

Macroeconomic policies for investment and sustained and sustainable development

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Abstract

Climate crises will adversely impact the already weak and volatile growth of Latin American and Caribbean countries and significant public and private investment in adaptation and mitigation will be needed to address the effects of climate change. This is no easy proposition in a region that underinvests and has a complex macroeconomic scenario. Macroeconomic and financing policies have great potential to boost investment, but fiscal policy must safeguard public investment during fiscal consolidation processes and find ways to enhance it during recovery phases in order to crowd in private investment. Monetary policy, in coordination with macroprudential regulation, must not only help to manage domestic demand over the economic cycle, but also embed climate-related risk in financing.

Keywords

Climate change mitigation, economic growth, macroeconomics, Latin America and the Caribbean

JEL classification

E6, O4, H54

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I. Introduction

The Latin American and Caribbean countries suffer from a chronic low-growth problem. For three decades, growth rates have been low and volatile, at an annual average rate of 2.5% for the period 1990–2023. This translates into real per capita yearly growth in gross domestic product (GDP) of 1.2%. Even worse was the period 2014–2023, when real GDP growth averaged just 0.8% and the per capita figure dropped to 0.1%. The Economic Commission for Latin America and the Caribbean (ECLAC) has described this time as a new lost decade.

The growing adverse impact of climate change represents a new constraint on the region's growth and threatens to sink future growth trends below even the performance thus far, unless the requisite investments are made in adaptation and mitigation of the related shocks.

In the past few decades, the region's macroeconomic trajectory has been unequal to the challenges of productive transformation and adaptation to climate change. The fall in inflation to one-digit rates in almost all the countries from 2000 onward was not accompanied by improvements in other macroeconomic variables. To lacklustre economic growth has been added underinvestment, as real growth in investment averaged 2.1% in the period 1990–2023 and it languished at around 19% of GDP. Labour productivity has been practically stagnant since 1980, total factor productivity has contributed negatively to growth and employment gains have slowed over the last four decades.

This article argues that the increase in investment needed to tackle climate change and boost growth poses major macroeconomic challenges —especially in a region that has the lowest investment rate in the world— and thus will require massive efforts on both the public and the private fronts. Consequently, macroeconomic and financial policies will have to be crafted to stimulate the investment needed to pull the region free of its low-growth and stagnant productivity trap and tackle the urgent need to act on climate change.

ECLAC has long advocated for active use of fiscal, monetary, macroprudential, exchange-rate and financial policies. The policies and instruments that are used to manage the economic cycle affect the path and composition of growth over the medium and long terms, mainly through their effects on investment (Ffrench-Davis, 2006, 2010 and 2015; Ocampo, 2011; Titelman and Pérez, 2015). This article complements the literature on the subject by identifying the new challenges that climate change poses for macroeconomic policy and investment.

The stronger investment needed in the region must not only drive profound changes in countries' productive structure, but also strengthen climate shock adaptation and mitigation. The region's hallmark heterogeneity has acted as a brake on economic growth, which has translated into sharp differences in productivity between firms and sectors, uneven macroeconomic policy capacities to respond to the vagaries of the economic cycle, deep disparities in access to productive financing and high levels of labour market informality.

This article has five sections. Following this introduction, section II examines the main stylized facts of the macroeconomic trajectory of the region's economies over the past four decades and describes the adverse impacts of climate change on their growth and productivity. Next, section III analyses the investment needs to boost growth and address climate change. Section IV discusses the slant of the fiscal, monetary and financing policies needed in the region to meet the investment challenges of gaining a sustained and sustainable growth path. Lastly, section V offers concluding remarks.

II. Effects of climate change on growth in the region

Compared to other world regions, the Latin American and Caribbean countries registered low per capita GDP growth over the period 1950–2019, at 1.8% on average. Only Sub-Saharan Africa showed lower growth (see table 1).

Table 1
Real per capita GDP growth, annual average 1950–2019
(Percentages)

	1950–2019
East Asia and the Pacific	3.9
Central Europe	2.5
Latin America and the Caribbean	1.8
Middle East and North Africa	2.0
Southern Asia	2.9
Sub-Saharan Africa	1.2
Organisation for Economic Co-operation and Development (OECD)	2.9

Source: Prepared by the author, on the basis of R. Feenstra, R. Inklaar and M. Timmer, “The next generation of the Penn World Table”, *American Economic Review*, vol. 105, No. 10, Nashville, American Economic Association (AEA), 2015.

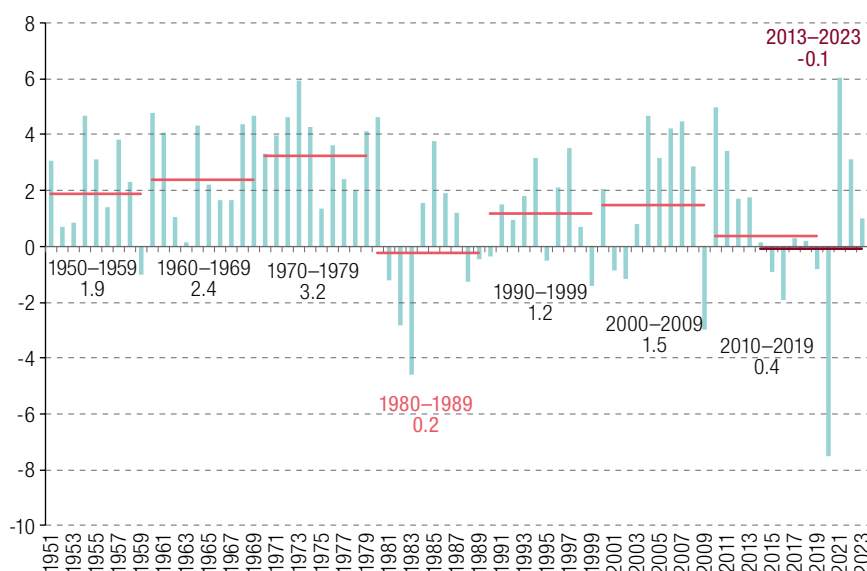
Note: At 2017 prices.

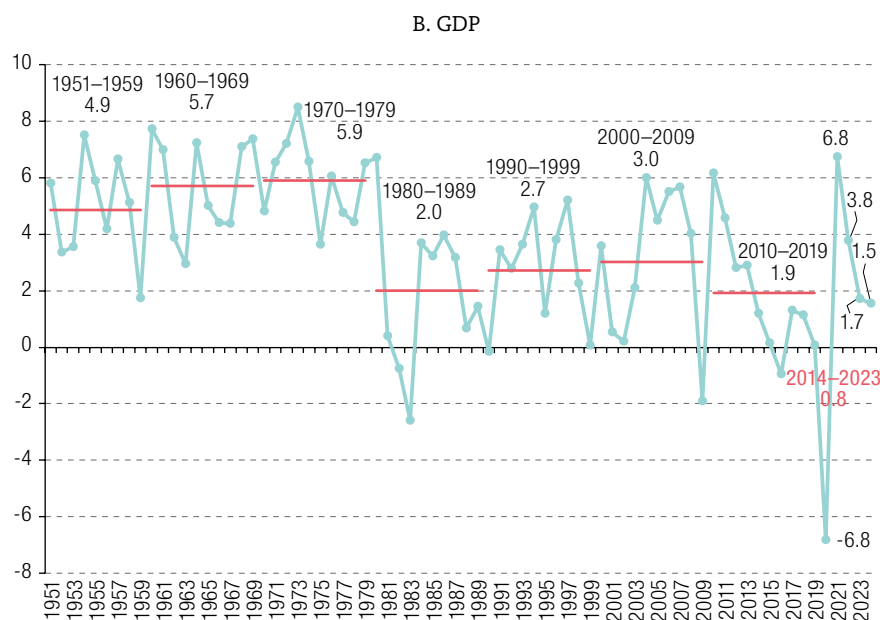
The external debt crisis of the 1980s marked a before and after in the region's per capita GDP growth pattern. Between 1950 and 1970, per capita GDP growth averaged 2.5%, rising to 3.2% in the 1970s. By contrast, in 1990–2023, average per capita GDP growth was just 1.2% (see figure 1).

The region's real per capita GDP growth slowed heavily from 2010 onward and averaged 0.4% in the decade 2010–2019 —the lowest figure since the 1950s, apart from the lost decade of 1980s. Between 2014 and 2023, a period that ECLAC has described as a new lost decade, per capita GDP will have contracted by 0.1% in the region (see figure 1).

Figure 1
Latin America (18 countries):^a real growth in per capita GDP and GDP, 1951–2023
(Percentages)

A. Per capita GDP





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

Note: At 2018 prices. Data for 2023 are ECLAC projections.

^a Argentina, Bolivarian Republic of Venezuela, Brazil, Chile, Colombia, Costa Rica, Dominican Republic, Ecuador, El Salvador, Guatemala, Honduras, Mexico, Nicaragua, Panama, Paraguay, Peru, Plurinational State of Bolivia and Uruguay.

Regional growth has not only been chronically low; it has also been highly volatile (see figure 1B). Macroeconomic fluctuations in the region closely track external shocks through variations in the terms of trade or in capital and financial account flows, which have sharpened in line with the countries' greater openness and integration into the international financial system.² The region's output volatility has been extensively documented (ECLAC, 2002; French-Davis, 2006; Ocampo, 2011 and 2015; Restuccia and Rogerson, 2017).

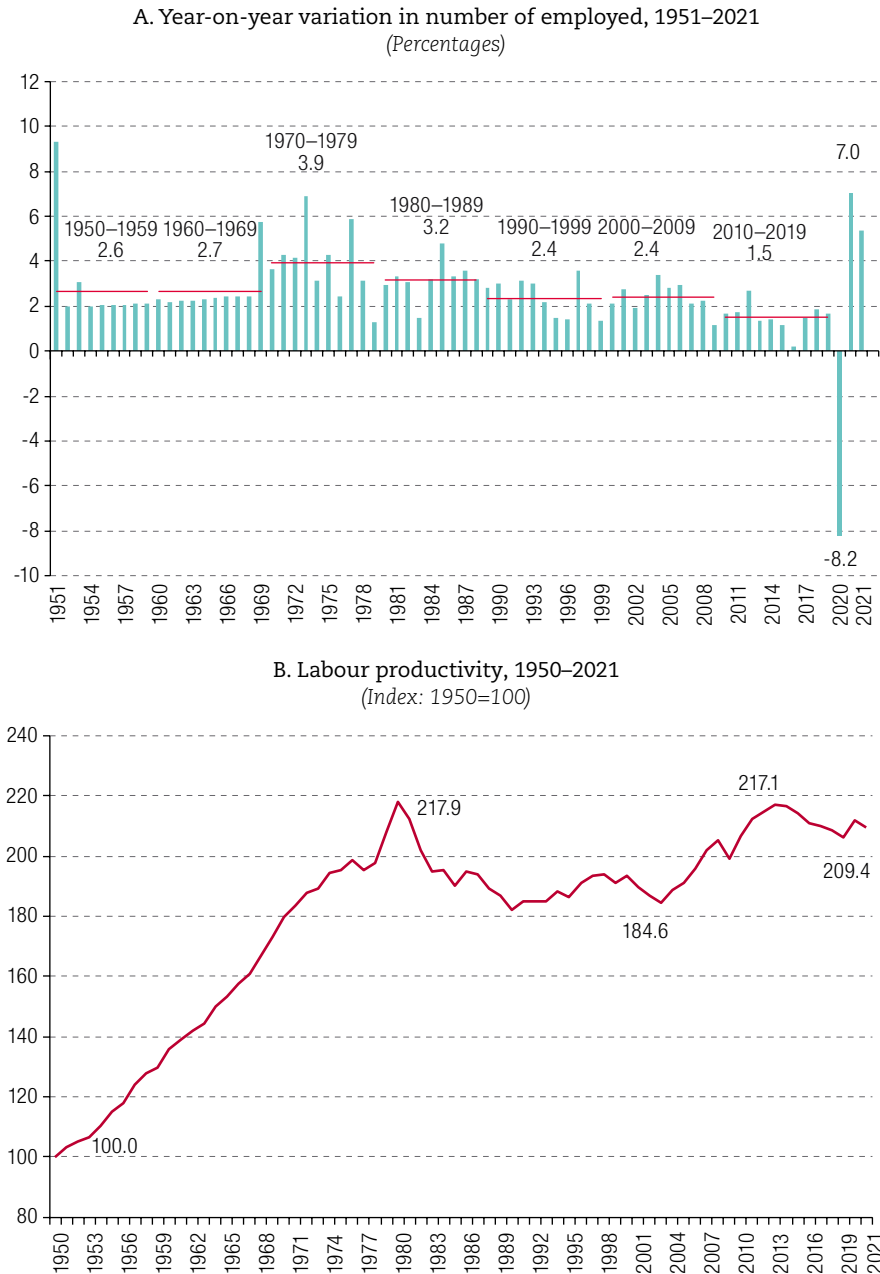
Their vulnerability to external shocks imprints certain unique characteristics on the economic cycles of developing economies, particularly those of the region, which are manifested in greater short-term macroeconomic (real and monetary) volatility (Titelman and Pérez, 2015; Pérez and Pineda, 2010). These authors find that, although downswings are similar in magnitude and duration to those in other developing regions, upswings tend to be smaller and shorter. This tendency towards weak recovery may be attributed to slow credit growth during the expansionary phase and the fact that little of it goes into productive activities, which holds back growth in variables such as productivity and investment. This means that, on the one hand, short-term fluctuations impact long-term performance and, on the other, the relationship between the short and long terms is determined by the interaction between real and financial variables, among which investment is crucial.

The region's poor performance over recent decades is not limited to its GDP. Labour market dynamics have also shown worrying trends in the past four decades, with weak labour productivity gains, falling growth in the number of employed and extensive labour informality.

As figure 2 shows, growth in the number of employed in the region has trended downward since the 1980s debt crisis, from an average of 3.9% between 1970 and 1979 to 3.2% between 1980 and 1989 and 2.4% between 1990 and 2009. Thereafter, the weaker growth period in the region between 2010 and 2019 was also associated with slacker employment growth, which fell to the lowest rate since 1950 (1.5%).

² Ocampo (2011) described this as "balance of payments dominance".

Figure 2
Latin America (18 countries):^a number of employed and labour productivity, 1950–2021
(Percentages and index)



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

^a Argentina, Bolivarian Republic of Venezuela, Brazil, Chile, Colombia, Costa Rica, Dominican Republic, Ecuador, El Salvador, Guatemala, Honduras, Mexico, Nicaragua, Panama, Paraguay, Peru, Plurinational State of Bolivia and Uruguay.

At the same time, labour productivity has tended to stagnate since 1980 (see figure 2B). After average yearly growth of 2.6% between 1950 and 1979 —when it outperformed the United States' average of 2.0%— it contracted at an average rate of 0.1% year-on-year between 1980 and 2021. Its performance between 2004 and 2013 on the back of the commodities boom brought labour productivity close to its 1980 level, but the end of the commodity price supercycle broke that trend and labour productivity has been slipping ever since.

The behaviour of labour productivity has widened the productivity gap between the countries of the region and the United States and other emerging economies. Latin America's labour productivity went from representing 32.1% of the United States figure between 1991 and 2003, to 26.6% between 2014 and 2021. By contrast, the Korean economy's labour productivity went from 44.9% of the United States figure in 1991–2023 to 61.3% in 2014–2021. Singapore's labour productivity rose from 104.3% of United States labour productivity in 1991–2023 to 126.3% in 2014–2021 (see table 2).

Table 2

Developed economies, Latin America and other emerging economies: labour productivity in relation to United States labour productivity, 1991–2021
(Percentages)

	1991–2003	2004–2013	2014–2021
Organisation for Economic Co-operation and Development (OECD)	79.9	76.0	73.9
European Union	82.1	77.8	75.2
Japan	73.7	67.1	62.5
China	5.3	12.1	21.2
Singapore	104.3	116.8	126.3
Republic of Korea	44.9	56.2	61.3
Sub-Saharan Africa	7.5	9.6	13.7
Latin America	32.1	28.0	26.6

Source: Prepared by the author, on the basis of R. Feenstra, R. Inklaar and M. Timmer, "The next generation of the Penn World Table", *American Economic Review*, vol. 105, No. 10, Nashville, American Economic Association (AEA), 2015.

Note: At 2017 prices.

A breakdown of the contribution of the factors of production shows that regional growth has been driven by the accumulation of these rather than by productivity. Labour accounts for 55.1% of the variation in the region's GDP growth rate between 1990 and 2023, while capital accounts for 54.6%. In that period, total factor productivity made a negative contribution to growth. It is worth noting that total factor productivity contributed positively to GDP growth only in the 1990s (see table 3). These findings are in line with those reported in the literature on growth in the region (Loayza, Fajnzylber and Calderón, 2004; Aravena, Hofman and Escobar, 2018).

Table 3

Latin America (18 countries):^a contribution of capital, labour and total factor productivity to GDP growth, 1990–2023
(Percentages)

	Capital	Labour	Total factor productivity
1990–1999	43.0	43.6	13.4
2000–2009	45.6	55.4	-1.0
2010–2019	79.6	64.8	-44.3
2020–2023	74.1	73.1	-47.2
1990–2023	54.6	55.1	-9.7

Source: Prepared by the author, on the basis of official figures.

Note: At 2018 prices.

^a Argentina, Bolivarian Republic of Venezuela, Brazil, Chile, Colombia, Costa Rica, Dominican Republic, Ecuador, El Salvador, Guatemala, Honduras, Mexico, Nicaragua, Panama, Paraguay, Peru, Plurinational State of Bolivia and Uruguay.

Added to growth-constraining issues in the region are obstacles to growth deriving from climate change. The persistent and increasing impact of rising temperatures and more frequent extreme weather events threatens to undermine the region's already low medium-term growth, principally through rapid capital depreciation and lower labour productivity. Environmental degradation will reduce

labour productivity in sectors that are important for many countries in the region, such as agriculture and tourism. At the same time, the stock of public capital —infrastructure— is highly exposed to these shocks, with adverse impacts on the provision of the public economic services needed to underpin the creation of dynamic economies (Dasgupta and others, 2021).

The impact of climate change on the growth trajectory is far from insignificant. A recent study on six countries that are highly vulnerable to climate change in Central America and the Caribbean (Titelman and others, 2023) found that worsening climate shocks could reduce GDP (the size of the economies) by between 9% and 12% by 2050, compared to a trend growth scenario. These countries are especially vulnerable owing to their heavy dependence on economic sectors —such as agriculture and tourism— that will suffer significant dislocation as a result of the growing impact of climate change.

III. Investment needs in a region that underinvests

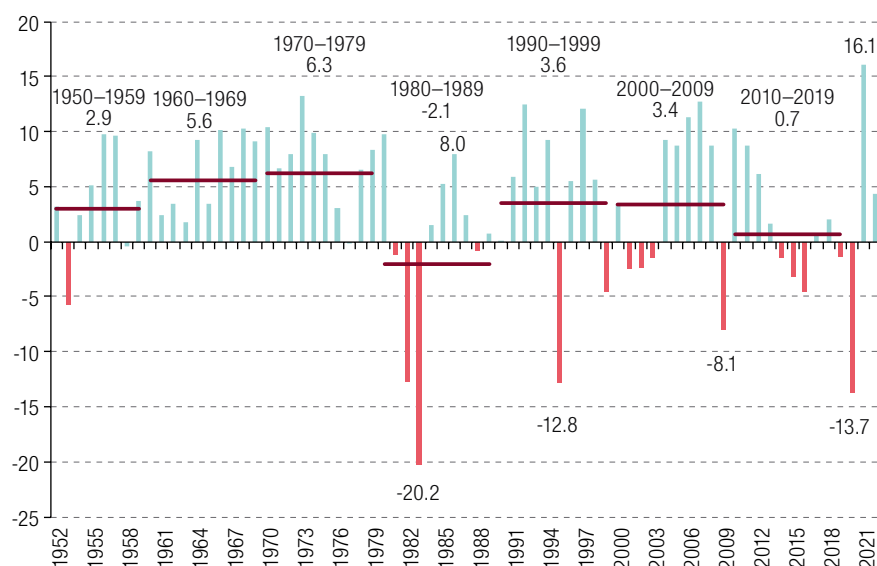
It will take a powerful investment push to boost growth and address the deleterious effects of climate change on the region's economies and societies. For the region's economies as a whole, Bhattacharya and others (2022) estimate that 6.8% of GDP would have to be invested annually in human capital, sustainable infrastructure, agriculture, adaptation and resilience, among other things, in order to achieve the Sustainable Development Goals (SDG). Rozenberg and Fay (2019) arrive at similar figures —7.2% of GDP annually— to close gaps in electricity, transport, water sanitation, flood protection and irrigation. Other estimates for the region converge with these values. Rozenberg and Fay (2019) estimate an additional investment effort in infrastructure of between 2.6% and 8.8% of annual GDP. These values rise even more if the efforts needed to meet social demands are computed. For six countries in the region that are highly vulnerable to climate change, Titelman and others (2023) estimate that the additional investment needed to offset the adverse effects of worsening climate shocks on growth ranges between 5.3% and 10.9% of annual GDP, depending on the country.

Achieving this level of investment is made all the more difficult by the pattern of investment in the region over the past three decades. Latin America and the Caribbean posts lower investment rates than other emerging economies, and its growth has been very low, especially since the 1990s (ECLAC, 2022b). Like the pattern of GDP growth, investment behaviour is very dissimilar before and after the external debt crisis. Between 1951 and 1979, regional investment growth averaged 5.9% per decade and its highest average growth by decade occurred in the 1970s (6.3%) (see figure 3). Between 1990 and 2021 the average growth rate per decade was just 2.9%.

Investment patterns have closely tracked commodity prices, rising steadily for five years during the supercycle, with growth rates above 9%. Thereafter, investment was slow to recover in the wake of the 2008 financial crisis, then stagnated in the 2010s with average annual growth of just 0.8%. But investment growth has not only been sluggish in recent decades, it has also become more volatile, with more frequent contractionary cycles. In fact, starting in the 1990s, upswings in public and private investment became both shorter and weaker, while downswings became more frequent (ECLAC, 2022b).

Since 2011, public and private investment have trended in different directions. Between 2010 and 2019, public investment contracted 2.8% on average per year, while private investment grew by 3.1%. This contrasted notably with the period 2000–2009, when yearly public investment growth averaged 7.4% (ECLAC, 2022b). As a result, public investment has fallen to low levels not only in absolute terms but also relatively speaking. General government public investment in the region is well below the levels seen in advanced economies and even in other developing regions. As a result of limited public investment, the stock of public capital —economic infrastructure— is insufficient to underpin growing economies and support productive transformation and productivity (see figure 4).

Figure 3
Latin America (18 countries):^a growth rate of real gross fixed capital formation, 1952–2021
(Percentages)

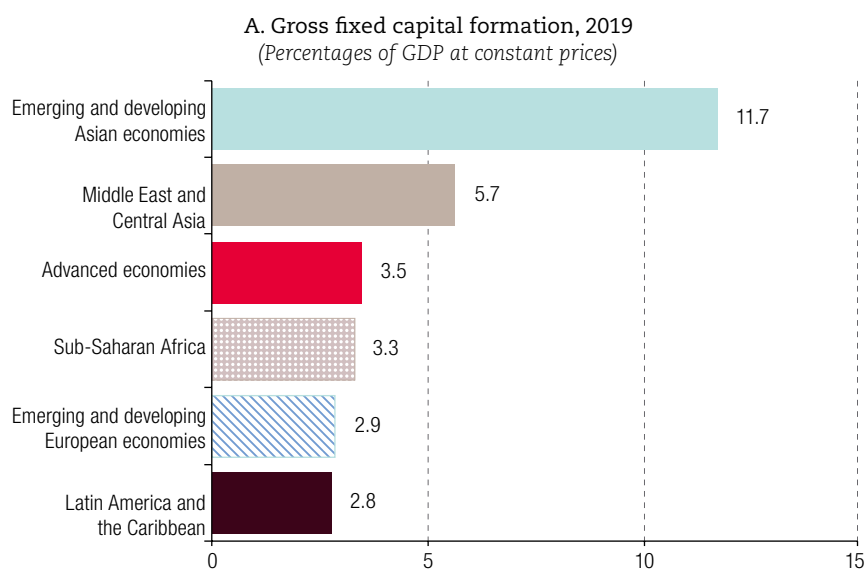


Source: Prepared by the author, on the basis of official figures.

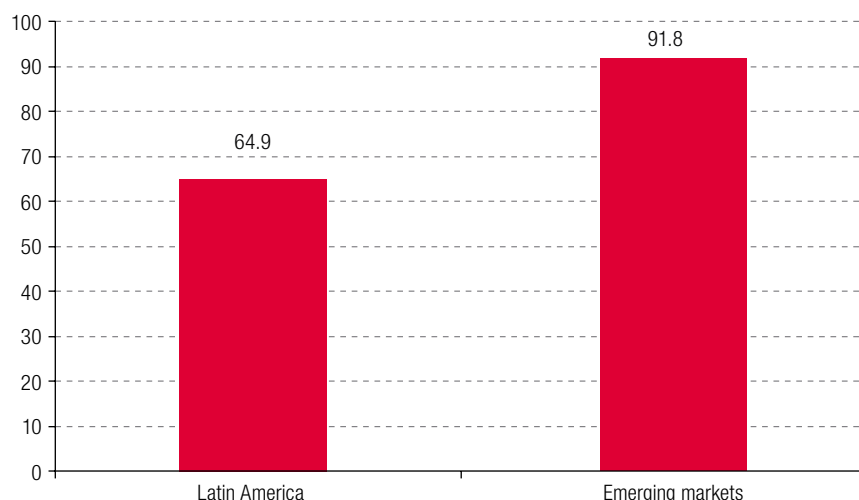
Note: At 2018 prices.

^a Argentina, Bolivarian Republic of Venezuela, Brazil, Chile, Colombia, Costa Rica, Dominican Republic, Ecuador, El Salvador, Guatemala, Honduras, Mexico, Nicaragua, Panama, Paraguay, Peru, Plurinational State of Bolivia and Uruguay.

Figure 4
Selected regions: gross fixed capital formation and general government capital stock, 2015 and 2019
(Percentages of GDP)



B. Capital stock, 2015
(Percentages of GDP)



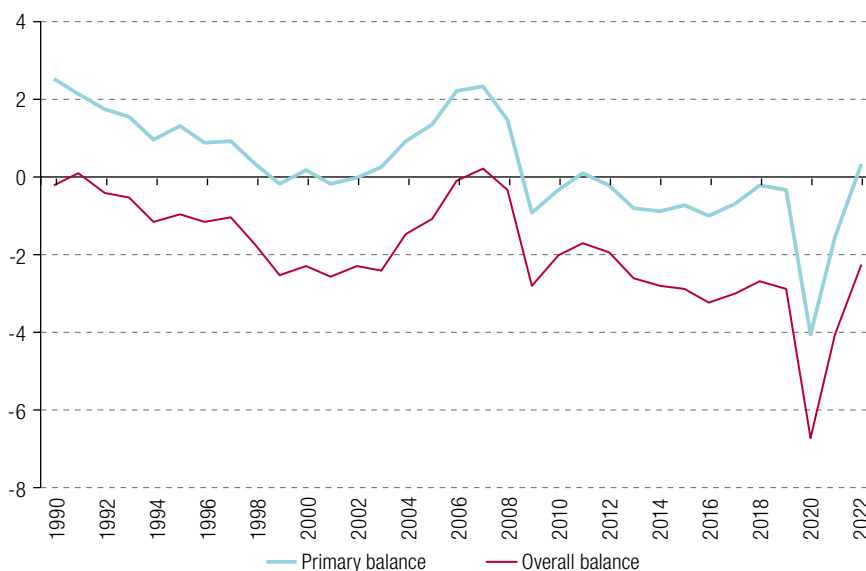
Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of International Monetary Fund (IMF), "Investment and Capital Stock Dataset (ICSD)" [online database] <https://data.imf.org/?sk=1CE8A55F-CFA7-4BC0-BCE2-256EE65AC0E4>.

Note: Weighted averages calculated on the basis of gross domestic product (GDP) at purchasing power parity (PPP), in international dollars at current prices.

Public investment performance reflects the narrowing of the fiscal space in the countries of the region. As figure 5 shows, the public deficit and sovereign debt have fluctuated over the past 30 years with the impacts of various economic crises and (positive and negative) external shocks. The crisis caused by the coronavirus disease (COVID-19) pandemic and the fiscal efforts made to deal with it have left the region with debt levels similar on average to those of 1990.

Figure 5
Latin America (16 countries):^a fiscal balances and central government
gross public debt, 1990–2022
(Percentages of GDP)

A. Fiscal balances



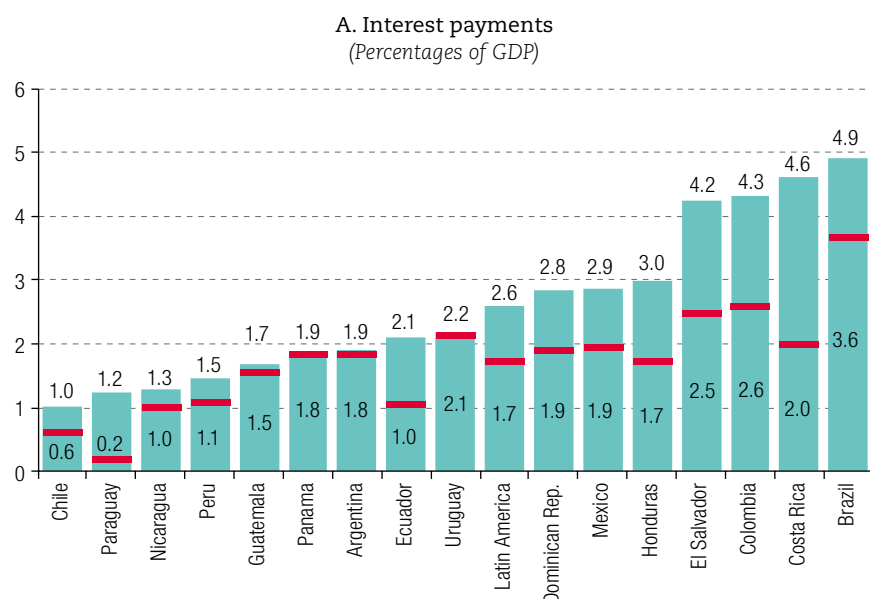


Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of official figures.

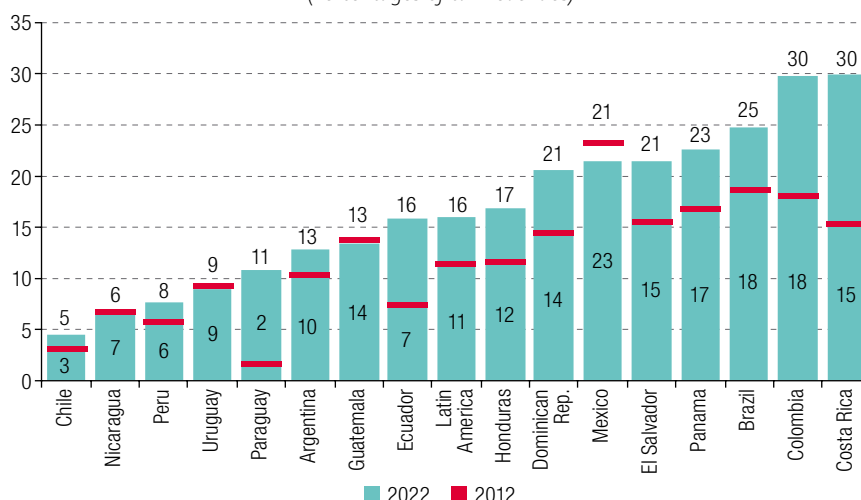
^a Argentina, Brazil, Chile, Colombia, Costa Rica, Dominican Republic, Ecuador, El Salvador, Guatemala, Honduras, Mexico, Nicaragua, Panama, Paraguay, Peru and Uruguay. The figures for Argentina, Mexico and Peru refer to the national public administration, the federal public sector and the general government, respectively.

In a context of ever rising financing costs, public debt service limits the fiscal policy response capacity. Figure 6 shows that Latin American central governments' interest payments climbed significantly over the past decade, to reach 2.6% of GDP in 2022. The picture is also highly uneven, with these payments representing almost 5% of GDP in Brazil, compared to around 1% in Chile. As a result, countries are devoting a growing proportion of tax revenues to debt service. In 2022, interest payments exceeded 20% of GDP in Brazil, the Dominican Republic, El Salvador, Mexico and Panama, and reached 30% in Colombia and Costa Rica.

Figure 6
Latin America (16 countries): central government interest payments, 2012 and 2022
(Percentages of GDP and of tax revenues)



B. Ratio of interest payments to tax revenues
(Percentages of tax revenues)



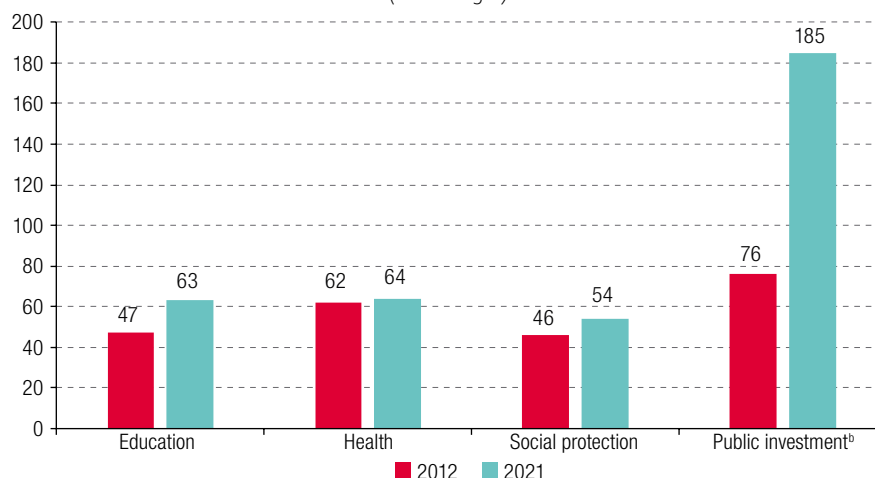
Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of official figures.

Note: The figures for Argentina, Mexico and Peru refer to the national public administration, the federal public sector and the general government, respectively.

The growing debt service burden and its impact on the fiscal space impose heavy constraints on growth (ECLAC, 2023b). In several of the region's countries, debt service matches or exceeds expenditure on education, health and social protection. There is also a worrying imbalance between interest payments and public investment, which has tended to be used as the main fiscal adjustment variable over the past decade. Most countries devote more resources to interest payment than to public investment, which undermines economic growth, productive development and investment in climate change adaptation and mitigation (see figure 7).

Figure 7

Latin America and the Caribbean (21 countries):^a ratio of central government interest payments to expenditure on education, health care, social protection and public investment, 2012 and 2021 (Percentages)



Source: Economic Commission for Latin America and the Caribbean (ECLAC), *Public debt and development distress in Latin America and the Caribbean* (LC/TS.2023/20), Santiago, 2023.

^a Argentina, Bahamas, Barbados, Brazil, Chile, Colombia, Costa Rica, Dominican Republic, Ecuador, El Salvador, Guatemala, Guyana, Honduras, Jamaica, Mexico, Nicaragua, Panama, Paraguay, Peru, Trinidad and Tobago, and Uruguay. Figures for Brazil, Colombia, Costa Rica, Guatemala, Paraguay and Peru refer to the general government. Figures for Argentina, El Salvador, and Mexico refer to the non-financial public sector. Figures for acquisitions of fixed assets as a share of interest payments refer to the central government in all cases.

^b Refers to acquisitions of fixed assets. Excludes capital transfers and financial investment.

IV. Macroeconomic policy, investment and sustained and sustainable growth

1. A sustainable fiscal path to boost investment and social spending

Fiscal policy design must reconcile its role in the management and stability of the economic cycle with its function in catalysing dynamic, sustained and sustainable growth through public investment and efficient and effective public spending. This necessarily means tackling inadequacies in fiscal policy management in the region and progressively crafting a new fiscal covenant to underpin a sustainability framework for public finances based on increasing recurrent revenues and improving expenditure allocation.

The historically limited fiscal space in the countries of the region has constrained the countercyclical response capacity of fiscal policy. It has also acted as a heavy drag on policymakers' ability to pursue and sustain public investment and social spending.

As various studies have documented (Alesina, Tabelini and Campante, 2008; Talvi and Végh, 2005), fiscal policy in Latin America and the Caribbean tends to be volatile and procyclical, lacking automatic stabilizers to aid the management of the economic cycle. Because the region has historically run fiscal deficits —as public revenues are insufficient to cover public spending demands— fiscal adjustments during contractionary periods tend to be hefty, which exacerbates the downward phase of the cycle. At the same time, with low levels of public investment, the public sector plays a limited role in supporting medium- and long-run growth.

In this context, in order to manage the economic cycle, the fiscal space must be expanded to generate the buffers to finance countercyclical spending and protect public investment, without undermining public debt sustainability. Public spending adjustments in the region's countries usually take the form of sharp falls in public investment, one of the main lines of discretionary spending (Ardanaz and Izquierdo, 2017).

An aggravating factor in this pattern is that the public investment expansion during upswings is usually too small to make up for its contraction during downswings. Given the importance of public investment as a driver of growth in the short and medium terms, it is essential to institute financing mechanisms —including stabilization funds— to limit harmful cuts. It would also be worthwhile to review fiscal rules, considering the public investment implications of their design and implementation (ECLAC, 2022a).

Fiscal policy procyclicality also reflects the weakness of automatic stabilizers in the region. These instruments, like personal income tax and unemployment insurance, respond to cyclical movements and help stabilize aggregate demand without the need for changes in public spending or tax codes. Personal income tax collection and coverage are limited in the region, which constrains its potential as an automatic stabilizer in contractionary phases. Unemployment insurance is also limited in coverage. In 2018, only 10 countries or territories in the region —Anguilla, Argentina, Bahamas, Barbados, Bolivarian Republic of Venezuela, Brazil, Chile, Colombia, Ecuador and Uruguay— had this type of insurance (ILO, 2020). Furthermore, usually only workers in the formal sector are covered by unemployment insurance, which makes it even less effective as an automatic stabilizer.

Both personal income tax and unemployment insurance, as well as other social entitlements for unemployed workers, impact on fiscal revenues and expenditures. In the case of personal income tax, the impact is reflected in reduced tax collection, in line with the decline in gross national income, while the use of unemployment insurance pushes up public spending through increased cash transfers. So, in addition to improving the design of automatic stabilizers, the fiscal space needs to be widened so that they can operate freely. This means creating or strengthening stabilization funds to accommodate movements in automatic stabilizers and mitigate cyclical impacts on tax revenues and public spending.

Public spending policy also needs to develop a strategic perspective to be more effective in reducing social gaps and boosting the economy's growth potential, prioritizing measures that will yield high economic, social and environmental returns. Public spending should aim not only to meet current needs, but also to foster sustainable and inclusive development in the medium and long terms.

In this context, public investment could represent a significant boost to economic growth in Latin America and the Caribbean. Izquierdo and others (2019) argue that public investment produces greater fiscal multipliers in countries with low capital stock —such as those in the region— than in countries with high capital stock. They also draw attention to the crowding-in effects of public investment, given its positive secondary effects on the marginal product of private capital. Safeguarding public investment in the contractionary part of the cycle is also crucial to raise medium-term growth potential.

Expanding fiscal space to accommodate higher levels of investment means raising public revenues, not only by increasing tax collection, but also by making it more progressive. It is essential, in the short run, to take steps to address high levels of tax evasion. Tax non-compliance in Latin America has represented US\$ 325 billion, or 6.1% of regional GDP (ECLAC, 2020). Reviewing tax expenditures would also offer a key opportunity to strengthen public revenues quickly. In 2021, tax expenditures in Latin America averaged 3.7% of GDP, which represents 19% of the central government's budgetary spending (ECLAC, 2023a). Another important step is to bring tax codes into line with new good practices for taxation of the digital economy.

Over the medium term, fiscal compacts must be built to strengthen personal income tax, the main gap in taxation between the region and the Organisation for Economic Co-operation and Development (OECD). The scope of wealth and property taxes should also be expanded. Countries could consider adopting environmental and public health taxes and producers of non-renewable natural resources could review and update the fiscal frameworks applicable to the extractive sector (ECLAC, 2022a and 2023a)

There are ample opportunities to raise additional financing in financial markets by means of innovative financial instruments (Titelman and others, 2023). Issuances of thematic bonds (green, blue, social, sustainable and environmental, social and governance (ESG)) have increased markedly in the region since 2020. However, only a limited number of countries engage in these markets, which speaks to the need to establish the necessary institutional framework, including the adoption of internationally recognized thematic bond frameworks. Countries could also consider measures to attract private investments from global sustainable investment funds into projects with high economic and social returns.

2. Monetary and macroprudential policies to preserve stability and boost investment in climate change adaptation and mitigation

Monetary policy has played a key role in managing the economic cycle in the region (Cantú and others, 2021) and in significantly reducing inflation over the past three decades. Now, adding to the traditional challenges they face, the region's monetary and financial authorities must foster investment, not only to boost growth and the provision of public goods, but also to address the challenges (and seize the opportunities) posed by adaptation to climate change and decarbonization of the economies.

In addition to expanding the spectrum of macrofinancial policies, monetary and regulatory authorities should neither overestimate the effectiveness of interest rates in preserving nominal stability, nor underestimate the adverse impacts of generalized credit contraction on crucial growth determinants (such as investment) and thus on medium- and long-term growth prospects. It is therefore imperative for the region's monetary and financial authorities to expand the set of tools at their disposal and —as they did during the COVID-19 pandemic (ECLAC, 2020)— seek beneficial complementarity between all available conventional and non-conventional tools.

The region's macrofinancial stability would benefit from more active use of macroprudential policy, coordinated with other policies that touch on financial intermediation, with capital controls (including of cross-border capital flows) and with active management of international reserves (Ocampo, 2011; Ffrench-Davis, 2006). In this context, it is essential to take into account the impact of interest rate spreads on financial flows and related exchange-rate volatility.

Today, the region's monetary and financial authorities also need to expand their tools to preserve macrofinancial stability amid the financial risks posed by climate change, which may become sources of systemic risk, as acknowledged in the Basel III framework. The materialization of climate risks can cause demand and supply shocks and affect price levels and variability (with impacts on the conduct of monetary policy) (Batten, Sowerbutts and Tanaka, 2020). Overuse of interest rates to control persistent inflationary pressures could delay the "green" transition process by dampening investment and, therefore, further increase climate risk.

Various central banks and financial oversight bodies in the region have incorporated climate into their analyses and tracking of financial stability risks (ECLAC, 2023b). In this regard, the region's monetary authorities have put a great deal of effort into the dissemination of climate-related information in line with international standards and best practices (Torinelli and Martínez-Jaramillo, 2022). There is also growing interest in developing and adopting green or sustainable taxonomies so that financial institutions can distinguish different types of portfolio assets by their potential to aid the transition towards low-emissions economies. There are also growing numbers of initiatives to monitor and measure climate risks, with the use of climate risk stress tests, and to assess the exposure of the banking system and the private sector to climate-related systemic risks.

Given the significant investment needs to address the climate emergency, the monetary and financial authorities of the region must take steps to develop sustainable financing mechanisms, especially types of structured financing, mixed financing and results-based debt instruments.

3. Financing for investment and the effort to combat climate change

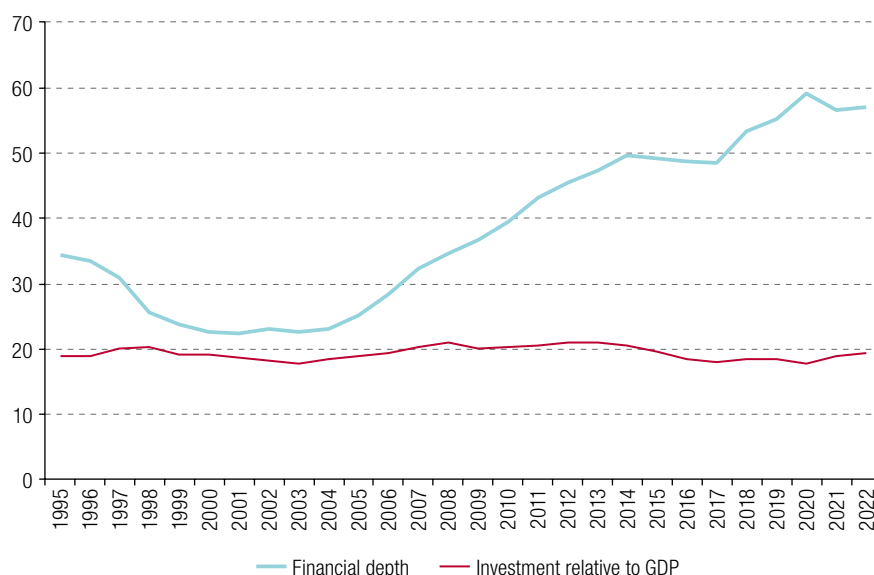
Having financing available and making productive use of it are both crucial to increase productivity and boost economic growth strategically to pursue productive diversification and meet the needs for investment in climate change adaptation and mitigation. Financial development requires designing and building an inclusive financial system geared towards financing the productive sector.

However, the deepening of the region's financial systems — measured by domestic credit relative to GDP — has taken a different path from investment relative to GDP, as seen in figure 8. While financial depth increased from around 30% of GDP in 2006 to almost 60% in 2022, investment hovered at around 20% throughout that period. In a region that underinvests and is being buffeted by the adverse effects of climate change, it is essential to step up the capacity to mobilize financing towards investment and the productive sectors.

The financial sector is key to managing climate change mitigation and adaptation efforts, by channelling resources towards achieving climate commitments and the SDGs. The development of sustainable finance markets depends on an array of factors, including the national framework in which financial institutions operate, the sensitivity of institutions to investor demands, and the challenges posed by the particular conditions in each country. According to Volz and others (2022), there are at least three policies that can help to align finance markets with sustainability objectives: (i) the use of facilities available to financial intermediaries; (ii) management of the central bank asset portfolio; and (iii) support for initiatives to develop sustainable finance markets. Lastly, developing sustainable finance markets requires the preparation of road maps and guidance on sustainable financing for financial intermediaries

and the creation of arenas for dialogue with government bodies. Likewise, progress is needed in carrying out stress tests and developing methodologies for identifying and evaluating climate-related risks in order to facilitate the calibration of policy options.

Figure 8
Latin America and the Caribbean: financial depth and investment, 1995–2022
(Percentages of GDP)



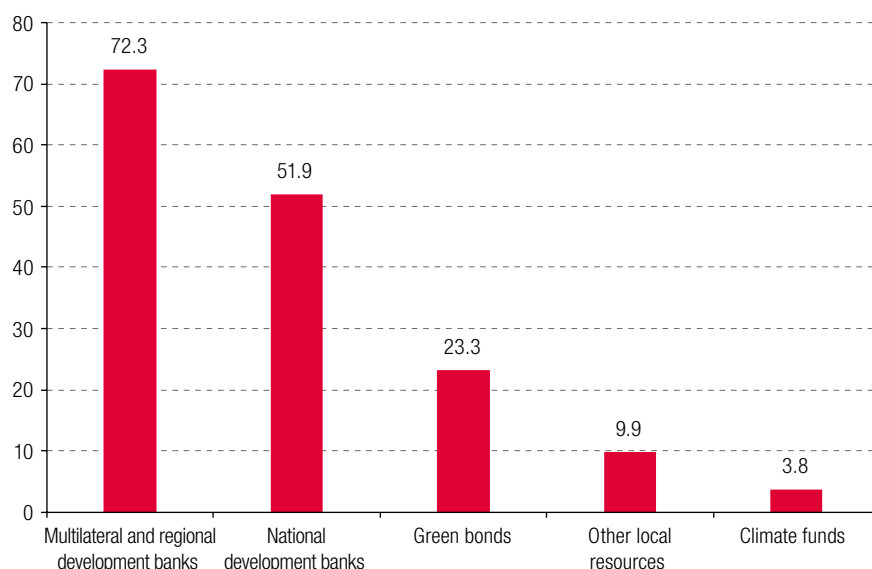
Source: Prepared by the author, on the basis of World Bank, World Development Indicators [online database] <https://databank.bancomundial.org/reports.aspx?source=world-development-indicators>.

In Latin America and the Caribbean, commercial banks are the largest providers of productive credit to the private sector. Regionwide, the banking system's assets represent on average 73.2% of the assets in the financial system. Credit penetration in productive sectors is much lower in Latin America and the Caribbean than in the developed countries (World Bank, 2023).

Development banking must complement the role of commercial banks in financing productive sectors. Since the mid-2000s, development banks have played an important role in financing economic infrastructure and investment to address climate change in the region, which are typically projects with high capital costs and steep initial investments, often exceeding government budgets and even the capacity of private investors. This means that environmental criteria — not only economic considerations — have become integral to the guiding principles of productive financing. Financing projects of this sort requires financial vehicles capable of crowding in financial capital and strengthening linkages to combine different instruments and sources (public, private and external). Development banks have a great deal to contribute in this regard.

The rise in green financing has been accompanied by changes in the composition of development banks' loan portfolios. The Inter-American Development Bank (IDB) has set a target of 30% of its portfolio for environment-linked investments; the Central American Bank for Economic Integration (CABEI) and the Development Bank of Latin America and the Caribbean (CAF) have set targets of 35% and 30%, respectively. CAF further projects that, by 2025, 40% of its portfolios will be devoted to climate investments, rising to 50% by 2050. Between 2013 and 2020, climate change financing amounted to US\$ 161 billion. Multilateral and regional development banks represented 45% of all climate financing flowing to the region (see figure 9).

Figure 9
Latin America and the Caribbean: climate finance, 2013–2020
(Billions of current dollars)



Source: Prepared by the author, on the basis of International Development Finance Club (IDFC), African Development Bank (AfDB), Caribbean Development Bank (CDB) and Climate Bonds Initiative (CBI).

V. Concluding remarks

The Latin American and Caribbean countries have experienced weak and volatile growth ever since the lost decade of the 1980s. Their volatility largely reflects their vulnerability to external financial and real shocks, while their weak growth is a consequence of poor investment performance, stagnation of productivity, limited export diversification and the extensive labour informality that goes with a highly uneven productive structure.

The adverse effects of climate change will further erode growth in the region's economies unless they are counteracted by hefty investment in adaptation and mitigation measures. According to various studies, this effort represents an additional increase in investment of between 5% and 10% of GDP per year.

This is no easy proposition for the countries of the region, which invest little, have limited macroeconomic policy space (making it hard to mobilize domestic resources) and face rising costs for external financing, be it public or private.

Macroeconomic and financing policies can play a crucial role in incentivizing and facilitating greater investment to support sustained and sustainable growth. Fiscal policy must safeguard public investment during times of fiscal consolidation, since it has typically taken heavy cuts in the downward phase of the economic cycle that tend not to be fully made up during the recovery phase. Public investment could significantly boost growth and efforts to combat climate change. Its impact on both these is positive insofar as it crowds in private investment and yields very significant fiscal multipliers in low capital stock countries such as those of the region.

The fiscal space has to be expanded in order to increase public investment in a framework of public finance sustainability together with a sustainable debt trajectory. In the short term, it is crucial to address the high level of tax evasion and review tax expenditures. In the medium term, personal income tax, wealth tax and property tax need to be made more robust and environmental and public health taxes put in place.

On the monetary policy front, the policy rate should be combined with other macroprudential policy tools to offset the adverse impacts on investment of generalized credit contractions.

Macroprudential regulation not only improves the management of domestic demand over the economic cycle, but is also a key tool in embedding the challenges of climate change into financing and financial stability. Part of this is expanding analysis and oversight capacity by developing and adopting green or sustainable taxonomies, so that financial institutions can distinguish the various types of assets in their portfolios by their potential to contribute to a transition towards low-emissions economies. Another factor is the increasing number of initiatives to track and measure climate risks through climate stress tests and to assess the exposure of the banking system and the private sector to sources of climate-related systemic risks.

Finally, productive sector financing plays a crucial role in supporting the expansion of private investment, in general, and in climate change adaptation and mitigation, in particular. Financial development requires the design and construction of an inclusive financial system geared towards productive financing. Development banks have much to contribute to this process, by creating financing vehicles capable of crowding in financial capital and strengthening links that combine different instruments and sources (public, private and external).

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