

Knowledge that transforms

Twenty years serving a prosperous, inclusive, and sustainable future

RED Report on Economic Development

CAF DEVELOPMENT BANK OF LATIN AMERICA AND THE CARIBBEAN

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Report on Economic Development (RED)
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Legal deposit: DC2025000280
ISBN: 978-980-422-326-6

Publisher:
CAF –Development Bank of Latin America and the Caribbean–

This document has been published under the Executive Presidency of Sergio Díaz Granados and the Executive Vice-Presidency of Strategic Programming of Christian Asinelli.

Knowledge Manager: Verónica Frisancho

Director of Socioeconomic Research (E): Walter Cont

Editorial management:
CAF Strategic Communication Department

Graphic design:
Good, Creatividad para el Desarrollo

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Foreword

Latin America and the Caribbean has had unquestionable achievements in terms of development. In the last century, most countries in the region have made significant progress in terms of macroeconomic stability and deepening of financial markets. The region has also made significant progress in terms of inclusion. In the first two decades of this century, the incidence of poverty has been reduced by more than 10 percentage points. Under-five mortality has fallen by half and life expectancy has increased by 14 years. The fraction of households with access to electricity has increased by more than 10 percentage points, and the fraction of older adults with access to pensions has risen by around 13.

Unfortunately, this development process remains incomplete. Over the last 70 years, per capita income in the region has remained below 30 % of the per capita income of the United States. Furthermore, one out of every three Latin Americans and Caribbeans continues to live in poverty. Structural problems such as informality, limited levels of market competition, infrastructure gaps and weak states and institutions are barriers to escaping the underdevelopment trap and achieving sustainable development goals.

The coming decades present important challenges for the region. On the one hand, the aging of the population will put increasing pressure on social security systems, with significant consequences for public finances. On the other hand, it faces a double transition, digital and green. The digital transition in Latin America and the Caribbean must be inclusive and strategic, prioritizing universal connectivity, the development of digital skills and the modernization of key sectors to benefit from their comparative advantages. Likewise, the green transition requires a forceful response, with rapid adaptation measures to address the impacts of climate change, and emission mitigation strategies where consideration for inclusion and equity in costs is central.

However, the dual digital and green transition represents a unique opportunity for Latin American and Caribbean countries to modernize their economies, foster sustainable innovation and leverage their comparative advantages, such as their biodiversity and wealth of natural resources. The region's abundant natural wealth is a fabulous lever for achieving sustainable development, boosting sectors such as agriculture, tourism and energy. The abundance of minerals, key to the energy transition, offers some countries in the region the possibility of integrating into clean energy value chains. The great potential for producing renewable energy gives the region the opportunity to develop an industrial sector in a world where the low carbon footprint of products will be a source of competitiveness. Finally, the richness and extension of the region's forests, mangroves and ecosystems are a key element in the global solution to climate change, as each hectare of standing forest alleviates the restrictions imposed by the carbon equation in the global economy.

Turning challenges into opportunities requires access to financing and an effective roadmap, informed by evidence. CAF is a key partner on both fronts. On the financing front, the portfolio of loans, equity investments and guarantees has been growing consistently and geared toward initiatives aligned with the sustainable development agenda of shareholder countries. In 2023, the total portfolio

exceeded USD 34 billion, representing a year-over-year growth of 9.8 %. The incorporation of new shareholders and the equity strengthening recently approved by the Assembly allow us to project that this growth dynamic will continue in the coming years. In addition, the institution is advancing towards its goal of becoming the green bank of Latin America and the Caribbean, with a commitment to reach 40 % green financing by 2026. By the end of 2024, these operations already represent 35 % of the portfolio.

To address the second front, CAF has developed a wide range of knowledge products, from detailed sector-country level instruments that contribute to the prioritization of specific programs, including country strategy documents that are the instrument for dialogue with the new administrations of member countries, to documents for analysis and discussion of policies with an integrating perspective for the region as a whole. The purpose of the *Report on Economic Development* (RED) is to bridge the gap between research and public decision-making in order to contribute to the formulation of evidence-based policies. This product also consolidates a vision that is close to the needs and reality of the countries of the region, each with different starting points and in search of a common purpose, which is the development and integration of the region. With this special edition to commemorate the 20th anniversary of our flagship report, the RED, CAF reaffirms its commitment to contribute to our member countries from the knowledge front.

The first edition of the RED, published in 2004 under the title *Reflections for resuming growth,* addressed the central question of how to achieve a path of sustained growth, a question that is still relevant twenty years later. Economic growth, trade integration and productive transformation were the focus of the first editions, although always promoting a comprehensive vision of development. Over time, editions of RED have addressed social inclusion (education, employment and inequality) and, more recently, environmental protection and responses to climate change (global challenges and energy transition). In addition, State capacity building was explored with a territorial approach and specific editions on public finance, integrity and State effectiveness. Today, RED is a fundamental tool for CAF to initiate and sustain a fluid policy dialogue and provide an input of knowledge produced from, by and for the region.

Sergio Díaz-Granados
Executive President of CAF
–Development Bank of Latin America and the Caribbean–

Acknowledgements

The preparation of the Report on Economic Development (RED) is the responsibility of the Socio-Economic Research Department of the Knowledge Management Department of CAF –Development Bank of Latin America and the Caribbean–.

The editing and general coordination of this edition was carried out by Fernando Álvarez and Federico Juncosa, with the support of Martín Finkelstein and Azul Menduiña.

The report was produced under the supervision of Walter Cont, Director of Socioeconomic Research, together with Verónica Frisancho, Knowledge Manager.

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Javier Restrepo carried out the editorial review and style correction.

The report includes the perspectives of prominent experts, who shared their reflections in audiovisual format. They are Juliano Assunção, Raquel Bernal, Bianor Calvalcanti, Mauricio Cárdenas, Marcela Eslava, Ricardo Hausmann, Karen-Mae Hill, Colm Imbert, Santiago Levy, Nora Lustig, Sebastián Mazzuca, Carmen Reinhart and Augusto de la Torre.

The chapters drew significantly on the various editions of the Report on Economic Development and were enriched by the comments of the following CAF officials: Lian Allub, Guillermo Alves, Pablo Brassiolo, Florencia Buccari, Carla Calá, Adriana Camacho, Ricardo Estrada, Gustavo Fajardo, Juan Odriozola, Daniel Ortega and Reinier Schliesser.

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Introduction

Economic growth is a necessary condition for development in Latin America and the Caribbean, but not the only one. Promoting progress in the region is achieved not only by improving the level and distribution of income, but also by ensuring healthy, safe, peaceful and just environments for all. Access to opportunities based on objectives and aspirations founded on people's talents, competencies and skills must be a fundamental part of this quest to achieve integral wellbeing.

In the last two decades, the region has shown progress in multiple dimensions, including, for example, an increase in income levels of close to 40 % for Latin America and 26 % for the Caribbean. Despite these positive numbers, one in three people still live in poverty and the region is among the most unequal in the world. Moreover, poverty is transmitted between generations, reflecting the persistence of barriers in access to education, employment and health. Improving social inclusion is a moral imperative and, at the same time, a source of economic growth, as it allows society to take advantage of the skills and talents of those who are currently excluded.

CAF has consolidated its purpose of being a central and strategic instrument to promote this development through interventions in various sectors. Its commitment to sustainable development and regional integration, its capacity to address challenges from and for the region, and the use of its financing tools to improve people's quality of life are at the core of the institutional work that the organization has been successfully carrying out for 56 years. In this context, the generation and dissemination of its own knowledge is a tool of transcendence and great potential, since knowledge has the dual purpose of adding value to its interventions and nurturing an informed discussion that improves the effectiveness and impact of public policies in its member countries.

This book celebrates 20 years of the Report on Economic Development (RED), a resource that has promoted and positioned a comprehensive and integrating vision of development in Latin America and the Caribbean. The volume addresses the progress made, the challenges that remain and the most effective instruments to handle them. The publication is also enriched by the valuable contributions of thirteen world-renowned leaders who have shared their reflections on the road travelled and the future of the region. I thank Juliano Assunção, Raquel Bernal, Mauricio Cárdenas, Bianor Cavalcanti, Marcela Eslava, Ricardo Hausmann, Karen-Mae Hill, Colm Imbert, Santiago Levy, Nora Lustig, Sebastián Mazzuca, Carmen Reinhart and Augusto de la Torre for his generosity with this work and for his commitment to the development of the region.

Christian Asinelli
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–Development Bank of Latin America and the Caribbean–

Chapter 1

Lights and shadows of Latin America and the Caribbean's elusive development

Key messages

1.

Development requires success in three interrelated areas: economic growth, inclusion and environmental sustainability. The region shows partial progress in each.

2.

Although the region has experienced per capita GDP growth, it has been insufficient to close the gap with the developed world.

3.

Total poverty fell significantly in the first decade of the 21st century. Despite this improvement, almost 30 % of Latin Americans and Caribbeans live in poverty, and more than 10 % in extreme poverty.

4.

During the 21st century, total emissions in Latin America contracted, especially due to a drop in emissions associated with agriculture and deforestation (AFOLU). The fight against climate change demands, however, greater mitigation efforts for the future. On the other hand, there has been an accelerated deterioration of natural capital in recent decades.

5.

Incomplete development has prominent features in the region. Three phenomena that stand out are high informality, infrastructure gaps and criminality. One positive aspect is that, unlike in the past, today the region shows superior macroeconomic stability and greater resilience to shocks.

6.

LAC is a region rich in natural capital. Its development can be leveraged on this important asset.

7.

Three transitions will significantly condition the development of LAC in the coming decades. The first is accelerated aging. The second is the green transition, which, among other facts, involves a strong reduction of emissions and a higher global valuation of assets present in the region, such as green generation potential, mineral endowment and ecosystem endowment. Finally, the region must complete its development in a world dominated by digital technologies, including artificial intelligence, with substantive implications for jobs.

8.

The decades ahead pose significant challenges associated, among others, with fiscal, distributive and economic structure impacts. However, they also offer opportunities for the region to close development gaps.

9.

Closing development gaps requires a comprehensive and knowledge-based agenda. For this reason, RED is an indispensable resource, as it offers an informed discussion on public policies on key development issues from and for the region.

Introduction

In recent decades, Latin America and the Caribbean (LAC) has made significant progress in key dimensions of development. However, there are still large gaps with respect to advanced economies that pose a triple challenge for the region.

On the one hand, it must grow vigorously and continuously in order to close the per capita income gap with the developed world. On the other, it must achieve a drastic reduction in inequality and poverty. Finally, these two objectives must be achieved while preserving the environmental sustainability of the planet. These three spheres of development interact with each other, generating important tensions and synergies.

The future is challenging, but it also offers clear opportunities to close gaps and overcome underdevelopment. Certainly, some trends will condition the region's development process: population aging, technological change and the decarbonization of the global economy. At the same time, there are still a number of structural barriers that limit the region's ability to position itself adequately in the face of these trends. Nevertheless, viewed as a whole, the region presents favorable conditions for future challenges, including advances in macroeconomic stability and, especially, a generous endowment of natural resources.

This chapter provides the necessary context for the discussion of key policies on productivity (chapter 2), inclusion (chapter 3) and environmental sustainability (chapter 4). Chapter 5 takes a forward-looking approach, highlighting opportunities for sustainable development as well as the institutional ingredients and the role of multilateral banks in bridging development gaps.

The triple challenge for the development of Latin America and the Caribbean

The multidimensionality of development

The concept of development has evolved over time. From a restrictive vision that emphasized per capita income levels, it has evolved to a broader one, which transcends income-based measures and also includes distributive and environmental sustainability aspects.

Clearly, the process of development implies a significant improvement in people's quality of life, which undoubtedly depends on income. Hence, per capita income growth is an essential dimension of development. In fact, this dimension has been the focus of the global vision of development since World War II.

However, since the 1970s, concrete efforts have been made to adopt a broad perspective on well-being and measurements of progress in development. The need to include poverty as a first element was evident. One example was the basic needs approach, whose institutional origins date back to the 1976 World Employment Conference of the International Labor Organization (Reinert, 2023).

Under this vision, in the early 1980s, ECLAC introduced the measurement of unsatisfied basic needs (UBN) as a tool for social diagnosis and support for the implementation of social programs. This methodology chose a series of census indicators that made it possible to determine whether or not households were meeting some of their main needs. Due to data availability, the needs considered were usually limited to four categories: (i) access to housing that ensured a minimum standard of habitability, (ii) access to basic services that ensured an adequate level of sanitation, (iii) access to basic education and (iv) economic capacity to reach minimum levels of consumption (Feres and Mancero, 2001).

Progress towards a multidimensional vision of development continued over the next two decades with a series of reflections and conferences, highlighting aspects such as gender, children, food, health and, with increasing importance, the preservation of nature and the environment.

These efforts and reflections were the basis for the Millennium Development Goals (MDGs), derived from the Millennium Declaration, proclaimed by more than 150 world leaders at the Millennium Summit held in September 2000. The eight goals highlighted in the declaration for 2015 were: (1) eradicate extreme poverty and hunger, (2) achieve universal primary education, (3) promote gender equality and empower women, (4) reduce child mortality, (5) improve maternal health, (6) combat HIV/AIDS, malaria and other diseases, (7) ensure environmental sustainability, and (8) develop a global partnership for

development. Each goal entailed specific targets; for example, one of the specific targets for goal 1 was to reduce by half, between 1990 and 2015, the proportion of people with an income of less than one dollar a day.

In September 2015, the United Nations General Assembly adopted Resolution 70/1, entitled "Transforming our world: the 2030 Agenda for Sustainable Development," which stated:

"The new agenda builds on the Millennium Development Goals (...) In its scope, however, the framework we are announcing today goes far beyond the MDGs. Alongside continuing development priorities such as poverty eradication, health, education, and food security and nutrition, it sets out a wide range of economic, social and environmental objectives" (United Nations, 2015).

With this resolution, the MDGs were updated to 17 Sustainable Development Goals (SDGs), with 169 associated targets. Among the additions, in relation to the MDGs, are the explicit incorporation of the reduction of inequality (SDG 10) and gender equality (SDG 5), as well as specific environmental targets related to ocean conservation (SDG 14), forest sustainability and biodiversity protection (SDG 15), and climate change and its effects (SDG 13). As expected, the SDGs also include targets related to economic growth, quality employment and innovation (SDGs 8 and 9).

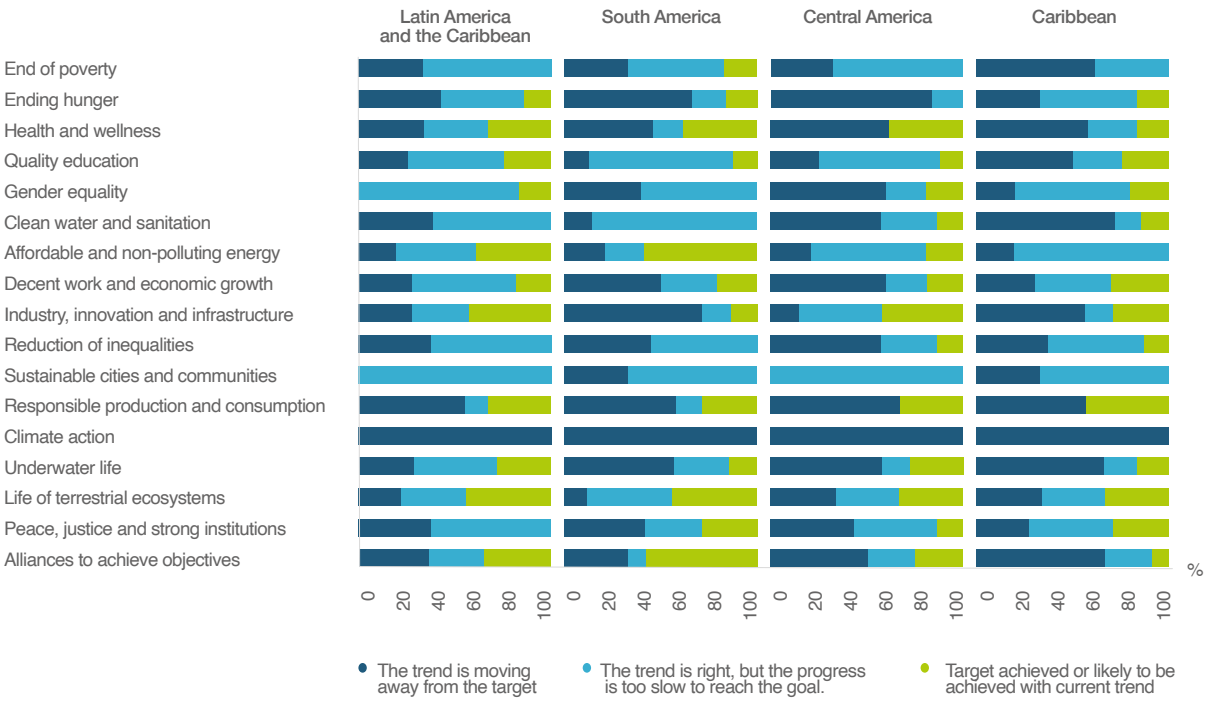
Figura 1.1
ODS



Diagnosis of the region: glass half full, glass half empty

The degree of compliance with the targets associated with the SDGs offers a panoramic view of the region's development. ECLAC (2024) provides an analysis with data as of February 2024, classifying the targets for each of the 17 goals[1] in four possible categories: (1) the trend is far from the target, (2) the trend is correct but progress is too slow to achieve it, (3) the target has been achieved or is likely to be achieved, and (4) there is insufficient data. The results are presented both for the region as a whole and for three sub-regions: South America, Central America, and Mexico and the Caribbean (see figure 1.1). For the region, only 22 % of the targets that have been projected show compliance horizons to 2030. Around 46 % of the targets are still on track, but would need to accelerate the pace of progress to reach the established thresholds. Finally, 32 % of the targets are regressing with respect to the starting point in 2015. It is worth noting that even within the various goals, in general there are targets that are on track to be met and others that show backsliding. When contrasting between subregions, South America shows some slight advantages, but a similar picture.

Figure 1.1
SDG targets by degree of achievement



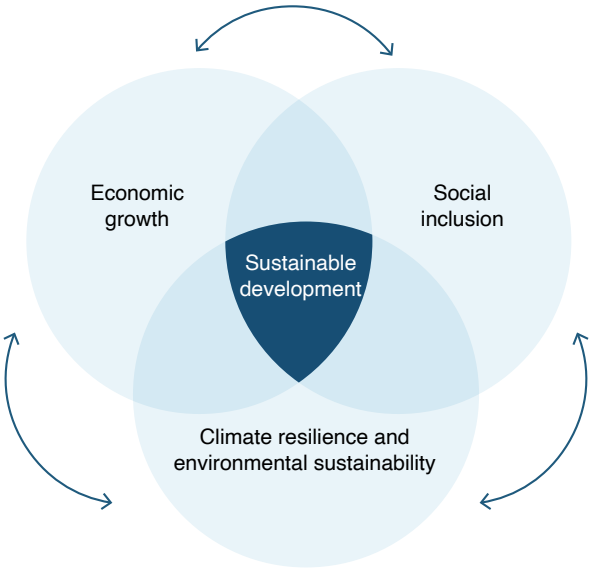
Note: Those goals for which no information is available on their degree of compliance were omitted from the figure.
Source: ECLAC (2024).

1 The information available made it possible to assess the probability of meeting the 2030 thresholds for 131 targets (78 % of the total).

Measuring the development of nations on an extensive set of indicators, as is the case with the SDGs, is valuable for bringing to light the different key aspects of development omitted by GDP per capita. However, the sheer complexity of the system can itself be a challenge in guiding public policy within a country[2].

A common way of approaching the multidimensionality of development is through three areas of analysis. The first is economic growth, to close the huge and persistent per capita income gap with the developed world. The second is inclusion, to ensure that economic growth reaches everyone and reduces poverty and the strong inequality in the region. The third is sustainability, pursuing three objectives: adapting to and improving resilience to climate change, contributing to the global reduction of emissions, and preserving natural capital.

Figura 1.2
The three areas of sustainable developmente



2 Kanbur et al. (2018) highlights an "inevitable and enduring tension between the trend to expand and broaden our indicators for assessing and monitoring economic and social progress in development, on the one hand, and, on the other, the imperative to maintain a relatively small number of indicators (...) in order to facilitate policy formulation".

However, these are not isolated areas, but interact with each other. This implies that there are risks of underdevelopment traps with low levels of per capita GDP, environmental degradation and high levels of poverty and inequality. However, these interactions also enable the possibility of virtuous circles, where progress in the three areas of sustainable development is mutually reinforcing (see Box 1.1).

Box 1.1
Interrelationships between areas of sustainable development

Growth, inequality and poverty

There is evidence from the developed world that innovation and technological change can increase the wage gap between the most and least educated and, with it, wage inequality (Acemoglu, 2002). Informality, on the other hand, explains the low productivity of the economy and also wage inequality. On the other hand, social inclusion favors economic growth by promoting a better allocation of talents (Hsieh et al., 2019).

Connection between growth and sustainability

Climate change affects growth and productivity. Extreme weather events, whose frequency and intensity are increasing due to global warming, cause loss of human lives and damage to infrastructure, compromise agricultural production and impact the accumulation of human capital. Productivity gains, including those in the agricultural sector, can simultaneously favor economic growth and environmental protection, since they imply lower energy use and natural capital depreciation per unit of output. However, gains in the efficiency with which a natural resource can be exploited can also result in greater demand for the resource, aggravating the pressure on ecosystems. Finally, the increase in household income is accompanied by an increase in the consumption of most goods, the production and disposal of which generate adverse consequences for the environmental balance.

Connection, inclusion and sustainability

Extreme weather events, such as droughts and floods, affect the poorest more strongly, becoming a factor that amplifies inequality. On the one hand, lower-income households are more exposed to these events than the rest of the population, partly because they live in riskier areas (Winsemius et al., 2018). On the other, they are more vulnerable; that is, in the case of suffering an event, it is more likely to have severe and persistent negative effects. Also, poverty and inequality impose certain restrictions on the adoption of clean or energy-efficient technologies in households, partly due to limitations in financing these measures.

> "What we have observed in developed countries, in general, is that, in order for the process of growth and development to be sustained and inclusive, the population employed in low productivity sectors must move, by the force of demand and the demand for goods and services, to the higher productivity sectors".
>
> **Based on an interview with Nora Lustig**

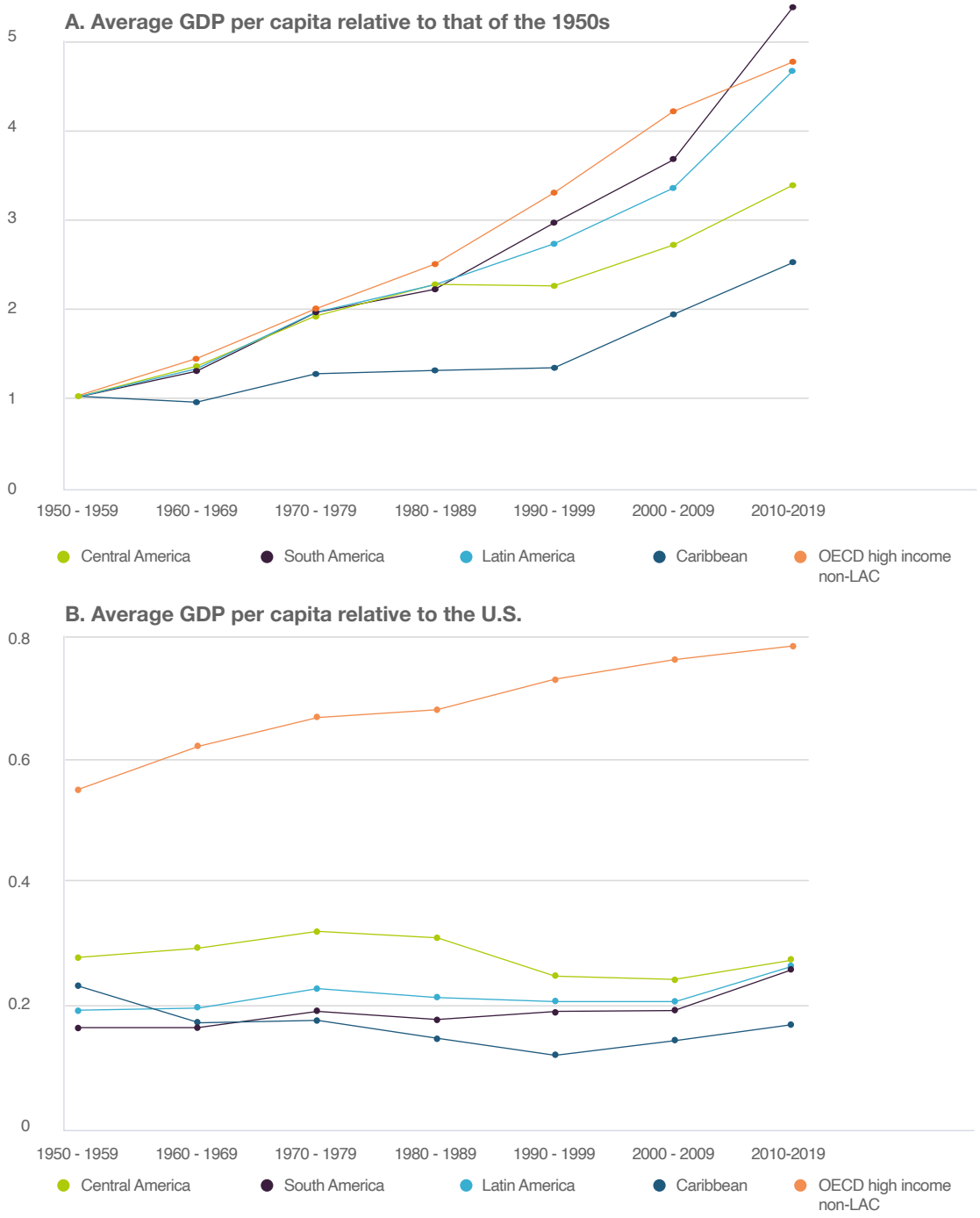
> "While there are tensions and there may be vicious circles between the different dimensions that are important for economic and social development (...), there are also complementarities. And I believe that good public policy needs to exploit these complementarities so that progress in favor of one dimension, for example, growth, is compatible with and helps progress in another dimension of economic and social development, such as environmental sustainability or social equity".
>
> **Based on an interview with Santiago Levy**

To gain a more detailed perspective on the dynamics of regional development, we will review a reduced set of key indicators in each of the three areas of sustainable development. For each area we will highlight the most salient fact:

Fact # 1: The region has experienced per capita GDP growth, although this has been insufficient to significantly reduce the gap with the developed world.

Between 2010 and 2019, real GDP per capita in Latin America was more than 4.4 times the average for the period 1950-1959. For the Caribbean, this value was 2.4 times higher (figure 1.2, see panel A). However, this growth has been insufficient to close the per capita GDP gap with the developed world, e.g., the United States, which has remained practically unchanged and below 30 % in recent decades (see figure 1.2, panel B).

Figure 1.2
Evolution of GDP per capita



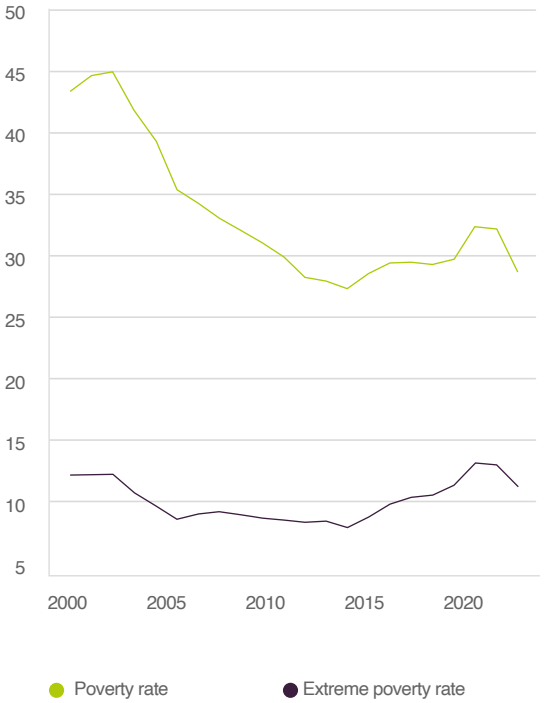
Note: For the figure, the real GDP variable on the production side in PPP (USD million in 2017) from the *Penn World Table* base is used. The regional aggregates correspond to the population-weighted average of the country-level values (for which WPP population data were used). Based on these values, simple averages are then calculated for each decade. In the figure, the average value for each decade relative to the 1950s average (panel A) and relative to the U.S. value (panel B) is reported
Source: Feenstra et al. (2023) and WPP (2024).

Fact # 2: In the last two decades there has been a reduction in inequality and poverty, but we are still one of the most unequal regions and maintain very high levels of poverty.

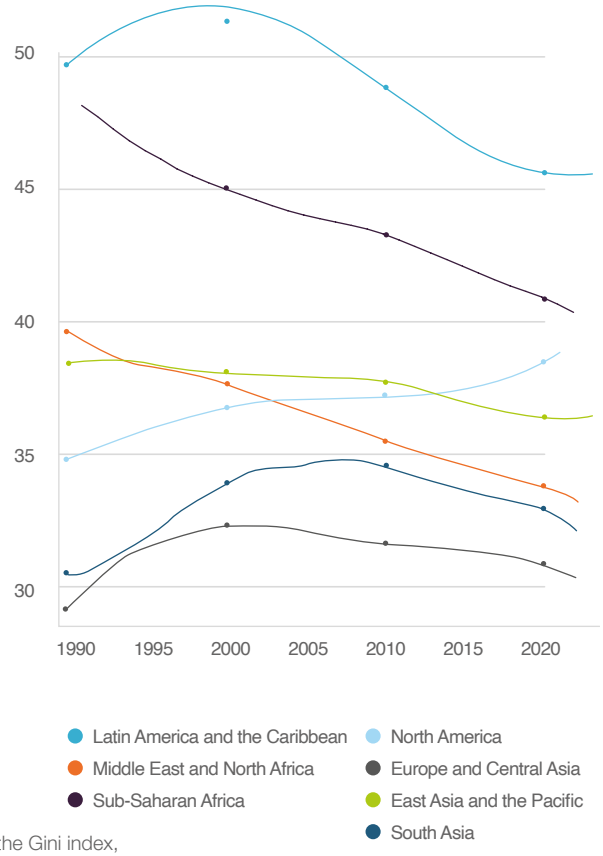
Total poverty fell significantly in the first decade of the 21st century. Then, this fall slowed and reversed slightly from the middle of the second decade of the century, with a rebound associated with Covid-19. Despite this improvement, according to the most recent data, almost 30 % of the population in Latin American and the Caribbean live in poverty and more than 10 % in extreme poverty. In rural areas, the incidence of poverty exceeds 40 % and extreme poverty almost 20 %. These levels are well above those recorded in developed regions (figure 1.3). The Gini index, a classic measure of inequality, also shows a favorable trend so far this century; however, according to this indicator, the region is among the most unequal in the world in terms of income distribution.

Figure 1.3.
Poverty and inequality dimension

A. Evolution of poverty rates in Latin America



B. Evolution of the Gini index of income distribution



Note: In panel B, each line represents a local polynomial smoothing of the Gini index, which measures average income inequality by region and year.
Sources: World Bank (2023) and ECLAC (2023a).

> "Latin America is a region that has excess poverty. (...) and one of the essential sources of why there is excess poverty is precisely because it is one of the most unequal regions in the world. Why are we in such an unequal world in Latin America? (...) Because the type of development that is taking place does not generate enough jobs to offer opportunities to people who come with low levels of education or training".
>
> **Based on an interview with Nora Lustig**

The flip side of this reduction in poverty experienced by the region in recent decades is a significant growth of the middle classes in Latin America and the Caribbean. According to estimates, the middle class went from representing about 20 % of households at the beginning of the century to 38 % in 2019[3] (World Bank, 2021).

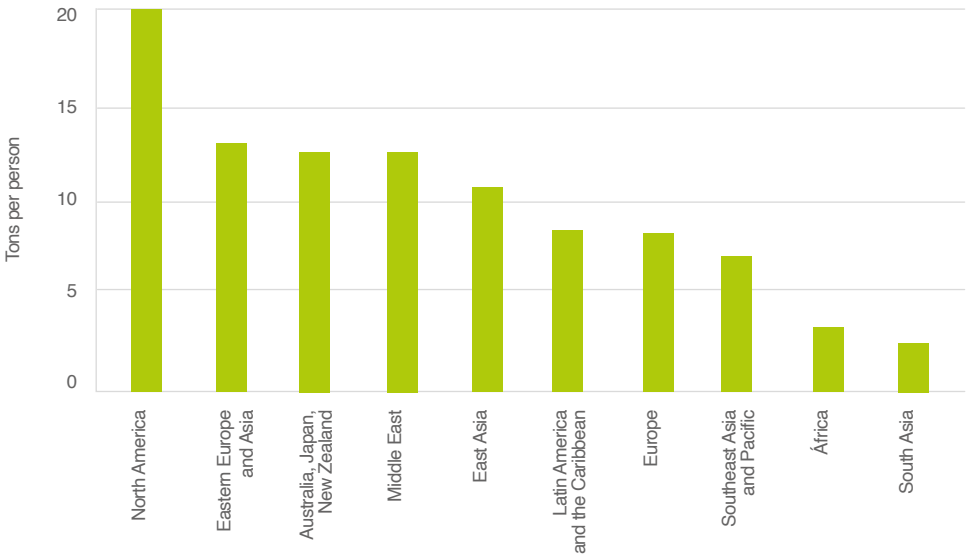
Middle-class growth represents an opportunity to boost the region's economic and social development. However, existing challenges need to be addressed to consolidate this progress. A particularly relevant challenge is that a large part of the region's middle class is in a vulnerable situation, susceptible to falling into poverty in the face of economic shocks. For example, Stampini et al. (2016) find that in the region 14 % of middle-class people fall into poverty at least once in a 10-year period.

Fact # 3: In the region, per capita GHG emissions are lower than in other regions such as North America. Nevertheless, there is high exposure to the consequences of climate change. In addition, there is an accelerated deterioration of natural capital.

According to the most recent estimate, per capita GHG emissions in Latin America and the Caribbean are less than half those of North America, and also lower than those of other regions such as East Asia and the Middle East (figure 1.4). On the other hand, the region has been responsible for 11 % of anthropogenic GHG emissions since 1850.

3 Defined in this case as the fraction of households with purchasing power adjusted incomes between $13 and $70 per day.

Figure 1.4.
GHG emissions, population and GDP

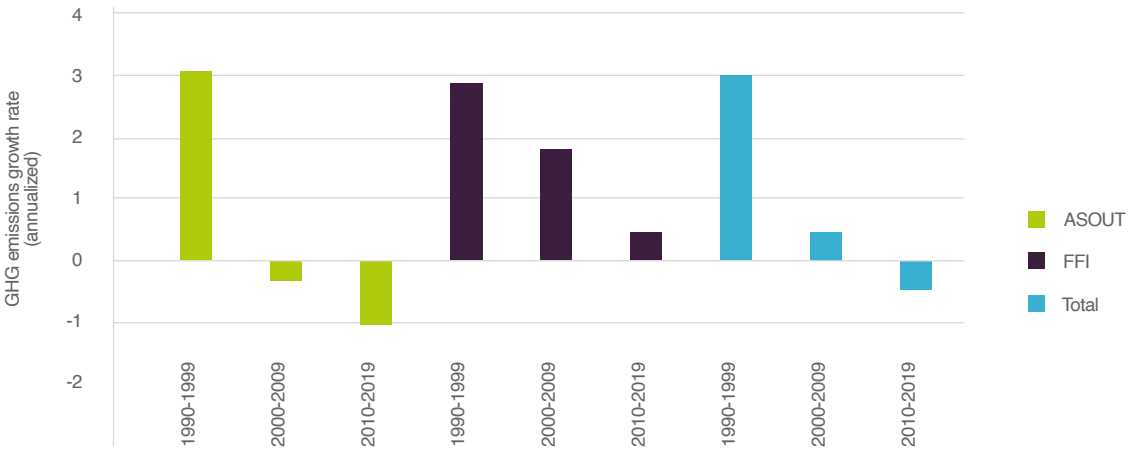


Note: Data from World Population Prospects is used for population and real GDP with 2017 prices from Penn World Table base is used for GDP.
Sources: Minx et al. (2021); Feenstra et al. (2023) and WPP (2024).

In terms of emissions composition, Latin America is characterized by the importance of its non-energy emissions. Globally, almost 80 % of GHG emissions come from fossil energy consumption and industrial processes (FECIP), while just over 20 % come from the AFOLU sector (agriculture, forestry and other land uses). In contrast, in Latin America, about 55 % of emissions come from this sector, a much more significant amount than the 14 % in the Caribbean or 8 % in OECD countries (see chapter 4).

However, the importance of this component has been falling in the region. During the periods 2000-2009 and 2010-2019, total emissions in Latin America contracted significantly, even turning negative in the last decade (-3.8 %) due to a sharp fall in the AFOLU component (-10.3 %), which offset the growth of the FECIP component (5.2 %). Something similar occurred in the Caribbean region, where, in the last decade, there was even a reduction in both AFOLU emissions (-15.6 %) and FECIP (-2.5 %), resulting in a fall in total emissions (-4.4 %) (see figure 4.5).

Figure 1.5.
Growth of GHG emissions



Note: The bars represent the annualized change between 1990 and 2000, 2000 and 2009, and 2010 and 2019 of the region's total emissions. The sectors that make up FECIP (fossil fuels and industrial processes) are buildings, energy systems, industry and transportation. AFOLU (agriculture, forestry and other land uses) are agriculture and LULUCF (Land Use, Land Use Change and Forestry). For the LULUCF sector, Friedlingstein et al. (2023) was used as a data source, while for the rest of the sectors Minx et al. (2021) was used.
Source: Minx et al. (2021) and Friedlingstein et al. (2023).

Aside from its responsibility for emissions, it is a fact that the region is suffering considerably from the consequences of climate change. Since 1980, the occurrence of extreme weather events has increased almost twofold (see chapter 4). There has also been a significant increase in the number of people affected. These events tend to hit the most vulnerable families hardest, as well as certain sectors such as agriculture and tourism.

> "Sea level rise is causing erosion; it is damaging coastal regions. Guyana, for example, has saltwater intrusion damaging their agricultural communities along the coast, and so on and so forth. And then, of course, there are more intense hurricanes, much more difficult weather patterns, rain when it's supposed to be dry and drought when it's supposed to be rainy. These are challenges that the Caribbean must overcome if it is to be sustainable".
>
> **Based on an interview with Colm Imbert**

The recent history of the region also points to a significant deterioration of natural capital. Between 1990 and 2014, natural capital per capita contracted in the region by about 40 % (Sanguinetti et al., 2014). Moreover, the region has been consuming its natural capital faster than the global average. Thus, according to the Inclusive Wealth 2023 report of the United Nations environmental program (2023), by 1990, the region had more than 21 % of the value of natural capital, but, by 2019, the figure had fallen to 13.77 %. Likewise, the Living Planet Index shows an alarming loss of biodiversity over the last 50 years (see chapter 4). Sustainable use of our natural capital will be key to promoting sustainable development.

> "Undoubtedly, we have to look for ways to generate income from our own biodiversity, protecting it. We must generate resources and ensure that they reach, above all, the most vulnerable sectors of the population".
>
> **Based on an interview with Mauricio Cárdenas**

Historical features that condition development in the region

The economic, social and environmental debts faced by Latin America and the Caribbean, as evidenced in the previous brief diagnosis, indicate the scope of the challenge to be faced. Addressing it requires an analysis that takes into account the specificities of the regional context and makes it possible to identify the structural factors that condition the possibilities for development.

Three phenomena stand out because they cut across the multiple dimensions of development and because they are also characteristic of the region: high informality, infrastructure gaps and crime. The first is both a cause and a consequence of low productivity, and increases inequalities. The second makes households and businesses in the region remote from each other, which hinders production and access to services. And the third affects the social and economic fabric, representing a critical obstacle to growth, well-being and social cohesion.

Despite these challenges, the region shows strengths that should not go unnoticed and that are instrumental to the policies required for the region's development. Macroeconomic and financial institutions have made significant progress, providing a base of relative stability in a context of global volatility. In addition, and especially, the rich endowment of natural resources, increasingly valued on the global stage, offers opportunities to boost development.

Productive informality

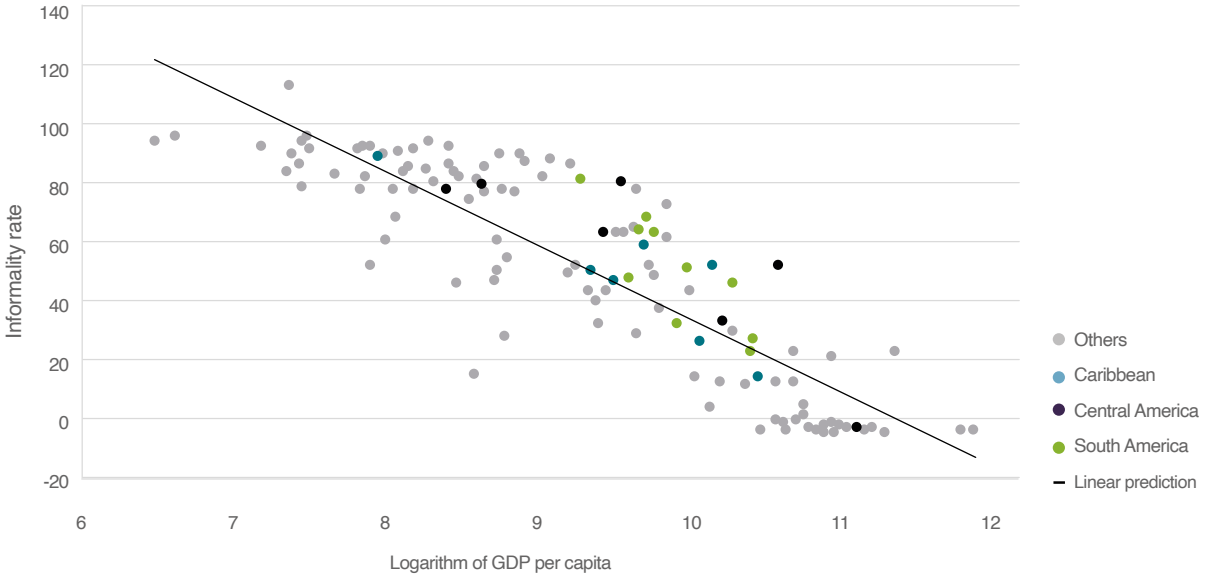
Productive informality is a measure of the degree of compliance with the regulations imposed by the State for a business or person to carry out an economic activity. These regulations are of different nature and may vary between sectors or according to the characteristics of the company, especially its size. In practice, even when regulations do not have a design bias by size, compliance tends to be less frequent in smaller companies, so that many regulations end up being, in fact, size-dependent.

Informality is a very prominent phenomenon in the region. An example of this is labor informality[4].On average, around 57 % of employed people do not pay social security contributions, which is the most common measure of this type of informality. This average hides important differences between countries. The rates range between 27 and 32 % in Chile and Uruguay, and up to 80 % in Bolivia, Guatemala, Honduras and Nicaragua. This scenario is also evident in the Caribbean: Bahamas, 18 %; Dominican Republic, 56 %; Jamaica, 55 %; Trinidad and Tobago, 70 %; Barbados, 62 % (ILO, 2024, except own calculations for T&T 2014).

The labor informality rate tends to fall with the country's per capita income. However, in the countries of the region, it is even higher than in countries with similar incomes. Hence, we can speak of an *excess of informality* (see figure 1.6).

4 Informality is manifested in many other metrics, for example, in the number of businesses without business registration. According to the World Bank Enterprise Survey (WBES, 2024), the fraction of establishments that were not registered at the time of opening in the region is 14.5 %; nine percentage points higher than the situation in the Europe and Central Asia region. It is worth noting that this source of information is restricted to companies with more than 10 workers, so it does not include the lack of registration in small companies, which have a greater bias towards informality.

Figure 1.6
Relationship between the informality rate and GDP per capita



Note: Panel A in the graph presents the relationship between GDP per capita, PPP ($ at current international prices) and the labor informality rate as recorded by the ILO. Informal workers are defined as own-account workers employed in their own informal sector enterprises; those engaged in the production of goods exclusively for their household's final use (e.g., subsistence agriculture or own-account housing construction), if covered; contributing family workers, regardless of whether they work in formal or informal sector enterprises; wage earners with informal jobs, whether employed by formal sector enterprises, informal sector enterprises, or as paid domestic workers by households. Wage earners are considered to have informal jobs if their relationship to the occupation is not subject, in law or in practice, to national labor legislation, income tax, social protection or entitlement to certain benefits for the occupation (paid annual or sick leave, etc.). The values presented in the graph for each country correspond to the most recent data available for informality. The line presented arises from the predicted values of a regression in which the dependent variable is the informality rate and the independent variable is the logarithm of GDP per capita.
Source: ILO (2024) and World Bank (2024b).

The high proportion of self-employed, which in the region reaches 40 % of the employed, explains to a large extent labor informality. But this also manifests itself under the condition of salaried workers, especially in micro-enterprises. Indeed, in Latin America, 1 out of every 4 informal wage earners is in companies with 10 workers or more, while 8 out of every 100 are in companies with at least 100 workers (Álvarez et al., 2018). It also tends to be more intense in sectors such as agriculture, where it reaches 80 % of wage earners, but even in sectors such as manufacturing, 35 % of wage earners are informal.

The level of informality also varies according to the characteristics of the workers, being particularly high among young people, those with less education and those with low incomes. Wage earners with incomplete secondary education account for 59 % on average in the region, and in almost half of the countries analyzed (7 out of 16) it exceeds 75 %. Informality, in the lowest income quintile, reaches 86 % of salaried employment.

It is clear that informality is a drag on productivity, since it implies a poor distribution of the labor force that reduces the aggregate productivity of the economy. In fact, there are significant differences between the average wages of workers in formal and informal jobs (between 15 % and 30 %), regardless of their education, age or gender. These differences are indicative, in part, of productivity gaps between formal and informal jobs. The movement of these workers to formal and more efficient firms would bring significant productivity gains.

The wage gap between formal and informal workers, combined with the socioeconomic gradient of informal employment, makes informality in the region a structural cause of wage inequality. A recent study finds that 34 % of the inequality gap in the lower part of the region's distribution with respect to the U.S. is explained by a higher concentration of workers in the categories with the worst relative income and productivity: self-employment and employment in micro-establishments (Eslava et al., 2021).

> "Latin America combines low levels of per capita income with very high inequality (...). These two problems are not unconnected; they are manifestations of the same basic characteristics of Latin America. (...) we have a very large mass of the population that is unable to engage in the most productive activities, that is, in activities where they could generate the most income for themselves and their families and, at the same time, where they could contribute the most to the economy".
>
> **Based on an interview with Marcela Eslava**

Informality is also detrimental to skill formation. On the one hand, because the low returns to education under the condition of informality discourage investment in education and, on the other, because once in the labor market, people accumulate more skills in a formal job than in an informal one. Indeed, wage earners more frequently report that self-employed people show an increase in their job skills during their employment, both emotional and technical (Berniell et al., 2016). Also, formal wage earners have higher participation in training activities in their employment.

Labor informality is also the main barrier to increasing the coverage and financial sustainability of contributory social protection systems. Based on administrative data on social security in the region, it is found that, on average, a worker makes social security contributions for 35 % of his or her working life in Argentina, 51 % in Brazil, 47 % in Ecuador and 50 % in Uruguay (Álvarez et al., 2020). Because the laws require a minimum number of contributions to access a pension, a significant part of the labor force will not have access to it at retirement. On the other hand, high informality reduces the funds to finance contributory schemes. In fact, if informality were reduced by half, the revenues of contributory pension systems would increase by between 14 %

(Uruguay) and 57 % (Ecuador), with an average value of almost 40 % among the countries analyzed[5]. In general, moreover, informality reduces collection capacities and, therefore, undermines the financing of public spending.

> "The use of non-contributory instruments is extremely important because the informality means that many of the benefits that are part of the social security system do not reach the poor population".
> **Based on an interview with Nora Lustig**

Finally, informality also introduces challenges for environmental policies. See Box 1.2.

Box 1.2
Another challenge for the energy transition: productive informality

Because of their nature, informal enterprises are outside the regulatory frameworks that penalize CO_2 emissions. Moreover, the existence of environmental regulations may favor the growth of the informal sector, with all the productive implications that this has.

In this regard, Abid et al. (2023) study the impact of carbon taxes in 25 sub-Saharan African economies. The paper shows that environmental regulation would increase the carbon footprint of the economy by encouraging informality and argues that traditional carbon taxes would not be appropriate for economies with high informality, as they incentivize formal firms to move part of their activities to informality. This phenomenon not only affects carbon emissions, but can have a considerable impact on the emission of water and air pollutants.

Bali Swain et al. (2020) show that, in developing countries, the informal sector has a significant impact on local air and water pollution, mainly explained by the lack of control over its practices. Bali Swain et al. (2020), Brännlund et al. (2017) and Gani (2012) show that reductions in corruption, involving improvements in the efficiency of environmental control, can have relevant positive effects on environmental quality and this is especially important for countries with a large informal economy.

The region's productive and environmental policy must therefore internalize in its design the propensity of companies to be informal. The improvement of State oversight capacities is an indispensable ingredient in the range of policies for the energy transition.

5 The countries considered are Argentina, Brazil, Colombia, Ecuador, Mexico, Paraguay, Peru and Uruguay.

Infrastructure gaps

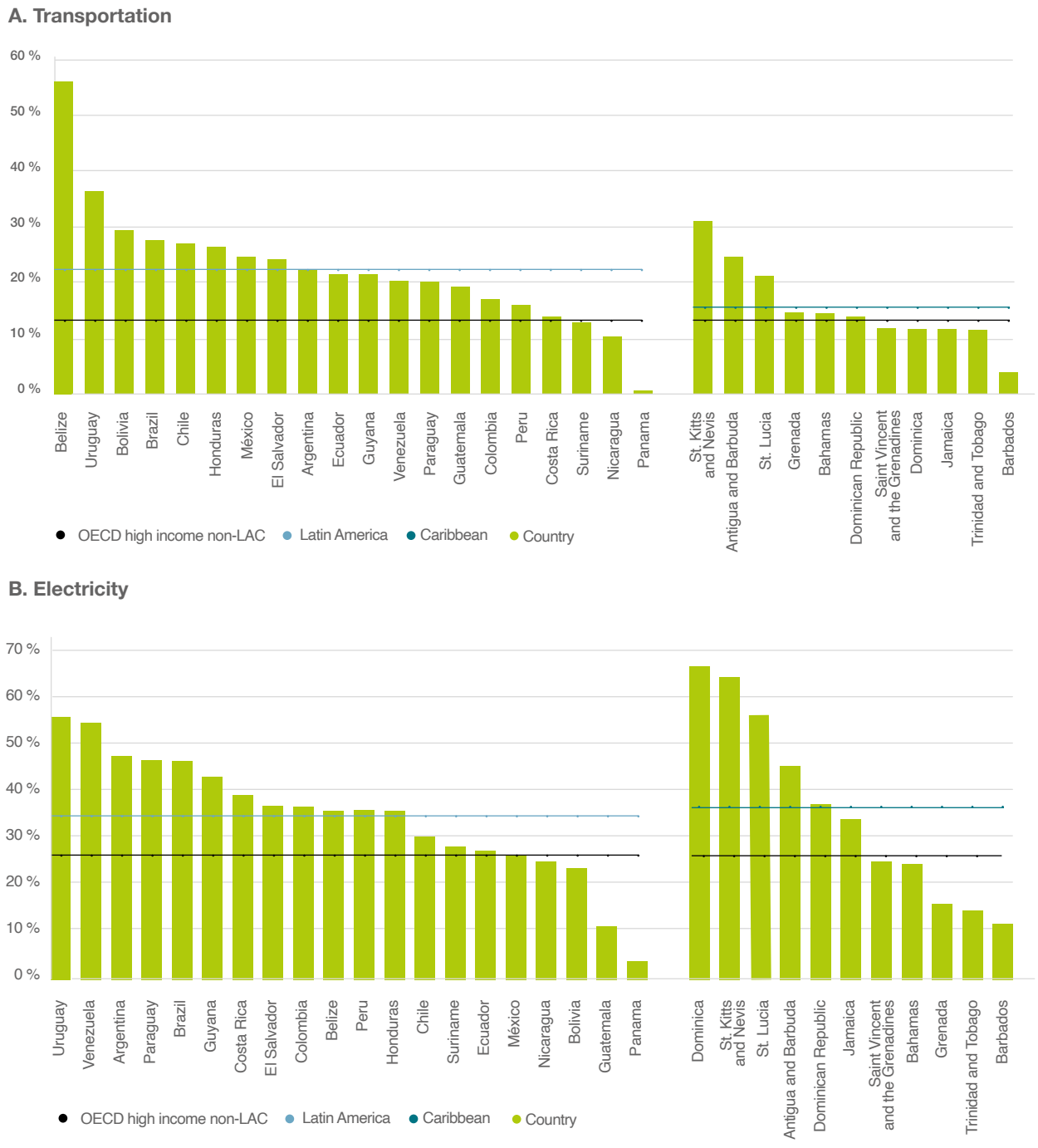
The economic infrastructure gap is one of the major determinants of productive activity in the region. Transportation networks in all their modes, energy infrastructure and communications networks are central components of production, since they allow access to inputs and markets. The region shows a significant lag in these three components as a result of a low level of investment over time and low investment efficiency.

> "Infrastructure for greater connectivity and integration among our countries is the priority and the great challenge for the next fifty years. If we do not do this, Latin America will never really be able to overcome its development problems".
>
> **Based on an interview with Mauricio Cárdenas**

In land transportation, this lag is manifested by the lower availability of road infrastructure. For example, on average, for 11 Latin American countries, road coverage measured in km paved per 100,000 inhabitants is 200, while this indicator for OECD countries reaches 1,400. This low availability, together with the poor quality of existing infrastructure, results in congestion, road accidents and high and uncertain travel times. Air and maritime connectivity indices, which respond to the availability, frequency and importance of the terminals with which countries are connected in each mode, also show significant lags with respect to developed economies (Sanguinetti et al., 2021, and AC&A et al., 2020).

Gaps in transportation and energy infrastructure are also evident in the day-to-day operations of companies. In this regard, survey data reveal a high incidence of companies that identify transportation and electricity as a major or very severe constraint to their operations (WBES, 2024). In transportation, for the average of Latin American countries, the incidence of this barrier reaches 23 %, much higher than the OECD average value (14 %, excluding Latin American countries). Electricity is also identified as a barrier in a much higher order than that observed in OECD, both for Latin America and the Caribbean (34 % and 36 %, respectively).

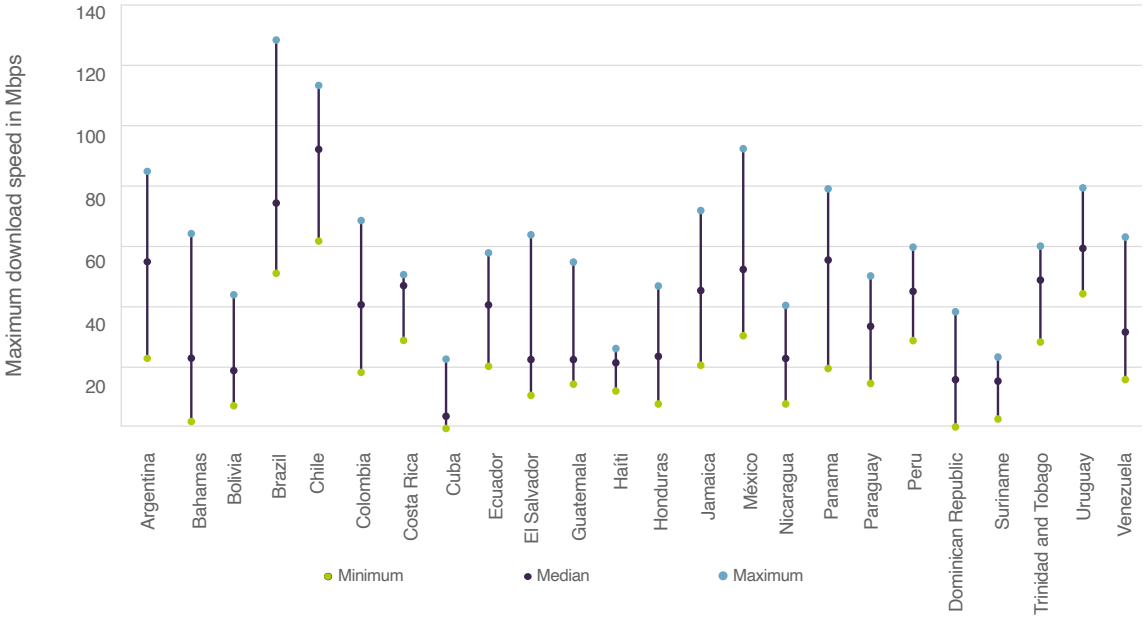
Figure 1.7
Percentage of companies that identify transportation and electricity as a major or very severe constraint



Note: Based on *Enterprise Surveys*. The regional aggregate is the simple average of the percentages at the country level.
Source: WBES (2024).

One way to approximate the lag in telecommunications infrastructure is by the speed of internet services that can be accessed in each economy. Graph 1.8 shows information on maximum internet access speed for regions within the countries of the region, from open connection test data. For each country, the graph shows the maximum download speed recorded in the provinces or states (the first administrative division level which is fastest, the median and, finally, the maximum speed recorded in the state or province with the slowest access)[6].

Figure 1.8
Maximum download speed of Internet service on fixed connections by state or province



Note: The database at the query level is aggregated at the departmental level by taking the maximum speed value reported in that area. This allows to approximate the internet infrastructure available in each department. The data is then re-aggregated at the provincial or state level, also using the maximum speed value of the departments. In countries without an administrative division at the state level, as well as in those where information is not available with a greater geographic disaggregation than the state or provincial level, this last step is omitted. On this final basis, the minimum, median and maximum values are reported for each country.
Source: Created by authors based on Ookla (2024) and Buccari and Fajardo (2024).

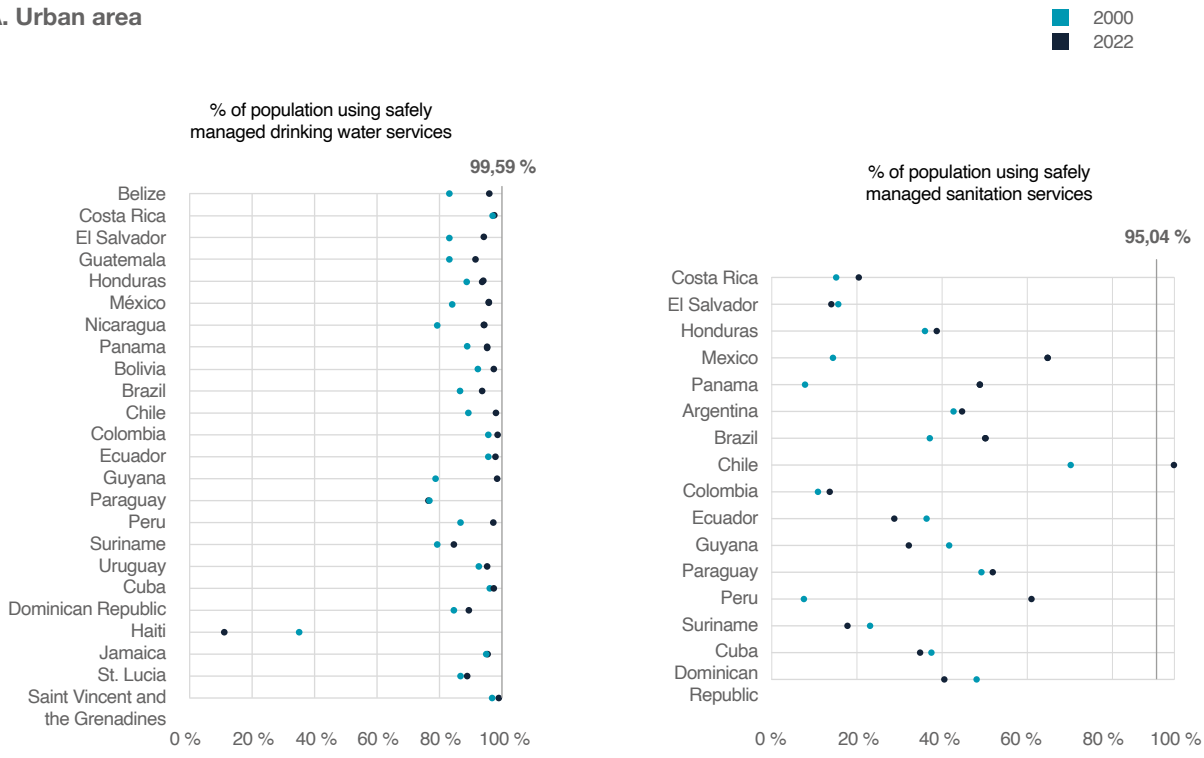
6 The focus is on maximum speed to account for the availability of communications infrastructure, rather than averages that also reflect affordability challenges.

These data reveal important connectivity infrastructure gaps. The median download speed in high-income countries exceeds 90 MBPS, above the maximum speed that can be accessed even in the states with the best connectivity for the vast majority of countries in the region. Some countries, such as Cuba, Haiti and Suriname, show notable gaps: the maximum speed that can be accessed in the states with the best connectivity in these countries is only one-sixth of that of the best performer, Brazil (129 MBPS). In addition, all countries show significant internal gaps. For example, in 21 of the 24 countries shown, the best available connection in the slowest states is similar to or lower than the best speed recorded in Haiti (26 MBPS).

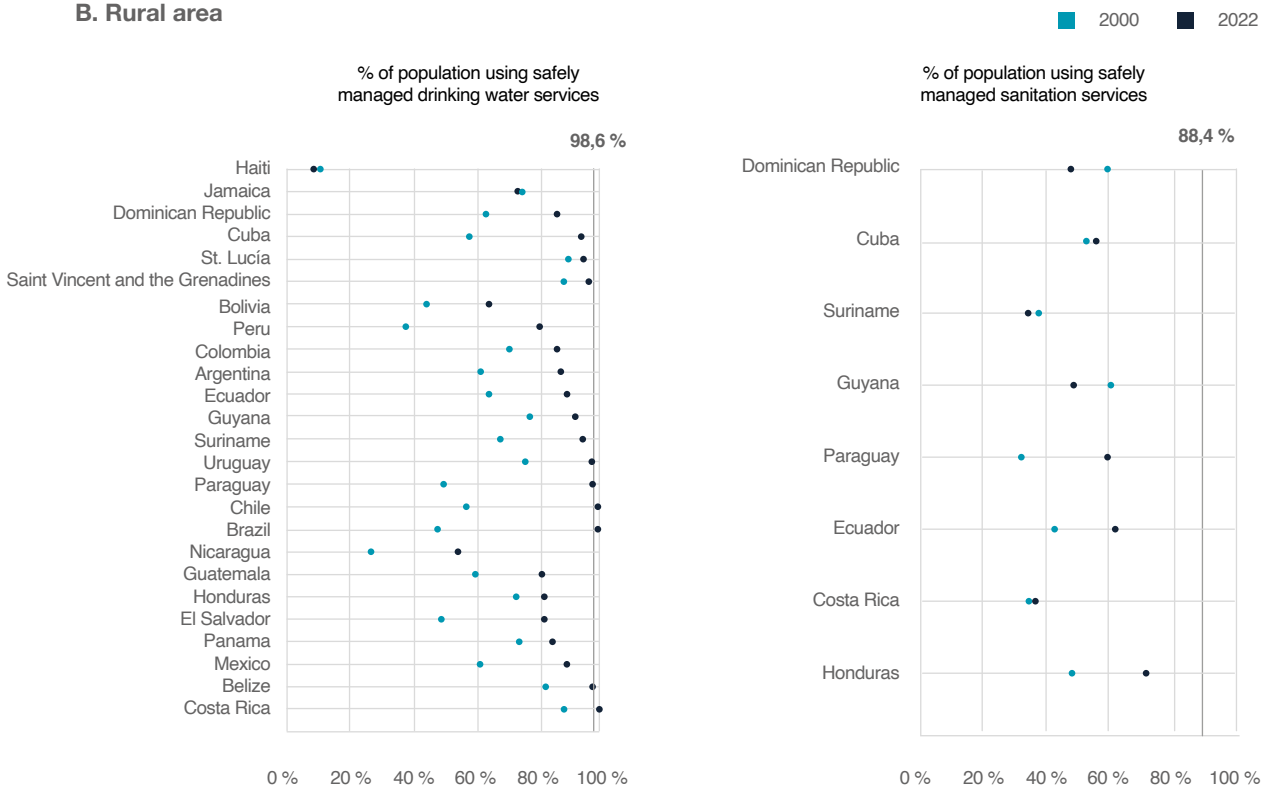
The infrastructure gaps in the region are also particularly acute when analyzing safe water and sanitation infrastructure, as shown in figure 1.9. South and Central America have made significant progress in the last two decades, achieving, for example, almost universal coverage of access to safe water in urban areas and over 90 % in rural households. The Caribbean lags behind. For example, nearly half of urban households do not have adequate sanitation infrastructure.
In terms of household access to electricity, there has also been significant progress and challenges. In the last 20 years, the fraction of connected households grew by 10 percentage points; however, in at least six countries in the region, still more than 10 % of rural households are not connected to the electricity system (Allub et al., 2024).

Figure 1.9.
Access to water and sanitation services

A. Urban area



B. Rural area



Note: The variables used are the proportion of the population using safely managed drinking water services (drinking water from an improved water source that is on the premises) and the proportion of the population using safely managed sanitation services (use of improved facilities that are not shared with other households and where excreta are safely disposed of on-site or transported and treated off-site). The light blue color represents the value in 2000, while the dark blue color represents the value for the latest year available. The latest year varies between countries according to data availability. The vertical line represents the population-weighted average for high-income non-LAC OECD in 2022.

Source: United Nations (2024).

Economic infrastructure supports the flow of physical goods, energy and information, i.e., virtually all economic exchanges, and is therefore key to economic growth.

Transportation infrastructure affects the ease with which companies can access markets, both to obtain inputs and to position their products vis-à-vis competitors and end consumers. In this regard, the region has quantity and quality gaps, particularly in land infrastructure, which may be limiting the deepening of regional value chains. Being deficient, it increases local and international distribution costs, eroding their competitiveness. In turn, it limits the growth and productivity processes associated with productive specialization and trade integration.

Energy is a critical input in production and is transversal to all economic sectors. A deficient energy infrastructure, particularly electricity, results in supply instability, which can cause damage to production equipment and loss of goods. This, in turn, subjects companies to costly investments and expenditures to mitigate risks, for example, in their own power generation capacity and fuel storage.
The importance of the electricity sector is growing in view of the decarbonization objectives of economies due to the expected increase in consumption. In addition, the integration of generation capacity from non-conventional sources, which are characterized by being more atomized, dispersed and intermittent, will require substantial investments in transmission networks (Allub et al., 2024).

The telecommunications infrastructure determines the ease with which companies interact with their customers, suppliers and, increasingly, their employees.
The digital services supported by this infrastructure represent a growing portion of the value of the goods and services traded. Closing connectivity gaps will therefore be essential for the region's productive integration.

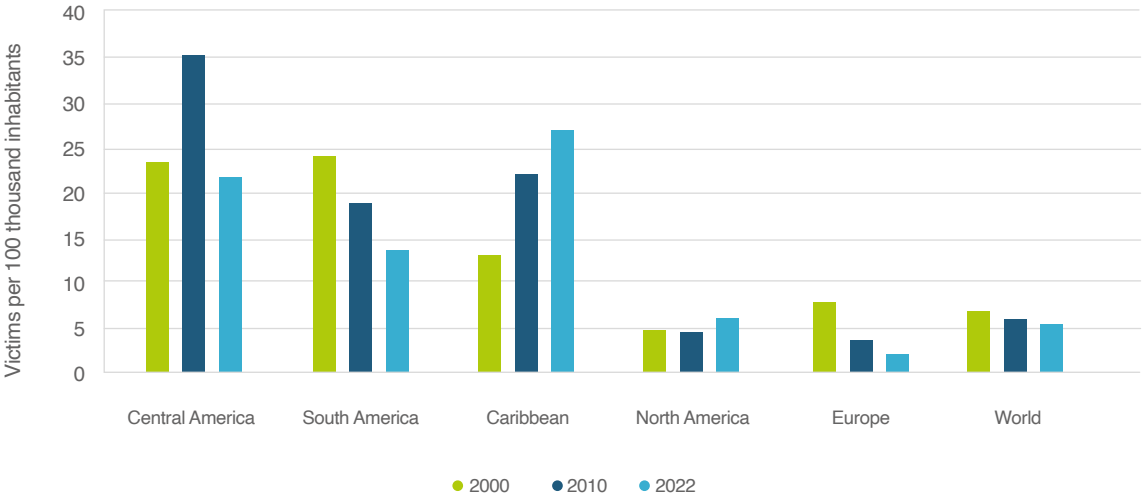
Finally, water and sanitation infrastructure is a key determinant of household well-being. Promoting access to safe water and adequate effluent treatment reduces the incidence of disease, with lasting impacts on human capital accumulation (chapter 3). Lack of clean energy also harms household health.

> The infrastructure deficit we have (...) is going to require a lot of private investment and many investment structures in which not only the private sector but also multilateral entities will have to participate".
> **Based on an interview with Augusto de la Torre**

Crime

Crime is a scourge with very significant economic and social costs. Despite the lack of reliable data, which is usually very present in the measurement of this phenomenon, the available information indicates the magnitude of the problem in the region. With significant differences between countries, the region has high levels of intentional homicides, violent acts, corruption and bribery.

Figure 1.10.
Homicide rate



Source: UNODC (2024).

Among the best quality statistics is the intentional homicide rate. In 2000, according to data from the United Nations Office on Drugs and Crime (UNODC), the intentional homicide rate in Latin America and the Caribbean was 21.66 per 100.000 inhabitants. By 2022, the rate fell by just 2 homicides approximately, to reach a value of 19.58 homicides per 100,000 inhabitants. This measure is significantly higher than that of European countries, which are below 1 homicide per 100.000 inhabitants, but it is also above the world average of 5.61 homicides per 100.000 inhabitants.

Of course, there are important differences between countries. In Honduras, Jamaica, Trinidad and Tobago and the Bahamas the rate is notoriously high, with more than 30 victims per 100.000 inhabitants. On the other hand, in Bolivia, Uruguay, Chile and Argentina this indicator is below 10.

> "In the Caribbean we are seeing increases in crime, especially in juvenile transgression. (...) Statistics show that (...) we are seeing younger fathers, fractured homes, absentee father syndrome, young people feeling disillusioned and joining gangs in search of a sense of belonging. And we need to address the root causes of this".
>
> **Based on an interview with Karen-Mae Hill**

Crime and violence impose high costs on society. There are direct costs, including public and private spending associated with crime prevention and control, the expense of the criminal justice system and prisons, and the value of assets and property destroyed by crime, as well as costs associated with loss of life and other consequences on the physical and mental health of victims and their families. However, the effect of crime goes beyond these costs. Certainly, crime affects trust among citizens and between citizens and the State. It also changes the behavior of individuals and businesses. In particular, it reduces the incentives of businesses and families to invest in physical capital and education. These indirect costs are significant, although more difficult to estimate (see Sanguinetti et al., 2014 for more conceptual details of the costs of crime).

> "There is a direct relationship between crime and economic performance. Because if people don't feel safe to invest, they don't do it. People are not going to feel safe to come visit and spend their money. And so, the economy grinds to a halt. Nobody feels safe, nobody feels protected, nobody feels empowered to participate in a crime infested society".
>
> **Based on an interview with Karen-Mae Hill**

One of the most comprehensive and recent estimates of direct costs is Jaitman et al. (2017). The authors find a direct cost for 17 countries in the region of 3.5 % of GDP, an estimate that doubles the figure with respect to the developed world. Estimates vary across countries. Honduras, El Salvador and Bahamas are above 4 % of GDP, and Argentina, Peru, Chile, Barbados, Uruguay and Mexico, below 2 %[7].

Crime and corruption are complex and multidimensional phenomena that demand a comprehensive action strategy. The RED 2019 (Sanguinetti et al., 2014) presents a set of key actions to reduce crime with an important focus on prevention. These actions include policies aimed at the family, schools and the urban environment, but also at criminal justice systems and the State's own capacities. For its part, RED 2019 (Fajardo et al., 2019) focuses on corruption and highlights policies linked to internal and external control mechanisms, selection schemes for bureaucrats (elected and non-elected) and other institutions to regulate the interaction between the State and the private sector, such as anti-bribery laws and contract award mechanisms.

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7 The remaining countries in the study are Jamaica, Brazil, T&T, Costa Rica, Ecuador, Paraguay, Colombia and Guatemala, with values between 2 and 4 % of GDP.

Macroeconomic institutions

Robust financial markets and macroeconomic stability are two key enabling conditions for economic growth and inclusion. Financial markets play a fundamental role in the wellbeing of families since, through savings and credit operations, they can better adjust their consumption over time. In addition, financial markets make it possible to intermediate funds to productive projects, favoring economic growth. Macroeconomic stability, on the other hand, is essential for the viability of companies productive projects and the stability of household income.

The region has made significant progress in the depth of financial markets. In 1980, the credit-to-GDP ratio in the countries of the region averaged 25.6 %; today it stands at 44.7 %. However, the gap in market depth with respect to developed countries has widened: the 2023 credit-to-GDP ratio in the region is significantly lower than in the United Kingdom (121 %) and the United States (195 %).

Figure 1.11. shows a broader set of indicators of the financial system in the countries of the region (Financial Development Index), in the dimensions of access, depth and efficiency in credit markets (identified as financial institutions) and capital markets (identified as financial markets). The graph makes it clear that the countries of the region have shown generalized improvements with respect to the 1980s. Such improvements are especially widespread in the financial institutions sector in the dimensions of access and depth. However, there have been generalized setbacks in the efficiency dimension. As for the capital market, improvements are observed in a group of countries, among which Mexico, Brazil, Chile and Colombia stand out. When comparing current performance with the simple average of the United States and Canada (right panel), significant and generalized lags are observed, which are more pressing for the capital market.

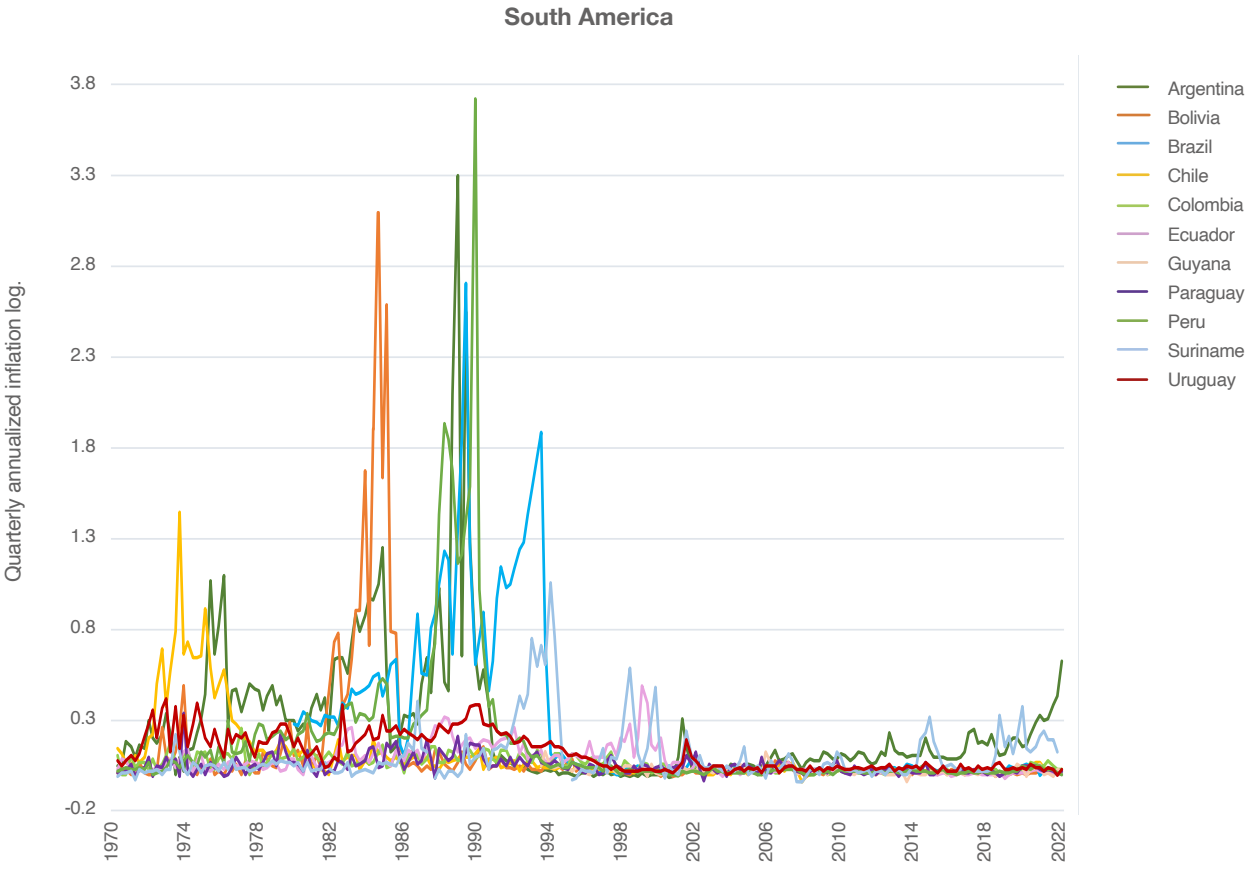
Figure 1.11
Financial Market Development Index

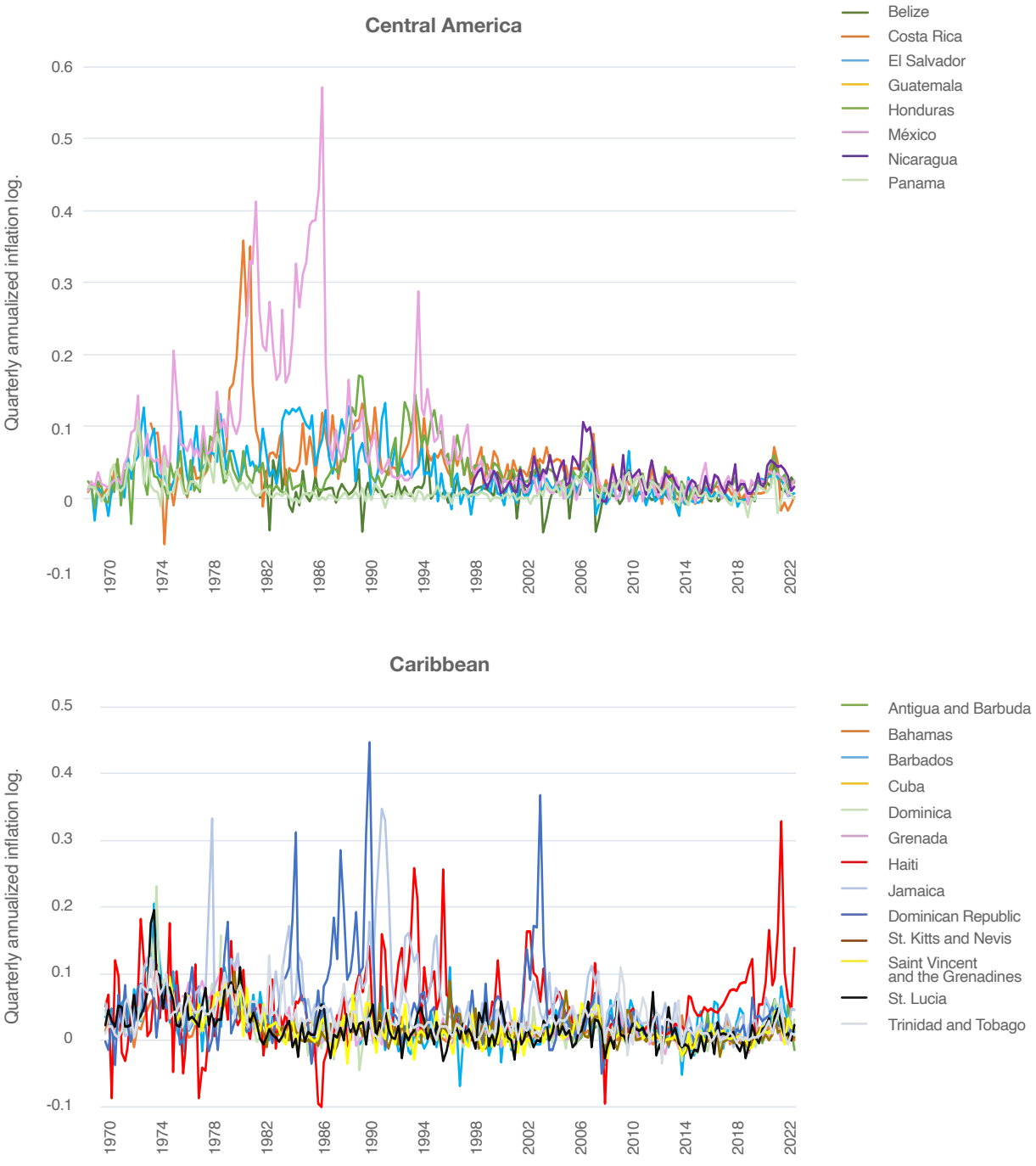
	Difference with respect to the average value of the 1980s						Difference with respect to the average value for the United States and Canada					
	Access to institutions	Depth of institutions	Institutional efficiency	Access to markets	Market depth	Market efficiency	Access to institutions	Depth of institutions	Institutional efficiency	Access to markets	Market depth	Market efficiency
Costa Rica	0.31	0.15	-0.06	-0.04	0.02	-0.05	-0.30	-0.59	-0.13	-0.63	-0.93	-0.84
El Salvador	0.09	0.21	-0.23	-0.07	0.00	-0.08	-0.53	-0.53	-0.29	-0.64	-0.95	-0.87
Guatemala	0.33	-0.04	-0.04	-0.09	-0.01	-0.09	-0.29	-0.77	-0.08	-0.65	-0.97	-0.87
Honduras	0.12	0.01	-0.14	-0.10	0.09	-0.11	-0.49	-0.71	-0.20	-0.65	-0.86	-0.87
México	0.19	0.10	-0.04	0.29	0.25	0.19	-0.42	-0.64	-0.11	-0.24	-0.70	-0.57
Nicaragua	-0.05	-0.03	-0.08	-0.13	-0.03	-0.05	-0.65	-0.76	-0.17	-0.66	-0.98	-0.87
Panama	0.30	0.08	0.08	0.50	0.22	-0.03	-0.29	-0.64	-0.01	-0.02	-0.73	-0.84
Argentina	0.16	0.02	-0.11	0.42	0.03	0.00	-0.46	-0.70	-0.20	-0.13	-0.92	-0.80
Bolivia	0.36	0.22	-0.03	-0.07	-0.03	-0.08	-0.26	-0.50	-0.12	-0.65	-0.98	-0.87
Brazil	0.50	0.35	-0.07	0.33	0.37	0.83	-0.11	-0.37	-0.16	-0.25	-0.57	0.04
Chile	0.22	0.48	0.00	0.34	0.40	0.12	-0.39	-0.24	-0.08	-0.24	-0.54	-0.67
Colombia	0.15	0.18	-0.05	0.45	0.20	0.07	-0.47	-0.56	-0.13	-0.14	-0.75	-0.73
Ecuador	0.08	0.00	-0.20	-0.07	-0.01	-0.05	-0.54	-0.74	-0.26	-0.65	-0.96	-0.84
Paraguay	-0.02	-0.04	-0.15	-0.08	-0.01	-0.02	-0.59	-0.76	-0.27	-0.63	-0.96	-0.82
Peru	0.18	0.09	-0.03	0.33	0.16	-0.02	-0.37	-0.62	-0.12	-0.22	-0.78	-0.83
Uruguay	0.21	0.09	0.01	0.05	0.03	-0.08	-0.36	-0.64	-0.12	-0.60	-0.94	-0.87
Venezuela	0.18	0.00	0.18	0.00	0.25	-0.14	-0.42	-0.76	-0.12	-0.66	-0.71	-0.84
Antigua and Barbuda	0.43	0.19	0.06	-0.11	-0.04	-0.07	-0.18	-0.54	-0.02	-0.66	-0.99	-0.87
Aruba	0.48	0.11	-0.60	-0.10	-0.03	-0.07	-0.13	-0.61	-0.68	-0.66	-0.97	-0.87
Bahamas	0.62	0.15	0.02	0.28	0.22	-0.07	0.01	-0.57	-0.06	-0.28	-0.72	-0.87
Barbados	0.13	0.51	0.00	0.28	0.26	-0.05	-0.47	-0.21	-0.09	-0.29	-0.68	-0.85
Belize	0.22	0.07	-0.09	-0.08	-0.04	-0.07	-0.39	-0.66	-0.18	-0.66	-0.98	-0.87
Dominica	0.11	0.12	0.00	-0.08	-0.04	-0.08	-0.51	-0.62	-0.07	-0.66	-0.99	-0.87
Dominican Republic	0.10	0.00	-0.14	-0.07	-0.01	-0.08	-0.52	-0.74	-0.21	-0.65	-0.96	-0.87
Grenada	0.31	0.18	-0.08	-0.10	0.18	-0.09	-0.31	-0.55	-0.13	-0.66	-0.76	-0.87
Guyana	-0.01	-0.05	-0.03	-0.11	-0.01	-0.10	-0.65	-0.78	-0.08	-0.66	-0.96	-0.87
Haiti	-0.15	-0.11	-0.04	-0.11	-0.04	-0.11	-0.78	-0.83	-0.11	-0.66	-0.99	-0.87
Jamaica	0.00	0.45	-0.12	-0.09	0.34	-0.07	-0.61	-0.26	-0.19	-0.62	-0.60	-0.82
St. Kitts and Nevis	0.45	-0.07	0.00	-0.08	-0.04	-0.03	-0.08	-0.77	-0.07	-0.66	-0.99	-0.87
St. Lucia	0.18	0.12	-0.07	0.41	0.02	-0.04	-0.42	-0.56	-0.14	-0.16	-0.92	-0.87
Saint Vincent and the Grenadines	0.15	0.03	-0.10	-0.03	-0.04	-0.05	-0.46	-0.64	-0.17	-0.66	-0.99	-0.87
Suriname	0.11	-0.05	0.03	-0.03	-0.03	-0.06	-0.49	-0.72	-0.06	-0.66	-0.97	-0.87
Trinidad y Tobago	0.08	0.31	0.04	0.05	0.17	-0.02	-0.50	-0.34	-0.08	-0.57	-0.75	-0.82

Source: IMF (2024a).

In terms of macroeconomic stability, the region has made significant progress in achieving price stability in recent decades. The 1970s and 1980s were decades of recurrent crises, characterized by accelerated price escalations and a virtual breakdown of the price system. During the 1970s, for example, Argentina reached an inflationary peak of close to 400 % in 1976, and Chile reached 600 % in 1974, followed by peaks of 3,000 % in Argentina in 1989, 7,500 % in Peru in 1990, and 2,500 % in Brazil in 1993

Figure 1.12.
Inflation evolution by country





Note: The figure shows the base 10 logarithm of annualized quarterly inflation. For ease of exposition, the maximum value of the series is truncated at 4 and the minimum at -0.1.
Sources: IMF (2024b). For Argentina, the consumer price index base provided by Cavallo and Bertolotto (2018) is used up to 2018, while for subsequent years the data provided by INDEC (2024) is used.

In general, episodes of inflationary escalation responded to a mechanics of fiscal dominance (Kehoe and Nicolini, 2022; see box 1.3). The achievements in price stability in the region respond, in part, to the introduction of legal reforms that narrowed the mandate of central banks in price stability and strengthened their autonomy. Thirteen countries in the region introduced reforms in this regard between 1990 and 1996. With some exceptions, these reforms were successful and resilient in the face of crisis episodes. Two recent unprecedented episodes—the 2008 global financial crisis and the shock associated with the Covid-19 pandemic in 2020—show that central banks in the region were able to implement countercyclical monetary policy to mitigate the impacts of the crises and were largely successful in reversing previous monetary expansions to contain inflationary pressures (Jácome and Pienknagura, 2022).

> "When the U.S. inflation rate reached 9 % and the Federal Reserve began raising interest rates quickly and sharply, the region withstood the interest rate increases admirably, which is a very different situation than in the late 1970s and early 1980s, when sharply rising international interest rates led to a general financial crisis. So that points to resilience".
>
> **Based on an interview with Carmen Reinhart**

Box 1.3
Fiscal and financial dominance

The price stability of economies may be compromised by episodes of fiscal or financial dominance.

Governments have incentives to expand the coverage or generosity of their public benefits and services to meet citizens' demands. However, fiscal expenditures require sources of financing. In the absence of the ability of Governments to resort to new taxes or debt to finance their spending, central banks may face pressure to finance it through monetary issuance. This results in a prioritization of the fiscal objective over price stability that eventually leads to inflation, a phenomenon known as fiscal dominance of monetary policy.

Similarly, financial dominance refers to prioritizing the sustainability of the financial system. Global shocks or local economic downturns can affect the solvency of financial institutions, particularly when they have not adequately managed risks and are overexposed. Central banks can mitigate the costs for affected institutions, particularly when they perceive systemic risks. However, a monetary policy that is perceived to be lax and permeable to mitigate insolvency risks by financial institutions may generate incentives for overexposure to risk and, consequently, lead to an equilibrium with accelerated credit expansion and inflation expectations.

To avoid these dynamics that compromise price stability, robust institutional mechanisms that preserve the independence of central banks to make decisions are required.

Compromised fiscal spaces

Fiscal imbalances represent a major threat to macroeconomic stability. And the region has high and growing levels of indebtedness. Indeed, 13 of the 32 countries shown in Figure 1.13 have public debt levels above 70 % of GDP. The terms of access to financing are costly and uneven across countries: the implicit rate on debt service averages 3.6 %, 4 % and 5.3 % in the Caribbean, South and Central America and Mexico, respectively, while it exceeds 5 % in eight countries in the region as a whole. Consequently, the debt burden represents high levels for both output and fiscal revenues. On the fiscal revenue side, a group of countries—Guatemala, Brazil, Barbados, Belize, Guyana, Haiti and St. Kitts and Nevis—have revenues above 30 % of GDP, similar to the OECD average (33 %) (IMF, 2024c), contrasting with their lagging levels of development, suggesting little room for relaxing fiscal restraint on the revenue side.

The analysis of the region's macroeconomic context shows that, although significant progress has been made, structural challenges persist and must be addressed comprehensively. The fiscal deterioration observed in several countries, partly as a result of Covid-19 response policies, represents a real threat to the institutional framework that has made it possible to achieve a certain degree of stability.

> "Fiscal issues have become much more acute since Covid-19 because the collapse of production that we saw globally, the displacement of labor markets, meant the collapse of revenues and more government spending to support the economy".
>
> **Based on an interview with Carmen Reinhart**

The current context demands that the countries of the region undertake fiscal consolidation processes to face new public policy challenges. The growing pressure to address social, environmental and economic development issues can only be handled with well-managed fiscal resources. This implies reducing deficits and controlling public debt, raising fiscal revenues in countries where there are gaps compared to developed economies, and improving efficiency in public spending so that governments can respond to emerging needs without jeopardizing overall economic stability.

Finally, progress in deepening financial markets may offer a complementary path to stimulate growth and economic resilience. As gaps in financial development close under sound regulatory environments, the region could better channel internal and external resources to productive activities. An efficient and inclusive financial system, which facilitates access to credit and capital markets, can boost growth and enable broader and more equitable sharing of its benefits.

Figure 1.13
Fiscal dashboard

		Gross debt	Revenue	Primary balance	Consolidated balance sheet	Consolidated balance sheet (10 years)	Debt service	Implicit rate
El Salvador	ACE	75.05	25.77	2.15	-2.44	-3.97	17.82	6.1
Belize	ACE	64.14	21.84	0.90	-0.75	-5.21	7.55	2.6
Costa Rica	ACE	63.85	16.59	2.10	-2.84	-5.53	29.76	7.7
Mexico	ACE	56.03	24.20	1.03	-4.33	-3.22	22.13	9.6
Panama	ACE	54.89	17.35	-2.21	-3.93	-3.86	9.93	3.1
Honduras	ACE	49.09	25.47	3.86	1.65	-1.35	8.67	4.5
Nicaragua	ACE	43.94	29.28	2.11	0.85	-1.34	4.33	2.9
Guatemala	ACE	29.59	12.66	-0.04	-1.71	-2.01	13.17	5.6
Venezuela	ASU	157.81	5.96	-5.85	-6.02	0.00	2.98	0.1
Suriname	ASU	120.08	27.78	1.07	-3.13	-7.13	15.11	3.5
Brazil	ASU	85.33	43.28	4.96	-3.10	-6.12	18.64	9.5
Argentina	ASU	84.68	33.43	-1.80	-3.85	-4.99	6.11	2.4
Bolivia	ASU	80.01	28.38	-5.50	-7.12	-7.13	5.72	2.0
Uruguay	ASU	61.00	27.24	-0.52	-2.52	-2.64	7.36	3.3
Colombia	ASU	60.35	27.86	-1.92	-6.20	-4.29	15.37	7.1
Ecuador	ASU	57.30	39.39	1.70	0.05	-5.26	4.19	2.9
Paraguay	ASU	40.76	19.86	-1.95	-3.77	-2.54	9.17	4.5
Chile	ASU	37.98	28.13	2.37	1.36	-2.78	3.57	2.6
Peru	ASU	31.49	22.05	0.03	-1.40	-2.37	6.51	4.6
Guyana	ASU	26.05	15.37	-4.88	-5.18	-4.32	1.92	1.1
Barbados	CAR	122.51	29.67	2.55	-2.05	-4.29	15.50	3.75
Dominica	CAR	98.53	43.15	-0.37	-3.86	-7.92	8.09	3.54
Bahamas	CAR	88.85	21.09	-1.34	-5.80	-5.16	21.15	5.02
Jamaica	CAR	87.96	30.08	5.78	0.28	0.03	18.29	6.25
Saint Vincent and the Grenadines	CAR	87.93	27.61	-7.01	-9.39	0.00	8.62	2.71
Antigua and Barbuda	CAR	86.24	20.16	-1.15	-3.73	-7.96	12.77	2.98
St. Lucia	CAR	85.27	21.82	1.47	-1.45	-9.05	13.41	3.43
Grenada	CAR	63.57	33.16	2.57	0.94	0.10	4.93	2.57
St. Kitts and Nevis	CAR	61.13	51.96	-2.01	-3.25	7.55	2.39	2.03
Dominican Republic	CAR	59.55	15.27	-0.40	-3.25	-3.39	18.66	4.78
Trinidad and Tobago	CAR	50.96	27.79	2.74	0.33	-6.09	8.68	4.73
Haití	CAR	25.01	6.24	-1.75	-2.05	-1.81	4.87	1.22

Source: IMF (2024c, 2024d).

Natural resource wealth

Latin America and the Caribbean is an exuberant region. With only 8 % of the global population, it has 16 % of the territory, 15 % of the agricultural land, 23 % of the forest cover, 34 % of the primary forest cover, 31 % of the fishing areas and 32 % of the drinking water sources. In terms of energy, it has 19 % of oil reserves and almost 12 % of the global energy supply from renewable sources, with a very important potential in solar and wind generation. It is also rich in minerals, including those critical for the green transition. For example, 47 % of lithium reserves; 36 % of copper reserves and 34.5 % of silver reserves, to name a few. It is also a highly biodiverse region, with 6 of the 17 countries defined as megadiverse (Venezuela, Brazil, Colombia, Ecuador, Mexico and Peru)[8].

Table 1.1
Physical endowment and natural resources in Latin America

	Percentage of global reserves	Percentage of global production
Minerals		
Lithium	47 %	36.7 %
Copper	36.6 %	37.1 %
Molybdenum	35 %	36.5 %
Silver	34.5 %	50.8 %
Graphite	23.8 %	
Tin	20.6 %	20.7 %
Iron	18.8 %	18.2 %
Rare earths	16.7 %	
Nickel	15.7 %	
Zinc	13.9 %	20.9 %
Lead		13.9 %
Gold		13 %
Bauxite and aluminum		9.8 %
Energy sources		
Oil	19 %	8.7 %
Natural gas (conventional only)	4.3 %	4.5 %

8 VIt is worth noting that natural wealth tends to be concentrated within the region in specific countries. For example, lithium resources are heavily concentrated in Chile, Argentina and Bolivia; fossil resources in Venezuela, Ecuador, and Trinidad and Tobago; and primary forests in Brazil, Colombia, Peru and Bolivia.

	Percentage of global reserves	Percentage of global production
Land and soil		
Earth	16 %	
Agricultural land	15 %	
Arable land	11 %	
Earth under civilization	11 %	
Crop production		19 %
Livestock of hens		15 %
Cattle		28 %
Swine herd		10 %
Food production		18 %
Forests		
Forest cover	23 %	
Primary forest cover	34 %	
Forest biomass carbon	36 %	
Lumber production		12 %
Production of printing and writing paper		4 %
Biodiversity		
Megadiversity	6 of the 17 megadiverse countries in the world (Bolivarian Republic of Venezuela, Brazil, Colombia, Ecuador, Mexico and Peru).	Fishing area
Terrestrial ecoregions	24 %	
Marine ecoregions	18 %	
Ecosystem capacity		40 % of the capacity of ecosystems to produce natural goods and assimilate the by-products of their consumption, which gives the region's inhabitants a comparative advantage in natural resources three higher than the world average.
Oceans		
Fishing area	31 %	
Territorial waters		22 % of the surface of territorial waters is protected (8 % in the world).
Fish production		7 %
Water		
Renewable freshwater resources	32 %	
Households with safely managed drinking water services		75.4 %

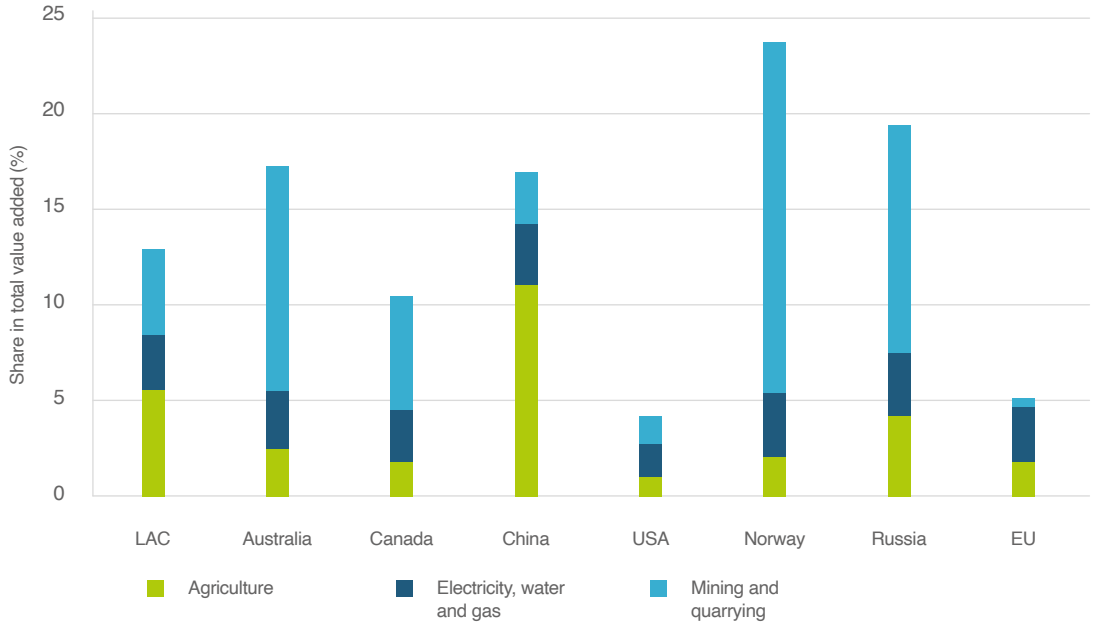
	Percentage of global reserves	Percentage of global production
Households with safely managed sanitation services		34.0 %
Value added per cubic meter of water abstracted		USD 12 value added per cubic meter of water withdrawn (SDG indicator 6.4.1) USD 19 globally).
Important sites for freshwater biodiversity that are protected		45 % (40 % worldwide)

Fuente: CEPAL (2023b).

This natural capital has been and will continue to be a significant source of wealth. Therefore, the importance of economic production and extraction activities linked to natural resources is not surprising. The extractive sectors, agriculture and the provision of electricity, water and gas, represent more than 10 % of the regional GDP, well above the value for the countries of the European Union and the United States. Interestingly, in developed countries such as Australia, Canada and Norway, the contribution of these sectors to the economy is outstanding, as it is in the region. This shows that an economic structure with a high participation of sectors based on natural capital is not incompatible with high economic and social development. The region can, therefore, leverage its development on the significant stock of natural capital it possesses.

> "The great point of contact between the economic development agenda, social inequality and environmental protection today is precisely to find ways to make better use of natural resources, internalizing that we need to take into account the costs of our decisions as a society".
>
> **Based on an interview with Juliano Assunção**

Figure 1.14
Importance of economic sectors associated with natural endowment



Note: The share of each sector in the total value added of the country or region is represented. In the case of regions, the values represent the shares considering the sum of value added (total and sectoral) among the countries that make up each region. The "agriculture" sector includes agriculture, forestry and fishing. The "electricity, gas and water" sector includes electricity, gas, steam and air conditioning supply, and water supply, sewerage, waste management and remediation activities. Finally, the "extractive" sector includes mining and quarrying.
Source: IEA (2023b).

The impact of natural resources is also evident in other variables: for example, in fiscal revenues. In the case of hydrocarbon extraction, it exceeds 4 % of GDP in countries such as Ecuador, Guyana, Trinidad and Tobago, and Bolivia. Fiscal revenues associated with minerals represent 3 % and 1.5 % of GDP in Chile and Peru, respectively. Fossil resources also represent an important source of foreign exchange. In Colombia, Bolivia, Trinidad and Tobago, and Ecuador, these exports exceed 20 % of total foreign sales of goods and services.

A future of opportunities and challenges

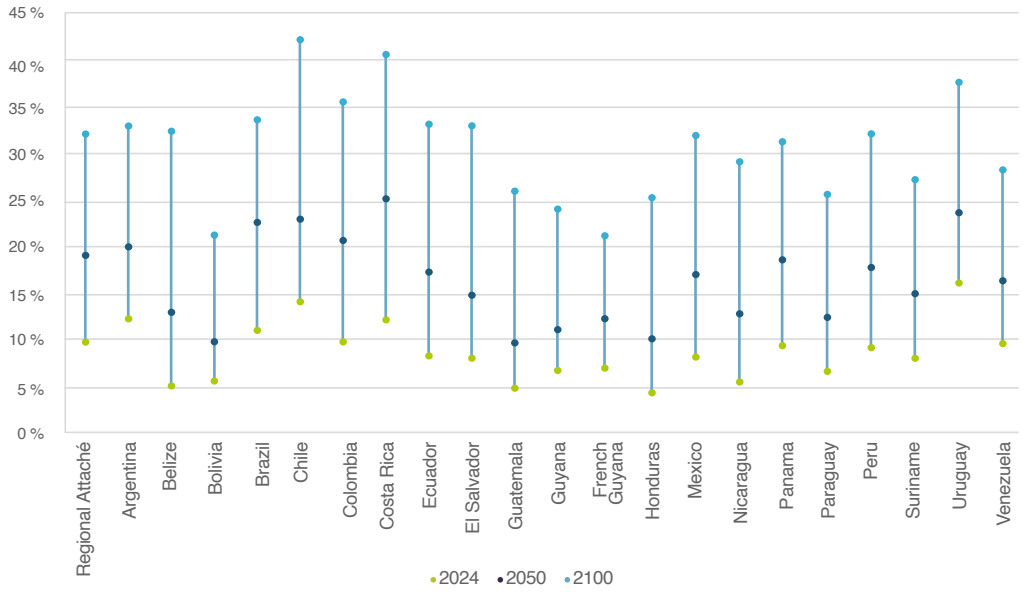
Three transitions will significantly condition the development of Latin America and the Caribbean in the coming decades: demographic, green and digital. Along with these transitions, recent geopolitical factors such as the trade war between the United States and China, or global armed conflicts, may reconfigure global value chains with implications for the region (Estevadeordal et al., 2024).

The demographic transition: a rapidly aging population

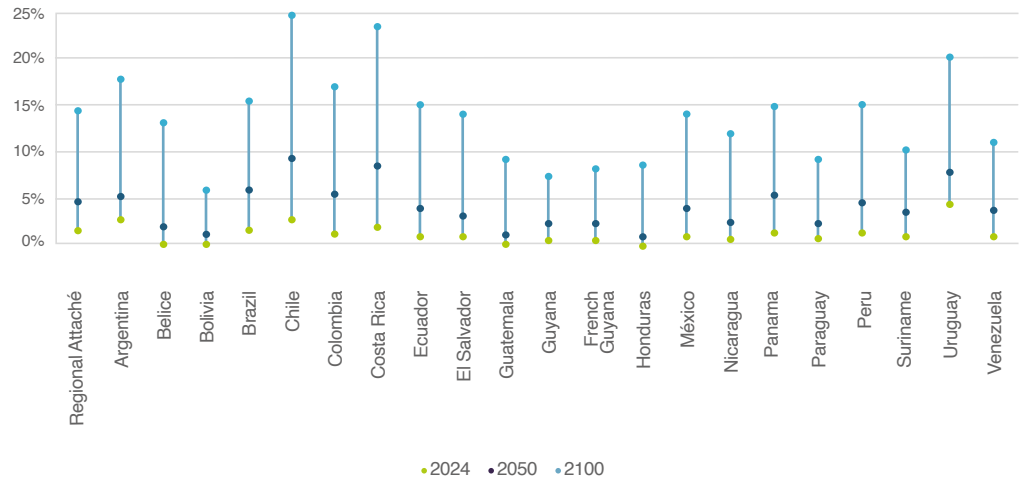
Latin America and the Caribbean still has a relatively young population. By 2024, the fraction of adults over 65 years of age averages 9.76 % in Latin America and just over 11 % in the Caribbean countries. In contrast, in OECD countries it is around 21 %.

Figure 1.15
Proportion of the aging population, current and future, by countries

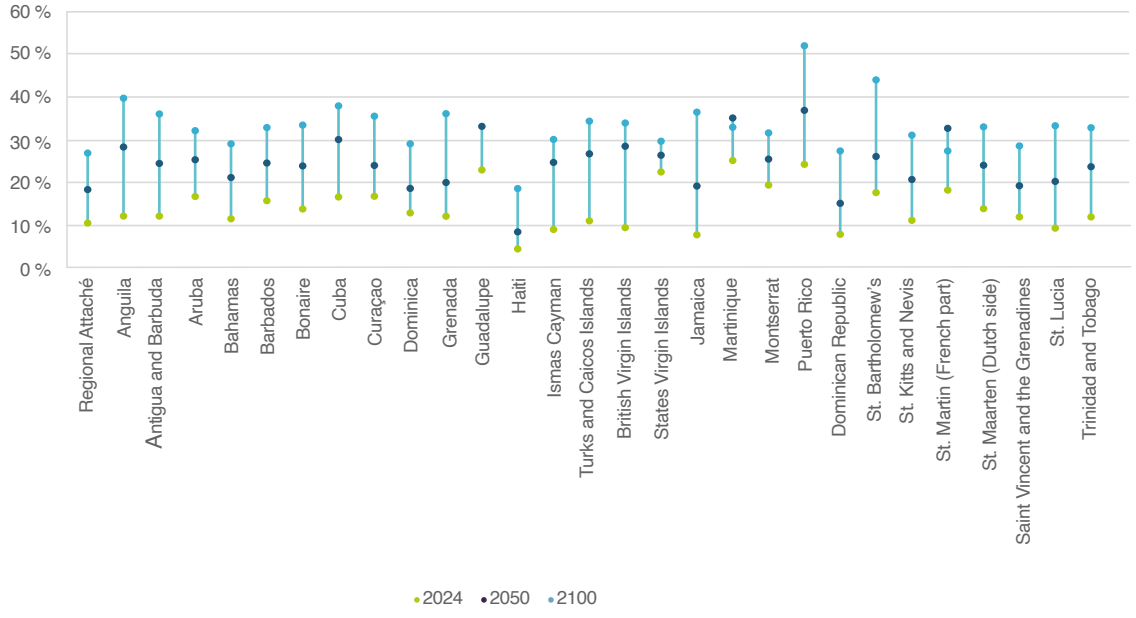
A. Proportion of the population aged 65 years or older in Latin America



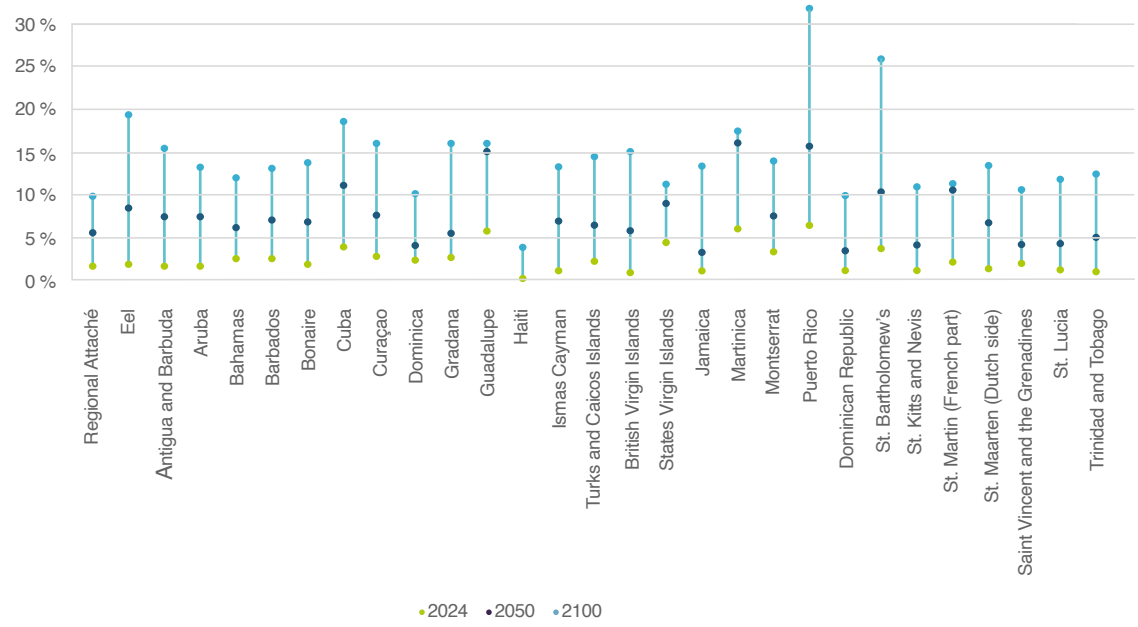
B. Proportion of the population aged 80 years or older in Latin America



C. Proportion of the population aged 65 years or older in the Caribbean



D. Proportion of the population aged 80 years or older in the Caribbean



Source: WPP (2024).

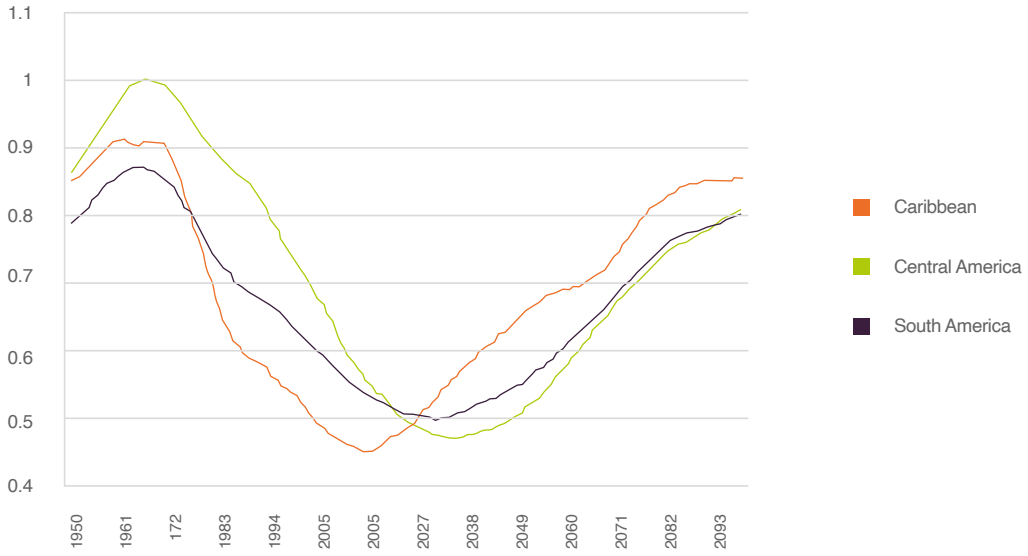
However, in the coming decades, the region will undergo a rapid and inexorable aging process. By 2050, the over-65s will account for 19 % of the population in Latin America and 18 % in the Caribbean. It is worth noting that while it took countries such as France and Sweden 115 years and 85 years, respectively, to experience an increase in their over-65 population, from 7 % to 14 % (Aranco et al., 2018), this phenomenon will occur in the region in just 30 years.

During the demographic transition process, the dependency ratio[9] usually follows a U-shaped behavior, where the decreasing phase is identified with the first demographic bonus[10]. On average, the region has already reached its minimum dependency ratio, in other words, it has already passed its first demographic bonus. However, countries such as Bolivia and Paraguay will still experience some additional years with a declining dependency ratio.

9 This indicator is constructed as the quotient between the fraction of people over 65 and under 15 years of age and the fraction of people between 15 and 65 years of age. It inversely reflects the relative importance of the labor force.

10 EThis demographic bonus is understood as the potential growth in per capita consumption resulting from the change in the age structure of the population, given the productivity of labor

Figure 1.16
Past evolution and future projections of the dependency ratio



Source: WPP (2024).

The dynamics of the population age structure and dependency ratio respond to life expectancy and fertility rate[11]. Both factors have moved in the same direction as in the developed world. In 1950, life expectancy at birth for a Latin American citizen was only 50 years, and for a person born in the OECD countries it was up to 65 years. Today, the numbers are 76 and 81, respectively. In the last 70 years, life expectancy has increased by more than 25 years for Latin Americans and Caribbean citizens. It is expected that these values will continue to rise towards the end of the century, reaching 87 years for Latin Americans, very close to the 91 years of OECD citizens. On the other hand, fertility has fallen markedly during this period. Between 1950 and 2024, Latin America's fertility rate fell from more than six to around two live births per woman of childbearing age. By the end of the century, it is expected to continue falling and converge to OECD levels of around 1.7 births per woman, which is below replacement fertility.

11 Migration is a third phenomenon that can change the age structure of the population, given that migrants tend to be, in greater proportion, people of working age. The capacity of migration to affect the age structure depends on how important the migratory flow is as a proportion of the population. In this metric, countries such as El Salvador, Uruguay, Paraguay and Venezuela stand out. The data presented in the graphs on the proportion of older adults and the dependency ratio incorporate the effects of expected migration. Migrations play a quantitatively moderate role in the accelerated aging phenomenon highlighted in this section (see Álvarez et al., 2020).

The green transition: climate change and the growing concern for environmental sustainability

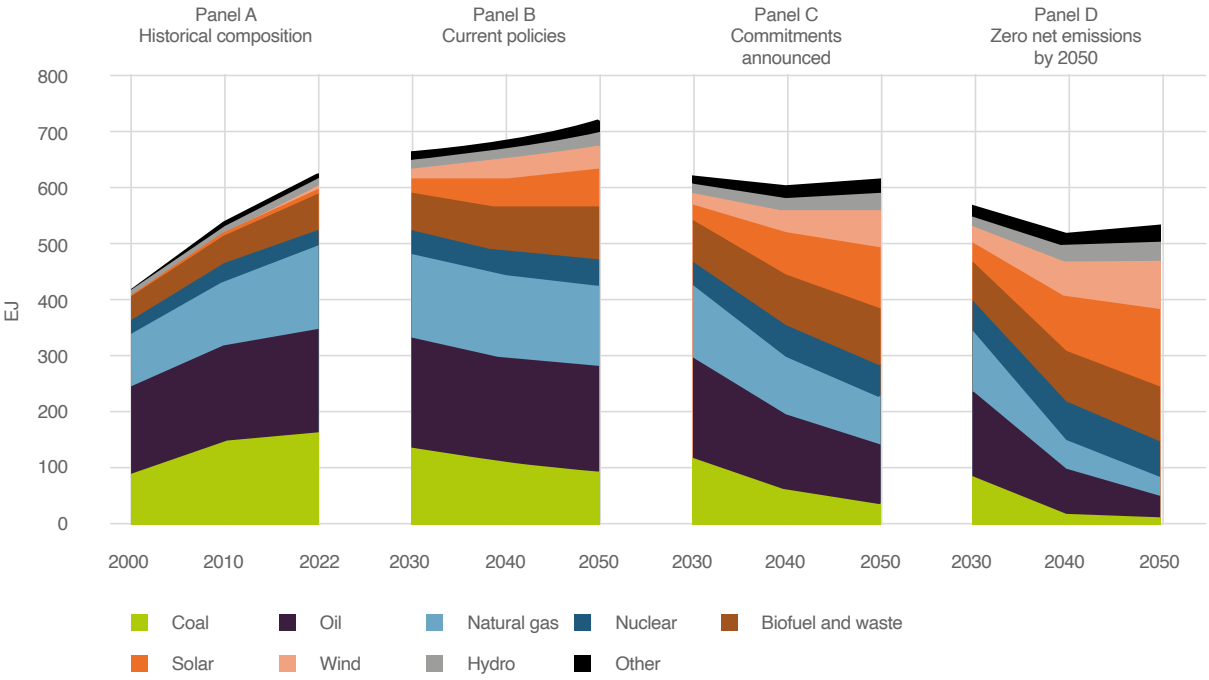
In the last 70 years, greenhouse gas (GHG) emissions have increased more than sixfold. Their increased concentration in the atmosphere has pushed the global temperature of the planet to more than one degree Celsius above the temperature of the pre-industrial era. The effects of this global warming are evident, with an increase in the frequency and intensity of extreme weather events (see chapter 4).

> "We have seen how climate change has wreaked havoc around the world, but especially in small island developing states. The hurricanes we are experiencing are bigger, fiercer and causing more damage than we could ever comprehend".
>
> **Based on an interview with Karen-Mae Hill**

The sustainability of the planet demands a radical change in the production model. This change must translate into a considerable reduction in GHG emissions and greater protection of natural capital. Fortunately, there seems to be a significant global consensus on this need (see chapter 4).

When facing climate change, this commitment requires, in the long term, a drastic reduction in the use of fossil fuels worldwide and their replacement by clean energy sources such as solar, wind and green hydrogen. Indeed, by 2022, coal, oil and gas accounted for 80 % of energy inputs. Under the IEA's zero net emissions scenario, this contribution will drop to 17 % by 2050. Solar and wind sources, which accounted for about 2 % in 2022, will account for 42 % of energy supply by 2050 under the same scenario.

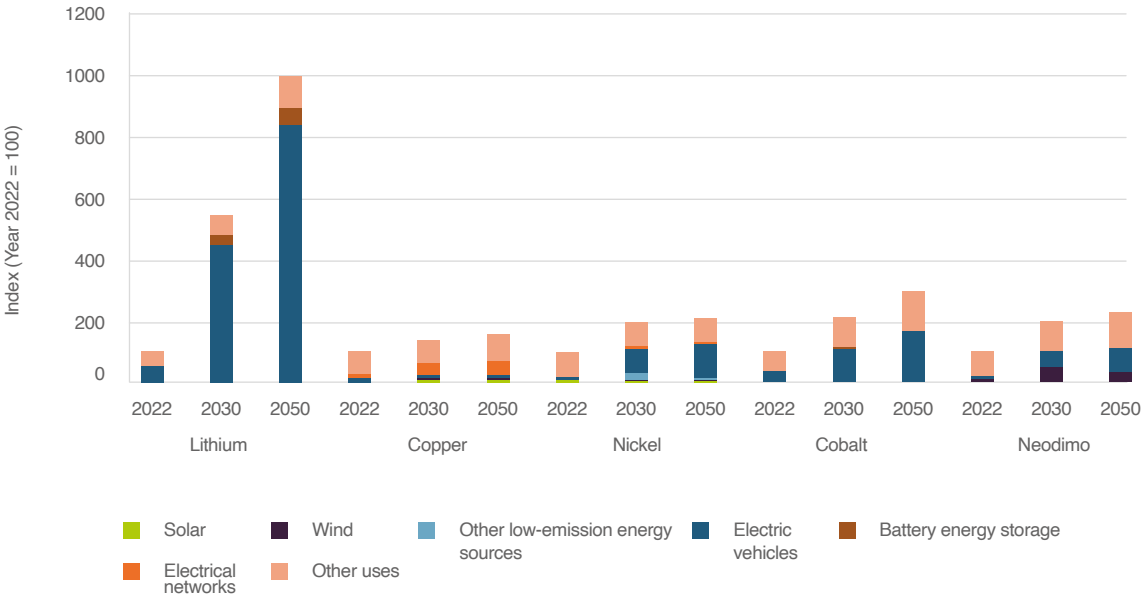
Figure 1.17
Global energy supply



Nota: The current policies scenario shows the trajectory that these policies imply. The announced commitments scenario assumes that all stated government targets are met in full and on schedule, including their long-term zero emissions and energy access targets. The 2050 net-zero emissions scenario charts the path to achieving stabilization of global temperature rise at 1.5 °C and universal access to electricity and modern energy systems by 2030. The labels indicate the share relative to the total in the year of the decade change. Others include concentrating solar thermal power, geothermal energy, marine energy, hydrogen and ammonia.
Source: Created by authors based on IEA (2021, 2023c).

This energy transformation is also associated with a growing demand for certain minerals that are essential for clean energy technologies. Indeed, under the CEN scenario, it is estimated that demand for lithium will be more than 10 times higher than it is today by 2050. The demand for other minerals will also grow significantly: cobalt demand will increase by a factor of three, nickel by more than two, and copper by more than 1.5 times.

Figure 1.18
Demand for critical minerals in the zero net emissions scenario



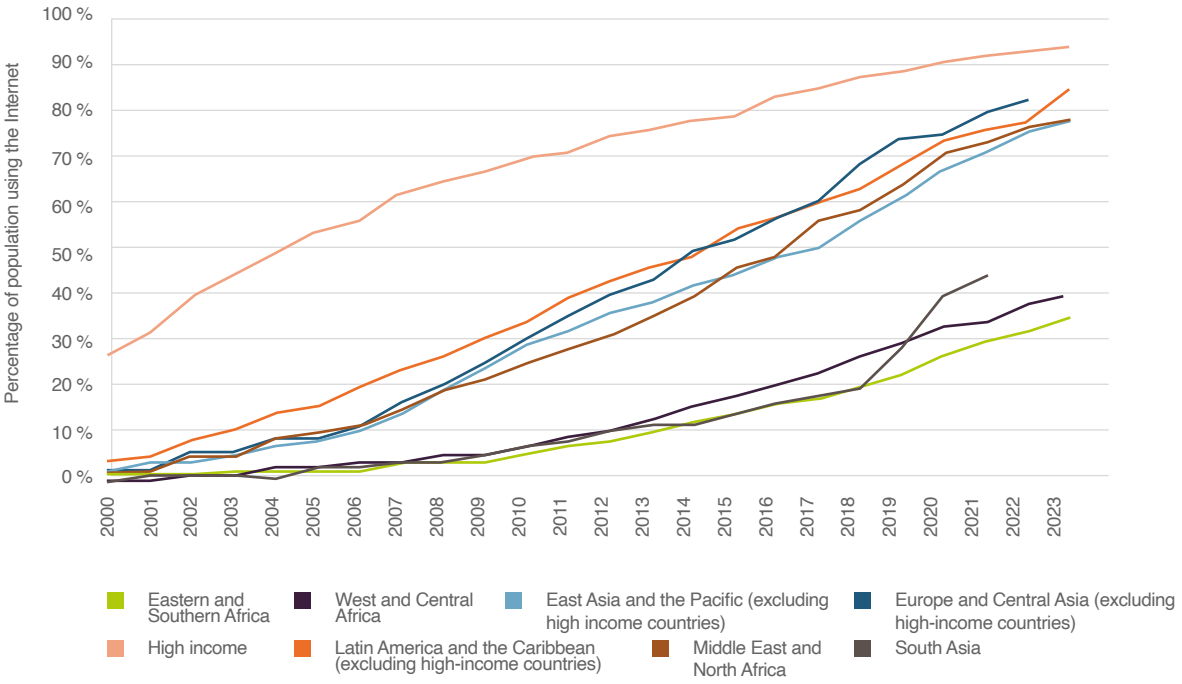
Source: Created by authors based on IEA (2023a).

The digital transition

Undoubtedly, digital technologies[12] eare producing profound transformations in society. The digitalization of the economy has advanced formidably with the massive penetration of computers and the use of the Internet and other information and communication technologies (ICTs). By 2022, the number of internet users will reach 5,300 million, two-thirds of the global population (World Bank, 2024c).

12 Digital technologies - that is, the tools, systems and artifacts that make it possible to generate, store, transmit and process information in digital format - include a broad spectrum of tools. A first generation includes computers and their components, and later the Internet and ICTs. Both technologies have been transformative. The same is expected of the "new" digital technologies, among which we can cite the internet of things, robotics, artificial intelligence and *machine learning, big data, cloud computing,* digital platforms, *blockchain* and 3D printing.

Figure 1.19.
Percentage of the population using the internet



Sources: World Bank (2024c) and ITU (2024).

However, this growth has been uneven. There are still gaps in access between developed and developing economies. By 2022, in Latin America and the Caribbean, 78 % of the population had access to the Internet, a value 13 percentage points lower than in the developed world. In addition, there are large differences within countries: between rural and urban areas, between age groups and between genders. In the productive sphere, there are gaps between sectors and companies of different sizes.

For example, according to the Report on Digital Trends and Progress 2023 (World Bank, 2024a), upper-middle-income countries have gaps in urban and rural internet use of 22 percentage points; the gender gap is 5 percentage points, and between adults and young people it is 19 percentage points. For lower-middle-

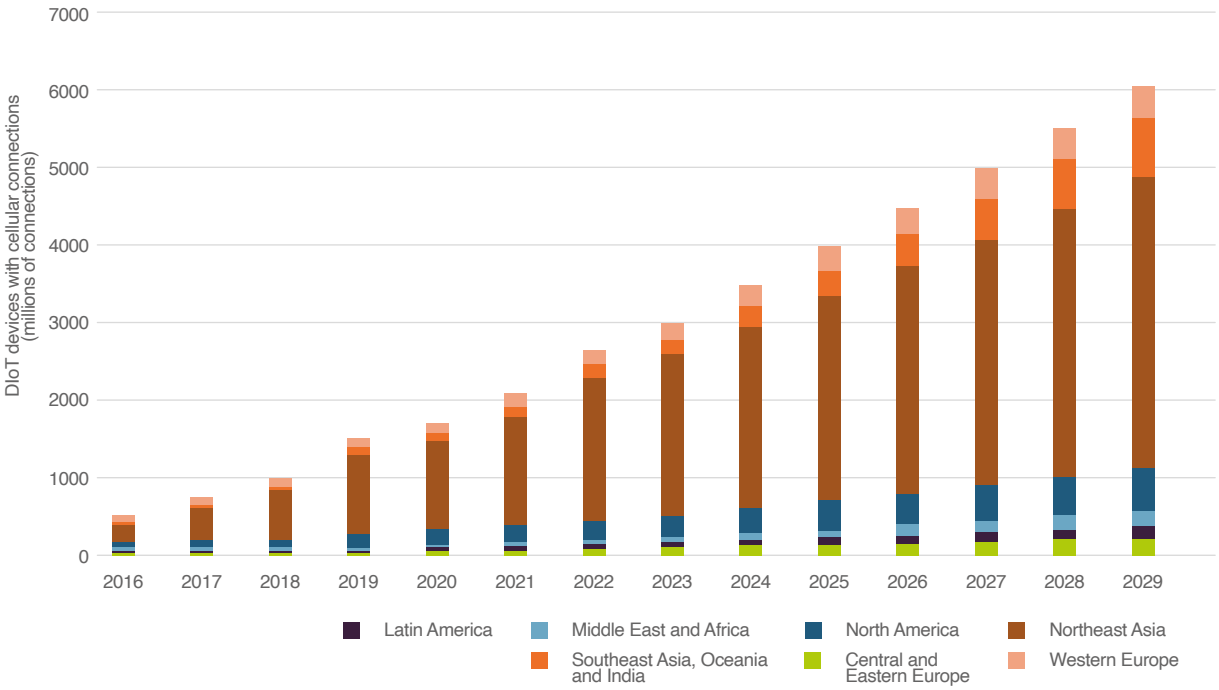
income countries, the values are 34, 15 and 13, respectively. The report also points out, based on the World Bank's *Pulse of Business* survey, that by 2022, globally, the fraction of microenterprises (between 5 and 19 workers) that had adopted a digital solution was around 30 %. Among large companies (more than 100 workers) it was almost 65 %.

Despite the progress made in the last three decades, the digitalization phenomenon is still in its early stages. Significant penetration of emerging or advanced digital technologies such as the internet of things (Figure 1.20) and artificial intelligence is anticipated. For example, the volume of global data traffic is expected to grow by a factor of 2.5 by 2029, largely associated with the expansion of fifth-generation technology. Projections for adoption of this technology point to growth in coverage from 45 % in 2023 to around 85 % by the end of the decade (UNCTAD, 2024).

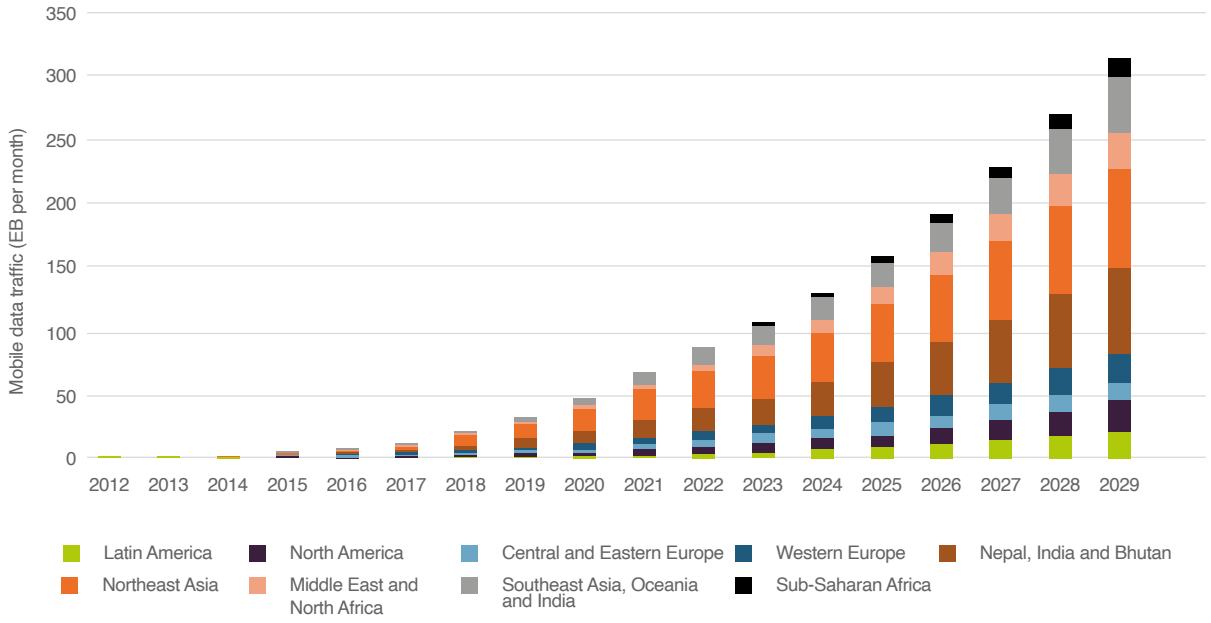
The Internet of Things (IoT), a term that refers to the network of devices equipped with sensors and actuators connected to the network to collect and share data in real time, is also expected to grow significantly. This technology facilitates process automation, remote monitoring, resource optimization and the creation of intelligent systems that improve efficiency and convenience in various fields, such as smart homes and cities, healthcare, agriculture and industry, among others.

Figure 1.20.
Use of IoT

A. IOT devices with cellular connections



B. Mobile data traffic



Sources: UNCTAD (2024) and Ericsson (2024).

It is estimated that around 39 billion connections will be IoT-related by 2029, compared to around 16 billion existing connections in 2023. The enterprise segment will account for more than 60 % of these connections (UNCTAD, 2024).

The automation of production processes through the use of robots is another future prospect. According to the International Federation of Robotics (2018), global sales of industrial robots doubled between 2013 and 2017, and it is expected that the trend will continue in the future.

Business models are also being transformed by improvements in internet quality through reduced latency between users and data centers, and lower data storage costs, which facilitates cloud computing. This reduces the need for in-house technology experts and offers flexibility for scalability, qualities that are especially important for SMEs and highly relevant in Latin America and the Caribbean.

Between 2016 and 2021, cloud traffic multiplied by a factor of 6, mainly explained by the dynamics in Asia-Pacific and North America. Latin America represents a very small fraction of the global share, close to 2.5 % (UNCTAD, 2019).

Finally, one of the most transformative technologies will be artificial intelligence (AI). According to estimates, global investment in private AI companies has multiplied by a factor of more than 4 between 2015 and 2019. The United States has the largest market, accounting for more than half of such investment (UNCTAD, Digital Economy Report, 2021).

The capacity of AI algorithms has evolved dramatically over time. The parameters used in models (a measure of complexity) have grown exponentially, from just 255 in 1955 to 1.6 trillion in 2022. Widespread adoption of this technology can drive accelerated growth and efficiency, and offer opportunities for developing countries, especially for its applications in the education, transportation, and sustainability sectors, among others (World Bank, 2024a).

Implications for development

These trends will undoubtedly have a significant impact on the sustainable development of the countries in the region.

Fiscal scope and State capacities

The accelerated aging of the population will generate a significant growth in the demand for health and elderly care services, while a greater number of people will attain a pension. Both forces will impact fiscal accounts. Estimates carried out in the RED 2020 (Álvarez et al., 2020) indicate that, if the pension and health systems continue along the same lines, the fiscal deficits of both systems will increase by almost four points of GDP on average for the region, solely as a result of aging. To this must be added the expenditures associated with closing the gaps in coverage and quality.

Decarbonization would also have significant fiscal impacts. By 2021, for example, fiscal revenues from the hydrocarbon industry were more than 2.5 % of GDP for Latin America and the Caribbean. However, for some countries such as Trinidad and Tobago, Guyana and Ecuador, the values exceeded 4 % of GDP. The decreasing global prevalence of fossil fuels associated with decarbonization will entail significant losses in these sources of income. On the other hand, mitigating and adapting to climate change in the coming years will require significant fiscal outlays (see chapter 4). The search for new sources of tax revenue, such as environmental taxes or emerging activities such as the production of critical minerals for the energy transition, is a key aspect of providing the treasury with revenue.

The digitalization of the State, on the other hand, can increase collection capacities and the efficiency of public spending with a view to addressing the fiscal deterioration of these trends. There is evidence that the digitalization and automation of sales and tax processes facilitates the identification of the tax base, improves tax payment monitoring and compliance, and reduces the transactional costs of paying taxes. The same evidence points to the incorporation of digital technologies improving public service delivery through at least three channels: enabling new ways of service delivery (e.g., e-learning), improving program targeting, and finally, improving transparency, accountability, and reducing corruption (Nayyar et al., 2024). For example, Laajaj et al. (2017) show how a reform that automated the import declaration procedure in Colombia reduced reported cases of corruption.

> "Technology is going to offer us some tools that we do not know about, that we have not fully adopted in our countries, but that are going to be fundamental to improve the efficiency of the State, to improve tax collection. These technologies are really going to be very useful in giving us a great qualitative leap in the way the State operates".
>
> **Based on an interview with Mauricio Cárdenas**

> "There are demands to spend more on climate transition, both mitigation and adaptation. There are demands for social needs. There are demands for an aging population. (...) None of that is going to go away any time soon. Governments have to prioritize addressing these demands with an eye toward having a high impact, because dealing with all these demands will drain fiscal resources very quickly".
>
> **Based on an interview with Carmen Reinhart**

> "Both pensions and public health in the region are increasingly affected by the aging of the population that is taking place in the region at an accelerated pace and, therefore, we will need important redesigns of our public health systems that will have to attend to a different demography, with different health problems, and this will possibly require important fiscal resources".
>
> **Based on an interview with Augusto de la Torre**

> "People are not living the quality and length of life that they should be living in the Caribbean. And that is a huge challenge for our health systems, for our social capital, for human policy development, and we must do something about it as an urgent priority for the Caribbean..".
>
> **Based on an interview with Karen-Mae Hill**

Economic growth

These trends would also have repercussions in terms of economic growth, which, in turn, has an impact on tax collection potential. On the demographic front, the loss of the first demographic bonus makes productivity gains essential as a source of prosperity. Fortunately, the expectation of living longer could encourage greater private savings to finance a longer period of retirement. Properly channeled, these savings could boost economic growth (this channel is associated with a "second demographic bonus").

The green transition, although challenging for hydrocarbon-rich countries, offers productive development opportunities for the region by virtue of its wealth of natural capital. Certainly, the fossil fuel industry represents a driving force for many economies in the region[13], and with decarbonization, it will lose its traction. However, the sectors associated with minerals that serve as inputs for clean technologies will gain relevance.

Latin America and the Caribbean has two of the main copper producers: Chile and Peru. The region also has a very significant share of lithium reserves. One of the world's main reserves of this mineral is located on the border between Argentina, Bolivia and Chile, a region known as the lithium triangle. With regard to nickel, the region has a significant share of world reserves (17 %), although production is small, accounting for less than 5 % of the world total. This offers it the opportunity to join the clean energy VC.

Given the growing concern for the environment, access to clean energy could be a determining factor in the location of *powershoring* companies seeking to reduce their carbon footprint. This would facilitate their access to consumer markets in developed countries. Historically, the region has had a clean electricity matrix. Today, 57 % comes from renewable sources compared to the global average of 37 %. And although it is true that this advantage comes mainly from its excellent water potential—which still remains to be exploited—it is also known that the region has an excellent solar and wind potential (Allub et al., 2024). This potential is attractive for companies, especially in energy-intensive sectors, and would also allow the development of an industry for the production and export of clean fuels such as green H2.

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13 In Latin America and the Caribbean (LAC), the energy sectors as a whole contribute approximately 4.6 % of value added (VA); in the countries of the Organization for Economic Cooperation and Development (OECD), they provide less than 2.5 %. If electricity is removed, fossil-based energy sectors account for 2.8 % of VA in LAC and about 1 % in the OECD (Allub et al., 2024).

"We must begin by saying that Latin America and the Caribbean is in a privileged position in the world with respect to electric energy and, above all, to clean electric energy from renewable sources. We have this great asset, and we should take advantage of it because we are capable. We could offer products from agriculture and industry with a low carbon footprint because our electric energy is clean, but we must decarbonize even more..".

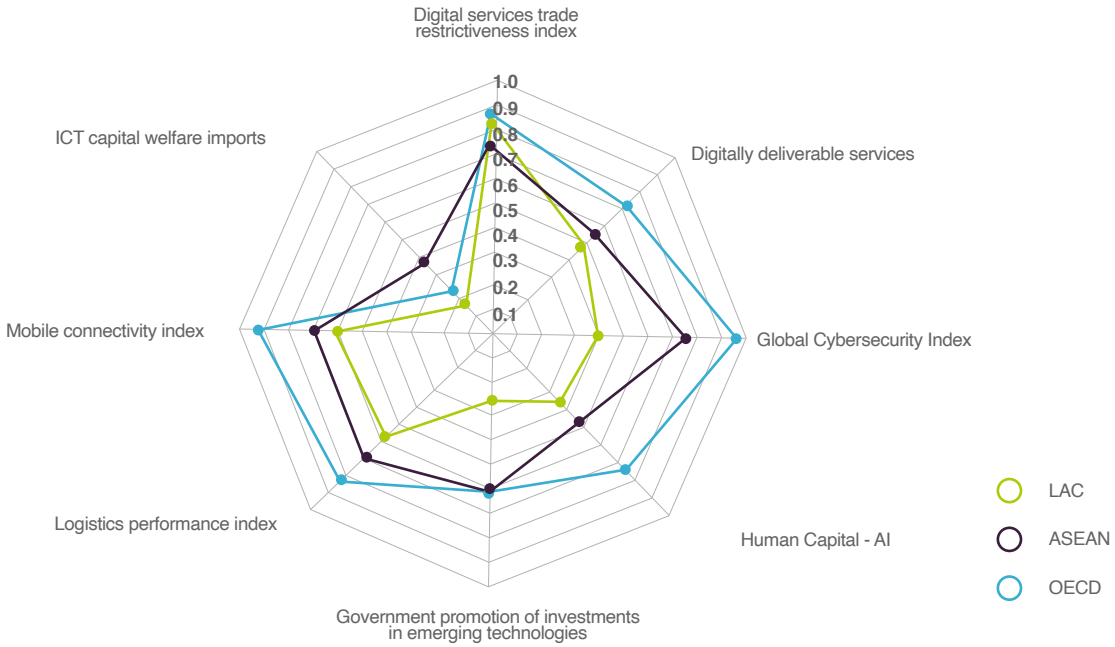
Based on an interview with Mauricio Cárdenas

Digital transformation has been and will continue to be an important driver of growth globally. In developing countries, technological *leapfrogging* will allow them to close their income gap with respect to developed countries (see chapter 5). Digitalization increases production and productivity by expanding markets and improving the quality of supply-demand matches; it also improves the efficiency of business processes and boosts the accumulation of intangible capital (Nayyar et al., 2024). Digitalization, and in particular AI, can have a significant impact on the economy through new discoveries and inventions, reshaping the nature of the innovation, research and development process (Cockburn et al., 2019). Finally, digital transformation can promote a reconfiguration of global value chains. On the one hand, automation may reduce the advantages of access to cheap labor; on the other hand, new digital technologies will reduce the costs of coordination, monitoring and trade, promoting the decentralization of production and the shaping of value chains (Estevadeordal et al., 2024).

To take advantage of the growth opportunities presented by digital transformation, the region must be prepared. Estevadeordal et al. (2024) propose eight indicators to assess readiness[14]. The data show that Latin America and the Caribbean lags considerably behind the OECD in multiple dimensions. These gaps are particularly wide in the importance of trade in digitally deliverable services and human capital readiness, as well as in indicators associated with policy frameworks: cybersecurity and government promotion of investment in emerging technologies. Likewise, the results of the logistics performance and mobile connectivity variables reflect persistent infrastructure and logistics challenges, which limit opportunities to take advantage of the trade facilitation potential of digital technology.

14 The work in question is part of a set of seven research papers, the result of cooperation between CAF and Georgetown University's Institute of the Americas, to explore opportunities for insertion into global value chains for the countries of the region.

Figure 1.21
Preparedness to take advantage of the growth opportunities offered by digital transformation



Source: Created by authors based on Estevadeordal et al. (2024).

Labor market, inequality and inclusion

Demographic changes impact labor supply. Increased life expectancy, for example, can extend people's working lives. In turn, a reduction in fertility favors an increase in women's labor participation and greater investment in human capital per offspring.

A major concern is the impact these trends may have on employment. The green transformation implies that some sectors will shrink and others will expand. This reallocation is expected to be intense, as estimates suggest that at least 70 % of the labor supply is in non-green jobs and thus at risk of shrinking as economies decarbonize (Allub et al., 2024). This reallocation is complicated by the fact that green jobs demand different skills than non-green jobs.

A similar phenomenon occurs with digital transformation and, in particular, with the automation of production processes. A first question is whether automation reduces or increases the demand for jobs. First, the automation of certain tasks and processes usually carried out by people would reduce the demand for labor. On the other hand, automation may increase labor productivity and, by that way, labor demand for non-automatable tasks. Likewise, digital technologies can create new tasks, increasing the demand for labor (Acemoglu and Restrepo, 2019).

Digital transformation can also affect the labor demand due to a general increase in the demand for goods and services. New technologies reduce prices, improve product quality, enable greater customization and increase the speed of delivery. If demand increases sufficiently due to these processes, employment will grow, even if the labor required per unit of output decreases (Bessen, 2017).

> "I don't think anyone can accurately predict how the labor market will be affected locally, regionally and internationally as a result of this process of rapid technological change, digitalization and now with the very important expansion of tools connected to artificial intelligence. We economists know that certain technological changes displace some jobs and sometimes destroy them. (...) What I believe is going to be vital for Latin America is its capacity to adapt to the impacts of this great technological change, for example, of artificial intelligence and digitalization in the labor market".
>
> **Based on an interview with Augusto de la Torre**

The evidence suggests that ICT adoption associated with the first wave of digitalization has not reduced aggregate employment in advanced economies. The few empirical studies on developing economies conclude, in general terms, that the net effect on jobs has been positive, albeit with differences by type. The evidence on the effects of robots has not been consolidated. Some studies find that robotization reduces the employment rate (Acemoglu and Restrepo, 2020) but others (Jäger et al., 2016) find that the penetration of industrial robots has so far had no direct effects (Nayyar et al., 2024).

A related question concerns the polarization hypothesis. That is, if most of the automated tasks are in jobs in the middle part of the skill distribution, automation would lead to a reduction in the fraction of jobs in this segment, but there would be, consequently, an increase in the fraction of high- and low-skill jobs. There is evidence of this hypothesis in the developed world, but it is not verified, at least not yet, in the countries of the region (Berniell et al., 2016, Alvarez et al., 2020) nor in other developing economies (Molina and Maloney, 2019).

One consequence of employment polarization is increased inequality. While high-skilled workers benefit from technology, as it complements their skills, low-skilled workers may suffer a reduction in their income, partly due to the displacement of middle-skilled workers to lower-skilled jobs (Álvarez et al., 2020).

Climate change also has substantive implications for inequality and poverty. The increase in the frequency and intensity of extreme weather events, such as droughts and floods, have a greater impact on the poorest, becoming a factor that amplifies inequality (chapter 4). The revision of subsidies and tariffs for energy goods required by decarbonization affects energy prices, with potential distributional implications. At the same time, technological progress has made solar and wind energy sources cheaper, which, given their scale characteristics, may favor the closure of access to electricity in remote areas. Along the same lines, digitalization has proven to be a powerful instrument for financial inclusion, especially for households in remote areas (Nayyar et al., 2024).

Twenty years thinking about development from Latin America and the Caribbean

The Report on Economic Development

The first Report on Economic Development (RED) was published in 2004 in response to the growing need to add knowledge to CAF's operations and support decision-making on development policies. From its inception, the RED sought to complement the institution's interventions through an in-depth analysis of the challenges in the region.

The context that characterized Latin America and the Caribbean at the beginning of the RED series was that of a region that, although heterogeneous, had made significant progress in terms of democratic consolidation, macroeconomic stability and market deepening. However, this progress had fallen short of expectations and promises in terms of sustained and robust economic growth, and a deep social debt persisted. In fact, the region had experienced aggregate per capita income growth rates of only 1 % in the preceding decade, and showed significant growth in poverty.

At that time, CAF had been in existence for 35 years and was undergoing a period of transformation. The institution, which in its beginnings had focused on financing economic infrastructure projects, was seeking to transform itself into a development bank with a mission that encompassed a greater diversity of sectors. In addition, it expanded its territorial presence with the incorporation of nine member countries in the previous decade and five in the last five years, bringing its membership to 17. Today, the institution has 21 members and is moving toward consolidating its presence throughout Latin America and the Caribbean.

In response to the needs of the context, RED was conceived as a knowledge platform for informed policy discussion on key regional development issues. From the outset, each annual report was dedicated to carrying out an exhaustive empirical diagnosis, analyzing the rigorous evidence available and contributing original research, in order to offer clear and feasible policy recommendations. Always with a view from and for the region. This approach has helped RED become a reference for those who design and implement policies in the region, consolidating its position as an indispensable resource for effective, evidence-based development.

From its inception, the report sought an integral vision of development, understanding economic growth as a sine qua non condition and, at the same time, a means to improve the well-being of the region's inhabitants. The emphasis of the first three editions of the RED was on economic growth, trade integration and change in the economic structure (Reflections for resuming growth, Latin America in the global context and The road to productive transformation); in all of them, the concern for inclusion was of central importance[15].

Over the years, the report systematically addressed the areas of social inclusion (opportunities in Latin America; more skills for work and life; inherited inequalities), economic growth and integration (financial services for development; entrepreneurship in Latin America; institutions for productivity; pathways to integration) and, more recently, environmental protection (global challenges, regional solutions; just energy transition for sustainable development). In addition, the series dealt in depth with the study of State capabilities, a central focus of work and one of the great debts of the region's development. This approach was taken in a cross-cutting manner and with a territorial focus, as well as through dedicated issues (public finances for development; a more effective State; integrity in public policies; the next State).

Over two decades, the central concerns of the RED editions have persisted: promoting sustainable development in Latin America and the Caribbean. During this time, the region has experienced a regional convergence in certain aspects: countries that previously showed human development indicators characteristic of low-income economies, such as Paraguay, Peru, Bolivia and the Dominican Republic, have moved closer to once more advantaged countries in the region, such as Argentina, Uruguay and Mexico. However, they appear to be the newest members of the group of economies in the "middle-income trap", characterized by economic stagnation, high and persistent levels of poverty and inequality, and intermediate institutional quality. The future knowledge agenda must respond to the challenges and the particular context of each country, considering a global environment marked by demographic, digital and green trends. In addition, it must address the strengthening of State capacities required to undertake the pending tasks towards sustainable development in the region.

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15 For example, one of the five chapters in the first edition of RED addresses social inclusion.

Contents of the book

This book, developed for the 20th anniversary of the RED series, is organized into five chapters. The first chapter introduces the concept of development in its multidimensional nature and presents a stylized diagnosis of progress and pending issues in the region. It also addresses the most salient cross-cutting characteristics of the Latin American and Caribbean context (productive informality, deficient infrastructure and crime, resource endowment and macroeconomic institutionality), and the long-term transitions (technological, demographic and green) that condition the path of development in the region.

Chapters 2, 3 and 4 address the areas of economic growth, social inclusion and environmental sustainability, providing a detailed diagnosis and a proposal for specific policies for each. The diagnosis in chapter 2 points out that the region's per capita GDP has grown insufficiently, limiting its capacity to converge towards the income levels of developed countries. It is emphasized that this low growth is linked to low productive efficiency that cuts across all economic sectors. The proposed policies are focused on improving the distribution of productive factors and promoting innovation. These include labor strategies, especially those aimed at formalizing employment and developing skills for emerging sectors. They also address competition policies and access to quality inputs, participation in global trade and the promotion of a new industrial policy that avoids the old mistakes of "picking winners" and fosters coordination and the generation of productive externalities.

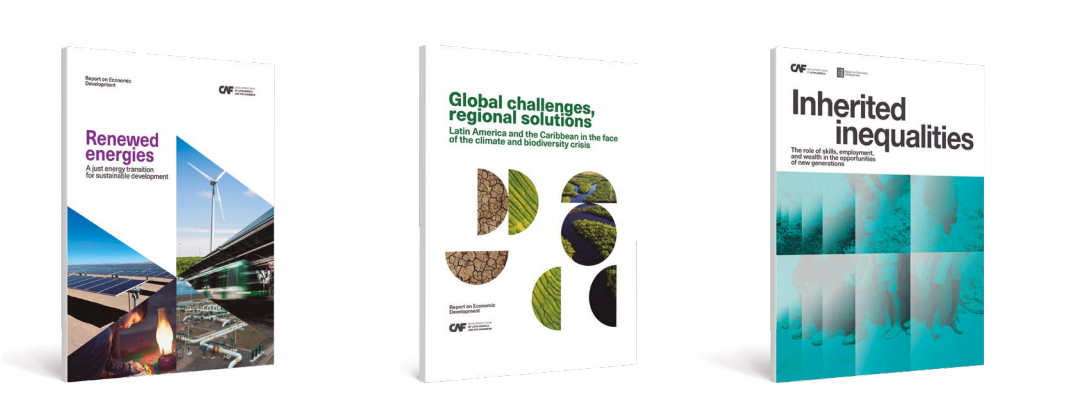
Chapter 3 shows that, although significant progress has been made in reducing poverty in the last two decades, one out of every three inhabitants of the region continues to live in poverty, while it remains one of the most unequal territories in the world. The chapter presents the main policy instruments, organized around the life cycle of individuals, which prioritize attacking barriers to access to opportunities as a way of reducing poverty in a lasting way and breaking intergenerational cycles of exclusion. At the same time, it recognizes that ex post redistribution policies are a necessary complement for those who are critically deprived and unable to take advantage of employment opportunities.

Chapter 4 warns that global efforts to reduce greenhouse gas emissions are insufficient to avoid the serious consequences of climate change. Furthermore, the degradation of ecosystems and the air and water pollution experienced by the region's inhabitants is alarming. The impacts of climate change are already evident and are particularly affecting the region, which is why the chapter emphasizes the need for adaptation policies. The chapter highlights the central importance of mitigation policies in the agriculture and forestry sector, as well as in the energy and industrial sectors, which will become increasingly important as the economy expands. It also presents instruments for protecting the environment and ecosystems. The chapter discusses the opportunities offered by technology and the stock of natural resources in the territory and pays special attention to the fiscal impact of these policies and the green transition in general.

Finally, chapter 5 offers a prospective outlook, outlining a development strategy that will enable the region to respond to the key trends identified in the first chapter and in the context of the pre-existing challenges of growth, inclusion and environmental preservation. It addresses the strengthening of institutions and State capacities needed to implement the required policies and to adapt governance structures to a context that requires complex policies and coordination at multiple levels. This last chapter also analyzes the role of multilateral development banks as allies in the development process.

The chapters highlight the valuable contributions of globally recognized experts who have shared their knowledge in the various areas that make up development. Their contributions are reflected in the form of boxes that capture the essence of their reflections in the context of the discussion.

Figure 1.3
Latest editions of RED



RED 2024
Renewed energies:
A just energy transition for sustainable development

RED 2023
Global challenges, regional solutions: Latin America and the Caribbean in the face of the climate and biodiversity crisis

RED 2022
Inherited inequalities:
The role of skills, employment, and wealth in the opportunities of new generations

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Chapter 2

Policies for productive development



Key messages

1.

Despite the progress the region has made in terms of per capita income over the last three decades, this has been insufficient to close the gap with the most advanced countries.

2.

The lag in per capita income is a reflection of low labor productivity, which, in turn, is largely explained by the region's low productive efficiency. Total factor productivity, an indicator that measures efficiency in production, has been stagnant since 1990.

3.

Economies in the region, such as Chile, Costa Rica, the Dominican Republic, Panama, Peru, Trinidad and Tobago, and Uruguay, which have managed to increase their productivity, have been able to grow substantially and close the income gap with respect to the most advanced countries.

4.

Reducing informality is imperative to increase productivity in the region. Policies that reduce the costs of formality and increase its benefits are steps in the right direction. Increased taxation that seeks to formalize businesses can also have positive effects on formal employment and productivity. Likewise, education and training policies are essential to this end.

5.

Improving access to financing for companies is crucial. Reforms that foster competition in the financial sector are fundamental. This includes the entry of new financial institutions such as *fintechs* and credit cooperatives, and the promotion of development banking. It is also necessary to promote the development of capital markets as a financing alternative.

6.

Greater trade openness is key not only to foster competition in goods and services markets, but also to boost the participation of the region's companies in global value chains. Greater regional integration is a fundamental step in this direction. To this end, it is necessary to reduce tariff and non-tariff barriers, improve logistics systems and transportation infrastructure, and simplify customs procedures.

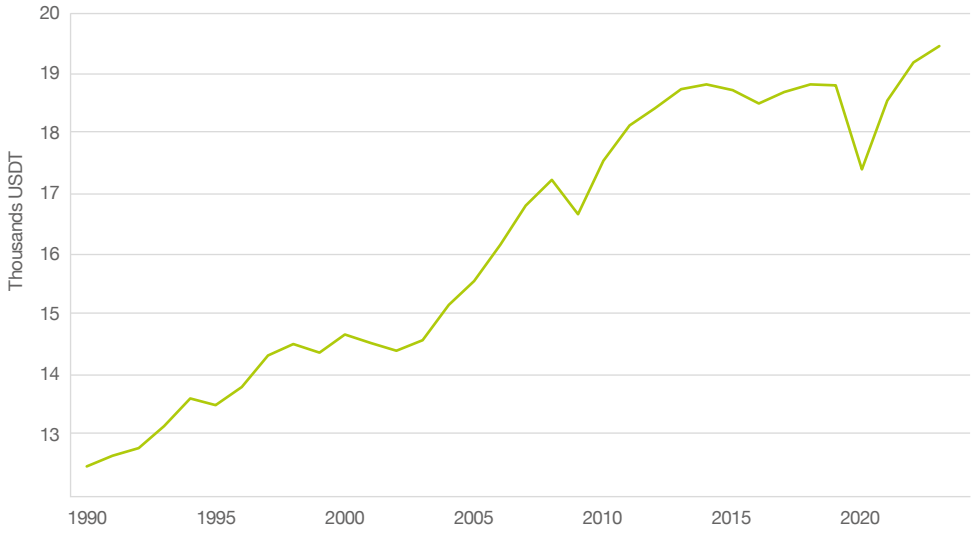
7.

Industrial policy can serve as an articulating mechanism for the set of reforms needed to address the various problems afflicting LAC. It is a key tool for promoting economic growth and productive diversification in the region.

Growth and productivity in Latin America: an aggregate analysis

Latin America and the Caribbean (LAC) has made significant progress in its quality of life over the last three decades. This is reflected in a growth of around 56 % in per capita income since 1990 (figure 2.1) and is mainly explained by the accumulation of physical and human capital during this period, which has allowed for an increase in labor productivity.

Figure 2.1
GDP per capita, Latin America and the Caribbean, 1990-2023
(PPP, USD at constant 2021 prices)

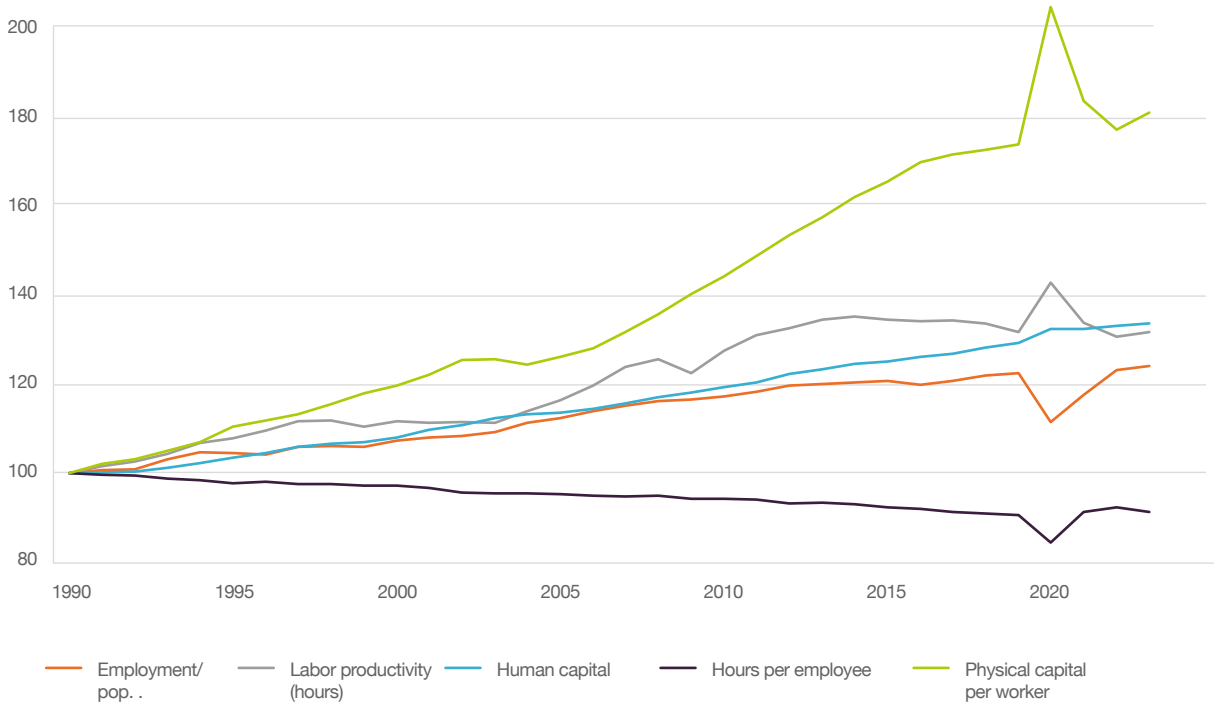


Source: (World Bank, 2024).

Between 1990 and 2023, the stock of physical capital per worker increased by around 80 %, while the skills of the typical worker grew by around 34 % (figure 2.2). In turn, employment, as a proportion of the population, increased by 24 %, mainly due to the significant growth in female labor participation, which rose from 41 % in 1990 to 54 % in 2023, on average, in the region.

However, the number of hours worked per worker fell by 9 % over the same period, partially attenuating the increase in employment. As a result, labor productivity per hour worked increased by 32 %.

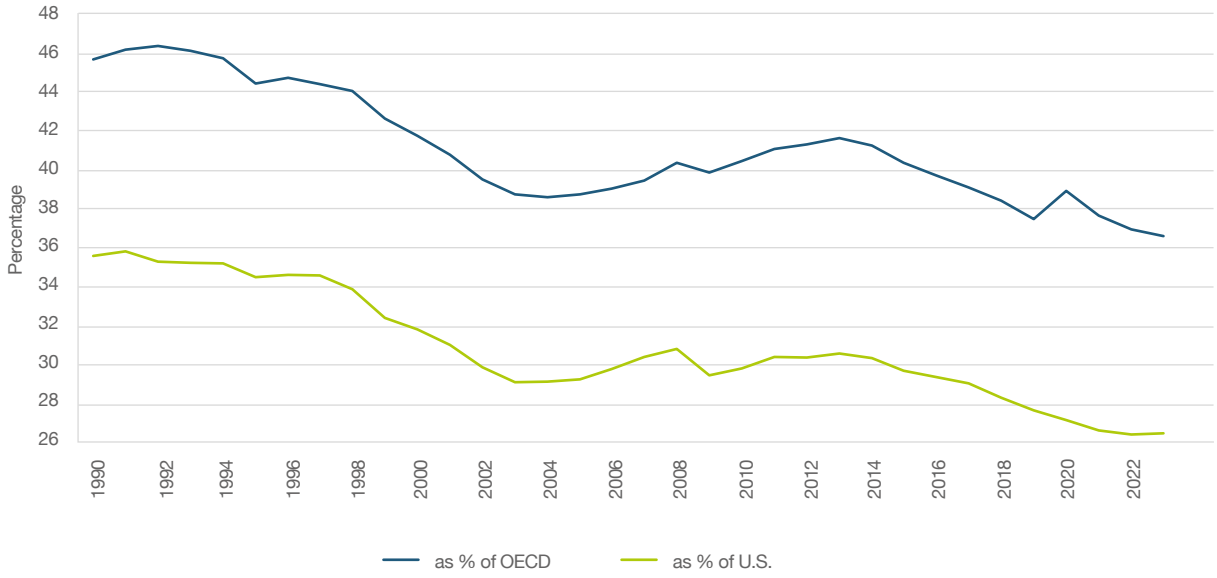
Figure 2.2
Productivity, capital and labor, LAC, 1990-2023 (1990 = 100)



Source: Own calculations based on data from The Conference Board (2023).

Despite this increase, the region lags significantly behind the most advanced countries. In 1990, output per worker in LAC was equivalent to 46 % of that of the OECD, while in 2023 it was 37 %. With respect to the United States, the decline is even more marked, from 36 % to 27 % in the same period (figure 2.3).

Figure 2.3
Labor productivity in LAC as percentage of OECD and U.S., 1990-2023

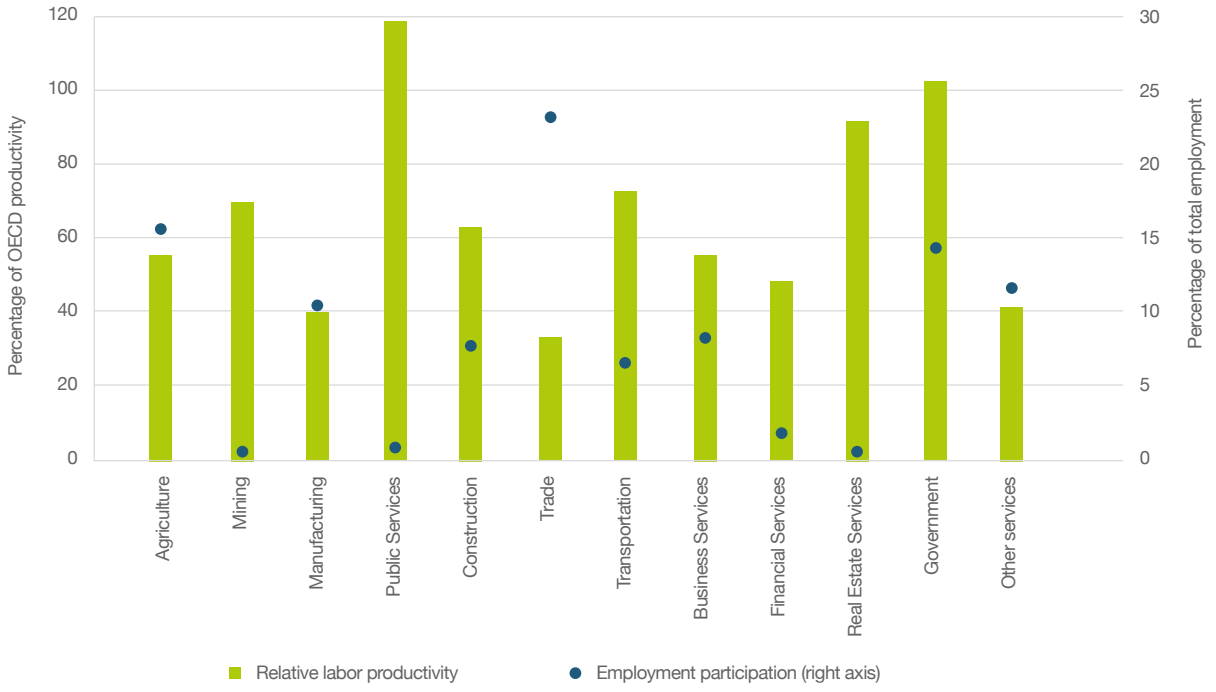


Note: OECD labor productivity is the average of current members excluding OECD Latin American countries.
Source: Own calculations based on data from The Conference Board (2023).

More dramatic has been the evolution of productivity with respect to the group of emerging and developing countries as a whole. While in 1990 labor productivity in LAC was 2.7 times that of this group of countries, in 2023 it was only 1.2 times higher.

This low labor productivity is also observed in most sectors, especially those in which the private sector plays a relevant role. Except for the Government and utilities sectors, where State-owned enterprises and regulations have a significant influence, all other sectors show, on average, lower labor productivity relative to the OECD (figure 2.4).

Figure 2.4
LAC labor productivity as percentage of OECD and employment share by sector, 2017

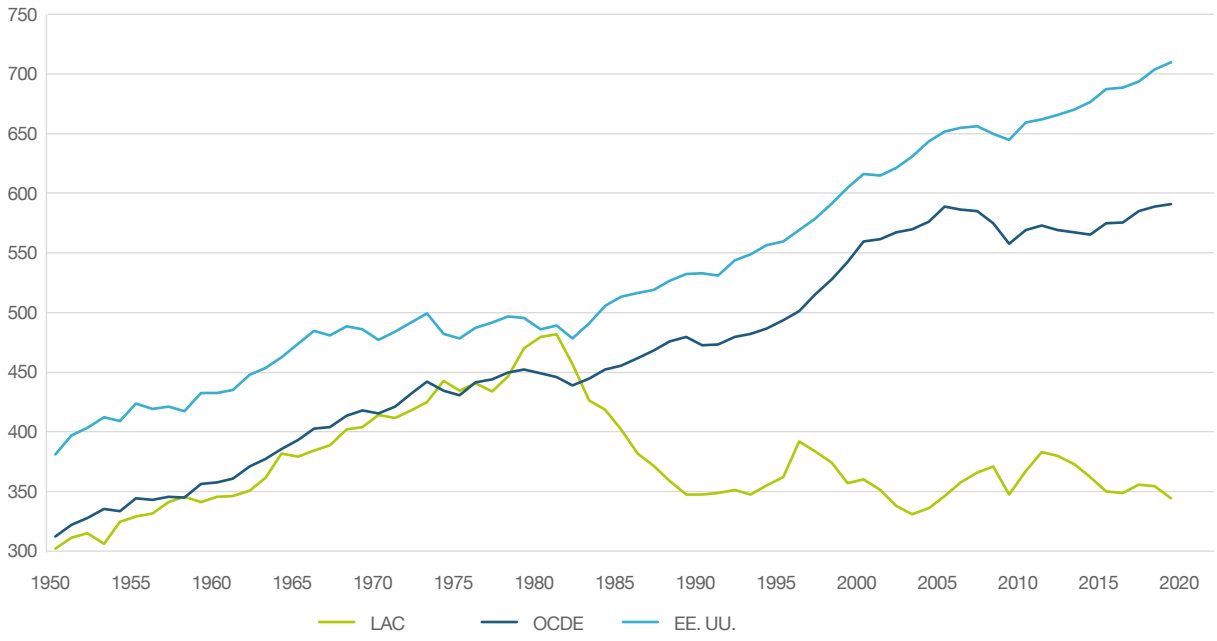


Note: The bars in the figure represent labor productivity in each sector in LAC as a percentage of productivity in the same sector in the OECD. The OECD average excludes OECD Latin American countries.
Source: Own calculations based on the GGDC Productivity Level Database (Inklaar et al., 2023).

Important sectors such as commerce, manufacturing and other services, which employ a significant portion of workers (23 %, 10 % and 11 %, respectively), are characterized by low labor productivity, with levels of 33 %, 39 % and 42 % relative to the OECD. Another relevant sector, agriculture, which accounts for 15 % of employment in the region, also shows a significant gap, with a labor productivity of 55 % in relation to the group of advanced economies.

One factor behind the lag in labor productivity is the low productive efficiency of the region's economies. Total factor productivity (TFP), an indicator that reflects how efficiently an economy uses its inputs (capital and labor) to produce goods and services, is significantly lower in LAC than in more developed countries. TFP, according to the most recent data, is approximately half of that observed in the United States, and 60 % of that observed in the OECD (figure 2.5).

Figure 2.5
Total factor productivity in LAC, OECD and USA, 1950-2019 (adjusted for PPP)



Note: Own calculations based on data from the Penn World Table (version 10.01) (Feenstra et al., 2023).
Source: OECD average does not include Latin American OECD member countries.

Low TFP not only has a negative impact on production, but also discourages investment. This is reflected in the low capital endowment per worker in the region, which is barely one third of that observed in the United States and the OECD, despite having increased substantially in recent decades.

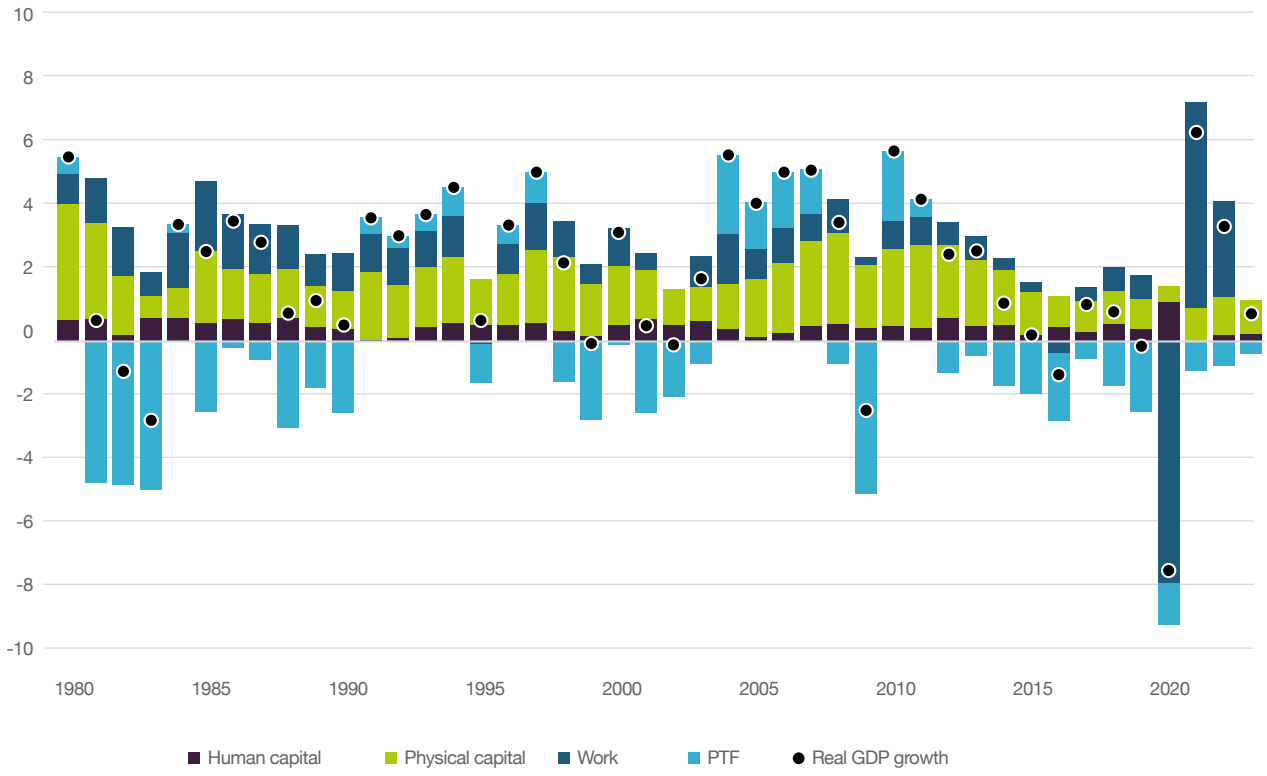
An analysis of the labor productivity gap between LAC and the United States during the period 2010-2019 revealed that approximately 80 % of the gap is explained by differences in TFP, considering both its direct effect on output and its indirect impact through physical capital accumulation[1]. The remaining 20 % is attributed to differences in human capital, i.e., in the skills and educational background of workers. It is estimated that the human capital of the typical worker in LAC is equivalent to 70 % of the human capital of the typical worker in the United States.

1 Specifically, a development accounting exercise was conducted using the Penn World Table version 10.01 (Feenstra et al., 2015), a database with information on relative levels of income, production, inputs and productivity, covering 183 countries between 1950 and 2019. The results correspond to the average for the period 2010-2019 for the 23 LAC countries with the necessary data (Argentina, Barbados, Belize, Bolivia, Brazil, Chile, Colombia, Costa Rica, Dominican Republic, Ecuador, El Salvador, Guatemala, Haiti, Honduras, Jamaica, Mexico, Nicaragua, Panama, Paraguay, Peru, Trinidad and Tobago, Uruguay and Venezuela).

Low TFP in the region has been a constant for at least the last 40 years. Although until the end of the 1970s, TFP grew almost on a par with that of developed countries, the sharp fall experienced in the 1980s generated a significant lag. Since 1990, TFP has shown relative stability with cyclical fluctuations.

This poor TFP performance in the region since the 1980s has limited economic growth that has been based on the accumulation of factors of production, especially physical capital. The results of a growth accounting exercise for the region highlight this reality (figure 2.6). Since 1980, the contribution of TFP to growth has been negative in 30 of the 44 years analyzed, with an average of -0.87 percentage points for the entire period. On the other hand, physical capital, human capital and labor have contributed an average of 1.72, 0.48 and 0.91 percentage points, respectively, for an average annual real GDP growth of 2.23 % since 1980.

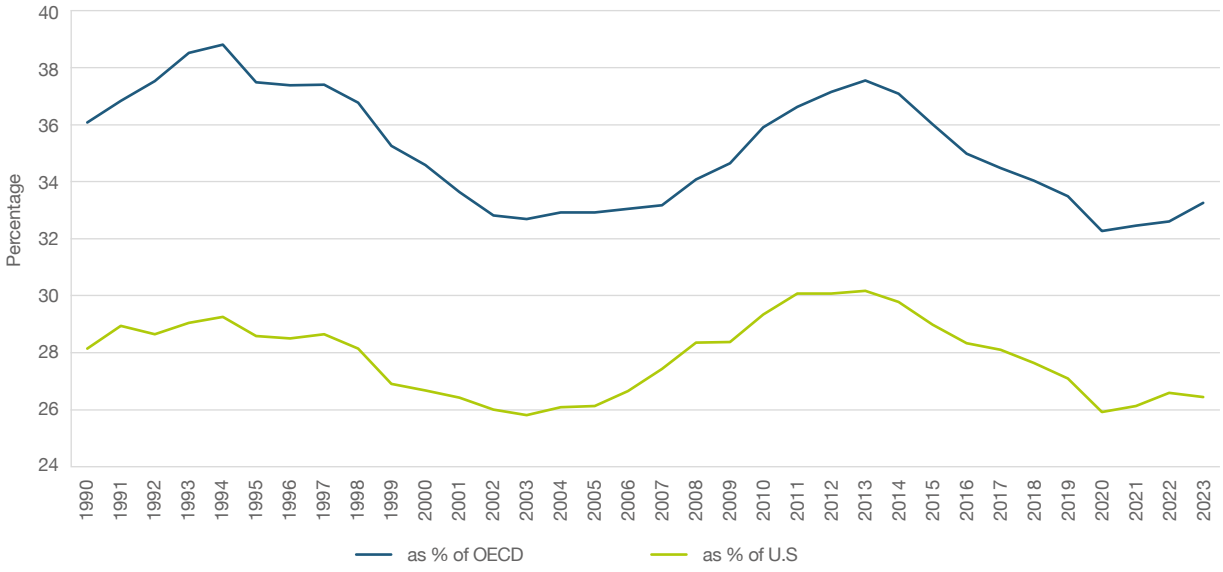
Figure 2.6
Growth accounting, LAC, 1980-2023



Source: Own calculations based on data from The Conference Board (2023).

This situation is reflected in the persistent lag of per capita income in the region with respect to advanced economies. As figure 2.7 shows, since 1990, LAC's per capita GDP relative to the OECD and the United States has remained around 34 % and 27 %, respectively, even showing a slight negative trend.

Figure 2.7
GDP per capita (PPP) of LAC as percentage of OECD and U.S., 1990-2023



Note: For the calculation of OECD average GDP per capita, Latin American OECD countries are excluded.
Source: World Bank (2024).

"Latin America has been lagging behind in growth for 60 years. [Unlike other regions] Latin America missed the opportunity to connect more effectively with the great engines of growth that were consolidated after World War II (...) What one sees in the data is that from the 1950s onwards, Latin American development has barely kept pace with world growth and has lagged behind for long periods of time".

Based on an interview with Augusto de la Torre

"We have closed many gaps in many areas, but not the per capita income gap".

Based on an interview with Ricardo Hausmann

This regional analysis, however, hides some success stories. We refer to those of Chile, Costa Rica, Panama, Peru, Dominican Republic, Trinidad and Tobago and Uruguay[2]. Between 1990 and 2023, the GDP per capita of these countries multiplied by a factor of approximately 3.15 in the case of Panama and the Dominican Republic, and between 2.18 and 2.65 for the rest. This allowed them to close the income gap with the more developed countries. For example, in 1990, Panama and the Dominican Republic had a per capita income equivalent to 26 % and 16 % of that of the United States, and in 2023 it reached 49 % and 31 %, respectively. Uruguay, the country that grew the least in this group, went from having a per capita income equivalent to 32 % of that of the United States in 1990 to 42 % in 2023.

The high growth in these countries, in contrast to that observed in the region as a whole, is largely explained by the increase in total factor productivity, which on average grew by 25 % between 1990 and 2019, while in the region it remained practically constant. TFP played a particularly important role in Chile and Peru, where it grew by around 31 %[3].

Employment growth as a proportion of the total population was also decisive, especially in the Dominican Republic, Panama and Peru, where it increased by 62 %, 59 % and 48 %, respectively, compared to 22 % in the region.

Physical capital accumulation played an important role in Panama, the Dominican Republic and Chile, where capital per worker increased by a factor of 5.9, 3.5 and 3.2, respectively, while in the region it increased by 2.1[4]. Finally, the increase in human capital was particularly high in the Dominican Republic, where it grew by 44 %, in contrast to 30 % in the region.

From micro to macro: a brief conceptual framework

To fully understand what determines an economy's productivity and growth, one must consider institutional factors and those most directly related to business activity. Institutional factors, such as the protection of property rights and the quality of regulatory frameworks, shape the business environment, which in turn affects the behavior and performance of firms.

This environment determines both the internal efficiency of firms and the distribution of productive resources among them—also called allocative efficiency. These two factors define aggregate productivity. In essence, an economy will be more productive if it has more efficient companies and if these concentrate more resources and tend to be larger.

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2 Guyana is not included as it is a recent success story purely based on oil exploitation. Since 2019, GDP per capita has increased by almost 300 %

3 These figures are obtained from Penn World Table version 10.01 data.

4 This increase in capital per worker differs from that shown in figure 2.2 because the capital stock is expressed differently. Specifically, in the Penn World Table, capital is adjusted by a PPP factor.

This is obviously a dynamic phenomenon influenced, on the allocative efficiency side, by the growth of existing firms and by the entry and exit of firms. As for internal efficiency, factors such as innovation, the adoption of new technologies and improvements in organizational and managerial practices are crucial for increasing productivity.

These phenomena, in turn, are interconnected. On the one hand, changes in the internal efficiency of firms are associated with their growth (Eslava et al., 2023). On the other hand, market distortions that limit the growth of firms or the entry of new ones have an adverse effect on innovation levels and, therefore, on productivity.

The 2018 Report on Economic Development entitled Institutions for productivity: towards a better business environment (Álvarez et al., 2018), argues that the region's productive lag is largely due to institutional deficiencies that transversally affect the productive sector. The role played by economic institutions in shaping an enabling environment for productive development is crucial.

To better understand how institutional deficiencies affect businesses, the report delves into four key areas: labor relations, access to financing, competition and relations among businesses themselves. A deeper analysis of each of these areas reveals challenges and opportunities for fostering productive development in the region's economies.

> "One dimension of the problem of low productivity in Latin America, of course, has to do with the fact that different companies have, on average, lower productivity than those in more developed countries. This is true, not only for companies, but also for any productive unit, including self-employed people. But there is also an additional factor that is sometimes more difficult to imagine, and that is the fact that the most productive companies, which are the ones that have the greatest capacity to absorb more people as labor force, pay them better salaries—precisely because they generate more productivity— (...) do not grow as much as they should. That is, they do not end up absorbing as many people as they should. Meanwhile, the companies with the lowest productivity, the productive units that have the least capacity to generate good income, become larger than they should ideally be. Sometimes they survive longer than they would ideally survive.".
>
> **Based on an interview with Marcela Eslava**

The labor market: challenges and policies

A well-functioning labor market is indispensable for an efficient allocation of labor across occupations, sectors and firms. As pointed out by RED (Álvarez et al., 2018), matching processes between workers and firms, as well as wage-setting mechanisms, are crucial for productivity[5].

In general, if wages reflect the productivity of the job, they will serve as a guide to workers in the search and matching process that characterizes the labor market.

The proper functioning of wage-setting mechanisms is key for higher productivity firms to attract the best qualified workers. However, taxes, regulations and other institutional aspects such as employer social security contributions, minimum wage laws and collective bargaining can distort this process[6].

An aspect of profound relevance for LAC is the distribution of workers between the formal and informal sectors. As figure 2.8 shows, 52 % of jobs in the region are informal, well above the 13 % in high-income countries or 7 % in the European Union[7]. nformality in the region is high, even compared to other countries with similar per capita incomes (Álvarez et al., 2020). This implies a loss of productivity due to the multiple inefficiencies associated with the informal sector.

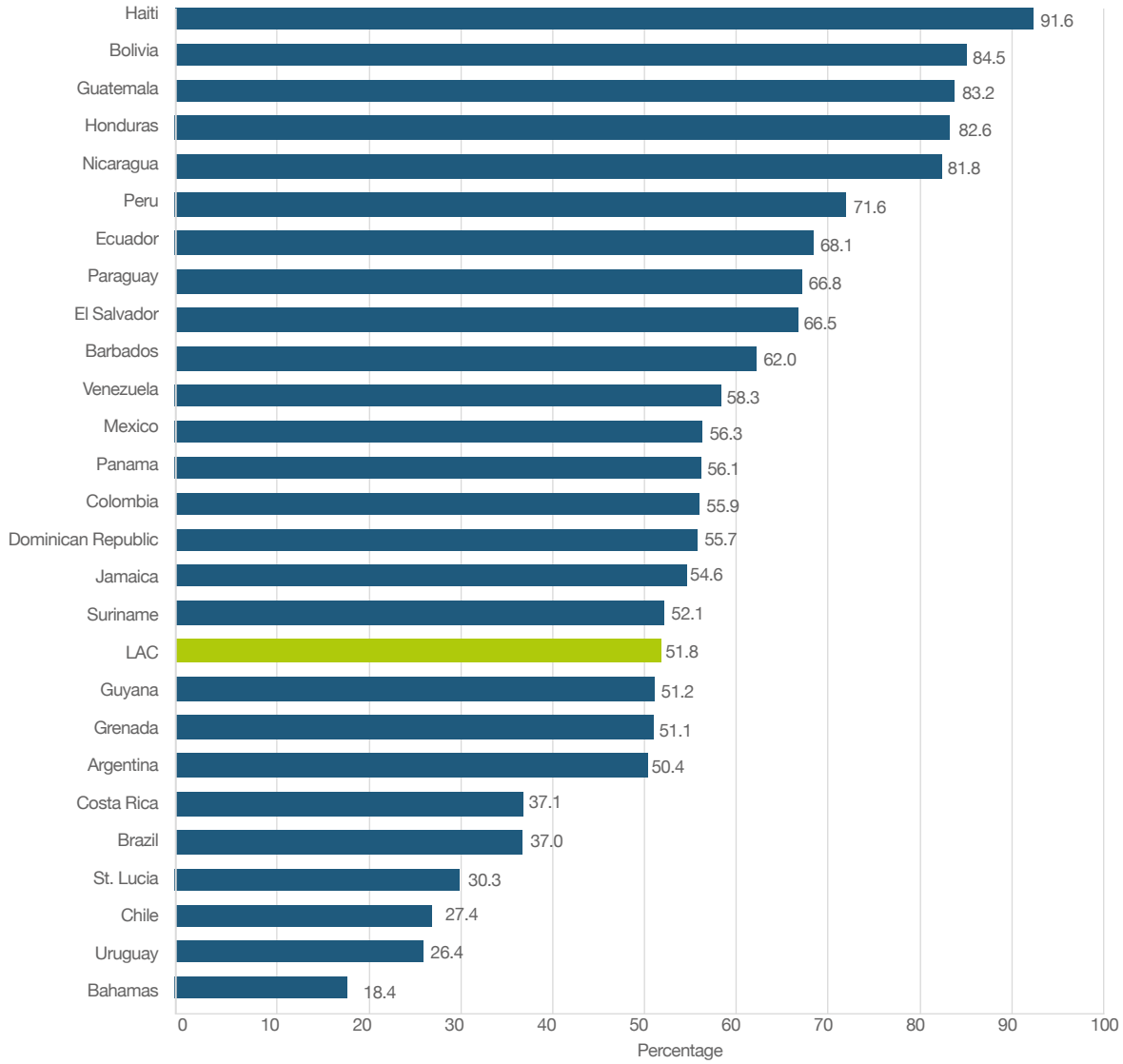
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5 One aspect mentioned in RED 2018, but ignored in this section for reasons of space, is the impact on productivity of working conditions within the company through the effect of these on workers' performance and the acquisition of on-the-job skills.

6 Chapter 5 of RED 2018 examines these mechanisms in more detail

7 According to ILO estimates for 2023 (https://rshiny.ilo.org/dataexplorer23/?id=EMP_2IFL_SEX_RT_A)

Figure 2.8
Informal employment rate (%)



Note: The vast majority of observations are for the year 2023. For the following countries, the latest available data is for an earlier year: Bahamas (2019), Barbados (2016), Grenada (2020), Guyana (2019), Honduras (2017), Haiti (2012), St. Lucia (2022), Nicaragua (2012), Suriname (2016), and Venezuela (2017).
Source: Ilostat, ILO (ILO, 2023b)

On the one hand, informal companies generally operate on a smaller scale to avoid detection and the costs of formality, such as taxes and parafiscal contributions, compliance with laws and regulations, and the social protection of their employees. This prevents them from achieving economies of scale, adopting better technologies or accessing credit markets. As a result, labor and capital are not used in the most efficient way.

As a result, workers in the informal sector tend to have limited access to resources and training opportunities[8]. RED (Álvarez et al., 2018) shows evidence that in LAC informal employment is associated with lower skill acquisition and, therefore, growth within their field of action[9].

Moreover, in economies with a substantial informal sector, people may not invest enough in their own education or in acquiring job skills. As a result, informal workers face low wages and lack of social protection, which affects human capital development and perpetuates poverty and inequality

It is not surprising that schooling levels are considerably lower among informal workers. For example, in LAC, the percentage of workers with at least secondary education is about 30 percentage points lower in the informal sector than in the formal sector (OECD, 2024a).

Similarly, informality affects the quality of worker-job matches. According to OECD data (2024a), about 16 % of informal workers in LAC, on average, have a lower educational level than that required by their job, which contrasts with the 9 % observed in the formal sector[10].

And, to complete this bleak picture, the low quality of labor matches in the informal sector results in greater mobility between jobs. RED (Álvarez et al., 2018) estimates that the seniority of informal wage earners is 16 % lower than that of formal employees with similar characteristics and jobs[11].

In short, the high rates of informality in the region have profound negative consequences for aggregate productivity and perpetuate a cycle of low efficiency and precariousness that limits development.

Informality also has other consequences, beyond its effects on productivity. The literature highlights that it worsens the fiscal capacity of governments, which is an obstacle to growth in developing economies such as those of LAC[12].

As informality is a complex phenomenon, it is ultimately determined by decisions made by companies and workers. From the perspective of firms, the high costs associated with registration, regulatory compliance and tax payments may deter formalization. The perception of few or no benefits of formality, in terms of limited access to credit or legal protection, also reduces incentives to operate within the regulatory framework. In addition, if institutions to enforce laws and regulations are weak, informal operations will proliferate due to the low risk of sanctions.

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8 OECD (2024).
9 Jaramillo and Escobar (2022) reach a similar conclusion by examining data from Peru and Mexico.
10 The countries in the region for which there is data on this skills gap are Argentina, Bolivia, Brazil, Chile, Colombia, El Salvador, Mexico, Paraguay and Peru
11 Without controlling for worker and job characteristics, differences in seniority between the formal and informal sectors can reach more than 50 % in several countries in the region, such as Colombia, Guatemala, Peru, Paraguay, the Dominican Republic and Uruguay.
12 Ogilvie (2022), Besley and Persson (2013), Dincecco and Prado (2012), and Dincecco and Katz (2016), among others.

On the workers' side, social welfare policies that do not differentiate between formal and informal employment, coupled with labor market rigidities, can push people into informality.

Likewise, limited educational opportunities restrict access to formal employment. If the perceived returns of formal employment, in terms of wages, job security and skills development, are low compared to the informal sector, the individual's decision will be biased towards the latter.

> "We cannot speak of social inclusion when half of the workers in the region do not have access to social security. And the second major problem is that, in a context of high informality, the performance of companies and workers is affected in multiple dimensions that depress productivity. And these are two ideas that must be seen as a simultaneous result of the same phenomenon of dysfunctional institutions, high informality and lack of social protection and low productivity".
>
> **Based on an interview with Santiago Levy**

Policies for formality

Addressing the multiple causal factors of informality involves a combination of policies that must be adapted to the specific context of each economy. A first set of policies are those aimed at reducing the costs of formalization. These are based on the idea that firms that opt for informality are motivated by high regulatory costs and start-up costs, such as business registration. However, empirical evidence suggests that these policies are not effective in reducing informality, as entry costs are not the main obstacle

In contrast, policies that aim to reduce the recurrent costs of operating in the formal sector, or that increase its benefits, tend to be more effective, since for many firms, the costs of formality outweigh the benefits. However, such measures may not have much impact and may not be cost-effective (Ulyssea, 2020).

The 2012 tax reform in Colombia is a good example. With it, employers' social security contributions were reduced from 29.5 % to 16 %, replacing them with a tax on profits. This is associated with a drop in the informality rate of almost five percentage points, mainly due to an increase in the creation of formal employment within micro and small enterprises[13]. This suggests that reducing the costs of formality may incentivize smaller employers to integrate their workers into the formal sector.

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13 See Fernández and Villar (2017), Bernal et al. (2017) and Morales and Medina (2017) for more details.

Other policies that impose costs on formal employment are minimum wage and employment protection policies, which are widely used in the region. As for the former, high minimum wages in some countries push many employers into informality.

Indeed, RED (Álvarez et al., 2018) shows the results of an empirical exercise that indicates that, in sectors where minimum wages are higher versus the average wage, any change in the legal minimum wage has a larger impact on informality. However, the magnitude of the impact appears to be small, which is consistent with the findings of the literature, which suggest that the minimum wage has no or very small effects on informality. These studies, however, generally refer to moderate minimum wages, which is not the case for some countries in the region.

Regarding employment protection, there is evidence that higher levels of protection, such as regulation of firing and hiring, are associated with higher informality, especially when compliance is more strictly monitored[14].

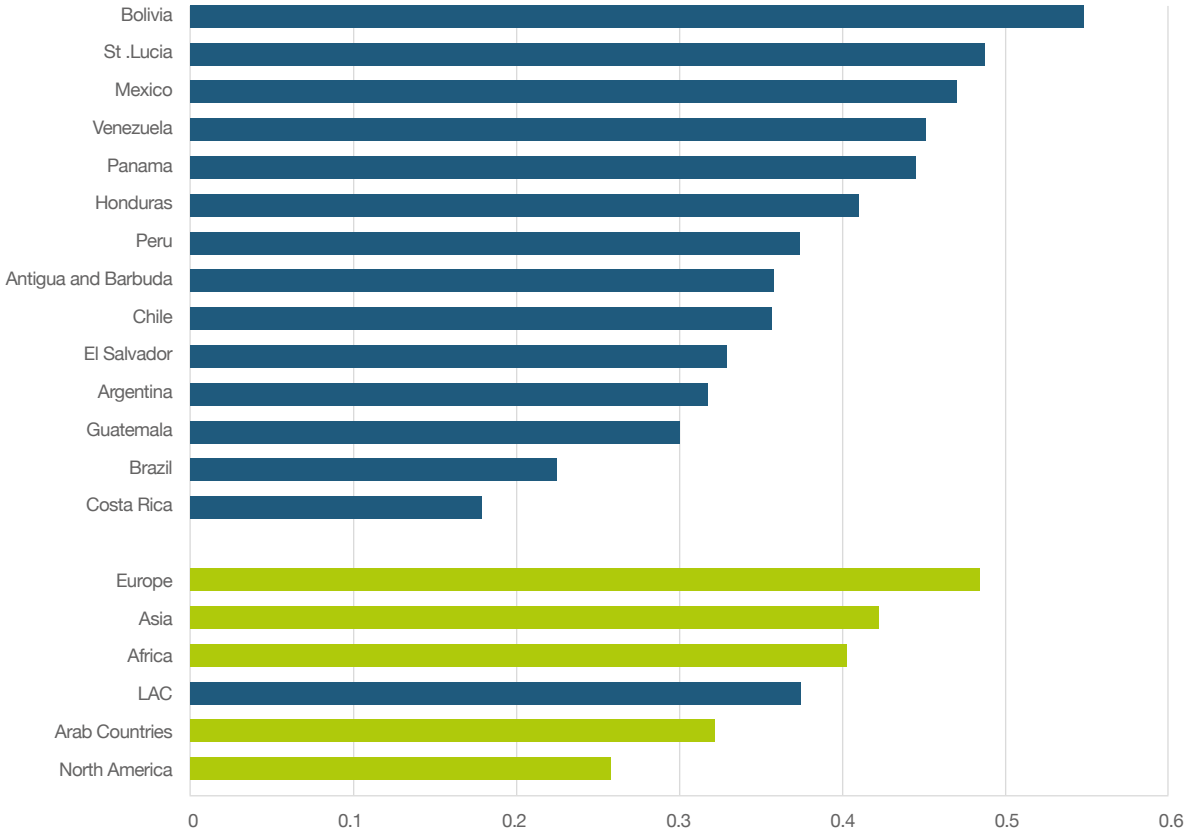
As can be seen in panel A of figure 2.9, although the region has average levels of employment protection compared to other regions, there is great heterogeneity within the region. On the one hand, Bolivia, St. Lucia, Mexico, Venezuela and Panama have levels of protection similar to those observed in Europe, the region with the strictest legislation in this area. On the other hand, Costa Rica and Brazil exhibit low levels.

Panel B also shows that there is a positive association between employment protection levels and the informality rate. This, of course, does not indicate a causal relationship, but it is suggestive in light of the above evidence.

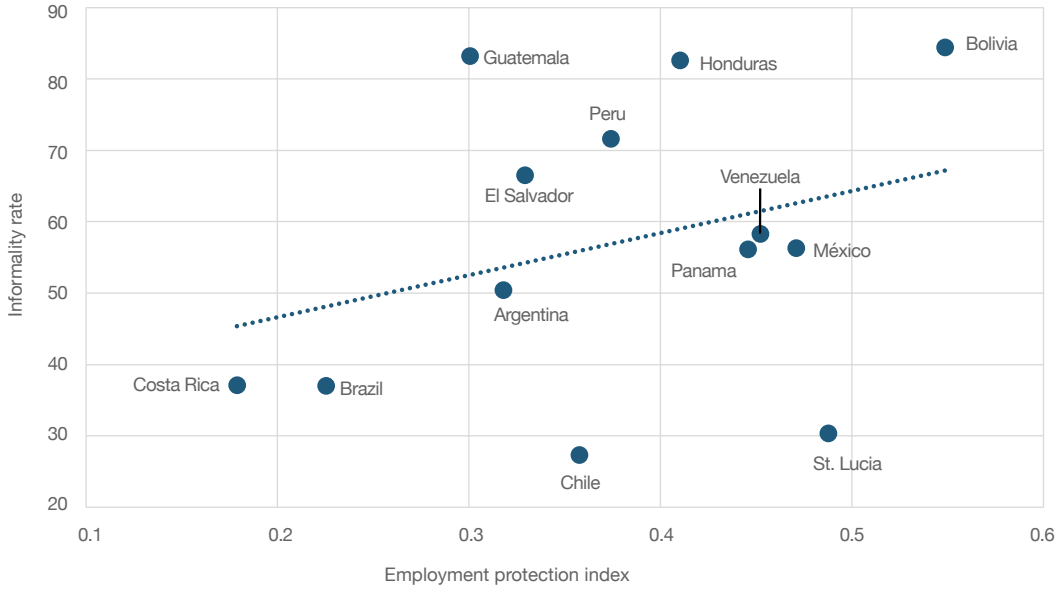
14 See, for example, David, Pienknagura and Roldós (2020), and Chaurey, et al. (2024).

Figure 2.9
Employment protection and informality

A. EPL Index



B. EPL vs. informality rate



Note: In panel A, a composite indicator of employment protection legislation (EPL) governing regular contracts and individual dismissals is shown. Most data are for 2019, but some countries such as Argentina, Chile, Antigua and Barbuda, and Panama are for 2018, Bolivia and St. Lucia are for 2017, and Venezuela is for 2016. In panel B, the relationship between the EPL index and the informality rate is shown.
Source: EPLex and ILOSTAT database, both from ILO (ILO, 2019, 2023b).

In this context, minimum wage and employment protection policies must be carefully calibrated so as not to discourage the creation of formal employment.

Another set of measures that can have a positive impact are those that increase the benefits of formality, such as social protection programs tied to formal employment. Empirical evidence points in this direction. For example, in Brazil, formal workers are willing to pay for more generous benefits in the form of a lower wage relative to informal (Almeida and Carneiro, 2012). This implies that increasing social benefits in formal employment could attract informal workers. In Uruguay, a social security reform in 2008, which extended health benefits for formal workers, had a positive effect on formalization (Bergolo and Cruces, 2014).

A corollary that emerges from this evidence is that non-contributory social programs or in which beneficiary status is linked to informal employment should be used with caution; otherwise, perverse incentives may be generated that not only increase informality, but also reduce labor participation (Álvarez et al., 2018; Álvarez et al., 2020).

In LAC, several experiences demonstrate this. In Brazil, the Family Health Program (PSF), introduced in 1994 with the aim of advancing universal coverage of the health system, led to an increase in informality, particularly among workers with low levels of education, estimated at 8-10 %. In Mexico, the Seguro Popular program, which extended health coverage to informal workers, also caused a decline in formal employment. In Colombia, the Subsidized Health Regime, the mechanism by which the poorest population has access to medical services through a state-subsidized benefit plan, caused a reallocation from formal to informal jobs. In Uruguay, the conditional cash transfer program aimed at vulnerable households led to a 13 % drop in formal employment of beneficiaries, which also meant an increase in labor inactivity. Finally, in Argentina, the introduction of the *Asignación Universal por Hijo* (AUH), a program that provides a monetary subsidy per minor child to unemployed and informal workers, which was previously limited to formal workers, reduced the probability of formalization of beneficiaries by 40 %[15].

> "The main problem of social protection in Latin America is that it is segmented, fragmented. We have contributory systems for workers who are in a relationship with the companies, and the companies comply with the law. And for everyone else we have another system, a patchwork of health programs, non-contributory pension programs and other types of social protection programs that are an imperfect substitute, but which segment the population. Basically, how this works is that if you have a job in a formal company, you have access to this type of protection, and if you have a job in other conditions, you have access to this other type of protection".
>
> **Based on an interview with Santiago Levy**

Another set of formalization policies are those aimed at increasing the cost of informality through increased taxation. There are two types of measures: those aimed at formalizing companies (extensive margin) and those aimed at formalizing informal workers employed in the formal sector (intensive margin).

Regarding the first type, the scarce evidence on the impact of a greater enforcement effort suggests a positive effect (Andrade et al., 2016). Studies find that increased enforcement is associated with productivity gains at the aggregate level. These gains are, in part, a product of the exit of low-productivity informal firms and the reallocation of resources to more productive formal firms. Now, while these effects lead to higher productivity, they can also result in higher unemployment. However, a recent study finds that stricter taxation has no effect on unemployment because formal firms absorb workers displaced from the informal sector (Dix-Carneiro et al., 2021).

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15 For more details, review Conti et al. (2019) for the case of the PSF in Brazil; Bosch and Campos-Vázquez for that of Seguro Popular in Mexico; Camacho et al. (2014) for that of the Subsidized Regime in Colombia; Bergolo and Cruces (2021) for that of Uruguay; and Garganta and Gasparini (2015) for that of the AUH in Argentina.

Regarding increased taxation at the intensive margin, the results can be very different. Empirical evidence suggests that, while it may increase formal employment, it may also increase unemployment and labor inactivity (Almeida and Carneiro, 2012; Samaniego de la Parra, 2017). Likewise, increased taxation of formal firms may increase the fraction of informal firms. The reason is that higher taxation increases the costs of formality, especially for less productive firms (Ulyssea, 2018).

The reduction of informality also requires improvements in the education of the labor force. Education and training policies are essential to increase worker productivity and facilitate their insertion into the formal sector.

Evidence indicates that the fall in informality in Brazil in the early 2000s was largely due to significant improvements in the educational composition of the population (Haanwinckel and Soares, 2021; Soares and Haanwinckel, 2017; Fairris and Jonasson, 2020). This suggests that educational policies may be the most effective tool to address the problem of high informality in the long run, as such changes occur slowly.

There are, however, training and skills formation policies with short-term effects. Several studies find that the *Jóvenes en Acción* program in Colombia, aimed at encouraging human capital formation of the young population in situations of poverty and vulnerability, has had positive and persistent effects on formal employment (Attanasio et al., 2011, 2017). A similar program in the Dominican Republic, Youth and Employment, also shows a positive and sustained impact over time on formal employment and wages of participants (Ibarrarán et al., 2014; Ibarrarán et al., 2015).

Other studies point in the same direction. We speak specifically of the meta-analysis by Escudero et al. (2019), which finds that training programs implemented in LAC have been particularly effective in comparison with other policies. It also concludes that programs that incorporate on-the-job training, such as internships, present a higher probability of having a positive impact on employability. In addition, it is observed that programs with a duration of more than four months and that are developed in collaboration with private institutions, or where providers go through a bidding process, have a greater impact.

Labor policies in the face of major technological changes

Education and training policies are essential to address major present and future technological changes, such as those related to the energy transition, digitalization, automation and artificial intelligence. In this context, it is essential to invest in the development of new skills, retrain workers and adapt education and vocational training systems to the labor market needs of the future[16].

16 RED 2024 (Allub et al., 2024) highlights the case for energy transition.

In this sense, the creation of the so-called Skills Councils is a step in the right direction. These are spaces for dialogue where the public and private sectors and workers can identify skills needs and design strategies to meet them. They can also foster collaboration between the education and business sectors, ensuring that training programs are relevant.

Other active employment policies are also needed, as well as compensatory policies to support workers during the transition. On the active policy side, the creation of employment agencies can help the unemployed find vacancies and certify their skills. It is also important that information on job opportunities is accessible to all, including those with a digital divide. The cases of Job Bank in Canada and SkillFuture in Singapore can serve as examples[17].

As for compensatory policies, an unemployment insurance system can be a crucial tool to mitigate the impact of technological change. However, the coverage of such insurance in LAC is considerably lower than in developed countries. In this sense, strengthening these insurance mechanisms is key to face the possible disruptive effects of technological change.

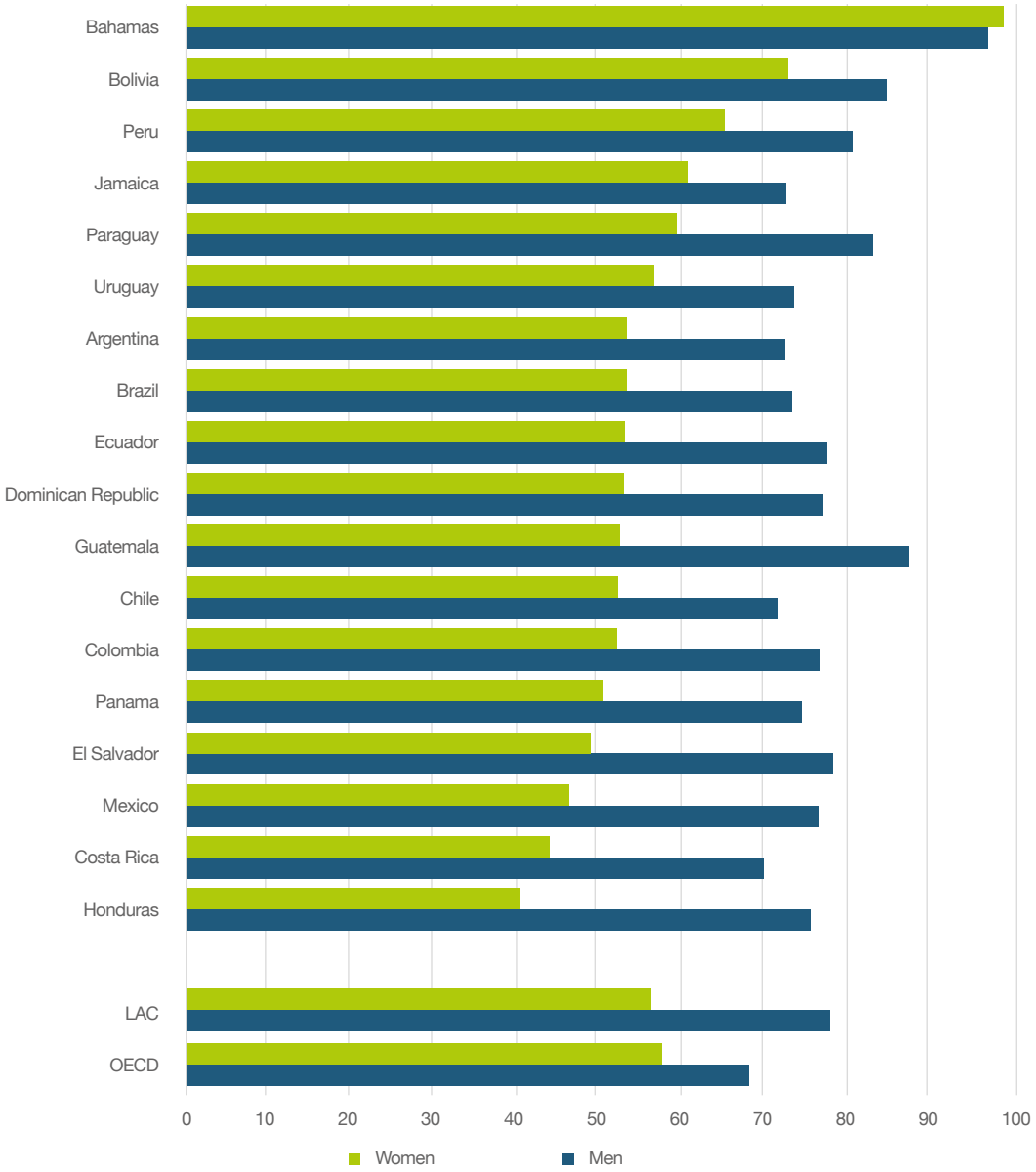
Finally, subsidies for low-income and less skilled workers are another tool to mitigate the adverse effects of change. These measures, however, should be complemented with job insertion and training strategies such as those described above, so as not to discourage formal employment.

Policies for the inclusion of women in the labor market

The low labor force participation of women is another widespread problem in the region. The average gap with men is almost 22 percentage points, while in OECD countries it is 10 points (figure 2.10). This not only implies a serious problem of social inclusion, as discussed in chapter 4, but also a problem of economic efficiency, as mentioned in chapter 1.

17 Visit https://www.jobbank.gc.ca/home and https://www.skillsfuture.gov.sg/ for more details.

Figure 2.10
Labor force participation by sex (%), 2023



Source: (ILO, 2023a).

The RED (Álvarez et al., 2020) made a detailed analysis of policies to promote women's labor participation. The report highlighted two sets of measures that go hand in hand with the main determinants of the gender gap: the difficulties women have in reconciling family and work life and the level of formal education (Marchionni et al., 2019).

Addressing the first problem involves implementing maternity and paternity leave policies that contribute to sharing the burden of responsibilities in the home, essentially the care of newborn children. In this regard, one initiative that has been taken in many countries is to grant equal and shared leave. However, as this type of leave is usually offered to formal workers, its effectiveness may be limited where there is high informality.

Likewise, expanding the supply of care services and extending the school day would reduce the opportunity cost associated with motherhood and make it easier for women to enter the labor market.

Regarding the second problem, it is worth highlighting the following figures. For tertiary education levels, the gap in the labor participation rate in the region is 7 percentage points on average, while for lower levels it is around 20, 26 and 28 for secondary, primary and less than primary education levels, respectively[18]. In this context, active employment policies and programs to support female entrepreneurship can promote the inclusion of women in the labor market.

Financial markets and productive development

Companies access to financing is a fundamental factor for the efficient allocation of capital and productivity. The situation in LAC in this regard is not encouraging.

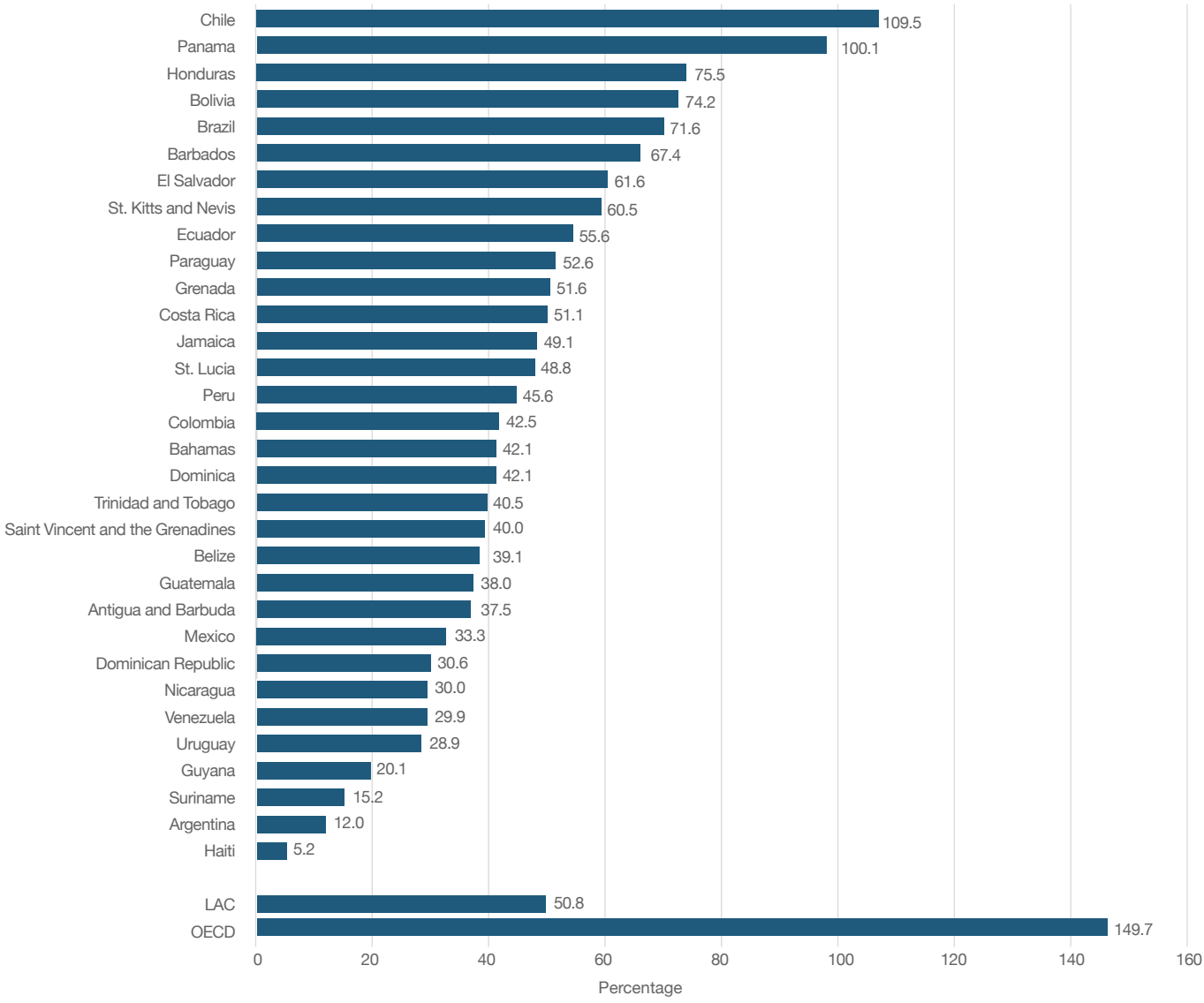
Credit, relative to the size of the economies, is relatively low. Figure 2.11 shows that in LAC credit to the private sector was equivalent to 51 % of GDP in 2023, while in OECD countries it averaged 150 %. This not only indicates poor financial development in the region, but also suggests that firms and households have limited access[19].

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18 These figures are calculated from ILO data (https://rshiny.ilo.org/dataexplorer19/?lang=en&segment=indicator&id=EAP_2WAP_SEX_AGE_RT_A) as averages for the years 2021-2023.

19 Of course, there is great heterogeneity in the region. Countries such as Chile and Panama are known for the depth and stability of their financial systems, which contributes to the high levels of credit to the private sector as a percentage of GDP that are observed. The vast majority of countries in the region, however, have much lower levels of credit.

Figure 2.11
Credit to the private sector (% GDP)



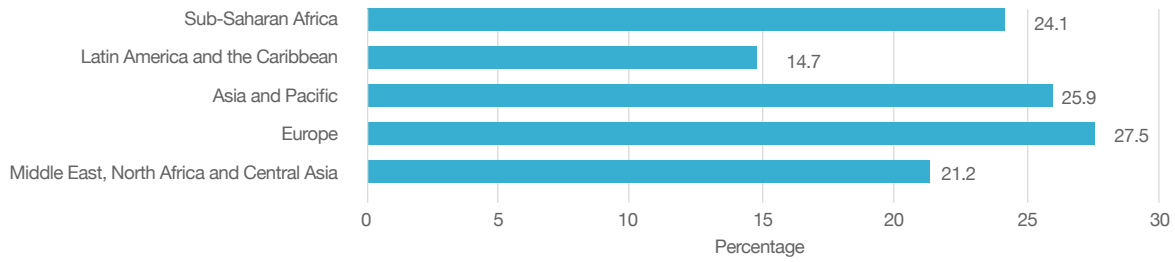
Note: Figures are the latest available data for each country. Most are for 2023. Bolivia and Peru are for 2022, Panama, 2020, and Venezuela, 2013.
Source: World Bank (2023b).

Other indicators confirm this. Small and medium-sized enterprises (SMEs), which consitute almost all of those operating in the economy and account for around 70 % of salaried employment in LAC, face serious credit constraints. As illustrated in panel A of figure 2.12, in the region, about 15 % of commercial bank loans are directed to SMEs, while in the rest of the world's regions they exceed 20 %,

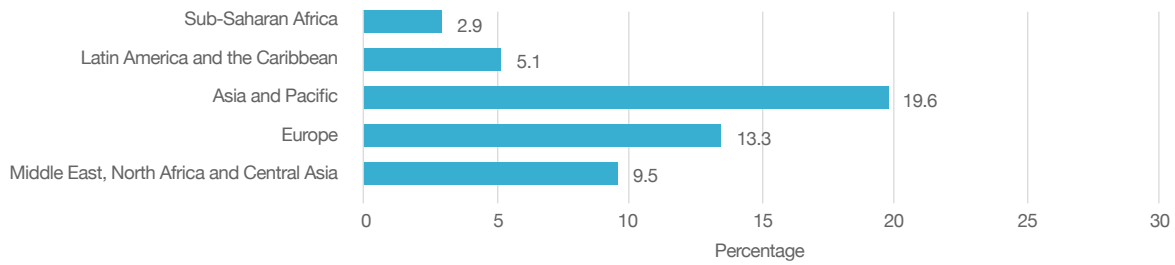
reaching almost 28 % in Europe. Also, SME lending in LAC is only about 5 % of GDP, significantly below the other regions, except Africa, where it is almost 3 % (panel B). By contrast, in Europe, SME lending is equivalent to 13 % of GDP, and in Asia-Pacific, almost 20 %.

Figure 2.12
Commercial Bank Lending to SMEs

A. Percentage over total loans



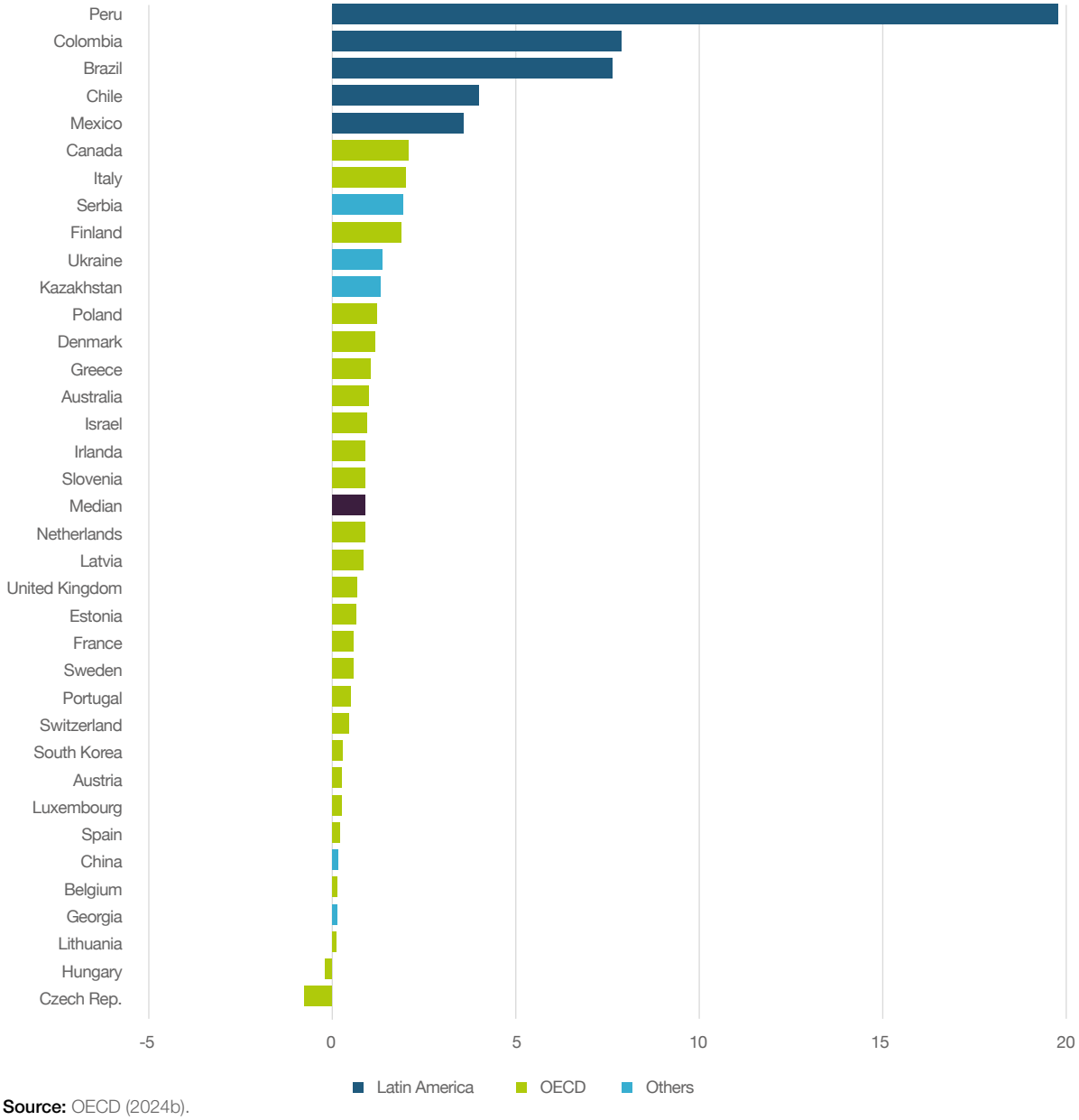
B. Percentage of GDP



Note: The bars show the share of SME lending in total commercial bank lending (panel A) and GDP (panel B) in each region, calculated as the simple average of the countries for which information is available on all variables and for the whole period.
Source: IMF (2024).

Another sign is the interest rate differential paid by SMEs with respect to large companies. According to OECD data (2024b), this is substantially higher in LAC than in developed countries. Figure 2.13 shows that for LAC countries, this differential ranges from 3.6 percentage points in Mexico to almost 20 in Peru. The average for these two countries together with Chile, Colombia and Brazil is 8.6. In contrast, the median for the sample of 36 countries included in the graph is less than 1 percentage point.

Figure 2.13
Interest rate differential between loans to SMEs and large companies, 2022



Source: OECD (2024b).

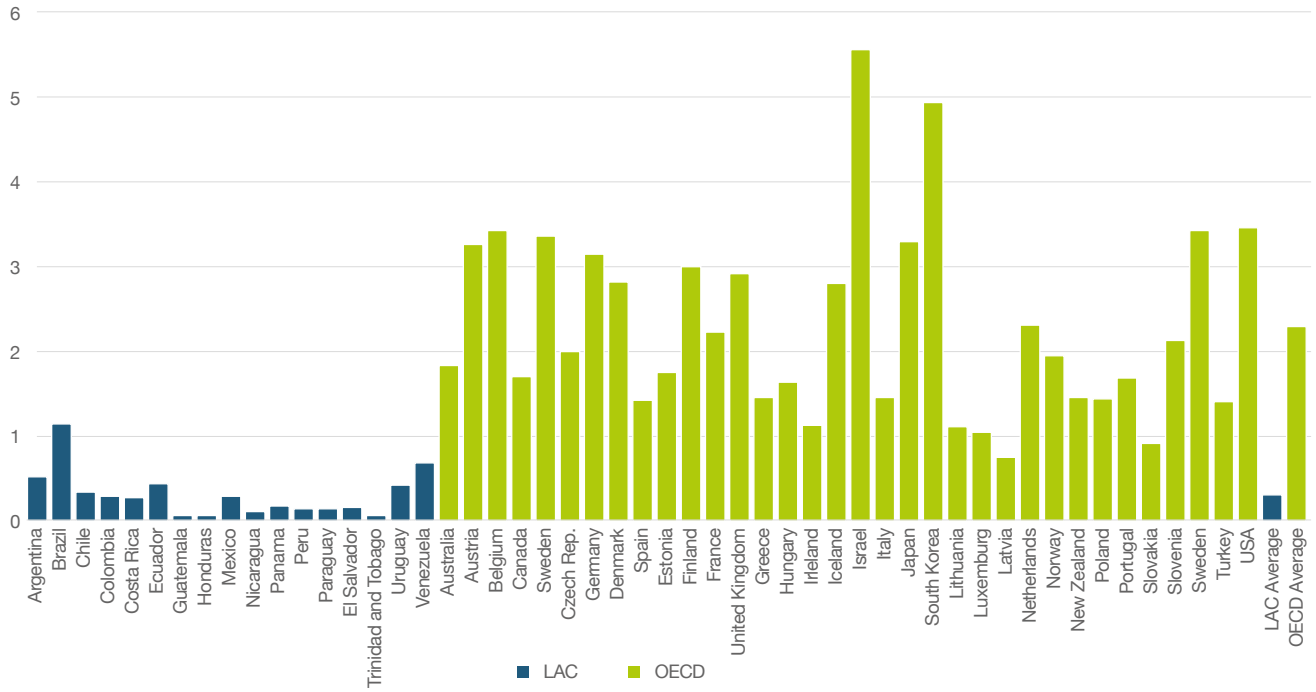
Limited access to finance is a significant obstacle to firm growth, preventing them from fully exploiting the efficiency gains from innovation[20]. When companies, especially SMEs and young firms, face high borrowing costs and barriers to accessing credit, their ability to invest in new technologies, expand operations and

20 Aghion and Fally (2007) and Ayyagari et al. (2021) find that greater access to finance leads to higher employment growth of firms, especially micro and SMEs.

even maintain their existing capital is limited. It also affects innovation decisions by limiting investment in critical complementary inputs, acquiring advanced machinery, hiring skilled labor or implementing new organizational practices[21].

Figure 2.14 shows that R&D spending in LAC countries represents, on average, 0.31 % of GDP, with Brazil leading with 1.15 %. In contrast, the average for OECD countries is 2.3 % of GDP, with countries such as Germany, Japan and the United States above 3 %. Other innovation indicators show the same picture. For example, in terms of patent applications, LAC accounts for only 0.35 % of applications worldwide, while, by way of comparison, the region has more than 8 % of the population and about 7.3 % of world GDP[22].

Figure 2.14
Expenditure on research and development (% GDP)



Note: For most countries, data are for the year 2021, except for the following. For Brazil, Chile and Colombia, they correspond to 2020; Australia and Honduras, 2019; Venezuela, 2016; Nicaragua, 2015; and Ecuador, 2014. The OECD average corresponds to the simple average of the OECD member countries, except for Colombia, Chile and Mexico.
Source: World Bank (2022).

21 There is an extensive literature showing evidence that financial constraints are associated with lower levels of investment in innovation. For example, Bond et al. (2003) and Gorodnichenko and Schnitzer (2013) with data for Germany and the United Kingdom and, more recently, Zhang (2023) with data for China and India. For the case of Latin America, Crisóstomo et al. (2011) find evidence for Brazil that points in the same direction.

22 These data come from the World Bank's World Development Indicators.

Of course, lack of access to financing is not the only cause of low innovation in the region, but it is a crucial factor according to the empirical evidence. Competition in the markets for goods and services, as well as cooperation between companies and participation in value chains, as will be seen below, are also determining factors.

Financial frictions are another element that reduces the entry of new companies[23]. High entry costs and limited access to start-up capital mean that only firms with sufficient internal funds or connections can enter the market. This reduces competition, allowing less productive firms to survive and thrive.

In essence, a financial system that does not function efficiently prevents capital from flowing, especially to the most productive companies with the greatest potential, which ultimately translates into lower productivity at the aggregate level.

Access to finance also affects the occupational decisions of individuals. When barriers exist and capital does not reach the entrepreneurs with the greatest potential, the economy suffers from an inefficient distribution of talent. This means that entrepreneurs with fewer capabilities, but with access to resources, end up operating less productive companies that demand less labor and capital. This is reflected in lower wages, which makes the option of being a salaried worker less attractive. As a result, more individuals seek to become entrepreneurs, generating a vicious circle that results in excessive and inefficient enterprises, many of which end up in the informal sector.

The relationship between informality and financial frictions does not end with their effects on workers' occupational decisions. When firms lack the financial history or assets necessary to secure loans in the formal sector, they may choose to operate informally to avoid the costs associated with formalization.

Another adverse effect of financing barriers is that they hinder the expansion of companies into new markets and their participation in global value chains. In short, financial frictions have profound consequences on the productive fabric and productivity of companies and the economy as a whole.

Financial reform: greater access to credit and inclusion

To improve access to credit, especially for SMEs, and foster greater financial inclusion in LAC, it is essential to address the current shortcomings of the banking system. In the region, the banking system is characterized by high concentration and a lack of incentives to direct sources of financing to SMEs, which are perceived as riskier, forcing many of these companies to rely on internal or informal resources.

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23 Aghion et al. (2007) show that the availability of financing has a strong effect on the entry of new firms. Similarly, Klapper et al. (2006) find evidence that financial development also has a significant impact on firm entry.

In this sense, it is crucial to implement policies that promote competition, transparency and efficiency. This implies, on the one hand, promoting the development of credit information systems that provide reliable information on borrowers, facilitating more accurate risk assessment by banks. This entails strengthening -or even creating- credit bureaus, such as credit bureaus, which collect and disseminate credit information on individuals and companies. By reducing the information asymmetries that characterize the financial system, these institutions promote greater access to credit, responsible indebtedness and a more inclusive and efficient financial system.

> "In terms of inclusion, a common characteristic of Latin America (...) is that access to credit is often highly skewed towards larger companies. Therefore, small and medium-sized enterprises and households have much more limited access to credit".
>
> **Based on an interview with Carmen Reinhart**

In the other hand, it is necessary to facilitate the entry of new financial institutions, including *fintechs* and credit unions, to diversify the market and offer more options to companies and the public.

The impact of *fintechs* in LAC could be significant in improving access to credit, especially for sectors traditionally underserved by conventional banking. Fintechs have the potential to democratize access to financial services through the use of innovative technology that reduces operating costs and allows products and services to be offered that are better adapted to clients' needs.

One of the main advantages of these types of institutions is their ability to assess risk using non-traditional data, such as utility payment history or social network profiles, and alternative analysis methods. This allows them to assess the creditworthiness of SMEs and individuals with limited or no credit history, or insufficient collateral (Kelly et al., 2017).

By operating at lower costs, *fintechs* can offer more favorable financing conditions. This translates into increased competition in the financial sector that manifests itself both directly, through rivalry between *fintech* institutions and traditional banks, and indirectly, by providing incentives for traditional financial institutions to invest in new technologies (Bakker et al., 2023).

There is evidence that this increased competition has been reflected in reduced interest rate spreads, making credit more affordable. In emerging and developing economies, as well as in LAC, an increase in digital bank activity is associated with a reduction in these spreads.

Specifically, a one percentage point increase in the share of digital bank transactions to total bank lending is associated with a decrease in the interest margin of between 0.2 and 1.9 percentage points. In Brazil, where there is a large *fintech* presence, interest rate margins declined by approximately 13 percentage points between 2017 and 2020, and the increase in digital bank activity is estimated to have contributed to a 3-percentage point reduction in these margins (Bakker et al., 2023).

The impact of *fintechs* goes beyond this, as they are also contributing to financial inclusion. Digital technologies make it more cost-effective to attract and serve traditionally excluded populations, such as those in rural areas and low-income people, by overcoming geographic and other barriers and creating products and services specifically designed for the needs of these groups.

Data for Latin America and the Caribbean show that, indeed, fintech ventures are increasingly targeting segments of the population underserved by the traditional financial system. In 2023, "57.32 % of fintech companies target underbanked or unbanked individuals or companies"[24], lwhich represents a significant increase compared to the 36 % observed in 2021 (Finnovista and IDB, 2024)[25].

The partnership between traditional financial institutions and *fintechs* has also proven to be an effective strategy, allowing greater access to credit for individuals and companies, particularly SMEs, that would otherwise have remained excluded.

These partnerships allow leveraging the strengths of both types of organizations. Traditional financial institutions bring their brand, customer base, and access to funds, while *fintechs* offer technological innovation, modern information systems, and the ability to analyze large volumes of consumer data (Kelly et al., 2017).

One question that remains to be answered is whether the growth of the fintech industry effectively improves access to credit for businesses and consumers. Evidence presented in Berg et al. (2022) suggests that, at least in developed economies, *fintechs* have failed to significantly expand access to credit to borrowers underserved by traditional banking, except in specific niches. Other studies show, however, an improvement in access to credit in certain segments and markets[26]. Regarding companies, specifically, there is evidence that *fintechs* can improve access to financing, especially for SMEs[27].

In the particular case of developing economies, *fintechs* have a greater potential to expand access to credit, as their banking systems often lack the infrastructure and resources for proper risk assessment. Therefore, *fintechs*, by using non-traditional data and methods, can have a greater impact.

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24 IDB (2024), p. 169.

25 Fintechs drive financial inclusion not only with products and services, but also with tools that improve users' financial education and health. By 2021, two-thirds of *fintechs* in LAC already offered this type of support, which is crucial in a region with low financial capabilities (IDB, 2022).

26 See, for example, Jagtiani et al. (2021) and Jagtiani and Lemieux (2018, 2019).

27 Beaumont et al. (2021), Hau et al. (2018) and Cornelli et al. (2024).

For this impact to be fully effective, governments and regulators in the countries of the region need to establish a regulatory framework that promotes innovation while protecting consumers and ensuring the stability of the financial system. This includes creating a competitive environment that allows these institutions to operate alongside traditional banking entities, thus promoting a more inclusive and dynamic ecosystem.

Box 2.1 delves into the necessary reforms to the regulatory and normative framework for a better development of the fintech sector.

Box 2.1
A favorable environment for *fintechs*

To achieve the regulatory changes needed to drive fintech growth, while protecting consumers and ensuring the stability of the financial system, a number of specific measures can be implemented, classified into the following categories:

1. Measures to promote regulatory clarity:

- **Definition of categories and services:** establish clear and precise definitions of the different categories of fintech and the services they offer. This can be achieved by creating a fintech-specific glossary or taxonomy to be used by all players in the ecosystem, including regulators, fintech companies and consumers.

- **Balanced regulatory framework:** develop a regulatory framework that balances the need to protect consumers and financial stability with the flexibility needed for *fintechs* to innovate and compete. This may involve creating specific regulations for the fintech sector that are different from the regulations applicable to traditional financial institutions, or adapting existing regulations to make them more flexible and adaptable to the new needs of the sector.

2. Measures to strengthen consumer protection:

- **Data privacy:** implement regulations that protect the privacy of consumer data, including how *fintechs* collect, use and share them. This may involve adapting existing data protection laws or creating new laws specific to the fintech sector.

- **Disclosure of information:** require *fintechs* to clearly and transparently disclose information about their services, including costs, risks and benefits. This can help consumers make informed decisions about the fintech services they use.

- **Prevention of discrimination:** implement regulations that prevent discriminatory lending practices by *fintechs*. This may include prohibiting discrimination on the basis of gender, race, religion or other protected factors.

3. Measures to ensure financial stability:

- **Supervision:** implement adequate oversight of *fintechs* to mitigate systemic risks, especially as they grow and become more integrated into the financial system. This may involve the creation of a specific regulatory body for this sector or the adaptation of existing regulatory bodies.

- **Capital and liquidity requirements:** establish capital and liquidity requirements for *fintechs* that are commensurate with the risks they pose. This can help ensure that *fintechs* are solvent and able to absorb losses, which can contribute to the stability of the financial system.

4. Measures to promote competition:

- **Fair competition:** implement regulations that promote competition among *fintechs* and between *fintechs* and traditional financial institutions. This may include removing barriers to entry for *fintechs*, such as reducing licensing requirements or facilitating access to financial infrastructure.

- **Access to infrastructure:** ensure that *fintechs* have equal access to financial infrastructure, such as payment systems. This can help them compete on a level playing field with traditional financial institutions.

5. Measures to promote responsible innovation:

- **Innovation with protection:** creating a regulatory environment that encourages innovation in areas such as the use of alternative data, artificial intelligence and machine learning in credit assessment, while ensuring consumer protection. This may involve the creation of a regulatory *sandbox*, allowing *fintechs* to test new technologies and business models in a controlled environment.

- **Oversight of new technologies:** oversee new technologies and business models to mitigate potential risks and ensure consumer protection. This may involve the creation of a working group or committee dedicated to monitoring new technologies and developing regulations to mitigate risks.

In summary, to achieve the regulatory changes necessary for fintech growth, a comprehensive approach is required that includes measures to promote regulatory clarity, consumer protection, financial stability, competition and responsible innovation.

Development banking as an alternative

Development banking can play a crucial role in improving access to financing for businesses by acting as a complement to private banks and credit unions. It can also boost the growth of SMEs, which are the engine of many of the region's economies. Through support programs and financial products tailored to the needs of these companies, development banking can facilitate access

to credit and promote the creation of jobs, investment and innovation. It can achieve these objectives through two traditional mechanisms: direct credit and guarantee programs[28].

Direct credit consists of loans granted by development banks to companies. There are two main types of direct credit: loans to end clients and second-tier loans to financial institutions. In the first case, development banks grant loans directly to companies, while in the second case they are channeled through private financial institutions that act as intermediaries.

Loans granted directly to end clients usually have more favorable terms than those offered by commercial banks, such as lower interest rates and more flexible repayment terms. The effectiveness of this instrument depends on the ability of development banks to reach SMEs, which are often geographically dispersed. It also requires a wide service network and the ability to accurately assess the risk of each operation.

The reach of second-tier programs is usually greater, since they take advantage of the infrastructure and information of partner financial institutions to reach a larger number of clients, without significantly increasing the cost of financing. In this case, moreover, the credit risk is shared. Evidence suggests that this type of lending has lower default rates compared to direct development bank loans, which may reflect a more efficient client selection and risk management process.

On the other hand, guarantee programs are instruments designed to facilitate access to credit for SMEs, especially in contexts where they face significant barriers due to asymmetric information problems. These programs allow companies that do not have sufficient backing to guarantee a loan to access financing by purchasing guarantees to replace it. This insurance allows companies with potential, but perceived as high risk, to access credit with better conditions.

Although some studies show a positive impact of these public financing programs on access to credit and employment generation, the effects on investment, innovation and productivity are less clear. This is because the success of public financing depends crucially on good program design and implementation (Abadi et al., 2022).

A typical problem with this type of program is that the resources granted end up benefiting companies that do not face financial restrictions. In these cases, private credit is replaced by public financing, and access to resources for excluded companies is not improved. This type of problem could be avoided if the design of these programs prioritized the participation of companies that actually face credit restrictions.

In order to improve the impact of these programs, it is recommended that they focus on companies with growth potential and the capacity to use resources effectively, which implies an important challenge in terms of identifying companies not only with potential and capacity, but also with limited access to financing.

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28 For a more extensive discussion on this topic, see Álvarez et al. (2021).

Complementing financial support with business development services, such as financial management training, diagnostics of management practices, marketing advice and internationalization support, can significantly amplify the positive effects of public financing programs[29].

This combination of financing and business development services is crucial, as it enables SMEs to access capital and improve their internal capabilities. Implementing such programs in an integrated manner can therefore contribute to the sustainable development of SMEs.

An important aspect in the design of these programs is constant monitoring. Rigorous impact evaluations make it possible to measure their effectiveness, identify areas for improvement and optimize the allocation of resources. To achieve this, it is essential to ensure transparency in the beneficiary selection process and in the distribution of funds.

Adequate monitoring of guarantee funds, for example, would not only help determine whether the program is effectively improving access to credit, but also whether it is sustainable in the long term. A common challenge in these programs is that banks may have incentives to bring their riskier clients into the guarantee programs, or else relax their efforts in selecting and monitoring beneficiary enterprises, which could result in higher default rates and affect the sustainability of the program.

These incentive problems also highlight the need to introduce in their design an adequate risk sharing between the development bank, the commercial bank and the participating companies. In addition, the implementation of penalty mechanisms for banks with high default rates and incentives for those with good performance can encourage banks to take an active interest in the credit quality of borrowers, mitigating moral hazard and program sustainability problems.

In order for development banks to fully comply with their function of improving access to credit, certain reforms are needed to optimize their operation, guarantee their sustainability and ensure their capacity to respond to the needs of the productive sector.

These reforms must ensure that development banks act as a complement to commercial banks and that they are capable of identifying the market failures that need to be overcome, as well as determining which instruments to use to support the productive development policies defined by governments. National development banks must also be able to identify sectors and activities with the potential to generate positive externalities in the economy, such as innovation, export diversification, the green economy and the development of value chains.

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29 Experiences in Brazil (Pires et al., 2014), Chile (Arráiz et al., 2011) and Argentina (Peirano, 2011) are illustrative.

In this sense, these reforms should include the definition of a clear mandate to guide the actions of development banks and ensure their complementarity with the private sector. In turn, to ensure that they can fulfill this mandate, they must adopt good governance structures that guarantee their independence, technical capacity and financial sustainability. Only in this way will they be able to play an active role in the productive transformation of the region's economies.

> "Indeed, development banks have a very important role to play, far beyond the financial one. They are the place where we learn from each other, where suddenly a country wants to carry out a project in a new area (...), and that leads the bank to learn in the process of financing these types of activities. Once it learns, it can pass on that knowledge so that other countries can explore those same directions".
>
> **Based on an interview with Ricardo Hausmann**

The role of the capital markets in financing

Beyond the role that access to credit plays in boosting productive development, another important aspect that must be taken into account in a comprehensive financial reform is the development of capital markets.

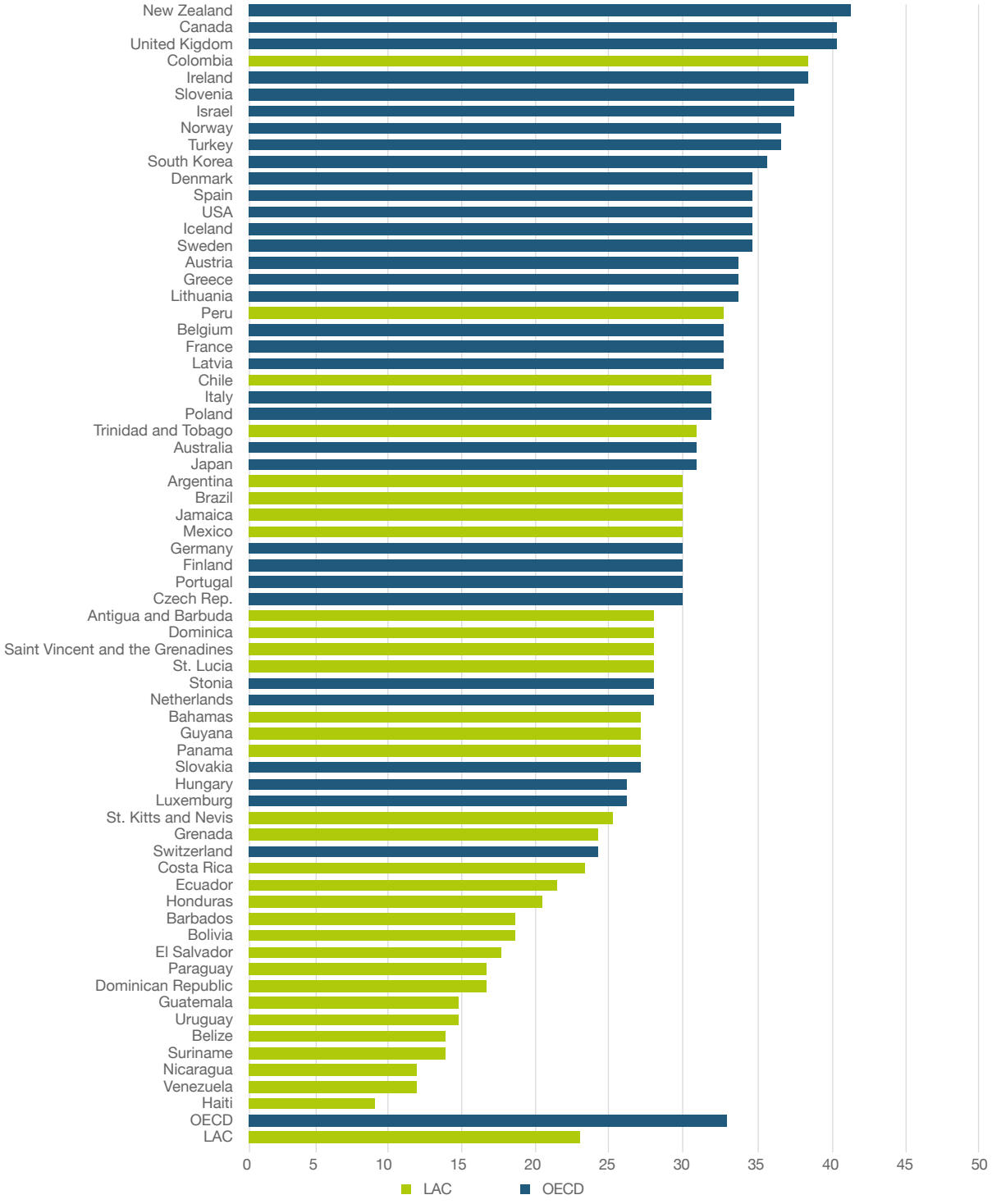
The region's securities markets have significant growth potential, but realizing it requires specific reforms. One priority is to improve accessibility to the market itself. Reducing barriers such as high transaction costs and complex regulations can encourage broader participation, particularly from retail investors. In addition, promoting institutional investment from entities such as pension funds can inject much-needed liquidity. Developing deeper bond markets can also provide alternative funding avenues and complement stock market growth.

Strengthening transparency and corporate governance is also crucial. This involves improving disclosure requirements for listed companies, ensuring rigorous compliance with international accounting and reporting standards, and incorporating environmental, social and governance factors into company disclosures. Establishing strong and independent regulatory bodies, with robust enforcement mechanisms, is essential to maintain market integrity and protect investors.

In general, good corporate governance facilitates access to financing, both from internal and external sources. In this scenario, the need to protect minority shareholders stands out.

Figure 2.15 shows how far the region lags behind in this regard. It shows that countries generally offer less protection to minority investors than more developed countries. This suggests the existence of significant gaps in the legal and institutional framework governing this important aspect of corporate governance.

Figure 2.15
Protection of minority investors, 2019



Note: Index from 0 to 50 (best) constructed based on the following sub-indices: degree of transparency, director accountability, ease of shareholder lawsuits, shareholder rights, corporate governance and transparency.

Source: (World Bank, 2020).

This gap has profound implications for companies' access to financing. When minority shareholders are better protected, capital tends to be allocated more efficiently, as investors feel more confident to invest knowing that their rights are guaranteed. Strong minority shareholder protection reduces the risk of majority shareholders or management abusing their power to the detriment of minority shareholders. This encourages the development of stock markets and allows capital to flow to companies with better growth prospects.

However, in order to strengthen the rights of minority shareholders, a clear and comprehensive legal framework must be established that explicitly defines such rights. These include, among others, voting rights, access to company information and the possibility of taking legal action against the company itself or its directors.

This legal framework must be complemented by strong and independent regulatory bodies, with powers to enforce regulations and ensure fair treatment of all shareholders, regardless of their shareholding. In addition, it is essential to promote transparent corporate governance practices, such as independent boards of directors and clear decision-making processes. Finally, accessible and efficient dispute resolution mechanisms should be in place to address conflicts between shareholders and the company, ensuring that minority shareholders have a fair and impartial platform to voice their concerns and seek redress.

Also critical to the development of capital markets, particularly debt markets, is the proper design of bankruptcy laws. These provide a key framework for dealing with insolvency, reducing uncertainty for both borrowers and lenders, and ultimately promoting the smooth functioning of the financial system.

Reducing risk and increasing investor confidence are the main ways in which bankruptcy laws support the development of capital markets. Well-defined bankruptcy procedures provide clear and predictable processes for handling insolvencies, giving creditors the assurance that their rights will be protected. This makes investment in debt securities more attractive, as lenders are more willing to provide capital when they have confidence in the ability of the legal system to handle companies' financial difficulties.

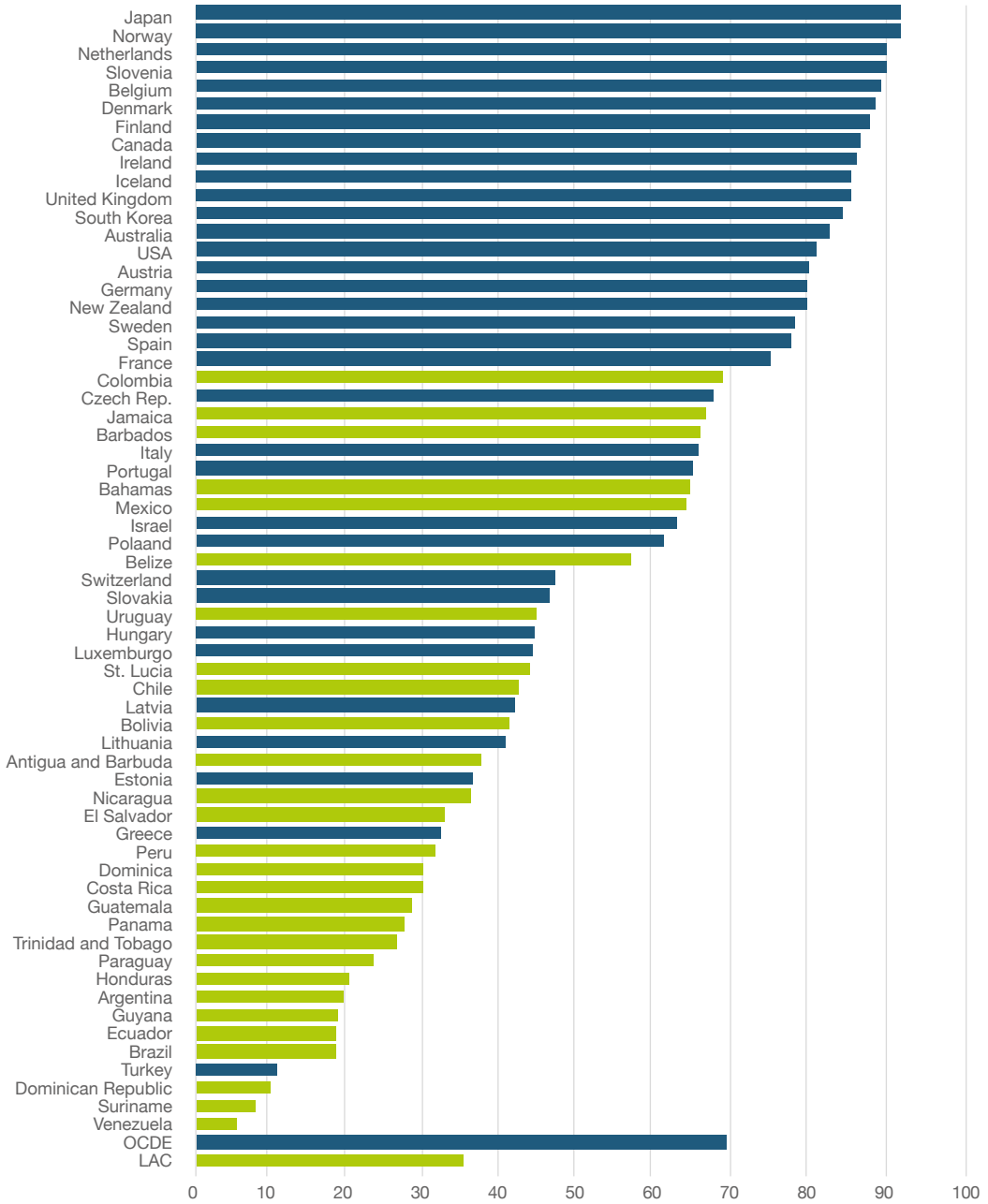
In addition, effective bankruptcy laws allow for the efficient restructuring and reorganization of financially troubled companies. By providing a legal framework for them to negotiate with creditors and reduce their debt burden, these laws help prevent the unnecessary liquidation of companies. This preserves their economic value, maintains jobs and allows viable businesses to continue operating[30].

Figure 2.16 shows that countries in the region, in general, have less efficient insolvency procedures than more developed countries. In LAC, creditors recover about one-third of the debt in the event of insolvency on average, while in the OECD they recover 70 %.

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30 Beyond capital markets, bankruptcy laws also have a significant impact on credit. Clear and efficient insolvency procedures reduce risk for banks, making them more willing to lend to firms and individuals (Claessens and Klapper, 2005).

Figure 2.16
Insolvency proceedings



Note: This indicator shows the recovery rate in the event of insolvency. Cents per dollar recovered by secured creditors through debt reorganization, liquidation or enforcement (foreclosure or administration) proceedings.
Source: World Bank (2020).

Although there are differences among countries, some common reforms are needed in LAC to strengthen bankruptcy laws and make insolvency procedures more efficient. On the one hand, it is necessary to modernize and harmonize legal frameworks. This involves updating bankruptcy laws to reflect the complexities of modern financial instruments and cross-border transactions, improving efficiency and transparency in bankruptcy proceedings, and establishing specialized courts to handle cases effectively.

On the other hand, it is essential to strengthen creditor rights while ensuring fair treatment of debtors. Improving creditor protection in areas such as priority of payments and collateral enforcement procedures can increase investor confidence and foster debt market growth. At the same time, it is important to balance these protections with provisions for debt restructuring and rehabilitation to give debtors the opportunity to recover.

Another aspect of the capital market that can lead to improved access to financing for companies is the development of private equity and venture capital instruments. The former is aimed at more mature companies seeking to restructure or expand, while the latter is focused on early-stage ventures with high growth potential.

For SMEs and young companies with difficulties in accessing traditional financing, these instruments serve as a complement and, in some cases, as an alternative to debt instruments. These mechanisms are appropriate to overcome the heavy requirements demanded by more traditional sources, such as the demonstration of income to qualify for credit or the exemption from paying interest at an early stage of operation, when there is usually a clear scarcity of liquidity (Álvarez et al., 2021).

Despite their advantages, these mechanisms have had little penetration in LAC due to information problems, the opacity of financial records and the lack of familiarity of entrepreneurs with these financing vehicles. To overcome these barriers, policies are suggested to encourage both their demand and supply.

On the demand side, the creation of databases of SMEs with the potential to attract investors can be promoted as part of the business services offered by government agencies or trade associations. The promotion of startup “accelerators” and “incubators” is another way of bringing companies closer to potential venture capital investors.

On the supply side, tax incentives can be offered to venture capital investors. On the other hand, direct investment or government co-investment in venture capital funds can serve as a catalytic instrument for the participation of private investors, which is key for the proper functioning of these funds.

Competition as a driver of innovation and productivity

Competition in goods and services markets is a determinant of aggregate productivity by influencing both the allocative efficiency of the economy and the internal efficiency of firms. Lack of competition leads to an inefficient allocation of production factors. First, barriers to competition allow low productive firms to survive and even prosper, while the more productive ones do not necessarily develop their full potential.

Second, in industries where the entry of new firms is restricted, the role of the selection process in firm dynamics is distorted, reducing the possibility for new, higher productivity firms to replace outgoing, less productive ones, which would not be able to survive in a more competitive environment.

On the other hand, the lack of competition also affects companies' productivity directly. Facing less competitive pressure, companies have less incentive to innovate and improve their processes and management practices. Likewise, high market power can lead to more restrictive labor practices, which tend to reduce workers' efficiency and effort (Álvarez et al., 2018).

RED 2018 shows that LAC has low levels of competition, especially in the services sector, which translates into high price margins compared to other regions and, in particular, to higher-income countries. In a recent World Bank report, Maloney et al. (2024) find that markets in LAC are characterized by a high level of concentration and market power, with the presence of a few dominant giant firms.

Figure 2.17 confirms these findings. It shows an index of the degree of market dominance where it can be seen that, according to the opinion of business executives in each of the countries, the levels of competition in LAC countries are below those observed in OECD members.

Figure 2.17
Market dominance index



Note: This index is derived from the survey question "In your country, how would you characterize business activity? [1 = dominated by a few business groups; 7 = distributed among many firms]. Weighted average 2018-2019 or most recent period available.
OECD average excludes LAC countries that belong to the organization.
Source: Global Competitiveness Report 2019, World Economic Forum.

It is healthy to protect competition

Although in the last 20 years there has been significant progress with "the enactment of numerous new competition laws, amendments to existing ones and the establishment of a significant number of competition authorities"[31], the region continues to show a lag in this area with respect to more developed countries. Although some countries have adopted competition policies aligned with good practices, deficiencies persist in the implementation and enforcement of laws, as well as in the institutional capacity to promote a more competitive environment (Álvarez et al., 2018).

Also, competition policies are still young and weak in many countries in the region, thanks in part to the power and influence wielded by large companies. In general, competition agencies are understaffed and underfunded compared to their peers in OECD countries. This is reflected in fewer *ex officio* investigations for anticompetitive behavior (Maloney et al., 2024; OECD, 2022).

In order to strengthen the regulatory frameworks for competition defense and the corresponding agencies, it is necessary to implement a set of measures to address the deficiencies identified. These measures should focus, first and foremost, on improving institutional capacities. This implies providing the agencies with greater autonomy and resources so that they can effectively investigate and sanction anticompetitive behavior. This includes improving information collection and analysis systems, as well as staff training.

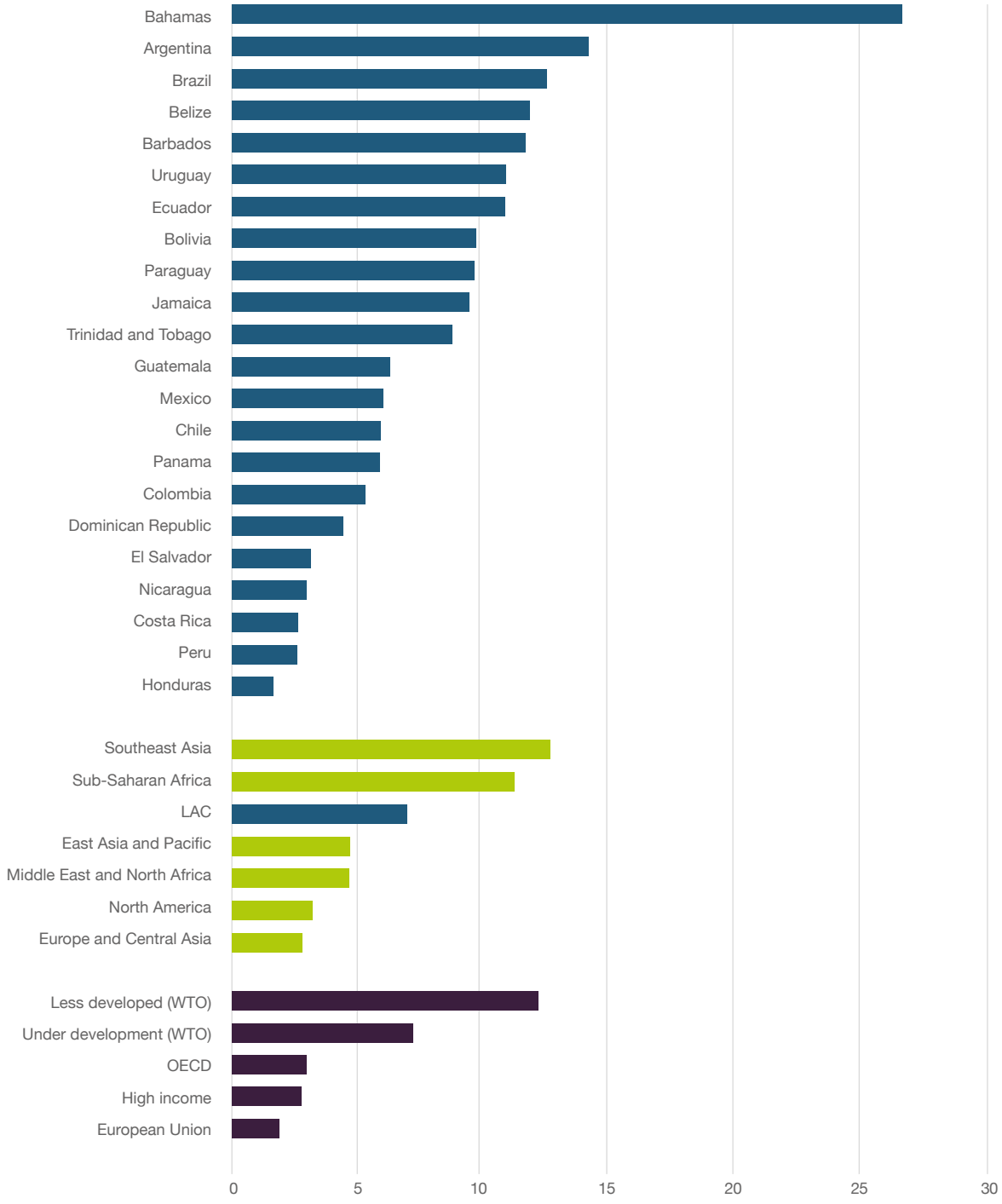
On the other hand, enforcement and compliance must be improved. This involves ensuring that competition laws are applied impartially and efficiently, with dissuasive sanctions for companies that break the rules. It is also crucial to promote awareness of the importance of competition and make it easier for consumers to report anti-competitive practices.

Trade openness

Another policy highlighted by RED (Álvarez et al., 2018) to promote competition is trade openness. The report shows that "despite the progress that Latin America has undoubtedly shown in recent decades in terms of trade openness, the region remains relatively closed to international competition compared to more developed countries". As figure 2.18 shows, LAC has high tariffs compared to other regions. For example, it has an average effective tariff rate of almost 7 %, while more developed countries have tariffs around 3 % or even lower, as is the case of the European Union. Furthermore, LAC has tariffs similar to those of other developing economies and much lower than those observed in lower-income countries and regions

31 OECD (2022).

Figure 2.18
Average effective tariffs (%), 2022



Note: These values refer to the simple average of the effective applied tariff rates (AHS).
Source: WITS 2022, World Bank.

Within the region, however, there is great heterogeneity. On the one hand, there is Peru and a group of Central American countries such as Honduras, Costa Rica, Nicaragua and El Salvador with low tariffs, at levels similar to those observed in more developed countries. On the other hand, there is a group of countries with very high tariff barriers, such as those of Mercosur and some Caribbean countries.

Also, as mentioned in the RED (Sanguinetti et al., 2021), existing non-tariff barriers in the region "can represent important restrictions to trade and in several cases be comparable in magnitude or even higher than tariff barriers". RED (Álvarez et al., 2018) suggests that these barriers have been used as a proxy for tariffs in the design of trade policy in the region in a context of continuously falling tariffs since the 1990s.

The barriers to trade in LAC are reflected in the relatively low volume of international trade relative to the size of the economy. Figure 2.19 shows that total trade in the region represents about 50 % of GDP, below most other regions of the world and the more developed countries, including the European Union, where this indicator reaches 94 %. Even the least developed countries, most of which are in Sub-Saharan Africa, have higher levels of trade.

Again, there is great variability within the region. In particular, small economies such as those of the Caribbean and Central America have levels of trade openness that tend to be higher, as is to be expected in this type of economy, while the larger ones, such as Argentina, Brazil and Colombia, have significantly lower levels of trade. The case of Mexico is exceptional in this regard because of its relationship with the United States, to which it directs around 80 % of its exports and from which almost half of its imports come.

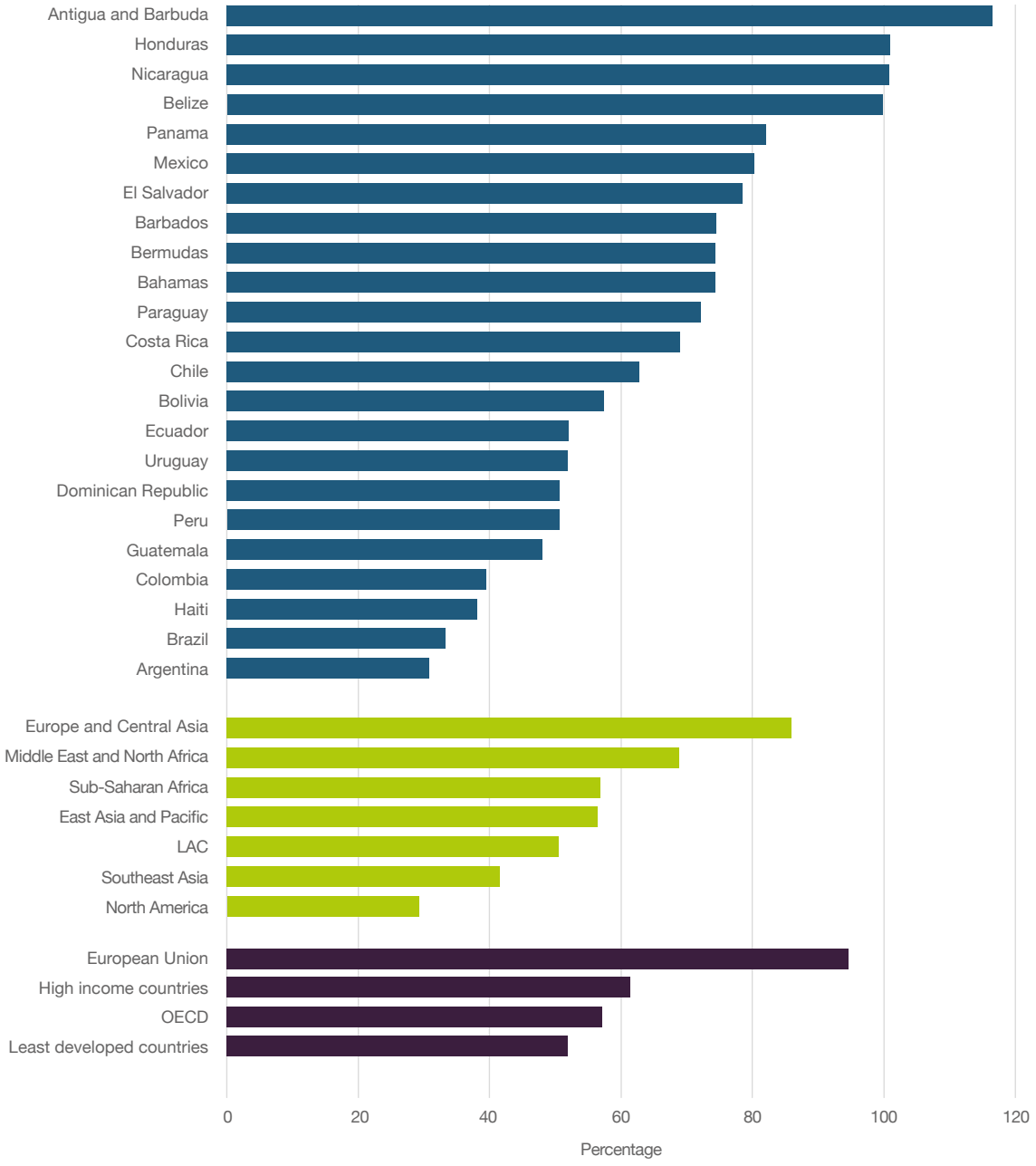
These low levels of trade openness in the region translate, in turn, into low regional integration. Countries not only trade relatively little with the rest of the world, but also among themselves. As shown in panel A of Figure 2.20, LAC is one of the regions with the lowest intra-regional share of its imports and exports, both representing around 15 % of the total. In the case of exports, LAC is only above South Asia[32], cwhose intra-regional exports account for only 7 % of the total, and practically at the same level as the Middle East and North Africa. Overall, LAC is far behind the intra-regional trade values of Europe and Central Asia, and East Asia and the Pacific.

The lack of regional integration is also apparent in the level of tariffs applied to intra-regional imports. Panel B shows that effective tariffs on intra-regional imports are not only higher than total effective tariffs in LAC, but are also the second highest among the regions included there.

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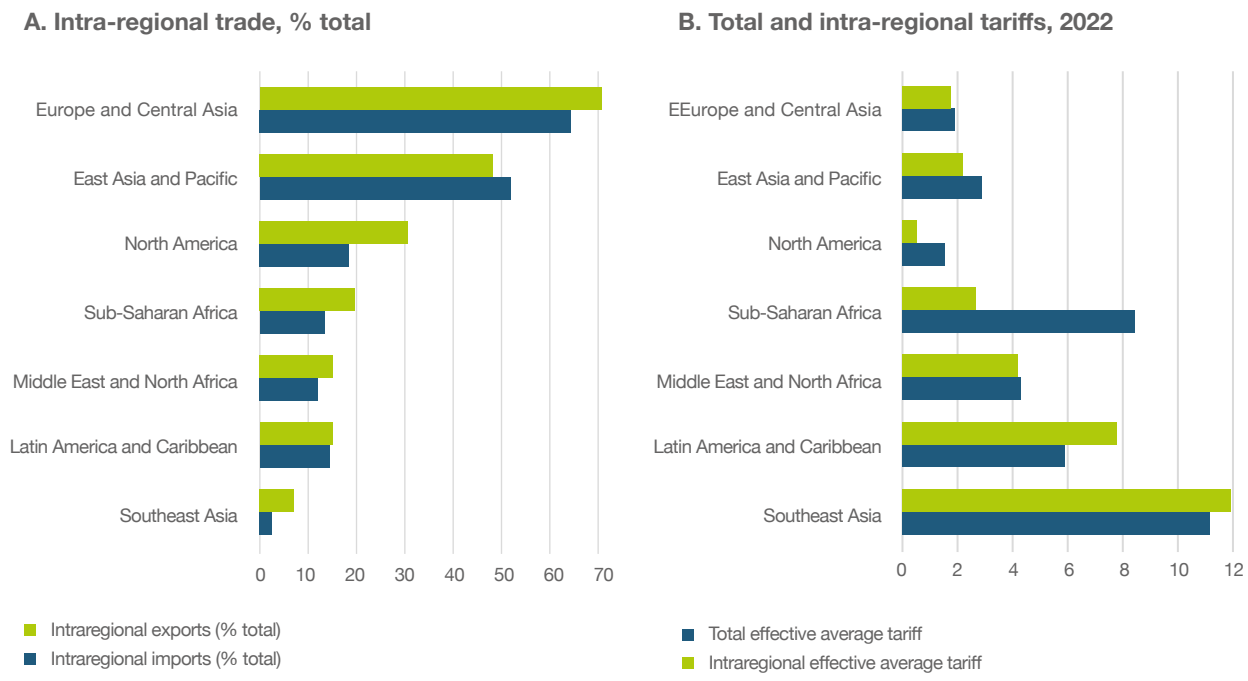
32 Including Afghanistan, Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan and Sri Lanka.

Figure 2.19
Trade as a percentage of GDP, average 2018-2023



Note: This indicator refers to imports plus exports as a percentage of GDP.
Source: World Bank (2023a).

Figure 2.20
Intra-regional trade, 2022



Source: (WITS, 2022).

The issue of international trade, of the development of the tradable sector, not only of exports that find quality niches in the world but also of efficient import substitutions, is a very important process. I am convinced that in this sense, structure is important for growth. There are some economists who think that the only important thing is to be productive in whatever one produces, but I tend to think that it is not only to be productive and efficient but also to tend to produce more, to be oriented towards external demand, towards the tradable sector. This structure seems to me to offer a wider range to grow based on learning, development and technological adoption

Based on an interview with Augusto de la Torre

> "International trade is an important ally of improved productive capacity, and it is so through at least two channels that the literature has shown to be manifested in Latin America and has shown this to be the case in the various episodes of trade liberalization. A first element is competitive pressure".
> **Based on an interview with Marcela Eslava**

To promote greater trade openness, the countries of the region must first reduce or remove tariff and non-tariff barriers. Countries with high tariffs, such as those of Mercosur, should consider a gradual reduction until they reach levels similar to those of countries with lower import levies. Secondly, improvements in logistics systems and the simplification of customs processes and procedures are needed to avoid greater trade restrictions and costs. Finally, it is necessary to promote regional integration, for which it is also essential to improve transportation infrastructure, especially land transportation[33].

Business-to-business relations: access to inputs and cooperation

Access to inputs in terms of quantity, quality and variety is essential for companies to achieve high levels of productivity. So is cooperation, which allows them to obtain the necessary inputs for their production in a more efficient way and to have a flow of information that facilitates the adoption of innovative inputs and better technologies.

In this sense, given that production is organized in value chains where one company depends on the inputs of others, distortions in one sector can be transmitted to others and affect their productivity. Therefore, the web of inter-firm relationships acts as a transmission mechanism for sectoral shocks that eventually affect aggregate productivity.

The service sector

An analysis of sectoral input-output relations in LAC reveals the great importance of the services sectors and, in particular, of the commerce sector as an input supplier (Álvarez et al., 2018). It also identifies sectoral distortions affecting access to inputs. These distortions, taken together, are estimated to cause productivity losses equivalent to 14 % of output on average in the region.

33 RED 2021 offers an in-depth analysis of regional integration policies.

Although these distortions stem, to a large extent, from the set of regulations and market failures that affect all sectors, some arise from sector-specific problems. The service sector seems to be particularly affected by this type of problem, which is relevant given its degree of influence within the economy.

This is related to the marked deficiencies in the quality of some services in the region, such as electricity, transportation and logistics services, which are essential for business operations. The low quality of services is due, in part, to the existence of important infrastructure gaps, as mentioned in Chapter 1. Another determining factor is the presence of deficient regulatory frameworks that limit competition and impose barriers to trade in services.

Addressing these problems implies carrying out reforms to these regulatory frameworks and implementing measures that favor competition, private participation and international trade in services, some of which have already been discussed. Other measures may be aimed at encouraging public-private partnerships in infrastructure projects and foreign direct investment in services.

Cluster policies

Cluster promotion policies can be powerful instruments for improving access to inputs and fostering cooperation among firms. This is particularly relevant in industries where coordination is essential to achieve economies of scale or to favor access to specialized workers or inputs.

Cluster policies can also generate significant sectoral productivity gains by fostering the division and specialization of labor, the development of a wide range of high-quality inputs and services for the sector, the provision of essential public goods and infrastructure, the development of business partnerships, and the innovation and diffusion of knowledge.

For cluster policies to be effective, they must promote capacity building in both the public and private sectors. This implies strengthening institutions, promoting human capital formation and facilitating collaboration between companies, Government, universities and research institutions. In addition, it is crucial to promote the benefits generated by clusters, such as knowledge spillovers. To this end, measures that strengthen linkages within the cluster and facilitate its integration with external markets must be implemented (Álvarez et al., 2018).

This approach requires a comprehensive set of actions ranging from the identification of potential clusters and dialogue with key stakeholders, to the provision of public goods, the promotion of collective investments, support for the training of specialized human capital, the improvement of logistics infrastructure and the development of efficient supply chains.

Participation in global value chains

Integration into global value chains (GVCs) is a key aspect to enhance the impact of clusters. It offers multiple benefits, such as access to higher quality inputs, advanced technologies and more efficient production processes. Integration also exposes companies to best practices, international standards and innovations that can result in knowledge transfers. In addition, companies have access to global markets that allow them to grow, take advantage of economies of scale and increase their efficiency.

> "There is a channel that runs along the production chain that makes the benefits of international trade grow and grow as we build on the production chain. This is a very important element that speaks of the importance of having access to better inputs. And that not only translates into me importing better or cheaper inputs, but also into competitive pressure on input levels. It also leads to an improvement in the local production of those inputs".
>
> **Based on an interview with Marcela Eslava**

A study by Fernandes et al. (2021) reveals that exporting companies in the region that participate in GVCs—that is, those that not only export, but also import intermediate inputs and capital goods—have a better export performance. These companies also tend to be larger and more diversified.

> "When looking at Latin America's integration into large value chains, we find that we are connected at the beginning or at the end of the chain with some products. The studies that have been done show that the countries that have been most successful in growth typically have multidimensional and varied connections with global value chains. In particular, they are highly embedded in the intermediate segments. This suggests that when you are in the middle of the chain, you have more options for learning, acquiring and developing new technologies, and improving the quality of what you do because, on the one hand, you have to import, and on the other, you have to export".
>
> **Based on an interview with Augusto de la Torre**

Unfortunately, LAC shows a low level of integration into GVCs. This is also reflected in a weak integration into regional value chains, which is in line with the low level of intra-regional trade already mentioned. The evidence shows that, compared to other regions, LAC exporting companies are less dependent on intraregional markets, both for their exports and for obtaining inputs (Fernandes et al., 2021).

The integration of the region's companies into GVCs requires a comprehensive strategy that addresses several key aspects. First, facilitating foreign direct investment (FDI). This allows multinational companies to take advantage of local economic benefits, such as lower costs or the availability of specific inputs. In addition, FDI can generate opportunities for domestic companies to integrate into the production chains of these multinationals and create spillover effects that benefit local companies.

Second, there is a need for cross-cutting policies that promote trade openness, innovation and human capital development, as well as others that improve access to financing. Institutional reforms are also needed, for example, to strengthen property rights and promote regulatory transparency.

Finally, in order to reinforce regional value chains, it is essential to simplify and harmonize the rules of origin in intra-regional trade agreements. The complexity and inconsistency of these rules hinder the accumulation of production processes in several countries and discourage regional integration.

Industrial policy as an enabler of productive development

So far, reforms and policies have been proposed to address specific problems such as informality and lack of access to financing. However, many of these problems have common roots that require a comprehensive and coordinated approach capable of articulating these policies. Industrial policy can serve as an articulating mechanism.

Industrial policy is defined as the set of government actions that seek to transform the structure of economic activity in pursuit of some public objective. These policies are targeted, meaning that they are oriented to specific activities, and are intentional in the sense that they seek to change the structure of the economy.

In Latin America and the Caribbean, industrial policy presents an opportunity to boost economic growth and productive diversification. One of the potential benefits is the ability to transform the economic structure toward more advanced and competitive sectors, which could generate quality jobs and foster innovation. However, to maximize these benefits, it is crucial that policies are well designed and based on a rigorous analysis that considers the specific characteristics of each country and the risks inherent in state intervention.

Modern industrial policy moves within a complex triad: the incorporation of new technologies, the promotion of social inclusion and the pursuit of environmental sustainability (ECLAC, 2017). This triple challenge requires a comprehensive approach that not only fosters competitiveness, but also ensures that the benefits of growth are distributed equitably and that economic development is compatible with environmental protection. For example, the promotion of renewable energy industries can generate green jobs, reduce dependence on fossil fuels and contribute to climate change mitigation. However, it is crucial that these policies do not exclude the most vulnerable sectors of the population and that they consider the long-term social and environmental impacts.

Despite its potential benefits, the implementation of industrial policy carries certain risks. One of these is political capture, where particular interests may divert resources to activities that do not benefit society as a whole. Lack of adequate information can lead to inefficient sector selection decisions. Another risk is that poorly designed policies may give disproportionate advantages to certain companies, compromising competition.

To reduce risks, it is essential to implement an approach based on data and empirical evidence. Policies should undergo cost-benefit testing, considering not only direct costs, but also administrative costs. It is important to include continuous monitoring and evaluation mechanisms to adjust policies as needed.

Public-private collaboration is also essential to generate relevant information, formulate action agendas and ensure that policies are effective. In addition, it is crucial to learn from international and, especially, regional experiences, given that the economic and social contexts may be similar. By adopting these strategies, countries in the region can reap the benefits of industrial policy while minimizing its risks.

Now, a well-designed industrial policy must provide a directional framework that allows private actors to make long-term investment decisions, such as the promotion of technologies that make efficient use of resources and produce low carbon emissions. This implies creating an environment that stimulates competition and provides guarantees for corrective action, moving away from rigid and centralized approaches that have failed in the past (ECLAC, 2017).

Industrial policy has a wide range of instruments at its disposal to achieve its productive development objectives. These can be cross-cutting or selective.

Transversal policies, also known as horizontal policies, seek to improve the general productive environment, benefiting all companies regardless of their economic activity or location.

Many of the policies discussed in this chapter are among the cross-cutting ones, such as, for example, those aimed at facilitating access to financing for companies. There are also trade and international market integration policies, human resource education and training, and competition policies. Other interventions include science, technology and innovation policies, as well as investment in infrastructure and the provision of public goods such as education, health and social protection.

Selective policies, on the other hand, focus on specific areas of the economy. On the one hand, there are sectoral policies aimed at identifying and promoting industries with high growth potential, such as renewable energies or biotechnology. To this end, rigorous market analyses are carried out and measures are implemented to promote innovation, public-private collaboration and investment attraction. Territorial policies, on the other hand, seek balanced economic development throughout the territory, reducing regional disparities and boosting competitiveness.

Among the instruments or strategies that can be used by both sectoral and territorial policies is the development of clusters, which, in addition to promoting the development of a specific sector or activity, also boosts local economic growth, employment generation and regional competitiveness.

Finally, the selection and combination of these instruments will depend on the industrial strategies of each country, as well as the characteristics of its productive structure and economic context. Box 2.2 illustrates the case of the digital transformation of the productive sector as an industrial strategy of particular interest to LAC.

Box 2.2
The digital transformation

The digital transformation of the productive sector seeks to improve the performance of companies through the adoption of Industry 4.0 technologies such as the internet of things, artificial intelligence, cloud computing, *big data* and *blockchain*, among others.

Currently, the region is lagging behind in the use of digital technologies by households, businesses and governments. This is associated with the region's backwardness in digital infrastructure, which is manifested, for example, in low rates of internet connectivity and low density of fiber optic networks (Agudelo, 2021; Álvarez and Toledo, 2022).

On the business side, the gap in the adoption of digital technologies is largely explained by "the lack of capabilities and knowledge of managers and workers to identify digital needs and solutions, as well as to adapt processes, organizational culture and business model to these technologies" (Alvaredo et. al., 2023). The internal capabilities of companies are not only a key determinant for the adoption and development of digital technologies, but also condition their impact on productivity.

Addressing this problem implies the creation of labor and management training programs in digital transformation that contribute to reducing the skills gap of workers and entrepreneurs. This initiative can be accompanied by technical assistance programs that offer subsidized consulting services to companies seeking to make the technological leap, but lacking the expertise and resources to assess their technological needs and design and implement the most appropriate digital solutions.

Governments can also create umbrella programs that bring together and coordinate a broad set of complementary initiatives. In addition to offering training and consulting opportunities, they can provide spaces for exchange and collaboration between companies where they can share their experiences and knowledge. These programs can also include the development of open platforms through which to provide tools and content to facilitate the digital transformation of companies.

Another significant obstacle faced by companies in the region in their digitalization is the limited access to financing, which tends to be more acute in the case of digital projects due to the difficulty of using intangible assets and intellectual property as credit guarantees. In addition, banks tend to have greater difficulty in evaluating these projects. This justifies the development of instruments specifically designed to finance the digitalization of companies. In this regard, existing instruments such as guarantee funds and direct credit programs, as well as subsidy schemes, can be adapted.

To facilitate the digitalization of enterprises, it is also essential to improve digital infrastructure and connectivity. A crucial aspect to achieve this is collaboration between the public and private sector, especially in the deployment of 5G networks. To this end, policies must be implemented to free up sufficient radio spectrum, streamline licensing processes and encourage investment in public infrastructure, such as fiber optics. The granting of permits and access to suitable locations for the construction of telecommunications towers should also be facilitated, as well as promoting the shared use of infrastructure. Connectivity should also be ensured in rural and underserved areas, where private sector investment may be limited. This may require specific subsidies or other incentives.

Finally, it is necessary to establish an adequate regulatory framework that guarantees the affordability, quality and security of digital services, establishing quality of service standards, dispute resolution mechanisms, and protecting consumer privacy and data security. The regulatory framework should also promote competition in the telecommunications sector by encouraging the entry of new infrastructure players and preventing anticompetitive behavior.

Productive capacities, complexity and diversification

The productive landscape of Latin America and the Caribbean has its counterpart in terms of the complexity and diversification of the region's economies, that is, in the degree of sophistication and diversity of their productive capacities (Hidalgo and Hausmann, 2009). These capabilities, which include technological knowledge, the skills of the labor force, cooperation networks between companies and the quality of institutions, are what enable a country to innovate, adapt to changes in the global environment, move up the value chain and, in short, grow in a sustained manner.

> "South America should have a development orientation very strongly marked by an effort to diversify its structure and a good use of natural resources to expand prosperity in other sectors. The great challenge for South America, therefore, is to develop economic activities that are internationally competitive, beyond commodities, and that requires improving the value added in the commodities sector itself, but also diversifying".
>
> **Based on an interview with Augusto de la Torre**

The region's productive development requires the accumulation of these capabilities, which will translate into economies that are not only more diversified but also less vulnerable to external shocks. The countries of the region will also be able to take better advantage of the opportunities offered by international markets and ongoing and future technological changes.

To make progress in this regard, there are no magic recipes. The countries of the region need to undertake far-reaching reforms that will enable them to resolve the serious problems described in this chapter and thus promote a dynamic, competitive and innovative productive environment.

As a final message, it is important to emphasize that the design and implementation of these reforms and policies should be articulated within a broad development strategy and be the product of rigorous, evidence-based analysis to ensure their effectiveness and sustainability over time.

The participation of all relevant stakeholders, including the private sector, Government, academy and civil society, is crucial to build consensus and ensure that policies respond to the real needs of the productive environment. In addition, it is essential that these policies integrate the principles of environmental sustainability and social equity, recognizing that economic development should not compromise the well-being of future generations or perpetuate existing inequalities.

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Chapter 3

Balance and perspectives of social inclusion for building more equitable societies



Key messages

1.

In LAC, 30 % of the population lives in poverty, and the region stands out as one of the most unequal in terms of income and wealth, especially in rural areas and among indigenous and Afro-descendant populations.

2.

A fundamental pillar of inclusion policies must be the guarantee of equal opportunities. However, in the region, numerous persistent barriers hinder equality, contributing significantly to socioeconomic gaps in various dimensions of well-being. For this reason, *ex post* redistributive policies continue to play a crucial role

3.

A comprehensive set of public policies is required to overcome the structural barriers to social inclusion, ensuring key opportunities for disadvantaged groups to develop human capital, access quality jobs, strengthen their capacity to save and acquire essential assets, and have income, health and care protection in old age.

4.

Early childhood represents a critical stage of intervention to close the marked gaps in human capital. Successful policies in the region, such as conditional income transfers and the expansion of maternal and child health services, have demonstrated their effectiveness; however, there is still a long way to go to expand and improve the quality of early childhood education.

5.

The quality and relevance of basic education is a pending debt that has not accompanied the notable expansion in educational coverage. Disadvantaged groups also face significant financial barriers to accessing higher levels of education, which offer salary returns more than double those of people who reach lower levels.

6.

Access to quality jobs and the accumulation of essential assets are fundamental for inclusion during adulthood. However, structural barriers such as labor informality and limited social protection, the limited access to credit, specific challenges faced by ethnic minorities and women, and regional inequalities generate deep inclusion gaps.

7.

Policies aimed at reducing gaps in access to economic opportunities must Operate on multiple fronts: equalizing productive potential by strengthening human capital at the labor stage, promoting equal treatment in the labor market for people with similar skills, regardless of gender or ethnicity, improving labor decision-making by disadvantaged groups through adequate access to information, and strengthening financial inclusion.

8.

Labor informality excludes many individuals from contributory pension systems. Non-contributory pensions have been expanded to ensure a minimum income in old age, but their coverage and adequacy are still major challenges in several countries.

9.

The aging of the population and the lack of formal care services overburden families, especially women. It is crucial to develop care policies for the elderly, which so far have been nonexistent in the region.

10.

Inclusion policies face cross-cutting challenges such as the need to effectively target beneficiaries, guarantee technical and institutional capacities for efficient implementation, ensure sustainable financing to maintain these policies in the long term, improve redistributive capacity, and avoid distortions that undermine incentives for productivity and economic growth.

Introduction

At the core of regional development lies the crucial goal of ensuring social inclusion, understood primarily as the full participation of communities in the economic life of society. Full compliance with this principle would ensure that all individuals and social groups have access to the same opportunities to prosper, thereby reducing socioeconomic disparities. However, this objective has been elusive in the region and remains a significant challenge.

Over the last three decades, Latin America and the Caribbean has made significant progress in improving living conditions and socioeconomic equity. However, the path towards the total eradication of poverty and the profound reduction of inequality remains incomplete. In recent years, in fact, this process seems to have slowed down and even stalled in some countries. Approximately 30 % of Latin Americans and Caribbeans still live in poverty conditions according to ECLAC data (CEPALSTAT, 2024)[1]. In addition, Latin America and the Caribbean is still positioned as one of the regions with the greatest inequality in the world, both in terms of income and wealth[2].

Addressing the underlying structural causes is essential to overcome the obstacles that limit the social inclusion of broad sectors of the population in Latin America and the Caribbean. Identifying the possibilities for inclusion involves understanding the complex network of opportunities that should be available throughout people's life course. In childhood and adolescence, it is crucial to guarantee the formation of human capital through education and job training; in adulthood, to facilitate access to quality jobs and the possibility of saving and accumulating key assets; and in old age, to guarantee well-being and autonomy through adequate income, health and care protection.

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1 This figure is the result of a population-weighted average of the countries in the region. There is wide heterogeneity in poverty levels among countries. According to the 2022 data, at one extreme are Ecuador, Mexico and El Salvador, with high poverty rates (between 25 and 30 %), while at the other extreme are Uruguay, Chile and Panama, with low poverty levels (between 4 and 14 %).

2 Alvaredo et al. (2023) analyze income inequality in Latin America and the Caribbean in depth, and show that there is some uncertainty about the exact levels of inequality due to differences in the data sources and methods used. According to their analysis, Sub-Saharan Africa emerges as the geographic region with the highest inequality, followed by Latin America and the Caribbean.

One of the pillars of inclusion policies must be the guarantee of equal opportunities. However, given that numerous barriers persist in the region that limit this equality and contribute significantly to socioeconomic gaps in different dimensions of well-being, *ex post* redistributive policies continue to play a crucial role. This dual approach, which combines the promotion of opportunities with redistributive measures, is essential to adressing both the causes and consequences of poverty and inequality in Latin America and the Caribbean.

This chapter focuses on key areas of intervention in the region, considering the extent of socioeconomic gaps and their potential for social impact and benefit. Policies should address the main barriers faced by the most disadvantaged individuals and households, such as financial constraints, lack of insurance and limited access to quality public services. There are barriers of a different nature, such as lack of knowledge and information, social norms, discrimination and spatial frictions that also need to be addressed. The design of inclusion policies faces, in turn, new challenges arising from macro trends such as technological, demographic and climatic changes. These transformations bring new issues, such as fiscal pressure on pension, health and elder care systems, the threat to employability and climate risks that disproportionately affect the most vulnerable groups. But they also offer opportunities, such as access to new technologies for financial inclusion. Adaptive capacity and long-term planning will be essensial for sustaining effective progress in social inclusion.

> "When we think about the environment, I think Latin America has sinned of being a bit extreme in its concerns for protection. There is a growing anti-mining movement: we saw what happened recently in Panama, we are seeing the impossibility of mining developments in Colombia, in Peru, in Chile. I want to say to Latin America that we cannot save the atmosphere without scratching the earth and we have a great difficulty in balancing global environmental protection with local protection".
> **Based on an interview with Ricardo Hausmann**

Social inclusion in Latin America and the Caribbean: a look at recent history

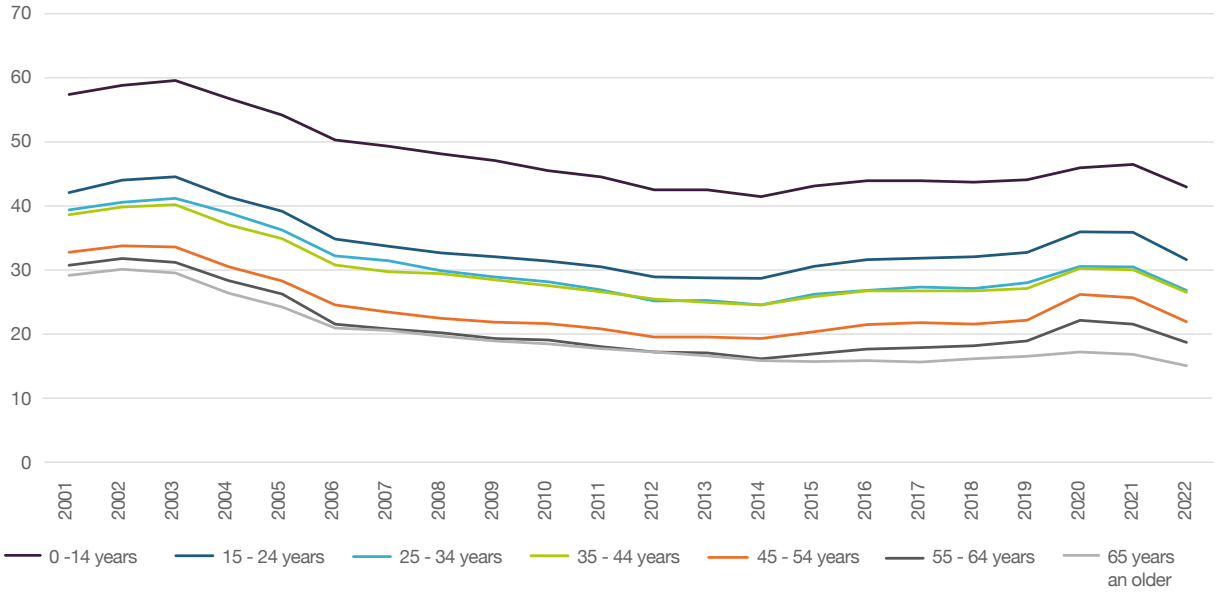
The evolution of social inclusion in Latin America and the Caribbean has been marked by significant fluctuations over the last three decades. After the severe economic crises that affected several countries in the region in the early 2000s, Most of them successfully resumed growth, accompanied by significant improvements in social indicators. In contrast to the 1990s, the new millennium brought with it a notable reduction in poverty and inequality. This was possible thanks to a combination of favorable public policies and a conducive international context (Gasparini, 2019). The boom registered between 2002 and 2012, when an accelerated fall in inequality was observed, faded from 2013 onwards. The fall in poverty was more sustained throughout the period, with a slight slowdown during the 2010s in South America relative to Central America and the Caribbean. More recently, the COVID-19 pandemic was a major setback for all countries in the region, exacerbating pre-existing inequalities.

Poverty does not affect the entire population uniformly. There are marked disparities based on age, gender, region and ethnic origin. According to ECLAC data (CEPALSTAT, 2024), children represent the most vulnerable group, with a poverty rate of 43 % for those under 14 years of age, compared to 15 % for adults over 65 years of age in 2022 (figure 1). Regional gaps are significant within countries: rural areas account for a large share of extreme poverty (17 % compared to 5 % in urban areas) and have poverty rates that are almost double those of cities (39 % compared to 21 %). There are also gender gaps, with a higher incidence among women (25 %) compared to men (24 %) in the region.

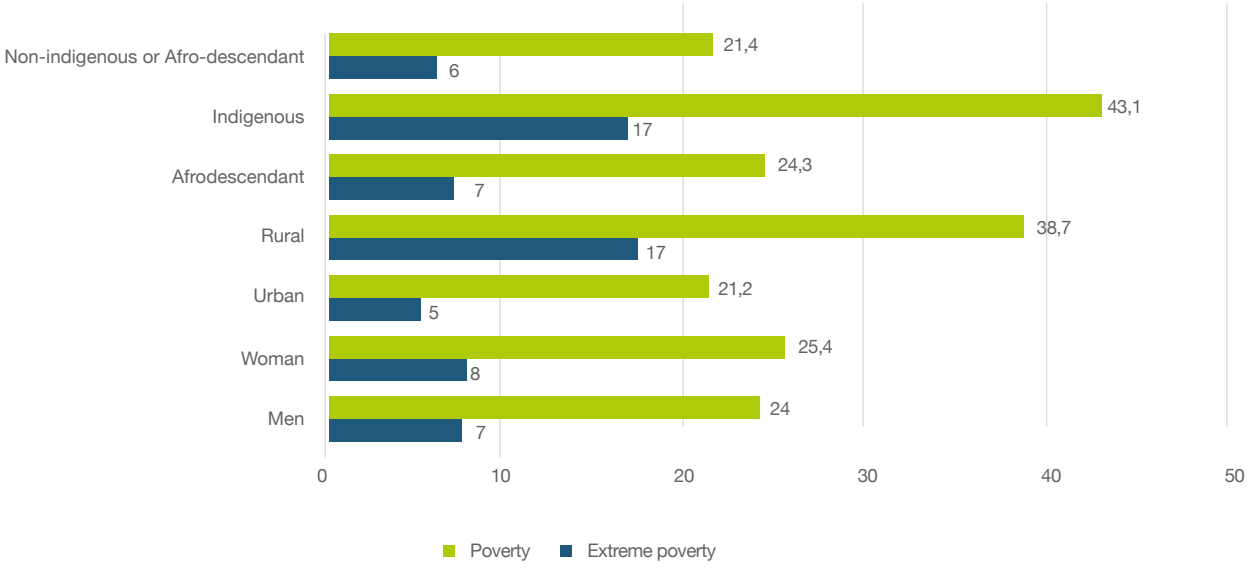
Latin America and the Caribbean stand out for their remarkable ethnic and racial diversity. Among the total population, 23 % self-identify as white, 43 % as mestizo, 16 % as Black, 7 % as Indigenous and 12 % in another ethnic or racial group (Albina et al., 2024). Indigenous and Afro-descendant groups face considerably higher poverty rates: 43 % of indigenous people and 24 % of Afro-descendants live in poverty, compared to 21 % of the rest of the population.

Figure 3.1
Poverty by age, region, ethnicity and gender

A. Evolution of poverty by age group, 2000-2022



B. Poverty and extreme poverty by region, ethnicity and gender, 2022



Nota: Note: Panel A of the figure shows the evolution of the percentage of the total population whose average per capita income is below the poverty line in Latin America, disaggregated by age group. Panel B presents the poverty rate for different population subgroups in Latin America. Income is calculated at the household level, considering the sum of wages, self-employment income, returns on assets, transfers and subsidies received by all household members, in addition to imputed rent in households that own their homes. The poverty lines are periodically estimated by ECLAC and are adjusted according to inflation and the particularities of each country and region. The regional average for Latin America is weighted, using the most recent population projections to adjust the total survey population. In some cases, the data for each country do not correspond to the observed value, but to projections of poverty and extreme poverty based on models that complete missing data or link non-comparable series.
Source: Own elaboration based on CEPALSTAT (2024).

Over the past three decades, alongside reductions in poverty and inequality, several social indicators have shown improvements, albeit with different nuances. For example, the region has experienced sustained progress in terms of health, with declines in infant mortality and increased life expectancy at birth. The socioeconomic gaps in these indicators, however, have not closed (Bancalari et al., 2024). Figure 2 presents the average annual variation in the values of another set of indicators, according to population income decile, between 1992 and 2019[3]. The positive values of the indicators reflect improvements for the corresponding decile relative to the base period (1990s), except for the informality indicator, where a negative value signifies improvement with respect to the base period.

> "We have closed (gaps) in many areas. For example, in education, fertility, the number of children that women have, women's education and their participation in the workplace, life expectancy, the population in the idea of working as a percentage of the total population".
> **Based on an interview with Ricardo Hausmann**

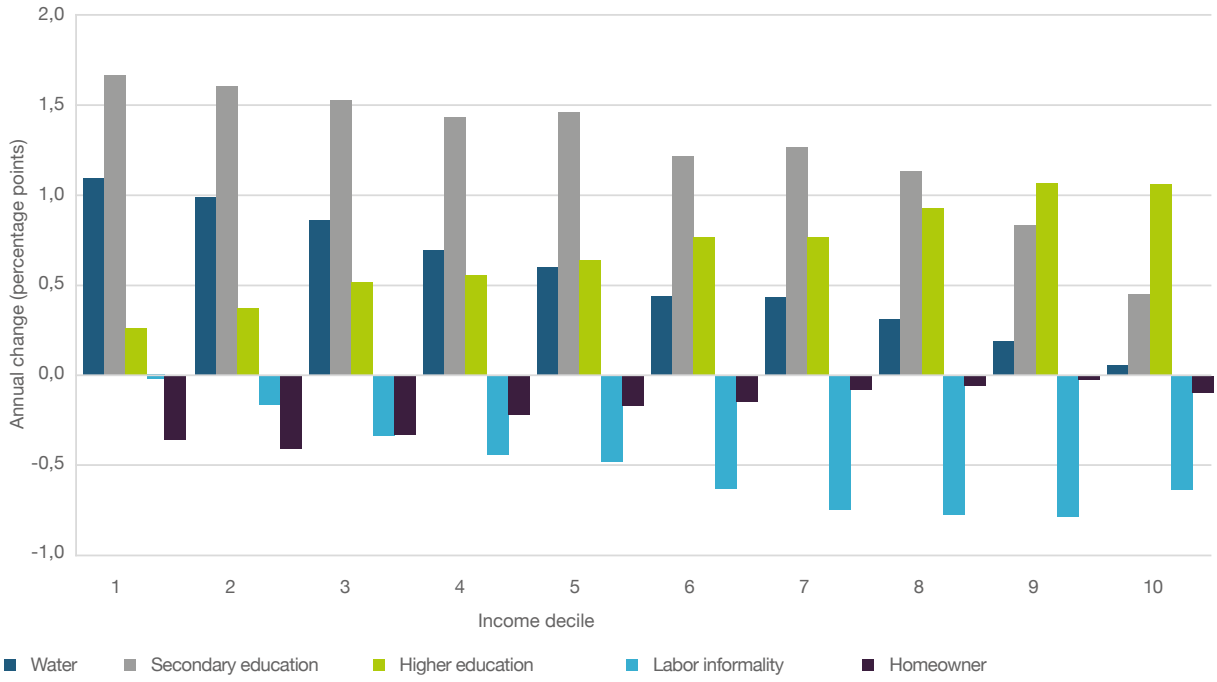
The expansion in secondary education coverage in all income deciles is noteworthy, accompanied by a closing of gaps between the poorest and richest deciles. These results are consistent with the significant and widespread expansion of basic education across the region during this period. A similar pattern is observed in access to water at home, an essential service with a special impact on health, though the increase has been more moderate. Higher education coverage rose in all income deciles, but this expansion has been especially greater in the higher deciles. This asymmetry is worrisome because it reveals a perpetuation of inequalities, especially when one takes into account that the wage premiums for higher education are substantial.

In the rest of the indicators, the results have been less promising, highlighting where the most unyielding barriers to social progress lie. In terms of labor, informality—which includes unregistered salaried workers, non-professional self-employed workers and unpaid family workers—fell overall, but especially in the highest deciles. In the lower income deciles, this phenomenon remains practically unchanged. Informal jobs, in addition to offering lower salaries and less stability, generate inequalities in access to social protection, which, to a large extent, continues to be linked to formal employment in the region. Finally, the home

3 The graph represents the "growth-incidence curve" (CIC). CICs are anonymous mobility assessments, in the sense that the outcome of a selected indicator is compared for the same p-percentile at two different points in time, not for the same household or individual (Gasparini and Bracco, 2023). The vertical axis shows the weighted annualized rate of change of the corresponding indicator for each percentile of the income distribution.

ownership rate fell in the lower deciles, while it remained constant among the higher deciles. Home ownership, although an imperfect measure because it does not consider, for example, aspects of quality, is a good proxy for household wealth, since for the bulk of the population it is the most important asset of their total wealth (De la Mata et al., 2022).

Figure 3.2
Annual variation between 1992 and 2019 of key indicators for inclusion Average for Latin American countries



Note: The vertical axis shows the annual variation (in percentage points) in each indicator, by household income decile. Variations are calculated by comparing the values for each income decile in 1992 and 2019. The variables considered include: water: percentage of households that have access to a water source (safe water as reported in the survey) in the dwelling or on the land; secondary education: percentage of middle school age youth attending that level; higher education: percentage of higher education age youth attending that level; labor informality: percentage of workers who are unregistered wage earners, or non-professional self-employed or family workers; homeownership: percentage of households owning both land and building. Values are simple averages across countries. Countries included are: Argentina, Bolivia, Brazil, Chile, Colombia, Costa Rica, Dominican Republic, Ecuador, El Salvador, Honduras, Mexico, Panama, Paraguay, Peru and Uruguay. Countries may vary according to each of the variables considered.
Source: Gasparini and Bracco (2023) based on SEDLAC data.

Life cycle and key dimensions of social inclusion

Social inclusion is a complex process that depends on several factors throughout the life cycle. These factors evolve sequentially and interdependently, giving rise to an itinerary of opportunities and challenges. Diagram 3.1 illustrates a simple scheme for thinking about social inclusion policies, where the life course is divided into three stages: the first covers the first two decades, where human capital formation is crucial; the second covers adulthood, with job opportunities and wealth accumulation; and the third, old age, where income, health and care protection must be guaranteed.

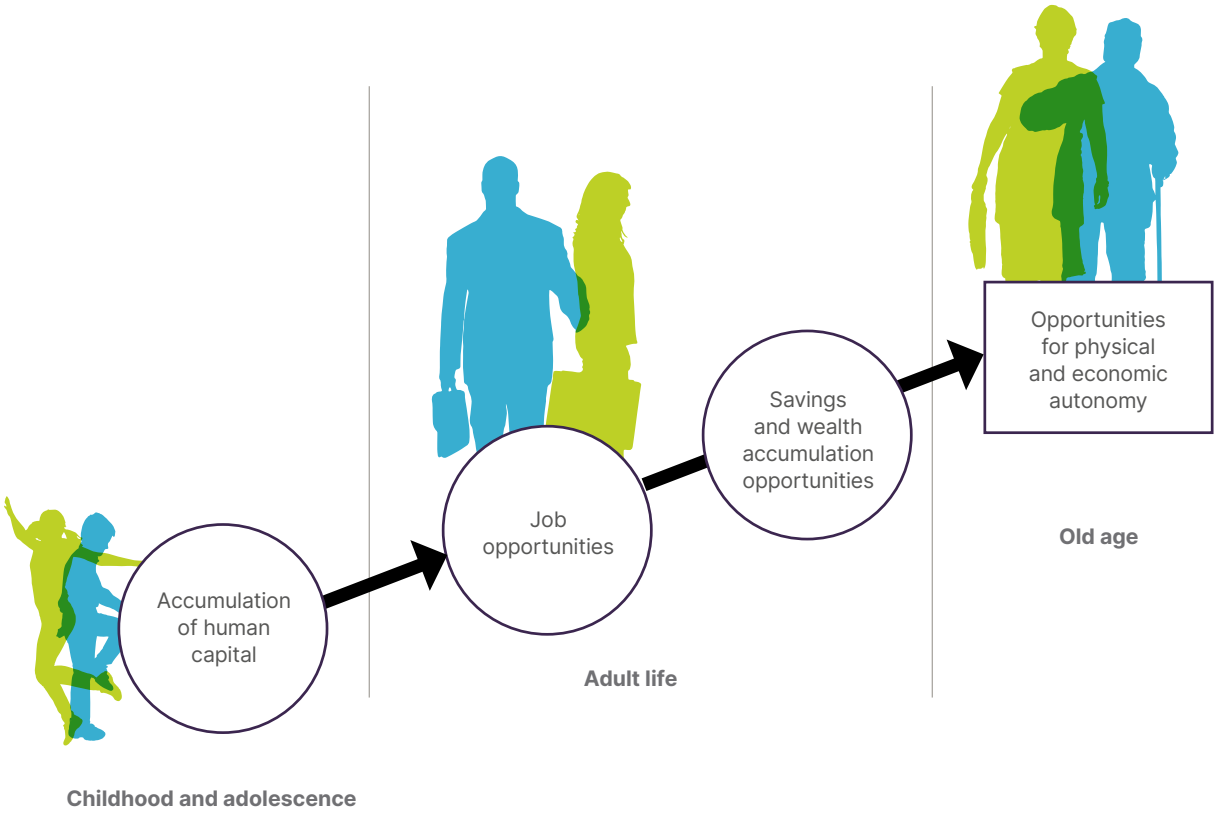
The adequate development of human capital during the first two decades of life is crucial for full inclusion. This consists of a broad set of fundamental skills, from physical and mental health to cognitive and socioemotional skills, which later enable the acquisition of specialized knowledge. Skills are not innate or fixed. Growing evidence shows that skills accumulate throughout life. This same evidence also indicates that some stages of life are more important than others. The most crucial moments begin during gestation and culminate after adolescence. This is when the greatest changes occur at the biological and social levels, and it is also when the foundations for all subsequent development are laid. In this process, investments by families, educational and health institutions, and the physical and social environment will be crucial to establishing solid skills.

These skills will enable access to quality job opportunities in adulthood, away from informality and low-productivity self-employment. Access to formal jobs in the region is currently synonymous with better social protection conditions, higher salaries and better opportunities for professional development. Public policies focused on the most vulnerable groups to facilitate their transition to formality, as well as to cushion negative shocks in the labor market, are critical in an agenda that seeks to break down the deepest barriers behind social exclusion.

Employment opportunities also determine the capacity to save and accumulate wealth, in which access to credit and adequate financial knowledge play a fundamental role. People with access to these opportunities can improve their quality of life and ensure a more stable future. Equitable access to financial resources is fundamental to reducing vulnerability and promoting investment in education, health and housing.

Old age presents challenges in terms of inclusion and it is essential to ensure protection in terms of income, health and care. Equitable opportunities throughout the life course are particularly relevant at this stage, since many people depend on the resources accumulated in previous stages to face this phase. In turn, the insurance mechanisms provided by social protection systems are key to ensuring a life course in old age that is not interrupted by health shocks, reduction of income during the period of retirement from the labor market and other types of vulnerabilities.

Diagram 3.1
Key opportunities throughout the life cycle to foster social inclusion



The virtuous circle between human capital formation, employment, savings, asset accumulation and protection in old age is not limited to a single generation: the achievements of an individual have an impact on the opportunities that their children will have. This view highlights the need for comprehensive policies that recognize their potential intergenerational impacts and provides additional motivation to encourage redistributive policies. For example, monetary transfers to adults or older adults can have an impact on children, to the extent that these resources are used in the formation of their human capital.

The reason why a large part of the population does not accumulate human capital, does not have access to quality jobs, does not save, and does not have protection in old age is that there are a significant number of barriers. Identifying them is critical when designing and targeting public policies for inclusion. And among them is a central one, faced by most families in the region: the financial constraint of making investments with a positive return. Poor families do not have sufficient resources to ensure proper nutrition, cover health, education and care expenses, or have access to adequate housing in environments that favor the development of their children. Educational and residential decisions, made under limited financial conditions, also determine to a large extent the quality of education and of the environment, both physical and social, in which children and young people develop.

These challenges worsen when basic public services are deficient or inaccessible. In turn, they are accentuated by limited access to credit, which is not available as a tool to undertake larger investments, such as housing, or to cope with negative income shocks. This vulnerability is intensified by the health, economic, technological or environmental risks that arise throughout life, which have an unequal impact, depending on the socioeconomic level.

The ability of families to protect themselves through insurance mechanisms, both private and social, is key to guaranteeing stable trajectories, mitigating negative events and avoiding the loss of savings or assets. The poorest in the region face limited insurance, as the type and quality of coverage provided by social security systems generally depend on the labor market status of workers. The lack of insurance is critical for the formation of human capital, especially in key stages such as the prenatal period and the first years of life, where the lack of investment can have irreversible effects. In addition, the most vulnerable households are more exposed to all kinds of unforeseen events that affect their income, jobs and wealth accumulation.

> “Social insurance regulations come from 19th century Europe, from a model where social protection is associated to the relationship between the company and the worker (...) The States of the region give asymmetric treatment to the same person depending on the labor contract he/she has (...) If we want social inclusion, we have to rethink in depth how we structure social protection in the region. We must stop going down the same path of simply adding more and more programs and more and more spending without having any logic and any coherence in what is being done”.
>
> **Based on an interview with Santiago Levy**

There is another broad set of non-financial barriers to inclusion that often act through more subtle mechanisms. These are equally important and include aspects such as lack of knowledge and information, social norms, discrimination and space constraints, among others. Overcoming them requires policies that strengthen access to information to improve decision making at specific stages of the life course (such as information to strengthen parenting or on wage returns by college degree to improve student decision making), or broader policies that transform key cultural norms to reduce gender and racial-ethnic gaps. Spatial barriers, meanwhile, require context-specific policies, including bringing essential services closer to vulnerable households or improving mobility to facilitate access to opportunities.

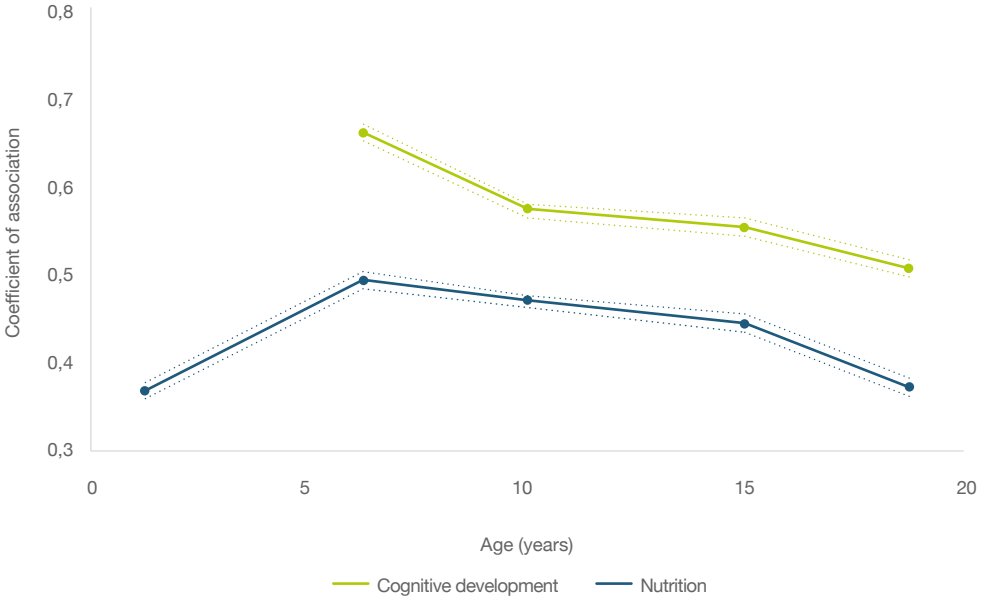
Policies for the first decades of life

Equitable human capital formation is a fundamental pillar for building more inclusive and prosperous societies. Socioeconomic gaps in skill development begin early in life and continue throughout childhood and adolescence (Berniell et al., 2016; De la Mata et al., 2022). Figure 3.3 shows the association between household socioeconomic status at birth and two key indicators of child development: nutrition and cognitive performance, assessed in the same group of children in Peru at different stages of their childhood and adolescence. Higher values denote a stronger association between household wealth and the development index. The data show that socioeconomic disparities in skills emerge long before children enter formal educationl[4] and remain largely unchanged until the age of 15, when the last measurement is taken[5].

4 Similar patterns are observed in longitudinal studies for Chile, Colombia, Mexico and Uruguay (Attanasio et al., 2024).

5 The drop in the value of indicators between the ages of 5 and 15 could be interpreted as an equalizing effect of education, but of a very limited magnitude.

Figure 3.3
Association between household wealth at birth and measures of child development in the first two decades of life (Peru)



Note: The figure shows the correlation between the household's ranking in the wealth distribution and the child's ranking in the distribution of the nutrition and cognitive development indicators, respectively. The correlation is estimated as the coefficient of a regression where the independent variable is the wealth percentile of the parents at the time of the child's birth, and the dependent variable is the percentile of the child development indicator. Estimates are made on the same sample of children as they get older, which is possible because of the longitudinal nature of the data. The dotted lines represent the confidence intervals of the point estimates (95 %). The household wealth index is constructed by *Niños del Milenio* from three dimensions (quality of housing, access to services and possession of durable goods). The nutrition index is constructed based on a child's height-for-age (Z-score) and indicates the position of a child's height relative to the distribution of heights for children of the same age. The cognitive development index results from the score on the Peabody Picture Vocabulary Test (PPVT) and captures children's cognitive performance in terms of receptive vocabulary (e.g., it measures the degree of association between words mentioned by the assessor and the pictures available on the assessment cards).

Source: De la Mata et al., (2022) based on rounds 1 to 5 of the *Niños del Milenio* study (https://ninosdelmilenio.org).

RED 2016 (Berniell et al., 2016) discusses various reasons that justify State intervention in promoting the development of children and youth. Policies aimed at the early stages of life should focus on improving the conditions for the accumulation of human capital, alleviating the main barriers faced by families, which, as noted, are essentially financial, time, lack of insurance against health events, and knowledge and information obstacles[6]. A comprehensive approach

6 RED 2016 (Berniell et al., 2016) discusses various reasons that justify State intervention in promoting the development of children and youth.

must account for the diversity of socioeconomic, ethnic and geographic contexts in the region and contemplate the multiple stages of child development, from early childhood to higher education. This set of policies can have enormous social returns and be cost-effective, as has been shown in developing countries (Deming, 2022; Hendren and Sprung-Keyser, 2020). Some of the most promising strategies to reduce these gaps at three major stages of childhood and youth are described below: the first six years of life, the primary and secondary basic education period, and the post-secondary education period.

> "Financing early childhood is the best investment any Government can make (...) If you invest in young children, the gaps between the most and the least vulnerable do not emerge (...) There is a great social agreement around early childhood, something that did not happen with primary and secondary education in the countries of Latin America (...) Latin American countries work together to design policies and exchange good practices regarding the implementation of early childhood programs".
>
> **Based on an interview with Raquel Bernal**

Improve the conditions for human capital formation in childhood and adolescence

Adequate human capital development begins in the early years of life and directly impacts well-being and economic success in adulthood. As figure 3 underscores, skill gaps manifest themselves long before children enter formal education, highlighting the importance of intervening in the early years and preschool period. This prevents these gaps from widening and becoming more difficult to close at later stages. This is why the social rates of return on these investments can be particularly high (Cunha and Heckman, 2007).

Conditional income transfers

A first set of policies to alleviate financial constraints includes subsidies, transfers or the provision of goods and services aimed at child development. Of this package of tools, the role of conditional cash transfers in the countries of the region should be highlighted, with programs currently in force in 19 countries, which in the last decade have covered 20 % of the Latin American and Caribbean population[7]. These programs have a dual objective: to alleviate poverty immediately through transfers to vulnerable families and to promote

7 These data are from the ECLAC Database of Non-Contributory Social Protection Programs in Latin America and the Caribbean, Conditional Transfer Programs [online] http://dds.cepal.org/bdptc/.

human capital through conditionality in aspects such as schooling, health care and nutrition (Cecchini and Atuesta, 2017). This affects one of the main channels of intergenerational reproduction of inequality and potentially reduces the need for government assistance in the future. Evidence demonstrates its effectiveness in improving education and child health indicators in the short and long term (see box 3.1.).

Box 3.1

Effectiveness of conditional cash transfers

Conditional income transfer programs are a clear example of social policy innovation in LAC. The region has been a pioneer in their large-scale implementation since the 1990s. Since then, these programs have become flagships in many countries (Millán et al., 2019). Their success has inspired other countries outside the region to adopt similar programs. Currently, they represent, on average, an expenditure of 0.26 % of GDP.

Several impact evaluations support the use of conditionalities. Baird et al. (2019), from a review of 75 studies on 35 programs, shows that explicit conditionalities, effectively monitored and implemented with sanctions, significantly increase the impact on school enrollment compared to programs without conditions. Rigorous evaluations in Brazil, Colombia, Ecuador, Mexico, Nicaragua, Honduras, Chile and Jamaica show positive short-term effects on education and access to health services for beneficiary children (Fiszbein and Schady, 2009). These results show that these programs are not only relevant in early childhood, but throughout the entire educational cycle. They can play a crucial role in stages of the educational cycle where school dropout is more acute, such as entry to secondary education (De Janvry and Sadoulet, 2006).

Recently, long-term effects have begun to be studied, with promising results in Nicaragua, where beneficiary children accumulate more years of education in adulthood. A higher probability of completing primary or secondary education is also observed in Colombia, Ecuador, El Salvador, Honduras and Mexico (Attanasio et al., 2021; Millán et al., 2019). However, the impacts on labor trajectory are less consistent (Millán et al., 2019). Some studies suggest a significant increase in long-term labor income, especially related to higher educational levels (Barham et al., 2018, 2024 for Nicaragua; Behrman et al., 2011; Parker and Vogl, 2023 for Mexico; Laguinge et al., 2024 for Brazil). Other studies find no significant effects on the labor development of beneficiaries (Araújo et al., 2019; Baird et al., 2019; Filmer and Schady, 2014). The persistence of obstacles encountered by beneficiaries of these programs in the labor market could be more related to structural barriers in the region than to the design of the programs. Still, more analysis on the long-term effects is needed to optimize their impact.

Maternal, child and adolescent health promotion

Living conditions at birth are strongly influenced by the home environment and the parents' economic situation, not only during gestation but also before conception. Maternal and child health policies that ensure healthy development from pregnancy onwards are crucial to reduce the gaps at the root. These include prenatal care programs, nutritional supplementation for pregnant and lactating mothers, and regular pediatric follow-up in the first years of life.

The increase in non-contributory health insurance during the last decades had a significant impact on the reduction of infant mortality, on the health of newborns, on access to services—mainly in the maternal and infant population—on the availability of more efficient medical services and on the reduction of out-of-pocket expenses, i.e., those to be covered by the family on its own. These effects have been widely documented in various countries in the region[8]. As a collateral effect, programs with benefits tied to the condition of not receiving coverage through contributory systems tend to moderately discourage the search for employment in the formal sector of the economy (Camacho et al., 2014; Conti et al., 2018).

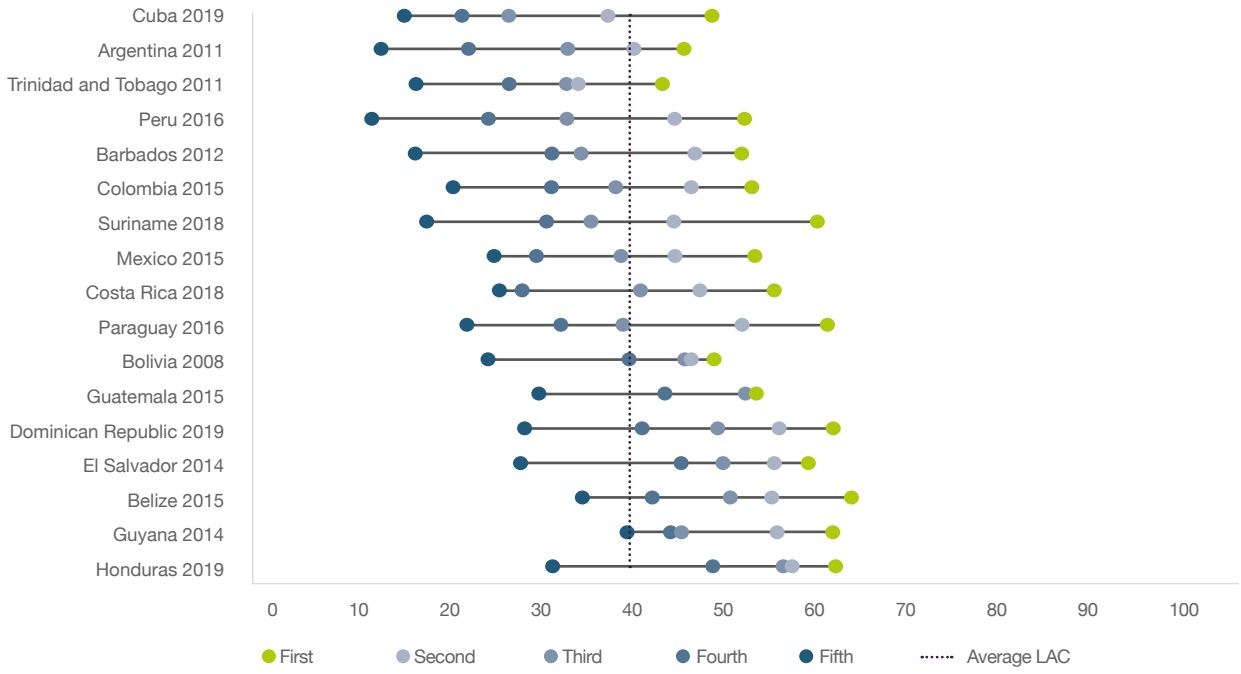
Family planning programs play a crucial role in ensuring that children are born into an environment where parents can provide the care and investment necessary for their development. In Latin America and the Caribbean, according to data from Demographic and Health Surveys (DHS), about half of pregnancies are unplanned and the most disadvantaged families face greater barriers to family planning due to lack of access to quality contraceptive methods and reproductive health services, and limited comprehensive sexuality education in school and family settings.

Teenage pregnancy is one of the most critical challenges in the region, to the point that it presents one of the highest rates worldwide. The adolescent fertility rate in 2022 shows that 52 out of every thousand women between 15 and 19 years of age had a child, compared to a value of 18 for OECD countries and 9 for high-income countries (World Bank, 2024). Teenage pregnancy also implies a marked inequality according to socioeconomic level (figure 4). The perpetuation of these teenage pregnancies in the most vulnerable sectors reinforces intergenerational inequalities (Machado et al., 2023), since young mothers tend to face greater difficulties, for example in completing their education, which has a negative impact on their job opportunities, affecting the development of their children (De la Mata et al., 2022). Strengthening adolescent pregnancy prevention policies and comprehensive sexual education programs is essential to address this problem.

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8 Studies are highlighted for Argentina (Celhay et al., 2019), Brazil (Bhalotra et al., 2019), Chile (Clarke et al., 2018), Colombia (Camacho and Conover, 2013; Miller et al., 2009), Peru (Bernal et al., 2017) and Mexico (Conti and Ginja, 2023).

Figure 3.4
Percentage of women aged 25-49 years who had their first child as a teenager, by household wealth quintile



Note: This figure reproduces figure B of Bancalari et al. (2024) and shows the percentage of women (aged 25-49) who had their first child during adolescence. The wealth quintile corresponds to the female household. The sample is restricted to women over 25 years of age, when the typical educational stage has been completed. The average for Latin America and the Caribbean is calculated with the countries included in the figure.
Source: Bancalari et al. (2024) based on Demographic and Health Surveys (DHS) and Multiple Indicator Cluster Survey (MICS).

Early interventions and family accompaniment

The involvement of families is crucial for child development. However, this is often limited by the lack of information about the importance of childhood development and the role of the family itself in skill formation (Bernal and Fernández, 2013). Family accompaniment programs, such as home visits by health professionals or social workers, can be very effective, as they provide parents with key information on child development, early stimulation and appropriate care, adapted to their context. In areas with limited access to care centers, these policies are especially valuable (Attanasio et al., 2024).

The Reach Up and Learn program in Jamaica is an innovative case and a reference for the region. Its positive impacts have been sustained, even during the beneficiaries' adult lives (Gertler et al., 2014; Grantham-McGregor et al., 1991). Following this example, Colombia conducted a larger-scale implementation of this model in a vulnerable population, although it did not sustain the initial effects

two years after the intervention was completed (Andrew et al., 2018). Based on lessons from Colombia, the model was adapted for national implementation in Peru with the Cuna Más program. Rigorous evaluations of this program are encouraging, showing positive impacts on child development up to two years after the intervention (Araújo et al., 2021).

Preschool care and education services offered

Contributing to the early stimulation of children between 0 and 3 years of age is also possible through the provision of childcare services. In this period, formal education is not yet compulsory, so public provision of these services would be key to alleviating the monetary constraints of vulnerable households. Two important factors for the success of these interventions emerge from the evidence: the scale of the intervention and the target group. At large scale, these programs tend to lose quality, especially in the professionalization of caregivers and close follow-up, which is critical to achieving a significant impact. This is relevant in Latin America, where the professionalization of caregivers is still pending (Andrew et al., 2016). Studies in Bolivia, Ecuador and Peru show that many centers do not meet minimum quality standards, particularly in areas such as cognitive and language development (Berlinski and Schady, 2015). Investing in teacher quality in this cycle can generate great benefits, as shown by a study in Ecuador (Araújo et al., 2016). On the other hand, the positive impacts of these programs are usually concentrated in the most disadvantaged groups, so their expansion should be prioritized with good targeting (Bernal and Ramírez, 2019; Hojman and Boo, 2022).

Formal preschool education is a central pillar for the development human capital in the first years of life. Expanding its coverage is one of the greatest challenges in the region because, as, although it is compulsory in all countries (generally between 4 and 5 years of age), many are still far from achieving universality. Figure 5 shows the gross enrollment rate between 3 and 5 years of age at various countries in the region[9], with Argentina, Brazil, Ecuador and Uruguay standing out for their high coverage. However, there is a marked socioeconomic gradient throughout the region, with a clear lag in the attendance rate of children from the poorest households. This disparity has worsened in the post-pandemic period, especially in countries such as Argentina, Brazil, Chile, Colombia, Ecuador, Panama and Peru, where the enrollment rate of children from the most vulnerable households has fallen sharply, exacerbating inequalities.

> "We still have a long way to go, especially because the budgets allocated to investment in early education are still very low".
> **Based on an interview with Raquel Bernal**

9 The specific age group within this range changes from country to country.

Expanding the supply of preschool education can have important social returns, as shown by experiences in the region. Cohorts affected by expansions have shown higher performance in primary education in Argentina (Berlinski et al., 2009) and, in cumulative years of schooling, in Uruguay (Berlinski et al., 2008). New infrastructure construction programs, which may be necessary to increase supply, have a significant cost component. However, given their positive and substantial long-term effects, this type of programs could be cost-effective (Berniell et al., 2016).

> "The great problem in the region continues to be quality (...) The quality of early education has some particularities that are slightly different from that of other educational levels (...) Two basic points to guarantee the quality of early education: first, early education programs must have very specific, very prescriptive curricula, with clear learning outcomes; second, the training and professional development of teachers must be ensured".
>
> **Based on an interview with Raquel Bernal**

Figure 3.5
School attendance between 3 and 5 years of age* (gross enrollment rate), average and by socio-economic level (household income quintile)



Nota: *In Bolivia, until 2009, school attendance was only collected for 5-year-olds, and from 2010 onwards, for children aged 4 to 5. In Brazil, the PNAD asks for 3- to 5-year-olds until 2015, while the continuous survey, since 2012, focuses on 5-year-olds. In Costa Rica, until 2005, the question includes children aged 3 to 5, but then refers only to children aged 5. In El Salvador, the reference is to children aged 4 to 5. In Panama, until 2010, the results refer to 5-year-olds, and then include 4- and 5-year-olds. Argentina goes from covering 28 cities to 31 in 2006.
Source: Prepared by the authors based on SEDLAC (CEDLAS and World Bank).

In addition to easing the economic burden on families, the expansion of educational provision between 0 and 5 years of age allows parents, particularly mothers, who bear the greatest burden of care, to participate in the labor market without compromising childcare (Berlinski et al., 2011; Berlinski and Galiani, 2007; Morrissey, 2017). Quality time shared between parents and children is critical for early development. These types of policies, along with others related to the formal labor market (such as maternity/paternity leave, sick leave for children, and the possibility of teleworking), play a fundamental role in reconciling work and parenting, ensuring that parents have sufficient time to invest in their children. Given the high level of labor informality in the most vulnerable groups, care provision and preschool education policies have great potential to alleviate the time constraint in these households.

Provision of basic services in housing and surroundings

It is crucial to ensure that households have access to essential public services such as safe drinking water, sanitation, quality energy sources and recreational spaces. These minimum conditions provide families with a healthy environment for the development of their children. Progress in reducing child mortality and chronic malnutrition in recent decades has been driven largely by State investments in infrastructure (Berlinski and Schady, 2015). The provision of safe drinking water, in particular, has proven to be crucial in reducing mortality and improving child health (Waddington and Snilstveit, 2009; Wolf et al., 2018).

However, access to basic services in the region remains a significant concern. Almost Nearly one in four Latin Americans and Caribbeans live in informal settlements that, due to their condition, have low levels of coverage of basic household services, such as water, sanitation and energy. A high percentage of households in the region do not have access to electricity, especially in rural areas. The use of dirty energy sources for cooking and heating, such as firewood and kerosene, which have significant negative effects on health, is still very common in the poorest households (Álvarez et al., 2024).

Adequate public infrastructure has the advantage of facilitating household resilience to climate impacts. But the quality of the physical space also affects the way in which interaction with other people takes place. These characteristics of the environment are not only important in early childhood, but also in adolescence, another critical stage in skill formation. The ability of individuals and households to modify their environment is limited, and therefore the role of the State is central (Berniell et al., 2016).

Increasing quality and relevance in basic education

Latin America and the Caribbean has made significant progress in basic education coverage. Primary education has been universalized in much of the region and secondary coverage has increased considerably (figure 6.A). Improving secondary education completion rates remains a pending challenge. However, beyond coverage, one of the most critical problems that has emerged is the quality and relevance of curricula in relation to the skills demanded in labor markets.

Students in Latin America and the Caribbean are not reaching basic levels in key areas such as language and mathematics. The PISA standardized tests show low performance in all Latin American and Caribbean countries, in addition to the marked gap by socioeconomic level (figure 6.B), which is a product of both the impact of the family environment and the quality of education. School segregation in Latin America and the Caribbean based on socioeconomic characteristics is extremely high, as documented in RED 2022 (De la Mata et al., 2022). This segregation is evident in the division between public and private education, which generates disparities in quality and limits interaction between groups from different socioeconomic backgrounds, perpetuating inequalities and reducing social cohesion.

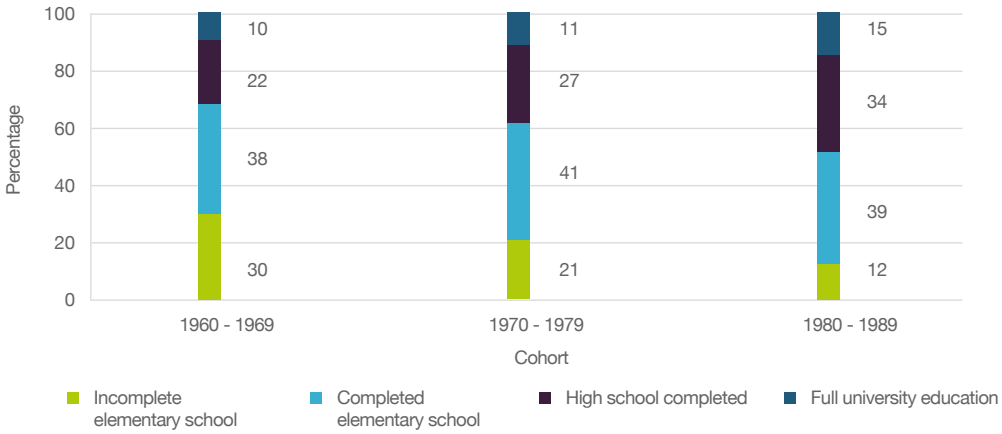
Addressing these challenges requires policies that enhance teacher quality through continuous training programs and greater incentives, especially in the public sector, where the most vulnerable students are concentrated. Improving teacher education can be enhanced with several promising strategies, such as focusing on fundamental areas (mathematics and reading comprehension), the implementation of small group tutoring and the use of technologies for adaptive learning, which allows teaching at student rank, and not only at curriculum level (Berniell et al., 2021).

TIt is also necessary to invest in school infrastructure, particularly in the most disadvantaged areas, and to update school curricula to develop both basic skills and competencies that respond to the changing demands of the labor market (box 3.2.). Finally, it is essential to actively monitor and address school segregation, promoting inclusive education that provides all students, regardless of their socioeconomic background, with equal opportunities to achieve quality education.

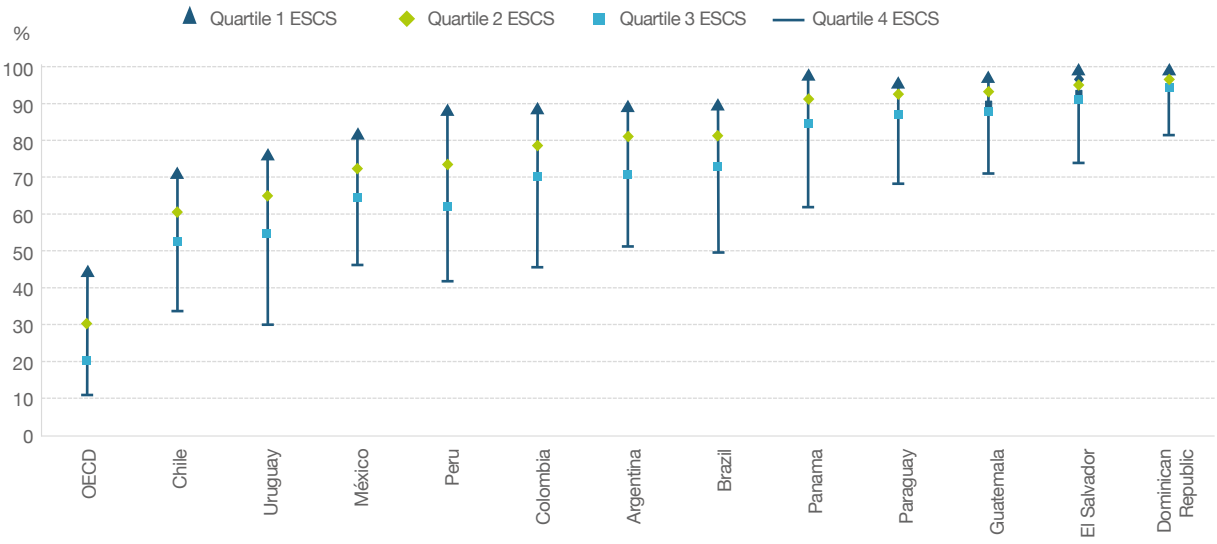
> "We are all going to have to be digitally literate (...) I am convinced that, despite so much technology, artificial intelligence and the way it transforms us, what will continue to be totally important in the future, and perhaps even more so, are transversal competencies, because it is really going to be very difficult to keep up with so much technology, and how fast it is going to come out. And within those enduring competencies, I think one of the most important will be learning how to learn".
>
> **Based on an interview with Raquel Bernal**

Figure 3.6
Coverage and quality of education

A. Coverage: Distribution of the highest level of education attained by Latin Americans and Caribbeans born between 1960 and 1989



B. Quality: Percentage of students who do not reach a minimum level of performance in mathematics in the PISA 2022 tests, by socioeconomic level
(ESCS socioeconomic status index quartile)

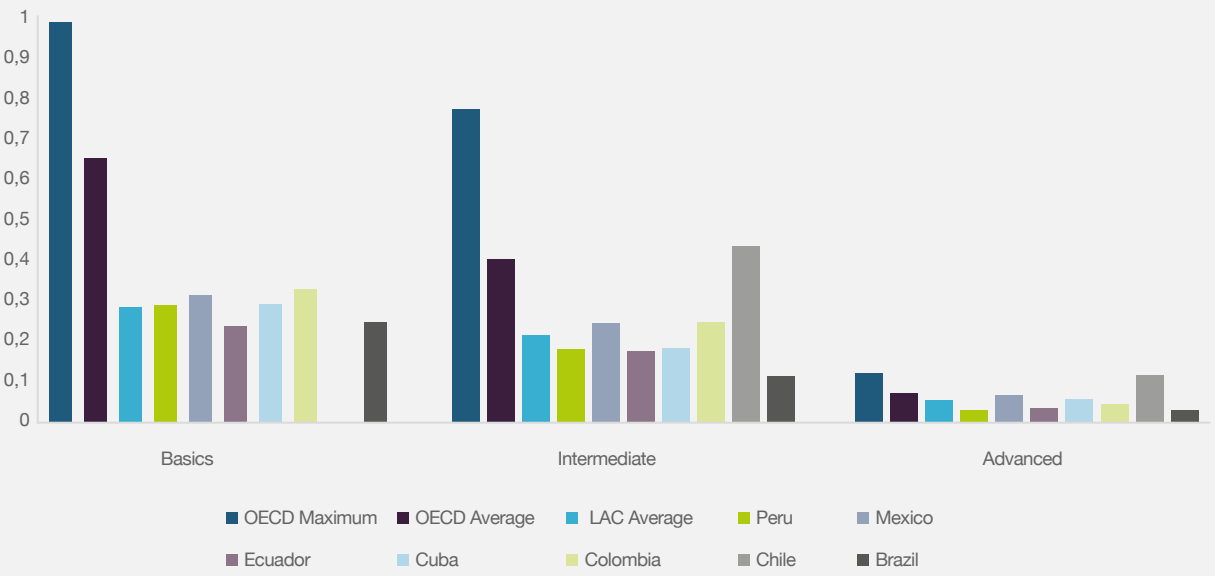


Note: Panel A: The figure shows the evolution of the distribution of educational attainment in Latin American and Caribbean countries, according to the highest level of education attained by cohorts born between 1960 and 1989. The calculation includes adults between 25 and 70 years of age at the time of the census. The countries considered are Argentina, Bolivia, Brazil, Chile, Colombia, Costa Rica, Dominican Republic, Ecuador, El Salvador, Guatemala, Haiti, Honduras, Jamaica, Mexico, Nicaragua, Panama, Paraguay, Peru, Puerto Rico, Suriname, Trinidad and Tobago, Uruguay and Venezuela. Average weighted by population. Panel B: The figure presents the percentage of individuals who have a score greater than or equal to 2 in mathematics, by wealth (ESCS index). The ESCS (economic, social and cultural status) index is derived from students' responses on household possessions, parents' education and occupation.
Source: De la Mata et al., (2022) based on census microdata available in IPUMS (2020) (panel A) and OECD, PISA 2022 Database, (panel B).

Box 3.2
Digital skills gaps

In a modern and increasingly technologized economy, digital skills will play an increasingly important role. Dalio et al. (2023), studying this topic, establish that competence in the digital sphere is given by the ability to access, manage, integrate, communicate, evaluate and create information in a safe and appropriate way through digital technologies to obtain a job, exercise a decent job and undertake entrepreneurship. Based on this premise, and using data published by ITU (2022), it is possible to divide digital skills according to different levels of complexity.

Diagram 3.2
Digital skills by country and by level of complexity



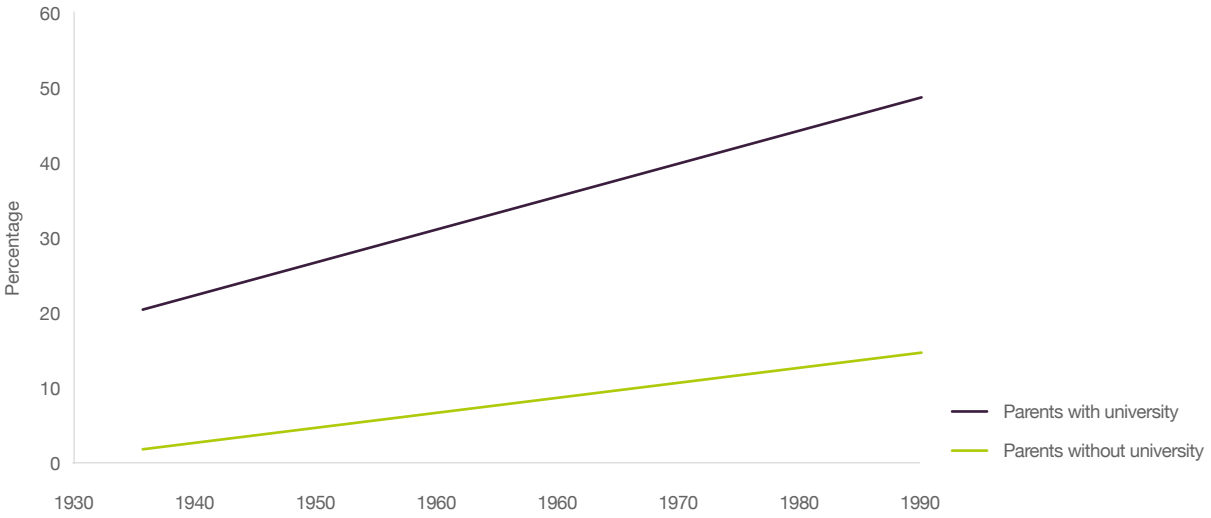
Note: There is no data available for Chile to measure the percentage of the population with basic skills. The digital skills indicator for basic tasks is constructed as the set of the following skills: copying or moving a file or folder; using copy and paste tools to duplicate or move information within a document, and sending e-mails with attachments. Intermediate tasks are constructed as the following skill sets: using basic arithmetic formulas in spreadsheets; connecting and installing new devices; and creating digital presentations using purpose-built *software.* Advanced tasks are built as the set of the following skills: writing programming code using specialized programming languages; finding, downloading, installing, and configuring software; and transferring files between computers and/or devices.
Source: Dalio et al., (2023).

A significant gap is observed between the OECD countries and the countries of the region in all of the skill sets analyzed. Within LAC, variability is also observed: Chile is the country with the best results (surpassing even the OECD average), and Brazil is positioned at the bottom of the *ranking* in all categories. These gaps need to be addressed systematically, with educational policies that promote digital competencies for life and work in an increasingly interconnected and technologically advanced world. At the time, access to computers and connectivity from schools were the biggest barriers in the region to advancing the digitization agenda. Today, it is also necessary to update educational curricula to integrate digital competencies in a cross-cutting manner in all subjects, focusing on the critical and creative use of technology. It is also crucial to invest in the continuous training of teachers, providing them with the pedagogical and technical tools necessary to teach these skills effectively and adapted to local realities.

Increase access to post-secondary education for vulnerable groups

The countries of the region have made important efforts to expand the supply of higher education by creating new institutions and promoting financing opportunities through scholarships—in some cases including free education—and credits (Ferreyra, 2017). However, major challenges persist for the inclusion of less advantaged groups, for whom reaching higher educational levels remains difficult. Recent data from RED 2022 reveal that only 14 out of every 100 young people born in the 1990s, whose parents did not have a university education, manage to complete higher education. Among those whose parents completed secondary or higher education, the probability is three times higher (46 out of every 100 manage to complete higher education) and the gap continues to widen (figure 3.7). Although part of this inequality is explained by a lower accumulation of previous skills and the failure to complete secondary education, there are other significant barriers, such as financial obstacles, lack of information, limitations in the supply of education and differences in expectations.

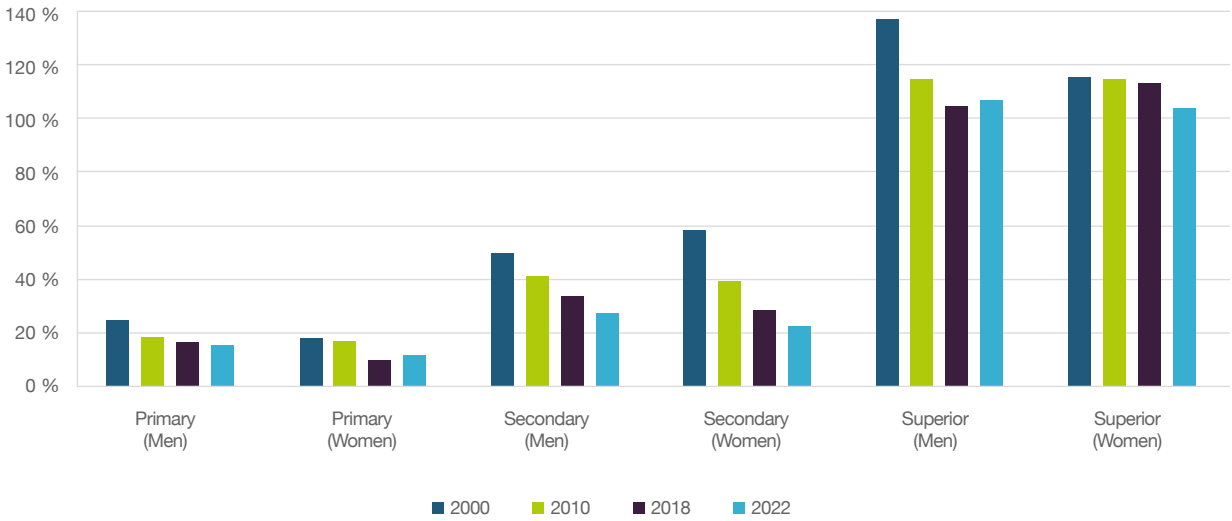
Figure 3.7
Probability of completing university education at age 25 by parents' level of education in Latin America and the Caribbean, for cohorts born between 1930 and 2000



Note: The figure shows the proportion of people completing college education at age 25, by year of birth and parental education. The lines reflect a linear fit based on estimates for each country, year of birth and parental education.
Source: De la Mata et al. (2022) based on census microdata available in IPUMS (2020).

There is an urgent need to address this disparity when considering the wage premium associated with higher education in the region. The wage differentials between those with higher education and those who only completed secondary education are wide. On average, in 2022, workers with completed higher education received an hourly wage 100 % higher than workers with only secondary education completed (figure 8). These differences are larger than in OECD countries (Fernández et al., 2024). In some economies such as Brazil, Chile, Colombia and Mexico, this premium exceeds 200 %. In addition, there is a drop in the premium associated with secondary education compared to primary education, suggesting that attaining this level of education alone may not be sufficient to guarantee higher quality job opportunities.

Figure 3.8
Percentage increase in hourly wage upon completion of each educational level (relative to previous educational level), regional average, by gender



Note: The graph shows the marginal returns to completing each educational level (primary, secondary and higher). These returns are calculated as the difference between the coefficients of the complete and incomplete educational level of a Mincer regression, where the dependent variable is the logarithm of the hourly wage in the main occupation for adults between 25 and 55 years old. Here, dummy regressors with educational categories, age, age squared, and area and region are included. Unweighted average of 13 countries: Argentina, Bolivia, Brazil, Chile, Colombia, Costa Rica, Dominican Republic, El Salvador, Mexico, Panama, Paraguay, Peru and Uruguay.
Source: Sedlac (Cedlas and World Bank).

Policies to improve access to postsecondary education must break down both financial and non-financial barriers. Comprehensive policies that recognize the interconnectedness of factors that influence access and success in higher education are essential. Moreover, given the heterogeneity of education systems and socioeconomic contexts in Latin America and the Caribbean, it is essential that these interventions be tailored to local realities.

On the supply side, the strategic expansion of public institutions and short-cycle programs—such as technological, technical or certifications—has shown potential to increase enrollment, especially in geographically underserved areas (Ferreyra, 2017). In Uruguay, the expansion of university campuses increased enrollment and the proportion of first-generation graduates (Lavy et al., 2024). Short-cycle programs in higher education are relatively scarce in our region (Ferreyra et al., 2021). An exception is Colombia, where approximately 30 % of higher education enrollment corresponds to this type of program, which has shown positive returns in income and formal employment, especially for women, although negative for men (Ferreyra et al., 2022).

> "Another path [for access to post-secondary education] could be to provide students with different paths to professional education: technical, technological, flexible short-cycle learning or certification of competencies, so that people can build a competency profile with the financial capacity they have at that moment".
>
> "It is also very important that top-grade universities are present in the territories (...) In the digital era, these high-quality universities will be able to offer content if the countries guarantee superior connectivity, even if they are not physically located in all parts of the country".
>
> **Based on an interview with Raquel Bernal**

It is also crucial to strengthen quality assurance systems in conjunction with policies that disseminate information on the performance of graduates in the labor market, according to the institution and the degree obtained, to guide students' decisions. These policies could help reverse phenomena such as those documented in Chile and Colombia, where the strong expansion of postsecondary education has not always been accompanied by increases in individual returns on this investment. A significant proportion of graduates could be facing negative returns (González-Velosa et al., 2015). This problem is particularly acute in higher technical degrees, which are often accessible to the most disadvantaged students.

> "College coverage was expanded without much care for quality. And this increased coverage without quality is very dangerous because we are not fulfilling the promise to these young people. Later, they are going to graduate, they are not going to find jobs or the salaries they expected and I think that this great frustration is very worrying for democracies.
>
> Before thinking about education and human capital policies, Latin American countries have a serious problem and a lack of clarity in the productive projects of the country we are looking for".
>
> **Based on an interview with Raquel Bernal**

On the demand side, need- and merit-based scholarships, as well as educational loans with favorable conditions, can significantly increase access and retention in higher education. The *Ser Pilo Paga* program in Colombia is a successful example of how a comprehensive financing approach can improve enrollment in high-quality universities, with positive effects on graduation, learning and employability (Londoño-Vélez et al., 2020, 2023).

Regarding credit, financing mechanisms must consider the risks faced by low-income families and the volatility of the labor market. It must be ensured that debt levels are sustainable, given the structural conditions of the region. In recent decades, most countries have developed a variety of student loan programs aimed at assisting low-income students with tuition, but, with some exceptions, little is known about their coverage and sustainability (Espinoza, 2013).

> "Financing is the great challenge for access and impact of higher education in Latin America and the world. (...) What has typically worked in other countries is the income-contingent payment, that is, the student is trained for free and repays when he/she already has a job. (...) Financing funds should be established for higher education with contributions from all sectors".
>
> **Based on an interview with Raquel Bernal**

Recent literature also highlights the importance of addressing non-financial barriers. Informative interventions about the benefits of higher education, admissions processes and financing options can increase aspirations and enrollment in a cost-effective manner (Dinkelman and Martinez, 2014).

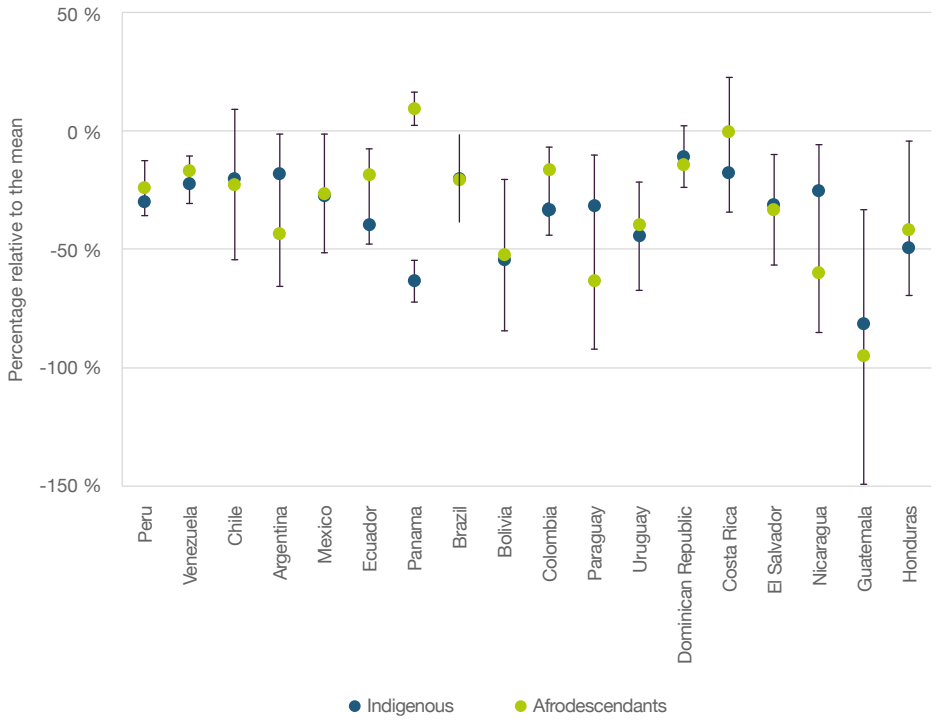
Addressing regional and racial/ethnic divides

Social inclusion policies, especially those focused on human capital formation, must address the ethnic-racial gaps that have often been neglected due to the lack of information to identify these populations (Albina et al., 2024). Afro-descendant and indigenous communities show systematically lower educational achievement in most countries in the region (figure 3.9.A). In this case, affirmative action policies, such as those for access to higher education and academic and socioemotional support programs, have shown promising results. In Brazil, quotas for university entrance for students from public schools and underrepresented ethnic groups have had positive impacts (Estevan et al., 2019; Oliveira et al., 2024). Despite possible initial mismatches due to lack of preparation (Arcidiacono et al., 2012, 2016), beneficiaries manage to graduate at approximately the same rate as their non-beneficiary peers (Oliveira et al., 2024). In turn, quotas at an elite university in Brazil generated a modest increase in early career earnings, but these effects faded over time (Machado et al., 2023), demonstrating that these policies require evaluation and adjustment to maximize their impact.

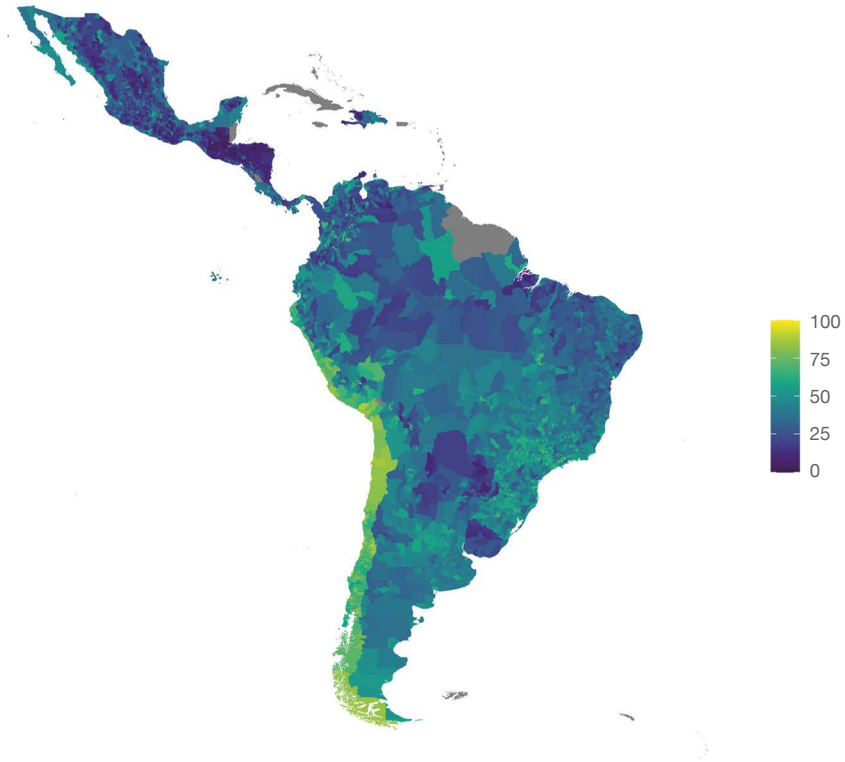
Geographic location is another key determinant of human capital formation opportunities in the region (De la Mata et al., 2022). The urban-rural divide is the clearest manifestation of regional gaps, with rural areas facing greater challenges in terms of access to quality education and basic services. But the gaps are even wider between different urban areas within countries. For example, there is considerable geographic variation in the percentage of people completing at least secondary education (figure 3.9. B). From the breakdown of this variation, 54 % is attributed to differences within countries and 46 % to differences between countries (Berniell et al., 2024). Factors such as limited educational supply and the restrictions faced by families to invest in education in areas of low economic development explain this dispersion. It is therefore essential that inclusion policies adopt a territorial approach, recognizing and addressing the particularities of each region.

Figure 3.9
Ethnic-racial and regional gaps

A. Differences in the probability of having completed high school, by country and ethnicity, with respect to mestizo/white



B. Percentage of individuals who completed at least secondary education in subnational geographic units of Latin American and Caribbean countries
(persons born between 1980 and 1989)



Note: The figure shows the difference in the proportion of Afro-descendants and indigenous people who complete secondary education with respect to the white or mestizo group. The differences are expressed as a percentage of high school graduates in the general population. The differences arise from a regression in which the dependent variable is a binary variable indicating whether the individual has completed high school or more and the independent variable is a categorical variable of ethnicity, in which the omitted variable is "white/mestizo". The regression includes controls for gender, age and survey year. The sample includes individuals between the ages of 25 and 60, and covers the years 2007 to 2020.
Source: Albina, et al. (2024) based on Latinobarómetro Years (panel A) and Berniell et al. (2024) based on census microdata available in IPUMS (2020) (panel B).

Policies for adult life

Labor market insertion and asset accumulation play a determining role in the well-being of individuals and their families during adulthood. However, the persistence of structural barriers, such as labor informality, difficulties in accessing credit, gender inequality, ethnic-racial discrimination and regional disparities, restrict opportunities for quality employment and access to social protection mechanisms.

When adding inequalities in human capital formation, the impact of all these barriers on labor income—the main source of income for Latin Americans and Caribbeans—is significant[10]. While income support policies for targeted groups are important to alleviate poverty, they are insufficient to address the deeper issues that sustain exclusion. This section focuses on addressing these structural problems by proposing policies that seek more equitable labor inclusion and expanded access to economic opportunities.

> "Families in poverty, particularly those in extreme poverty, need to be helped by the State, not only by offering them protection against risks, but also with some kind of income transfers. And here the region was a pioneer with the design of income transfer programs, but this is only one part of social protection".
>
> **Based on an interview with Santiago Levy**

Increasing access to quality jobs for vulnerable groups

Limited access to formal employment, as documented in the previous chapters of this report, is one of the structural problems that condition social inclusion. Informal employment is characterized by low wages, high instability, low productivity and limited prospects for professional growth. The segmentation of the labor market also aggravates the gaps in access to social protection mechanisms, which in the region are mainly linked to formal employment (Álvarez et al., 2020). Given the challenges of labor markets, social connections, especially family connections, play an exceptional role as a mechanism for finding employment. But this dependence becomes, in the long run, an additional source of inequalities in access to employment opportunities: families of higher socioeconomic status have better recommendations and contacts than those of lower socioeconomic status (De la Mata et al., 2022).

As a general guideline, policies aimed at reducing the gaps in access to quality jobs for vulnerable groups should act on three margins: first, tending to equalize the productive potential of workers; thus reducing previously existing gaps generated by the history of human capital accumulation and by changes in labor market demands; second, making more equitable the way in which the labor market treats people with similar productive potential, but with distinctive characteristics such as gender or ethnicity; and third, helping disadvantaged groups to make more and better informed employment decisions.

Although differences in human capital are constituted at earlier stages, there are still opportunities for training during working life (Berniell et al., 2016). Education and job training policies-which include classroom training, on-the-job training through internships, or both-, have shown favorable effects in the region, especially

10 Labor income represents approximately 80 % of total household income.

for young people and women (Escudero et al., 2019). Despite the fact that developing countries used to hold a pessimistic view of these policies (McKenzie, 2017), recent research has demonstrated their effectiveness (Carranza and McKenzie, 2024). Successful examples include Jóvenes en Acción in Colombia (Attanasio et al., 2017; Ibarrarán et al., 2019), Programa Primer Paso in Argentina (Berniell and De la Mata, 2017), Projoven in Peru (Ñopo et al., 2007), and Yo Estudio y Trabajo in Uruguay (Le Barbanchon et al., 2023).

> "We must overcome the idea that all human capital formation takes place only in educational institutions. There is a lot of room for human capital formation in the companies (...) And this dimension of human capital formation, in my opinion, has been highly underestimated".
>
> "We already have millions of workers in the region who are 30 years or older and who will be in the market for the next 30 years. We cannot waste this human capital, and there we have an important room for improvement".
>
> **Based on an interview with Santiago Levy**

Moreover, in the face of changing labor demand, driven by technological transformations and the energy transition, it is crucial to readjust training policies to strengthen the skills of vulnerable workers. Technological advances may lead to the replacement of workers by machines or the digitization of routine tasks (both manual and simple cognitive) in certain jobs; they may also increase the productivity of some workers in non-routine tasks and expand job opportunities in new tasks (Álvarez et al., 2020). On the other hand, the energy transition is expected to have an impact on employment levels and on the profile of skills required (Álvarez et al., 2024). In this context, there should be public policies that monitor these changes and offer retraining to affected workers to ensure their transition to these new job opportunities.

According to data from the 2019 CAF Survey (CAF, 2020), almost half of the workers in Latin American cities are concentrated in occupations with a high content of routine tasks (47 %, on average, in the main cities of the region, compared to 41 % in the United States). Analysis by socio-demographic characteristics indicates that workers with lower educational levels, middle socioeconomic family backgrounds and young people may be the most affected by automation. Brambilla et al. (2023) document the effect of the incorporation of robots in the labor markets of Argentina, Brazil and Mexico, the main users in Latin America. Robots mainly replace formal salaried jobs, affecting young and semi-skilled workers to a greater extent. This induces displaced workers to seek options in informal jobs to escape unemployment. Among those who do not lose their jobs, robotization generates greater wage losses for middle-aged and older formal workers.

Another active employment policy focuses on supporting workers in obtaining a job, reducing the asymmetry of information between them and companies, or reducing the costs associated with the search, which are particularly high for vulnerable groups. Among these policies are employment exchanges—which provide information on job vacancies to workers and about them to companies—support policies in the search process, including help on how to prepare a résumé, and training in interview skills. Also, the certification of competencies based on the evaluation of workers' productive capacities, and the encouragement of the development and use of digital job search platforms. Another type of policies that can contribute to improving decision-making at key stages of working life are those that provide information on the quality of available jobs and the future potential of occupations. These types of interventions can be especially important for young people at the time they enter the labor market, as these first work experiences condition future trajectories (Berniell and De la Mata, 2017). Taken together, these policies can help broaden the spectrum of labor opportunities for the most vulnerable groups, and thus reduce dependence on their social ties.

> "In terms of these business services, the time zone matters more (...) than how many kilometers away you are. And that makes it possible for Latin America to integrate north to south in terms of providing business services that could be using our growing university-educated population".
>
> **Based on an interview with Ricardo Hausmann**

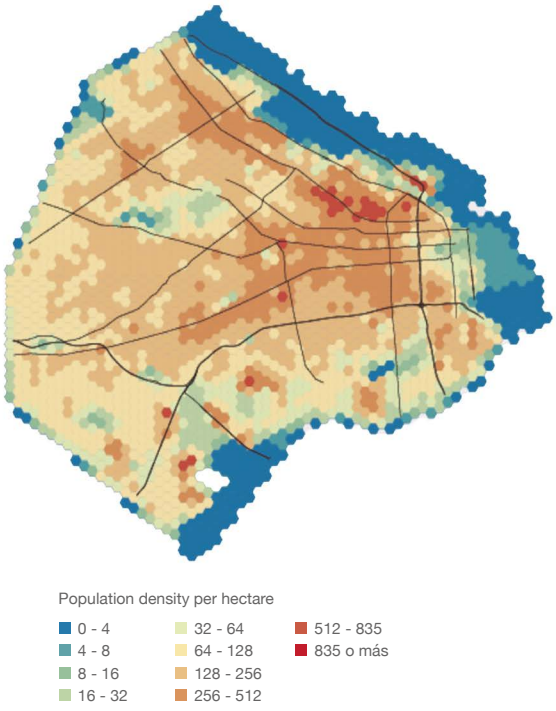
Reducing spatial inequality in job opportunities

Spatial inequalities are a crucial factor in the employment opportunities of vulnerable groups. Geographic location and access to transportation can significantly determine the possibilities of obtaining formal employment or improving working conditions. In Latin America and the Caribbean, productivity gaps between regions limit opportunities for those residing in less developed areas (Alves, 2021). Public policies can address these gaps through a territorial approach that reduces inequalities in access to basic services (education, health, infrastructure, etc.), thus strengthening their productive potential.

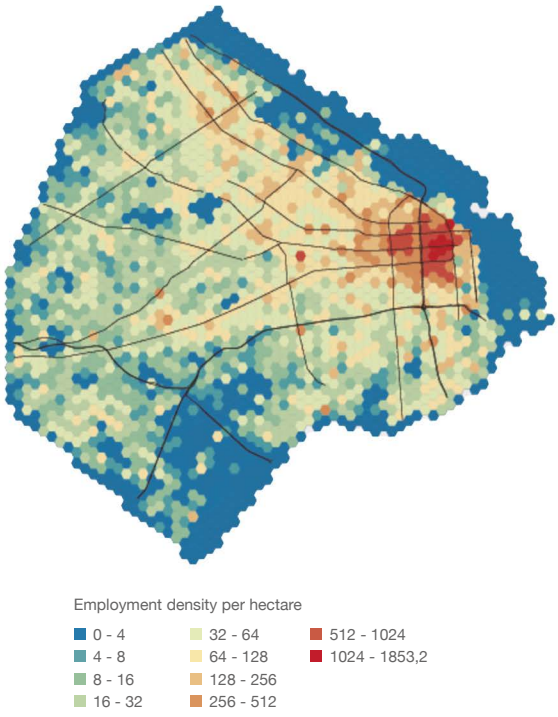
Within cities, spatial inequalities are also evident. Formal jobs tend to be concentrated in central areas, generating disparities in distances to the workplace. In the city of Buenos Aires, for example, half of the formal jobs are concentrated within a four-kilometer radius in the center, while the metropolitan area extends for tens of kilometers (Alves et al., 2018) (figure 3.10). Similar situations occur in São Paulo, where inhabitants of peripheral areas have access to less than 20 % of jobs that are less than an hour's drive away, in contrast to more than 50 % for inhabitants of the center (Pereira et al., 2020). Compounding this inequality are the high transportation costs and high congestion that are characteristic of Latin American and Caribbean cities (Daude et al., 2017).

Figure 3.10
Population and private formal employment density in the Autonomous City of Buenos Aires, 2017

A. Population density
(average persons per hectare).



B. Density of registered employment in the private sector
(total average employment per hectare).



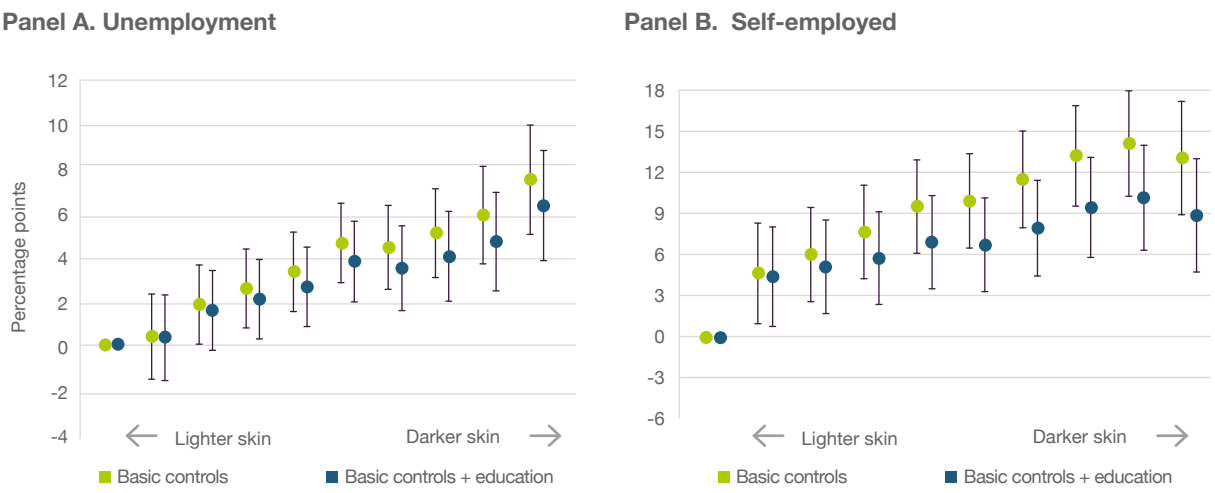
Source: Alves et al. (2018) based on administrative records of private registered employment in Argentina from the Argentine Integrated Pension System and the 2010 National Census of Population, Homes and Housing.

The active labor market policies previously described, especially those focused on helping workers get jobs, can be key to addressing the spatial barriers that cause workers to limit their job search in cramped environments within cities (Berniell, et al., 2024; Manning and Petrongolo, 2017). However, because a significant part of the constraints originates from the commuting costs faced by the most vulnerable populations, the expansion of public transportation infrastructure should be thought of as an effective tool to bring job opportunities closer. A recent study on the expansion of the subway in Mexico City showed that improving access to the city center, where formal jobs are concentrated, reduced levels of informality in peripheral neighborhoods and increased the welfare of its inhabitants (Zárate, 2022).

Eradicating all types of ethnic-racial discrimination

The indigenous and Afro-descendant populations of Latin America and the Caribbean face systematic penalties in the region's labor markets. These are reflected, among other things, in fewer opportunities for formal employment and, when they do obtain them, in lower incomes. Part of these ethnic-racial gaps can be explained by differences in human capital formation, as noted above. However, another significant part has its origin in discriminatory behavior in the labor market. So-called "statistical discrimination," where employers base their decisions on observable traits like ethnicity or skin color—as an imperfect indicator of productivity—is a clear example. But discrimination can also be based on preferences. Figure 3.11 shows that the odds of being unemployed or self-employed are higher for people with darker skin compared to those with lighter skin, even after comparing people with equal educational attainment, reflecting a clear racial bias in hiring decisions.

Figure 3.11
Gaps in employment outcomes by skin color



Note: The coefficients are the result of an ordinary regression where the dependent variable is a binary variable that indicates, according to the panel, whether the individual is unemployed or self-employed (not including professionals). The independent variables are a set of binary variables that take values from 1 to 10 and identify the individual's skin color. Lighter skin color is the omitted variable in the regression. Confidence intervals are 95 %. The basic controls are binary variables of gender, age, country and year, while the second set of controls adds to the first set binary variables of education of the individual. The sample years are 2010, 2012, 2014, 2014, 2016, 2017, 2018, and 2019, and the countries, Bahamas, Barbados, Belize, Brazil, Colombia, Costa Rica, Dominican Republic, Ecuador, El Salvador, Guatemala, Guyana, Haiti, Honduras, Jamaica, Nicaragua, Panama, Paraguay, Peru, Suriname, Trinidad and Tobago, and Uruguay.
Source: De la Mata et al. 2022 based on data from the LAPOP Americas Barometer.

Several studies have confirmed the existence of a significant component of labor discrimination in the region. On the one hand, some research has shown that an important part of the wage gap cannot be conclusively explained by obvious characteristics associated with worker productivity (Arcand and D'Hombres, 2004; Card et al., 2021). On the other hand, studies using the technique of sending fictitious resumes to real job offers, where the ethnicity or race of the candidate is randomly modified, have shown a clear bias in hiring, against Afro-descendant and indigenous candidates (Arceo-Gómez and Campos-Vázquez, 2014; Galarza and Yamada, 2014).

Actions to reduce racial-ethnic gaps in labor markets can be grouped into three broad areas. First, reform selection processes to ensure that ethnicity and race are not relevant factors; this would entail eliminating photos and names of candidates in the early stages of candidate selection. Second, implement affirmative action policies, such as minimum employment quotas for disadvantaged ethnic groups in public competitions adopted in Brazil and Uruguay (ECLAC and UNFPA, 2021). Although the evidence on these policies is limited, it suggests that they are effective in increasing the employment of disadvantaged groups without affecting productivity (Holzer and Neumark, 2000). Finally, these policies should be complemented by broader measures that address education and culture, key areas for combating structural discrimination.

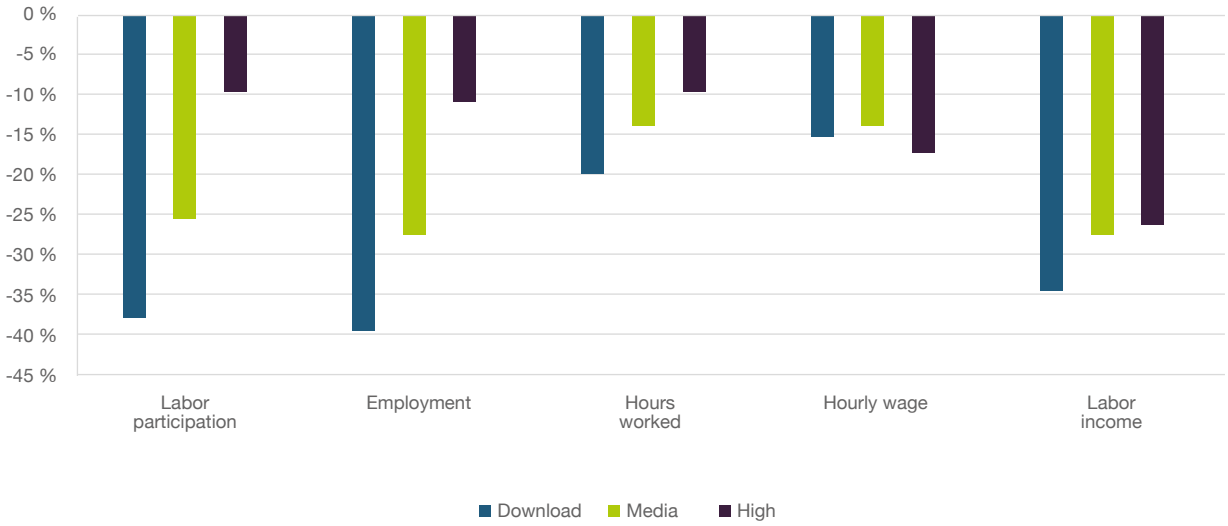
Strengthening women's economic autonomy

Women face specific barriers that limit their social inclusion, especially in the labor market. These inequalities affect more, as is to be expected, those located in disadvantaged contexts. They tend to manifest themselves in various aspects, such as the gap in labor participation and wages, occupational segregation and lower presence in quality formal jobs (figure 3.12.A). In addition, as they tend to bear disproportionate responsibilities for care and unpaid work, their availability to participate fully in the labor market is restricted (figure 3.12.B). Although the allocation of time between paid and unpaid work could be justified by comparative advantages, the evidence tends to reject this idea[11]. nstitutional factors such as limited childcare overage or parental leave policies, as well as social norms, play a preponderant role (Berniell et al., 2023; Kleven et al., 2019, 2024; Olivetti and Paserman, 2015). This situation not only negatively affects women's economic autonomy, but also limits the efficient allocation of talent in economies, contributing to lower productivity.

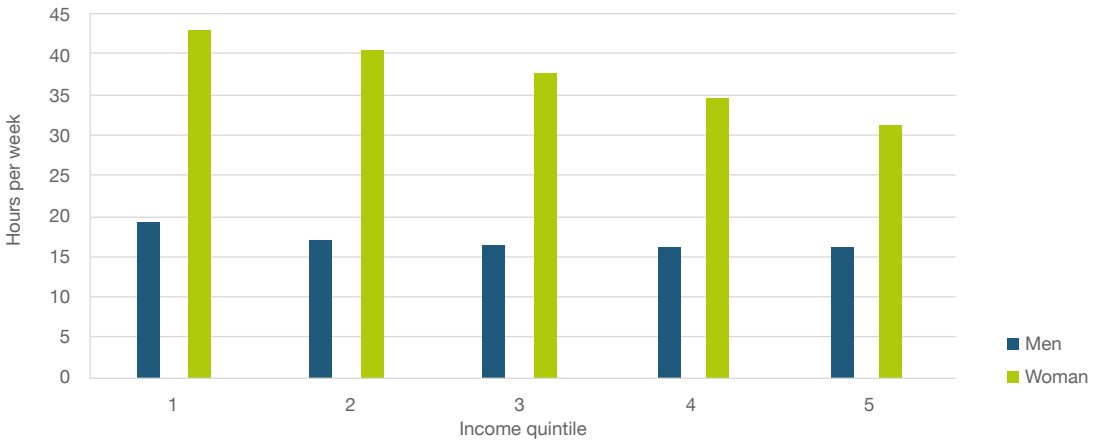
11 Afridi et al., 2024; Andresen and Nix, 2022; Ashraf et al., 2022; L. Berniell, Bonavida, et al., 2024; Fettig et al., 2022.

Figure 3.12
Gender gaps: labor market and household chores

A. Labor market gaps by educational level (percentage difference). Average for 18 Latin American and Caribbean countries, circa 2022



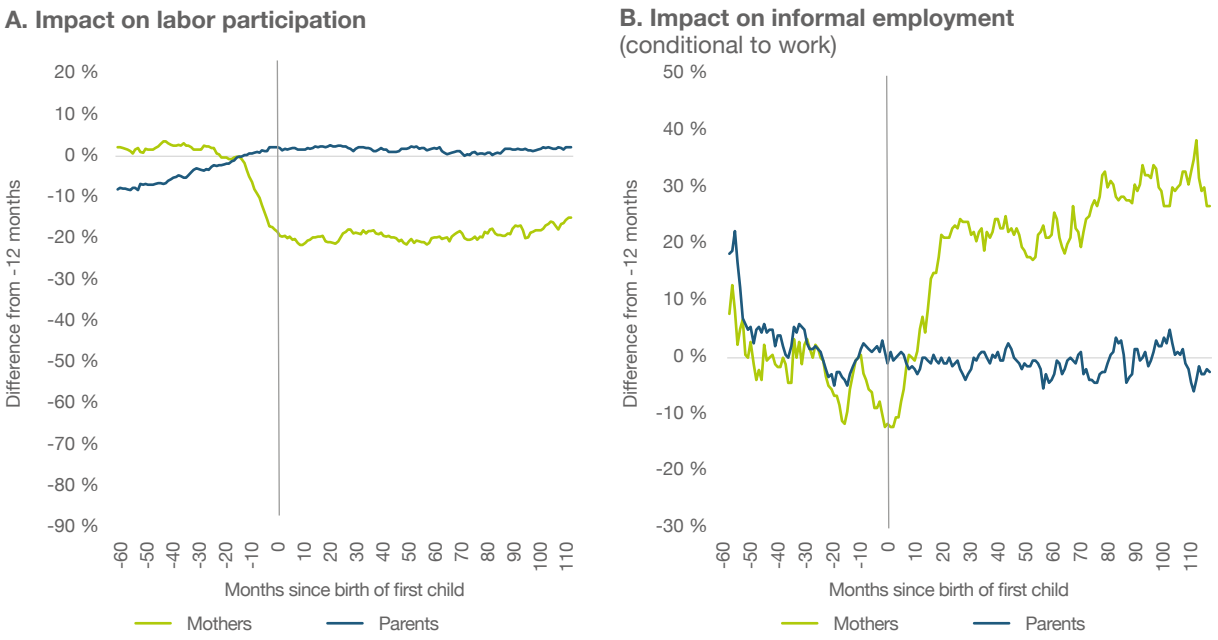
B. Hours per week spent on housework and unpaid care, by income quintile. Average for several Latin American countries



Note: Panel A presents the percentage difference between men and women in labor participation rate (25-54), employment rate (25-54), weekly hours spent in paid work (25-54), average hourly wage earned in the main occupation, and average monthly labor income across all occupations. The results correspond to the simple average of 18 Latin American countries. Panel B presents the average hours of unpaid work by per capita income quintile, family and gender. Unpaid work refers to work that is done without pay and is mostly performed in the private sphere. It is measured by quantifying the time that a person dedicates to work for self-consumption of goods, housework and unpaid care for the household itself or to support other households or the community. Simple average for 13 Latin American countries. Argentina, 2013: Brazil, 2019; Chile, 2015; Colombia, 2021; Costa Rica, 2022; Ecuador, 2012; El Salvador, 2017; Guatemala, 2022; Honduras, 2009; Mexico, 2019; Paraguay, 2016; Peru, 2010 and Uruguay, 2013.
Source: Prepared by the authors based on data from GenLAC (panel A) and CepalStat (panel B).

The gender gap in labor participation declined considerably during the 1990s and the first decade of the 2000s. During that period, it went from 40 to 30 percentage points in 2010, but has stagnated since then. This phenomenon contrasts with the remarkable educational progress achieved by women in recent decades, even surpassing men in years of schooling (Marchionni et al., 2019). Recent studies highlight motherhood as the central factor in explaining the gender gaps (Kleven et al., 2019), as this factor is responsible for almost half of the income inequality between men and women (Marchionni and Pedrazzi, 2023). This result is unequivocal in several countries in the region, where it is observed that women's labor trajectories are significantly affected after the birth of the first child and do not recover, even after several years[12]. n contrast, the birth of children has practically no impact on men's labor trajectories. Figure 3.13.A illustrates this phenomenon in the case of Chile. In the region, not only is there a marked decrease in the labor participation of women after childbearing, similar to what occurs in developed countries, but also the quality of their employment is considerably altered, increasing labor informality (figure 3.13.B). This may be due to the need for jobs with flexibility, which the formal sector typically lacks (Berniell et al., 2021).

Figure 3.13
Labor trajectories of mothers and fathers after birth of first child in Chile
(percentage changes with respect to the year prior to the birth)



Note: The figure shows the percentage change with respect to the base period (12 months before the birth of the first child) in the labor participation rate (panel A) and in the informality rate (panel B).
Source: (Berniell et. al, 2021).

12 This same pattern has been documented in several countries in the region (Aguilar-Gómez et al., 2019; Berniell et al., 2021, 2023; Marchionni and Pedrazzi, 2023)

Closing gender gaps in the labor market requires actions that help families reduce the time and money constraints associated with child and dependent care. As mentioned, the expansion of childcare services is fundamental, especially to improve the situation of the most vulnerable women (Berlinski et al., 2011; Berlinski and Galiani, 2007; Morrissey, 2017). A complementary measure would be to extend the school day in basic education.

The policy package should also focus on the revision of labor and social security legislation with the purpose of extending parental leaves with a gender-neutral approach, avoiding discrimination against women (Arreaza et al., 2023). Parental leaves are mainly focused on maternity, while paternity leaves are very short. This revision should promote co-responsibility between fathers and mothers. It should also ensure that there is no discrimination in the formal employment of women, avoiding cost gaps between the hiring of men and women.

Policies that favor the presence of women in better-paid and higher-quality occupations are also required. These should include curricular and pedagogical reforms throughout the educational cycle that are more gender-neutral and that explicitly encourage women to invest more in training aligned with future labor demands. They also include affirmative action policies that promote female participation in leadership roles.

Finally, it is essential to implement policies that promote changes in gender social norms, moving, for example, towards greater co-responsibility in caregiving tasks. This includes awareness campaigns on gender equality, educational programs for an equitable sharing of household chores, and the promotion of male role models in caregiving.

The most extreme manifestation of the adversities faced by women is, without a doubt, gender-based violence. According to data from the World Health Organization, one in three women has suffered some form of physical or sexual violence by a partner or another person. Gender-based violence has enormous repercussions on women's physical and mental health and economic conditions. It is a multidimensional public problem: it affects public health, safety and human rights. It is crucial to continue strengthening comprehensive public policies to prevent and combat gender-based violence, supported by studies and technological tools that improve data collection and statistics (Aguirre et al., 2022).

Although not explicitly aimed at reducing gender gaps, income transfer policies, such as conditional or non-contributory pensions, have collaborated in that direction by improving women's autonomy in managing household resources and their power to negotiate decisions about their lives and those of their children (Alemann et al., 2016; Berniell et al., 2020). They have also helped delay early marriage, reduce beneficiaries' fertility, increase contraceptive use, and reduce the likelihood of women experiencing physical violence by their partners (Bastagli et al., 2016).

Promoting financial inclusion and access to critical assets

Latin America and the Caribbean is characterized by a high concentration of wealth, even greater than that of income. The poorest 50 % of the population accumulates only 1 % of wealth, while the richest 10 % concentrates 78 % (WID, 2022). Evidence indicates that reaching certain minimum thresholds of wealth is even necessary to overcome poverty traps (Balboni et al., 2022). In this context, access to critical assets such as housing and other productive assets, together with financial inclusion, are fundamental to closing these poverty and inequality gaps.

For a large part of the population, the most relevant asset is housing (De la Mata et al., 2022). However, tenure gaps between the rich and poor sectors have continued to grow in recent decades. While access to housing is relatively high, there is a marked socioeconomic gradient in quality, particularly in terms of access to basic services such as drinking water and sanitation, as well as formal tenure. Housing in informal settlements and without access to public services remain the reality for many vulnerable sectors (Daude et al., 2017). On the other hand, the tenure of productive assets such as commercial premises or land also follows a socioeconomic pattern, with significantly limited access for the poorest sectors. Structural barriers faced by these groups include both lack of sufficient income and lack of access to adequate financial instruments and knowledge that could facilitate the acquisition and improvement of these assets.

In this regard, subsidies and transfers play a fundamental role in guaranteeing access to housing for lower-income households. Some studies have shown that cash subsidies for housing purchase, instead of State construction, can be more efficient and transparent, as they reduce costs and allow families to choose the location of their preference (Bouillon, 2012).

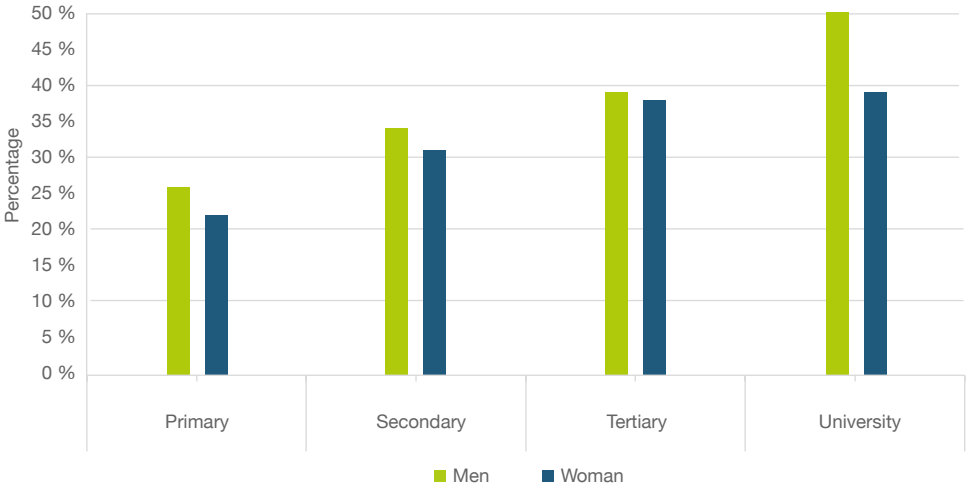
In addition, land titling programs have proven to be effective in improving housing investment and household health. This process allows households to formalize their properties, facilitating access to credit and promoting investment in housing improvements (Galiani and Schargrodsky, 2010). However, it is crucial that these programs also focus on maintaining formality in future transactions, preventing high registration costs from perpetuating informality in successive property transfers.

On the other hand, financial inclusion policies should be diverse, ranging from training in economic issues to improving access to banking services. The inhabitants of the region are characterized, for the most part, as having little financial literacy. This trend is directly proportional to socioeconomic level (Azar et al., 2018), as shown by the results of CAF's financial capability surveys (figure 3.14), in which, in addition, low financial literacy is evident for women. Financial inclusion policies integrated in the school education system and in conditional transfer programs can be a powerful tool to improve financial management in

vulnerable groups. Many of the conditional transfer programs already include financial education components (García et al., 2013). In addition, the participation of State financial institutions is also critical, as the private sector can provide them, but in a way that is not ideal due to the externalities they generate in credit markets (Laajaj and Yang, 2018).

Training programs in this field not only improve knowledge, but also the financial behavior of the beneficiaries (Kaiser et al., 2022). And when properly implemented, they have significant economic effects, especially in disadvantaged sectors (figure 3.14). In Peru, for example, a financial education pilot in high school not only had considerable impacts on the financial literacy of young people, but also had effects on their credit behavior three years later, when they were already graduated from high school (Frisancho, 2023a). A spillover effect from children to parents was also evident (Frisancho, 2023b).

Figure 3.14
Percentage of people with good financial knowledge according to gender and educational level



Note: The figure presents the proportion of people who answer correctly at least 5 of 7 questions formulated to measure knowledge about the concepts of inflation (2 questions), diversification (2 questions) and interest rates (3 questions), controlling for education and gender. The information corresponds to the simple average of 7 countries in the region in the most recent years, available in CAF's financial capability measurement survey: Argentina (2017), Bolivia (2013), Chile (2016), Colombia (2019), Ecuador (2013), Paraguay (2017) and Peru (2019).
Source: De la Mata et al., 2022 based on CAF financial capabilities measurement survey (CAF, 2020).

In addition to financial training, it is essential to improve access to banking services for the most vulnerable. This includes developing regulatory policies that encourage the growth of microfinance and *fintechs*, improving credit bureaus and promoting the digitalization of these services (Mejía and Azar, 2021). In recent decades, the microfinance industry has made significant progress in countries such as Bolivia and Peru, facilitating access for sectors traditionally excluded from the formal financial system. The use of new technologies represents an opportunity for financial inclusion and reinforces the need to consolidate policies to close access gaps, with greater internet coverage and digital literacy for vulnerable groups.

Policies for the elderly

Old age presents important challenges in terms of social inclusion in Latin America and the Caribbean, particularly in terms of guaranteeing adequate income and access to essential services. The consequences of inequalities accumulated throughout the life cycle, such as the higher incidence of labor informality and the lack of access to social protection mechanisms, become more evident at this stage. This section explores the policies needed to strengthen the economic protection of the elderly through more inclusive pension, health and care systems.

Protecting income in old age through pension systems

Old age poses major challenges in terms of economic autonomy. At this stage of life, ensuring economic security is essential to enable people to maintain a decent standard of living. Pension systems play a central role in this process, providing income during old age and protecting the population in the event of disability or death of a spouse. However, the high levels of informality in the labor markets of Latin America and the Caribbean have caused a significant proportion of the population to face old age without having met the necessary requirements to access contributory pensions, leaving many people in a situation of economic vulnerability (Álvarez et al., 2020). This is especially relevant for women, who have lower labor participation, are more exposed to informality and have a longer life expectancy.

Non-contributory pension systems have been a key policy for guaranteeing basic income to the most vulnerable groups during old age. Since the 2000s, coverage has expanded across several countries in the region, approaching universalization in some. However, in countries where contributory pension coverage is low (less than 40 % of the elderly population receives a contributory pension), the expansion of non-contributory pensions has been limited, as in the Dominican Republic, El Salvador, Guatemala, Nicaragua, Colombia, Peru and Ecuador (figure 3.15.A).

The adequacy of non-contributory pensions remains a major challenge. A recent study by Vila et al. (2024) shows that, on average, the value of benefits as a percentage of the poverty line has increased by 11 percentage points over the last 12 years, from 81 % in 2010 to 92 % in 2022. However, there is considerable heterogeneity across countries. While in Argentina, Brazil, Chile and Uruguay pensions are above the poverty line, in Bolivia, Colombia, El Salvador and Peru the value of benefits is very low, below 50 % of the reference line. Other countries such as Costa Rica, Ecuador, Mexico and Panama have intermediate levels, with pensions between half and the poverty line (figure 3.15.B).

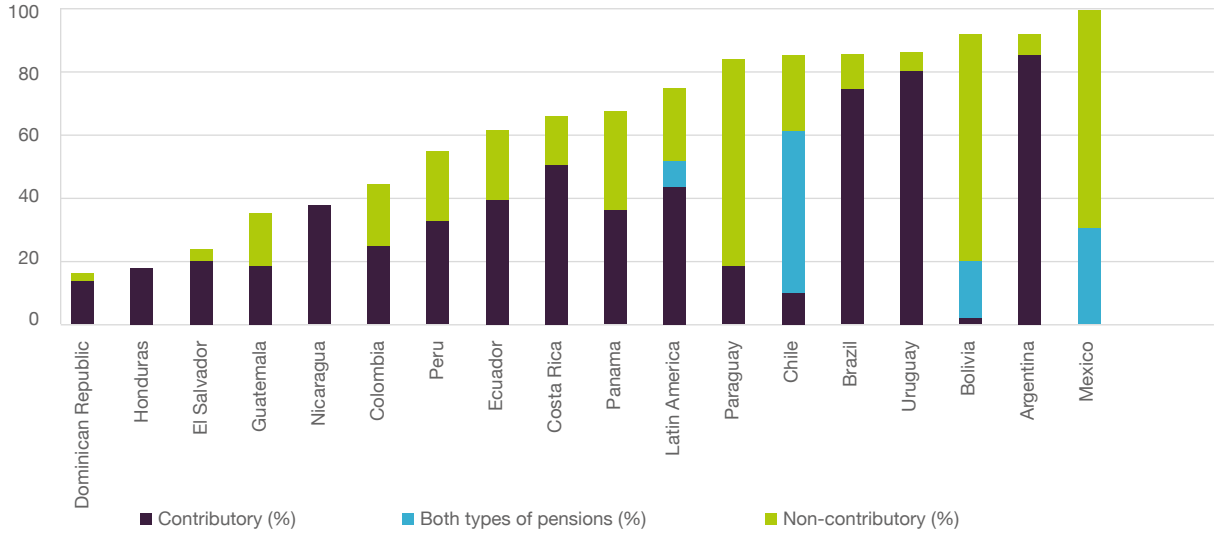
A key challenge for pension systems in the region is to achieve universal coverage that ensures beneficiaries a minimum level of income that allows them to avoid poverty. Given the high level of labor informality, this implies, in practice, continuing to extend non-contributory pensions. The challenge is not to create new programs, since most countries have already developed them, but to expand their coverage and, in some cases, increase benefit amounts.

According to estimates made for the RED (Álvarez et al., 2020), universalizing pension coverage would have an average cost of between 0.18 % and 0.24 % of GDP, depending on whether beneficiaries obtain a pension of USD 4 per day (in purchasing power parity) or the amount of the main non-contributory pension in each country. In the first case, the greatest challenge is faced especially by countries with low pension coverage in general, while, in the second case, it would be faced by countries with high amounts of current pensions (such as Brazil and Uruguay). These figures could almost triple (0.53 % and 0.66 % of GDP, respectively) considering the demographic transition that countries will experience in the next 30 years. This aging is occurring much faster in the region than in developed economies that have already undergone this process. The necessary reforms will therefore have to respond promptly to these demographic dynamics.

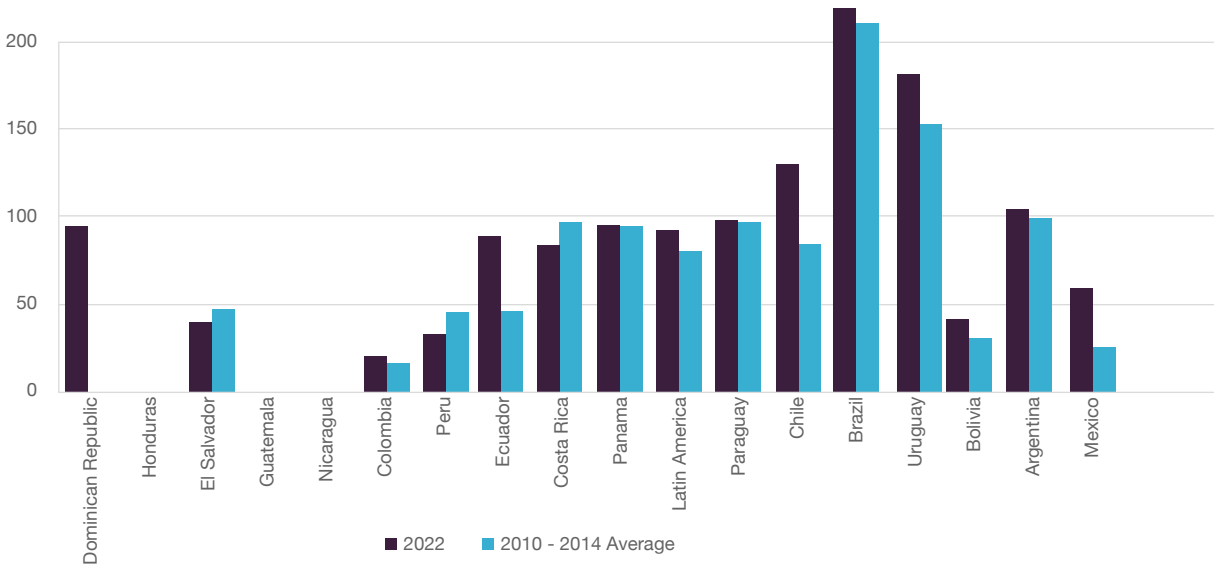
Given the growing need for resources, another fundamental challenge for pension systems, both in their contributory and non-contributory components, is to ensure their financial sustainability. This can be achieved through measures such as increasing workers' contribution rates, expanding the number of contributors (through higher levels of labor participation of women and older adults, as well as reducing informality), increasing general taxes or modifying the requirements for minimum years of contribution and retirement age. It is also essential to simplify and make the contributions of self-employed workers mandatory. These challenges vary considerably across countries in the region, so each will require a specific policy mix (Álvarez et al., 2020).

Figure 3.15
Pension Coverage and Adequacy

A. Coverage of contributory and non-contributory pensions (2022)



B. Sufficiency of non-contributory pensions (in relation to poverty line. 100=poverty line). Average 2010-2014 and 2022



Note: In panel A, the percentage of the population aged 65 and over with some type of coverage for the year 2022 is presented. Both types of pensions show the percentage of people aged 65 and over who receive both contributory and non-contributory pensions. Panel B presents the percentage that non-contributory pensions represent over the poverty line for each country, for 2022 and for the 2010-2014 average.
Sources: Vila et al. (2024) based on administrative data for each country, Economic Commission for Latin America and the Caribbean (ECLAC), Database of non-contributory social protection programs in Latin America and the Caribbean [online] https://dds.cepal.org/bpsnc/inicio, Latin American and Caribbean Demographic Center (Celade), Population Division of ECLAC, "Long-term population estimates and projections 1950-2100: 2019 revision," and United Nations, World Population Prospects 2019 [online] https://population.un.org/wpp2019/.

Guaranteeing access to adequate health and care coverage

In most Latin American and Caribbean countries, access to health services is linked to labor formality or to the enjoyment of a contributory pension. This leaves a significant part of the population outside the contributory-based health system. Brazil is an exception, with a universal health system. For older adults who face higher risks of "catastrophic" health expenditures—those who exceed 10 % of household income—this situation is especially critical (Álvarez et al., 2020).

Non-contributory health systems are essential to ensure access to medical services for vulnerable groups of all ages. However, there are significant quality gaps between contributory and non-contributory systems, which generate inequalities in access to the services needed to treat chronic conditions and prevent health problems in older adults (Bancalari et al., 2024). Although these have expanded in the region, the focus of benefits has been mainly on the maternal and child population.

In order to improve equity in access to health care, it is essential to improve coverage for those who are not covered by the contributory systems and to develop explicit plans that ensure access to quality essential medical services for the entire population. One advantage of explicit health plans is that they allow for efficient targeting of resources, improving the use of spending in this area by concentrating on preventive and curative services that have a greater impact.

However, the aging of the population also generates a growing demand for care services. In Latin America, most care for the elderly is informal and falls mainly on the families themselves, especially women. This lack of State policies generates a gap in formal support for older people who require assistance with daily activities and, at the same time, burdens families who face economic and time availability difficulties. The development of policies such as home care services, day centers and support programs for informal caregivers is essential to respond to the rapid aging of the population in the region (Álvarez et al., 2020).

Cross-cutting social policy challenges

It is important to recognize that inclusion policies face cross-cutting challenges that influence their design and implementation. One of the most relevant is the need for adequate targeting of beneficiaries to ensure that interventions effectively reach the populations that need them. A clear example of the need for improvement in this dimension is *ex post* redistributive policies, such as non-contributory cash transfer systems. Stampini et al. (2023) document that only 55 % of the population living in poverty benefits from these programs, while 41 % of people living in households receiving at least one non-contributory transfer are above the poverty line.

In addition, it is crucial for the State to have the technical and institutional capacities necessary to implement efficient policies. The capacity to design, coordinate and execute inclusion programs is a key determinant of their success. The lack of these competencies can limit the scope and effectiveness of initiatives. A more efficient State also contributes to a more adequate use of resources, thus potentially alleviating the fiscal strain associated with the need to expand social policies.

Another important challenge is the need to guarantee sustainable financing that will allow inclusion policies to be maintained in the long term, and that these policies are not threatened in the context of fiscal restrictions or electoral cycles. In the last three decades, public social spending has doubled its share of gross domestic product (GDP), and that of total public spending has increased in practically all countries, from less than 46 % to almost 54 %. This reflects the regional effort to build more robust social protection systems. Nevertheless, levels of social spending in the region are lower when compared with OECD countries. Although part of this difference is due to demographic factors (OECD countries have older populations and higher pension spending) and economic development, a significant portion is explained by lower coverage and generosity of social protection programs in Latin America and the Caribbean (Álvarez et al., 2020). Increasing coverage and guaranteeing a minimum quality floor for the services provided to the most vulnerable groups require ensuring adequate financing.

A pending challenge for social policy in the region is to improve its redistributive capacity. Although social spending, excluding contributory pensions, tends to equalize income distribution in Latin America and the Caribbean, tax systems as a whole have limitations: they manage to reduce inequality, but do so to a lesser extent than in other upper-middle-income countries, and significantly less than in advanced countries (Lustig et al., 2023). In some countries, the combination of social spending and taxation not only fails to reduce poverty but, in cases, may actually increase it (Higgins and Lustig, 2016). These results indicate that tax policy, which is beyond the scope of this chapter, plays an important role both in financing policies and in reducing inequality.

> "There is great room for improving equity and efficiency in Latin America, because we are precisely in a context where a dysfunctional, outdated design of social protection and tax instruments, such as special regimes for companies, are simultaneously causes of poorly functioning social protection and low productivity. Therefore, if we understand these synergies, we have an immense opportunity to redesign tax systems and improve social protection systems, moving forward on the side of equity and productivity".
>
> **Based on an interview with Santiago Levy**

Finally, the design of the inclusion policy must consider the effects it may have on the incentives for companies and beneficiaries to avoid undesired distortions in the labor market or investment, and ensure that incentives for productivity and economic growth are not undermined. This is crucial with regard to the benefits and financing of social protection instruments, such as health, pensions and other income transfer programs (box 3.3). Although these issues are beyond the scope of this chapter, they are fundamental to the discussion of specific policy instruments, as they directly influence the effectiveness and viability of inclusion strategies.

Box 3.3
Examples of disincentives for non-contributory social protection

Non-contributory social protection systems, despite their positive effect on the social welfare of informal and vulnerable workers and their families, can also generate incentives for these same workers to remain in the informal sector, leading to lower levels of productivity and affecting the economy.

Studies analyzing the impact of the introduction of non-contributory social protection programs, such as income transfers and non-contributory health systems, show that, although there are negative effects on labor participation and formality, their magnitude is moderate to low (Bérgolo Sosa and Cruces, 2016; Bosch and Campos-Vázquez, 2014; Camacho et al., 2014; Garganta and Gasparini, 2015). These undesirable effects must be weighed, in any case, against the benefits in various indicators of inclusion, such as health and education.

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Chapter 4

Solutions for environmental sustainability from the region



Key messages

1.

The current model of production and consumption is unsustainable.

2.

LAC is already facing significant negative impacts of climate change, making adaptation policies a priority.

3.

The characteristics of the region point to the need of prioritizing adaptation in the areas of agriculture, infrastructure and cities, and targeting interventions for vulnerable populations.

4.

The region's economies have agreed to ambitious emission reduction, although global commitments are still incompatible with the goal of not exceeding a 2 °C temperature increase compared to the pre-industrial era.

5.

In Latin America, the emissions profile differs significantly from that of the rest of the world, with the soil and agricultural sectors being the most important.

6.

Mitigation priorities in the soil and agricultural sector are to halt land use change in ecosystems with high carbon potential and improve agricultural practices for productivity and soil carbon management.

7.

Energy and industrial mitigation present opportunities for the region's economies with green electricity generation potential and critical mineral reserves for the transition.

8.

Pollution and environmental degradation negatively affect welfare and production.

9.

Ecosystem protection requires increasing the coverage of protected areas, prioritizing neglected ecosystems and improving monitoring and sanctioning capabilities.

10.

The environmental and energy transition involves high costs in a region with limited fiscal space.

An unsustainable development model

The period beginning with the Industrial Revolution witnessed an improvement in living standards unparalleled in human history. From 1850 to present, the global population has increased sixfold and global aggregate output has doubled, on average, every 25 years.

Unfortunately, this development occurred at the expense of a high environmental impact that today compromises the sustainability of the planet. As a result, the average global temperature and the degradation of the environment and ecosystems have increased.

The environmental crisis is already affecting economic activity and well-being. A clear example is the increase in the frequency and severity of external weather events. Therefore, to address this crisis, both mitigation policies that reduce the impact of human activity and adaptation policies that allow us to face the climate crisis with lower costs are required.

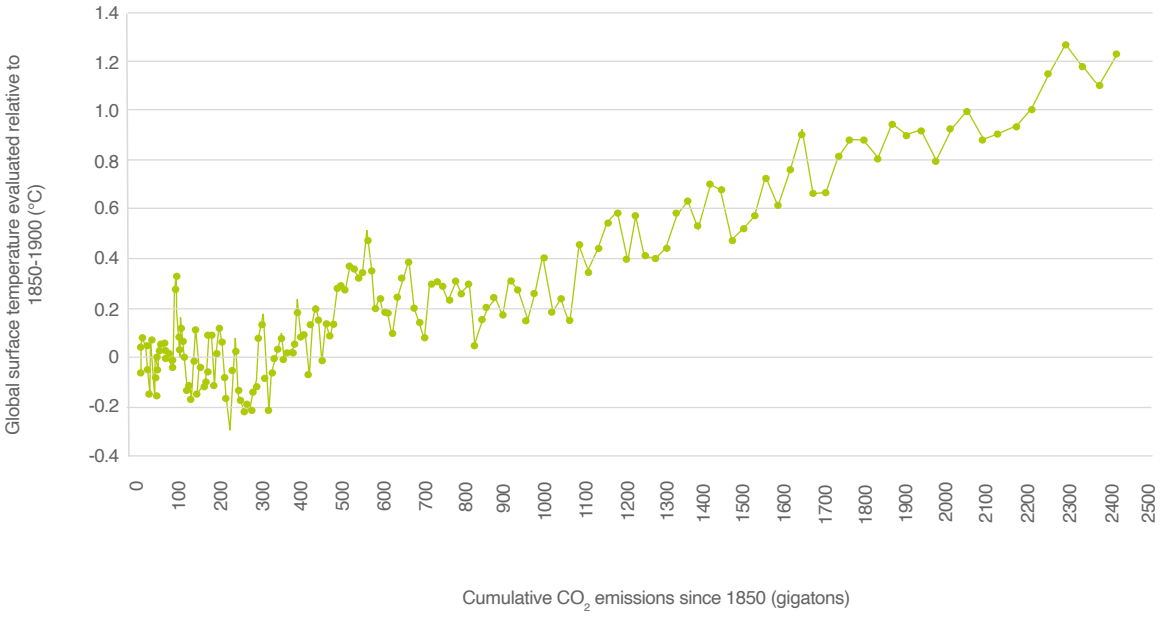
Human activity and global warming

Since the Industrial Revolution, the average global temperature has gradually risen to 1.2 °C above pre-industrial times (1850-1900). Scientific evidence has shown that this warming is caused by the emission of greenhouse gases (GHGs) resulting from human activity. Indeed, since 1850, emissions of CO_2, the main GHG, have increased more than 14-fold (figure 4.1).[1].

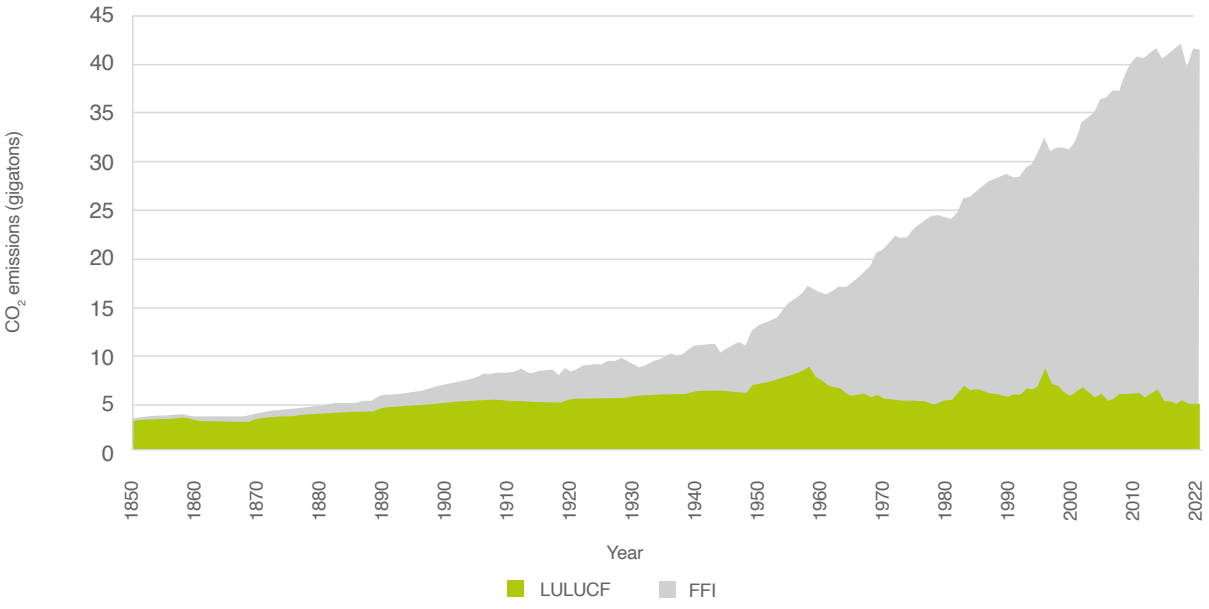
1 Relevant to the average global temperature is the concentration of GHGs in the atmosphere. Since 1850, human activity has caused the emission of more than 2,350 gigatons of carbon dioxide. Of these emissions, the oceans and terrestrial sinks have absorbed a quarter and a third, respectively, and the rest has accumulated in the atmosphere. In addition to carbon dioxide, with emissions shown in figure 4.1, other important GHGs are methane and nitrate oxide.

Figure 4.1
Historical evolution of global emissions, by source

A. Global surface temperature evaluated in relation to cumulative CO_2 emissions



B. Cumulative CO_2 emissions since 1850 (gigatons)



Note: CO_2 emissions are expressed in gigatons. The LULUCF category refers to land use, land-use change and forestry, while the FCIP category refers to fossil consumption and industrial processes.
Source: Friedlingstein et al. (2023) and IPCC (2021).

CO_2 emissions in figure 4.1 are grouped into two major components: those associated with land use, land-use change and forestry (LULUCF, hereafter), and those associated with fossil consumption and industrial processes (FCIP, hereafter). The importance of these two components has varied over time.

Between 1850 and 1900, the LULUCF component accounted for more than 90 % of total global CO_2 emissions. However, this component has lost weight in the face of the growing importance of fossil energy. Today, about four-fifths of global emissions come from fossil fuel consumption and industrial processes.

In 2019, per capita emissions in Latin America and the Caribbean were similar to the global average and represented less than 80 % of the value corresponding to developed countries and less than half compared to North America. Inequality in emissions responsibility is also manifested according to socioeconomic level: the first global income decile emitted the same as the remaining 9 deciles, 4 times more than the poorest half of the global population; meanwhile, the top percentile emitted a quarter of global emissions (Chancel, 2022).

> "Rich countries are the ones that emit the most, the ones that contribute the most to the problem [of global warming] and, on the other hand, the countries most exposed [to the consequences] are those that are, in fact, poor. Therefore, a question of justice must be an integral part of the climate discussion".
>
> **Based on an interview with Juliano Assunção**

> "The real problem is climate change. (...) And Trinidad and Tobago, in particular, is in a not-so-pleasant situation. (...) Emissions are high on a per capita basis because our population is only 1.3, 1.4 million. (...) Even though our emissions per capita are high, the amount is almost undetectable".
>
> **Based on an interview with Colm Imbert**

Although this is relevant when it comes to introducing elements of climate justice into the discussion on mitigation efforts, it does not exempt any country or region from making the necessary efforts to keep global temperatures at appropriate levels. It would not be enough for developed countries alone to make efforts to stop global warming, given that 75 % of current emissions come from middle and low-income countries.

Human activity and degradation of the environment and ecosystems

The degradation of the environment and ecosystems by human activity is associated with four causes in addition to climate change: land-use change, overexploitation, introduction of invasive species, and pollution (Purvis et al., 2019).

With respect to land use, by 1850, less than 4 % of the region's surface was significantly modified by human presence. In contrast, Europe (excluding Russia), by this date, presented modifications in about 40 % of its surface. For the most recent year with data (2017), the fraction of the soil with low or no transformations is around 45 % in the region, closer to 32 % in Europe (without Russia). This measure, however, varies significantly between subregions: in South America it reaches 47 %, while in Mesoamerica and the Caribbean it is 27 % and 17 %, respectively (see figure 4.2).

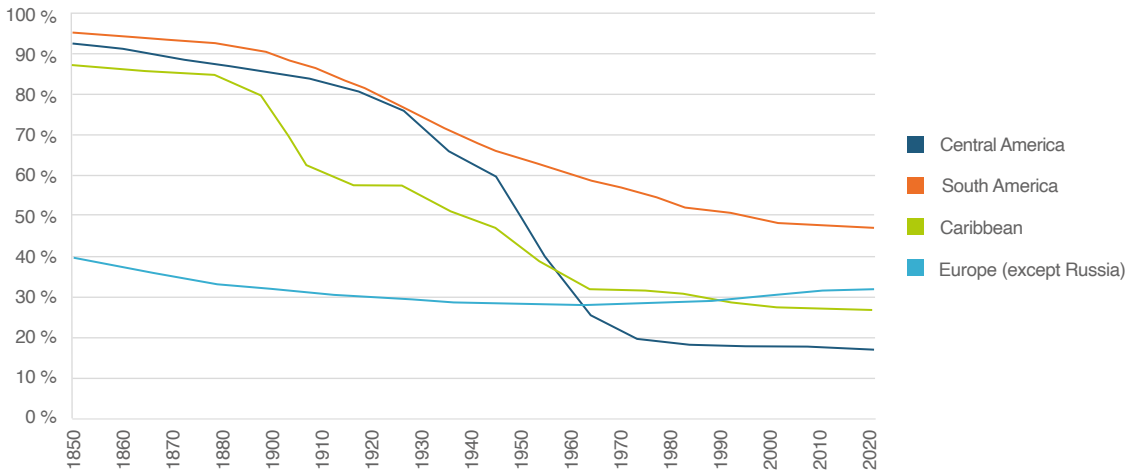
Land use change is strongly linked to the agricultural sector, especially in the region, where it has a high share of gross domestic product (GDP). By 2017, 35 % of the region's land area was devoted to pasture, the lowest intensity use, and 16 % to crops. In the Caribbean subregion, only 8 % was dedicated to grazing, while 35 % was dedicated to crops.

Finally, urban use and infrastructure placement, represented by the settlements category, constituted a comparatively smaller fraction of the area used in the region as a whole (4.4 %), although it accounted for 38 % of the area of the Caribbean countries. This land use is associated with the most profound transformation of the ecosystems in which it is located[2].

2 Por ejemplo, la expansión urbana a lo largo de las costas implica grandes disrupciones para procesos ecológicos claves de los ecosistemas costeros, como el pasaje de fauna y la hidrología de la que depende la captura de carbono de marismas y manglares (Dafforn et al., 2015; Heery et al., 2018).

Figure 4.2
Land use

A. Loss of natural and semi-natural land cover



B. Table of land use in 2017

Categoría	South America	Central America	Caribbean	Europe (except Russia)
Settlements	2.97 %	11.41 %	38.25 %	20.32 %
Crops	15.72 %	18.56 %	36.96 %	41.41 %
Grazing	33.82 %	43.30 %	7.98 %	6.55 %
Seminatura	40.92 %	26.66 %	16.55 %	28.61 %
Natural	6.57 %	0.07 %	0.27 %	3.11 %

Note: The values reflect the proportion of hexagons corresponding to each land use category in relation to the total number of hexagons in a given region, weighted by the area of the hexagons. For the purposes of this figure, Russia was excluded from the European region because of the extent of land unsuitable for human use in this country.
Source: Gauthier et al. (2021).

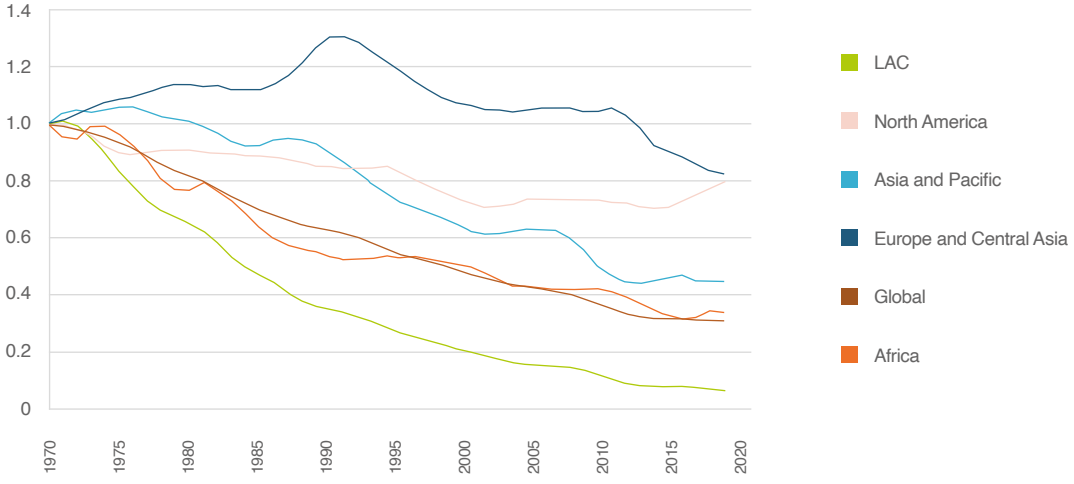
The second cause of environmental degradation is overexploitation, that is, the excessive extraction of natural resources, exceeding their regenerative capacity. The fishing industry, tourism and the extraction of timber resources experience this problem.

The third cause is the introduction of invasive species of plants, animals or microorganisms that alter the balance of ecosystems and can seriously damage their biodiversity. Pastoral land use, for example, involves the introduction of foreign grassland species that offer greater productivity under local climatic conditions. In general, these species can expand beyond the regions dedicated to production, competing with native plant species and altering natural fire cycles.

The fourth cause is air, water and soil pollution. This is a negative externality that affects human well-being through the degradation of ecosystems and the services they provide, and through its direct impact on health. The sectors or activities most frequently linked to pollution are hydrocarbon extraction and processing, mining and the agricultural sector. Cities are also an environment prone to pollution problems.

Ecosystem degradation is manifested in the loss of flora and fauna, both in terms of diversity (number of species) and population. The Living Planet Index shows a significant deterioration, especially in the Latin American and Caribbean region, where there has been a decline of more than 90 % since 1970.

Figure 4.3
Living Planet Index, by region 1970-2018

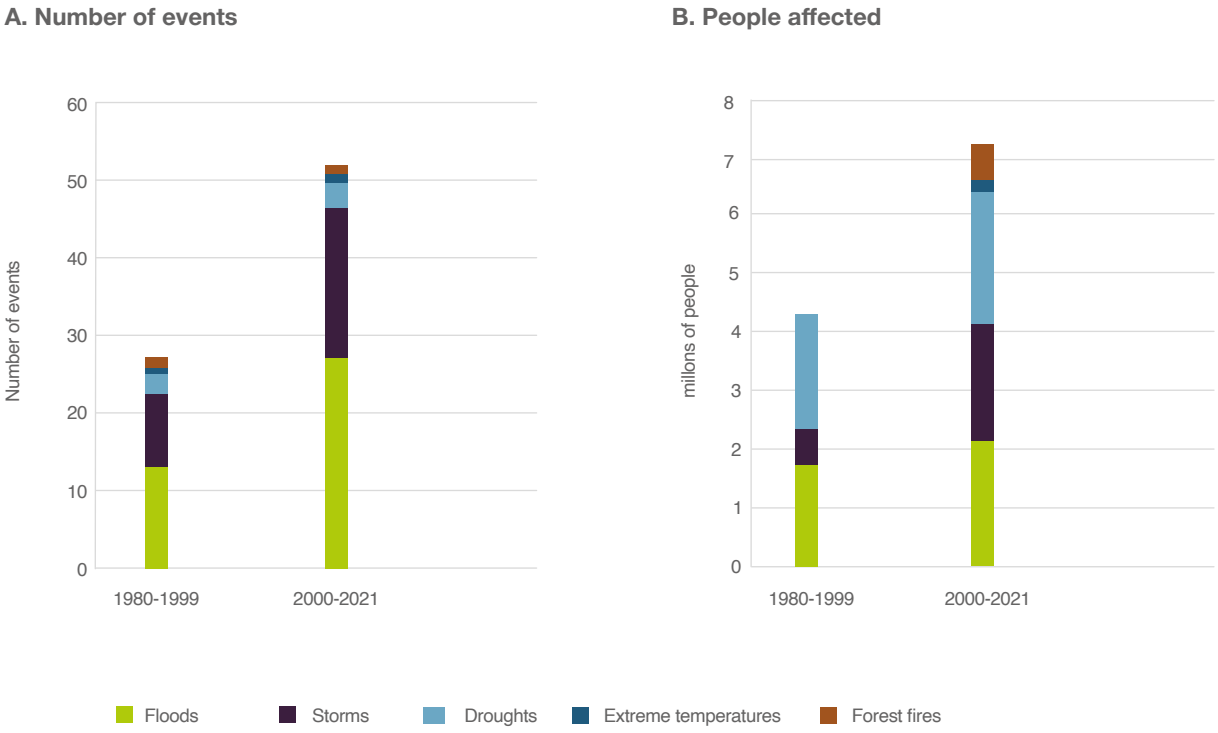


Note: The LPI shows the average rate of change in animal population size, relative to the 1970 size year (1970 = 1). It accounts for 31,821 populations in 5,230 species. The index is constructed as a geometric average of the rates of change of the various animal populations relative to their 1970 size year.
Source: Zoological Society of London and World Wildlife Fund (2022).

Impacts of climate change and ecosystem degradation

Global warming has increased the frequency and intensity of some extreme weather events such as floods, storms, droughts, forest fires and cyclones. In Latin America and the Caribbean, the number of such events increased from 28 per year in the last two decades of the 20th century to more than 53 in the first two decades of the 21st century. The number of people affected rose from 4.5 million per year to more than 7 million (figure 4.4).

Figure 4.4
Occurrence of climate-related extreme weather events and people affected in Latin America and the Caribbean



Note: The figure shows the annual averages of extreme weather events and people affected (in millions) by type of disaster for the periods 1980-1999 and 2000-2021.
Source: EMDAT (2022).

Unfortunately, these events have such significant social and economic costs that they even transcend generations. Caruso (2017) explores the consequences of natural disasters that occurred during the twentieth century in the region. In his results, he finds, for example, that suffering a flood as a fetus is associated with 0.47 fewer years in education, a 10 % higher probability of being unemployed and a reduction in labor income of about 12 %.

> "We invariably find ourselves as some of the biggest, if not the biggest, victims of climate change. When a hurricane strikes, it's us. There is nowhere to evacuate to. Your GDP is destroyed in fractions of a second, with multiplications of 100 %, 200 %, literally gone in a few hours, and very little can be done about it. This is really challenging for small states.".
>
> **Based on a interview with Karen-Mae Hill**

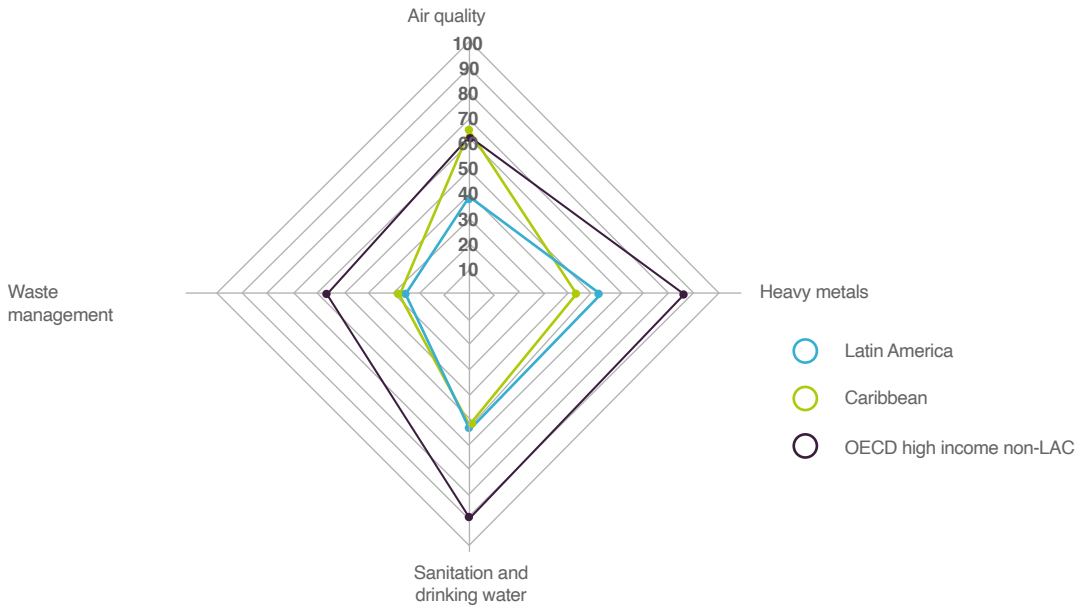
Natural disasters also impact infrastructure, a key driver of growth and inclusion. Droughts and changing rainfall patterns can also compromise agricultural production. For example, southern Latin America has just experienced the worst drought since 1944, according to the World Meteorological Organization. It is estimated that this episode could cost between 2 % and 5 % of GDP in Argentina, Brazil, Paraguay and Uruguay, mainly due to the negative impacts on the agricultural, livestock and energy sectors (Perelmuter, 2023).

The deterioration of ecosystems reduces the value of the services they provide, which are classified into four groups: (i) *provisioning services,* referring to the set of physical materials that people obtain from nature; (ii) *regulating services*, which include temperature moderation, water cycle regulation and air purification, among others; (iii) *cultural or non-material services,* which contemplate the aesthetic and recreational value of nature; and (iv) *supporting services,* referring to the processes that are necessary for all other ecosystem services and human life to be possible, including oxygen production (Millennium Ecosystem Assessment, 2005).

Although economic activity tends to privilege provisioning services that have a market value, other services, which are more difficult to quantify and appropriate, are also essential. Tourism depends crucially on the aesthetic value of paradigmatic ecosystems in the region (cultural or non-material ecosystem services), such as the Caribbean beaches or the Amazon rainforest, while urban economic activity benefits from regulating services through the moderation of temperatures by vegetation. It also benefits from regulating services by depositing its wastes, where ecosystems intervene in the purification of air, soil and water.

La contaminación, en particular, es una manifestación de la degradación del Pollution, in particular, is a manifestation of environmental degradation with significant incidence in the region (AMAP and UNEP, 2019). Figure 4.5 shows the components associated with environmental health reported by the Environmental Protection Index (Block et al., 2024). The data reveal that, on average, the countries of the region present indicators significantly lower than those observed in OECD countries.

Figure 4.5
Selected Environmental Health Indicators EPI



Note: To calculate the aggregate values per category, the weighted average of the different sub-indices that compose it was calculated. The original EPI weights were adjusted to add up to 100 % within each category. The regional aggregates are the simple average of the countries that make up each region. The values correspond to the year 2024.
Source: Block et al. (2024).

There is abundant evidence of the welfare effects of pollution. Some analyses focus on air pollution caused by fossil fuels. For example, Rivera et al. (2024) provide evidence for Chile, where the expansion of solar power generation capacity was associated with a reduction in hospital admissions due to respiratory diseases.

There is robust evidence of acute episodes of ecosystem degradation that negatively impact human health. For example, impacts caused by vegetation loss due to the role of vegetation in improving air quality (Jones and McDermott, 2018), and by sudden reductions in populations of vultures and amphibians that are important for disease vector control (Frank and Sudarshan, 2024; Springborn et al., 2022).

In addition, there is evidence of the negative impact on economic activity caused by the loss of key pest control species on agricultural production (Frank et al., 2024). Frank (2024) documents a one-third increase in pesticide use caused by the reduction of bat populations, and a consequent increase in infant mortality of 8 %.

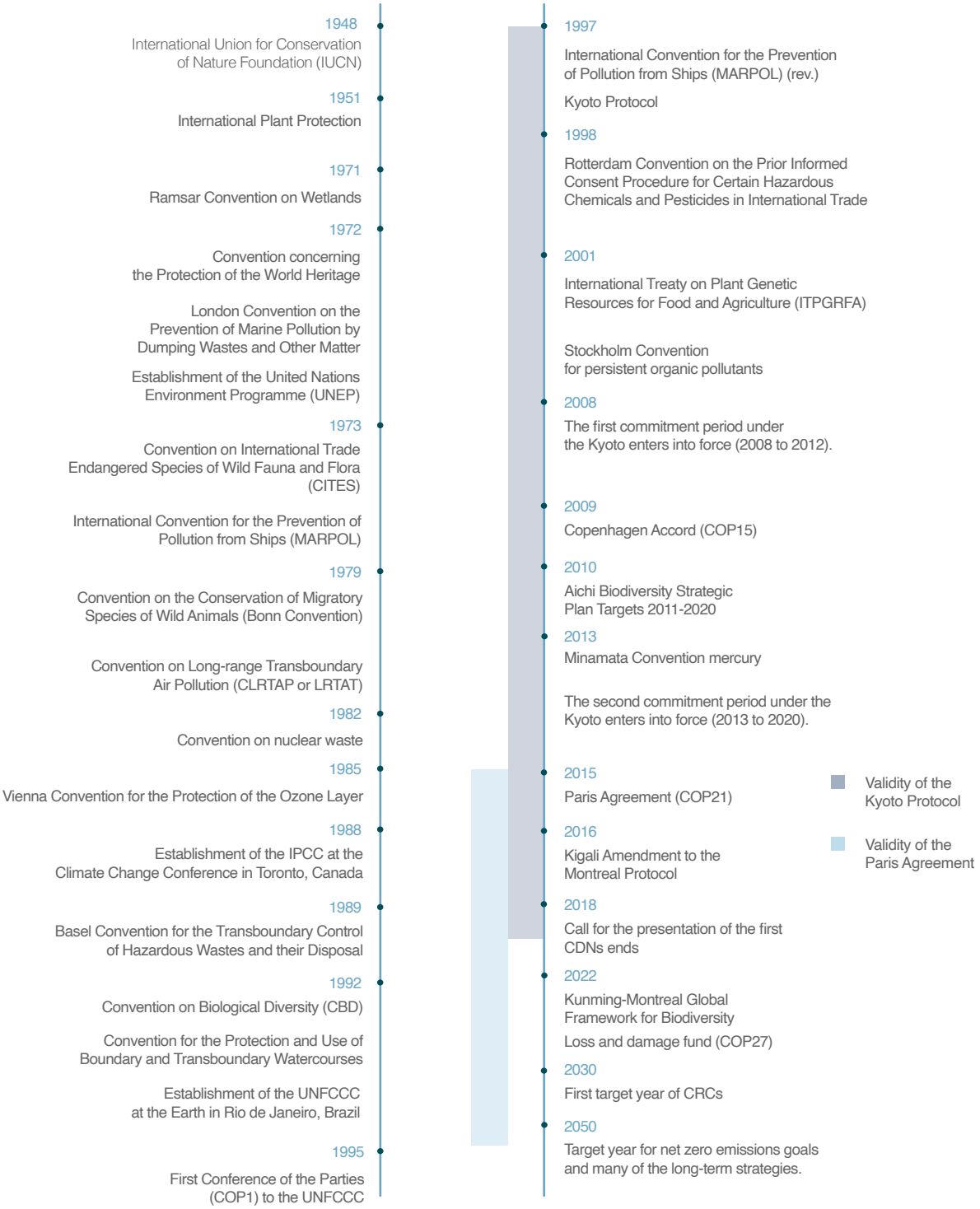
A global pact for sustainability

Global warming and environmental degradation are already impacting human well-being. However, the worst could be yet to come. At the current rate of emissions, less than 30 years remain to limit the temperature increase to 2 °C, a threshold considered by scientists to be the point of no return beyond which there are high risks of massive and irreversible damage on a global scale[3].

This panorama has led to an important global consensus on the need to protect the environment, with efforts dating back to the last third of the 20th century. Diagram 4.1 shows global efforts for environmental sustainability, highlighting, on the one hand, the main milestones in international agreements for environmental and biodiversity protection and, on the other, those concerning the response to climate change.

3 The 1.5 °C threshold is less than a decade away.

Diagram 4.1
Milestones of the global compact for sustainability



Source: Prepared by the authors.

With regard to climate change, the most notable recent milestone is the Paris Agreement, which sets as its central objective "to hold the increase in the global average temperature well below 2 °C above pre-industrial levels, and pursue efforts to limit the temperature increase to 1.5 °C above pre-industrial levels" (United Nations, 2015).

The Paris Agreement is a major breakthrough for a concerted response to the climate crisis. The strong adherence achieved, with almost all countries participating and proposing national contributions, is its greatest achievement. As of November 2024, 195 countries have joined, of which 33 are from Latin America and the Caribbean. Its governance model, in which countries propose their own commitments, has favored adherence. However, it also has implicit weaknesses associated with the lack of a coordinated vision to ensure consistency between commitments and the remaining carbon budget, and the absence of mechanisms to ensure compliance with commitments.

Under the Paris Agreement, Latin America and the Caribbean committed to reduce its emissions by approximately 11% by 2030, compared to 2020 levels. This target contemplates **mitigation efforts** comparable to those of developed economies, considering that the projected population growth for the region is higher and that it seeks economic growth that will allow it to approach the GDP per capita levels of these developed economies. Specifically, given the projected population growth, if per capita GDP in Latin America and the Caribbean grows at an annual rate of 4 %, the region would have to reduce emissions per unit of GDP by approximately 5.5 % per year. This percentage is comparable to the cut required in the European Union, which needs to reduce its emissions per unit of GDP by 5.24 % per year, assuming economic growth of 2 %. However, this required reduction in Latin America and the Caribbean more than doubles the decline observed in this variable over the last decade.

It is worth noting that these commitments defined by the countries represent an intermediate step towards the goal of pursuing environmental sustainability. To stop global warming completely, net-zero emissions are required, and for the average temperature peak to remain below 2°C, this reduction must be accelerated. According to Climate Watch's Net-Zero tracker (2024), at the time of writing, 101 countries, together accounting for more than 80 % of global emissions, have committed to net-zero emissions targets. With respect to the date, 69 of them by 2050, 10 before 2050, 16 after 2050, and 6 have already achieved net-zero emissions status, with a commitment to maintain it.

However, the current commitments are incompatible with the objectives of the Paris Agreement. To date, the sum of the commitments will increase the global average temperature by approximately 2.5 degrees, with possibilities of reaching even 3 degrees; and the combination of the actions effectively implemented gives an even more alarming picture (Climate Action Tracker, 2023).

> "What we have today is a diplomatic process very much associated with annual climate conferences (...) which have a process, a timeline, a speed of action that is incompatible with the challenge (...) We have this institutional challenge of coordinating the action of countries, which are relatively few. The G20 represents 80 % of the problem, in general terms, so it is a relatively small set of countries that can do a lot.".
>
> **Based on a interview with Juliano Assunção**

Concern for the extinction of species has a foundational milestone in the creation of the International Union for the Conservation of Nature in 1948. However, environmental actions gained momentum after the creation of the United Nations Environment Programme (UNEP) in 1972, in an effort to coordinate environmental actions at the international level and assist countries in implementing environmental legislation.

Among the most successful environmental protection initiatives are those for the protection of air pollution. Among these, the Vienna Convention—and, within it, the Montreal Protocol for the Protection of the Ozone Layer (1985)—is considered one of the most effective. It was ratified by 196 countries and, since its entry into force, has been associated with an almost total elimination of emissions of gases covered by the protocol.

The creation of UNEP took place in the context of a greater demand for environmental quality that gave momentum to regulations for environmental protection on a national scale, in particular, the requirement of Environmental Impact Assessments (EIA) for the approval of productive projects. The United States was a pioneer with the approval of the National Environmental Policy Act (1970). However, the EIA requirement became widespread in developing countries in the 1990s, largely driven by the incorporation of environmental safeguards in World Bank-financed projects (see Operational Directive 4.01 on environmental analysis). To date, EIAs are a central component of environmental policies; more than 190 countries incorporate laws associated with the use of this instrument (Morgan, 2012).

International governance has made less progress in protecting ecosystems and biodiversity than in climate change. The main coordinating body, the 1992 Convention on Biological Diversity, has worked to set conservation targets. Among the efforts made since then, the Aichi Targets, promulgated in 2010, stand out, the most recent milestone being the **Global Biodiversity Framework,** signed at the COP in 2022.

This framework identifies 4 goals and 23 targets for urgent action in the decade to 2030, including ensuring that by 2030 at least 30 % of areas of degraded terrestrial, inland water, coastal and marine ecosystems are being effectively restored (target 2), and achieving and enabling that, by 2030, at least 30 % of

terrestrial, inland water, coastal and marine areas, especially those of particular importance for biodiversity and ecosystem functions and services, are conserved and effectively managed through protected area systems (target 3)[4].

Reducing emissions caused by human activity

Latin America and the Caribbean emissions profile

> "Latin America's great contribution to global decarbonization lies in the reduction of deforestation (...) We have to stop destroying our biodiversity, protect it and make the world pay for it (...) Because one hectare protected with forests, with jungles in Latin America, is a hectare that will help the whole world to maintain a dynamic economic activity".
>
> **Based on a interview with Mauricio Cárdenas**

GHG emissions are usually classified into two major groups. The first, called agriculture, forestry and other land use (AFOLU), comprises emissions resulting from land cover modifications (LULUCF), as well as emissions from agricultural production associated, crucially, with the digestive process of livestock, and nitrogen oxides associated with the use of fertilizers. The second group is called Fossil Consumption and Industrial Processes (FCIP), and includes emissions associated with the use of fossil fuels, as well as non-energy emissions linked to certain industrial processes and waste decomposition.

Globally, almost 80 % of GHG emissions come from IPCC, while just over 20 % come from the AFOLU sector. In contrast, about 54 % of Latin America's emissions came from the AFOLU sector, a much more significant amount than the 13 % from the Caribbean or 8 % from OECD countries (see figure 4.5)[5]

As might be expected, there are notable differences within the region in terms of the importance of these two sources of emissions. For example, in Latin America, countries where AFOLU exceeds 70 % of emissions (Brazil, Nicaragua, Paraguay and Uruguay) coexist with others where it represents less than 30 % (Chile, Mexico, El Salvador)

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4 For more details see UNEP GBD (2022) https://www.cbd.int/doc/c/2c37/244c/133052cdb1ff4d5556ffac94/cop-15-l-25-es.pdf

5 Data are for 2019; most recent information based on emissions data from Minx et al. (2021).

Within the AFOLU component, in the case of Latin America, the LULUCF component slightly dominates the agricultural component (56 % vs. 44 %), but both are very important. In contrast, in the Caribbean and OECD countries, they come mainly from the agricultural component; moreover, the LULUCF component has had negative emissions due to processes such as the growth of the forest area. On the other hand, the most important subsector within agricultural emissions is enteric fermentation, which refers to methane emissions (CH4) associated with the digestive process of cattle, which represents almost two thirds of agricultural emissions.

In terms of FCIP components, the share of the buildings sector is modest: approximately 5 % in Latin America, 3 % in the Caribbean and more than 10 % in the OECD. However, this value refers only to emissions from the use of fuels in this sector, although it is responsible for indirect emissions associated with the generation of electricity using[6].

Household energy consumption is comparatively low in the region: 7.12 gigajoules, well below China (19.3), the United States (30.6) and Europe (23.4) (OLADE, 2021; National Bureau of Statistics of China, 2022; EIA, 2020; Eurostat, 2022). This is due to lower household incomes and the low need for heating. However, it is indispensable to advance mitigation policies also at the household level: household energy consumption is expected to increase as incomes rise and due to increased cooling needs caused by global warming[7]. Electrification of consumption and energy efficiency are key dimensions for mitigation in this sector.

Emissions associated with the other components are, in general, significant. For example, in Latin America, energy systems (including fugitive emissions) are responsible for 31 % of emissions, transport for 26 %, and industry (including waste management) for 38 %. In the Caribbean, transport has a comparatively smaller share, at 12 %, while energy systems and industry account for more than 40 % each.

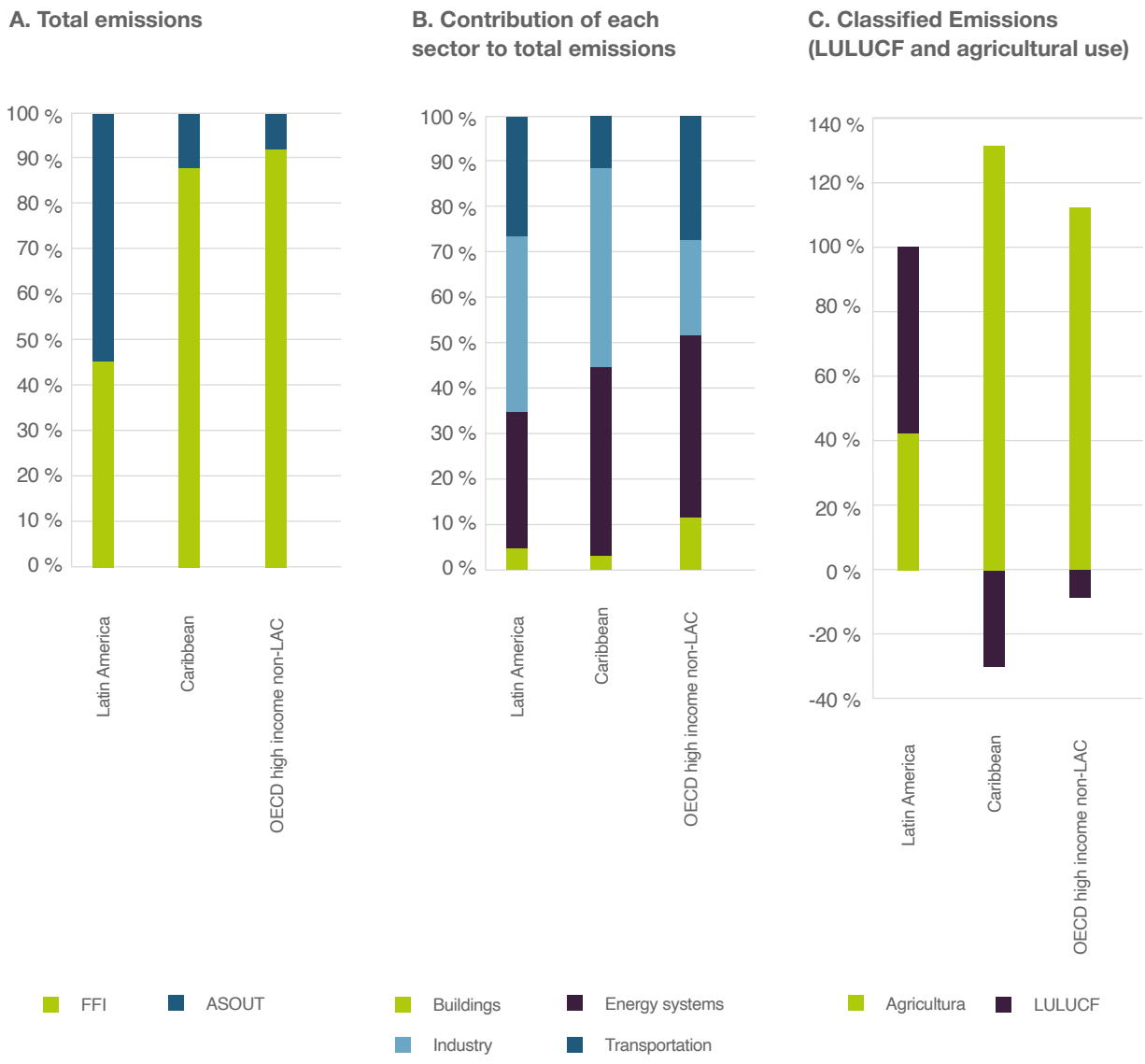
It should be noted that emissions associated with international maritime and air transport are not included in figure 4.5 because they are not usually attributed to any country. These account for 1.55 % and 1.19 % of global GHG emissions, respectively. To put this number in perspective, together they account for almost 40 % of total emissions in Latin America and the Caribbean. Therefore, mitigation in this sector is essential to achieve net zero emissions.

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6 Forty percent of electricity is consumed by industry, 33 % by households and 20 % by the commercial sector.

7 Indeed, air-conditioning ownership in the region is expected to rise by almost 20 percentage points by 2050 as a result of the projected evolution of temperatures and incomes, which would increase total residential electricity consumption by 13 % (Allub et al., 2024).

Figure 4.6
Emissions profile for Latin America and the Caribbean



Note: The graph illustrates the share of AFOLU and FCIP in total emissions, breaking down the contribution of each sector within these two broad categories. Greenhouse gases CO_2, CH_4, N_2O and F-gases are considered, which are aggregated using the CO_2 equivalent metric, based on the AR5 GWP-100. Calculations are for the year 2019 (latest available data from Minx, 2021). Regional aggregates correspond to the sum of emissions from all constituent countries.
Source: Minx (2021) and Friedlingstein et al. (2023).

Mitigation in energy systems[8]

From the energy supply side, four mitigation actions are highlighted in RED 2024 (Allub et al., 2024):

Action # 1: Reducing energy system losses

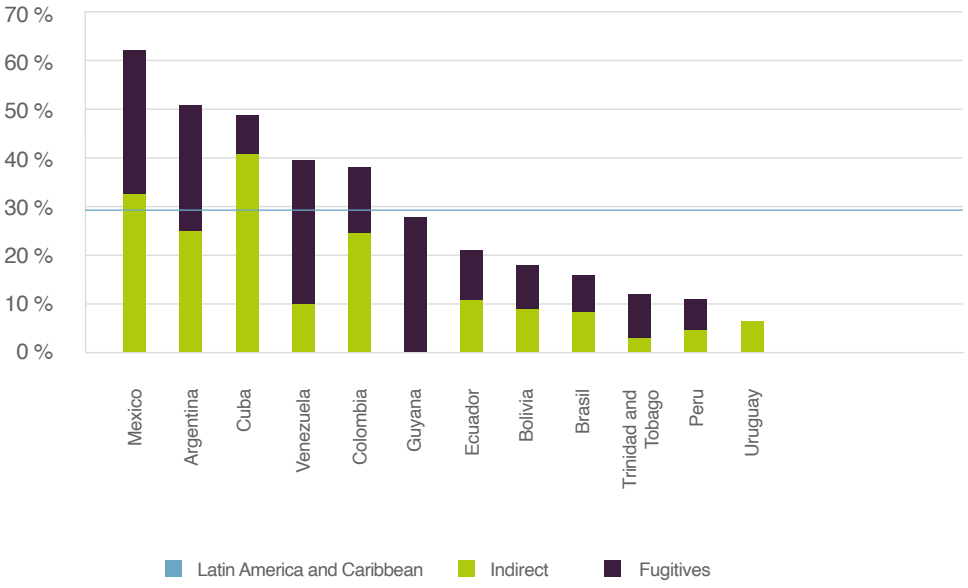
Energy production, transformation and transportation processes are associated with losses that amplify consumption-related emissions, which must be reduced.

In the case of electricity, for example, for Latin America and the Caribbean, losses associated with fuel-based electricity generation average 56%, while losses in the transmission and distribution phase amount to 19%. Although not all are attributable to inefficiency problems, the differences between countries indicate potential room for improvement; for example, transmission and distribution losses represent 5 % in the United States (EIA, 2022). Problems in the quality of generation and transmission and distribution infrastructure may be responsible for these excessive losses and may be correctable.

With respect to fuels, significant losses have also been identified. For a set of 10 countries studied, for every 100 tons of CO_2 equivalent (t CO_2e) emitted when fossil fuels were consumed, more than 29 t CO_2 were previously released during their production and transport. Most of these were methane emissions generated by venting or flaring of unused natural gas, or by leaks in the production, transformation and transportation processes (see figure 4.7).

8 This section is based on RED 2024.

Figure 4.7
Emissions from fossil fuel production and transport relative to total emissions by final product consumption



Note: The figure shows fossil sector emissions from energy use (indirect emissions) and fugitive methane emissions released in the production, transport, refining and distribution of coal, gas, oil and oil derivatives, as a percentage of emissions from consumption of final fuels produced. Emissions from energy use are computed using the corresponding emission factors for each fuel. Total consumption refers to domestic plus external consumption. Countries for which homogeneous information on methane emissions is available are shown.
Sources: OLADE (2023) and IEA (2023b).

These pre-consumer emissions can be reduced with better equipment and electrification of some processes[9] Proper disposal of oil and gas fields and coal mines is also crucial to reduce methane emissions.

Action # 2: Natural gas as a transition fuel

Natural gas is the hydrocarbon with the lowest CO_2 emissions per unit of energy delivered. For example, during combustion, it emits less than 60 % of the emissions that would be obtained by getting the energy with coal. Natural gas is associated with significant emissions in production and transportation due to leakage, a relevant area of action for emissions mitigation in the region. However, even considering current fugitive emissions, replacing coal with natural gas implies an emissions reduction of approximately 20 %.

9 According to the IEA (2023a), the use of more efficient equipment could save around 30 % of the energy needed, with equivalent decreases in emissions. However, electrification of all processes where feasible would allow even greater reductions, approaching three quarters of what is currently emitted in fuel production.

To put this virtue of gas in perspective, if 50 % of the use of coal and oil-based fuels in Latin America and the Caribbean were replaced by natural gas, considering current production processes, a direct reduction equivalent to 7 % of current emissions would be achieved, representing almost 65 % of the commitments set for 2030

One risk of gas penetration is that investments in production, transportation and consumption will delay the speed of convergence towards carbon neutrality. One way to minimize this risk is to consider the retrofitting of equipment for natural gas use as a step in a strategy towards decarbonization.

The two actions outlined so far are aimed at reducing emissions in contexts where dependence on fossil fuels persists; however, the path towards greater decarbonization, and in particular towards zero net emissions, rests on two pillars: green electrification and the penetration of clean fuels.

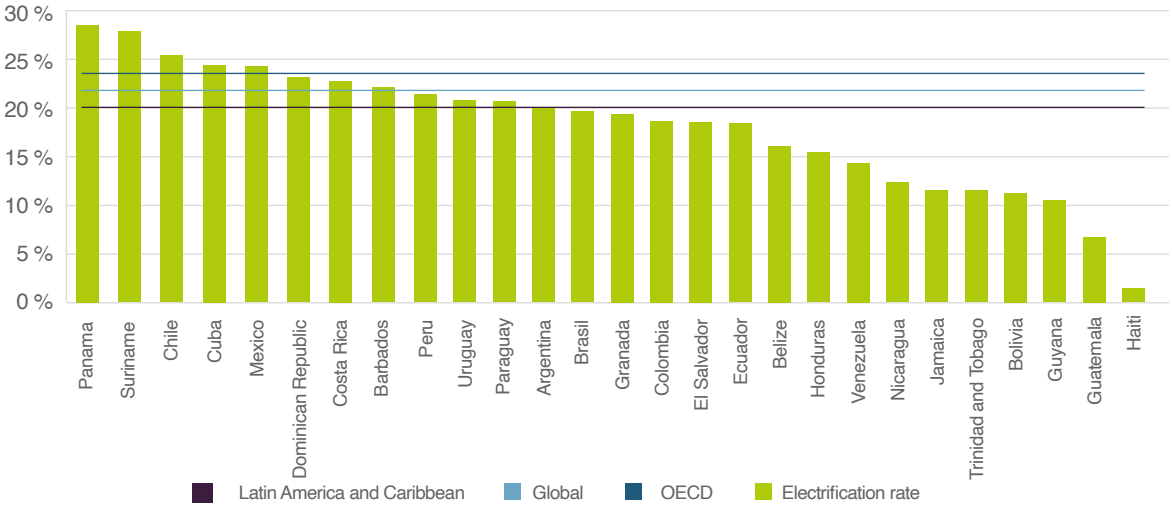
> "For these countries that have natural gas, the important thing is that it gives us time while we move forward with electrification. It is a transitional fossil fuel, but it makes the transition smoother, less costly and, above all, allows the economy to adjust.".
>
> **Based on a interview with Mauricio Cárdenas**

Action # 3: Green electrification

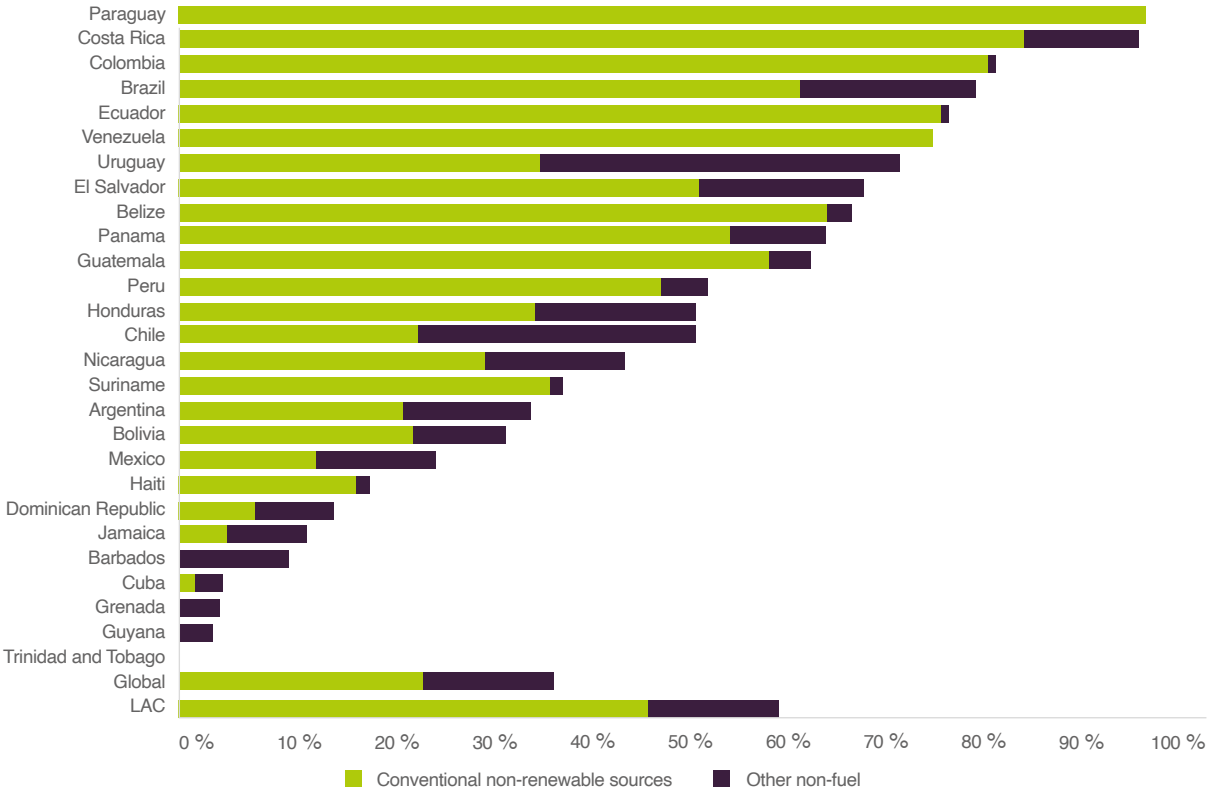
According to the most recent data (2022), electricity accounts for about 20 % of consumption in Latin America and the Caribbean. This electrification rate is slightly lower than that of OECD countries (around 23 %) and remarkably heterogeneous across countries (figure 4.8, top panel). The region's electricity matrix is relatively green: 61 % of this electricity is generated from renewable sources, up from 36.5 % at the global level. However, non-conventional renewable sources (solar/wind) are responsible for 12.5 % of electricity generation, similar to the global value (11.7 %). This indicates that the advantage in non-fuel generation comes from water resources (see figure 4.8, lower panel).

Figure 4.8
Electrification rate and share of renewables in the electricity matrix

A. Electrification rate by country



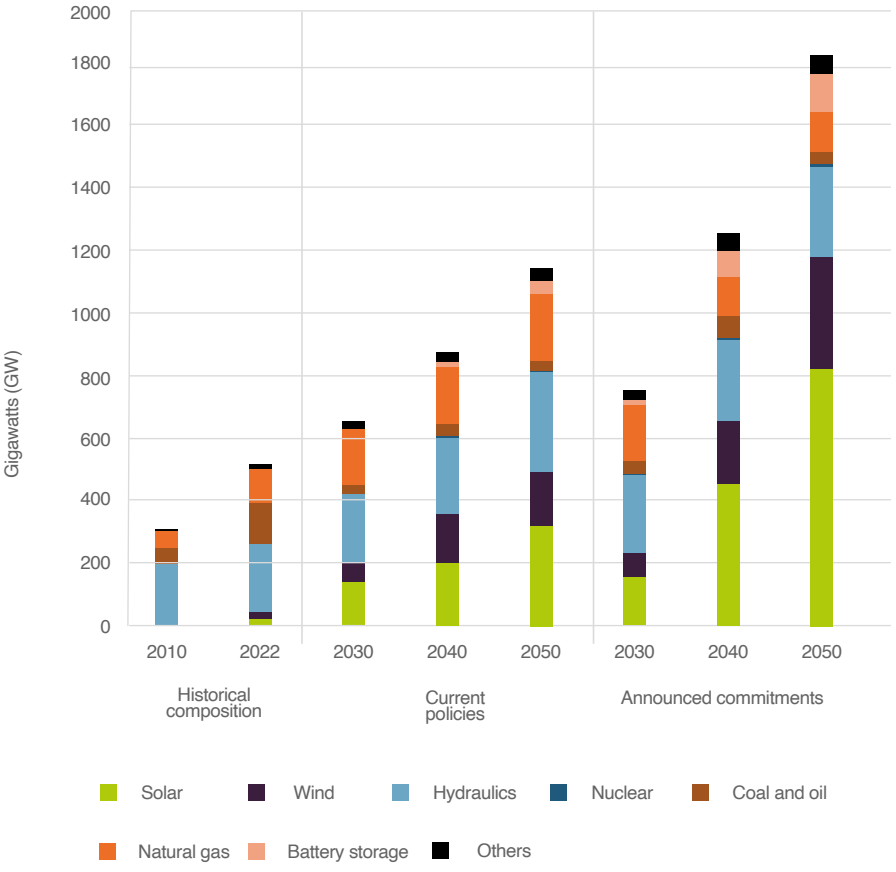
B. Non-fuel generation and NCRE



Note: All values are for the year 2022. For global and OECD aggregate data, both electricity consumption and wind and solar energy sources were used, according to the IEA database. Non-conventional renewable sources consist of solar and wind power. The remaining non-fuel, nuclear, hydro and geothermal.
Source: OLADE (2024a, 2024b) and IEA (2024).

The energy transition requires a significant increase in the electrification rate, driven notably by the expansion of non-conventional renewable sources. Indeed, according to the IEA, in the scenario of commitments made, electricity generation capacity increases from 520 GW in 2022 to 1,857 GW in 2050, which implies that the electrification rate rises from 20 % to 40 %. In turn, under this scenario, the generation capacity of non-conventional renewable energy sources (NCRE) should be multiplied by more than 13 times, representing around 63 % of electricity generation (see figure 4.9). .

Figure 4.9
Green electrification in Latin America and the Caribbean



Note: The figure shows how electricity capacity is composed today and under current policy scenarios and IEA commitments. The "other" category includes bioenergy, geothermal energy, marine energy, hydrogen and ammonia.
Source: IEA (2023c).

Green electrification has challenges. The first is related to the intermittency of solar and wind energy. This makes backup mechanisms that include hydroelectric power plants, thermal generation plants (e.g., open-cycle natural gas or clean fuel-based) and batteries indispensable. Under the commitments scenario, the battery system is expected to have a capacity of 137 GW by 2050, 44 % of the estimated hydroelectric capacity by that date. Energy integration of national and international systems can also mitigate intermittency problems.

A second challenge stems from the cost structure of NCRE, characterized by relatively high initial investment costs, but generation costs close to zero during the years of operation. This very distinctive cost structure with respect to fuel-based sources of electricity generation calls for regulatory changes in the way electricity generators are remunerated. In addition, experts indicate that changes in the rate structure charged to consumers are required in the face of the massive adoption of solar home generation. Tariff schemes based on fixed and differentiated charges according to the time block in which the electricity is consumed are part of the recommendations that emerge with the incorporation of NCRE.

A third challenge is associated with transmission and distribution. The region's transmission network is approximately 20 km per 10,000 inhabitants and, in the net zero emissions (NZE) scenario, it needs to more than double by 2050, in line with the expected increase in electricity consumption. This expansion implies financial and land-use permitting and concession management challenges. On the other hand, the incorporation of NCRE may require changes in transmission and distribution networks, due to a greater diversity and dispersion of generation sources and the expansion of solar home panels.

Action # 4: Penetration of low carbon fuels

AEven in the NZE scenario, more than 50 % of energy consumption will depend on fuels. This is due to the existence of sectors that are difficult to electrify and the need for back-up systems to deal with the intermittency of electricity generation from NCRE sources. There are two alternatives for obtaining clean fuels to replace fossil fuels: agricultural fuels and hydrogen and its derivatives[10].

10 At the time of combustion, fuels of agricultural origin generate CO_2 emissions, but the carbon emitted must have been previously removed from the atmosphere by photosynthesis. Hydrogen, on the other hand, does not emit at the time of use and, depending on the process, can be produced with little or no emissions.

Agricultural fuels (e.g., biodiesel and ethanol) have the challenges associated with the use of land and agricultural inputs such as fertilizers, herbicides and insecticides. This implies, on the one hand, GHG emissions due to the increase in cultivated area that drives deforestation and the carbon content of agricultural supplies, and, on the other hand, the increase in the price of food by competing with its production. Some conditions that reduce these challenges are the increase in agricultural productivity, the use of non-food crops, forestry, agricultural and livestock waste or solid urban waste, as well as production on degraded land that is not suitable for food production.

The development of agricultural fuels requires the adoption of regulatory frameworks that establish guidelines for their production with low environmental impact, including certification frameworks for sustainable management with independent verification and covering the entire supply and production chain. Secondly, policies that encourage consumption should be adopted[11]. A third axis corresponds to policies that promote innovation, especially for waste-based fuels, particularly wood and paper. In this line, the adoption of mandatory quotas for the use of advanced biofuels as a policy instrument stands out.

Regarding the second alternative, hydrogen can be used directly as a fuel (molecular hydrogen) or in the form of ammonia. For it to be an ally in decarbonization, it must be obtained with low or zero emissions. The alternatives for producing it are: 1) natural gas-based production with integration of carbon capture and storage with production; 2) hydrogen production by electrolysis of water, with electricity generated from renewable or clean sources; and 3) use of inputs from sustainable organic sources, incorporating carbon capture. The required penetration of clean H_2 demands reducing the costs of its production and, above all, the difficulties of its transport and storage.

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11 Argentina, for example, has a minimum ethanol cut in gasoline, and biodiesel cut in diesel, of 12 % and 5 %, respectively. Brazil, in addition to the adoption of minimum quotas, sells ethanol to the end consumer and develops vehicles with flexible engines (internal combustion engines that can run on gasoline or alcohol).

Mitigation in energy uses

Mitigation strategies involving end-users entail promoting energy efficiency, encouraging more sustainable practices and electrification of uses where feasible, and adopting clean fuels in uses that are not. Concrete actions are sector-specific.

Industries difficult to decarbonize

Three industries are responsible for almost 60 % of the emissions of the entire industrial sector in the region: cement, steel and chemicals. They are key to the region's economic development and, at the same time, difficult to decarbonize due to the nature of their production processes; for example, due to the need for heat or key inputs with a high impact on emissions. The main decarbonization policies for these sectors are presented in table 4.2.

Table 4.2
Mitigation policies in three industries difficult to decarbonize

Cement	Steel	Chemistry
Use of more modern furnaces.	Promotion of the green hydrogen industry and promotion of industrial clusters in areas close to it that allow the production of steel.	Promotion of the green hydrogen industry and the development of industrial clusters in areas close to it that allow the production of chemical products.
Adoption of technical standards on cement composition and performance to reduce clinker content.	Financing for furnace renovation and other technological improvements.	Carbon sequestration (mature technology in ammonia).
Biomass as fuel and biomass ash as a clinker substitute.	Circular economy and scrap recovery.	Electrification of certain processes (production of plastic pellets).
Circular economy and concrete recycling.		Circularity and recycling of plastic, including regulations and taxes on single-use plastics.

In general, these policies can be grouped into three:

(1) Use of clean fuels: for example, green hydrogen in the steel industry.

(2) Equipment modernization: for example, modernizing kilns in the cement industry[12].

(3) Process transformation: e.g., reducing clinker content in the cement industry, use of carbon capture and storage technologies in the chemical industry, use of scrap and electric furnaces in steel production[13].

Within the strategy for reducing emissions in industrial processes, the case of waste management also stands out, representing 15 % and 12 % of FCIP emissions in Latin America and the Caribbean, respectively, and barely 3 % in OECD countries. Introducing circular economy principles would reduce these emissions by promoting the reuse of resources that are treated as waste.

Transportation sector

In Latin American and Caribbean countries, land transport accounts for almost 90 % of the sector's emissions, almost equally distributed among private cars, freight vehicles and buses. As in the case of the industrial sector, mitigation strategies here will depend on the mode and type of vehicle.

In the case of heavy-duty transport, electrification options are still limited. Strategies are oriented, first, towards the use of cleaner fuels such as advanced biofuels or, even in the transition, natural gas. Secondly, to promote logistical efficiency in cargo handling to reduce the incidence of lightly loaded trips. Moving freight by rail can be a valid mitigation option if scale permits. Rail freight transportation has an energy use that accounts, on average, for only 15 % of that in land freight transportation (Gross, 2020). However, rail infrastructure is expensive, so it would only be economically viable when a route reaches a sufficiently high freight scale. For urban logistics, typically light freight, electrification is an economical and viable option.

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12 For the cement industry, rotary kilns with precalciners and suspension preheaters are the most efficient solution to reduce emissions. In Latin America and the Caribbean, only 65 % of the plants use this type of kilns and they have an average age of 29 years, higher than the world average of 18 years, indicating that there is still room to upgrade them and gain in efficiency

13 The secondary way of steel production uses scrap as the main input and is made with an electric arc furnace, whose main energy source is electricity, rather than coal. This method emits significantly less GHGs than using iron ore and fossil fuel-fired furnaces. The secondary route is constrained by the availability of scrap

Regarding urban passenger transportation, a first strategy is to increase the use of public transportation and its electrification rate; for example, by incorporating electric buses and, where efficient, subways. Likewise, the increase of active mobility such as walking or cycling is also a necessary option to give capillarity to the public transport system. This requires transforming the infrastructure of cities, especially those oriented to the use of individual transportation. The adoption of individual electric vehicles is a lower-emission alternative to internal combustion engines, although still limited by high costs and the precarious charging infrastructure in cities. La adopción de vehículos eléctricos individuales es una alternativa con menores emisiones a los motores de combustión interna, aunque aún limitada por los altos costos y la precaria infraestructura de carga en las ciudades.

In the case of international maritime and air transport, since all countries are jointly responsible for emissions in these sectors, the key bodies for promoting mitigation in this subsector are the International Civil Aviation Organization (ICAO) and the International Maritime Organization (IMO). The latter has made progress in adopting a strategy based on two central components: fuel emissions standards and energy efficiency (MEPC, 2023). ICAO, for its part, adopted a global aspirational strategy in 2022 to achieve net zero emissions (ICAO, 2022).

Mitigation actions in this sector include energy efficiency, but especially promoting sustainable fuels that today represent a very low fraction of the sector's consumption. Under the International Energy Agency's NZE scenario, these are expected to cover more than 80 % of the sector's needs by 2050.

Residential

Interventions to improve efficiency and promote savings in electricity consumption in the residential sector can be grouped into three categories: (1) improving the efficiency of appliances and buildings through subsidies or mandatory standards; (2) providing information and education for both the adoption of new, more efficient appliances and the use of existing ones; and (3) modifying the level and structure of energy prices.

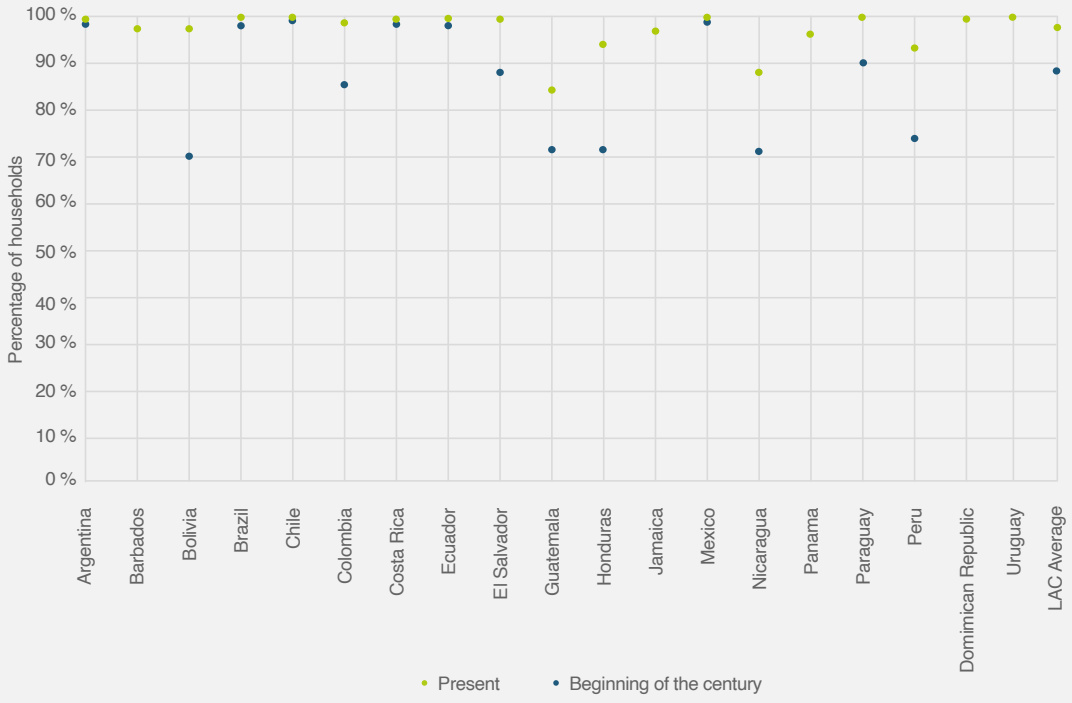
In the case of households, in addition to these mitigation actions, it is necessary to close existing gaps in access to quality energy and ensure affordability (see box 4.1)

Box 4.1.
Access and affordability of quality energy

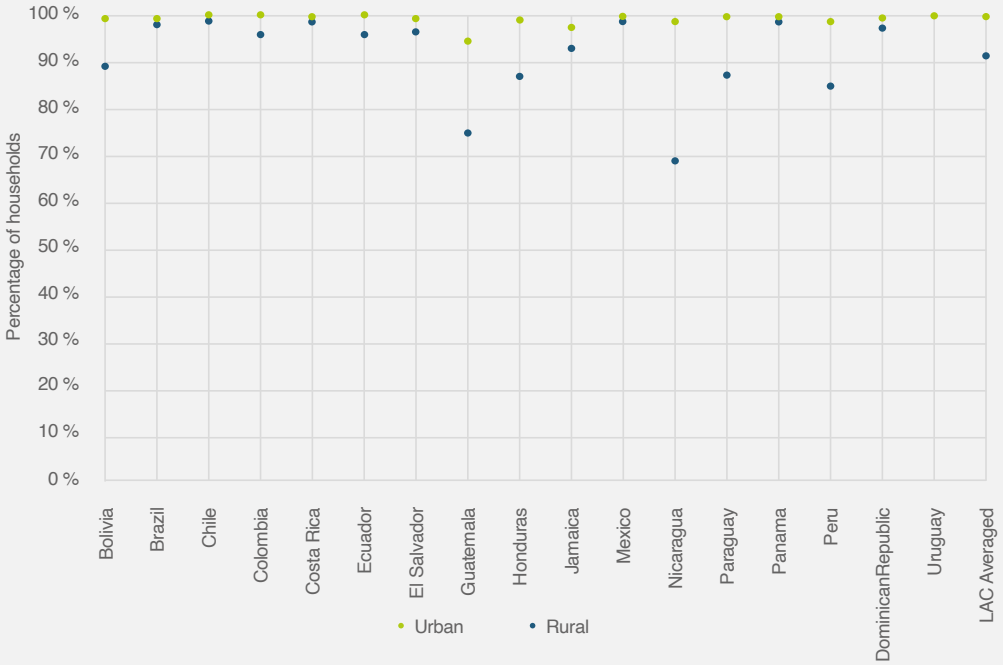
Access to electricity. In the last 20 years, the region has managed to increase the fraction of households with access to electricity by more than 10 percentage points (from 86.5 %). However, in some countries of the region, more than 10 % of rural households still do not have electricity connection (figure 1). NCRE offers an opportunity to close these electricity access gaps in remote areas due to the possibility of distributed generation; low-scale generation close to the point of consumption.

Figure 4.2

Access to electricity service, by country in the region



B. Proportion of households currently connected to service in rural and urban areas



Note: The graph shows the percentage of households with access to electricity service in 19 countries and the LAC average. The figure 4.2.A shows the evolution of this indicator between the current period (2014-2021) and the beginning of the century (2000-2005), while figure 4.2.B shows the current data by area. The variable was constructed from national h-ousehold surveys.
Source: Puig and Tornarolli (2023).

Informal connections. In urban areas, although access is almost universal in most countries, the challenge of informal connections is relevant. Informality entails health risks and deficiencies in the quality of the connection, both in terms of continuity of supply and power. On the other hand, the absence of a meter means that the regulatory role that prices have in electricity consumption is lost, in addition to entailing potential revenue problems for distribution companies.

Excessive use of firewood. The region has also managed to reduce dependence on fuels that are particularly harmful to health, such as firewood. Although this has decreased in residential consumption in all countries, it is still the most relevant source in low-income countries in the region—Guatemala, Haiti, Honduras and Nicaragua—but also in some higher-income countries such as Chile, where it is used for heating, and Colombia, Paraguay and Peru, where it is mainly used for cooking. To reduce dependence on firewood, migration to electricity is the ideal solution, but this requires transmission and distribution networks, which in some rural areas of some countries are not always present. The natural gas option has a similar problem. Liquefied petroleum gas, although not environmentally optimal, is much easier to distribute, so it could be considered as a transitional alternative until access to electricity improves.

Affordability. Energy represents an important component of household budgets, especially for the poorest households. On average, households spend 6 % of their budget on energy, mostly on electricity, exceeding 10 % among the poorest in some countries. According to the 2018 edition of the *Latinobarómetro* survey (2018), in the simple average of 18 countries, 54 % of respondents reported having difficulties paying the electricity bill at some point. This may be a challenge for the removal of significant electricity subsidies in some countries in the region.

Mitigation in land use and agriculture

For emissions associated with land use and land-use change and agriculture, the following mitigation actions are highlighted in RED 2023 (Brassiolo et al., 2023):

Action # 1: Halt land use change in high carbon ecosystems

In line with the sectoral composition of emissions, the main mitigation action in this sector is to halt land use change. That is, slowing the advance of the agricultural frontier, particularly in ecosystems with a high carbon content: tropical forests, freshwater wetlands and mangroves. To this end, there is a set of instruments that have been implemented with moderate success: establishment of protected areas, anti-deforestation laws and supply chain regulations. However, the effectiveness of these policies is compromised by a lack of implementation capacity. As an example, it is estimated that more than 96 % of deforestation in the Amazon region is illegal. These policies are discussed in the section “Protection of the environment and ecosystems”.

Action # 2: Improve agricultural productivity

Reducing deforestation without compromising the growth of the agricultural sector requires increasing agricultural productivity. Using detailed geographical data on the potential production of each plot, Adamopoulos and Restuccia (2022) find that the use of the best existing practices and technologies, together with a better choice of crops according to the characteristics of the plots, would allow a fivefold increase in production per hectare in poor countries. The participation of public research and technology transfer institutes is required in this area.

Technological progress presents great opportunities for the agricultural sector, particularly in two dimensions: precision agriculture and genetic improvement in crop and animal production. The first, facilitated by the use of autonomous vehicles and automated image processing for crop monitoring, makes it possible to reduce the need for inputs, thereby reducing pollution. The second improves resilience to pest incidence and climate variability.

Productivity gains in the agricultural sector support mitigation in two ways: by reducing the use of inputs, especially those with a significant carbon footprint per manufacture or per use, and by reducing the area required per dollar invested in production.

Increasing productivity in the agricultural sector alone does not guarantee that the expansion of the agricultural frontier will be contained, since it encourages the recovery of land use for production. Containing such expansion over ecosystems with high carbon density requires complementary actions.

Action # 3: Strengthening land registers and protection of property rights

Deforestation and land use change are favored in the region by diffuse land ownership rights. In the Brazilian Amazon, for example, there is evidence that illegal appropriation of public lands by private producers and subsequent titling by the State is associated with deforestation, since fencing and long-term productive use, which ultimately lead to deforestation, are included in land regularization mechanisms (Carrero et al., 2022). The imperfect implementation of property rights that make appropriations possible entails zero cost or even remuneration for emissions associated with land use change. Therefore, the regularization of domains, the strengthening of land registers and the agile implementation of legal and juridical mechanisms to guarantee respect for property rights and stop illegitimate appropriations and exploitations, especially on public lands, are key.

Action # 4: Improved agricultural practices for soil carbon management, livestock emissions and agricultural wastes

In regions affected by crop production and grazing, soils have a great potential to store carbon.

Some practices that increase carbon in croplands are the use of improved varieties, crop rotation and the use of cover crops between planting cycles. In grazing lands, the appropriate management of the number of livestock per hectare, the use of diverse pasture varieties and fire prevention stand out.

Soil carbon sequestration through improved agricultural practices is considered a high-potential, low-cost area, although subject to monitoring and verification challenges necessary for widespread adoption (IPCC, 2022a).

Two cross-cutting tools: carbon pricing and capture technologies

Carbon markets and carbon tax

GHG emissions generate a negative externality at the global level. Emitters do not consider all the costs that these emissions impose on the rest of society; therefore, they are inefficiently high. Carbon taxes and carbon markets seek to correct this externality.

In terms of taxes, the government sets a price for the emission of CO_2 equivalent units that must be paid by the emitter. The presence of this cost discourages GHG emissions. In addition to assigning a social cost to GHG emissions, such taxes provide fiscal revenues that can finance projects necessary for the green transition.

Carbon markets are trading systems where carbon credits are traded. Different economic agents, such as companies or families, can offset their emissions through the purchase of carbon credits allocated by the government or offered by other agents that eliminate or reduce GHG emissions. These carbon markets can be of two types: regulated, where companies and entities buy credits to comply with national or international regulations, or voluntary, where they buy credits on an optional basis (UNDP, 2022)[14].

There are different ways of distributing these emission permits. For example, by allocating them to companies according to their level of emissions in some reference period or through auctions, which results in a source of revenue. After the initial allocation, trading of emission allowances between companies (or countries) is authorized, allowing those who emitted less than expected to sell their surplus to others, providing an incentive for mitigation.

Among the advantages of carbon markets is that the price is determined by the market, while the tax requires administrative processes to change its amount. This may give carbon markets more flexibility to adjust to particular situations in the economy; but, at the same time, it makes the price more volatile. On the other hand, at the level of international cooperation, carbon taxes would require global unification of the price per ton of CO_2 equivalent or border adjustment mechanisms to avoid what is known as carbon leakage, i.e., emissions from companies that migrate their production from countries with strict regulations to others where they are more permissive.

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14 In the first case, the State allocates the stock of emission permits according to its mitigation objectives, while in the voluntary case, the supply comes from private actors or Governments developing carbon reduction or elimination projects, who are the credit suppliers, while the demand comes from private actors wishing to reduce their carbon footprint.

> "If there is one thing we know in economics is that the price of carbon should be the same worldwide, because one particle emission in China is equivalent to one particle emission in Brazil (...). If we are really committed to the climate agenda (...) we will need to have these markets integrated. Therefore, I do not think we can make carbon a fundamental part of the mitigation agenda as long as these markets remain segmented (...) We need a market with Government participation, one that is regulated, and where there is this integration between the different countries".
>
> **Based on an interview with Juliano Assunção**

Carbon capture, use and storage (CCS)

Even in zero net emissions scenarios, fossil fuels will not disappear, at least not until the middle of the 21st century. This highlights the need to advance the development of carbon capture, use and storage technologies to eliminate the emissions associated with fossil fuels that remain. The incentives for the penetration of these technologies will be conditioned by the cost assigned to GHG emissions.

There is a natural process of carbon capture, use and storage (CCS). This occurs through the recovery of forests or vegetation by eliminating productive activities on soils. There are also technologies with varying degrees of development that can have a place in the set of mitigation measures[15]. In the capture phase, there are two types of technology: directly at the place of emission (a physical point, such as a factory or a thermal power plant), and those that take carbon from the air (known as direct air capture). The most developed applications of the first type are in the electricity and industrial sectors. On the other hand, air capture is more costly because it consumes more energy.

CCS can allow recovering part of the value of energy assets at risk of abandonment in transition processes, since their negative effect on the climate would be lower (Clark and Herzog, 2014; IPCC, 2005). For these technologies to be economically viable, it is necessary that investors perceive that this activity has a value and that it reflects the environmental costs in the future.

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15 In addition to natural (e.g., reforestation) and artificial carbon sequestration processes, there are other intermediate options, such as enhanced weathering (stimulation of the rock degradation process and release of cations to strengthen CO_2 sequestration), enhanced soil CO_2 sequestration practices (land use changes that raise gas uptake) and ocean fertilization (to stimulate CO_2 sequestration). See details in Terlouw et al. (2021).

Protection of ecosystems and biodiversity

The qualities of the environment we inhabit respond to the set of ecosystem services. Human activities affect the environment and people's quality of life through exposure to pollution and loss of ecosystem services. Those who carry out activities with high environmental impacts do so without paying attention to the costs they impose on others, which has led to a broad set of instruments designed to deal with these externalities at the local, national and international levels (figure 4.1). The main actions and pending issues for environmental protection, focused on the protection of ecosystems and biodiversity, are discussed below.

> "The protection of ecosystems, especially in tropical countries (...) is a challenge that requires very strong government action. There is no well-structured market (...), there is no organized structure that benefits from ecosystem services. But we know that they are very important and crucial for us (...) because they play a role in several global systems that are extremely important for human life".
> **Based on an interview with Juliano Assunção**

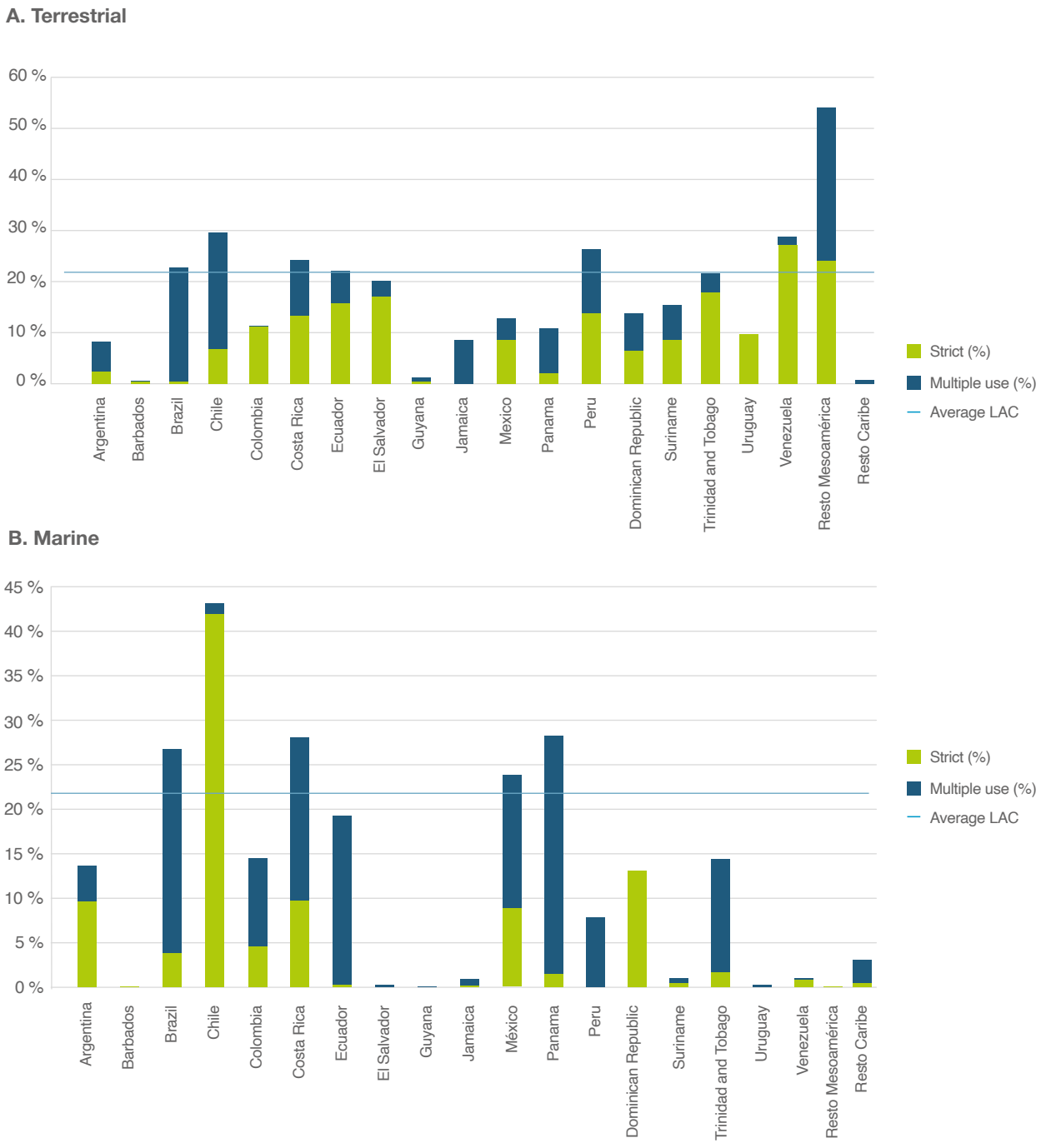
Action # 1: Establishing protected areas in neglected ecosystems, strengthening their monitoring and ensuring their interconnection

One of the most important instruments for the preservation of ecosystems and biodiversity at the global level is the establishment of protected areas (PAs). These involve territorial delimitations where restrictions are imposed on the type of activities that can be developed. Simplifying, they can be of a strict type, where neither the establishment of people nor the development of economic activities is allowed, or of multiple uses, where activities are allowed to a variable degree.

Comprehensively assessing the effectiveness of protected areas is challenging because of the difficulty of establishing a valid comparison. Two central challenges are their location and spillover effects. Evidence on effects on deforestation and vegetation cover, which are the main ones evaluated, shows modest impacts. Positive effects tend to be found in areas with higher degradation pressures. In turn, evidence on spillover results is mixed, sometimes showing positive, sometimes negative effects of protection in surrounding areas, which seem to depend on the productive value of the regions under protection and the proximity of transportation routes (Reynaert et al., 2024).

The region has shown a significant increase in the coverage of protected areas, currently reaching around 22 % of the land surface, exceeding the global aggregate by nearly 10 percentage points. It also has a similar percentage of the maritime surface. Nearly a third of the region's terrestrial protected areas are of the strict type, while this category reaches half of the maritime areas.

Figure 4.10
Terrestrial and marine protected area coverage by type and country



Note: The share of strictly protected areas is shown as a percentage of total terrestrial and marine protected areas. In the case of marine areas, exclusive economic zones are considered as the total national area. In this analysis, all areas with national designation are included and strict PAs are considered to be those areas classified by the International Union for Conservation of Nature as categories I to IV, both inclusive. For more details, see the online appendix of the RED (Brassiolo et al., 2023).
Sources: UNEP-WCMC and IUCN (2022) and Flanders Marine Institute (2019).

In addition to the proportion of the area covered, it is essential for biodiversity that these areas include a broad representation of the various ecosystems and that they are interconnected, so that species can move between them. In this regard, there are pending challenges in the region due to the heterogeneous progress of countries (figure 4.10) and ecosystems. For example, while the coverage of strict areas reaches 10 % in forests, in areas dominated by grasslands it is only 3 % (Brassiolo et al., 2023).

Action # 2: Leveraging protection through local communities

As a rule, strict protected areas should offer the greatest protection to the regions covered. However, this is not necessarily the case. Effective protection requires costly and continuous monitoring efforts, and imposes costs on individuals and businesses affected by regulations.

One way to relieve the tension between conservation and economic livelihood needs is through co-management arrangements. This involves transferring to a local community the right to develop economic exploitation in the protected area, in a sustainable manner and with exclusivity. Such arrangements offer a genuine source of income for the communities. At the same time, property rights generate incentives for communities to be active players in conservation efforts.

Evidence suggests that there is no difference in the protection provided by strict areas over mixed areas, once geographic characteristics are taken into account (Reynaert et al., 2024; Rico-Straffon et al., 2022; Kere et al., 2017). Additionally, the combination of demarcation of protected areas with the transfer of exploitation rights to local and indigenous communities within them, or in contiguous transition zones, can improve effective protection (Sims and Alix-Garcia, 2017; Baragwanath and Bayi, 2020; Blackman, 2015).

> "Resources must be generated and must reach the most vulnerable sectors of the population (...) One of these policies shall seek, above all, to improve living conditions in rural areas, where nature is very important (...). We have to think on how we manage to bring financial capital to invest in that natural wealth, to protect it and generate an income we lack today".
>
> **Based on an interview with Mauricio Cárdenas**

Action # 3: Zoning and regulation focused on key ecosystems

Certain types of ecosystems stand out for their importance to human well-being and play a central role in responding to climate change. For example, mangroves, freshwater wetlands and forests have high carbon potential, while moderating water cycles; glaciers are a natural reservoir of vital freshwater in dry seasons. Consequently, there is a set of regulations focused on critical zones and ecosystems. Examples of these are forest or anti-deforestation laws, as well as those regarding wetlands and glaciers. Among the best-known policies is Brazil's Forest Code, which regulates the activities that take place within the area known under the legal definition of the Amazon: it prohibits deforestation in areas owned by the State, and establishes that at least 80 % of privately owned land must preserve its natural vegetation. In Argentina, the Forest Law established three categories according to the basic conservation status of native forests, prohibiting any affectation of the natural cover in areas with better conservation (category 3).

The effectiveness of zoning or ecosystem-based regulations depends crucially on monitoring, sanctioning and enforcement capabilities. The territorial scale of such regulations makes effective implementation difficult, in contrast to the relatively more focused efforts of protected areas. In the Brazilian Amazon, for example, almost all recorded deforestation is illegal, and mostly occurs in public forests, in a fragmented manner and in low-scale exploitations (Ferreira, 2023; Valdiones et al., 2021). However, several instruments applied to improve early detection and focus monitoring efforts proved to be effective in drastically reducing the rate of deforestation (Ferreira, 2023).

Action # 4: Expand and strengthen the design of payments for ecosystem services schemes

Ecosystem protection instruments based on market mechanisms seek to provide economic incentives for households and businesses to participate in conservation actions.

Payments for ecosystem services (PES) are voluntary participation mechanisms that compensate participants for taking a particular conservation action. They typically involve three components: a source of funding, usually from government funds or international assistance; one or more intermediaries who are responsible for monitoring and implementation; and the final beneficiaries, who contractually commit to carry out the conservation actions in exchange for the payment.

Latin America and the Caribbean has been a pioneer in the implementation of PES schemes and currently accounts for about half of the 550 globally known programs (Salzman et al., 2018), with examples implemented on a large scale in Mexico and Costa Rica. In the region, there are national-level programs in five countries, although they are mostly at the regional or local level (Alpízar et al., 2020).

Initially, PES focused on the protection of water sources. Under them, participating producers, located in watersheds, receive payments for forest protection and management actions and reforestation. Gradually, other programs promoted carbon capture and storage, biodiversity and scenic beauty conservation (Wunder et al., 2008).

PES schemes are not exempt from challenges. First, they depend on the pre-existence of well-defined and robust property rights. Participants in PES schemes must be able to demonstrate legitimate ownership and tenure of the area they are applying for. This limits implementation in regions with disputed territories and informal tenure, a frequent situation in the regional context, as well as leaving out informal and illicit activities that take place on public lands.

Second, they often depend on a source of public funding or international assistance and are therefore vulnerable to changes in the countries' budget availability or the international context. This is partly due to the difficulties of fully and accurately measuring the services provided and the diffuse nature of the beneficiaries, which sometimes makes it impossible for them to contribute to the costs.

Third, these are voluntary participation schemes, so it is not assured by design that the principle of additionality is met[16]. Taking part in the PSE schemes is attractive to individuals when the benefit outweighs the costs of participation, so it is possible that the plots that apply are those of lower productive value and would have been retained anyway without the need for the program (see, for example, Jayachandran, 2023).

Fourth, although they can partially replace the income that would have been obtained from the development of an activity with environmental impact, PES schemes are not free from adverse distributional impacts. It is possible that, by giving up certain productive activities, they may reduce employment and income among non-landowner households. The evidence, in this regard, is mixed (Alix-Garcia et al., 2019; Villalobos et al., 2023).

A first dimension to improve PES schemes is to bet on a greater participation of the private sector in their financing, particularly in cases where the benefits are more local and where there are economic sectors directly dependent on these services. The most common cases are the ecotourism sectors and drinking water supply companies. Another way is through compensation mechanisms, whereby companies participate in the financing of PES programs as part of the licensing agreement with the State for the development of an activity with environmental impact in another region.

16 This principle refers to the fact that the true impact of an environmental protection action, which should be the focus of what is rewarded in PES schemes, involves a comparison with what would have happened in the absence of that action

The second dimension is to reduce selection bias and improve the set of participating plots in the schemes. For this, the introduction of a restriction that prevents the incorporation of properties in a partial way looks promising for reducing deforestation with respect to the traditional design (Izquierdo-Tort et al., 2024).

A third is to carefully evaluate the distributive impacts of programs and identify complementary instruments to address poverty and employment. For example, through the promotion of local economic activities with low environmental impact, leveraging on the natural capital that is preserved.

Action # 5: Strengthen regulations with traceability as a strategy for commercial insertion and consumer positioning

Concern for environmental protection has a growing presence among consumers and companies around the world. Eco-certifications are a way of leveraging this concern in order to channel resources towards sustainable production practices. These consist of labeling products with information on the quality of environmental practices throughout the value chain. This requires mechanisms for traceability of the origin of all inputs and the action of an agency involved in monitoring and certification. Labels allow environmental valuation to materialize in a greater willingness of consumers to pay for products with high environmental standards, which, in turn, encourages companies to adopt better practices.

Currently, there are more than 400 eco-certification schemes around the world, managed by governmental organizations, industry associations and individual initiatives. Some prominent examples from the region include banana, coffee and cocoa production sectors (Blackman et al., 2014). Evidence on the impact of these schemes is promising although incipient and requires further development to establish the most appropriate design features for their effectiveness (Ibáñez and Blackman, 2016; Blackman and Rivera, 2011; Rico-Straffon et al., 2023).

The agenda and policies implemented at the global level have implications that transcend borders, particularly in the case of large markets or those implemented in blocs. As a growing set of markets put into effect stricter environmental regulations, pressure grows on third countries to implement similar regulations, either because of consumer pressure or to motivate fair competition with companies based in jurisdictions with stricter regulations. Eventually, countries' environmental regulations may even translate into barriers to trade.

The European Union's Deforestation Regulation (EUDR, 2023), in force since 2025, requires a group of commodities and their derivatives to be deforestation-free in order to enter or be exported from the European market. These products have been identified as the main ones associated with deforestation at a global level. In the United States, the Forest Act, also focused on trade in deforestation-free products, is currently under discussion in the legislative process. Supply chain regulations applied in international trade result in substantive incentives for current and potential trading partners to implement comparable regulatory measures and strengthen the institutional framework to evidence compliance, which allows them to maintain access to international markets.

In response to these dynamics, ambitious examples of industry agreements to halt deforestation have emerged in the region. The Soy Moratorium is a good example. It is a broad agreement of companies in the agricultural sector, civil society actors and the government, whereby participating companies commit to only buy soybeans produced on land that has not been deforested after July 2016, a condition that was monitored, first, by aeronautical surveys and, later, with remote sensing.

Evidence suggests that the moratorium was successful in contributing to the reduction of deforestation in the Amazon by reducing the returns that producers obtained from expanding the agricultural frontier (Nepstad et al., 2014; Rudorff et al., 2011). In contrast, a similar initiative to discourage the purchase of cattle raised in deforested areas of Brazil would have had limited success due to the difficulty of establishing effective traceability mechanisms on the animals (Ferreira, 2023). Ultimately, the success of supply chain interventions depends on technologies and institutions that allow strict traceability along the entire chain.

Adaptation to climate change and ecosystem degradation

The countries of Latin America and the Caribbean have diverse realities, but exhibit some common characteristics with major implications for the impacts that the region faces from climate change and its adaptation needs.

First, as discussed in chapters 1 and 3, the economies of the region show high income inequality, and income is generally medium or low. The high incidence of poverty increases the need for public policies to reduce its impact on vulnerable groups.

Second, the region exhibits a high and growing level of urbanization, with inadequate planning. It also shows gaps in basic infrastructure, which increases its needs for adaptation and interventions from the State.

Third, in many countries of the region, the population is concentrated in coastal areas, which are exposed to rising sea levels and, therefore, to the greater frequency and intensity of storms and the resulting storm surges. This is particularly the case in the Caribbean, where about one-fifth of the land area and 12 % of the population is less than 10 meters above sea level.

Fourth, the economic structure of the region is heavily dependent on the agricultural sector, which accounts for 15 % of employment on average and around 30 % in seven countries (Brassiolo et al., 2023)[17]. This sector is particularly vulnerable to the changes already experienced and expected in rainfall and temperature regimes as a result of global warming.

Adaptation policies seek to reduce the impacts of climate change on health, contribute to well-being, food security, biodiversity conservation and risk and damage reduction (IPCC, 2022b). Considering the characteristics of the region, adaptation priorities can be classified into three groups: the agricultural sector, resilient cities and infrastructure, and targeted policies for vulnerable populations.

Policies for adaptation in the agricultural sector aim, in the first place, to strengthen the resilience of farming systems to the impacts of climate change, through practices that optimize water and soil use and make them more resistant to extreme weather events, such as droughts and floods. This involves the development of climate information systems, land use planning, including changes in the choice of crops according to plots, the development and adoption of varieties resistant to expected changes, and the enlargement of irrigated land in areas affected by water stress. Water management requires investments in both traditional infrastructure and nature-based solutions: dams for irrigation water storage and flood prevention, construction and expansion of stream capacity to improve drainage, and leveraging ecosystems—mangroves, inland wetlands, forests—to moderate water cycles (Brassiolo et al., 2023; IPCC, 2022b).

Second, access to insurance mechanisms and credit must be developed and strengthened. Agricultural insurance, production financing and futures markets make it possible to improve risk management for agricultural producers and remove the financial barriers that prevent necessary investment.

In the urban and infrastructure sector, territorial planning and management and the development of resilient infrastructure are the most important instruments. Planning for urban expansion and infrastructure (e.g., transportation, energy and communications) must take into account possible changes in climate conditions, contemplating the uncertainty associated with projected scenarios. Additionally, information systems have a prominent role in guiding the decisions of households and developers, including the dissemination of information on environmental risks with spatial granularity and forecasting and early warning systems (De la Mata et al., 2022).

Resilient infrastructure has the ability to cope with extreme environmental conditions (rainfall, wind, storm surges), for example, through greater resistance or better location. Some key dimensions where greater resilience is required are infrastructure to prevent coastal erosion (e.g. seawalls), infrastructure for rainfall drainage in cities, electricity transmission and distribution networks that suffer efficiency losses due to high temperatures and must adapt their consumption to cooling needs, and the energy transition, among others.

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17 Bolivia, Ecuador, Guatemala, Haiti, Honduras, Nicaragua and Peru.

> "The Caribbean is right in the middle of the Atlantic hurricane belt, and the season runs from June to November. So, every year, there will be at least one hurricane hitting the Caribbean islands, sometimes more than one, and they can be very destructive. And many of these islands are small, so it's hard for them to withstand their effects. There's nothing the Caribbean islands can do about it. They have to try to build hurricane-resistant housing, make sure they have adequate drainage systems, but there's not much they can do except to be prepared".
>
> **Based on an interview with Colm Imbert**

> "I want us to move toward solutions that build the structures, that invest in the technologies we need to make sure that our early warning systems are as strong as possible and that our systems for rebuilding and regrouping are as robust as possible".
>
> **Based on an interview with Karen-Mae Hill**

Nature-based solutions (or green infrastructure) play a central role in adaptation in cities and coastal areas and reduce the need for traditional (or gray) infrastructure. For example, reopening urban watercourses next to green areas allows moderating water cycles and preventing flooding; restoring mangroves, coral reefs and oyster barriers allows absorbing wave energy and reducing coastal erosion; restoring and removing debris and waste from creeks and watercourses reduces the risk of flooding.

Territorial planning in urban areas must be implemented effectively. This implies challenges in the region, since informal occupations are recurrent and tend to be located in sites with high exposure to environmental risks. Urban policies targeting vulnerable groups must address the dual challenge of improving the quality of housing and the environment of informal neighborhoods. This amplifies their adaptive capacity, while avoiding growth in regions with high exposure to risks, where adaptation entails high costs. Policies to improve labor inclusion (chapter 3), increasing income and diversifying their sources, are strongly complementary to climate adaptation objectives.

The nexus between digital and green transitions

The major trends introduced in chapter 1, associated with technological change and the global adoption of policies for environmental sustainability, have multiple areas of interaction. Understanding the challenges, areas of conflict and synergies that these trends pose is key to the region's development.

A first area of conflict between digitalization and environmental sustainability is associated with material requirements. Despite the immaterial nature of the value produced by the growing digital economy, it depends on a physical component that supports it. On the one hand, the devices that materialize the link between people and the digital world: cell phones, personal computers and an increasing number of devices of all kinds that connect to the network. On the other hand, the supporting infrastructure for data transport, storage and transformation, comprising physical cable or fiber optic connections and data storage and computing servers. In addition, policies for sustainability also have a significant material requirement, as they rely on the development of solar panels, windmills, electrical grids and batteries. Furthermore, some evidence indicates that the material intensity of electronic devices, which includes all the physical resources mobilized in their production, is higher than average, while their obsolescence is accelerated (UNCTAD, 2024).

The digital and green transitions change the composition of the economy's material demand and depend on a broader set of elements, such as lithium and cobalt for batteries, copper and aluminum for power grids, gold and rare earths for electronic devices and semiconductors. This new composition gives greater relevance to a number of countries in the region. Notably Chile, Bolivia and Argentina share the lithium triangle, where an estimated 46 % of global reserves are concentrated; Chile, Peru and Mexico, 36 % of copper; Brazil, 26 % of graphite and 19 % of rare earths, etc. (UNCTAD, 2024). The mining required for the extraction of these materials is associated with significant environmental impacts. The extraction, processing, use and final disposal of seven metals with growing demand by these trends may increase their environmental impact by two to four times by 2060 (OECD, 2019).

A second area of tension concerns the energy demand associated with digitalization. The production and use of electronic devices, networks and data centers demand a significant amount of energy that, to date, has significant GHG emissions associated with it. In terms of use, for example, in 2022, the combined electricity consumption of a selected set of the largest digital companies reached about 125 terawatt-hours (TWh), a level similar to the annual electricity consumption of Argentina (139 TWh in 2022) (Ministry of Economy of Argentina, 2022). In addition, this technological progress drives an accelerated growth in energy consumption in line with new uses, as is the case of general-purpose artificial intelligence. In this regard, Microsoft's electricity consumption increased

by 70 % between 2021 and 2023 to reach 24 TWh, the period of public deployment of ChatGPT applications supported by this company's infrastructure (Microsoft, 2024). While the energy demand of this sector is in the form of electricity and is comparatively feasible to decarbonize, the rate of growth presents challenges for emissions mitigation.

But new technologies and digitalization also present opportunities for environmental sustainability, since the developments have use cases of central importance. A first technological application that stands out is the enhancement of monitoring capabilities. First, the increasing availability of satellite data makes it easier to monitor key environmental parameters remotely and with increasing temporal and spatial granularity. This is a precondition for controlling events such as deforestation, forest fires, accidental or deliberate methane releases in the fossil fuel value chain, mining and illegal fishing, among others. This application is further enabled by the development of advanced data analysis tools (deep learning models for automated detection in images) and the growing capacity to process data.

A good example of this application is the "Action Plan for the Prevention and Control of Deforestation in the Amazon", created in 2004 in Brazil. This plan is associated with a reduction in deforestation of almost 80 % in eight years from the peak recorded in 2004. The central component of this plan was the creation of a real-time deforestation detection system (DETER) based on satellite data (Ferreira, 2023).

In a second application, digitalization can enable substantial emissions reductions in the energy transition by enabling electricity demand response mechanisms. These include the interconnection of electronic devices and the establishment of smart grids that enable automatic optimization of consumption. The central component of clean energy systems are non-conventional renewable energies, mainly solar and wind. These are characterized by their intermittency: they deliver electricity at virtually zero marginal cost, but only when the sun shines or the wind blows. The technologies mentioned above make it possible to automate demand response to take advantage of surplus electricity and reduce consumption in times of shortage, which avoids resorting to fuel-based generation. Bidirectional electricity meters, one of the components of smart grids, are an example of an application. These allow electricity consumption to be collected and reported to operators in near real time and reward household consumption reductions in times of shortage. Additionally, they allow households equipped with solar panels or batteries (domestic or car batteries) to inject electricity into the grid when it is most needed (IDEAL, 2022; IEA, 2023d).

In a third application, digitalization can enable efficiency gains with implications for environmental impact. In this regard, Hubbard (2003) finds that the adoption of on-board computers in the road freight transportation sector resulted in an increase in the rate of cargo capacity utilization of three percentage points, representing substantial economic benefits. Precision agriculture, discussed in the previous section, is another example of efficiency improvements and environmental outcomes associated with digitalization.

The macroeconomics of the green transition

The green transition will have an impact on the region's economies beyond aspects strictly related to sustainability. On the one hand, it may have an impact on external balances, on price formation, on the stability of the financial system and, especially, on the fiscal sphere. On the other hand, it may favor a structural transformation with implications for the labor market and productive development.

Regarding the external balance, although most Latin American and Caribbean countries are net energy importers, some, such as Colombia, Bolivia, Trinidad and Tobago, Ecuador and Venezuela, are strong hydrocarbon producers and their net exports of energy products exceed 20 % of total exports. In these cases, decarbonization of the global economy could have a negative impact on sources of foreign exchange.

The green transition could also affect price levels, structure and volatility. The increase in extreme weather events may affect the supply of agricultural goods and increase their price, and the removal of energy subsidies and the imposition of green taxes may have effects on energy prices, while the increase in demand for inputs for the green transition may affect their price and that of other goods that use them. In the financial sphere, the loss of value of assets linked to the fossil economy (stranded assets) could also have an impact on stability if they affect the value of goods or assets held by banks and, by the same effect, the access to credit of companies directly or indirectly associated with fossil energy production.

The fiscal impacts are possibly the most relevant. The study by Cárdenas and Orozco (2022), for example, presents estimates of the costs of meeting the targets set out in the climate change response commitments for six countries in the region. The authors find estimates ranging on average from 7 % to 11 % of GDP per year, higher than the amounts required in the developed world.

To these financing needs, the deterioration of fiscal revenues for countries with fossil resources should be added. In Latin America and the Caribbean, fiscal revenues from hydrocarbons reached 4.2 % in 2022; but the importance in countries such as Ecuador, Guyana and Trinidad and Tobago exceeds 9 % of GDP this year (OECD, 2023). The decarbonization of the global economy significantly reduces this source of tax revenues.

> "We cannot continue to subsidize activities that generate major sustainability problems, such as, for example, fossil fuel consumption. These subsidies are regressive, they go to sectors that do not need them, and they are bad from the point of view of sustainability. We have to ensure that these subsidies, which today demand a lot of resources from the State, are gradually dismantled".
>
> **Based on an interview with Mauricio Cárdenas**

> "We cannot continue to subsidize activities that generate major sustainability problems, such as, for example, fossil fuel consumption. These subsidies are regressive, they go to sectors that do not need them, and they are bad from the point of view of sustainability. We have to ensure that these subsidies, which today demand a lot of resources from the State, are gradually dismantled".
>
> **Based on an interview with Juliano Assunção**

In response, in a context of shrinking fiscal space (see chapter 1), some Governments have potential savings linked to the removal of energy subsidies. Environment-related taxes, such as levies on energy, transport, pollution and carbon emissions in general, as well as the auctioning of emission allowances can also provide sources of financing for the green transition.

In Latin America, energy subsidies (both direct and indirect) are equivalent to 4.7 % of GDP, which is more than twice as much as in more developed countries (around 2.2 %). For countries with critical mineral resources for the energy transition, the revenue associated with mining activity is likely to grow significantly.

In the aggregate, green finance needs are expected to exceed these potential sources of tax revenues. Unfortunately, international climate finance is often very limited with respect to investment needs and biased towards mitigation (Brassiolo et al., 2023). Multilateral funds climate[18] can help channel finance towards green activities by increasing the visibility of each country's contributions to climate goals, as well as helping to ensure that a larger amount of funds take the form

18 Some multilateral funds that developing countries have access to are the Green Climate Fund (GCF), the Global Environment Facility (GEF) and the Adaptation Fund (AF). These were created over the years as financial mechanisms of the United Nations Framework Convention on Climate Change (UNFCCC) to provide resources to developing countries.

of non-refundable transfers or concessional credits, i.e., those granted on more favorable terms than those available in the traditional financial market. This allows developing countries to meet climate objectives without sacrificing resources available for other development goals. Indeed, access to concessional credit for some countries seems key to be able to make adaptation investments, especially in the area of resilient infrastructure[19] (Arreaza et al., 2023).

Bonds tied to climate objectives can also attract funds and investors motivated by environmental conservation. Uruguay's pioneering experience, with a bond issued in October 2022, points in this direction. This bond incorporates a reduction in the interest rate associated with good performance in two climate objectives: reduction of GHG emissions and conservation of native forest areas[20] (Perelmuter, 2023).

Additionally, the development of accurate green taxonomies could help increase transparency and improve the distribution of funds (Allub et al., 2024). Green taxonomies[21] define environmental objectives and establish sectors, subsectors and economic activities that meet them. They also establish the criteria and thresholds that each activity must meet to be considered environmentally sustainable. Their main usefulness is to establish a common language for finance in this area and to give a clear signal to investors and public and private sector actors about what a green investment is. They also facilitate the creation of regulatory frameworks that promote investment and the development of sustainable activities and contribute to the advancement of policies aligned with sustainability and emissions reduction objectives.

There are currently multiple global initiatives for green taxonomies or classifications. One of them is that of CAF, which identifies green businesses in ten strategic sectors and establishes the criteria and indicators that must be met to move towards more sustainable businesses (Gómez García et al., 2022). The Climate Bonds Initiative (CBI) taxonomy, launched in 2014, serves as a guide in the development of certification criteria for sectors and activities in the global economy.

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19 A recent paper explores the role of resilient infrastructure investment, contingency funds and concessional financing in the dynamics of output and debt-to-GDP in the face of environmental shocks. The analysis finds that investment in resilient infrastructure and the creation of contingency funds reduce the impact of climate events on GDP and may favor better debt dynamics in the medium and long term. However, these instruments imply a higher short-term public debt burden, which could discourage this type of actions. The paper finds that access to concessional credit can be key to improving the time horizon over which these investments pay off in terms of debt-to-GDP ratio trajectories (Arreaza et al., 2023).

20 Although the issue was for USD 1.5 billion, total demand reached USD 3.96 billion, with interest from 188 investors from the United States, Europe, Asia, Uruguay and other Latin American countries (Perelmuter, 2023).

21 For more detail on the development process and governance schemes of a green taxonomy, see the appendix to chapter 10 of RED 2024, available online.

In Latin America and the Caribbean, Brazil was the first country to have its own green classification in 2015. It is currently joined by Colombia and Mexico (since 2022 and 2023, respectively) and several countries that are in the process of developing one (e.g., Argentina, Chile, Peru and the Dominican Republic).

At a more structural level, one challenge of the green transition has to do with labor market adjustments, as some sectors will expand while others will contract. The challenges of this labor adjustment are compounded by the differences in skills required between green and non-green jobs. Fortunately, the green transition also brings important opportunities for the region. Our potential to produce clean energy and our abundance of critical minerals for the energy transition means productive development potential to attract industries and insert ourselves into clean energy value chains. More generally, exploiting natural resources, including the region's rich biodiversity, is an enormous lever for advancing towards sustainable development and, at the same time, helping to alleviate the major global challenges the planet is facing in terms of environmental sustainability[22].

22 We review these structural challenges and opportunities in greater detail in chapters 1 and 5; for more depth, see RED 2023 and RED 2024

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Chapter 5

Latin America and the Caribbean: towards sustainable development in the 21st century



Key messages

1.

The Fourth Industrial Revolution generates take-off opportunities for the region, despite persistent challenges. The adoption of Industry 4.0 technologies (artificial intelligence, internet of things, etc.) presents leap-frogging as a possible growth path for the countries of the region. This vision contrasts with the idea of sequential and gradual growth, moving from agriculture to manufacturing.

2.

In order to harness new technologies so as to address existing development gaps and stimulate economic growth, it is necessary to identify key sectors that maximize the region's natural advantages. First, a modern agricultural sector must be encouraged. Second, a new industrial policy that integrates the non-tradable services sector should be promoted. The latter, characterized by informality and low productivity, will be essential to absorb low-skilled labor, which could be displaced by automation and digitalization of some processes.

3.

These growth paths are complementary to industrialization and the specialization of certain countries in the export of tradable services, such as financial or informational. It is essential for the region's manufacturing sector to consider biodiversity and ecosystems as sources of wealth, particularly in the context of the energy transition. LAC must also find ways to better integrate into global value chains (GVCs).

4.

Instead of relying exclusively on the extraction of natural resources, such as minerals or oil, the region has the opportunity to transform its ecosystems and species into valuable assets for industries such as pharmaceuticals, agribusiness, biotechnology and tourism. In the context of the energy transition, LAC has important geographical advantages for the development of clean energy. The incorporation of tariffs and trade restrictions based on the carbon content of goods and services will make access to clean energy an important competitive advantage.

5.

Decarbonization will also foster the formation of value chains to meet the demand for clean energy. The region should make the most of its comparative advantages to produce renewable energy and access to minerals such as lithium and copper to expand its participation in GVCs.

6.

LAC's geopolitical positioning facilitates its insertion in GVCs. On the one hand, the region has a low war risk and can position itself as a reliable supplier of inputs. In addition, it has generally remained apart from the imposition of export and import bans, restrictions and licensing requirements motivated by trade wars. LAC has great potential to position itself in GVCs due to the abundance of critical minerals and the expansion of tradable services. The region has shown great growth potential in the development and export of software services, data design and analysis, *fintechs* and business process outsourcing (BPO).

7.

The success of public policies depends on the capacity of Governments to design, implement and evaluate regulations effectively. A State with strong institutions, trained personnel and efficient administrative processes can ensure that public policies are implemented in a coherent and sustained manner over time.

8.

Advancing the State capacity agenda in LAC requires prioritizing institutional strengthening. The four pillars of this agenda are: professionalization of the public service; provision of incentives to develop the potential of civil servants; digitalization of the State, and reinforcement of its capacity to generate, manage and analyze data in real time.

9.

The direct financing that the multilateral development banks (MDBs) provide to the region's Governments is the most notorious action. However, the greatest transformative potential of these agencies lies in their ability to address market and coordination failures. The MDBs are key public policy tools with the global experience, the mandate to contribute to development and the capacity to invest in public goods at scale. The MDBs also innovate, pioneering the creation of social impact bonds, green investment funds and results-based financing mechanisms.

10.

The generation of knowledge from multilateral banks has at least three advantages. First, the MDBs operating in LAC have much more direct and frequent connections with the region's activities than academia. Second, the MDBs serve as excellent platforms for the dissemination of knowledge, and this facilitates the arrival of the different knowledge products to the forums that matter for evidence to guide public policies. Third, rigorous evaluation of operations allows the MDBs to replicate and scale cost-effective solutions to the region's problems.

Introduction

The previous chapters have offered a mixed picture of the closing of economic and social gaps in Latin America and the Caribbean (LAC). Although high levels of heterogeneity persist, the region has generally achieved relative macroeconomic stability, especially in those countries whose central banks have maintained their independence from other branches of Government. Added to this are significant reductions in poverty rates, driven largely by the commodity super-cycle between 2000 and 2014, and the success of conditional transfer programs. The region has also approached universal levels of school enrollment, with gender equity and even a favorable advantage for women. In addition, several successful payment-for-ecosystem-services (PES) initiatives have been implemented to encourage environmental conservation.

However, the list of pending challenges is still long. According to ECLAC, potential growth in the region ranges between 1.8 % and 2.5 %, depending on the country and subregion (ECLAC, 2022). Chapter 2 revealed that the lag in productivity is alarming. For the sample, average labor productivity in LAC is approximately 40 % of that of the United States. Chapter 3 presented a bleak picture with respect to meeting the Sustainable Development Goals (SDGs) and closing the gaps. Evidence of this is that, on average, 70 % of workers in the region are informally employed, which limits their access to social protection services. It also showed how the region faces persistent levels of inequality and low economic and social mobility, to which must be added that, despite greater access to public education, its quality and relevance continue to be urgent problems. Chapter 4 also raised the alarm about the pending climate action agenda, especially considering that the region accounts for 9 % of the world's extreme weather events.

In light of this reality, this chapter offers proposals aimed at promoting economic growth and sustainable development at a time of historical upheaval. The current context is marked by growing rivalry between global powers, trade tensions, open conflicts in Europe and the Middle East, the entrenchment of polarization and political uncertainty, the transition to a multipolar world and global challenges such as climate change, the impacts of artificial intelligence and migration crises, which require rebuilding an increasingly fragmented international cooperation. In an increasingly interconnected and technologically advanced world, LAC has some opportunities to take advantage of new avenues for growth and sustainable development.

However, the possibility of taking advantage of technology and the current geopolitical environment does not mean that we should stop working on the pending development agenda. On the contrary, resolving structural challenges is fundamental to enhance any take-off strategy. In this agenda, it is crucial to place emphasis on enabling factors such as investment in digital infrastructure and the design of an appropriate regulatory ecosystem, the reformulation of industrial policy and the provision of quality and relevant education. Likewise, strengthening State capacities and promoting strong institutions are key to this agenda. To ensure policy coherence and maximize resources, especially in countries with territorial differences and unequal administrative capacities, central and subnational Governments must coordinate effectively. Institutions are key to building trust and promoting investment and innovation, but there is no hiding the fact that the region faces major challenges linked to problems of legitimacy and corruption. To boost inclusion and sustainability, it is essential to start by modernizing these institutions, ensuring their representativeness and capacity to regulate natural resources and manage climate risks.

Many of the challenges faced by LAC countries are the same as in other regions and require coordinated efforts among nations, particularly in emissions reduction and energy transition. There are also intertemporal challenges that transcend political cycles and require planning, coordination and strengthening of institutions to ensure the continuity of public policies in the long term. This chapter will conclude by reviewing the role of modern multilateral banking in the region's development agenda, given that development banks have positioned themselves as key actors that, in addition to providing financing, also offer key public goods such as knowledge and coordination.

In short, LAC is at a crossroads that calls for strategic decisions to take advantage of emerging opportunities, without losing sight of historical challenges. The convergence of external factors, such as geopolitical transformations and technological megatrends, with internal structural problems, calls for the adoption of a comprehensive development vision. This chapter sets out a forward-looking agenda that seeks to adapt and build on the progress achieved.

Prospects for sustainable economic growth: opportunities amid persistent challenges

The fourth industrial revolution has come to offer a new opportunity to address LAC's challenges and achieve a more inclusive and just region. In particular, the adoption of Industry 4.0 technologies (artificial intelligence, internet of things, etc.) and the development of digital talent can favorably impact productivity, foster greater regional integration, create quality jobs and reduce social and gender gaps. While it is true that automation may also reduce the advantages of access to cheap labor in the region, there is a potentially beneficial *trade-off* as new digital technologies open up space for new jobs and reduce coordination, monitoring and trade costs. Specifically, the digitalization of our economies promotes the decentralization of production and the formation of value chains, as well as the diversification of services traded within and outside the region.

The traditional and prevailing view of the region's development considered that the true path to economic growth was through a structural transformation that implied a transition from agriculture to manufacturing industry. Under this view, the path to development in LAC should be seen as a sequential and gradual process of investments in skills and technology that would facilitate the transit of our economies through the stages previously followed by developed nations (Lin, 2011; Kuznets, 1966). However, the current context offers the possibility of leap-frogging as a way to achieve growth in low- and middle-income nations.

Experience in other regions of the world has taught us that this is possible. One of the best examples is the investment in mobile telephony as a substitute for fixed lines. Countries such as India, Ghana and Nigeria virtually bypassed the adoption of fixed lines, thus avoiding building an extensive network infrastructure[1]. Others, such as China, slowed down the expansion of fixed lines and focused on building up their mobile telecommunications network. The explosive growth of mobile technology has boosted other sectors, such as e-commerce and digital financial services. In countries such as Kenya, Ghana and Nigeria, mass access to mobile telephony led to innovation in the financial sector through the provision of mobile money services and digital payments (M-Pesa, MoMo, or eTranzact). The adoption of these services triggered another leap in stages, as this new technology facilitated the financial inclusion of previously excluded households without the need to open a traditional bank account. China provides another example of leap-frogging in its payment system, virtually bypassing the use of banked cards and moving directly from cash to digital wallets (Alipay and WeChat Pay)[2]. Another example of leap-frogging

1 See https://ourworldindata.org/grapher/mobile-landline-subscriptions.
2 This model can serve as a guide for developing countries with less consolidated banking systems. See https://www.brookings.edu/articles/is-chinas-new-payment-system-the-future/.

comes from the region. In Brazil, several rural areas have moved directly from older technologies, such as Ethernet, to satellite connections without the need to deploy expensive fiber optic infrastructure. This technological leap has been key to bridging the digital divide in a country with vast geographic areas that are difficult to access[3].

In the case of low-income countries, leap-frogging offers the opportunity to take advantage of new technologies to address existing development gaps and stimulate economic growth. Technology adoption can also facilitate the inclusion of populations with limited access to infrastructure and services. For middle-income countries, leap-frogging provides a potential way out of the middle-income trap, whereby a nation's economic development stagnates, by enabling countries to move rapidly to a knowledge-based economy built on digital services and high value-added production.

> "Latin America needs to do a lot of work to improve financial inclusion. What can be done? (...) Digitalization policies, more sensible microfinance and more advanced risk assessment would allow banks to broaden the base of who they lend to".
>
> **Based on an interview with Carmen Reinhart**

LAC should make the necessary investments to underpin the technologies of the fourth industrial revolution. This would allow us to move from traditional industry to modern industry by accelerating the level of development, wealth creation and digital transformation in the post-pandemic stage. In particular, a recent study for Africa proposes actions that are crucial to facilitate the leap-frogging (Blimpo et al., 2017). First, it is critical to have the right regulatory ecosystem in place (see box 5.1). Second, the implemented innovation must have the potential to be scaled. Third, the public sector must prioritize the acquisition of skills and, fourth, investment in R&D must be encouraged to adapt the technology to the local context.

Building a vision of the future that allows LAC to avoid intermediate stages in its development requires the urgent identification of key sectors in which the use of technology can accelerate the transition from traditional to modern industry. In addition to accelerating wealth creation, this would also raise levels of development in the region. An essential component of this strategy involves maximizing the region's natural advantages: the production of raw materials and the relative abundance of low-skilled labor. Technology, in this context, presents itself as a catalyst that can transform these resources into sources of sustained wealth.

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3 See https://www.gov.br/en/government-of-brazil/latest-news/2022/the-brazilian-govt-is-bringing-high-speed-connectivity-to-every-city-with-poor-or-unavailable-access-to-internet.

Two actions are essential. First, to promote a modern agricultural sector that capitalizes on the comparative advantages derived from the region's natural capital. The use of advanced technologies in agriculture will make it possible to improve productivity and sustainability, maximizing the region's existing potential.

Second, a new industrial policy is needed to address the challenge of digitalization and its impact on labor markets, integrating the non-tradable services sector. This sector, characterized by informality and low productivity, will be essential to absorb the low-skilled labor that could be displaced by automation and digitalization of some processes.

These growth paths are complementary to industrialization and the specialization of certain countries in the export of tradable services, such as financial or information services. It is therefore essential for the region's manufacturing sector to consider biodiversity and ecosystems not only as natural assets, but also as sources of wealth, particularly in the context of the energy transition. On the other hand, LAC must find ways to better integrate into global value chains (GVCs), either through improvements that are reflected in the simplification of procedures and processes, or through investments in key sectors that have a greater projection of insertion. Among these, modern tradable services or inputs associated with the energy transition appear as alternatives.

A comprehensive strategy such as the one proposed can position the region as a key player in the global economy, making the most of its natural and human resources.

Box 5.1
Mobile payment systems and digital banking in LAC

Barriers to the adoption of mobile payment and digital banking systems in LAC are strongly influenced by a regulatory ecosystem that, in many cases, has not adapted quickly enough to the rapid technological evolution. Fragmented regulations at the regional and national levels can hinder the implementation of innovative payment solutions, creating uncertainty among financial service providers and consumers. In addition, strict regulations on customer identification and verification, while necessary to prevent money laundering and fraud, can act as barriers to financial inclusion, as many potential users do not have the required documentation to access these services.

The lack of harmonized regulation across countries is a key constraint on the expansion of *fintech* services and digital payment systems. Each country has its own regulatory framework, creating a fragmented environment that makes standardization of payment methods and interoperability of services difficult. This leads to companies having to adapt to a different standard in each country, making it hard to expand and implement innovative solutions regionally. In some cases, there are legal loopholes surrounding certain technologies. Such is the case of digital wallets in Peru. For many years, the regulatory framework in that country did not specifically contemplate the operation and regulation of digital wallets. This generated uncertainty for *fintech* companies and for users, who were unclear about how to operate legally in this space. In the absence of adequate regulation, many companies were reluctant to invest in the development of this type of solutions.

Other countries in the region have created more favorable regulatory environments for the adoption of digital payments. For example, Brazil has implemented PIX, an instant payment system that enables fast and secure transfers through mobile devices, promoted by the Central Bank of Brazil. This system helped increase the adoption of digital payments by eliminating high fees and facilitating access to a wide range of users. Similarly, Mexico has promoted the use of mobile banking and digital payments through initiatives such as CoDi (*cobro digital*), which facilitates electronic payments using QR codes and is backed by the Government.

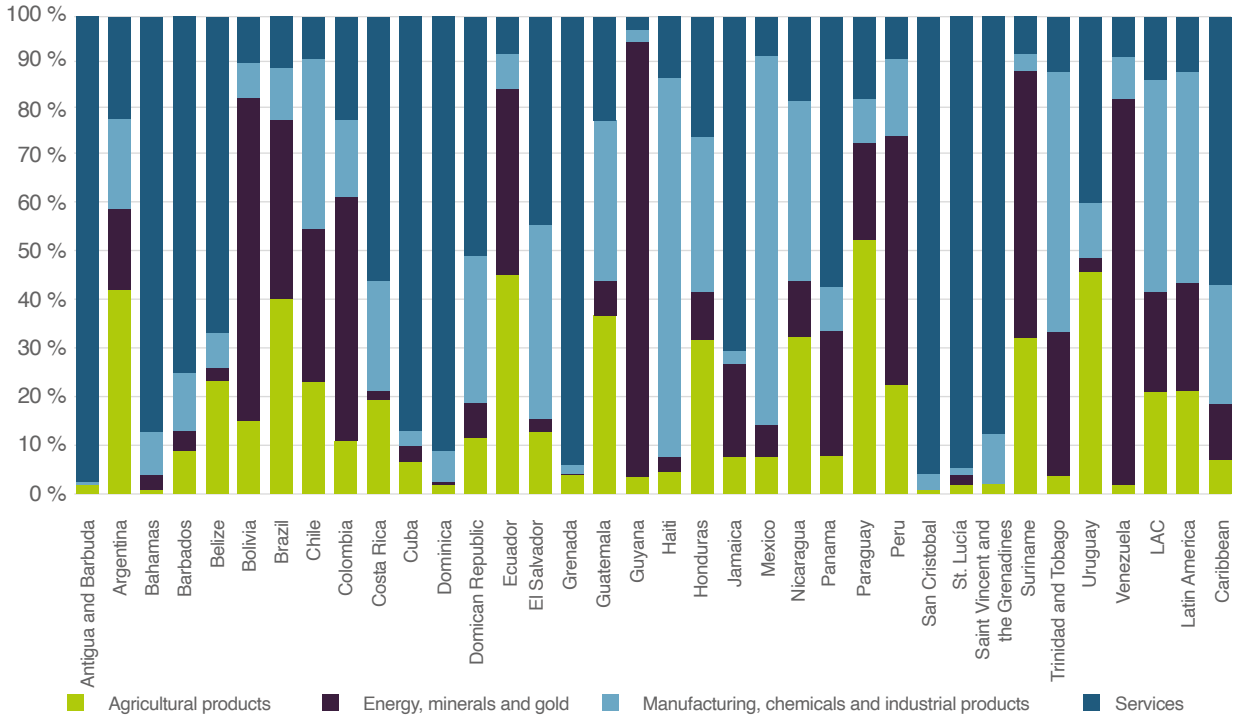
Despite these advances, there are still significant challenges that need to be addressed. The lack of adequate digital infrastructure in rural and less developed areas, as well as the low level of digital and financial literacy among certain segments of the population, limit the potential of mobile payment systems and digital banking. In addition, tensions between traditional financial system entities and *fintechs* can also complicate the regulatory landscape, generating resistance to change and innovation. It is therefore critical that Governments work together with the private sector to create regulatory frameworks that foster collaboration and innovation, enabling the benefits of digital payments to be accessible to all citizens in LAC.

Two examples of good practices are Brazil and Costa Rica, where the respective central banks have adopted an active role beyond the administration and oversight of the national payment system by providing common infrastructure and standards for ecosystem agents (Herrera et al., 2024).

Promoting the development of a modern agricultural sector

Until a few decades ago, the expansion of national income based on commodity exports was perceived as limited and unable to help the region take the leap to a path of sustained growth. While subsistence agriculture persists, LAC is increasingly important as a supplier of food to the rest of the world. In recent years, the region has stood out for its high food trade surplus, significantly larger than any other in the world. This is reflected in the high share of agricultural exports in LAC's total exports. In 2023, 21 % of LAC exports came from agricultural products. For the OECD countries as a whole, analyzing the same period, this value was only 7 %. And for the countries in the BRICS matrix (Brazil, Russia, India, China and South Africa), the percentage of agricultural products was only 6 % in 2023. It is worth noting that these data are guided by the behavior of the Latin American export matrix, since the Caribbean matrix stands out for the weight of exports of services, driven largely by the preponderance of tourism.

Figure 5.1
LAC exports, 2023



Note: Agricultural products: live animals; meat and meat preparations; dairy products and poultry eggs; cereals and cereal preparations; vegetables and fruits; sugar, sugar preparations and honey; coffee, tea, cocoa, spices and articles thereof; animal feeds (except unground cereals); miscellaneous edible products and preparations; beverages; tobacco and articles thereof; raw hides, skins and leather; oil seeds and oleaginous fruits; raw rubber (including synthetic and regenerated); cork and wood; pulp and waste paper; textile fibers and waste thereof; fishery.

Energy, minerals and gold: fertilizers and crude ores; metal ores and metal waste; crude materials of animal and vegetable origin, n.e.s. (not elsewhere specified); coal, coke and briquettes; petroleum, petroleum products and related materials; gas, natural and manufactured; electric current; animal oils and fats; fixed vegetable oils and fats, crude, refined or fractionated; processed animal and vegetable oils and fats; currency (other than gold coinage), which is not legal tender; gold, nonmonetary (excluding gold ores and concentrates).

Manufactures, chemicals and industrial products: organic chemicals; inorganic chemicals; dyeing, tanning and coloring materials; medicinal and pharmaceutical products; essential oils for perfumery materials and cleaning preparations; fertilizers; plastics in primary forms; plastics in non-primary forms; materials and chemicals, n.e.s.; leather, articles of leather and tanned hides and skins; articles of rubber, n.e.s.; articles of cork and wood (excl. furniture); paper and articles of paper; textile yarns and related products; articles of non-metallic minerals, n.e.s.; iron and steel; non-ferrous metals; articles of metal, n.e.s.; machinery and equipment for power generation; specialized machinery; metal working machinery; other industrial machinery and parts; office machines and automatic data processing equipment; telecommunication and sound recording equipment; machinery and appliances, n.e.s.; road vehicles; other road equipment; prefabricated buildings, sanitary, heating and lighting installations, n.e.s.; furniture and parts thereof; travel goods, handbags, etc.; clothing and clothing accessories; footwear; professional and scientific instruments, n.e.s.; photographic apparatus, optical goods, watches and clocks; miscellaneous manufactured articles, n.e.s.
Source: Unctad (2024).

Today, agriculture is a modern sector that represents a great opportunity for the region. Even with varying degrees of heterogeneity within and between countries, we find a sector that has been innovating and that relies on advanced production methods, thanks to the use of drones, satellite images, precision agriculture and cutting-edge genetics. Modern agriculture has the capacity to respond quickly, both to the changing standards imposed by large buyers—food processing centers and supermarkets—and to the demanding requirements of consumers. With the introduction of technological advances, significant productivity gains are unlocked, which become even more relevant under the pressures that mitigation actions demand in terms of land use in LAC. This innovation in the sector will also be critical in adapting to climate change. Technologies such as drip irrigation and genetically modified crops resistant to water stress, temperature change and pests, contribute to maximizing the use of arable land and water resources (Brassiolo et al., 2023).

To strengthen the role of agriculture as an engine of economic growth, the vertical transformation of the sector is necessary for it to employ more workers in more productive enterprises and become better inserted into global supply chains. These objectives imply promoting public-private partnerships and greater investment in innovation, as well as more sophisticated and productive processes (Ghezzi et al., 2022). Furthermore, this process of transforming agriculture must incorporate the notion of sustainability, especially in a context in which the bulk of the region's emissions come from agriculture (Brassiolo et al., 2023).

Promoting productivity improvements in the non-tradable services sector

Industrialization has been the main engine of modern economic growth. In developing countries, manufacturing offered the advantage of employing low-skilled workers. However, today's manufacturing industry tends to innovate through high-skilled workers, which reduces the demand for those with low levels of education. Automation has accelerated this trend. The advantage that developing economies used to have in terms of the relative abundance of unskilled labor is now in jeopardy. This new reality forces the service industry to become the sector that absorbs most of this displaced labor, particularly unskilled workers (Rodrik and Sandhu, 2024; Nayyar et al., 2021).

With services emerging as the main source of new jobs for low-skilled labor, industrial policy actions need to be reoriented to generate broad productivity improvements in this sector of the economy. This is the only way to bring about substantial increases in aggregate income. Productivity gains are also central to the equity agenda, as the only sustainable means of lifting people out of poverty is through well-paying jobs (Rodrik and Stiglitz, 2024). This reality is particularly important considering that approximately 80 % of total household income in LAC comes from labor income (Rodríguez Castelán et al., 2016).

In some countries, such as India and the Philippines, tradable service industries have been created that tend to be skill-intensive, as is the case of information technology services, financial services and business process outsourcing. In those sectors, productivity improvements can be very dynamic, but they are not the ones that will absorb the largest amount of available labor (Nayyar and Vargas da Cruz, 2018). From a development point of view, tradable services face the same disadvantage as manufacturing firms oriented to global value chains: they have limited potential to generate large amounts of employment for the abundant low-skilled labor force.

The informal sector is the largest employer in Latin America and the Caribbean. Available jobs come from micro and small enterprises or self-employed workers. To contribute to a generalized increase in productivity, the challenge is to generate productivity improvements in sectors that offer typically non-tradable services and absorb a lot of low-skilled labor, such as those linked to retail trade and care services (Rodrik and Stiglitz, 2024). These sectors, which in our region incorporate abundant informal labor, have low productivity levels and have never been a specific target of productive development policies in the region. While it is true that many workers in these sectors resort to these jobs as a survival mechanism, a portion of these micro and small enterprises have room to introduce strategies and policies that promote labor productivity gains.

Rodrik and Sandhu (2024) outline a new industrial policy focused on non-tradable services based on four pillars. First, work with large, established and relatively productive companies to incentivize them to increase employment, either directly or through their local supply chains. For example, the Government could implement partnerships with delivery service platforms, which became popular during and after the pandemic, and which employ a largely young population.

The Government can help recruit delivery drivers through fairs, regulation adjustment and publication of databases of potential candidates

The second pillar is to focus on smaller enterprises and seek to improve their productive capacities through the provision of specific public inputs. Such inputs could be management training, loans or subsidies, skills training for workers, specific infrastructure or technological assistance. Given the heterogeneity of firms in this segment, policies in this area require a differentiated approach depending on their size. In this pillar, a mechanism for selecting firms with greater growth potential is made explicit, since the reality is that not all of them become productive and successful. A key area in this line of action is access to financing for the creation and expansion of innovative firms.

The third pillar is to encourage the use of technology to complement the skills of low-skilled workers. This fundamental strategy seeks to enable less educated workers to rely on technology to increase the range of tasks they can perform, so that they can do some of the jobs usually reserved for more skilled professionals. This line of action conceives artificial intelligence and technology as mechanisms to empower less skilled workers. In this way, technology will cease to be merely a threat to their jobs. In medicine, and in particular in the provision of care services for older adults, digital tools have great potential to make it easier for less experienced caregivers to offer more advanced services to their patients.

The fourth pillar advocates training for less educated workers, but with a clear emphasis on offering assistance programs to job seekers to improve their employability. This implies, in turn, increasing the probability of job retention and promoting eventual promotion (Carranza and McKenzie, 2024). A good example along these lines is the “Youth Building the Future” program, implemented in Brazil, Colombia and El Salvador, and more recently, in Mexico (Kleijn et al., 2017). The program has three components: partnerships with the private sector; training, support for employment and accompaniment; and generation of evidence of the impacts in order to take the program to a larger scale and replicate it in other countries.

The role of subnational Governments is crucial in the design and implementation of industrial policies focused on the service sector. Given that many opportunities for development and economic growth are deeply connected to local realities, it is essential that targeting decisions-identification, selection of sectors and groups to which policies are directed-be made from a territorial approach. In particular, a new industrial policy focused on services such as tourism, technology or professional services requires the promotion of local innovation clusters, support for SMEs and the implementation of strategies to attract investments that respond to the demands and particularities of their economies, primarily by subnational Governments. Moreover, they are the ones who can best coordinate alliances between the private sector, academia and civil society, fostering the development of human capital and adequate infrastructure.

Conceiving biodiversity and ecosystems as a source of wealth

LAC is an exceptionally rich region in terms of ecosystems and biodiversity. The region contains 6 of the 17 most biodiverse countries in the world (Mexico, Venezuela, Colombia, Ecuador, Peru and Brazil). The region is also home to approximately 60-70 % of all known species, despite representing only about 16 % of the global land area. This includes more than half of the plant species, 40 % of mammal, bird and amphibian species, and 30 % of reptile species (Brassiolo et al., 2023). This immense wealth provides ecosystem services that contribute as a source of protection and adaptation to climate change, through the moderation of extreme weather events and the regulation of local climate.

Ecosystem services also determine the economic activity of our nations. Rich biodiversity influences agricultural productivity and species diversity is linked to the development of the fishing industry or the tourism sector, and the availability of minerals (particularly critical minerals and rare earths). Beyond the immediate economic benefits, biodiversity in LAC also represents a long-term strategic wealth. Instead of relying exclusively on the extraction of natural resources, such as minerals or oil, the region has the opportunity to transform its ecosystems and species into valuable assets for industries such as pharmaceuticals, agribusiness and biotechnology, sectors that could grow exponentially with the support of appropriate policies and the integration of advanced technologies. Tourism also emerges as a key sector with a sustainable approach to wealth generation based on diversity (see Box 5.2).

> "Much of Latin America's growth effort will be connected to the agricultural sector, which also has a very important link to the tourism sector. Our agriculture is part of the great topographic beauty of the region. Latin America's natural assets have to be combined to take advantage of its agricultural and agro-industrial capabilities, in addition to its capacity to attract tourism".
>
> **Based on an interview with Augusto de la Torre**

The pharmaceutical industry can benefit enormously from the vast catalog of plant and animal species that inhabit LAC. The medicinal properties of many of these species have yet to be explored or are in the early stages of commercial development. By focusing on research and sustainable development of products derived from biodiversity, pharmaceutical companies can discover new drugs, treatments and therapies. The sustainable approach is crucial, as it ensures that these resources remain available in the long term, avoiding overexploitation and ecosystem degradation.

In the agro-industrial sector, biodiversity also offers enormous potential for the development of high-value commercial products that can position LAC in specialized markets. A clear example is cacao, whose genetic diversity in the region makes it possible to grow unique, high-quality varieties that are ideal for the production of gourmet chocolates. These special varieties, which stand out for their distinctive flavor profiles and aromatic complexities, can be exploited in niche markets that value exclusive, artisanal products, significantly increasing their commercial value. By developing a premium agricultural product offering, the region can generate higher revenues and establish its reputation as a leader in quality and sustainability.

Likewise, the region's plant and animal biodiversity can be used to innovate food and agro-industrial products. The growing global demand for organic, healthy and sustainable food is not fully satisfied. Producers can take advantage of local varieties of fruits, herbs and grains, not only to improve food security, but also to develop functional foods, known as superfoods, with specific nutritional benefits, which are in high demand in international markets. The key, again, is to encourage a sustainable farming approach that conserves biological resources while generating significant income for producers and local economies.

Biotechnology, meanwhile, can harness biodiversity to develop innovative solutions in a wide range of sectors, from agriculture to energy. Technologies such as gene editing, biomanufacturing and biological synthesis can transform natural resources into sustainable, high-value products such as biofuels, biodegradable plastics and more environmentally friendly chemicals. In addition, the development of biotechnologies that promote the conservation of ecosystems and the rehabilitation of degraded lands would generate a synergy between biodiversity preservation and sustainable economic growth.

> "A very important element of productivity growth, of the productive capacities of companies already organized as such, is innovation. And innovation, on the one hand, in the sense of adopting better production techniques, but also, and above all, in the sense of inventing better products and services that are more desirable for people, but that also generate more added value for the company, for the economy and for the people who are linked to that company".
>
> **Based on an interview with Marcela Eslava**

Box 5.2
Tourism: a source of sustainable and inclusive growth

LAC responds to the growing demand for nature and cultural value tourism. In terms of contribution to GDP, the Caribbean stands out with 26.8 %, significantly above the world average of 8.9 % and 7.9 % for Latin America. In terms of employment from this sector, the Caribbean also stands out with 17.7 %, compared to 10.5 % worldwide and 7.7 % in Latin America. Tourism has also become a sector with a high participation of women, especially in the Caribbean, where female labor participation is 62.2 %. Latin America has 54.7 % of women in the sector, a figure similar to the world average of 54 %. In addition, the tourism sector also represents a gateway to the labor market for young people in the region. In fact, youth employment in this sector is so important that it is higher in the Caribbean (30 %) and Latin America (25 %) than in the rest of the world (20 %) and, on the other hand, one out of every three young people starts their working life in the tourism sector.

There are three strategic advantages in the sector that are aligned with the objectives of inclusive and sustainable growth. First, the jobs generated by tourism are difficult to replace with technology (i.e., hotels, restaurants, tour guides, etc.) and tend to incorporate low-skilled labor (see subsection 5.1.2 in this chapter). Second, it is a resource that does not run out as long as it is managed sustainably. Finally, new global trends and consumer demand call for the promotion of a new tourism model that places greater value on culture and exchange with the local population, as well as on environmental responsibility.

CAF's strategy seeks to promote a model of tourism that is greener, more inclusive, innovative, creative and equipped with new digital technologies. This model requires, first and foremost, investments in an environmentally responsible and low-carbon sector that is resilient and adapted to climate change. Also, the incorporation of a mitigation agenda that achieves the regeneration of ecosystems and promotes the conservation of protected areas.

Secondly, the new model should promote tourism with a gender focus, both on the supply and demand side. It should also take more account of the needs of people with disabilities and include a new business model that builds on the advantages of community-based tourism.

Third, the destinations and types of tourism offered must incorporate new products. Innovation in the sector relies on the region's ability to incorporate the use of technology and digitalization, especially to facilitate access for more consumers.

Fourthly, promoting creative tourism products is key to leading the bid for cultural tourism. In recent years, some consumer groups have revealed their preferences for gastronomy and enology and, in the case of cities, the demand for museums, theaters and cultural centers has reinforced the need to make the necessary investments in these attractions. In addition, a greater appreciation of indigenous and Afro-Latino culture may open up even larger markets based on the region's historical heritage.

Finally, a better equipped tourism sector is key to implementing several of the lines of action outlined above. This equipment is not limited to investments in infrastructure, especially resilient and sustainable infrastructure, but also includes greater connectivity and security at destinations.

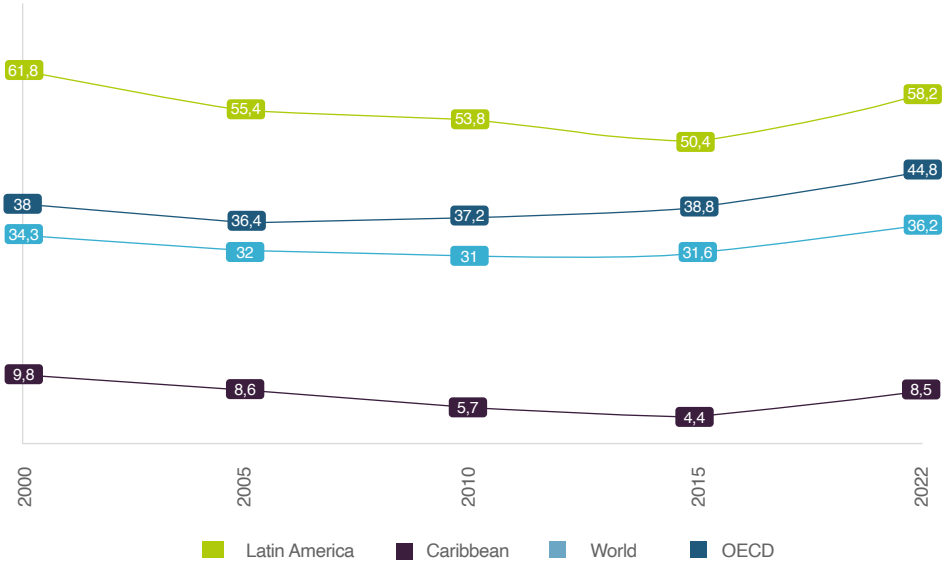
> "(...) Going back to tourism, we need to improve transportation in the Caribbean. We do not have a good interregional transportation system (...) The problem with interregional travel is that there are not enough flights available and they are very expensive (...) We also do not have a regional ferry service (...) We need to develop the Caribbean's capacity in transportation, both air and sea (...) We can greatly improve our tourism product.".
>
> **Based on an interview with Colm Imbert**

> "The Caribbean is struggling, like other parts of the world, with problems related to the proliferation of crime (...) There is a direct relationship between crime and economic performance (...) People are not going to feel safe to come and visit and spend their money. And so, the economy grinds to a halt".
>
> **Based on an interview with Karen-Mae Hill**

In the context of the energy transition, LAC has important geographical advantages for the development of clean energy (see figure 5.2). In particular, the geography of the region offers important comparative advantages for electricity generation from solar and wind sources (Allub et al., 2024). Thus, for example, the Puna area (which includes territories of Argentina, Bolivia, Chile and Peru) is the area with the greatest practical potential for photovoltaic energy in the world. Using non-conventional energy sources on a small scale can be a cost-effective way to reach isolated regions in the vast geography of our region. Thus, it is expected that the share of renewable energies in the region's electricity matrix will increase in the coming years. As discussed in chapter 4, solar and wind energy will play even more important roles in the midst of an accelerated process of electrification of the total energy matrix (see figure 5.3).

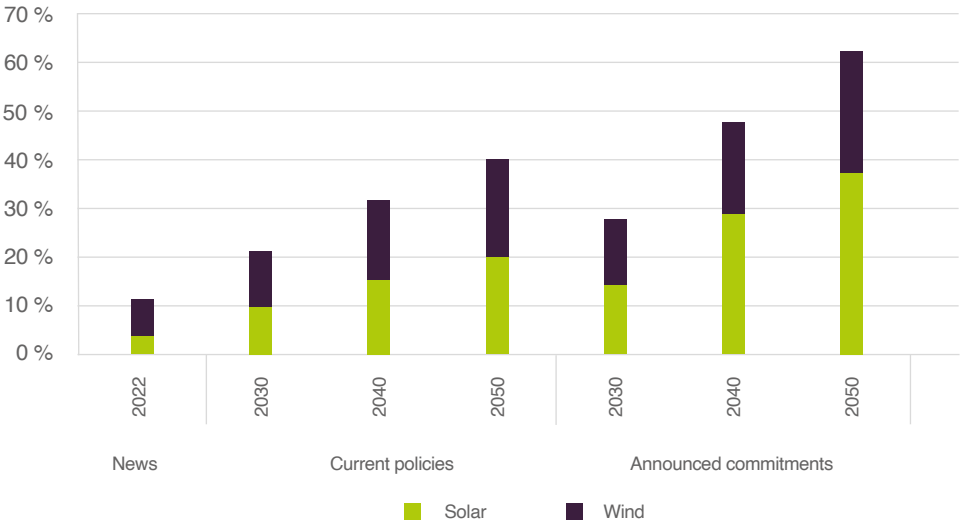
> "For the world to decarbonize, it's going to need to electrify everything it can, and make that electricity in a clean way, such as transportation with electric vehicles. There are many areas of production that are involved in creating the things that would allow the world to decarbonize. Many of them require critical minerals. Latin America is potentially rich in those critical minerals. Bolivia is the country that has the largest lithium reserves in the world; Chile and Argentina also have gigantic lithium reserves, and Latin America's copper reserves are enormous. There is a whole role that the region can play in facilitating the decarbonization of the world".
>
> **Based on an interview with Ricardo Hausmann**

Figure 5.2
Clean electricity generation by region



Note: Clean energy includes: solar, wind, hydro, nuclear and other renewables.
The remaining generation consists of oil, coal, gas and biomass.
Source: Created by authors based on data processed by Our World in Data (2023).

Figure 5.3
Share of solar and wind energy in the total electricity matrix, current scenario and announced commitments for Latin America and the Caribbean



Nota: "Current policies" refers to the scenario in which future Government policies are those currently implemented or under development. "Announced commitments" scenario refers to the scenario in which it is assumed that all targets stated by Governments are met in full and on schedule.
Source: Created by authors based on data processed from IEA (2023) and Our World in Data (2023).

The incorporation of tariffs and trade restrictions based on the carbon content of goods and services will make access to clean energy an important competitive advantage. These potential trade barriers could promote the location of companies in countries with clean, stable and cheap energy (powershoring). Since decarbonization will also promote the formation of value chains to meet the demand for clean energy, the region should take advantage of its comparative advantages in producing renewable energy and access to minerals such as lithium and copper to expand its participation in GVCs. For example, according to Our World in Data (2023), by 2022, 58 % of electricity in the region was generated from clean sources compared to 36 % globally.

The availability of renewable and cheap energy is a necessary but not sufficient condition to convince companies to operate in the region. Reliable and attractive business environments are also required, which contribute to the consolidation of productive investments (Allub et al., 2024). The good news is that some progress has been made. One example is Mexico, which also has the advantage of its proximity to the United States (nearshoring) in the case of the automotive and electronics sectors. Chile has also become a destination for companies in sectors such as copper mining and green technologies, and Brazil for technology and agricultural companies.

Expanding positioning potential in global value chains (GVCs)

Trade policy is currently influenced by geopolitical factors (e.g., the imposition of tariffs on Chinese products by the United States, the closing of borders due to armed conflicts or the use of sanctions schemes) that end up conditioning global trade and the formation of GVCs. The rivalry between China and the United States shows no signs of abating in the short term. In addition, the emergence and prevalence of other wars in Europe and the Middle East have led to the location of companies in countries perceived as allies and/or less likely to be part of the confrontations. As a low war-risk region, LAC can position itself as a reliable supplier of inputs.

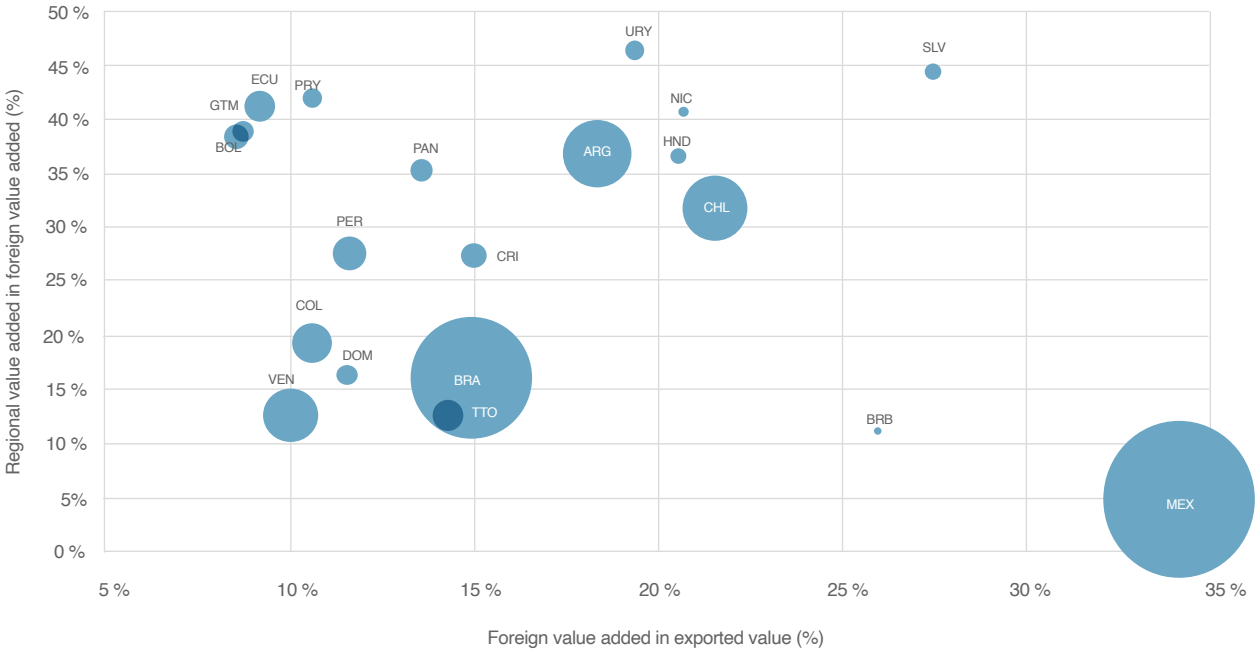
In recent years, the United States, China and Europe have implemented various bans, restrictions and licensing requirements for exports and imports, in a historical stage in which many of these measures arise from geopolitical positioning motivations. Although some LAC countries with complex internal contexts have been affected[4] ,in general, the region has been one of the least exposed to the imposition of these measures (Estevadeordal et al., 2024).

4 Countries such as Venezuela, Belize, Suriname, Bolivia, Honduras and Nicaragua have room to strengthen and improve the terms of diplomatic alliances with the main centers of production and consumption

Over time, our trade openness has been extremely limited compared to other regions. Such levels of openness are particularly low for South American countries (Drakopoulos, 2024). Currently, the region shows limited progress in terms of its insertion into global value chains. Figure 5.4 shows that, with the exception of Mexico, foreign value added in the total value-added exports of LAC economies is very low. Although some countries have a significant share of inputs (e.g., Uruguay, El Salvador and Paraguay), their level of foreign integration is still very low. Compared to Asia or Europe, LAC has lower levels of participation in backward or forward linkages, i.e., between the productive sector and its suppliers, and the productive sector and its consumers, but also shows greater weakness in the development of global chains within the region (Estevadeordal et al., 2024).

> "The other very important element of international trade, which has to do with inputs, is the ever-deepening development of global value chains. The fact that I can produce an input here that someone else is going to use, or a piece of a good that someone else assembles or complements somewhere else so that it is finally built in a third geography of the world is a potential channel for growth, which has been expanding exponentially in the world, and in which Latin America still has a lot of room to insert itself and take better advantage of these gains".
>
> **Based on an interview with Marcela Eslava**

Figure 5.4
LAC participation in global value chains

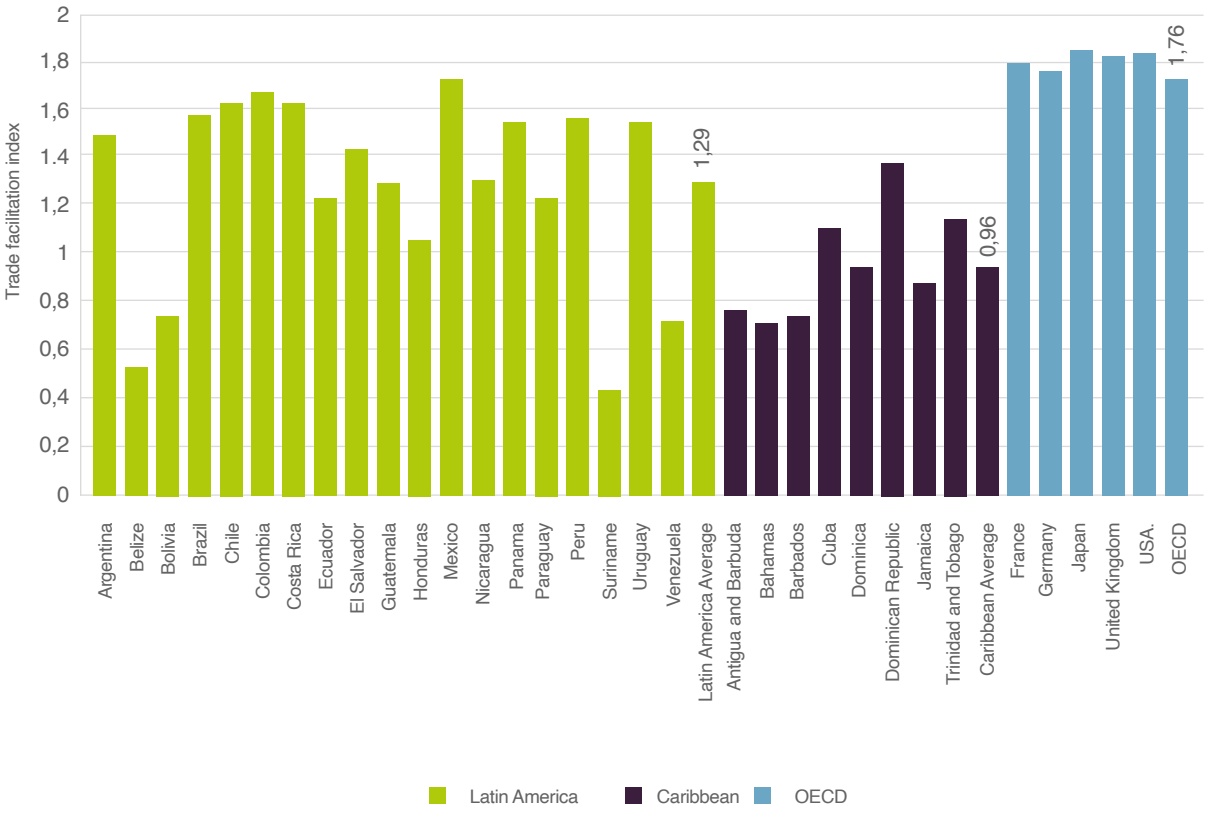


Note: The figure shows the ratio between the percentage of regional value added over foreign value added (Y-axis), with respect to the percentage of foreign value added over total exported value added (X-axis) by country. Countries' exports are composed of domestic value added and foreign value added, and foreign value added can be regional (originating in countries of the same region) or extra-regional (originating in countries outside the region). The size of the bubbles reflects the total value added (domestic and foreign) exported by each country. Regional value added includes that originating in the countries shown in the figure.
Source: Unctad (2020).

For LAC to take advantage of the current geopolitical changes, the region's Governments need to invest in substantial improvements in their trade facilitation levels, which remain well below those of more advanced regions (see figure 5.5). Trade facilitation indices in LAC tend to show uneven performance, with some countries making progress in simplifying customs procedures and digitalization, while others face significant challenges in infrastructure and regulation. This variability means that while some economies are improving their global competitiveness and attracting more investment, others risk falling behind, limiting their ability to fully integrate into international value chains and reap the benefits of global trade.

By imposing more stringent requirements in terms of sustainability, quality and traceability, global markets are setting the pace for LAC companies to adapt to them, incorporating practices that improve the competitiveness of their goods and services. To this end, it is essential that both the public and private sectors invest in technical infrastructure, capacity building and improvements in governance to facilitate the adoption of these standards. In addition to opening up new market opportunities, certifications linked to environmental, social and governance (ESG) practices allow Latin American products, such as agro-industrial products, to stand out in premium segments, contributing to greater diversification and productive sophistication.

Figure 5.5
OECD trade facilitation indices 2022



Note: The average of 11 trade facilitation dimensions is reported: automation; procedures; cooperation with internal border agency; cooperation with external border agency; governance and fairness; availability of information; trade community participation; advance rulings; appeals procedures; fees and expenses; documents.
Source: Created by authors based on OECD (2022).

Transparent and stable legal frameworks are also essential for attracting foreign direct investment. It is also important to improve specific legal frameworks that facilitate the fight against corruption and money laundering, which helps mitigate the risk associated with interacting with sanctioned partners, suppliers or jurisdictions. Aligning domestic policies with the environmental and technological standards of strategic trading partners, such as Europe and the U.S., can position the countries of the region as attractive partners in the face of new industrial policy conditions in advanced economies. Overall, diplomatic efforts to promote LAC as an attractive region for international capital will be essential.

In this context, the energy transition offers new opportunities for the region's insertion in GVCs. On the one hand, the technologies that will appear or consolidate—and that will be indispensable for this transformation—require critical minerals that are abundantly found in the region (see figure 5.6). Photovoltaic solar panels, electricity grids and wind energy, for example, will require large quantities of copper. In the case of electric vehicles and batteries, there will be a high demand not only for copper, but also for cobalt, nickel, rare earths and lithium (Allub et al., 2024). On the other hand, some countries such as Argentina, Venezuela or Brazil have ample natural gas reserves. The construction of liquefaction plants could allow a differential insertion of the countries from the region as energy exporters. In addition, the region has the opportunity to consolidate itself in the medium term as a producer and, eventually, as an exporter of low-emission hydrogen.

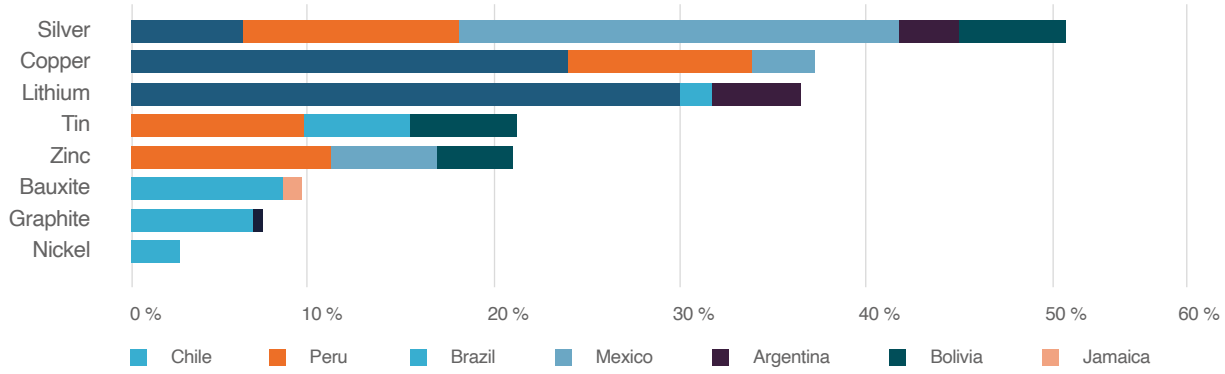
It also has great potential to position itself in GVCs through the expansion of tradable services such as financial, information technology and business consulting. Such services, which can be exported without requiring the physical presence of the supplier, offer an opportunity for the region to diversify its export base and reduce its dependence on raw materials. Countries such as Costa Rica and Uruguay have demonstrated that with the right policies it is possible to create competitive ecosystems that attract foreign investment in high value-added sectors, especially in technology and shared services.

The growing skilled workforce, particularly in sectors such as technology and digital innovation, is another of LAC's advantages in offering tradable services in high-value areas. In many countries, increasing access to higher education and the proliferation of technology centers have produced a pool of young, talented professionals. Multinational companies have begun to set their sights on cities such as Bogota, Buenos Aires or Monterrey as emerging technology hubs for the development and export of software, design and data analysis services. This allows LAC to capture a larger portion of the value added generated by these dynamic sectors.

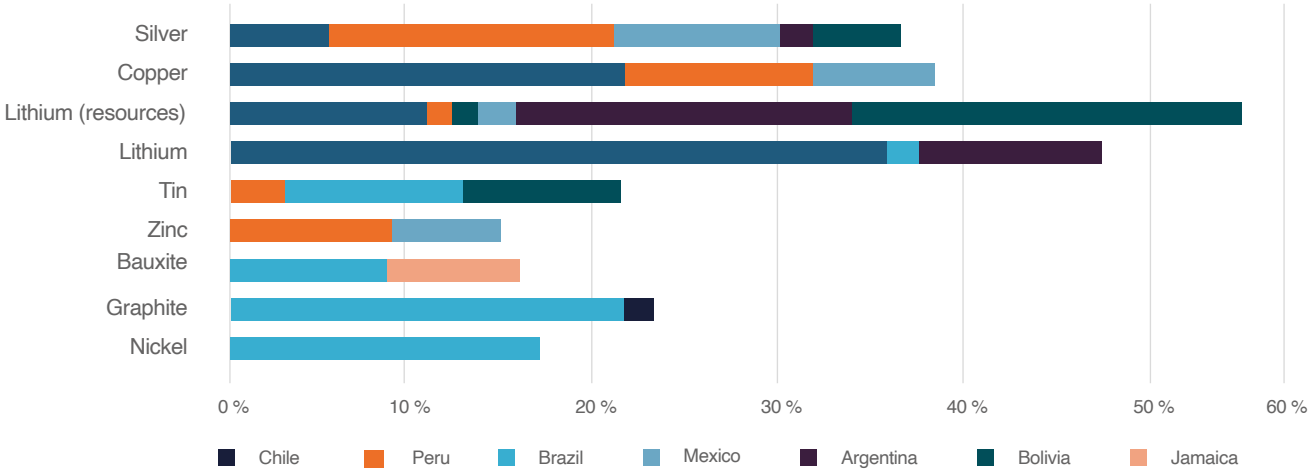
Other areas such as the development of *fintechs* (see chapter 2 and box 5.3), business process outsourcing (BPO), artificial intelligence and *big data* analysis also offer the region the opportunity to specialize. To position itself as a competitive provider of highly skilled services globally, LAC requires the integration of new technologies and the modernization of its regulatory frameworks. This will allow it to attract investment and generate quality jobs, while improving its insertion in global value chains.

Figure 5.6
LAC's global share of production and reserves of critical minerals (2022)

A. Production of critical minerals



B. Critical mineral reserves



Note: A mineral resource is a concentration of minerals that have been identified and measured with reasonable certainty, but whose extraction has not yet been demonstrated to be economically viable. A mineral reserve is a portion of a mineral resource that has been demonstrated to be economically and legally extractable under current socioeconomic and operating conditions.
Source: Created by authors based on U.S Geological Survey (2023).

Box 5.3
Fintech companies in LAC

The LAC *fintech* ecosystem is growing rapidly. Today there are companies that have managed to transform financial services in the region and project themselves internationally. An outstanding and widely known example is Mercado Libre, now one of the largest e-commerce companies in the region, which has developed Mercado Pago, its own digital payments platform. Mercado Pago has been fundamental for the financial inclusion of millions of people and has enormous potential to integrate into global value chains by facilitating cross-border payments and financial solutions for both consumers and small and medium-sized businesses.

Another example is Nubank, now one of the world's largest *fintechs*, which was born in Brazil and has expanded its presence in markets such as Mexico and Colombia. Nubank has managed to democratize access to credit and banking services, challenging traditional banking with its digital approach. This company has demonstrated that *fintechs* can scale quickly and compete in international markets, while taking advantage of the common characteristics of emerging economies, where financial digitalization and inclusion are urgent needs.

Clip, in Mexico, specializing in mobile payment solutions and point-of-sale terminals, and Ualá, in Argentina, a platform that offers prepaid cards and financial services through an app, are other examples of LAC *fintechs* that are growing and attracting international investment. Clip has been key in the digitalization of payments for small businesses in Mexico, and its technology is highly exportable to other emerging markets. Ualá, with a presence in Mexico and Argentina, has followed the same path, expanding and facilitating financial inclusion through technology.

By their nature, these companies are innovative in their solutions and have the potential to integrate into global value chains by facilitating fast and secure transactions, leveraging technologies such as *blockchain* and artificial intelligence to optimize financial processes. These capabilities make them attractive for collaborating with large international players in sectors such as trade, logistics and global banking, as well as allowing them to adapt to the regulatory frameworks of various countries and expand their reach beyond the region.

Seizing new (and old) opportunities: the pending agenda and the role of the institutional framework

At this point, the need for a growth strategy supported by the potential of technological innovations such as artificial intelligence, digitalization and renewable energies is clear. However, without solid economic foundations that drive growth steadily, the leap towards development may prove unsustainable. In this context, policies that promote investment, foster productivity gains, strengthen local productive capacities and improve physical and digital infrastructure become imperative. This will lay the foundations for a more competitive future (see chapter 2).

The most important thing is to think about inclusive wealth generation models. This is achieved by strengthening policies that ensure that all sectors of society benefit from these advances. The region has a pending debt in the reduction of inequality and the inclusion of traditionally marginalized populations, such as rural communities, women, the elderly, youth, indigenous peoples and Afro-descendant communities. To close existing gaps, it is crucial to invest in human capital, especially in education and training for the most vulnerable populations.

The region should prioritize policies that promote access to quality education and technological skills (see box 3.2), strengthening the capacity of the labor force to adapt to the demands of a digitalized global economy and a new industrial policy with an emphasis on non-tradable services.

> "For example, a country like Colombia, what does it want to do? We want to be the country, perhaps, of green energies, of nearshoring, we want to be the country where biodiversity can be monetized. Then, when a country understands its productive project, it can organize all the policies to make it work well. This is a first point and it does not happen in most Latin American countries, with a few exceptions. When you understand the project you want, then you design or implement policies in the sectors according to that, and that includes the human capital sector".
>
> **Based on an interview with Raquel Bernal**

On the other hand, sustainability must be a central pillar of LAC's economic growth strategy. Technological and economic progress will not be viable in the long term if it is not accompanied by responsible management of natural resources and a transition to greener and more sustainable models. Fortunately, our biodiversity, the abundance of ecosystems and the privileged atmospheric conditions of some countries can become a source of wealth that transcends the availability of raw materials. The potential for clean energy production is a clear example of how the energy transition can generate a positive balance for the region. But taking advantage of this opportunity requires policies that encourage innovation in clean energy, emissions reduction and the efficient use of resources (see chapter 4).

Advancing in the triple challenge of growth, inclusion and sustainability in LAC depends not only on the implementation of public policy reforms, but also on strengthening the institutional ecosystem that governs our societies. Central and subnational Governments play a key role in creating an environment that facilitates these transformations. Coordination between different levels of Government is essential to ensure policy coherence and effective implementation. Without a clear alignment of priorities, efforts to promote sustainable economic development can become fragmented, especially in countries with marked territorial differences and disparate administrative capacities. The challenge is to ensure that both national and local Governments work synergistically, maximizing resources and promoting stable and predictable regulatory frameworks.

Institutions also play a central role in this ecosystem. Nations with inclusive institutions tend to have greater long-term economic development, while those with extractive institutions, i.e., those that benefit only an elite, experience economic stagnation (Acemoglu et al., 2001). A solid and transparent institutional framework is crucial to generate trust among economic and social actors, promoting a favorable environment for investment, innovation and social cohesion. There is no hiding the fact that many of the institutions in LAC face problems of legitimacy and effectiveness, aggravated by corruption and lack of accountability. In order to address the challenges of inclusion, these institutions need to become more representative, transparent and effective in the provision of public services. Modernizing these structures is therefore essential for public policy reforms to materialize and achieve a lasting and transformative impact.

Institutionality and state capabilities

The success of public policies depends on the capacity of Governments to design, implement and evaluate regulations effectively. A State with strong institutions, trained personnel and efficient administrative processes can ensure that public policies are implemented in a coherent and sustained manner over time. In the opposite scenario, even the best-designed policies are destined to fail, either due to a lack of coordination in their execution, inefficient resource allocation or difficulties in adapting to changing contexts. Therefore, strengthening State capacities is a prerequisite for public policies to achieve their objectives and generate a positive impact on society.

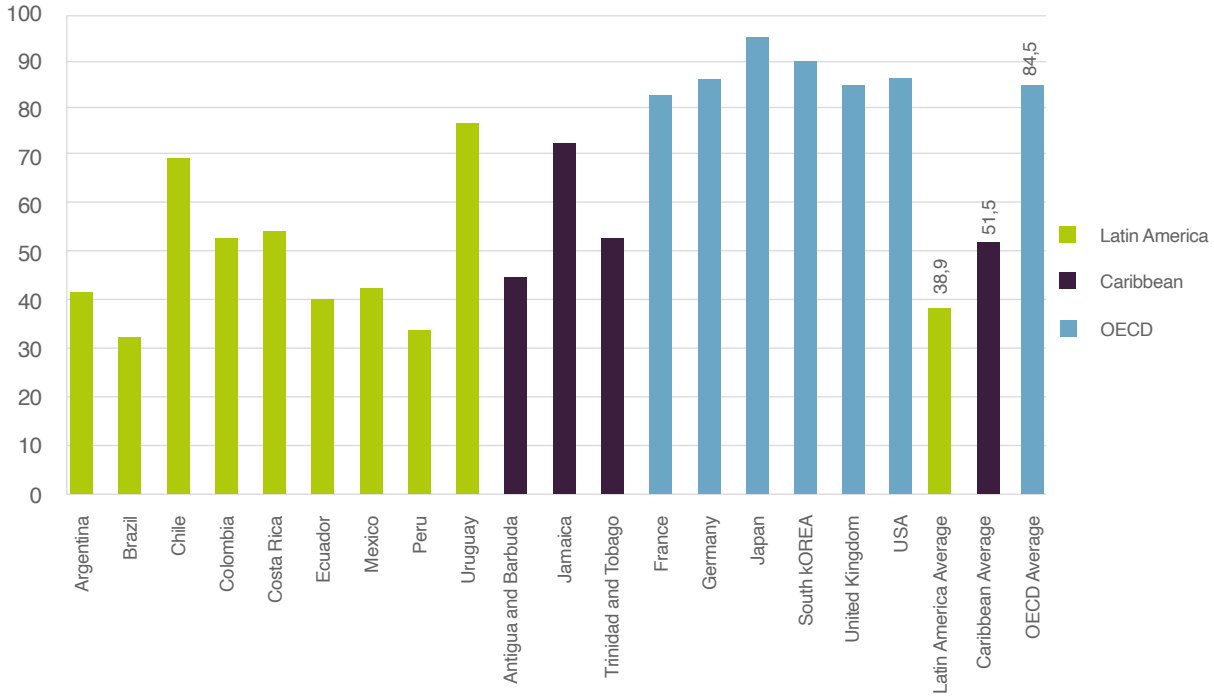
ABroadly speaking, State capabilities can be defined as the State's ability to implement policies. What varies, depending on the literature, is how these are measured. Elissa and Fotini (2018), for example, posit that State capabilities can be measured by three functions of the State: extraction, coordination and compliance. Lindvall and Teorell, (2016), on the other hand, formulate that State capabilities can be seen as the power of the State to achieve the objectives it sets for itself, contemplating how it uses and invests its resources and its ability to exercise this power throughout the controlled territory. Sanguinetti et al. (2015), frame State capabilities in four broad groups. The first, bureaucratic and administrative capacities needed to design and implement policies. The second, legal capacities, which include aspects such as the ability to enforce contracts, property rights and the existence of a judicial system to resolve disputes. Third,

infrastructural capacities, which refer to the State's ability to exercise effective control and presence over its territory, ensuring compliance with the law and the provision of public services in an equitable manner. And finally, fiscal capacity, defined as the State's ability to collect taxes.

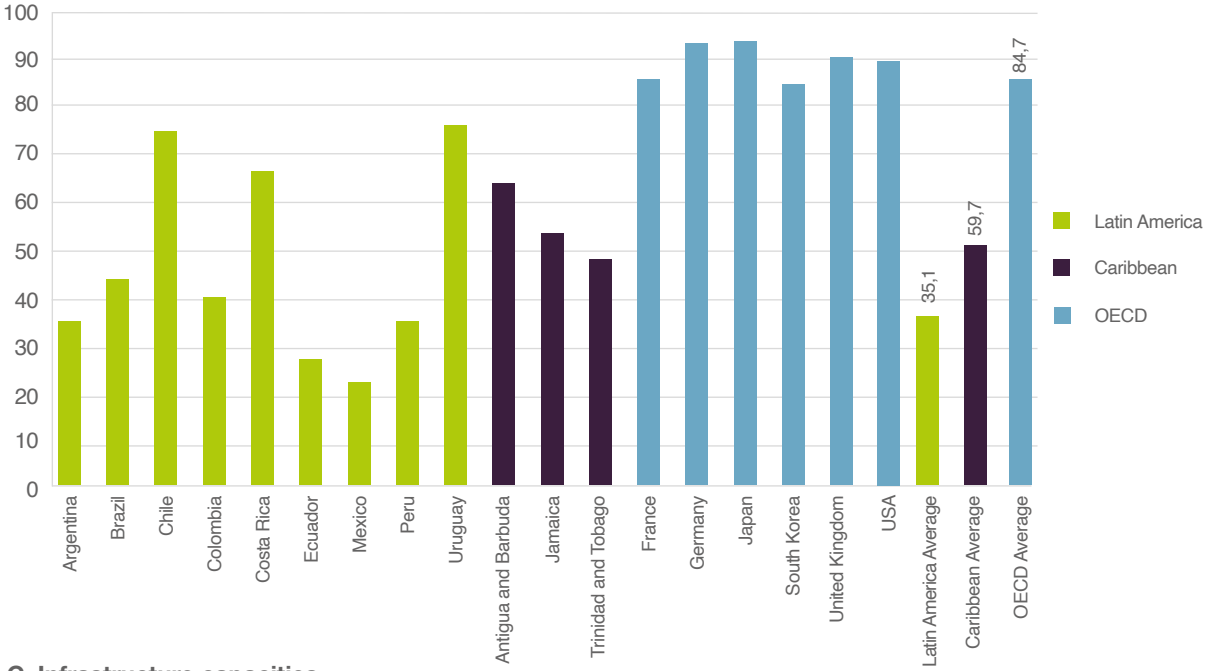
The *Worldwide Governance Indicators* of the World Bank are a source of information that addresses and quantifies three of the four dimensions proposed by Sanguinetti et al. (2015): bureaucratic and administrative capacity, legal and infrastructure capacities. Figure 5.7 makes it evident that LAC has a long way to go in these three dimensions. The gaps can be seen by comparing the performance of OECD countries with the average of Latin American countries. For the Caribbean countries, there are also gaps with respect to developed countries, although they are not as pronounced. The regional averages hide, however, wide heterogeneities among countries. In the case of Latin America, Uruguay, together with Chile and Costa Rica to a lesser extent, show a good performance in the indicators analyzed, in some cases reaching values closer to those of OECD countries.

Figure 5.7
State capacities by country and by region (selected countries)

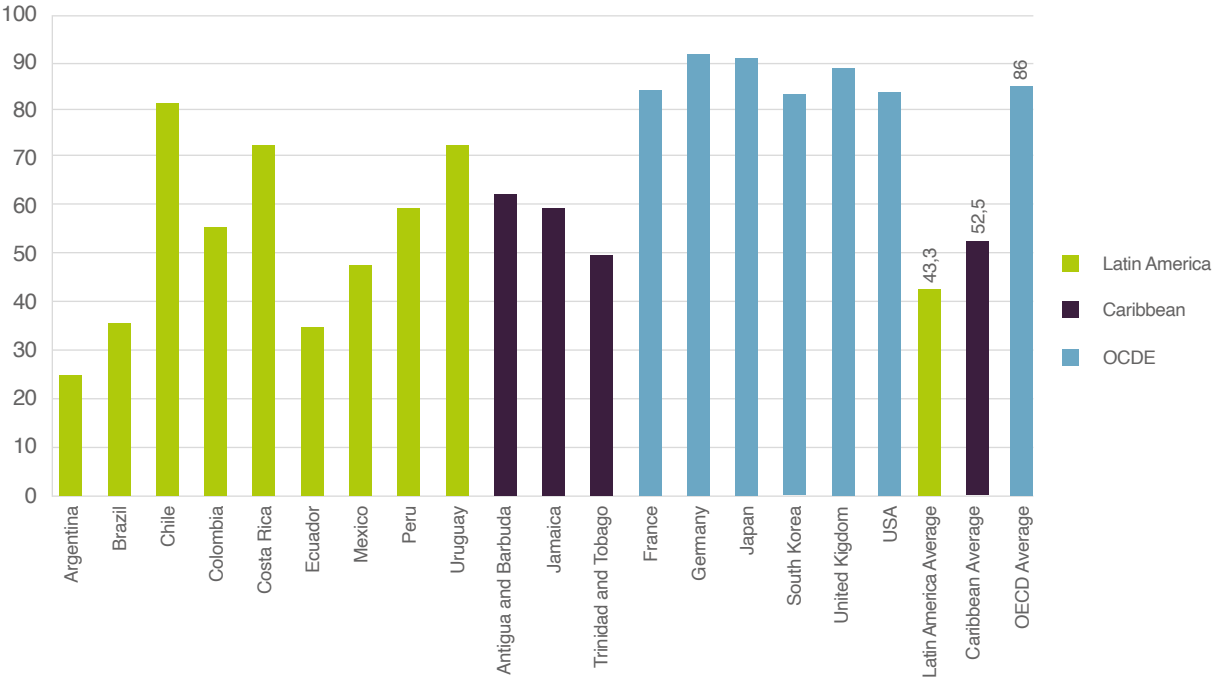
A. Bureaucratic and administrative capacity



B. Legal capacities



C. Infrastructure capacities

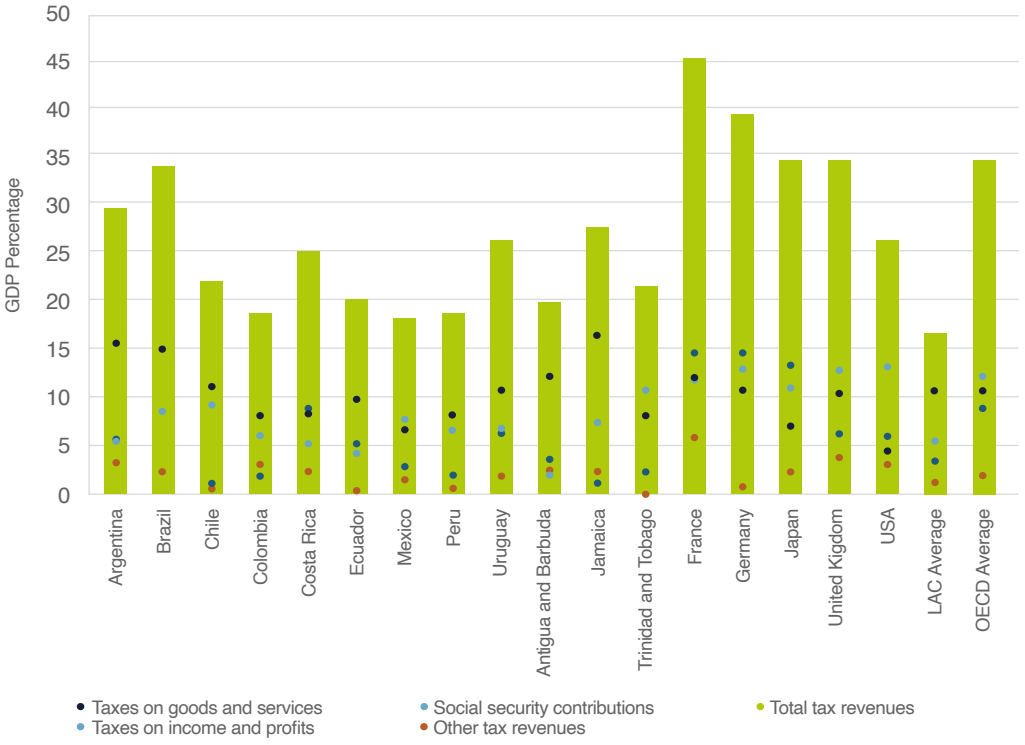


Note: Bureaucratic and administrative capacities are measured by the Government effectiveness indicator, which captures perceptions of the quality of public services, the quality of the civil service and the degree of its independence from political pressures, the quality of policy formulation and implementation, and the credibility of the Government's commitment to those policies. Legal capabilities are measured with the rule of law indicator, which corresponds to perceptions of the extent to which people adhere to the norms of society and, in particular, the quality of contract enforcement, property rights, the police, the courts, as well as the likelihood of crime and violence. Infrastructure capabilities are measured by the regulatory quality indicator, which corresponds to perceptions of the Government's ability to formulate and implement sound policies and regulations that enable and promote private sector development.
Source: World Bank (2022).

> "I think policymakers in the region really need to address the broadening of the revenue base. In general—despite higher tax rates in many emerging markets—tax collection is not the best. So, when I talk about broadening the tax base, I also mean more efforts. I mentioned digitalization earlier as a vehicle to improve collection. Efforts need to be made in that regard".
>
> **Based on an interview with Carmen Reinhart**

The fiscal capacities of the countries in the region are also limited, as expected. Figure 5.8 shows that average revenue collection in LAC is close to 22 % of GDP versus 34.2 % in OECD countries. It also shows large heterogeneities in collection within the region. Argentina and Brazil are the countries that collect the most, with figures close to one third of GDP, while Mexico and Peru collect between 17 % and 18 % of GDP. The tax structure in LAC is relatively homogeneous, with a greater preponderance of taxes on goods and services. In OECD countries, the share of value added taxes is similar to that of income and profit taxes and social security contributions. This difference between regions responds to the economic and productive structure of LAC, which requires broadening the tax base and limiting tax evasion, central issues in a context of high informality.

Figure 5.8
Total tax revenues as a percentage of GDP (2021)



Source: Created by authors based on OECD (2021).

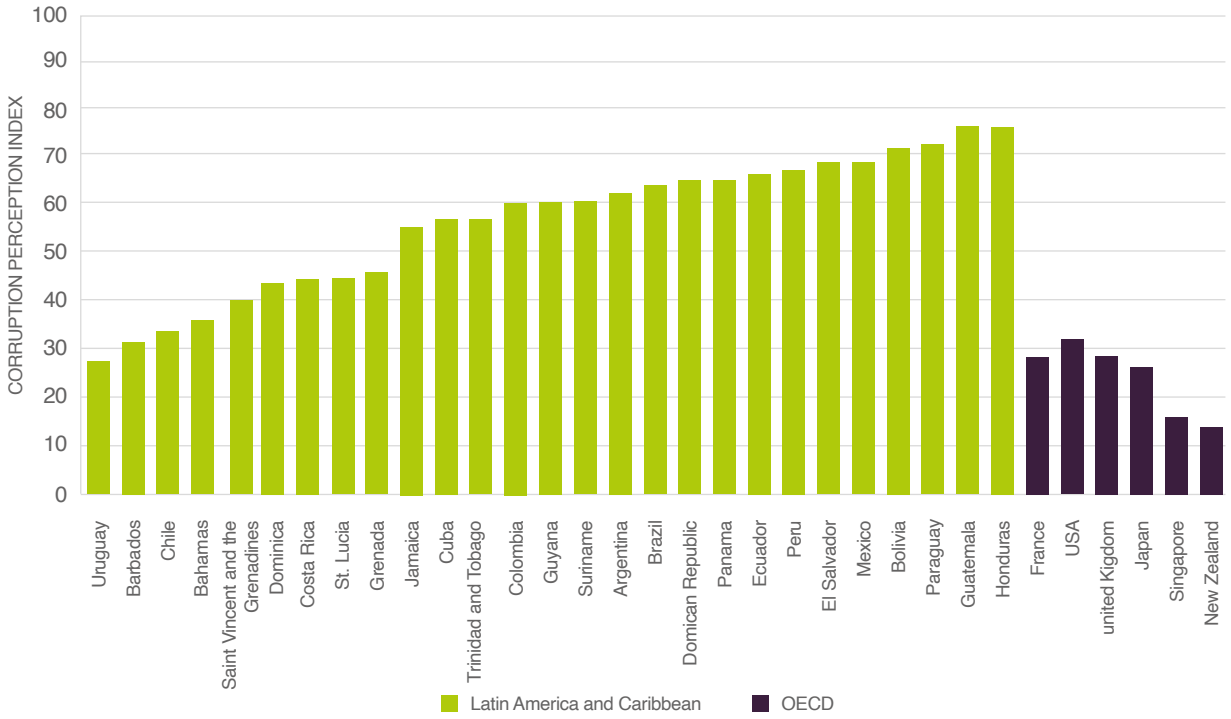
A phenomenon closely linked to State capacities in our region is corruption, which is nothing more than the abuse of public power to obtain private benefits . And it is not necessarily acts committed unilaterally by officials. Often, corruption involves collusion between public officials and private actors, such as individuals or companies, which aggravates its impact and makes it difficult to detect and sanction (Fajardo et al., 2019).

> "The capacities of the State do not arise spontaneously, they are deliberate decisions. Society has to dedicate part of its resources to build that capacity, to have a better bureaucracy, to have a more efficient and professional judicial branch, and at the same time to have a greater fiscal capacity. This requires a long and continuous effort. We have tended to see the State as something residual where the same standards are not applied, the same demands that are made in many private sector companies when it comes to choosing personnel".
>
> **Based on an interview with Mauricio Cárdenas**

Corruption is an obstacle to development for at least three main reasons. First, because it reduces the capacity of the State to provide quality goods and services. The second, because it compromises the productivity and growth of economies. According to Fajardo et al. (Fajardo et al., 2019), approximately 2 % of global GDP is lost in bribes. And the third, because corruption weakens citizens' trust in Government and institutions. It also discredits democratic systems. At the aggregate level, there is a negative relationship between citizens' perception of corruption and trust in the democratic system (Fajardo et al., 2019).

The Corruption Perceptions Index 2023, prepared by Transparency International, offers a quantitative tool to compare the perception of corruption in the region with selected OECD countries. In general, the perception of corruption in LAC is significantly more negative than the average for OECD countries (see figure 5.9). Nevertheless, the region shows considerable heterogeneity. While countries such as Uruguay and Barbados show indices comparable to those of some European nations, others such as Honduras, Guatemala, Paraguay and Bolivia exhibit alarmingly high levels of corruption perception, even for the regional context.

Figure 5.9
Perception of corruption in LAC in relation to OECD countries



Note: The figure considers the perception of corruption in each country analyzed, with 100 being highly corrupt and 0 indicating a low perception of corruption.
Source: Created by authors based on Transparency International (2023).

Thinking comprehensively about State capacities in the region requires considering the capacities of regional and local Governments. Throughout the 1980s and 1990s, LAC experienced enormous decentralization, but this process has not always been accompanied by adequate capacity development, and disparate levels of autonomy coexist throughout the region. While some tasks related to environmental management and urban and rural management almost always fall within the scope of action of regional and local Governments, more complex tasks such as the provision of health or education tend to present greater heterogeneity in terms of the separation of attributions between central and subnational Governments.

The capacities of local and regional Governments have important effects on local productivity levels, the well-being of the population and the implementation of adaptation strategies in the face of global challenges such as climate change. The performance of regional and local Governments is key to achieving the SDGs and closing social and economic gaps. Their ability to manage resources, coordinate actors and adapt strategies to local realities is essential to ensure that the SDGs translate into concrete and tangible improvements.

Therefore, advancing the State capacity agenda in LAC requires prioritizing institutional strengthening. This implies investing in the modernization of public administration structures, ensuring that State agencies have sufficient resources and adequately trained personnel. .

A key aspect is the professionalization of public service. The implementation of meritocratic systems in the hiring, promotion and evaluation of civil servants would reduce inefficiency and corruption (Sanguinetti et al., 2015). The professionalization of the civil service also grants stability to civil servants and provides them with a career perspective that is independent of electoral cycles. In the case of bureaucrats, working to promote the selection of trained, motivated and honest civil servants can generate a multiplier effect: a State with integrity will be attractive to these same profiles (Fajardo et al., 2019). A recent study for Brazil highlights that the election of young officials is correlated with greater investments in long-term policies, such as reducing deforestation and GHG emissions, without leading to a penalty in terms of income (Dahis et al., 2024). In the case of political positions, it is vital to work on electoral systems and on the regulation of party and campaign financing.

Materializing this agenda requires reducing the gap between regulatory frameworks and their implementation, for which it is key to strengthen the oversight capacities of electoral courts and other control bodies, expand the severity and scope of sanctions, and promote transparency and citizen oversight (Fajardo et al., 2019).

In addition to ensuring transparent selection criteria, incentives are also required to develop the potential of civil servants. Along these lines, Fajardo et al. (2019) propose enhancing the development of civil servants, the flexibilization of the salary structure and a greater linkage of salary and career development with the competencies, skills and effort of the worker.

Another crucial aspect is the digitalization of the State. The use of digital tools can significantly improve efficiency and transparency in public management, facilitating interaction between citizens and Government, optimizing service delivery and reducing opportunities for corrupt practices (OECD-CAF, 2024). However, for these tools to be effective, it is necessary to develop an adequate technological infrastructure and ensure that both officials and citizens have the necessary digital skills to use it.

The digitalization of the State can facilitate the implementation and use of internal and external control systems that contribute to improve State management (Fajardo et al., 2019). On the one hand, because digitalization can reduce discretionality by standardizing processes and closing power gaps between officials and citizens, or carry out audits to detect and sanction irregularities, being these processes more agile and easier to monitor. On the other hand, because external control mechanisms, such as citizen participation, can be facilitated through a greater capacity to produce and disseminate information based on digital systems.

A fourth key point, linked to the previous one, involves strengthening the State's capacity to generate, manage and analyze data in real time. This allows for more informed and adaptive policymaking, which is particularly important in a context of rapid economic, social and technological change. The creation of monitoring and evaluation mechanisms, with clear and accessible indicators, will make it possible to make adjustments to ongoing policies and ensure that the proposed objectives are achieved.

As for subnational Governments, it is essential to improve their administrative and financial capacity. Often, these levels of Government do not have sufficient resources or the necessary technical and/or legal competencies to implement effective policies. This can be addressed through continuous training programs and specific technical assistance, as well as the creation of legal frameworks that grant them greater fiscal autonomy, allowing them to generate their own resources to finance local priorities and extend their financing capacity in a sustainable manner.

> "The prosperity of the local regions of certain localities are perhaps 10 or 20 times richer than the poorest region of the same country. It's a drama, isn't it? And that drama, to a large extent, reflects the fact that local Governments also diverge enormously in terms of their capacities (...) Latin America is plagued by local Governments (...), high levels of corruption and disinterest in local development. And it is precisely this variety of public capacities within countries, between regions, that causes these great contrasts in human development within each country".
>
> **Based on an interview with Sebastián Mazzuca**

Finally, it is important to promote coordination between the different levels of Government. To this end, it is necessary to develop intergovernmental articulation mechanisms that facilitate the alignment of national and subnational policies. The implementation of platforms for dialogue and cooperation can help to ensure that policies are better adapted to local realities and that subnational Governments play a more active role in economic and social development, promoting solutions that respond to the specific needs of each territory.

The political economy of reforms

The implementation of reforms in LAC faces great difficulties due to a combination of political, institutional and social factors (Guizzo Altube et al., 2023).

First, political fragmentation is a central obstacle. Political systems in the region are often characterized by a lack of clear majorities in the legislative branches and weak coalitions. This complicates the process of negotiating and approving reforms. This fragmented scenario favors the use of the veto by those who have a vested interest in maintaining the statu quo, blocking reforms that could benefit society as a whole. Moreover, the short electoral cycle encourages politicians to

prioritize short-term measures that generate immediate benefits over long-term structural reforms that, although necessary, may be unpopular at the time of their implementation. The political instability that characterizes the region often undermines the long-term planning capacity of Governments.

> "There is a need for parties to have and commit to programs that are not what we call physiological, the system of "take it from here to there", of everything in the short term, everything is won or lost now, in this legislature, and all thinking and energy put in the next election.".
> **Based on an interview with Bianor Cavalcanti**

Another important challenge is the resistance of interest groups that may see their privileged positions affected by political and administrative reforms in the State. Business groups, unions or bureaucratic sectors with power to influence decision-making have incentives to oppose reforms that seek to redistribute resources or change the rules of the economic game (Tommasi et al., 2010). These dynamics are evidenced by the difficulties in advancing progressive tax adjustments or labor market formalization, issues that usually face strong organized opposition. The ability of these groups to mobilize resources and exert political pressure means that the intended reforms are often weakened or abandoned altogether.

Finally, the high levels of social inequality in the region generate tensions that hinder the creation of broad consensus to move forward with structural reforms, since these, when they affect different socioeconomic groups differently, can provoke adverse social reactions, such as protests or outbursts of popular discontent. This is particularly evident in the cases of pension reforms, fiscal adjustments or increases in the prices of public services. These types of tensions are further radicalized around the equal rights agenda.

Reforms aimed at guaranteeing gender equity, legal recognition and protection of the rights of LGBTQ+ people, as well as measures aimed at preventing and eradicating discrimination based on gender identity or sexual orientation, are usually strongly rejected by conservative sectors of society. These tend to mobilize under platforms that promote the defense of traditional values and the concept of the nuclear family, based on heterosexuality and binary gender roles, limiting progress on the pending inclusion agenda. The ability of Governments to manage these tensions and articulate an inclusive social dialogue is key to overcoming these barriers and making reforms viable and sustainable.

Álvarez et al. (2020) outline actions to promote the implementation of quality reforms, taking into account the complexities of the political environment. The first step in facilitating effective reforms is to have clear and accurate information on costs and future projections, such as population aging. International evidence suggests that reforms based on rigorous technical analysis that quantifies the challenges and costs of inaction are more successful. In terms of social protection policy, the region has made some progress along these lines. Many Latin American countries, such as Chile and Colombia, have already developed tools, such as

contingent liability reports and medium-term fiscal frameworks, to measure and project pension system expenditures and other components of the social protection system. These experiences provide valuable lessons for the region regarding the importance of extending the fiscal horizon and avoiding short-term biases.

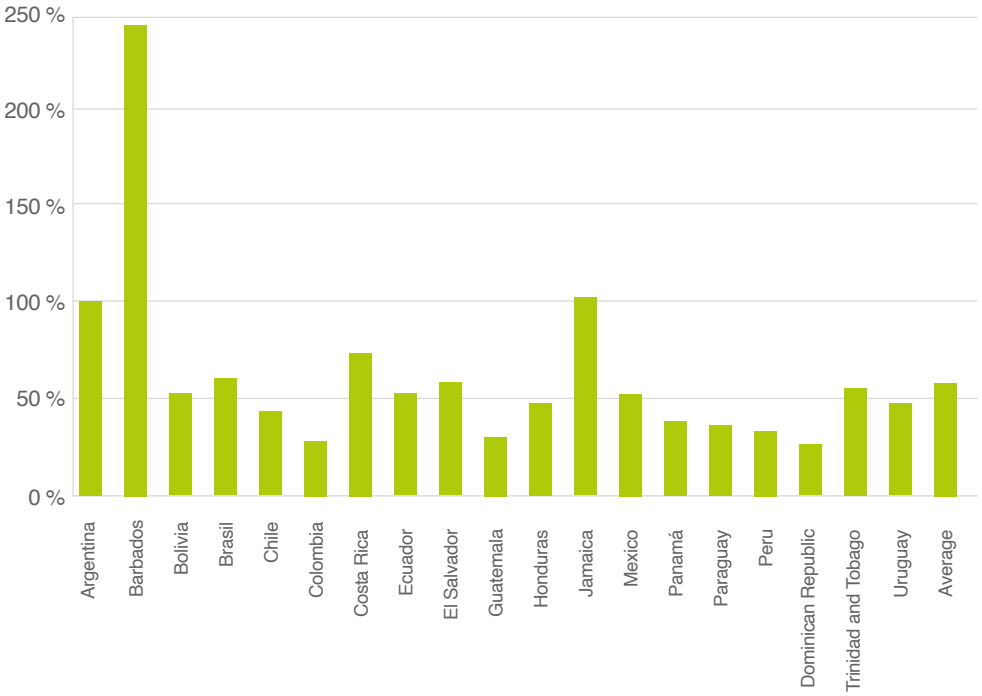
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The role of multilateral development banks

Thus far we have reviewed the main development challenges of the past and future for the region. It is clear that coordinated efforts among nations are required, particularly in the context of emissions reduction and energy transition, to address tasks that are extremely important.

There are other intertemporal challenges, since, as we have mentioned, periods of Government often prevent public policies from lasting over time, limiting their sustainability and preventing verification of their long-term effectiveness. The challenge of financing development is complicated by the risk rating of LAC countries, which forces them to assume a relatively short debt profile: 60 % of the region's financing needs are associated with debt repayments, equivalent to 7.9 % of GDP (see figure 5.10).

Figure 5.10
Percentage of financing needs associated with debt repayments



Note: The financing needs are calculated as the sum of the fiscal deficit and the value of debt repayments, as published in official sources (national budgets, debt reports, financing plans and fiscal policy, as appropriate) for each country. However, for Argentina, we used the data published in the most recent IMF Country Report as of the computation date. Our estimates include data from 19 countries in the region: Argentina, Barbados, Bolivia, Brazil, Chile, Colombia, Costa Rica, Dominican Republic, Ecuador, El Salvador, Guatemala, Honduras, Jamaica, Mexico, Panama, Paraguay, Peru, Trinidad and Tobago, and Uruguay.

While there are important differences in the capital structure and governance of the multilateral development banks (MDBs) that serve developing countries, these agencies pursue a common goal: to invest in projects that no one else can or will invest in. Projects that are also critical to the social, economic and environmental sustainability of our planet (Humphrey, 2022). The global environment has changed markedly in recent decades, which has led the MDBs to face their own transformation process to better meet the demands of Governments and other stakeholders.

The direct financing that the MDBs provide to the region's Governments is the most notorious action. Today, however, the MDBs have gone beyond the provision of concessional financing to offer financial instruments in line with the region's development trends and the needs of their clients. However, the provision of multilateral financing is relatively limited in the region: only 9 % of the countries' financing needs come from external sources, and multilateral banks contribute half of this share[5].

The greatest transformative potential of these organizations lies in their ability to address market and coordination failures. This is possible thanks to their supranational authority and their long-term strategies, beyond political cycles. In addition to the power of preferential, scaled and long-term financing, multilaterals complement their supply of monetary resources with technical support to Governments. MDBs are key public policy tools with global expertise, a mandate to contribute to development and the capacity to invest in public goods at scale. In addition to support and cooperation with sovereign States, the role of the MDBs in promoting private sector development has been growing rapidly in recent years. It has also been important in terms of financial innovation, as multilateral banks have pioneered solutions focused on addressing complex global challenges, especially in emerging markets and developing economies. Through the implementation of new financial tools such as social impact bonds, green investment funds and results-based financing mechanisms, these organizations have demonstrated their ability to mobilize private capital and channel it to projects that generate a positive social and environmental impact.

The MDBs also provide the region with global and regional public goods. Two of the most important cases in this regard are the provision of a coordination platform and the generation and dissemination of knowledge.

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5 Own estimates based on information from official sources (national budgets, debt reports, financing plans and fiscal policy, as appropriate).

> "Development banks have clear medium-term objectives and can assume risks that international banks are sometimes unwilling to take. And helping countries to overcome negative shocks is a fundamental role, as well as providing long-term financing for projects where the risk, for example, in terms of climate change and renewable energies, is something that is difficult for the market to measure accurately. But another equally fundamental role of development banking is to help countries not only in the generation of knowledge, but also in something that is sometimes underestimated. The Governments of the regions are constantly changing, every four or five years there is a change of Government and, on occasions, this instability means that public policies do not have the necessary presence or stability to be able to bear the fruits expected of them".
>
> **Based on an interview with Santiago Levy**

Multilateral banks thus serve as an enabling and supervisory body for coordinated action within and between countries. Its leadership, together with its financing and technical support capacity, is essential to guide the policy efforts required for the pending agenda in LAC. However, the magnitude of the challenge also demands that the multilateral agencies themselves coordinate their efforts to maximize their joint impact. By aligning their efforts, these institutions can avoid duplication of resources and efforts, maximize the impact of interventions and generate synergies that enhance results.

Recently, collaboration between the IMF and CAF was key in the economic stabilization of Argentina and Ecuador at critical times. CAF provided very short-term temporary financing to both countries to help them meet their immediate obligations, avoiding a default that would have had serious consequences for their economies. Through these bridge loans, both countries were able to access larger, more structured financing programs from the IMF. CAF's financing provided the time needed for negotiations with the IMF to be completed without the countries defaulting, which would have further compromised their economic stability and resilience.

n terms of knowledge generation, the range of activities is very broad and covers from data collection and impact assessment of projects and interventions, to the production of academic articles, technical notes, policy briefs and working papers, among others. In some countries of our region, the contribution of the MDBs to the production of primary data is fundamental. For example, in the Caribbean sub-region, where not all countries have an annual household survey, the support of organizations such as the Inter-American Development Bank (IDB) has been decisive in advancing the design and implementation of such efforts[6]. Within the financial inclusion agenda, CAF, for its part, has been developing the financial capabilities survey since 2013. This survey provides a comprehensive assessment of financial capabilities, including measures of knowledge, financial

6 See, for example https://wiconnect.iadb.org/en/news/how-can-the-latest-survey-of-living-conditions-in-suriname-help-with-the-pursuit-of-development/. In addition to Suriname, the IDB has supported similar efforts in Barbados and the Bahamas

behavior and attitudes towards money. By applying the same methodology in different countries, the survey also allows comparisons between countries and regions, which facilitates the identification of best practices and areas where more intervention is needed.

Beyond data collection, the vast majority of MDBs have a research team, centralized or decentralized throughout the institution, that produces original knowledge. The generation of this knowledge from multilateral banks has at least three advantages. The first is that, unlike the knowledge produced by academia, the MDBs operating in LAC have much more direct and frequent connections with the region's activities. This allows for a better understanding of the context and problems of the countries, and also provides the opportunity to generate research questions that are much more closely connected to reality and that will guide future operations.

The second advantage is that the MDBs serve as excellent platforms for the dissemination of knowledge. The connection of these organizations with policy makers is very close and this facilitates the arrival of the different knowledge products to the forums that matter for evidence to guide public policies. This advantage is even more tangible in the case of CAF thanks to the governance model that governs it, with a board of directors made up of the finance ministers of the member countries.

> "Multilateralism, I think, has been effectively consolidated. Many multilateral organizations play a role in educational processes, bringing knowledge, for example, in public management. In Latin America, for many years, multilateral organizations have financed courses, and very important courses, for example, on budgets, the capacity of Governments to develop personnel trained to manage public budgets, implement public budget systems, implement cultural management systems, museology and important things in terms of national identity, the historical vision of a given country and its cultural elements, its cultural heritage".
>
> **Based on an interview with Bianor Cavalcanti**

And the third advantage is that rigorous evaluation of operations allows MDBs to replicate and scale cost-effective solutions to the region's problems. This is why, over the past two decades, MDBs have placed greater emphasis on generating evidence and measuring the impact of their operations. It is the evaluation of programs and/or operations that enables MDBs to generate evidence-based policy prescriptions.

As we face the challenges of the future, cooperation and innovation will be vital. That is why we insist that MDBs, with their accumulated experience and ability to mobilize resources, must be seen not only as sources of funding, but as strategic allies in building a more equitable and sustainable future.

The transformation of the region depends on our ability to learn from past challenges, implement evidence-based solutions, and create an environment in which citizen participation and constructive dialogue are an integral part of decision-making processes. This is the best path to development that meets economic goals, while also ensuring social well-being and environmental preservation for future generations.

The MDBs need to walk this path supported by a knowledge agenda connected to the region's activities and highly coordinated with the capacity for action on the ground. Accompanying the region in the triple transition—social, digital and energy—in a context of limited fiscal space requires cost-effective and innovative investments and policies. And it is on this path that the role of knowledge generation and dissemination from the multilaterals, with a supranational vision, but from the region and for the region, can have important multiplier effects. It has been established that a single approach is not effective in a region as diverse as LAC. Knowledge at the service of development is key to identifying the precise and timely measures for each country.

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Inspirational leaders





Juliano Assuncão

PhD in Economics from the Pontifical Catholic University of Rio de Janeiro, Master's Degree in Economics from the Federal University of Minas Gerais, and Degree in Economics from the same institution. He is an associate professor at the Pontifical Catholic University of Rio de Janeiro and executive director of the Climate Policy Initiative in Brazil (CPI). In 2024, he took on the role of technical coordinator of the Group of Experts of the G20 Task Force for the Global Mobilization against Climate Change (TF-CLIMA).

This testimony explores the intersection between economic development and environmental sustainability, addressing both historical and contemporary challenges as well as opportunities for synergy. Climate justice is discussed, emphasizing historical responsibilities for emissions, differing capacities to bear mitigation costs, and varying levels of exposure to the consequences of climate change. The importance of state action in ecosystem protection is examined, along with the need for coordinated policies among countries to enhance the efficiency of climate change mitigation efforts. Finally, the role of carbon pricing as a tool for emissions reduction is analyzed, highlighting the urgency of eliminating fossil fuel subsidies.

Watch interview



Raquel Bernal

PhD and Master's in Economics from New York University. She is the rector and tenured professor at the University of the Andes. She was the director of the Center for Economic Development Studies (CEDE) at the same institution, and assistant professor at Northwestern University. She is an expert in impact evaluation, and her research focuses on the social economy, education, households, the workplace and the determinants of human capital, especially during early childhood. Between 2012 and 2017, she directed the Colombian Longitudinal Survey initiative.

This testimony addresses the challenges of reducing poverty and inequality in the region. The role of access to and quality of education in mitigating inequality and poverty is discussed, highlighting the need to prioritize investment in education, improve teacher training and adapt educational models to the challenges of the future - marked by digital transformation and the fourth industrial revolution - as well as to the needs of new generations with more versatile and dynamic career paths. Finally, financing strategies for higher education and human capital formation are analyzed.

Watch interview



Mauricio Cárdenas

PhD in Economics from the University of California, professor of Professional Practice in Global Leadership at the School of International and Public Affairs at Columbia University, and director of the Master of Public Administration in Global Leadership (MPA-GL) at the same university. He was Colombia's Minister of Finance between 2012 and 2018, and also Minister of Economic Development, Transport, and Mines and Energy. He has been director of the National Planning Department and, on two occasions, executive director of Fedesarrollo, the main policy research center in Colombia.

This testimony addresses the challenges and opportunities of environmental sustainability, including electrification, the role of natural gas as a transition fuel and the need to preserve biodiversity through international compensation mechanisms. It raises the importance of responsibly exploiting natural resources, distributing the profits to the most vulnerable groups. In addition, strategies for achieving fiscal sustainability are discussed, through more efficient public spending, progressive tax reform in line with productivity objectives and the elimination of harmful subsidies. Finally, the importance of strengthening the capacities of the State in the areas of security, justice and tax administration is emphasized, as well as the role of new technologies in improving state efficiency.

Watch interview



Augusto de la Torre

PhD and Master's in Economics from the University of Notre Dame. He is an assistant professor at the School of International and Public Affairs at Columbia University and directs the Center for Economic Research at the University of the Americas (UDLA) in Quito, Ecuador. He worked at the World Bank, where he held positions such as chief economist for Latin America and the Caribbean. He was president of the Central Bank of Ecuador and worked as an economist at the International Monetary Fund (IMF).

This testimony addresses the structural challenges of inclusive growth in Latin America, highlighting the need for differentiated policies to promote both economic growth and social equity. It analyzes the region's historical limitations to integrate into the global economy, the impact of population aging and climate change on fiscal sustainability, and the importance of reforming pension, health and education systems. In addition, the challenges of productive specialization, economic diversification and the future prospects of the agricultural sector are discussed.

Watch interview



Marcela Eslava

PhD in Economics from the University of Maryland at College Park, and economist from the University of the Andes. She is a tenured professor and was Dean of Economics at the University of the Andes. She has been elected president of the Latin American and Caribbean Economic Association (LACEA), and is a member of the Board of Directors of the Research Institute for Development, Growth and Economics (RIDGE).

This testimony analyzes the structural factors behind low productivity and high inequality in Latin America, highlighting the distribution and quality of human capital, the design of the regulatory apparatus, informality and low incentives for innovation. It also discusses business dynamics, obstacles to the mobility of workers towards more productive jobs, low investment in innovation and productivity gaps with respect to more developed countries. Finally, the role of international trade as a driver of productivity through competition and access to better inputs is examined, recognizing, however, its unequal effects on the population.

Watch interview



Ricardo Hausmann

He holds a PhD in Economics from Cornell University. He is the director of the Center for International Development (CID) at Harvard University and the Rafik Hariri Professor of the Practice of International Political Economy at the Kennedy School of the same university. He is also the founder and director of the Growth Lab at Harvard. He served as the first chief economist of the Inter-American Development Bank, where he created the Research Department. He was Venezuela's Minister of Planning and a member of the Board of Directors of the Central Bank of Venezuela.

In this testimony, the challenges of economic development in Latin America are analyzed, highlighting the growing income gap with developed countries and the need to reduce the technological gap. Issues related to sustainable development, decarbonization and the role of the region in the global energy transition are addressed, highlighting opportunities in the production of critical minerals and renewable energies. The importance of economic diversification, productive complexity and innovation is also discussed, pointing out the lack of integration between the productive sector and universities, as well as the scarce business investment in research and development.

Watch interview



Colm Imbert

Civil engineer with master's degrees in Maritime Civil Engineering, Construction Law and Arbitration, and Oil and Gas Law. He was Minister of Health and Minister of Science, Technology and Higher Education. In 2015, he was appointed Minister of Finance, a position that allowed him to return to the position of deputy for the eighth time and that of Minister of Government for the fifth time. In 2020, he was re-elected for the ninth time to the House of Representatives.

Throughout this testimony, the main development challenges in the Caribbean are addressed, highlighting the impact of climate change and the region's vulnerability to natural disasters. The role of tourism in the development process of Caribbean economies is analyzed, as well as the role of the energy transition in fiscal sustainability and the reduction of emissions. The importance of digital transformation to improve the efficiency of the public sector and economic transactions is also discussed. Finally, the urgency of improving air and sea connectivity to strengthen regional trade and tourism is emphasized, as well as the strategic role of Caricom in global geopolitics.

Watch interview



Santiago Levy

PhD in Economics and Master in Political Economy from Boston University, and also has an honorary postdoct from the University of Cambridge. He has held various positions in the Mexican public administration and in international organizations, including Vice-President of Sectors and Knowledge at the Inter-American Development Bank (IDB). He was also president of the Federal Competition Commission of Mexico and director of the Economic Deregulation Program in the then Ministry of Trade and Industrial Development.

In this testimony, the challenges of economic growth and social inclusion in Latin America are explored, highlighting the macroeconomic stability achieved in recent decades, but also the persistence of high levels of inequality and poverty. It addresses labor informality and its link to the design and functioning of key institutions, as well as the importance of training human capital beyond formal education, integrating training in companies. Finally, the opportunities and challenges posed by digitalization and the energy transition are discussed, highlighting the role of multilateral organizations in the stability and development of the region.

Watch interview



Nora Lustig

PhD in Economics and graduate in Economics from the University of California at Berkeley. She is Samuel Z. Stone Professor of Latin American Economics and founding director of the Commitment to Equity (CEQ) Institute at Tulane University. She is also a non-resident senior fellow at the Brookings Institution, the Center for Global Development and the Inter-American Dialogue in Washington. She was a founding member and president of the Latin American and Caribbean Economic Association (LACEA).

In this testimony, the challenges of reducing poverty and inequality in Latin America, linked to the lack of economic growth, are analyzed. The difficulties in intergenerational social mobility and racial discrimination in the region are discussed, as well as the effects of fiscal policy on income redistribution, showing an insufficient redistributive effort. Key instruments for improving equity are examined, such as targeted cash transfers and non-contributory social protection, and the need to adjust fiscal policies is emphasized. A more efficient use of resources to eradicate poverty is advocated.

Watch interview



Karen-Mae Hill

Lawyer and High Commissioner of Antigua and Barbuda to the United Kingdom. She obtained her law degree from the University of Leicester and a master's degree in Development Studies from the University of Oxford. She is a member of the Commonwealth Board of Governors and Ambassador Extraordinary and Plenipotentiary of Antigua and Barbuda to the Republic of Estonia.

The development achievements in the Caribbean are analyzed, highlighting the democratic stability and advances in education in the region, without neglecting the multiple challenges it faces. These include the incidence of non-communicable diseases, the impact of climate change on small island states, barriers to access to finance in the aftermath of natural disasters, and human capital impediments. The limitations of scale for economic development and the need to improve regional connectivity and integration are also discussed. Finally, the urgency of addressing youth crime is emphasized, considering the direct relationship between crime and the economic performance of countries, and the potential role of development banks in providing resources and technical capacities that boost the growth agendas of Caribbean countries is highlighted.

Watch interview



Sebastián Mazzuca

PhD and Master in Political Science from the University of California at Berkeley. Distinguished Professor of Political Economy at Tecnologico de Monterrey and Associate Professor of Political Science at Johns Hopkins University. He has been a postdoctoral fellow at the Academy of International and Area Studies at Harvard University, and has taught at that university and at the Universidad Nacional General San Martín. His work focuses on state formation, regime change and economic development.

In this interview, the institutional challenges are analyzed, highlighting the impact of the gaps in the capacities of the State on the region's lagging development. The competencies necessary for the efficient provision of essential public goods, such as security, education and infrastructure, are addressed. Likewise, the link between the quality of the State and the quality of democracy is explored, and the phenomenon of political polarization, the current geopolitical context, global integration and the role of multilateral organizations are also discussed.

Watch interview



Carmen Reinhart

Minos A. Zombanakis Professor of the International Financial System at Harvard's Kennedy School. She obtained a degree in Economics from Florida International University and did postgraduate studies at Columbia University. She was Senior Vice-President and Chief Economist at the World Bank, Chief Economist at the investment bank Bear Stearns, Policy Advisor and Deputy Director at the International Monetary Fund, and a member of the Advisory Panel of the Federal Reserve Bank of New York, as well as the Panel of Economic Advisors of the Congressional Budget Office, among other positions.

This testimony addresses the progress made and challenges remaining in the region's macroeconomic institutional framework, highlighting its resilience to external shocks and improvements in policy formulation. It analyzes the difficulties in the development of financial markets, financial inclusion and banking regulation. In addition, the fiscal situation and the need to broaden the tax base without affecting growth are examined, as well as the impact of commodity price volatility and the importance of better managing commodity cycles. Finally, future trends are discussed, such as aging, automation and the energy transition, highlighting the uncertainty regarding the impact of artificial intelligence and the urgency of securing financing for adaptation to climate change.

Watch interview



Bianor Scelza Cavalcanti

PhD in Administration and Public Policy from the Polytechnic Institute and Virginia State University; Master in Public Administration from the University of Southern California; and Bachelor of Administration from the Brazilian School of Public and Business Administration (FGV EBAPE). He was director of the latter, where he also held the position of international director (FGV DINT) until 2019. He was president of the International Association of Schools and Institutes of Administration (IASIA) from 2016 to 2019.

This testimony focuses on the need to strengthen institutions and the capacity of the State to address the challenges of sustainable development. It highlights the difficulties of coordination between the different levels of government, the importance of strategic planning with a long-term vision, the problems of corruption and the need to seek more equitable and efficient tax systems, as well as to guarantee a better allocation of public spending. The tensions between the branches of government, the impact of political polarization and the crisis of representativeness on governance are also discussed. The role of artificial intelligence and digitization in public management, the risks and opportunities of their implementation and the regulation of new technologies are addressed. Finally, the role of multilateral organizations in knowledge generation and state capacity building is emphasized.

Watch interview

CAF vision





Sergio Díaz-Granados

Executive President of CAF. Previously, he served as Executive Director for Colombia at the IDB. He was Minister of Trade, Industry and Tourism, Vice-Minister of Business Development, and Chairman of the Board of Bancoldex and Procolombia, in Colombia. He is a lawyer and specialist in Government and Finance from the Universidad Externado de Colombia, with postgraduate studies in Public Management for Social Development at INAP (Spain).

The testimony analyzes the main challenges that Latin America and the Caribbean face in achieving sustainable development in the coming decades, highlighting their potential as a "solution region" in the face of urgent global problems. It examines the role of the region in addressing these challenges and the key policies for taking advantage of its comparative advantages. It also highlights the distinctive attributes that consolidate CAF as a strategic ally in this process.

Watch interview



Gianpiero Leoncini

Executive Vice President of CAF. Previously, he serves as CAF Representative in Trinidad and Tobago and Director of the Secretariat and External Relations. Prior to joining the bank, he was Chief of Staff to the Secretary General of the Andean Community. He holds a degree in Political Science with a specialization in International Relations from the Institute of Political Studies of Paris and a Master's in Public Administration from the National School of Administration, France.

This testimony addresses the role of continuous learning in the design and implementation of public policies and the learning spaces in CAF's interventions. Additionally, the impact of the digital transformation in the region is analyzed, pointing out challenges for its adoption. Finally, the relevance of strengthening the sense of institutional belonging to foster commitment in organizations is highlighted.

Watch interview



Christian Asinelli

Corporate Vice-President of Strategic Planning at CAF, where he leads the strategy for sovereign financing, technical assistance and the generation and dissemination of knowledge, and the link with the countries in the region. Previously, he served as Undersecretary of International Financial Relations for Development in the Secretariat of Strategic Affairs of Argentina, and as President of the Banco Ciudad Foundation. He holds a PhD in Political Science from the National University of San Martín (Argentina).

This testimony addresses the differential role of CAF as a promoter of development in Latin America and the Caribbean, highlighting its approach adapted to the needs of the region. It also emphasizes the value of knowledge production to optimize the role of financing and technical assistance instruments, promoting effective evidence-based policies.

Watch interview



Antonio H. Pinheiro Silveira

Vice-president of the Private Sector at CAF. He was deputy head of Economic Advisory at the Ministry of Planning, secretary of Economic Monitoring at the Ministry of Finance, and minister of the Secretariat of Ports in the Brazilian government. He has sat on the boards of public and private companies, including Caixa Económica Federal, Vale S.A. (Fiscal Council) and Banco do Nordeste. He was executive director for Brazil at the World Bank and the IDB. He holds a PhD in Economics from the Federal University of Rio de Janeiro.

The interview addresses the role of the private sector in Latin America and the Caribbean, recognizing it as an indispensable actor for regional development. Obstacles are identified, as well as the sectors with the greatest growth potential. The role of CAF in strengthening the region's productive sector, through innovative financing instruments and technical support, is also highlighted. Finally, the importance of knowledge as an input for strategic decision-making is recognized.

Watch interview



Gabriel Felpeto

Vice President of Finance at CAF. Over 30 years of experience in capital markets and other financial activities. Previously, he served as Vice President of Finance at Banco Unión in Caracas, Venezuela. He holds an MBA from the Institute of Advanced Studies in Administration (IESA) and is a Mechanical Engineer from Simón Bolívar University.

The interview analyzes the role of multilateral banks in promoting financial innovation and strengthening markets in the region. The role of instruments such as green bonds or contingent bonds is highlighted. In addition, subregional financing is discussed as a new frontier for development, pointing out opportunities and challenges in the “quasi-sovereign” sector.

Watch interview



Alejandra Claros

Secretary General of CAF. Previously, she served as Chief of Staff to the President of Bolivia and National Coordinator of the National Telecommunications Company (ENTEL). She has a degree in Law and Political Science, and a master’s degree in Multidisciplinary Law from the Universidad Mayor de San Simón (Bolivia), and in Political Communication and Marketing from the University of Alcalá (Spain).

The interview explores the role of culture in social development and CAF’s initiatives to promote it. It addresses the role of communication and transparency as instruments for the social purpose of multilateral organizations. Finally, it discusses the need for a common position for Latin America and the Caribbean in global forums and negotiations, and CAF’s role in achieving this objective.

Watch interview



Verónica Frisancho

Knowledge Manager of CAF. PhD in Economics from Pennsylvania State University, and a BA in Economics from Universidad del Pacifico, Peru. Prior to joining CAF, she was a senior economist at the Inter-American Development Bank.

The interview explores the role of the knowledge sector in multilateral banking as a facilitator of sustainable development in Latin America and the Caribbean. It also analyzes priority and viable lines of action to move towards a more prosperous and inclusive region, taking advantage of its comparative advantages without losing sight of the fundamental objective of leaving no one behind.

Watch interview

In recent decades, Latin America and the Caribbean have made remarkable progress: GDP per capita in the region has grown by 40% in Latin America and 16% in the Caribbean since 1970, democracies have generally been consolidated, and poverty has been significantly reduced. However, profound challenges remain: one in three inhabitants still lives in poverty, the region continues to be one of the most unequal in the world, and it faces critical problems such as insecurity, labor informality and the weakness of its state capacities.

This book offers a comprehensive vision for understanding and addressing these problems, exploring the triple challenge of growing, including and protecting the environment. The text combines rigorous diagnoses with innovative proposals that lay the foundations for a more just, sustainable and resilient development, and is enriched by the perspectives of internationally renowned experts, invited to reflect on the most pressing problems in the region.

RED Report on Economic Development

CAF DEVELOPMENT BANK OF LATIN AMERICA AND THE CARIBBEAN