, without insulating them from the ups and downs of global competition.

The more efficient that social policies —and industrial policies— are, the more inclined society will be to respond positively to structural change. This is an especially important point for open economies, where firms must be competitive in order to survive. An open economy is more exposed, by definition, to exogenous shocks and movements than a closed economy. Accordingly, social policies should create a safety net that allows economic agents to cope with change and readapt without having to endure long periods of unemployment. This is the strategy that Europe's small open economies have followed (Katzenstein, 1985).[30] Greater openness and a focus on dynamic engagement in world trade demand more and better social protection through public policies, as well as a more active role by the State.

In terms of productive heterogeneity, there is much work ahead for the region, given that one of the defining characteristics of its economy are the large gaps in productivity between and within sectors, as well as between firms of varying sizes. Although these gaps are seen in every economy in the world, they are much more pronounced in Latin America and are the sign of sharp asymmetries between segments of firms and workers, combined with a concentration of employment in very low productivity sectors (ECLAC, 2010). Most Latin American and Caribbean societies suffer from deep social inequalities that derive from heavily concentrated ownership and striking production heterogeneity, that is, the coexistence of medium and high labour productivity sectors alongside segments in which labour productivity is very low. Social gaps cannot be explained without an understanding of the inequality that is observed in job quality and

[30] This point is also made by Kindleberger (1986): laissez-faire and greater trade openness can run in opposing, not convergent, directions.

productivity (between and within the various sectors of economic activity), which tends to manifest in very unequal income between workers and between capital and labour.

As noted in *Time for equality*, structural heterogeneity is largely responsible for the deep social inequality seen in Latin America and the Caribbean, inasmuch as productivity gaps reflect and simultaneously reinforce gaps in skills, incorporation of technological progress, bargaining power, access to social safety nets and upward job mobility options throughout the working lives of individuals. Because it is harder for low productivity sectors to innovate, adopt technology and promote learning, internal heterogeneity exacerbates systemic competitiveness problems (ECLAC, 2010). In short, structural heterogeneity reflects the difficulty that the region's economies have in adopting and disseminating international best practices in technology to sectors and firms; the productivity gaps in these economies translate into large wage gaps and reinforce inequality.

1. Growth and distribution patterns

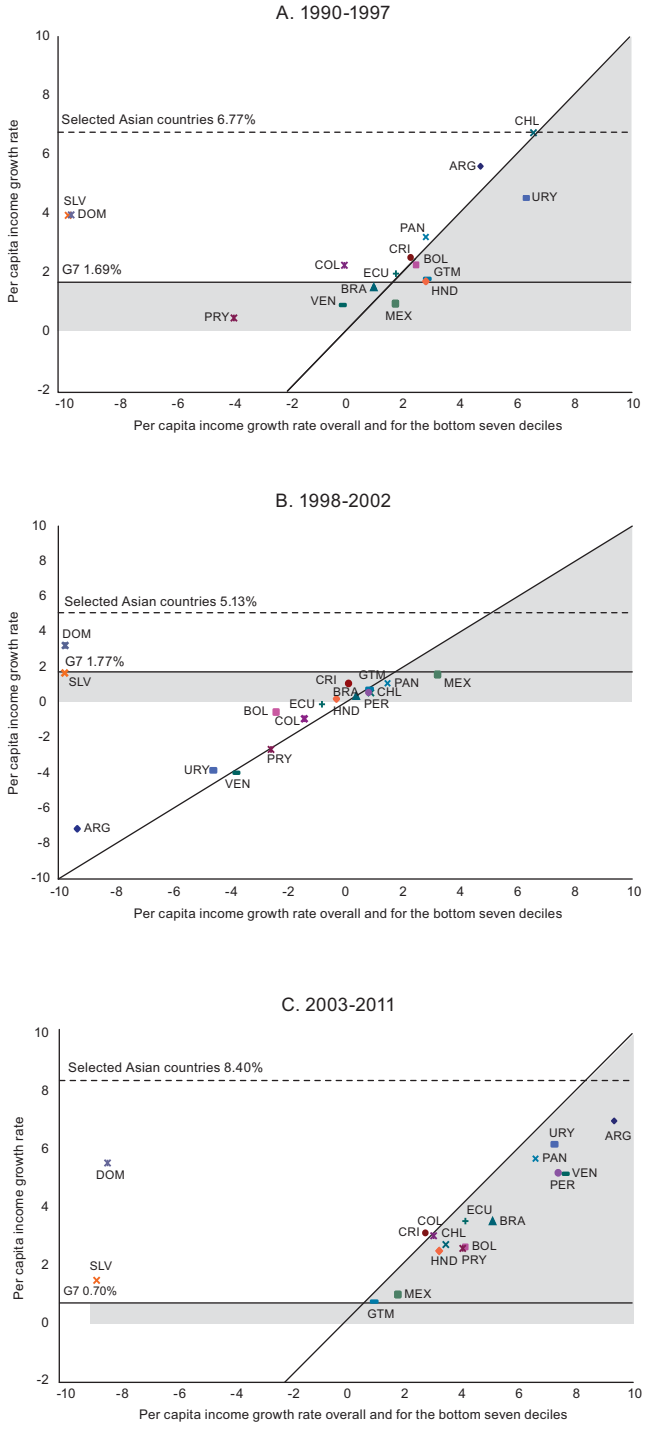
It is extremely difficult to measure internal productivity gaps, an issue that is explored in detail in chapter V of this document. One indicator of production heterogeneity at an intersector level is the rate of change in labour productivity in the nine largest sectors of the economy (see box V.1 in chapter V. For Latin America as a whole, between 1990 and the three-year period 2008-2010, the rate grew by 10.9%. Much of this increase occurred in 1990-1998 (with an increase of 31.3%), when structural reforms were sweeping the region, particularly trade liberalization and investment in the natural resources and commodities sectors. At the same time, the "external gap" (ECLAC, 2010), that is, the productivity gaps with the United States, widened by 12% for Latin America as a whole, despite a significant improvement in the relative position of the mining sector, which saw its gap narrow by 71.4%. In the manufacturing industry, the external gap increased by 40% between 1990 and 2008, which reflected the industry's inability to incorporate the important changes in technology that began taking place on the international frontier in the mid-1990s, particularly information and communications technologies.[31]

These data provide a first glance at the region's characteristic heterogeneity but say nothing about evolution of average income in the most disadvantaged sectors of the population. So as not to lose sight of the role of distribution in economic performance, using the methodology of Shaikh and Ragab (2008), national per capita income (Ypc) and the Gini coefficient (G) can be combined into a single indicator to obtain what is known as the "income of the vast majority." To make this concept work, a variable known as IGM70 is constructed, defined as the average income in the bottom seven personal income distribution deciles. This variable is calculated using the formula $IGM70 \approx (Ypc)*(1-G)$.

When per capita income growth is contrasted with growth in the bottom seven deciles of personal income distribution, inclusive growth processes can be distinguished from exclusive growth. In figure I.6, growth in average per capita income (vertical axis) is compared with growth in per capita income in the bottom seven deciles (horizontal axis) for three periods: 1990-1997 (the reform era); 1998-2002 (the lost half-decade); and 2003-2008 (the bonanza period). The 45-degree line (diagonal) helps to distinguish between inclusive and exclusive processes: observations situated above the line (i.e. average growth outpaces growth for the vast majority) indicate a pattern of exclusive growth; observations below the line (i.e. growth for the vast majority outpaces average growth) point to inclusive growth.

[31] It is important to look at the case of the manufacturing industry because this sector includes the activities with the greatest potential to generate and disseminate technological progress and structural change.

Figure I.6
LATIN AMERICA: PER CAPITA INCOME GROWTH OVERALL AND FOR THE BOTTOM SEVEN DECILES
(Percentages)



Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of M. Abeles, P. Gerstenfeld and D. Vega, "Crecimiento, distribución y desarrollo: Un enfoque integrado", *Project document*, No. 441 (LC/W.441), Santiago, Chile, 2010.

Each of the figures has a horizontal line that indicates the rate of growth in average per capita income in the Group of Seven (G7) countries, in order to set a threshold to differentiate between patterns of convergence and divergence in the average productivity of each economy (approximated using the per capita income growth rate). Observations situated above the line indicate convergence and those below the line point to a pattern of divergence in average productivity between the region's economies and the G7 economies.

In this framework, the cases situated in the upper right triangle could be described as "inclusive convergence" processes, that is, cases in which growth in the bottom seven deciles outpaces average growth (inclusive growth) and in which the economy's average income growth rate outstrips that of the advanced countries (G7). The cases situated in the upper left trapezoid (exclusive growth) could be described as "exclusive convergence" processes; those in the lower right trapezoid (stagnation with redistribution) as "inclusive divergence"; and those in the lower left triangle (stagnation with exclusion) as "exclusive divergence."[32]

For comparison purposes, figure I.6 also includes a dotted line indicating the average income growth rate in Asia's developing economies (simple average of China, India, Philippines, Indonesia, Malaysia, Thailand and Viet Nam). The comparison with Asia provides a stricter point of reference but one that is nonetheless relevant considering that this region has made strides towards convergence with the developed world.

An initial observation is that there were two periods of relatively widespread growth (1990-1997 and 2003-2011) and a period of virtual stagnation (1998-2002). In the first and especially in the last period under consideration, per capita income growth in the region's countries tended to outpace that of the G7 countries (convergence), in contrast with the pattern observed in the period 1998-2002. A second general observation is that the first two periods under consideration (1990-1997 and 1998-2002) were marked by exclusive growth, that is, situations in which economic growth occurred alongside deterioration in income distribution.

In the period 1990-1997, there were only four cases of inclusive convergence: the Plurinational State of Bolivia, Guatemala, the Dominican Republic and Uruguay, among which the latter stands out for having per capita income growth of over 3.6% per annum and growth of 5.3% per annum among the bottom seven deciles. At the far opposite end of the spectrum, the Bolivarian Republic of Venezuela and Paraguay had low per capita income growth and virtual stagnation or negative growth (in the case of Paraguay) in income among the bottom seven deciles. In the period 1990-1997, Argentina and Chile were the fastest growing economies, but unlike Uruguay, their growth was exclusive. Honduras and Mexico had an inclusive pattern of growth but at a much slower pace than the advanced countries (divergence or non-convergence). Lastly, Brazil, Colombia, Costa Rica, Ecuador and Panama grew at modest rates against a backdrop of exclusion (especially Colombia).

The period 1998-2002 (the lost half-decade) was the weakest in terms of growth (none of the Latin American countries, except for the Dominican Republic, had per capita income growth rates to match those of the G7 countries, which averaged just 1.5% per annum during the period), and there were even cases of negative growth. Argentina is a case in point, with income in the bottom seven deciles falling by a cumulative annual rate of 8.5%. Other countries that unequivocally lost ground were the Bolivarian Republic of Venezuela, Colombia, Paraguay, Uruguay (whose decline was

[32] See Abeles, Gerstenfeld and Vega (2011).

strongly tied to the crisis in Argentina) and the Plurinational State of Bolivia. In all of them, income distribution deteriorated as output shrank, which meant that income among the bottom seven deciles fell much more sharply than the national average, an example of the negative effects on equality of the region's marked cyclical dynamic. In general, growth in most of the countries came to a virtual standstill during the period 1998-2002, both in per capita income and in income among the bottom seven deciles. Only Mexico and Peru performed well, logging improvements in income distribution, albeit against a backdrop of very modest growth. Exclusive divergence was the dominant pattern during this period, with no instances of inclusive convergence (the upper right triangle is empty).

The period 2003-2007 stands in contrast, with higher —and accelerating— growth approaching that of the most vigorous developing countries (in Asia) and largely tied to the global spike in commodities prices, excess liquidity in the international market and easy access to credit for many countries in the region. During this period, inclusive convergence was practically the rule, and some countries performed impressively. Among them were Argentina and the Bolivarian Republic of Venezuela, which saw income growth among the bottom seven deciles soar to over 9% per annum, followed by Uruguay, with 8.5% growth among the bottom seven deciles, Panama (7.6%), Peru (6.4%) and the Plurinational State of Bolivia (6%). In all of these cases, income distribution improved and growth outpaced the G7 average, all factors that allow the period to be characterized as one of inclusive convergence.

Inclusive convergence in the region was largely based on a combination of social policies and rising formal employment and minimum wages in some countries. But this process was limited and did not lead to the internal multiplication of high productivity jobs. Indeed, there was not much forward movement in terms of production diversification during the period. With this in mind, the policy challenge (which will be discussed in chapter VI) is twofold. First, steps must be taken to ensure the continuity of social policies to the extent that they are necessary, a task that could be especially difficult if the effects of the terms of trade improvement were to dissipate or if remittance and tourism flows were to shrink drastically, as happened in 2008 and 2009. Meanwhile, in order to guarantee steady gains in employment and distribution indicators, even in less favourable conditions, the region must apply itself fully to the task of structural change, which has not yet garnered the political support and funding it needs.

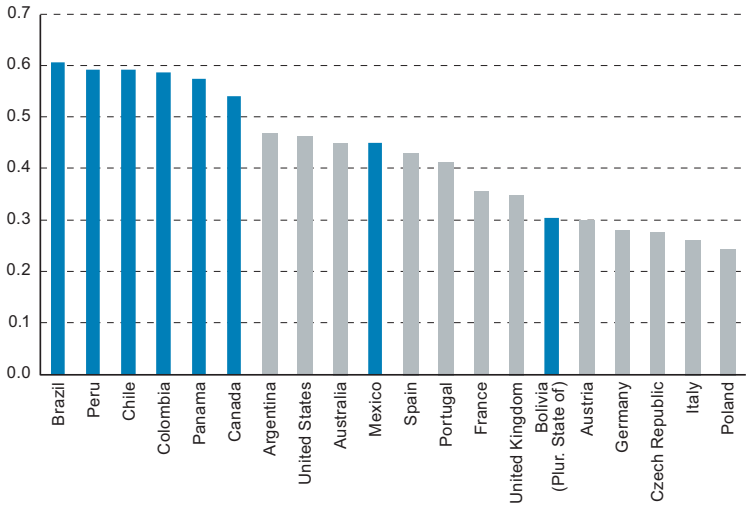
2. Geographical concentration of production and territorial heterogeneity

Among the specific manifestations of heterogeneity in Latin America and the Caribbean are the large gaps in social and economic development between the different regions in each country, with some places having standards of living that are similar to those of developed countries while others lag far behind.

A source of this inequality in the countries of Latin America and the Caribbean are structural rigidities in terms of the geographical concentration of wealth and the dynamic of territorial disparities. Rural and agricultural production patterns, with their attendant effects on dynamic efficiency (Keynesian and Schumpeterian), constitute a particularly important dimension of heterogeneity. A significant percentage of the population resides in rural areas, which continue to see sub-minimum-wage pay with no social protections, larger families, self-employment and income that fluctuates with the harvest seasons and the weather. Also critical are the structural gaps that exist between export-oriented activities, which are investment- and technology-intensive, and small-scale farm operations, which have low levels of productivity but contribute to the region's food supply.

At the country level, Argentina, Chile and Peru have a structure characterized by primacy, in which economic activity is concentrated in a single region. A multipolar structure is seen in Brazil, Colombia, Mexico and the Plurinational State of Bolivia, where economic activity is concentrated in more than one region (ILPES, 2007). Figure I.7 shows the levels of geographical concentration of production for the countries of Latin America and some developed countries. The latter have much lower rates than the former, which indicates a more even spatial distribution of production.

Figure I.7
LATIN AMERICA AND MEMBER COUNTRIES OF THE ORGANIZATION FOR ECONOMIC COOPERATION AND DEVELOPMENT: GEOGRAPHICAL CONCENTRATION OF GDP, AROUND 2010



Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of official data from the countries and subnational accounts of the Organization for Economic Cooperation and Development (OECD).

Note: The geographical concentration of GDP index is the sum of the differences between the share of land area and the share of GDP of the leading subnational unit over the total for the country, in absolute values divided by two. The index is zero when all subnational units have the same share of national GDP and total land area and moves closer to one as the differences between the GDP and land area shares of each subnational unit become larger.

High levels of territorial disparity are revealed by the differences between the regions of a country with the highest per capita GDP and the lowest per capita GDP. Whereas in the OECD countries the ratio of the highest to lowest per capita GDP territories generally does not rise above 2, in Latin America the ratio is greater than 2 in every case included in table I.8 and can be as high as 25, as is the case with Ecuador. The highest ratios are seen when the comparison is with agricultural areas that are lagging behind, such as Morona Santiago, Piauí, Formosa and Chiapas (see table I.8).

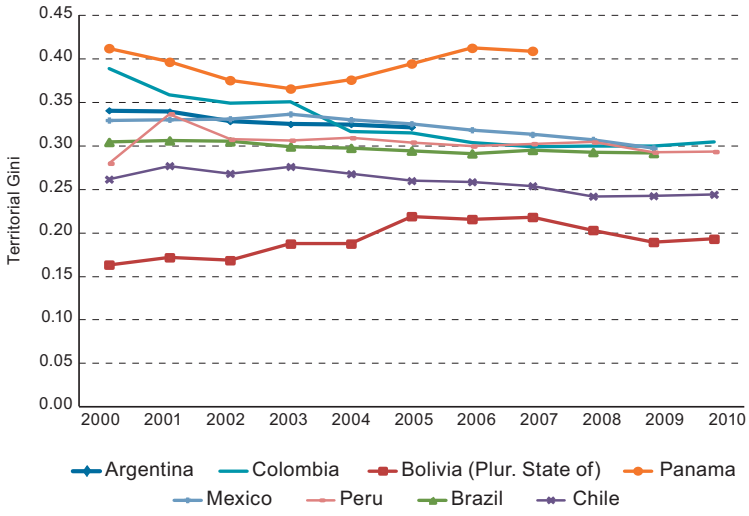
Figure I.8 shows the territorial Gini coefficient for nine countries in Latin America during the period 2000-2010. The countries with values near one have the highest levels of territorial disparity. Argentina, Colombia, Mexico and Panama are the countries that have shown the highest coefficient in recent years. The lowest levels of territorial disparity are seen in Chile and the Plurinational State of Bolivia. In general, trends have been stable, with a slight convergence since 2002 in a number of countries, including Argentina, Chile, Colombia and Mexico, as well as in the Plurinational State of Bolivia in more recent years.

Table I.8
LATIN AMERICA, SPAIN AND PORTUGAL: RATIO BETWEEN THE REGION WITH THE HIGHEST PER CAPITA GDP AND THE LOWEST PER CAPITA GDP

Country	Reference year	Region with highest per capita GDP	Region with lowest per capita GDP	Ratio of region with highest per capita GDP to region with lowest per capita GDP
Argentina	2005	City of Buenos Aires	Formosa	8.09
Bolivia (Plurinational State of)	2010	Tarija	Chuquisaca	2.69
Brazil	2009	Federal District	Piauí	8.56
Chile	2010	Antofagasta	Araucanía	4.33
Colombia	2010	Casanare	Vaupés	9.22
Ecuador	2007	Francisco de Orellana	Morona Santiago	25.76
Mexico	2009	Campeche	Chiapas	12.37
Panama	2007	Colón	Darién	8.05
Peru	2010	Moquehua	Apurimac	7.45
Spain	2007	Basque Country	Extremadura	1.89
Portugal	2007	Lisbon	Norte	1.74

Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of official data from the countries and subnational accounts, Organization for Economic Cooperation and Development (OECD).

Figure I.8
LATIN AMERICA: GINI COEFFICIENT OF TERRITORIAL DISPARITY IN PER CAPITA GDP, 2000-2010



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

H. Concluding remarks

The literature on economic development, and on structuralism in particular, has emphasized structural change as a key dimension for overcoming problems related to growth, employment and inequality in the region. Convergence with the developed world and between sectors and units of production within individual countries requires closing the technology gap; this cannot be achieved unless sectors and activities that are more technology-intensive come to account for a larger share of the economy, both in production and in exports. Furthermore, structural change will not occur unless industrial policies are set forth within a macroeconomic framework that enables new sectors to become competitive. This is a challenge that has been successfully met by a number of Asian countries but remains an item of unfinished business (except for certain countries and for limited periods) for Latin America and the Caribbean.

Over the long run, balance-of-payments problems have hobbled economic growth and been a key determinant of the dynamic and duration of cycles of economic activity and financing. These are exacerbated by external shocks that elicit expansionary responses, in combination with macroeconomic policies that often make conditions even more unstable by driving excessive exchange rate appreciation and cuts in public investment. Volatility, macro prices and underutilization of capacity dampen investment and undermine structural change.

Since 2004, a commodity price boom has driven diverging paths within the region. In the countries that are net importers of natural resources, it has placed more pressure on the external sector, tempered by the export diversification process under way since the 1990s (which is discussed in the next chapter) and remittances from workers abroad. Meanwhile, in the countries that export natural resources, it ushered an era of faster growth with a build-up in reserves and macroeconomic stability. The nature and intensity of the problems are different in the two cases, but it is imperative for both groups of countries to make more progress towards virtuous structural change: in Central America, to create more headroom to cope with adverse international price shocks, and in South America, to avoid the risk of Dutch disease. This is not the first time that favourable cycles in the commodities "lottery" are bringing unsustainable prosperity to some countries in the region. Latin America's economic history contains many examples of this type of rapid growth followed by a reversal in course. There is considerable uncertainty surrounding the duration of this boom and how it might be affected by a possible slowdown in Asian growth, especially in the light of slow recovery in the United States and the European crisis. Considering the need to diversify risks, commodities should not be relied upon as the sole vehicle for achieving strong economic growth.

The second consideration emerges not only from the lessons of economic history but also from the various strains of growth theory: convergence has never been achieved without knowledge accumulation and technological progress as the main drivers of growth, especially during a technology revolution like the one now under way. Even if the boom continues for some time, without endogenous technological progress and without capacity-building, the economy can only aspire to what Fernando Fajnzylber coined "showcase modernity," which describes a society in which consumption and import growth is largely built on rents from natural resources but cannot create the production linkages needed to absorb underemployment and informality. In this type of society, politics will become polarized around capturing rents from the export sector and using social policies to distribute them, as opposed to a society in which investment of rents and the quest for productivity reshape the production and employment matrix.

Since the mid-2000s, income distribution indicators have been improving in Latin America. This is related to a stronger labour market and the spread of social policies that have been continued over time, thanks to a new political consensus that has emerged around the need to combat inequality by pairing social policies with industrial policies. This consensus has given rise to proactive policies for everything from higher minimum wages to conditional cash transfer programmes for poor families, which have operated under a favourable population-age pyramid. Social policies should continue to play an important role in efforts to reduce inequality in the short term. In the medium and long term, they should work in tandem with industrial policies to help create quality jobs and advance towards guaranteed universal rights.

In the meantime, it is necessary to advance in the implementation of industrial policies and their articulation with other policies. The need for higher social spending may come up against budgetary obstacles, especially considering the low tax burden and the existence of significant fiscal costs (tax exemptions and evasion), as well as demands originating from other areas, such as infrastructure, education and training and industrial policy, a key vector for long-term growth. Fiscal space may become tighter again if there is a drop in growth rates —and thus in tax revenue— in which case competition for resources would intensify and it would become harder to maintain societal consensus around the need to fight inequality. Lastly, part of the population that is receiving benefits would ideally start to move towards higher quality participation in the labour market. The main objective is to reduce inequality by moving underemployed workers into quality jobs that put them on a path of higher learning and wages. This is impossible without the virtuous coordination of macroeconomic policy, industrial policy, social policy and structural change.