Unlocking growth in a changing world

Innovation, Integration, and Formalization for Latin America and the Caribbean

CAF DEVELOPMENT BANK OF LATIN AMERICA AND THE CARIBBEAN

Latin America and the Caribbean
Each path is an opportunity

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Foreword

Latin America and the Caribbean is a region of extraordinary natural wealth. With just 8% of the world's population, it holds 15% of global agricultural land, 23% of forests, and 31% of freshwater sources. It also possesses nearly half of the world's lithium reserves and over a third of copper reserves, while being home to six of the world's 17 megadiverse countries.

This abundance contrasts sharply with persistent development challenges. GDP per capita in the region remains about one-third of the OECD average and only a quarter of the level in the United States, a gap that has scarcely narrowed over the decades. Inequality and poverty are defining features, with around one in three people still living in poverty. At the same time, the accelerated degradation of ecosystems and biodiversity threatens the very foundations of the region's wealth.

The global context for the region's development is daunting. The world is increasingly fragmented and polarized. The pursuit of shared values and rules-based cooperation is yielding to transactional diplomacy, where power is exerted through issue-based bargaining, compelling smaller countries into polarized alignments. This shift coincides with the urgency of the environmental crisis, which demands coordinated global action for a green transition. At the same time, an accelerated digital transformation is redefining the foundations of economic activity. Together, these forces create a complex and uncertain landscape that compels the region to rethink its place in the world and its development strategy.

This report examines the path forward for Latin America and the Caribbean to achieve robust and sustained growth—the foundation for long-term social inclusion. Without vigorous growth, anchored in productivity and innovation, the region will not be able to close its persistent development gaps. The report's policy analysis is structured around three fundamental pillars for growth.

The first pillar, innovation, is the engine of progress in the age of knowledge. The region shows weaknesses not only in the creation of frontier technology but also in its capacity to adopt, adapt, and disseminate existing global knowledge. The second pillar, integration, is a powerful catalyst for productivity, driving competition, learning,

and insertion into global value chains. Despite decades of attempts to integrate into global markets, the region's trade integration remains shallow and unsophisticated. The third pillar, informality, is a structural feature that weighs heavily on economies. Reducing informality will foster on-the-job learning, unlock the potential of the workforce, and promote a more efficient allocation of resources.

These three pillars rest upon a critical foundation: effective state capacity. A state that is strategic, agile, and transparent is indispensable for catalyzing productivity. Strengthening fiscal capacity is particularly important in the region, where reduced fiscal space is limiting governments' ability to act.

Achieving a sustainable growth path requires confronting two significant collective action problems. The first is to strengthen the region's collective voice on the global stage, enabling it to negotiate effectively in a polarized world. The second is to address environmental externalities by preserving, valuing, and responsibly leveraging the region's natural capital. CAF –Development Bank of Latin America and the Caribbean-, one of the most successful integration experiences in the region, is uniquely positioned and has the responsibility to contribute to these goals. The institution contributes, not only with financing aimed at closing gaps, but also by generating knowledge—as reflected throughout these pages. This report offers a roadmap, developed in the region and for the region, to achieve a sustainable growth path.

Sergio Díaz-Granados

Executive President of CAF -Development Bank of Latin America and the Caribbean-

Introduction

The true source of growth lies in collective ingenuity. Economies expand and societies prosper when people have the skills and opportunities to apply their talents to productive endeavors and to create, share, and use knowledge and know-how. In this sense, growth and inclusion are inseparable: to grow is to unlock human potential, and to include is to ensure that all individuals can contribute and benefit. For Latin America and the Caribbean, the path to growth requires placing people and knowledge at the center of development, by strengthening education, training, work, and innovation.

The region continues to lag: average income per capita in Latin America and the Caribbean remains only about one-quarter of the level in the United States, with the region making little progress in closing that gap over the past decades. While some countries in the region have doubled their income per capita in the last four decades, many others have stagnated. And within countries, the differences in development across regions appear significantly larger than in developed economies. Inseparable from this income gap is the stark inequality and social exclusion in the region, where around one in three people lives in poverty, and the region is, by most measures, the most unequal in the world.

Closing these gaps requires more investment and higher productivity. On the one hand, the region must expand its stock of human and physical capital: investing in education, skills, infrastructure, and productive capacity. On the other, it must improve the way these resources are combined in production, ensuring that firms and workers in every sector can operate more efficiently and adapt more quickly. Without productivity growth, investment alone will not be enough to sustain development.

At the center of this challenge is what this report identifies as the three I's of productive development: integration, innovation, and informality. Integration matters because stronger international and regional connections widen markets, build scale, and enable productive specialization and knowledge transfer. Innovation is essential to foster the generation and diffusion of knowledge and technology, and to support firms in adopting and adapting new ideas. Tackling informality is vital because its persistence reduces skill accumulation and perpetuates inequality.

These policy objectives must be supported by a favorable business environment. Every entrepreneurial initiative unfolds in a territory shaped by infrastructure, regulations, and institutions at the local, national, and global levels. A high-quality environment, characterized by macroeconomic stability, legal certainty, an adequate regulatory environment, and a high capability of governments at national, intermediate, and local levels to enforce it fosters the entry and growth of innovative firms.

This report begins by recognizing the region's inability to achieve robust and sustained growth of GDP per capita, as the main root of underdevelopment. It examines the persistent income per capita gap that separates the region from advanced economies and discusses the role played by physical and human capital accumulation and productivity. It then lays out a policy agenda structured around three intermediate objectives that capture the region's core productive challenges: reducing informality, accelerating innovation, and pursuing deeper and higher-quality integration with the world. In turn, they depend on two fundamental state capabilities—fiscal and regulatory—analyzed in Chapter 5.

Finally, the report identifies emerging sectoral opportunities and strategic partnerships for the region, with particular emphasis on the mutual gains from a closer and more coordinated relationship with the European Union, which combines institutional strength with technological and innovative leadership. Together, these elements outline a roadmap for unlocking growth through collective ingenuity and inclusive development.

Christian Asinelli

Corporate Vice President of Strategic Programming
at CAF -Development Bank of Latin America and the Caribbean-

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Chapter 1.

PAST AND FUTURE OF ECONOMIC GROWTH IN LATIN AMERICA AND THE CARIBBEAN

Álvarez, Fernando | Juncosa, Federico | Research assistance from Carla Calá

Summary

This introductory chapter identifies stagnant growth as the main obstacle to the region's development and highlights low productivity as its fundamental cause, thereby framing the policy discussion developed throughout the report. Building on this assessment, the analysis underscores three priority areas for action, which are both manifestations of the productivity problem and the most powerful levers to resolve it: (i) reducing productive informality, (ii) catalyzing innovation and technological adoption, and (iii) deepening and upgrading international integration.

Furthermore, this chapter frames the region's development challenge within the context of three intertwined and unavoidable transitions—demographic, digital, and green—that are reshaping the rules of the game and present both unique risks and opportunities. Finally, it emphasizes how the interaction between these global trends and Latin America and the Caribbean's (LAC) abundant natural resources opens strategic avenues for development. Sectors such as sustainable food production, critical minerals, and clean energy are emerging as levers to build a new path for growth in the 21st century.

A history of slow and erratic economic growth

The recent economic history of Latin America and the Caribbean (LAC) is a tale of incomplete development, a story of undeniable progress but with promises still to be fulfilled. On one hand, the reforms of the late 20th century brought greater macroeconomic and financial stability. Additionally, the economic boom of the early 21st century enabled remarkable social achievements, including a reduction in the poverty rate of more than ten percentage points.

On the other hand, this progress rests on fragile foundations. Fiscal vulnerability persists in many economies, limiting their ability to respond to crises and jeopardizing social gains. Likewise, despite advances, nearly one in three people in the region still lives in poverty, and more than 10% in extreme poverty.[1] For them, development remains a distant goal.

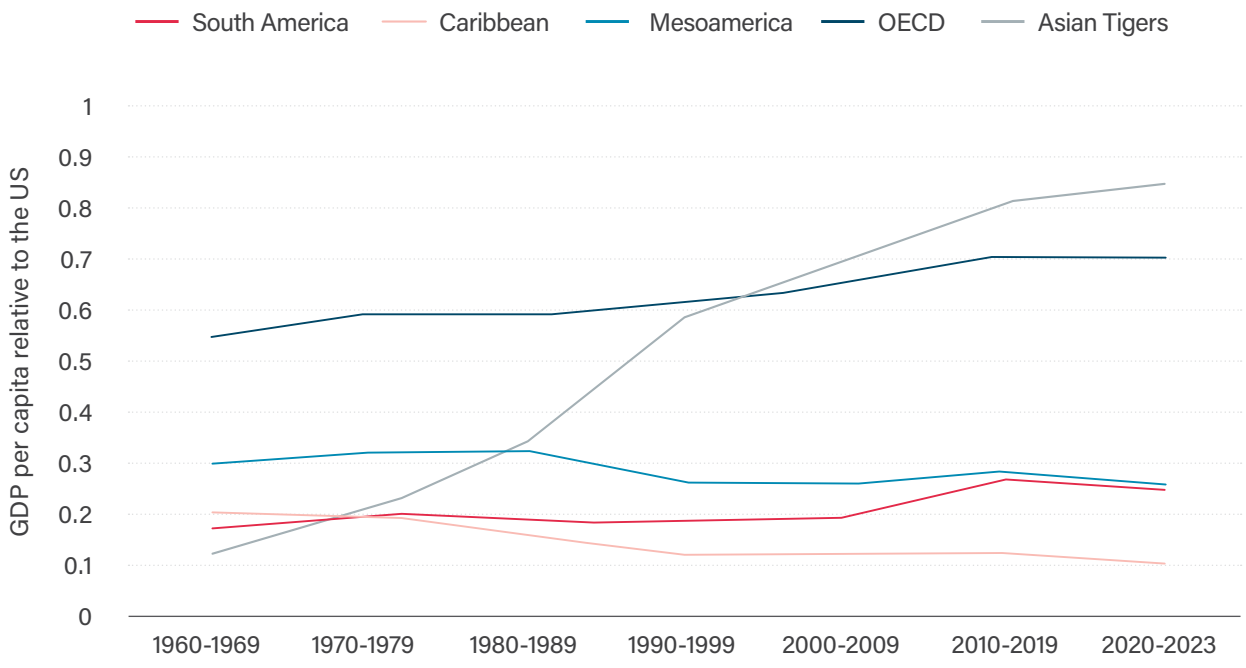
Currently, LAC stands at a developmental crossroads. The region must build more equitable societies, protect its unique environmental heritage, and secure lasting prosperity for its citizens. Yet pursuing these goals collides with a stark reality: the region's persistent inability to generate robust and sustained economic growth.

Today, GDP per capita in LAC is barely one-third of the OECD average and about a quarter of that of the United States. This gap is not a recent phenomenon but the result of decades of insufficient growth that have left the region in a state of relative paralysis (Graph 1.1). This long-term stagnation contrasts with the experience of the Asian 'Tigers': their per capita income grew from just over 10% of that of the United States in the 1960s to more than 70% today.

Against this backdrop, this report focuses on the challenge of economic growth. This focus does not overlook the other pillars of sustainable development: social inclusion and environmental sustainability. These three dimensions do not operate in isolation. Their interactions can generate traps of low growth, high inequality, and environmental degradation, but also virtuous cycles where progress in one area reinforces advances in the others. Public policy is therefore not faced with a trade-off between these objectives, but rather with the strategic challenge of activating and leveraging their synergies.

1. This tragedy is even more acute in rural areas, where the poverty rate exceeds 40%. This does not mean that poverty is primarily a rural problem. On the contrary, 73% of the poor in LAC currently live in urban areas—a fraction that has been growing in recent decades (UNDP, 2024).

Graph 1.1
Evolution of average GDP per capita relative to the US



Note: The graph shows the average GDP per capita in the selected region relative to the US. Real GDP on the production side in PPP (USD millions, 2017) from the *Penn World Table* is used. Regional aggregates correspond to population-weighted averages of country-level values (using WPP population data). Based on these values, simple averages were calculated for each decade. Details on the composition of each country group are provided in the chapter appendix.

Source: Authors based on Feenstra et al (2015) and WPP (2024).

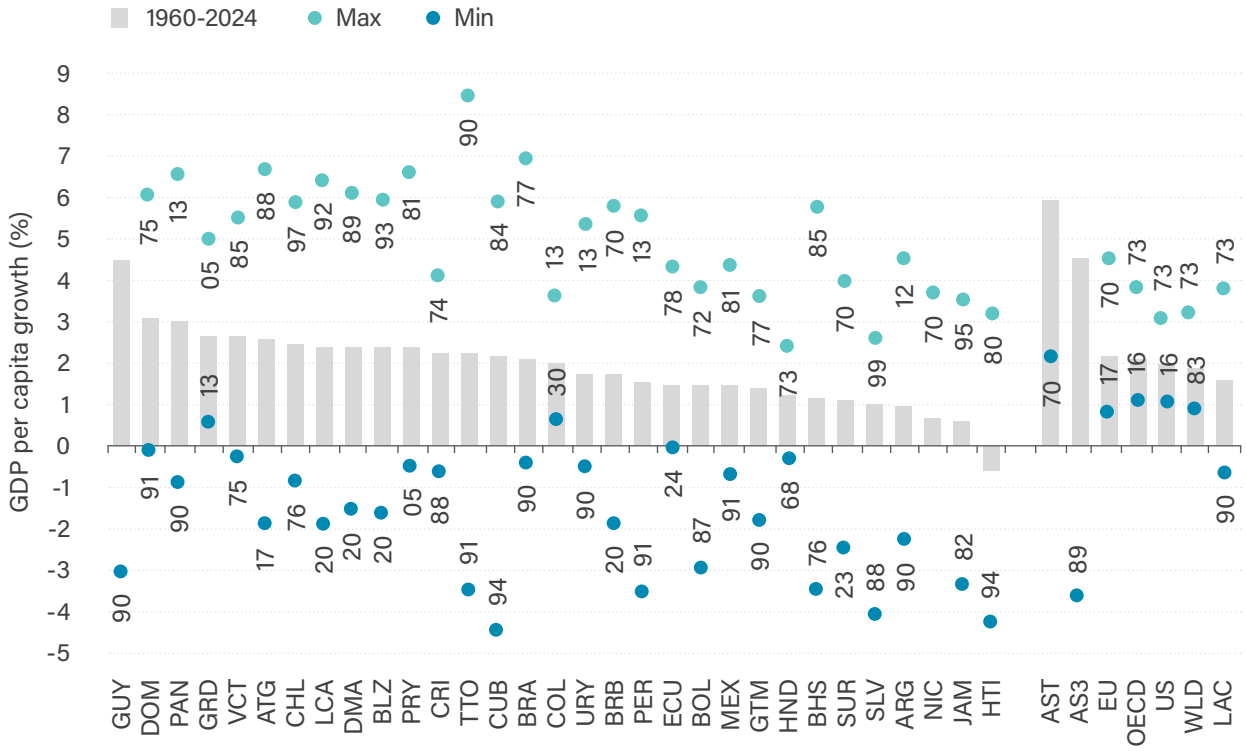
These complementarities are multi-directional. Economic growth creates formal, high-quality jobs, and hence, it is the most powerful tool for reducing poverty and inequality; in turn, greater social inclusion fosters a more efficient allocation of talent, boosting aggregate growth, as the evidence shows (C. Hsieh et al., 2019). Likewise, growth driven by productivity and innovation gains, when paired with effective environmental regulation, involves environmental protection by optimizing resource use. Conversely, investment in a green economy—from renewable energy to ecotourism—and the protection of natural capital can become new and powerful engines of growth and employment (Allub et al., 2024; Brassiolo et al., 2023). Even when environmental measures entail costs in the short run, they can foster sustainable development by tackling negative externalities that are omitted from traditional measures of economic activity.

It is precisely because these virtuous cycles exist that this report concentrates on reigniting growth. Understanding and removing the barriers that hinder economic growth is an essential first step to unlocking a positive spiral of comprehensive and sustainable development for the region. Without vigorous, productivity-based

economic growth, social and environmental development efforts face structural limits. Closing the GDP per capita gap is a prerequisite for closing other development gaps.

The regional average shown in Graph 1.1 masks significant heterogeneity and some relative success stories. Graph 1.2 presents growth rates by country for 1960–2024 and each country's best and worst decade. Since 1960, average annual GDP per capita growth in LAC was only 1.6%, lagging the world average (1.9%), the member countries of the European Union (2.2%), the United States (2%), and the Asian Tigers (6%). Currently, the region's GDP per capita is barely a third of the OECD average and about a quarter of that of the US. Only 12 of the 31 LAC countries achieved growth rates above the EU average. Furthermore, only five exceeded this average by 0.5 percentage points or more, a pace of convergence that would require two centuries to close the per capita income gap.

Graph 1.2
Annualized GDP per capita growth



Note: Annual GDP per capita growth rates by region are calculated as the population-weighted average of country-level GDP per capita for each year. Dots at the top (bottom) show the highest (lowest) average growth rate registered across a decade, and labels indicate the last year of the decade. The long-term growth rate corresponds to the compound growth rate for the 1960–2024 period for each country, except for those with later data availability. Regional aggregates and the world correspond to unweighted averages across countries. The best decade-average growth rates for Guyana and AST, not shown, are 17% and 13%, corresponding to 2014–2024 and 1964–1974, respectively. The worst decade-average growth for Nicaragua is -6%, corresponding to the 1978–1988 period. Details on the composition of each country group are provided in the chapter appendix

Source: Authors based on UN (2024) and World Bank (2025).

The 1980s stand out as a period of particularly poor performance: 16 countries recorded their worst performance during that decade. Yet, the data also reveal success stories. Panama and the Dominican Republic achieved annual per capita GDP growth roughly twice that of the US in recent decades, leading to a significant closing of the gap. For example, in 1990, Panama and the Dominican Republic had per capita incomes equivalent to 26% and 16% of that of the U.S. level; by 2023, these shares had reached 49% and 31%, respectively.

The subnational dimension of development

National figures hide one of the defining features of development in LAC: a profoundly unequal geography. The region is not only stuck in a slow process of convergence with the developed world, but it also suffers from a broken internal convergence. A few relatively prosperous cities and regions—often with sharp internal disparities themselves—coexist with lagging territories, marked by low productivity, high informality, and weak connections to the engines of the global economy.

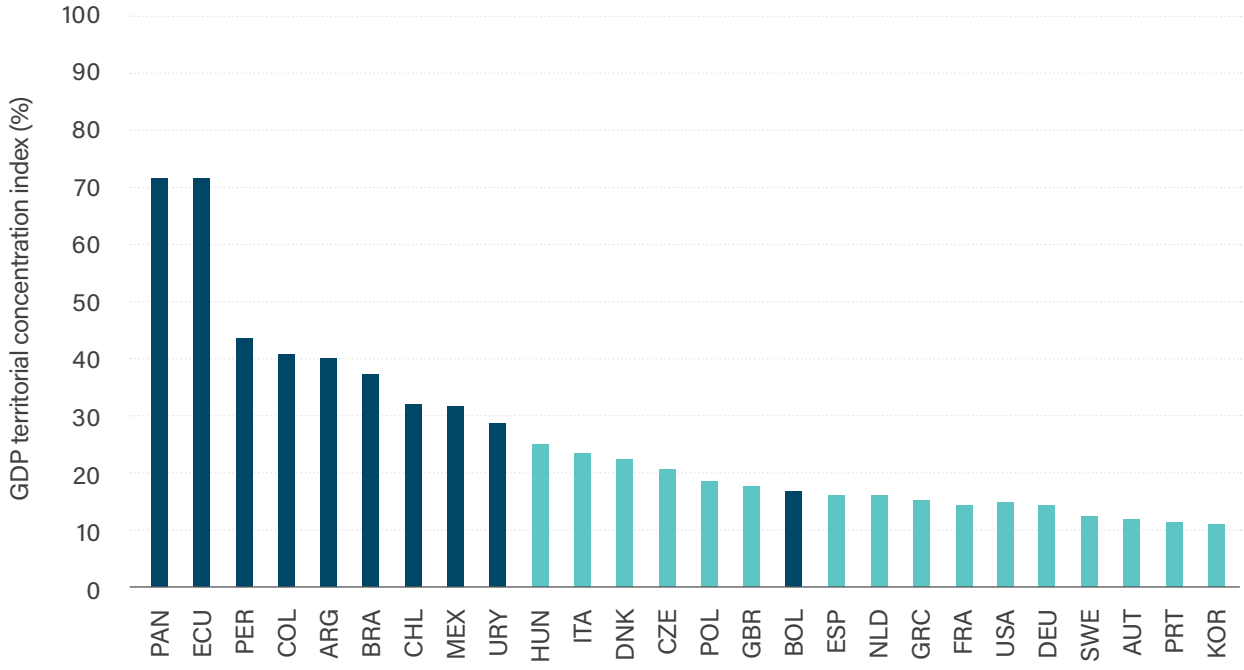
The evidence of this territorial fracture is clear. The dispersion of GDP per capita within the region's countries is systematically higher than in the OECD, with Panama and Ecuador representing extreme cases (Graph 1.3).[2,3] This phenomenon is also reflected in wages: a study of 279 cities across 12 countries reveals enormous disparities, with wage gaps between the capital and other cities reaching up to 30% in Argentina, Paraguay, and Peru (Alves, 2021). While differences in education explain part of these gaps (generally less than half), the remaining portion points to deep structural barriers that limit a more equitable distribution of prosperity. Agglomeration economies (measured by city size) also explain, in part, the wage gaps across cities.

These profound territorial divides are not just a matter of equity; they represent a structural barrier to growth. First, low productivity in lagging territories prevents local talents from reaching their maximum potential. Second, the low consumption and production capacity of lagging territories fragments the domestic market, preventing firms from achieving economies of scale. These disparities also weaken human capital accumulation—a critical driver of growth—for those living in less prosperous

2. The dispersion of regional GDP per capita is calculated as the sum of the absolute differences between each territory's GDP per capita and the national GDP per capita, weighted by population share, and expressed as a percentage of the national GDP per capita.

3. An important caveat for this comparison is that the scale of the subnational units being considered is very heterogeneous across countries (e.g., those within Panama vs. within the US) and can explain part of the difference. However, the comparatively large subnational inequality is also apparent for economies of similar size.

Graph 1.3
GDP Territorial Concentration Index in Latin America (10 countries) and OECD (16 countries), 2022 (in %)



Note: The *GDP Territorial Concentration Index* measures the degree of territorial concentration of economic activity within a country. It is based on the distribution of subnational GDP and captures how much each territory's share deviates from the national average. Higher values indicate greater territorial inequality in GDP distribution, while lower values reflect a more balanced spatial pattern.

Source: Díez Pinto et al. (2025).

regions.[4] Finally, these gaps fuel political and social instability, deteriorating the overall investment climate.

Understanding this territorial dimension is key to designing effective public policies. Overcoming these development traps demands a strategy aimed at unlocking the endogenous potential of each region. This implies identifying local productive vocations and strengthening them through strategic investments in three key areas: physical and digital connectivity to integrate lagging regions into domestic and global markets; human capital aligned with high-potential activities; and, crucially, strengthening local institutional capacities so that territorial actors can lead their own productive transformation process.

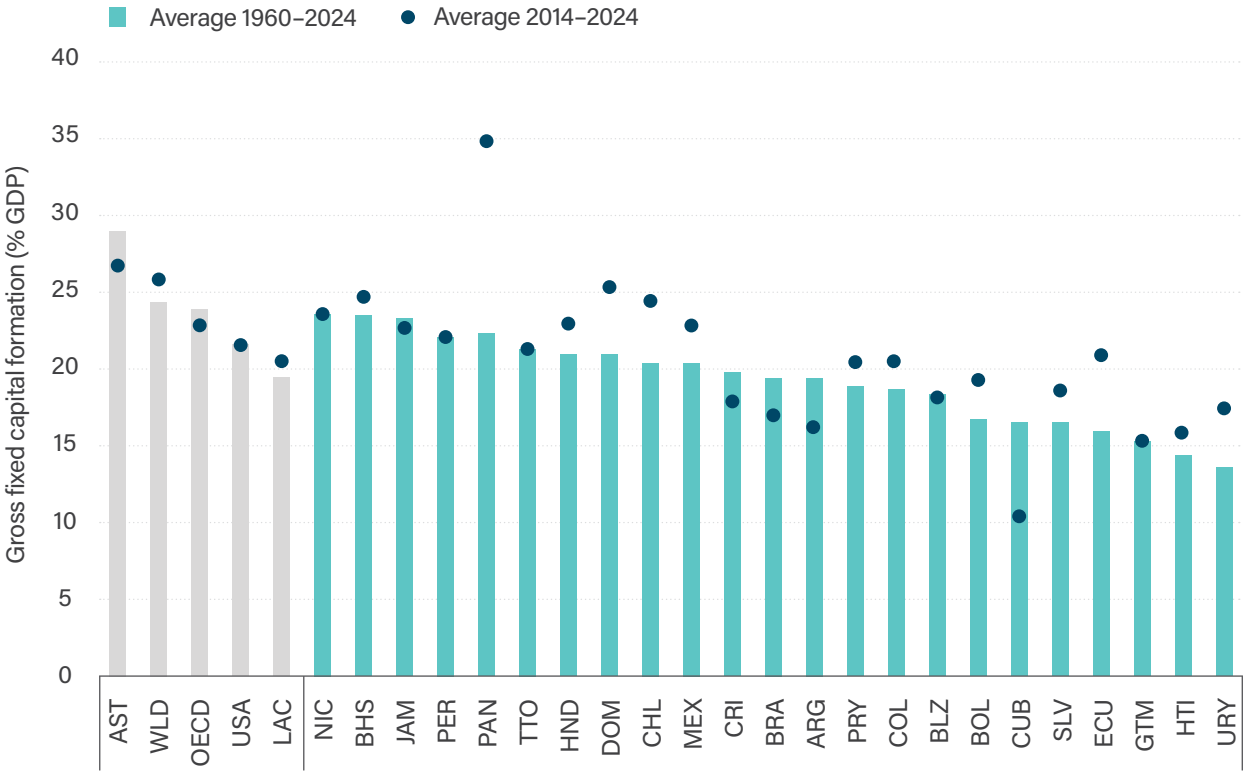
4. As de la Mata et al. (2022) details, one's place of birth is a critical determinant of social mobility in the region. The findings are eloquent: children of parents without a high school education are 20 percentage points more likely to complete school themselves if they live in an urban area compared to a rural one. This opportunity gap, which has remained persistent for decades, demonstrates that territorial disparities are not merely a snapshot of underdevelopment, but a powerful mechanism for its perpetuation.

The determinants of growth: Investment and productivity

Factor accumulation: A necessary but insufficient condition

To grow, an economy needs to be fueled by high-quality physical and human capital. On this front, LAC exhibits structural weaknesses. LAC gross fixed capital formation has been lower than in other emerging regions, especially East Asia (Graph 1.4). This low capital accumulation translates directly into a smaller stock of machinery, technology, and infrastructure per worker, which restricts productivity and competitiveness globally. Without a significant increase in both public and private investment, the equipment and infrastructure gap will continue to constrain growth.

Graph 1.4
Gross fixed capital formation (% of GDP)



Note: Gross fixed capital formation refers to acquisitions less disposals of fixed assets during the accounting period, including specified expenditures on services that increase the value of non-produced assets. The indicator is expressed as a percentage of Gross Domestic Product (GDP), defined as the total income generated through the production of goods and services within an economic territory during an accounting period. Details on the composition of each country group are provided in the chapter appendix.

Source: Authors based on World Bank (2024b).

Human capital presents another challenge. For decades, the region benefited from a demographic dividend, but that window of opportunity is now closing. Future growth can no longer rely on a growing labor force, but rather on a more skilled, more productive one. Despite notable advances in educational coverage, deep gaps in human capital persist: on one hand, the quality of basic education remains deficient, as consistently low PISA test scores reflect; on the other, higher and technical education continue to face problems of access and relevance. Educational offerings are often misaligned with the needs of a rapidly changing productive sector, especially in science, technology, and skills for the digital and green economy.

Boosting investment in physical capital requires improving the business environment through macroeconomic stability, legal certainty, and regulatory simplification. This must be complemented by a strong push for strategic infrastructure investment, public–private partnerships, and deeper capital markets. In turn, improving human capital requires a qualitative leap: investment in early childhood care, reforms to the teaching profession, and modernized curricula aligned with the demands of 21st-century skills. It is essential to strengthen high-quality technical and vocational education and to ensure that higher education is linked to productive sectors with the highest potential.

Aggregate productivity: The root of low growth and the per capita GDP gap

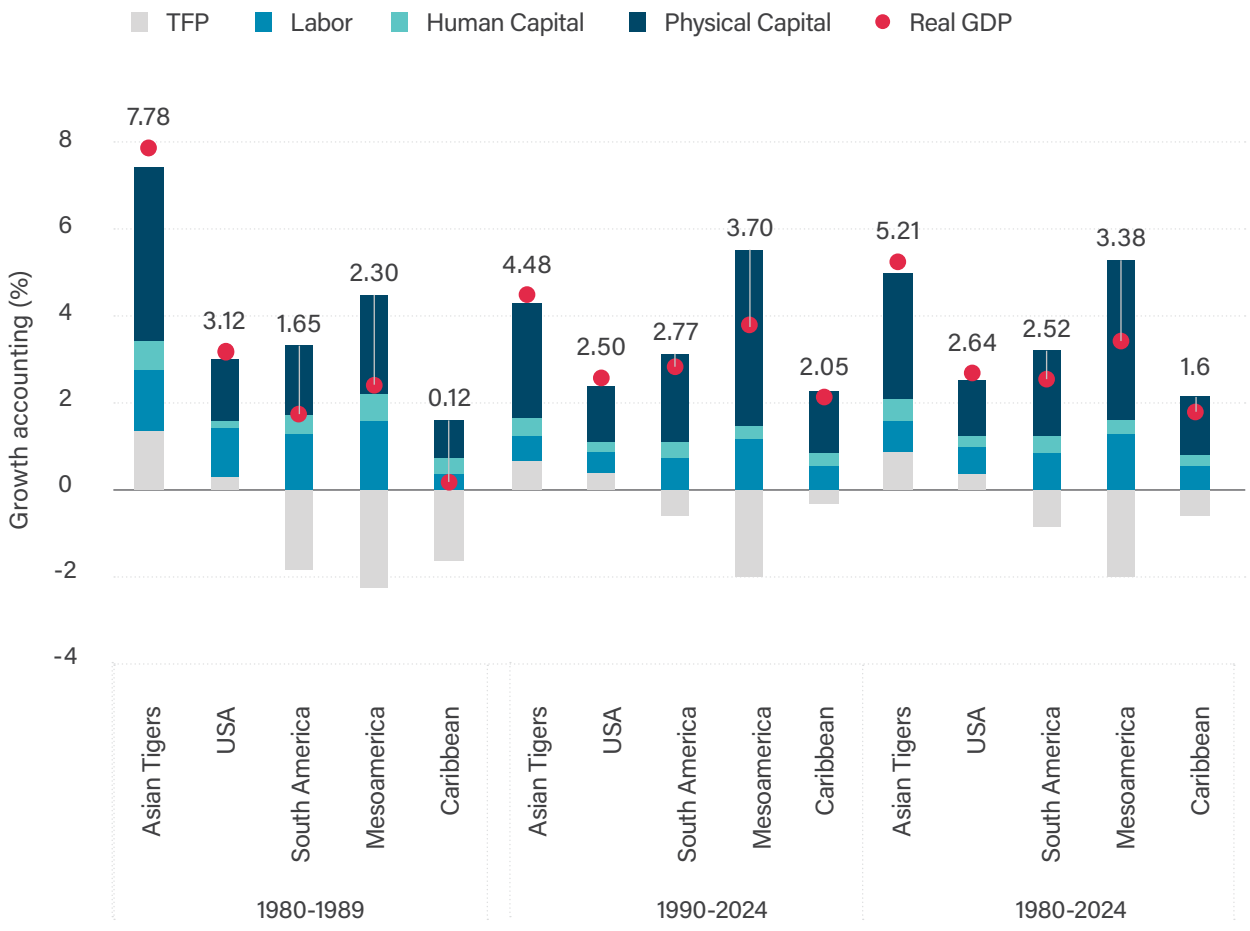
The slow growth of per capita income in LAC has a primary culprit: chronic productivity stagnation. While the accumulation of production factors—such as physical capital and skills training—is important, international evidence is conclusive: Total Factor Productivity (TFP), which measures the efficiency with which these factors are combined, accounts for most of the income differences between countries (C.-T. Hsieh and Klenow, 2010).[5] This global pattern is confirmed in the region: differences in TFP explain nearly 80% of LAC's GDP per capita gap relative to the US, both through their direct contribution and through their indirect effect on investment driven by higher returns (Álvarez et al., 2019).

5. In growth and development accounting exercises, Total Factor Productivity (TFP) is calculated as a residual. As such, this measure inevitably captures not only productive efficiency but also other factors such as measurement errors or capacity utilization. However, the use of TFP as a measure of productivity is well established and there is a broad consensus that productivity plays a leading role in development, both through its direct impact on growth and its capacity to incentivize greater and better accumulation of physical and human capital. In fact, evidence based on firm-level data has shown that low productivity is the fundamental cause of the gap in GDP per capita for LAC (see Álvarez et al., 2019).

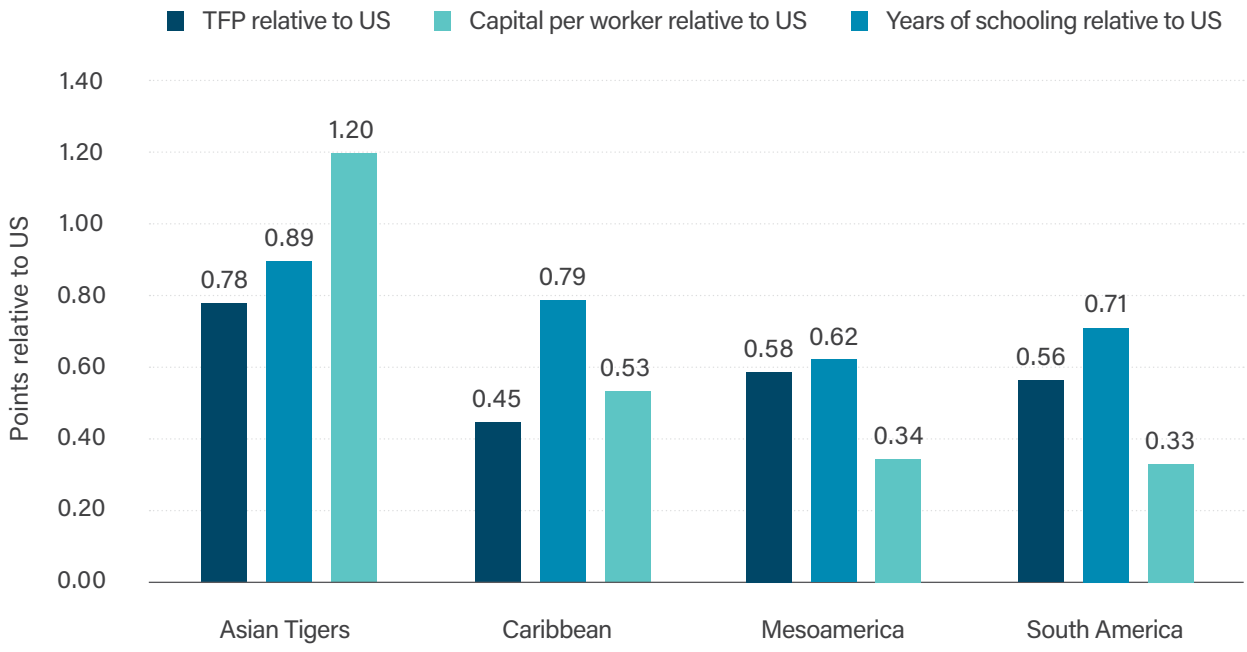
A decomposition analysis of the region's growth since 1980 (Graph 1.5) shows that factor accumulation has been the almost exclusive driver. In contrast, the contribution from TFP has been systematically negative, subtracting on average nearly a percentage point from growth each year. The 1980s "lost decade" was the most severe period, with a negative TFP contribution of 2 percentage points annually. Currently, TFP levels in South and Central America are below 60% of U.S. levels, and in the Caribbean, below 50%. By contrast, the TFP of the Asian Tiger economies is approaching 80% of that of the US.

Graph 1.5
Growth accounting and Total Factor Productivity relative to the United States

Panel A. Growth accounting by region (1980–2024)



Panel B. Total Factor Productivity relative to the United States



Note: Details on the composition of each country group are provided in the chapter appendix. In Panel A, the values shown for each period represent simple averages across years. The components of growth accounting correspond to the following variables in the underlying databases: human capital refers to the Contribution of Labor Quality to real GDP growth; physical capital to the Contribution of Total Capital Services to real GDP growth; labor to the Contribution of Labor Quantity to real GDP growth; and TFP to the Growth of Total Factor Productivity. Real GDP growth is measured as the Growth in real GDP. In Panel B, all series correspond to averages over 2019–2023. The TFP indicator reflects the level at current PPPs (the US = 1). Capital per worker relative to the United States is computed as each country's capital stock at current PPPs divided by its number of persons engaged, and then normalized by the corresponding US ratio. The schooling gap is defined as the ratio between a country's average years of schooling and the corresponding US value over the same period. Regional averages are obtained by taking simple averages across countries within each region.

Source: Authors based on Feenstra et al. (2015) and The Conference Board (2024).

The fact that regional growth has been driven by physical and human capital accumulation does not imply the absence of gaps in these inputs; indeed, physical capital and human capital per worker are lower in the region than in developed economies such as the US. Graph 1.5, Panel B, shows that physical capital per worker in Mesoamerica and South America are about 34% of that in the U.S., while the Caribbean is around 53%. While the capital stock has been the main growth lever in LAC in recent decades, investment will remain central to closing the income gap relative to developed economies.

Finally, it is crucial to recognize that investment and productivity are closely intertwined. Higher productivity raises the returns on investment, incentivizing firms to accumulate more and better physical capital. At the same time, a more productive and sophisticated economy raises demand for skilled workers and an increase in the returns to skills accumulation, which in turn motivates individuals

and governments to invest more in quality and relevant education. Additionally, investment is a key enabler of productivity (TFP) growth, as economies usually incorporate significant embodied technological advances through the acquisition of modern capital goods and machinery. Sustained productivity growth requires continuous, high-quality investment.

Keys to fostering productivity-led growth

The anatomy of productivity

Closing the income gap that separates LAC from developed economies requires a new era of economic growth. This effort demands not only accelerating the accumulation of physical and human capital but, above all, triggering a sustained and significant increase in productivity. Without productivity growth, convergence will remain an unattainable aspiration. Achieving this requires coordinated demand- and supply-side policies.

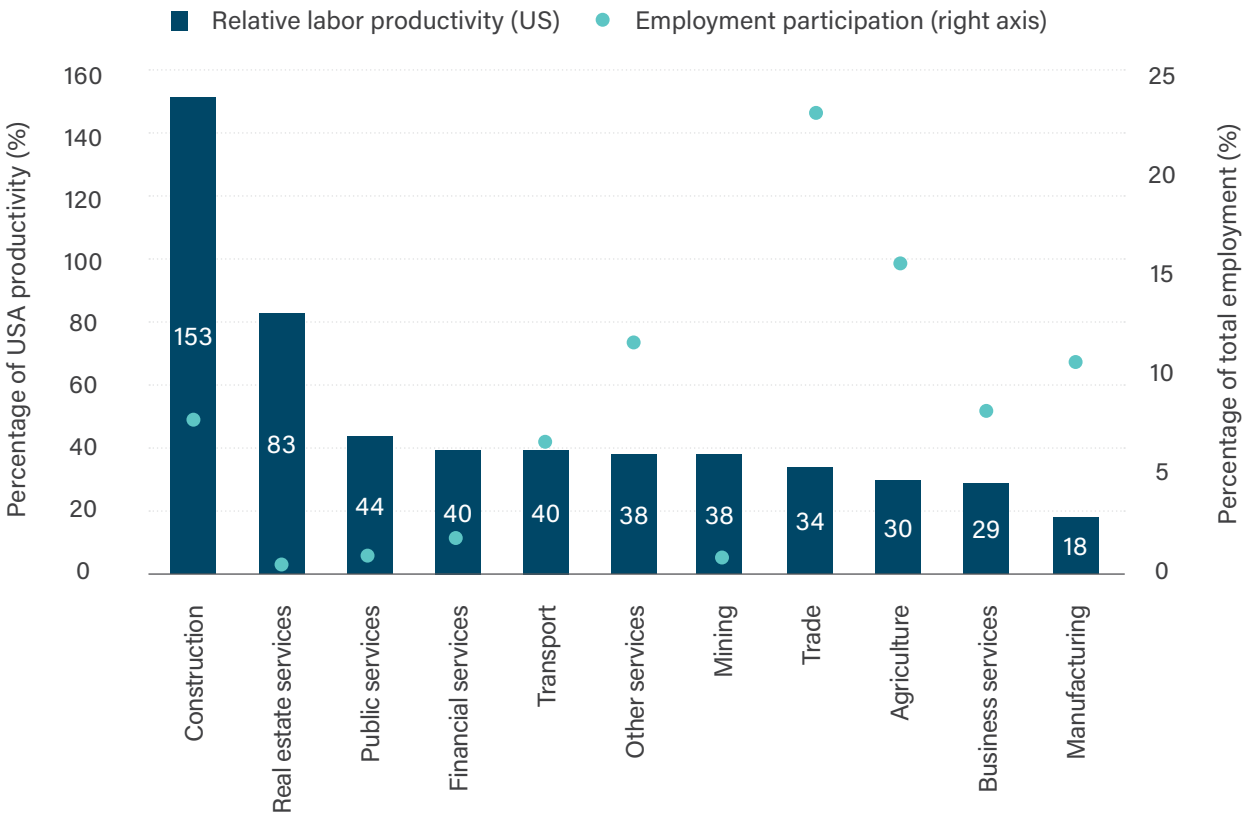
A country's aggregate productivity is the result of the health of its entire business ecosystem; ultimately, however, aggregate productivity is a combination of two factors. The first is the productivity of firms, which is closely linked to firms' capacity to innovate and become more efficient. The second is the allocation of resources across firms, sub-sectors, and sectors.

A prosperous and dynamic economy is one where its firms innovate and learn continuously and where capital and labor are systematically channeled from less productive establishments and sectors toward more productive ones. This reallocation process materializes in three ways: the expansion of efficient firms and the contraction of inefficient ones; the entry of new, innovative firms that challenge incumbents in the market; and the exit of those that are no longer viable, freeing up resources for more valuable uses.

A first level of aggregation for analyzing the role of factor allocation in productivity is the sector and sub-sector level. A common argument is that the region's productivity lag stems from too many workers concentrated in low-productivity sectors. Commerce and agriculture are classic examples, concentrating large shares of employment while also exhibiting the widest productivity gaps. However, the data show that productivity is low across most sectors, from agriculture and commerce to manufacturing and services (Graph 1.6).[6] The implication is clear: the challenge is not merely shifting workers from one sector to another, but raising productivity across the board.

6. Álvarez et al. (2019) systematically addresses the role of this structural component, finding that the correlation between a sector's size and its productivity, capturing the allocative efficiency of employment, is higher in the region than in the United States. The same result applies when studying the sectoral structure within the manufacturing sector. In other words, the lag in output per worker for the economy (and for the manufacturing sector) relative to the United States is not explained by a greater concentration of employment in more inefficient sectors compared to the U.S. economy.

Graph 1.6
Labor productivity in LAC relative to U.S. levels 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 US. The OECD average excludes LAC countries. The comparison includes the following sectors: Construction, real estate services, public services, financial services, transport, other services, mining, trade, agriculture, business services, and manufacturing. The Government sector is excluded because its output is measured based on inputs rather than value added.

Source: Authors based on the *GGDC Productivity Level Database* (Inklaar et al., 2023).

A second level involves the distribution of factors among establishments within the same industry. Evidence suggests that part of the productivity gap is explained by this misallocation of factors between firms. This includes misallocation between formal and informal establishments, but it is also present even when focusing solely on more formal establishments (Álvarez et al., 2019).

Misallocation is not limited to the labor market; it also extends to capital, land, and intermediate inputs. It is associated with the absence of efficient exit mechanisms, which allows "zombie firms" to remain in operation, trapping resources that could be used more productively elsewhere. Addressing this requires action on key regulations and markets, including modernizing bankruptcy laws and improving the performance of labor, financial, and input markets—from tradable goods to essential logistics services.

However, while correcting misallocation is crucial for efficiency, improving firm quality itself is paramount for long-term growth. Without a dynamic population of high-quality, innovative firms capable of competing in sophisticated international markets, sustained prosperity is impossible. Fostering such firms requires a comprehensive policy approach, as discussed throughout this report, which combines traditional supply-side measures, such as tax incentives for innovation, worker training, and access to finance and infrastructure, with often-overlooked demand-side policies.

In fact, demand plays a fundamental role in growth, an especially relevant dimension for LAC economies, which have been historically exposed to macroeconomic and trade shocks (De La Torre and Ize, 2022).

One key focus of demand-side policies is stabilizing and managing economic cycles. Macroeconomic crises leave permanent scars on an economy's productive capacity. Rather than functioning as an efficient "cleansing mechanism", recessions can force productive firms with credit constraints to exit (Eslava et al., 2013). This phenomenon, combined with the destruction of physical capital, erosion of human capital, and disruption of production networks (Huneeus, 2018), reduces long-term potential growth. Counter-cyclical policy measures are particularly important in commodity-exporting countries, where large changes in terms of trade must be prudently managed to avoid the growth-impairing effects of Dutch disease. A robust counter-cyclical macroeconomic policy is therefore not just a stabilization tool but a long-term growth policy that safeguards an economy's supply capacity.

A second focus of demand-side policies is securing access to sophisticated markets that demand complex, high-quality products. While competitiveness is a prerequisite for servicing these markets, firms' decisions to invest in producing more complex and riskier goods depend on the existence of broad, sophisticated, and predictable demand. This is where policies such as the signing of strategic trade alliances play a fundamental role. Preferential and stable access to high-income markets not only enables economies of scale to make complex production profitable but also creates a powerful demand-pull effect. This, in turn, incentivizes firms to make investments in technology and human capital, leading to valuable knowledge spillovers. The new capabilities acquired spread throughout the economy, facilitating diversification into other sophisticated products. This spillover and learning processes are especially powerful when integrating into global value chains (see Chapter 4).

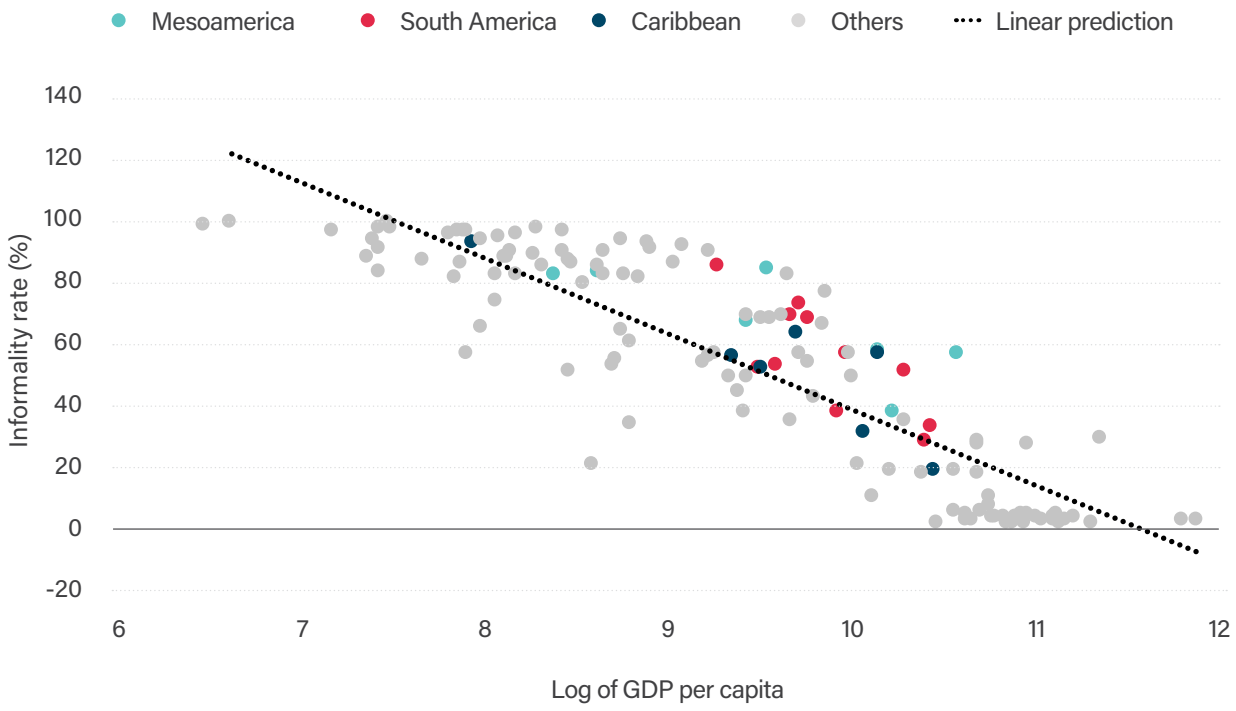
Three crucial outcomes: Informality, innovation, and international insertion

While the root causes of the region's low productivity run deep—embedded in the quality of its institutions and the configuration of its business ecosystem—an effective action plan must focus on concrete, intermediate objectives. The next three chapters of this report examine three critical factors observed in the region that undermine the ability of firms to improve and hinder the crucial process of resource reallocation:

low innovation, high informality, and limited international insertion. Addressing these damaging, immediate manifestations of deep-rooted barriers to growth creates an actionable policy agenda.

Informality is a defining structural feature of LAC's economies. Nearly half of the region's workforce operates outside of social security systems. Despite substantial heterogeneity across countries, most countries in the region exhibit informality rates significantly higher than those observed in economies with similar levels of per capita incomes across the globe, a phenomenon often described as excess informality in the region (Graph 1.7).

Graph 1.7
Relationship between the informality rate and GDP per capita



Note: The chart presents the relationship between GDP per capita, PPP (current international USD), and the labor informality rate reported by the ILO. Informal workers include own-account workers employed in informal sector enterprises; those engaged in the production of goods exclusively for final use by their household (e.g., subsistence farming or self-construction of housing), if covered; contributing family workers, regardless of whether they work in formal or informal sector enterprises; and employees in informal jobs, whether employed by formal or informal sector enterprises, or as paid domestic workers employed by households. Employees are considered to hold informal jobs if their employment relationship is not subject, in law or in practice, to national labor legislation, income taxation, social protection, or entitlement to employment benefits such as paid annual or sick leave. The values shown for each country correspond to the most recent data available on informality. The dotted line in the chart represents predicted values from a regression in which the dependent variable is the informality rate and the independent variable is the logarithm of GDP per capita. Details on the composition of each country group are provided in the chapter appendix.

Source: Authors based on ILO (2024) and World Bank (2024).

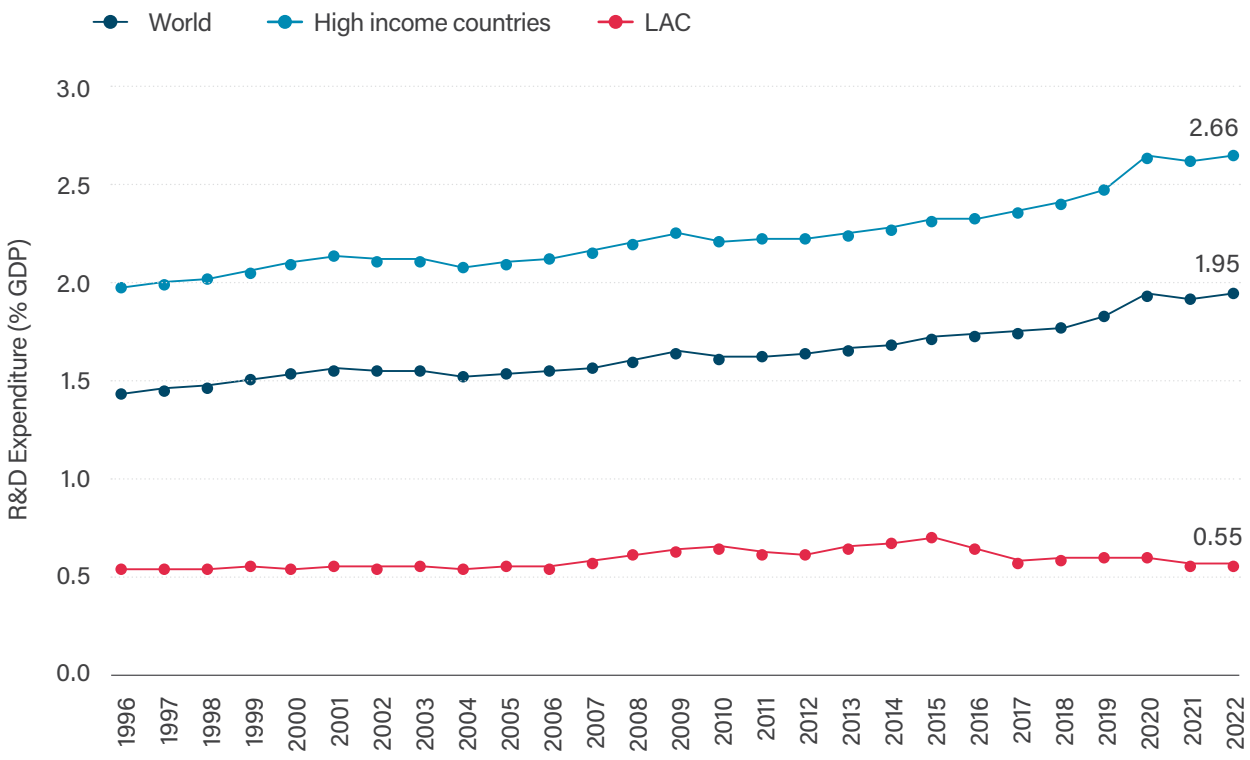
Informality undermines growth and productivity through several interconnected channels.[7] At the firm level, it fosters underinvestment, as informal firms operate at a sub-optimal scale to evade detection. Informality also distorts resource misallocation by allowing inefficient firms to survive via tax evasion, trapping capital and labor that could be used by more productive formal firms. It erodes human capital accumulation; it offers limited on-the-job training, and by lowering the return on education, it reduces ex-ante incentives for young people to invest in their skills. Finally, informality creates disconnection, isolating firms from global value chains, credit markets, and public support.

Of course, informality is not only a cause of low growth but a consequence of underdevelopment. Indeed, low growth structurally fails to generate sufficient high-quality jobs, forcing much of the labor force to take "refuge" in subsistence-level informal activities. Low human capital—itself a product of poor public education—traps workers in low-productivity roles, barring them from formal employment; while widespread financial exclusion and a lack of access to formal credit prevent informal firms from investing, scaling, and bearing the costs of formalization. All of this stems from a common source: weak states, where poor regulatory design and limited enforcement simultaneously foster informality and condemn an economy to the very stagnation that makes informality an alternative.

The second major drag on the region's productivity is a profound deficit in innovation and technology adoption, visible across multiple fronts, from poor management practices to insufficient investment in creating and absorbing new technologies, including digital ones. The evidence is stark. The region spends an average of just 0.55% of GDP in Research and Development (R&D), far below the OECD average of 2.66% and below the world average of nearly 2%. The results mirror the region's limited investment in R&D: LAC, home to more than 8% of the world's population, generates less than 1% of all global patent applications (see Chapter 3).

7. Informality also exacerbates inequality—another of the region's chronic problems. Since informality is concentrated among the most vulnerable workers, it perpetuates poverty and widens wage gaps. In fact, according Eslava et al., (2021), the overrepresentation of workers in low-productivity informal jobs explains more than a third of the inequality gap at the lower end of the region's income distribution when compared to the US.

Graph 1.8
R&D expenditure as a percentage of GDP



Note: Details on the composition of each country group are provided in the chapter appendix.

Source: Authors based on UNESCO (2025).

The lack of innovation and technology adoption is the primary cause of stagnation in firm productivity. Without the tools and culture for continuous improvement in processes and products, the region's firms cannot compete. Moreover, this stagnation weakens the process of resource reallocation. Fast-growing innovative firms and a critical mass of disruptive start-ups generate the “creative destruction” that an ecosystem needs to displace inefficient firms and reallocate capital and talent to more productive uses.

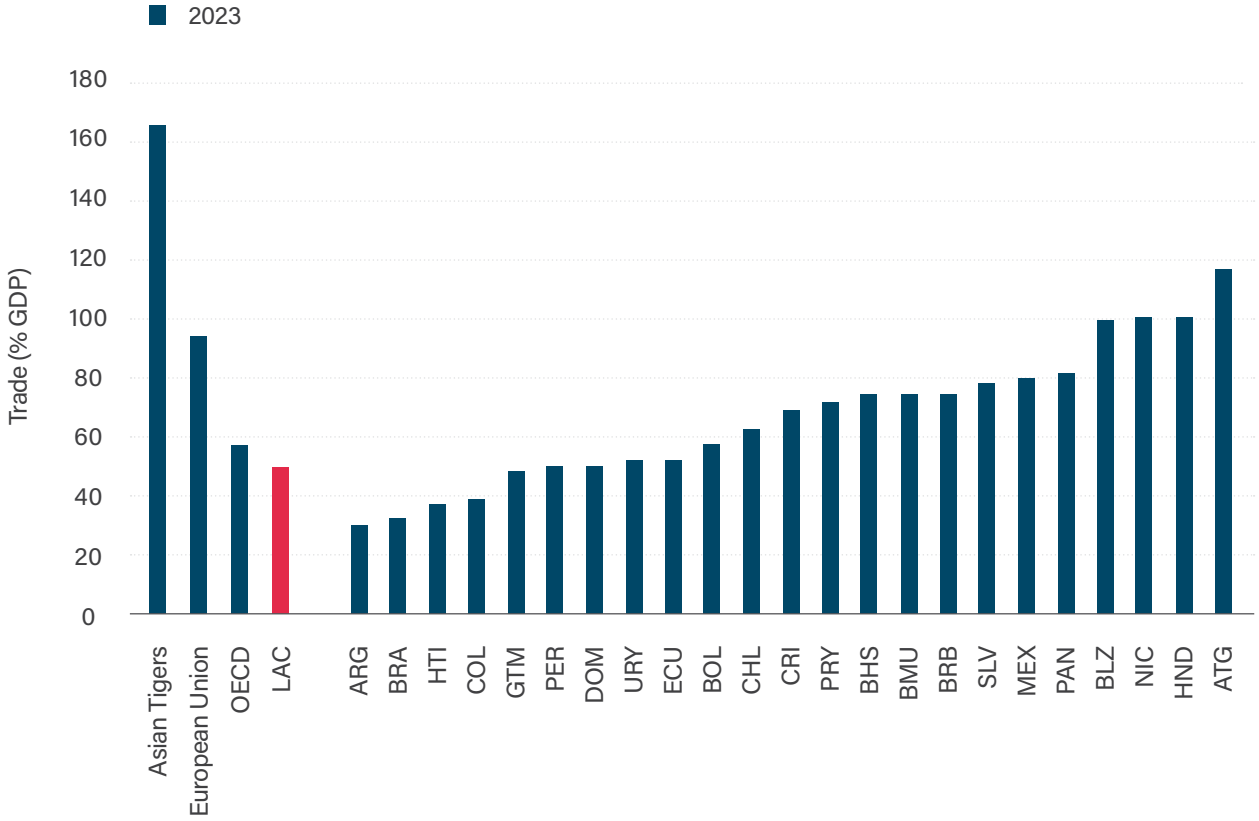
Digital transformation is particularly consequential. Digitalization is not just another tool; it is a catalyst that expands markets, optimizes processes, and redefines value chains (Estevadeordal et al., 2024; Nayyar et al., 2024). Technologies like Artificial Intelligence (AI) are poised to reshape the very nature of R&D (Cockburn et al., 2019). Without rapid and large-scale adoption, LAC risks missing a historic growth opportunity and falling further behind.

The third structural barrier is the limited and deficient integration of LAC into the global economy. Despite decades of trade liberalization, the region remains relatively closed compared to its peers. Total trade barely accounts for 50% of GDP, one of the lowest figures in the world (Graph 1.9, Panel A). The lack of trade is more salient in its intra-regional dimension: only 15% of trade takes place among the region's own countries, a stark contrast to the 60% in Europe or 50% in East Asia (Álvarez et al., 2025)

The problem, however, is not just one of scale, but of quality: the regional export basket is concentrated in low-economic complexity goods (Graph 1.9, Panel B), constraining the value-added of exports and limiting opportunities to embed them in global value chains.

Graph 1.9
Trade and Complexity ranking by countries and benchmarks

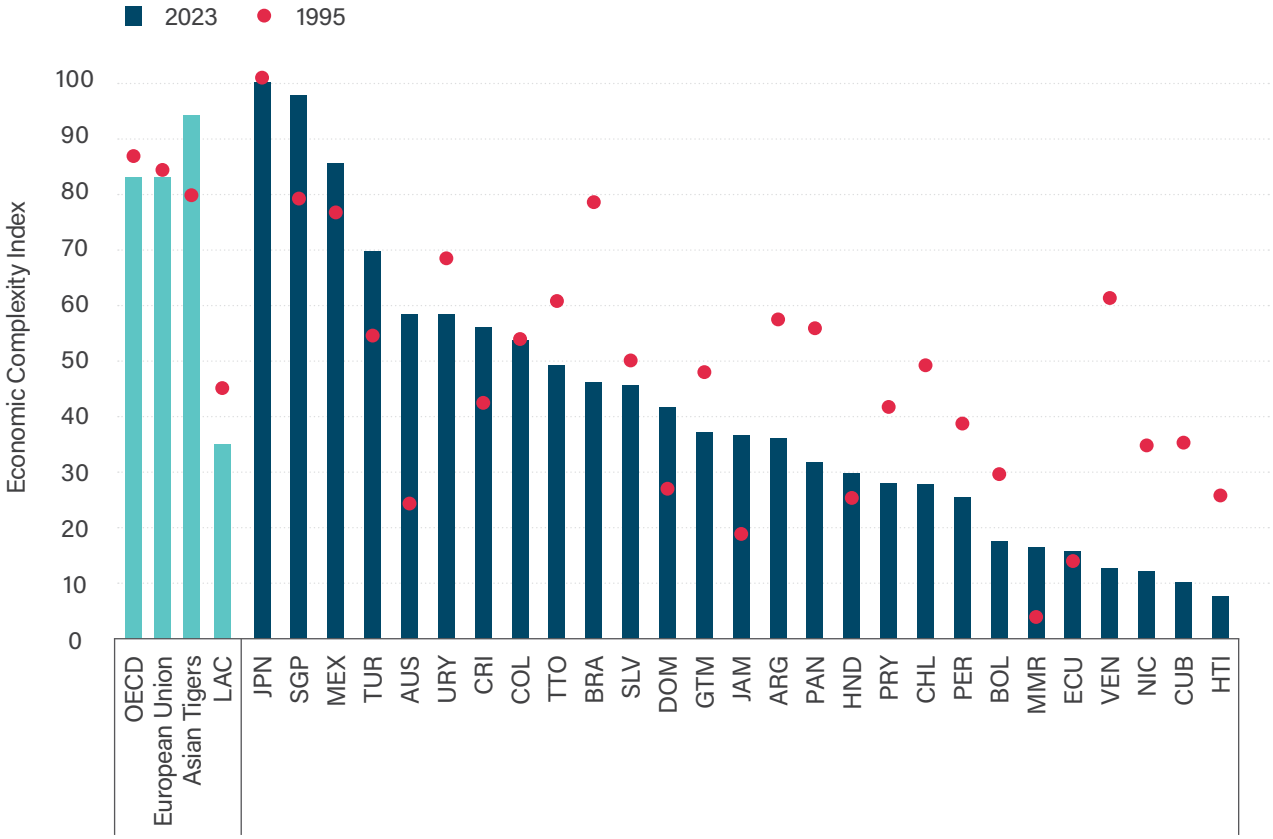
Panel A. Trade as a percentage of GDP, average 2018-2023



Note: This indicator refers to imports plus exports as a percentage of GDP. Details on the composition of each country group are provided in the chapter appendix.

Source: World Bank (2023).

Panel B. Complexity ranking by region (1995 – 2023)



Note: The Economic Complexity Index (ECI) in Panel B is calculated using the HS92 product classification and reflects the amount of productive knowledge embedded in a country's export structure, based on both the diversity of products it exports and the ubiquity of those products globally. Rankings have been normalized on a scale from 0 to 100, where 100 corresponds to the most complex economy and 0 to the least complex. The chart displays the simple average of ECI rankings by region, along with the countries with the highest and lowest complexity within each region in 1995 and their corresponding values in 2023. Details on the composition of each country group are provided in the chapter appendix.

Source: Authors based on The Growth Lab at Harvard University (2025).

The Product Complexity Index (PCI) of a good captures the amount and sophistication of know-how required to produce it. It is calculated based on how many other countries can produce the product and the economic complexity of those countries (Hidalgo and Hausmann, 2009). Likewise, the Economy Complexity Index (ECI) ranks a country based on the complexity of its export basket. On average, the region's economic complexity score is less than 40% of that of the world's top-performing economy. Moreover, except for Mexico, every country in the region falls below 60% of that global benchmark. Not only is LAC lagging in economic complexity, but the trend

is moving in the wrong direction: the region's ECI ranking is today 10 points lower than in 1995, and it has deteriorated for all but five of the 22 countries analyzed.[8]

Weak international integration deprives the region of powerful catalysts for productivity. One of them is competitive pressure. Exposure to trade triggers a process of natural selection: inefficient firms shrink or disappear, while the most productive ones expand by accessing new markets. This resource-reallocation mechanism has a significant impact, as shown in studies for Colombia (Eslava et al., 2013).

This competitive pressure, combined with improved access to markets and to higher-quality and more technologically advanced imported inputs, creates incentives for existing firms to increase their productivity. They are compelled to innovate, improve their management practices, and absorb knowledge. Foreign direct investment (FDI) and the presence of multinational corporations in the region accelerate this process of technology diffusion through imitation, production linkages, and human capital formation.

Therefore, international integration is a powerful tool for overcoming the other two barriers. By fostering competition and efficiency, trade integration can spur innovation, accelerate the growth of high-potential firms, and reduce informality, thereby promoting growth. Conversely, improving firms' innovation capacity increases their competitiveness and thus their ability to integrate into global markets.

The lack of complexity and diversification is also associated with low productive development. A diversified and complex export basket is much more than a simple trade indicator; it reflects an economy's productive capabilities and an engine for sustainable growth. First, diversification reduces vulnerability. Economies reliant on a few primary commodities (such as oil, copper, or soybeans) are exposed to international price volatility and the resulting boom-and-bust cycles, which hinder long-term planning and sustained investment. A broad and varied export basket stabilizes revenues and enables more resilient and predictable growth.

Beyond stability, the complexity and sophistication of the economy is a direct catalyst for productivity. Producing more complex goods and services requires a denser ecosystem of capabilities: more skilled workers, better infrastructure, stronger institutions, and greater collaboration among firms. Then, there is a direct correlation between a country's economic complexity and its productivity and income level. Part of this correlation is rooted in the fact that the production of sophisticated goods may generate knowledge spillovers, force firms to adopt better management and technological practices to compete globally, and foster innovation. In essence, a complex productive structure is not just a consequence of development, but may also be an active cause of it, pushing the entire economy up the productivity ladder.

8. Natural resource-based products tend to exhibit lower complexity. However, the region's complexity is low even when making sector-specific comparisons (see Graph 1.9, Panel B).

In summary, a growth strategy for the region requires removing barriers to innovation to increase productivity across firms in all sectors and subsectors; reducing frictions that lead to informality and misallocation; and fostering growth in the tradeable sector while increasing the diversity and complexity of the export mix.

Enabling factors

Macroeconomic stability is central to an entrepreneur's decision-making framework, as it affects the assessment of investment risk. When key macroeconomic variables are volatile, many projects are abandoned because expected returns are not high enough to compensate for uncertainty. Additionally, economic crises may have lasting negative effects on productivity by pushing credit-constrained firms out of the market, among other channels.

In the 1990s, the region made significant progress on macroeconomic stability. Prior to 1995, most countries in South America experienced periods of inflation above 100%, surpassing 1000% in Argentina, Bolivia, Brazil, and Peru. Economies in Central America and the Caribbean faced a more moderate but still unstable scenario, with Costa Rica, Mexico, the Dominican Republic, and Haiti recording periods of inflation above 20%.[9] From 1990 to 1996.

13 countries in the region reformed the legal framework governing their central banks, which proved largely successful in curbing inflation. Additionally, the two recent large-scale global economic shocks—the 2008 Global Financial Crisis (GFC) and the COVID-19 pandemic—show that the region's central banks were largely capable of implementing effective monetary expansion to mitigate the crises and were swift in reversing course to contain inflationary pressures (Jácome and Pienknagura, 2022).

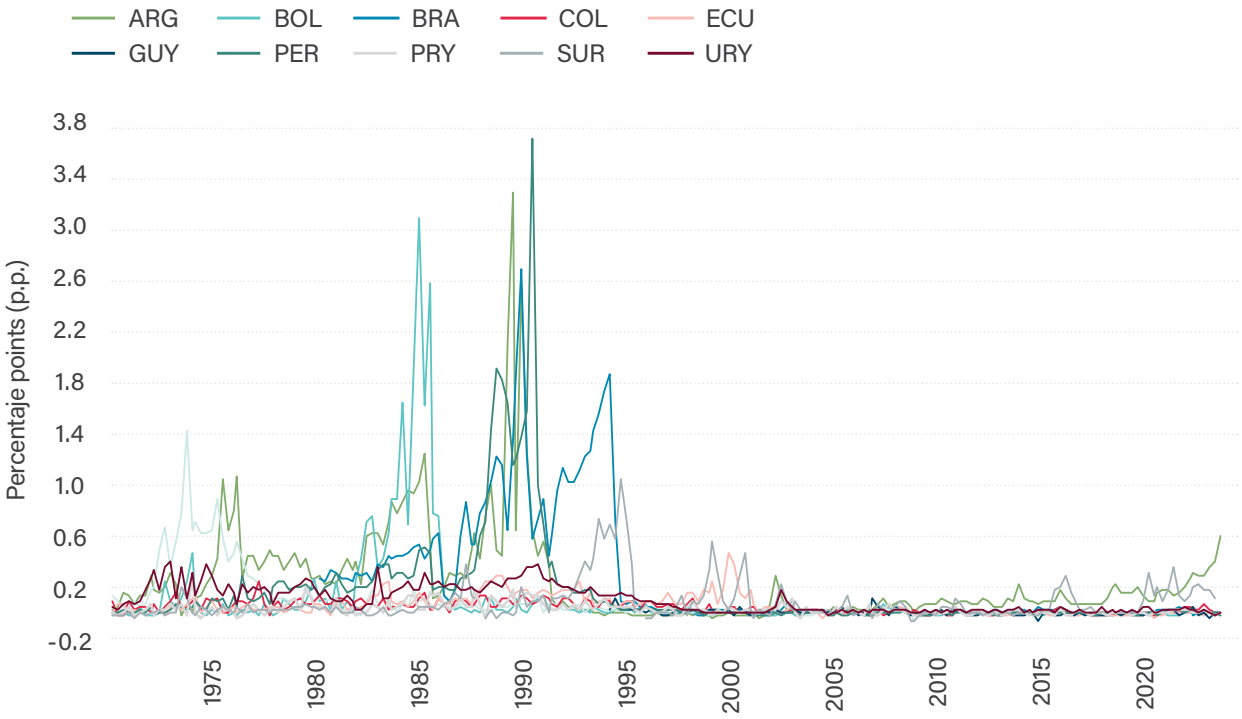
Fiscal sustainability, in turn, is a necessary condition for maintaining macroeconomic stability. Historically, most episodes of inflationary escalation and exchange-rate instability have been associated with fiscal dominance. Governments have incentives to expand the coverage or generosity of public benefits and services to meet citizens' demands. However, when governments are unable to finance their spending through increases in tax revenues and reach borrowing limits, central banks may come under pressure to finance it through monetary issuance, fueling inflation.

Fiscal imbalances represent a major threat to macroeconomic stability, particularly as the region's public debt levels are high and rising. Thirteen countries in the region report public debt above 70% of GDP (Álvarez et al., 2025). Access to financing is increasingly costly and uneven across countries in the region: the average rate on debt service is 3.6% in the Caribbean, 4% in South and Central America, and 5.3% in

9. Anglophone, Dutch and French Caribbean economies either use the US dollar or euro as their currency, or use a hard peg, as is the case for the Eastern Caribbean Currency Union (Antigua and Barbuda, Dominica, Grenada, St. Kitts and Nevis, St. Lucia, St. Vincent and the Grenadines, plus two British Overseas Territories, Anguilla and Montserrat). As a result, they experience limited domestic price volatility, largely mirroring the stability of their respective anchor currencies.

Graph 1.10
Inflation series by country

Panel A. South America

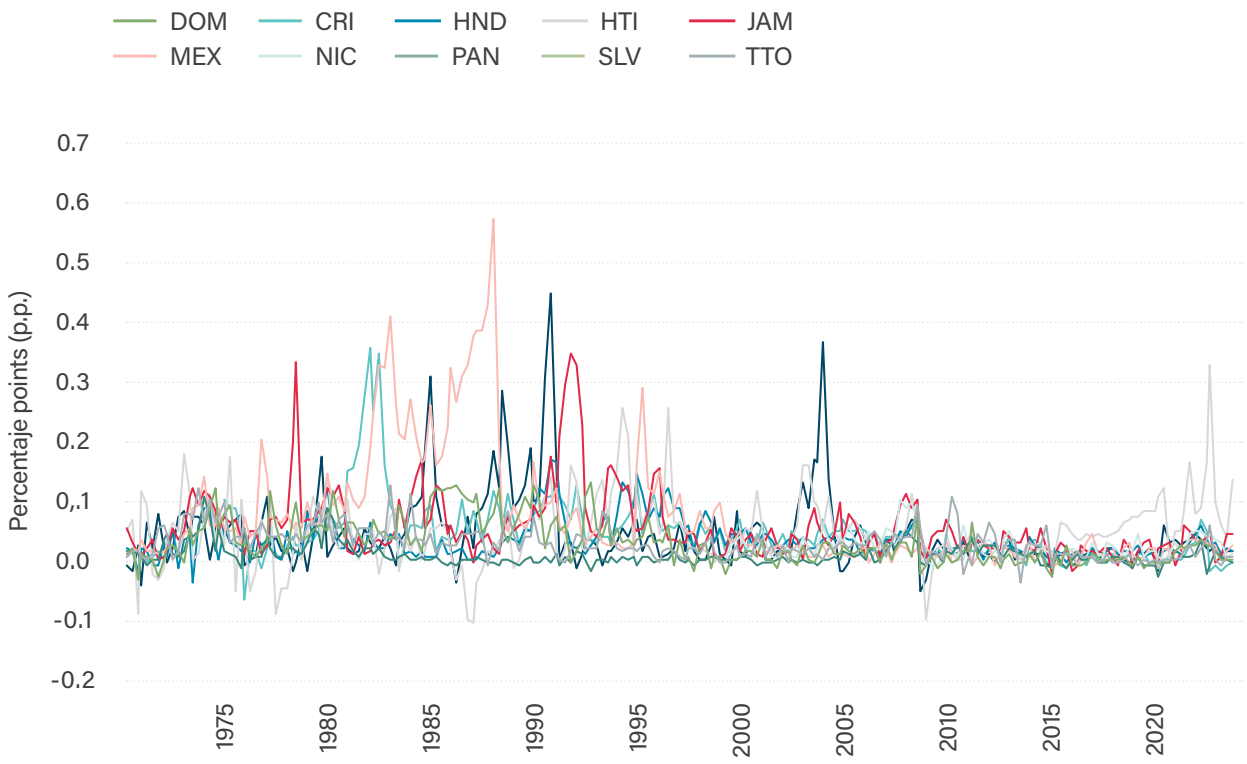


Mexico, and it exceeds 5% in eight countries. Even if countries manage to achieve a balanced budget, the prospects for debt sustainability are challenged by the higher rates at which the current debt holdings must be rolled over, as post-COVID recovery international rates are significantly higher than in the post-GFC period (see Chapter 5).

Financial development is another key factor not only for unlocking economic growth, but also for improving well-being. Well-functioning financial markets play a fundamental role in household well-being by allowing families to smooth consumption over time through savings and access to credit—especially by enabling homeownership. In addition, financial markets channel savings toward productive projects, favoring economic growth.

The region has made significant progress in financial depth. In 1980, the credit-to-GDP ratio across LAC countries averaged 25.6%; today it stands at 44.7%. However, the gap relative to developed countries has widened: the region's 2023 credit-to-GDP ratio is significantly lower than in the United Kingdom (121%) and the US (195%). The IMF's

Panel B. Mexico, Central America, and the Caribbean



Note: The graph shows the base 10 log of annualized quarterly gross inflation (a value of 1 in the graph corresponds to 9% inflation). For display purposes, series are truncated at a maximum of 4, representing 1000% inflation, and a minimum of -0.1, representing negative 20% inflation. Panel A includes Argentina, Bolivia, Brazil, Chile, Colombia, Ecuador, Guyana, Peru, Paraguay, Suriname, and Uruguay. Panel B includes the Dominican Republic, Costa Rica, Honduras, Haiti, Mexico, Jamaica, Nicaragua, Panama, El Salvador, and Trinidad and Tobago.

Source: Authors based on the IMF (2025) for all countries except Argentina. For Argentina, information is taken from Cavallo and Bertolotto (2016) up to 2018 and from INDEC (2024) from 2019 onwards.

Financial Development Index shows that improvements in financial development in the region have been more significant in credit markets than in capital markets (Álvarez et al., 2025). In the latter, Brazil, Chile, Colombia, Mexico, and Panama have experienced meaningful advances and show a relatively smaller gap relative to the US–Canada average (Álvarez et al., 2025).

Nonetheless, substantial progress is still required to broaden the base of publicly traded firms and expand household and institutional participation in allocating their savings through capital markets. In particular, developing a dynamic venture and seed-capital ecosystem is key to promoting the entry and scaling of innovative firms. This may arguably be the area with the greatest gaps relative to developed economies. Governments can help build this ecosystem in priority sectors (see Chapter 3).

Finally, two institutional pillars are critical for capital market development: the protection of minority shareholders and swift, efficient bankruptcy procedures (Álvarez et al., 2019).

State capacity to facilitate businesses, prevent capture, and control crime is a fundamental enabling factor for socioeconomic development.

Economic activity remains largely geographically anchored and is positively or negatively shaped by the local environment in which it occurs. Two dimensions are particularly salient. First, firms must comply with regulations and tax obligations that span all levels of government. These regulations are intended to address negative externalities and protect citizens. However, they are often poorly designed and overly burdensome, while compliance also depends on adequate services from national and local governments. Evidence indicates that regulatory burdens in LAC are high relative to developed regions and that governments frequently fall short in providing the high-quality services necessary to facilitate compliance (see Chapter 5).

Second, economic activity is shaped by local security conditions, such as the incidence of crime, which imposes substantial costs on society.[10] These include direct costs: public and private spending associated with crime prevention, control, judicial prosecution, and punishment, and the human and property costs borne by victims. Additionally, there are indirect costs associated with the loss of trust, which affect commercial and social interactions in general and reduce the incentives of businesses and families to invest in physical and human capital.

Crime is difficult to measure due to the lack of reliable data. Nevertheless, available evidence shows high levels of violence, corruption, and bribery across the region. Among the more robust indicators is the intentional homicide rate. According to data from the United Nations Office on Drugs and Crime (UNODC), the intentional homicide rate in LAC was 21.66 per 100,000 inhabitants in 2000. By 2022, it had fallen by only about two points. This rate remains an order of magnitude above the European average, and significantly higher than the world average of 5.61 homicides per 100,000 inhabitants. Regional trends vary widely: intentional homicides increased sharply in Mexico and most Caribbean countries (simple average rising from 12 to 22), while decreasing in Central and South America (from 22 to 15) (Álvarez et al., 2025).

A future of opportunities and challenges

The context in which LAC must pursue its development is defined by three inescapable transitions: demographic, digital, and green. These structural transitions

10. CAF is committed to generating actionable evidence on the incidence of crime and effective tools for its prevention and control, and is part of The Alliance for Security, Justice, and Development, an initiative comprising the World Bank, the Interamerican Development Bank, and 18 countries in LAC, among other institutions.

present the region with a combination of risks and opportunities. At the same time, a turbulent geopolitical context poses threats and possibilities, including the opportunity to forge new strategic alliances, such as a mutually beneficial relationship with the European Union (see Chapter 6).

The demographic transition: The challenge of growing old before getting rich

The region's population, while still younger than that of the OECD (10% over the age of 65 versus 21%), is aging rapidly. Driven by a 25-year increase in life expectancy and a drastic drop in the fertility rate in recent decades, projections indicate that by 2050, nearly one in five people in LAC will be over 65.

This shift presents an enormous challenge for the region. The loss of the demographic dividend[11] means that future growth must rely more heavily on productivity gains. At the same time, population aging will exert formidable fiscal pressure on pension and healthcare systems, making the need for robust growth to generate the resources to sustain these expenditures even more urgent.

This new context also calls for the institutionalization of long-term care services for the elderly, which are currently carried out mainly within families and whose burden falls disproportionately on women. At the same time, declining fertility rates can support an increase in women's participation in the labor force and higher investment in human capital per child.

The green transition: Between vulnerability and opportunity

The region is one of the most vulnerable to climate change, experiencing a dramatic increase in the frequency and intensity of extreme weather events in recent decades. At the same time, the global fight against global warming demands a massive substitution of fossil fuels—which today account for 80% of the world's energy matrix—with clean energy sources. This energy transition will, in turn, trigger a surge in demand for critical minerals: it is estimated that by 2050, demand for lithium will multiply tenfold, while demand for cobalt and nickel will triple and double, respectively.

For the region, this transition represents both a threat and a major productive development opportunity. Among the most salient risks are the need for costly investments in adaptation, the potential erosion of fiscal revenues of hydrocarbon-exporting countries, and the significant labor reallocation required, as an estimated

11. The demographic dividend is the phase of the demographic transition in which the dependency ratio decreases. This ratio measures the number of dependents (people younger than 15 and older than 64) divided by the working-age population (those between 15 and 64). In this period the demographic mechanic favors an increase in consumption per capita.

70% of workers are in "gray" jobs and may need different skills to transition to the growing segment of green jobs (Allub et al., 2024).

The opportunities are multiple because the region can play a key role in the green economy. Its abundance of critical minerals offers the possibility of integrating into clean energy value chains, while its exceptional potential for solar and wind power can attract energy-intensive industries and the development of an export industry for clean fuels such as green hydrogen (Allub et al., 2024).

The digital transformation: A race for productivity and inclusion

Two-thirds of the world's population already uses the internet, and this is just the beginning.[12] The penetration of technologies like 5G, the Internet of Things (IoT), robotics, and, above all, AI will grow exponentially. The capacity of AI models, for instance, has multiplied exponentially in recent years, signaling a technological revolution in the making.

Digitalization offers the region the possibility of productive leapfrogging, expanding markets, and radically improving efficiency. However, it also poses profound challenges for the labor market and for equity.

Automation generates a dual effect. On the one hand, it replaces human involvement in routine tasks; on the other, it increases productivity and creates new tasks, with a net effect on labor demand that is uncertain and highly debated (Acemoglu and Restrepo, 2019; Bessen, 2019). Moreover, general-purpose AI technologies are rapidly expanding the set of tasks that can be automatized, encompassing non-routine, cognitive-intensive tasks. One of the greatest concerns is the "polarization hypothesis." This states that technology will destroy middle-skill jobs, increasing the share of high- and low-skill jobs and, with it, wage inequality. While this trend is visible in the developed world, the evidence for the LAC region is still incipient, although the risk is latent (Álvarez et al., 2021; Maloney and Molina, 2019).

The fiscal situation in the new context

These three transitions converge on a critical point: fiscal space. Population aging will increase spending on pensions and healthcare; the green transition will require huge outlays for mitigation and adaptation while reducing hydrocarbon revenues; and the digital and green transformations will demand heavy investments in infrastructure, human capital, and policy to alleviate the costs of workers' reallocation.

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12. Gaps exist between and within countries. Access in LAC is 13 percentage points lower than in the developed world. Likewise, in upper-middle-income countries, there is a 22-percentage-point gap in internet use between urban and rural areas; the gender gap is five percentage points, and the gap between adults and youth is 19 points. For lower-middle-income countries, these figures are 34, 15, and 13 percentage points, respectively (World Bank, 2024a).

To finance this new and complex agenda, the region will need to find new sources of revenue (such as environmental taxes or royalties on mineral exploitation) and, crucially, leverage digitalization itself to modernize the state, increase spending efficiency, and strengthen tax collection (see Chapter 5 for more detail).

The geopolitical reshuffle: Risks and opportunities in a turbulent world

The current international context is marked by growing fragmentation, the strategic rivalry between the US and China, and a U.S. trade policy geared toward protecting its local industry, featuring a significant 10% baseline tariff across countries and goods, several country-specific higher "trade-balancing" tariffs, as well as the use of protectionism as a tool for bilateral negotiation. In this turbulent context, the pursuit of resilience is of increasing importance for all countries and regions.

Phenomena such as the COVID-19 pandemic and the war in Ukraine have only accelerated this trend, exposing the fragility of extended value chains and pushing global powers and companies to reconfigure their production networks through strategies like nearshoring (relocating production nearby) and friend-shoring (production in allied countries).

For a region historically sensitive to global winds like LAC, this new scenario is a double-edged sword that presents both risks and opportunities. For one, a more fragmented world is also more volatile and unpredictable, exposing the region's economies to trade and financial shocks. Furthermore, global polarization can exacerbate existing internal political polarization, making it difficult to build the consensus needed for a long-term development agenda. The return to protectionism may reduce the export capacity of the region's countries, especially those with high exposure to the US or to countries that could be heavily affected by a global trade war.

For another, the region's strategic assets take on new relevance in the current context: its vast resources for the energy transition and its capacity as an agri-food powerhouse make it a key player in global energy and food security. This gives the region negotiating leverage and the ability to forge diversified alliances, not only with its traditional partners but also with powers like the EU and other actors from the Global South. The need for US companies to secure their supply chains represents a nearshoring opportunity for countries like Mexico, which could attract investment, develop industrial capabilities, create high-quality jobs, and sophisticate their export basket. However, these nearshoring opportunities are not without uncertainties, linked among other things to the protectionist components of the U.S. administration's policy and frictions in the relationships between the US and the countries of the region.

Sectoral opportunities for the 21st century

LAC is at a historic crossroads, where its well-known abundance of natural resources converges with two global transformative forces: digitalization and the green transition. This confluence offers an opportunity to redefine the region's economic future. Sectors such as tourism, health, agriculture, mining, and energy are undergoing profound transformation—high-precision agriculture, sustainable tourism, and low-emission energy generation—and can become engines of a more sophisticated and resilient development model.

However, the opportunities presented by these global shifts are not limited to those closely related sectors. They extend to those linked by input-output relationships, and more importantly, to the development of goods and services in other sectors that draw on similar capabilities, a shared pool of knowledge, and technology. To take advantage of these opportunities, the state can play an active and strategic role; one that recognizes the challenges and follows global best practices in industrial policy as a key tool to drive these engines of growth.

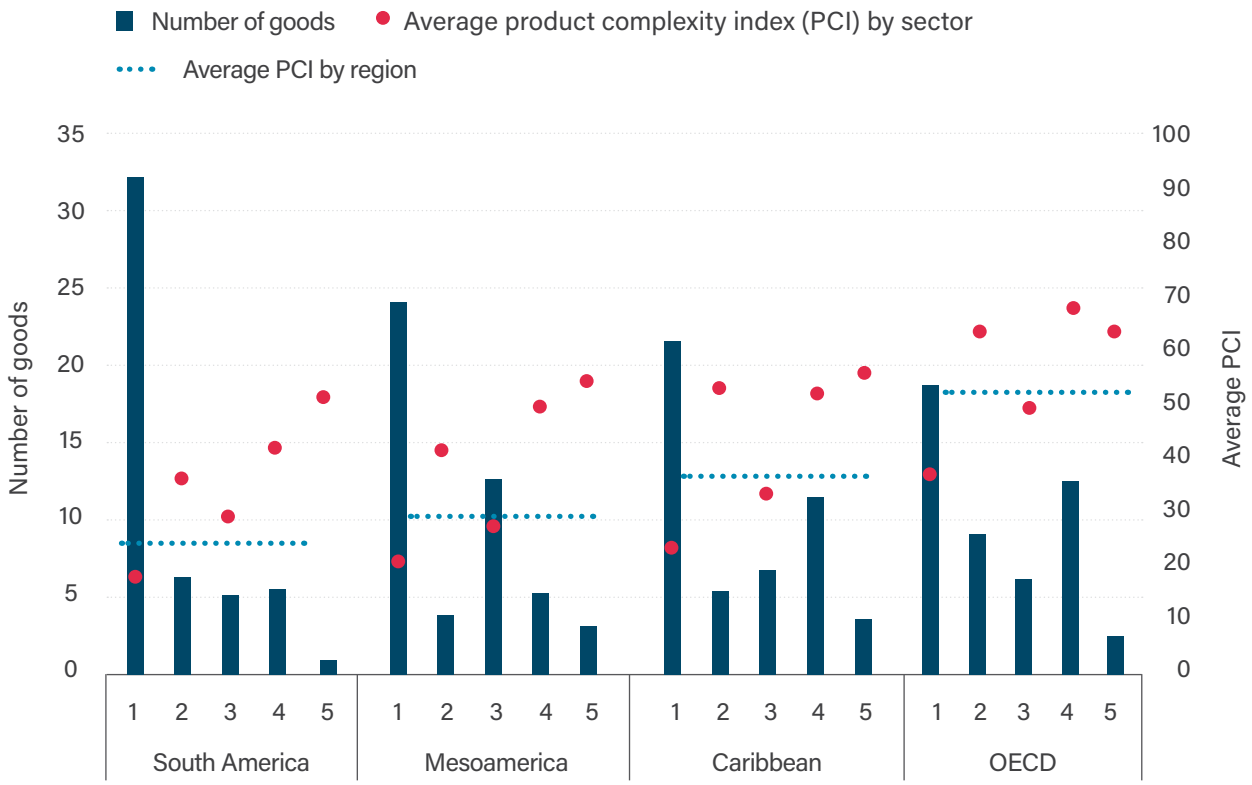
The imprints of the region's substantial natural endowment

LAC enjoys extraordinary natural abundance. With just 8% of the global population and 16% of the world's land area, it contains 15% of global agricultural land, 23% of forests, and 31% of freshwater sources. Its energy endowment is equally remarkable, with 19% of global oil reserves and a vast potential in solar and wind power. The region is also a key repository of critical minerals needed for the green transition, hosting 47% of the world's lithium reserves and 36% of copper reserves. Added to this is unparalleled biodiversity: six of the world's 17 megadiverse countries are located in LAC (Allub et al., 2024; Brassiolo et al., 2023).

LAC holds an estimated 12% of global natural capital, while its share of renewable natural capital is particularly high, estimated at 16%. However, these figures are far from the levels of global leaders such as Australia, Norway, and Canada. For example, excluding LAC outliers in natural wealth per capita (Suriname and Guyana), in the rest of the region, natural capital per worker averages around 6% of the wealthiest country in this metric, Australia (World Bank, 2024d).

The imprint of LAC's natural resource wealth is evident in both the fiscal and external dependence of many countries in the region. In Ecuador, Guyana, and Trinidad and Tobago, fiscal revenues from hydrocarbons exceed 4% of GDP, while minerals contribute up to 3% in Chile and Peru. Similarly, fossil fuel exports account for over 20% of total foreign sales in Colombia, Bolivia, and Ecuador, creating a strong vulnerability to international price volatility and the global energy transition. Natural capital has profoundly shaped the region's economic structure: the primary and extractive sectors account for over 10% of the regional GDP, a figure much higher than that of the EU or the US (ECLAC, 2024).

Graph 1.11
Number of goods in the top RCA ranking and complexity index per sector and subregion



Note: The graph shows the sector composition of the top 50 products with the highest value in the Revealed Comparative Advantage (RCA) index (left axis). This index measures the ratio of a good's participation in total exports of a country relative to that observed at the world level, so that an RCA value of 1 means that the participation of that good in total exports for a country is the same as for the average country. The dotted line indicates the export value-weighted average of the product complexity index (PCI) within each subregion and sector (right axis). Sectors on the horizontal axis are defined as follows: (1) Agro-based and natural products: vegetables, animals, wood and paper, minerals, fuels, ores, salts, stone, glass, and ceramics, (2) Chemicals and derivatives: chemicals and plastics, (3) Light manufactures and consumer goods: textiles, garments, footwear, and furniture, (4) Heavy manufactures and capital goods: machinery, instruments, and metals, and (5) Technology and transport: electronics and vehicles. Export baskets vary across regions. Central America specializes in chemicals and selected machinery; South America combines industrial inputs and metal products; the Caribbean shows greater diversification; and OECD countries concentrate on technology-intensive goods. Across all regions, human and animal blood products, vaccines, and biological cultures are prominent. Details on the composition of each country group are provided in the chapter appendix.

Source: Authors based on The Growth Lab at Harvard University (2025).

This reliance on natural resources is also apparent in the region's export profile: natural resource-based products represent more than half of total exports (ECLAC, 2024). According to the Atlas of Economic Complexity, 30 of the top 50 products with the highest Revealed Comparative Advantage (RCA) in South America are agro-based or natural products (compared to just under 20 for the OECD) (Graph 1.11).[13] Products in these sectors generally exhibit a low level of economic complexity. However, even when comparing within sectors, the complexity index for LAC remains significantly below the OECD average. The issue is not just that the region's production is biased toward natural resource-based goods but toward low-complexity goods.

The region's vast natural resource endowment is a powerful lever for development, but it offers no guarantee of success. The challenge is how to leverage this natural endowment to spur broad-based development. This demands a policy agenda, developed in detail throughout the report, that combines horizontal and vertical (sector-specific) actions and addresses the challenges involved in leveraging natural resources for lasting development (see Box 1.1).

This agenda includes catalyzing innovation, deepening international insertion, and reducing informality. Achieving these objectives requires strengthening the institutional framework for a stronger state and a more agile, streamlined, and competitive environment. These mechanisms are essential to build upon existing capabilities, develop a more complex and diversified economy, and move beyond simple dependence on the primary sector.

Box 1.1 Channeling natural resources for sustainable development

The natural endowment of LAC presents substantial opportunities to spur economic development. This wealth can be channeled to close development gaps, such as financing investments in human capital or infrastructure. Additionally, these resources are necessary inputs in the production of all goods and services, and local availability can be a source of comparative advantage for connected sectors. However, natural capital differs in key ways from human and physical capital.

First, they are characterized by diffuse property rights. For instance, subsoil minerals, oil, fish stock, and forests are typically public property. As a result, residents hold an ex-ante equal claim to their economic rent (i.e., the economic returns exceeding the normal returns on investment in other sectors). This raises important questions regarding the optimal rate of extraction of natural

13. The graph shows the sectoral composition of the top 50 exported products with the highest RCA index. This index measures the ratio of a good's participation in total exports of a country relative to that observed at the world level, so that an RCA value of 1 means that the participation of that good in total exports for a country is the same as for the average country.

capital and the distribution of benefits, both among the current inhabitants and between present and future generations.

Second, they are linked to environmental and social negative externalities, including degraded landscapes, water depletion, and water and air pollution. These environmental externalities mostly affect local communities. Minimizing and compensating for these externalities is crucial to maintaining the social license required for these sectors among local communities and securing access to environmentally aware foreign markets.

Third, resource wealth can have detrimental effects when institutions are weak. One channel is corruption: when government officials have discretion and low accountability over how to allocate production permits for natural resources, corruption becomes more prevalent. Evidence has found an adverse impact on the prevalence of bribery, preferential treatment, and the misappropriation of conservation funds (Dasgupta, 2021; Kotsadam et al., 2015; Riley, 1998; Sala-i-Martin and Subramanian, 2013; Sundström, 2016). Another channel is the detrimental macroeconomic effects. Specialization in natural resources makes countries overly exposed to commodity price cycles. Additionally, large and transitory capital inflows associated with investments in resource extraction and exports can entail exchange-rate appreciation, eroding and crowding out non-commodity tradable sectors, permanently impairing economic growth (Frankel, 2010; Hausmann and Rigobon, 2003).

Fiscal policy is central to overcoming the challenges around resource-based development. It should be designed to adequately capture the resource rents without discouraging the development of these sectors and anchored in robust macroeconomic institutions to prevent excessive public spending and adequately insulate exchange rates from transitory terms-of-trade swings and commodity booms.

Policy toolkits should aim to channel fiscal revenues from non-renewable resources into investment in infrastructure and human capital to enable sustained and diversified economic growth (see Chapter 5).

Building on existing capabilities

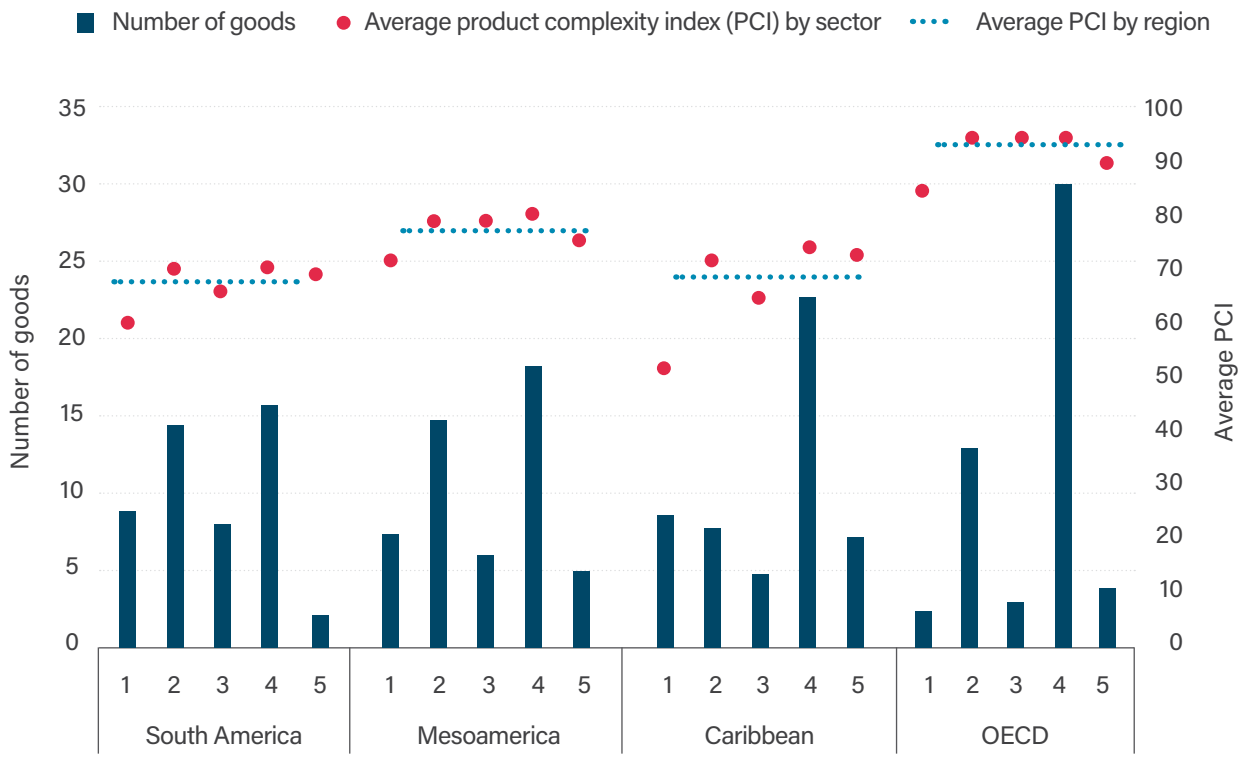
The Atlas of Economic Complexity points to diversification pathways based on a country's current export basket.[14] The approach considers three components. First, the *distance* of a good to the current export basket of a country, measured by how likely it is to observe the co-occurrence of exports of that product in other countries with similar

14. While the Atlas of Economic Complexity is a powerful diagnostic tool for identifying 'nearby' product opportunities, it has known limitations. Its reliance on historical goods-trade data means it largely overlooks the entire services sector and the domestic economy. Furthermore, it reveals what opportunities are close, but not how to capture them, i.e., the specific 'missing capabilities' (skills, regulations, infrastructure) that policy must address.

export structures. Second, the *complexity* of that good. Third, the *opportunity*, based on how close a good is to other complex goods within the global product network.

Considering these three components, Graph 1.12 shows a description of the top 50 goods on this diversification path, ranked by the Opportunity Gain index. Development opportunities continue to emerge in products linked to agriculture and mining, with promising opportunities also standing out in the chemical and machinery sectors. The products highlighted by this opportunity set suggest some diversification paths that follow input-output linkages within natural-resource value chains. This pattern implies that sectoral industrial policies aimed at "climbing the ladder of the value chain" align with the diversification pathways implied by export baskets around the world.

Graph 1.12
Top opportunity goods among those close to the current export basket



Note: The graph shows a description of the top 50 goods in terms of their Opportunity Gain Index for each country, among goods that are below the median distance from the current export basket in the product space. Sectors on the horizontal axis are defined as follows: (1) *Agro-based and natural products* include vegetables, animals, wood and paper, minerals, fuels, ores, and salts. (2) *Chemicals and derivatives* include chemicals and plastics. (3) *Light manufactures and consumer goods* include textiles, garments, footwear and furniture, and stone, glass and ceramics. (4) Heavy manufactures and capital goods include machinery, instruments, and metals. (5) *Technology and transport* include electronics and vehicles. Export baskets differ across regions. For details on the composition of goods in each region, see the note in Graph 1.11. Details on the composition of each country group are provided in the chapter appendix.

Source: Authors based on The Growth Lab at Harvard University (2025).

The role of services

The analysis above focuses on internationally traded goods and does not consider domestically produced and consumed goods or the service sector. Yet services play an increasingly significant role in productive development.

First, as firms grow and become more productive and complex, specialization and the division of labor drive them to outsource tasks previously performed in-house to specialized service providers. This process expands demand for business services such as consulting and marketing.

Second, digitalization and technological change have significantly shifted the frontier between the tradeable and non-tradeable sectors, particularly enabling services to participate in international trade. As a result, services increasingly exhibit characteristics once unique to manufacturing: growth is no longer constrained by domestic demand, and firms can tap into opportunities for learning from linkages across international borders.

Third, recent evidence shows that the process of structural transformation today may differ from the path followed by early industrializers. *Peak-manufacturing*—the maximum employment share that manufacturing reaches before it starts to decline in favor of services—is significantly lower and occurs at lower levels of income per capita (McMillan et al., 2014; Rodrik, 2016).

For countries in LAC, aiming to pursue a natural resource-intensive development strategy, the importance of promoting productivity gains in service sectors becomes evident when examining sector linkages. Table 1.3 lists the three most important upward and downward linkages for the region's principal primary sectors. A fundamental and often underestimated connection is apparent: the strong linkages to services required for the primary sectors. Commerce, logistics, energy services, accommodation, and, crucially, business services (such as consulting, software, and financial services) emerge as sectors whose growth is directly linked to the growth of the region's primary sectors.

Table 1.1
Top sector linkages for selected natural-resource sectors

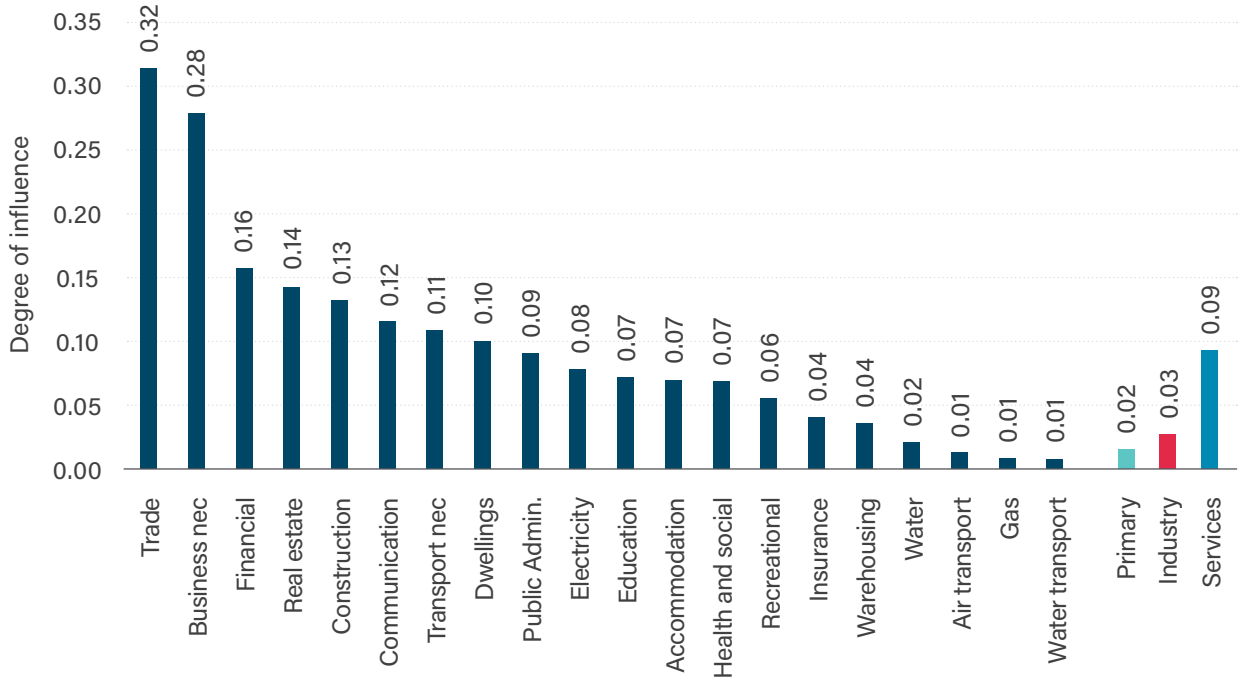
Sector	Backward linkages	Forward linkages
Agriculture	Chemistry products, trade, agriculture	Agroindustry, agriculture, beverages and tobacco products
Livestock	Agroindustry, livestock, trade	Agroindustry, livestock, accommodation, food and services
Forestry	Business services nec,* forestry, trade	Wood products, paper products, construction
Fishing	Agroindustry, fishing, trade	Agroindustry, fishing, accommodation, food and services
Agroindustry	Livestock, agroindustry, agriculture	Livestock, agroindustry, agriculture
Mining	Mining, energy, trade	Construction, mining, metal products
Energy	Oil and gas, energy, business services	Mining, energy, trade
Oil and gas	Oil and gas, business services, transport	Oil and gas, transport, energy

Note: The table lists the three main backward (upstream) and forward (downstream) linkages for LAC's principal natural-resource sectors. The source data use a 65-sector disaggregation, which is regrouped into eight sector aggregates for presentation. The regional input–output table is constructed as the simple (unweighted) average of the available country tables. A sector may link to itself when the largest intermediate-input flows occur between different subsectors within the same aggregate; within-subsector flows are excluded from the analysis. The abbreviation "nes" means "not elsewhere classified".

Source: Authors based on GTAP v.11 (Aguiar et al., 2022).

The significance of higher productivity in the service sector is also evident in the degree of influence measures across sectors. This measure captures the extent to which an increase in the efficiency of a sector propagates to the overall economy due to its direct and indirect influence as a supplier of inputs to the rest of the economy. The graph shows that services have roughly three times the influence of manufacturing or primary sectors. Within services, commerce and business services (accounting, financial, and others) stand out, while communication and land transport are also above the mean service-sector influence. The large degree of influence also coexists with significant productivity gaps in these sectors in LAC relative to advanced economies: business services, transport, and commerce all operate at below 40% of U.S. productivity levels (Graph 1.6), indicating significant space for improvement.

Graph 1.13
Degree of influence of service subsectors and grouped sectors in LAC



Note: The bars in the figure represent the degree of influence for the three aggregate sectors and for each services subsector in LAC. AC values are unweighted (simple) averages across the countries with available data. The degree of influence of a sector is computed as the weighted sum of its forward (row) coefficients in the Leontief inverse of the input–output table, where the weights are the economy's value-added shares across sectors.

Source: Authors based on *GGDC Productivity Level Database* (Inklaar et al., 2023).

The report discusses the levers available to improve the quality of input services. They can be summarized in four pillars: promoting innovation (Chapter 3), deepening international trade (Chapter 4), strengthening regulatory frameworks, improving compliance, and combating corruption (Chapter 5), and attracting foreign direct investment (Chapter 6).

Finally, services are expected to play a larger role in employment in LAC as automation, trade exposure, and premature deindustrialization produce job reallocation. A central challenge is to boost productivity in typically non-tradable, low-skill-intensive activities—such as retail and care services—so they generate higher wages and formality (Rodrik and Stiglitz, 2024). These policies are discussed in Chapter 2.

From design to action: Overcoming implementation challenges

The implementation of structural reforms in LAC, which are necessary to promote sustainable development, faces formidable challenges. The first set of challenges is tied to the historical issues of industrial policies.

The global return of industrial policy and a strategic approach for the region

As Hausmann and Hidalgo (2011) show, countries that gradually diversify their production into more complex products are more likely to achieve sustained growth. Beyond growth, a more diverse and complex productive structure reduces macroeconomic vulnerability (Reinhart et al., 2016), creates high-quality jobs, diminishes geopolitical risks, and allows for the alignment of growth with climate objectives.

Achieving productive upgrading requires the accumulation, mobilization, and combination of productive knowledge and capabilities that are partly tacit, embedded in workers, firms, and their networks. This process demands moving beyond horizontal policies toward targeted sectoral policies (industrial policy).

The rationale for industrial policies is based on the existence of market failures: productivity externalities, coordination failures between investments, and the need for sector-specific public goods (such as infrastructure or specialized human capital) (Juhász et al., 2023). Industrial policies have historically been an integral component of public-policy packages aimed at fostering growth (see Box 1.2).

Box 1.2 A brief history of industrial policy

The use of industrial policy to shape economic development has deep historical roots and has evolved through distinct phases worldwide.

- **Early Industrialization (18th–19th Centuries):** Early industrializers in Europe and the United States used steep tariffs, granted state monopolies, and leveraged resources from colonial territories to build domestic productive capacity (Juhász and Steinwender, 2024).

- **20th Century & Cold War:** The world wars and the Cold War ushered in an era of heavy-handed industrial policy, driven by state-sponsored military research and development. Recent evidence points to the long-term

positive impacts of this military R&D on local productivity, employment, and manufacturing value added (Garin and Rothbaum, 2025; Kantor and Whalley, 2023).

- **Divergent Paths (Post-1970s):**

  ✓ **The West:** Western economies largely shifted toward laissez-faire policies, championing trade liberalization through the GATT and later the WTO, which committed countries to reducing tariffs and subsidies. However, sectoral interventions never fully vanished, persisting through state-owned enterprises, domestic procurement rules, and dual-use (civil-military) R&D, which enabled key technologies like the internet.

  ✓ **East Asia:** The "Tiger" economies adopted export-oriented industrial policies that combined selective protection with strict performance criteria and sunset clauses. South Korea's Heavy and Chemical Industries (HCI) program is an emblematic case with proven large and persistent effects on the targeted sectors (Kim et al., 2025; Lane, 2025). China's "Made in China 2025" initiative follows a similar state-led strategy.

  ✓ **Latin America:** Beginning in the mid-20th century, the region pursued Import-Substitution Industrialization (ISI), using high tariffs to protect domestic industries. While this led to some technological upgrading, many protected firms remained inefficient decades later (Irwin, 2021). Notable exceptions include Brazil's Embraer in regional aviation and Argentina's nuclear cluster.

The Modern Resurgence (Post-COVID Era): Recent years have seen an explicit return of industrial policy in the West/advanced economies. This shift commenced with the first Trump administration's significant tariff increases and expanded with the Biden administration's large-scale legislative pushes to spur capacity in green energy and semiconductors (the Inflation Reduction Act and the CHIPS Act). The EU has also launched similar initiatives aimed at green and digital strategic autonomy. Finally, the second Trump administration adopted starkly protectionist measures and discriminatory tariffs to support the U.S. manufacturing sector.

Unfortunately, despite their potential, industrial policies carry significant risks. The first is the risk of information: governments lack perfect information to "pick winners," which can lead to resource allocation toward sectors without real potential. The second risk is political capture: policies that alter prices or distribute subsidies create enormous incentives for lobbying and corruption, resulting in decisions shaped by vested interests rather than productive merit. The costs of these failures are high, ranging from direct fiscal costs to the opportunity cost of not supporting more dynamic sectors.

Mitigating these risks requires a modern approach grounded in clear principles. First, establishing the foundations for a healthy and productive economy. The precondition for any successful productive policy is macroeconomic and institutional stability. This includes consistent fiscal frameworks, low and predictable inflation, and transparent exchange-rate regimes. Reducing uncertainty is essential for long-term investment. Equally important is improving regulatory design, improving transparency, and ensuring equitable enforcement to lower entry barriers.

Second, prioritize knowledge accumulation across all sectors. Policy should focus on strengthening capabilities and knowledge throughout the economy. This knowledge accumulation should start by incentivizing investment to accumulate the necessary physical capital and infrastructure; then, by promoting technology adoption to catch up to the global frontier; and finally, by supporting frontier innovation. Adoption of existing technology may be considered low-hanging fruit, though adaptation to local needs and regulatory conditions often requires significant applied research (World Bank, 2024e).

Third, adopt a modern, transparent, and prudent approach to sector-specific interventions. Agosin et al. (2014) propose a 2×2 classification of industrial policies along two axes: horizontal vs. vertical interventions, and public goods vs. market-distorting measures. Vertical, sector-specific public goods offer considerable scope for productive development, for example, financing sectoral technical R&D, investing in traceability systems for the agrifood chain, or building specialized infrastructure such as cold-storage facilities in ports and airports.

By contrast, market-distorting interventions, those that affect price signals directly through subsidies, tariffs, or tax exemptions, both horizontal and sector-specific, are the riskiest instruments. They can sometimes be directed to address sector or scale externalities or resolve coordination failures, but they typically entail high fiscal costs and can generate large efficiency losses that slow productivity growth. Additionally, they are prone to rent-seeking behavior and the entrenchment of incumbents.

When governments resort to such market-distorting tools, caution is paramount. Interventions must be tied to clear policy objectives, linked to measurable performance targets, and subject to regular evaluations that allow for timely withdrawal. Transparency about their fiscal and consumer costs is essential. Importantly, the failure of state-supported sectoral initiatives should be viewed as a natural outcome of risk-taking, not a policy defeat, provided that unsuccessful interventions are phased out quickly and consistently.

Finally, use natural resources as a strategic lever. Rents from natural resources can be a powerful tool if channeled intelligently, for example, into sector-specific research funds or supplier-development programs that embed external knowledge domestically. In this way, natural capital can be transformed into more durable forms of capital: human, technological, and strong institutions.

Navigating the political economy of reforms

Implementing the structural reforms required for the region's development agenda faces formidable political-economy challenges. A central issue lies in the distribution of costs and benefits: the costs of reforms are typically immediate and concentrated among well-organized groups, while the benefits are diffuse and materialize typically in the long term. Overcoming this dynamic requires a strategy that relies on the following three key principles.

First, *Rigor and Communicative Leadership*. Successful reforms rest on solid technical foundations that quantify the costs of inaction (the *status quo*) and the benefits of transformation (change). However, evidence alone is insufficient. Effective reforms demand strong political leadership capable of clearly communicating why change is necessary and of building consensus around reforms. Technical advisory commissions with broad participation have proven to be useful tools in the region for validating assessments and proposals with the public.

Second, *Gradualism and Compensation*. To reduce resistance, it is crucial to incorporate transition mechanisms. From an economic standpoint, this facilitates adjustments; from a political one, it neutralizes opposition from the most affected groups. Excluding current participants from new rules (e.g., pension reforms that only affect younger workers with more capacity to adjust to the new terms) or designing compensation mechanisms for those adversely affected are essential strategies to ensure the viability and sustainability of reforms

Third and last, *A Systemic View of Policies and Instruments*. An effective strategy involves "bundling" complementary measures that reinforce reform objectives. In the case of tax reforms, for instance, having a portfolio of instruments—rather than a single tax—allows the costs to be diluted among different actors. Likewise, a systemic view allows for "packaging" costs with visible benefits (e.g., combining fiscal sustainability measures with an expansion of coverage or improvement in service quality). This helps to dilute the veto power of specific groups.

Ultimately, the success of reforms depends not only on their technical design but also on a sophisticated political strategy capable of managing these tensions, compensating the losers, and articulating a persuasive long-term vision for society.

A particularly important source of tension will come from the labor market. Indeed, the green and digital transitions, alongside trade shocks and industrial policies, will require a significant reallocation of workers. If not managed properly, this process could exacerbate informality, unemployment, and inequality. The problem is

particularly acute for low-skill workers. However, complementary policies can mitigate these negative effects. Providing social protection and promoting training and labor inclusion—through active labor market policies (see Chapter 2)—is crucial. The next chapter discusses this set of policies in detail.

Finally, it is crucial to emphasize that the sustainable development agenda—and productive development in particular—is an inherently long-term endeavor. It requires a perspective that transcends electoral cycles, prioritizing strategic stability over time. In this context, National Development Plans could act as anchors to shield economic strategy from short-term political volatility. By codifying goals and fostering broad societal consensus, these plans may help transform transient government initiatives into enduring state policies, providing the certainty and direction needed to guide public and private investment across different administrations. Furthermore, engagement with the multilateral system—through adherence to the UN Sustainable Development Goals and partnerships with Multilateral Development Banks—provides an external layer of continuity. By anchoring national goals to international commitments and long-term financing, countries can better insulate their development strategies from domestic political turnover.

Chapter 1 Appendix

This appendix provides additional information and clarifications on the figures, graphs, and tables presented throughout this chapter. In particular, it details the composition of the regional and income groups used in each graph.

Composition of country groups

Graph 1.1:

- **Asian Tigers:** Hong Kong, Singapore, South Korea, Taiwan.
- **Caribbean:** Antigua and Barbuda, The Bahamas, Barbados, Cuba, Dominican Republic, Grenada, Haiti, Jamaica, St. Kitts and Nevis, St. Lucia, St. Vincent and the Grenadines, Trinidad and Tobago.
- **Mesoamerica:** Belize, Costa Rica, El Salvador, Guatemala, Honduras, Mexico, Nicaragua, Panama.
- **South America:** Argentina, Bolivia, Brazil, Chile, Colombia, Ecuador, Guyana, Paraguay, Peru, Suriname, Uruguay, Venezuela.
- **Latin America:** Caribbean, Mesoamerica, and South America.
- **Non-LAC high-income OECD:** Australia, Austria, Belgium, Canada, Switzerland, Czechia, Germany, Denmark, Spain, Estonia, Finland, France, United Kingdom, Greece, Hungary, Ireland, Iceland, Israel, Italy, Japan, South Korea, Lithuania, Luxembourg, Latvia, Netherlands, Norway, New Zealand, Poland, Portugal, Slovak Republic, Slovenia, Sweden, Türkiye, United States.

Graph 1.2:

- **Latin America and the Caribbean (LAC):** We use the region as predefined in the World Bank data. Antigua and Barbuda, Argentina, The Bahamas, Barbados, Belize, Bolivia, Brazil, Chile, Colombia, Costa Rica, Cuba, Dominican Republic, Ecuador, El Salvador, Grenada, Guatemala, Guyana, Haiti, Honduras, Jamaica, Mexico, Nicaragua, Panama, Paraguay, Peru, St. Kitts and Nevis, St. Lucia, St. Vincent and the Grenadines, Suriname, Trinidad and Tobago, Uruguay, Venezuela.
- **European Union (EU):** We use the region as predefined in the World Bank data. Austria, Belgium, Bulgaria, Croatia, Cyprus, Czechia, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden.
- **Asian Tigers (AST):** Hong Kong, Singapore, South Korea.

Graph 1.4:

- **Asian Tigers (AST):** Hong Kong, Singapore, South Korea.
- **Latin America and Caribbean (LAC):** Antigua and Barbuda, Argentina, The Bahamas, Barbados, Belize, Bolivia, Brazil, Chile, Colombia, Costa Rica, Cuba, Dominican Republic, Ecuador, El Salvador, Grenada, Guatemala, Guyana, Haiti, Honduras, Jamaica, Mexico, Nicaragua, Panama, Paraguay, Peru, St. Kitts and Nevis, St. Lucia, St. Vincent and the Grenadines, Suriname, Trinidad and Tobago, Uruguay, Venezuela.
- **OECD:** Australia, Austria, Belgium, Canada, Czechia, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Israel, Italy, Japan, South Korea, Latvia, Lithuania, Luxembourg, Netherlands, New Zealand, Norway, Poland, Portugal, Slovak Republic, Slovenia, Spain, Sweden, Switzerland, Türkiye, United Kingdom, United States.

Graph 1.5 – Panel A:

- **Asian Tigers:** Hong Kong, Singapore, South Korea, Taiwan.
- **South America:** Argentina, Bolivia, Brazil, Chile, Colombia, Ecuador, Paraguay, Peru, Uruguay, Venezuela.
- **Mesoamerica:** Costa Rica, Dominican Republic, Guatemala, Mexico.
- **Caribbean:** Jamaica, Trinidad and Tobago.

Graph 1.5 – Panel B:

- **Asian Tigers:** Hong Kong, Singapore, South Korea, Taiwan.

The set of countries included in each region varies across indicators due to data availability.

- **Caribbean**
  - TFP and capital per worker: The Bahamas, Barbados, Grenada, Haiti, Jamaica, St. Lucia, St. Vincent and the Grenadines, Trinidad and Tobago.
  - Human capital per worker: Same group, excluding The Bahamas, Grenada, St. Lucia, and St. Vincent and the Grenadines.
- **Mesoamerica**
  - For all indicators: Belize, Costa Rica, Dominican Republic, El Salvador, Guatemala, Honduras, Mexico, Nicaragua, Panama.

- **South America**
    - TFP and capital per worker: Argentina, Bolivia, Brazil, Chile, Colombia, Ecuador, Paraguay, Peru, Suriname, Uruguay, Venezuela.
    - Human capital per worker: Same as above, except Suriname is excluded and Guyana is included.

Graph 1.7:

- **Mesoamerica:** The Bahamas, Costa Rica, El Salvador, Guatemala, Honduras, Mexico, Nicaragua, Panama.
- **South America:** Argentina, Bolivia, Brazil, Chile, Colombia, Ecuador, Guyana, Paraguay, Peru, Suriname, Uruguay, Venezuela.
- **Caribbean:** Barbados, Dominican Republic, Grenada, Haiti, Jamaica, St. Lucia.

Graph 1.8:

- **Latin America and the Caribbean (LAC):** Antigua and Barbuda, Argentina, The Bahamas, Barbados, Belize, Bolivia, Brazil, Chile, Colombia, Costa Rica, Cuba, Dominica, Dominican Republic, Ecuador, El Salvador, Grenada, Guatemala, Guyana, Haiti, Honduras, Jamaica, Mexico, Nicaragua, Panama, Paraguay, Peru, St. Kitts and Nevis, St. Lucia, St. Vincent and the Grenadines, Suriname, Trinidad and Tobago, Uruguay, Venezuela.
- **High Income Countries (WB 2025 Classification):** American Samoa, Andorra, Antigua and Barbuda, Aruba, Australia, Austria, The Bahamas, Bahrain, Barbados, Belgium, Bermuda, British Virgin Islands, Brunei Darussalam, Bulgaria, Canada, Cayman Islands, Channel Islands, Chile, Costa Rica, Croatia, Curaçao, Cyprus, Czechia, Denmark, Estonia, Faroe Islands, Finland, France, French Polynesia, Germany, Gibraltar, Greece, Greenland, Guam, Guyana, Hong Kong SAR, China, Hungary, Iceland, Ireland, Isle of Man, Israel, Italy, Japan, South Korea, Kuwait, Latvia, Liechtenstein, Lithuania, Luxembourg, Macao SAR, China, Malta, Monaco, Nauru, Netherlands, New Caledonia, New Zealand, Northern Mariana Islands, Norway, Oman, Palau, Panama, Poland, Portugal, Puerto Rico (U.S.), Qatar, Romania, Russian Federation, San Marino, Saudi Arabia, Seychelles, Singapore, Sint Maarten (Dutch part), Slovak Republic, Slovenia, Spain, St. Kitts and Nevis, St. Martin (French part), Sweden, Switzerland, Taiwan, China, Trinidad and Tobago, Turks and Caicos Islands, United Arab Emirates, United Kingdom, United States, Uruguay, Virgin Islands (U.S.).

Graph 1.9:

- **Asian Tigers:** Hong Kong, Singapore, South Korea.

- **OECD:** Australia, Austria, Belgium, Canada, Chile, Colombia, Costa Rica, Czechia, Denmark, Estonia, Finlandia, France, Germany, Greece, Hungary, Iceland, Ireland, Israel, Italy, Japan, South Korea, Latvia, Lithuania, Luxembourg, Mexico, Netherlands, New Zealand, Norway, Poland, Portugal, Slovak Republic, Slovenia, Spain, Sweden, Switzerland, Türkiye, United Kingdom, United States.

- **European Union (EU):** Austria, Belgium, Bulgaria, Croatia, Cyprus, Czechia, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Poland, Portugal, Romania, Slovak Republic, Slovenia, Spain, Sweden.

Graphs 1.11 and 1.12:

- **South America:** Argentina, Bolivia, Brazil, Chile, Colombia, Ecuador, Paraguay, Peru, Uruguay, Venezuela.

- **Central America:** Costa Rica, El Salvador, Guatemala, Honduras, Mexico, Nicaragua, Panama.

- **Caribbean:** Aruba, Antigua and Barbuda, Bahamas, Belize, Barbados, Cuba, Curaçao, Cayman Islands, Dominica, Dominican Republic, Grenada, Guyana, Haiti, Jamaica, Saint Kitts and Nevis, Saint Lucia, Suriname, Sint Maarten, Turks and Caicos Islands, Trinidad and Tobago, Saint Vincent and the Grenadines, British Virgin Islands.

- **OECD:** Australia, Austria, Belgium, Canada, Switzerland, Germany, Denmark, Spain, Finland, South Korea, France, United Kingdom, Greece, Ireland, Iceland, Israel, Italy, Japan, Luxembourg, Netherlands, Norway, New Zealand, Portugal, Slovenia, Sweden, United States.

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2

Reducing Informality and Closing the Skills Gap

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Chapter 2.

REDUCING INFORMALITY AND CLOSING THE SKILLS GAP

Brassiolo, Pablo | Estrada, Ricardo | Research assistance from Pablo Fernández

Summary

Informality remains a structural feature of labor markets in Latin America and the Caribbean, affecting more than half of workers in the region. This chapter presents an updated assessment of informality, highlighting its heterogeneity across countries, worker types, and firm sizes, as well as its negative impact on aggregate productivity. At the individual level, informal workers face unstable labor trajectories, limited access to social protection, and fewer opportunities for skill development. At the aggregate level, informality slows productivity growth by allowing less productive firms to survive and by hindering human capital accumulation across the labor force. Throughout, we emphasize two distinct margins of informality—(i) the extensive margin (whether firms are registered) and (ii) the intensive margin (whether formal firms employ workers off the books)—and highlight the central role of self-employment in the region's informality landscape.

The second part of the chapter reviews the evidence on three main policy strategies to address informality: (i) reducing the costs of formalization and improving enforcement of labor regulations; (ii) supporting skill development and access to formal employment through active labor market policies—particularly training and job intermediation services; and (iii) raising productivity in small firms through sector-specific approaches and complementary policies to support transitions toward formality. The chapter concludes that there is no one-size-fits-all solution. Policy design must account for the different margins of informality and institutional capacities, while advancing a broader agenda of productivity and inclusion—amid rapid technological and structural change.

Introduction

Informal employment remains a defining feature of labor markets in Latin America and the Caribbean (LAC). Despite some progress in recent decades, informality continues to affect more than half of the region's workforce, often depriving workers of basic labor rights, social protection, and access to productive opportunities. Furthermore, informality poses a challenge for economic growth by limiting human capital accumulation, undermining job quality, and distorting the allocation of resources across firms.

This chapter analyzes the causes and consequences of informality in LAC and reviews policy options to promote formal employment. The first part presents an analytical overview of informal labor markets in the region, highlighting their heterogeneity across countries and types of workers, and distinguishing between the extensive margin—whether firms are registered—and the intensive margin—whether registered firms employ workers without formal contracts. It also explores how informality hinders aggregate productivity through three main channels: weaker accumulation of human capital, high job turnover, and misallocation of resources across firms. Taken together, the diagnosis shows that informality in LAC is pervasive and concentrated in low-productivity self-employment and small firms, with a sizable within-firm (intensive) margin. Because it largely reflects equilibrium responses to productivity gaps and regulatory wedges, durable reductions in informality hinge on raising productivity and narrowing the formal–informal cost gap.

The accumulation of human capital across the life cycle plays a central role in shaping labor market outcomes. Early deficits in nutrition, health, or basic skills, as well as unequal access to quality education and training, often translate into weaker employability and higher risks of informal employment in adulthood. Informality, in turn, reinforces these deficits by providing fewer opportunities for training and career development, perpetuating a low-productivity trap. Addressing these dynamics requires sustained investments in human capital—from early childhood to tertiary education and lifelong learning—so that workers can acquire the skills demanded by a transforming economy and access better-quality, formal jobs.

The second part of the chapter turns to policy, reviewing the evidence on three complementary strategies: (i) formalization policies—including cost reductions, incentive realignment, and enforcement—affecting both margins of informality, (ii) active labor market programs to strengthen skills and intermediation, and (iii) targeted measures to support formalization and productivity in high-informality sectors.

While this chapter focuses on labor market–specific interventions, broader strategies are equally important for reducing informality over time. We develop the role of strengthening human capital in a dedicated section below, showing how it improves formal employment and complements active labor market policies. Complementary policies that foster innovation and boost firm productivity, discussed in a separate chapter, also play a critical role in narrowing the formal–informal divide.

The landscape of informal employment and firms in Latin America and the Caribbean

Informality is a defining feature of labor markets in LAC. Despite some progress in the last two decades, informal employment still accounts for a large share of total employment in the region, ranging from 27% to 84% across countries. Based on the International Labour Organization (ILO) definition, informal employment includes both wage earners in informal jobs and self-employed workers in the informal sector, the latter representing a key component of informality in the region. These levels are significantly higher than those observed in advanced economies and remain well above the OECD average (Graph 2.1).

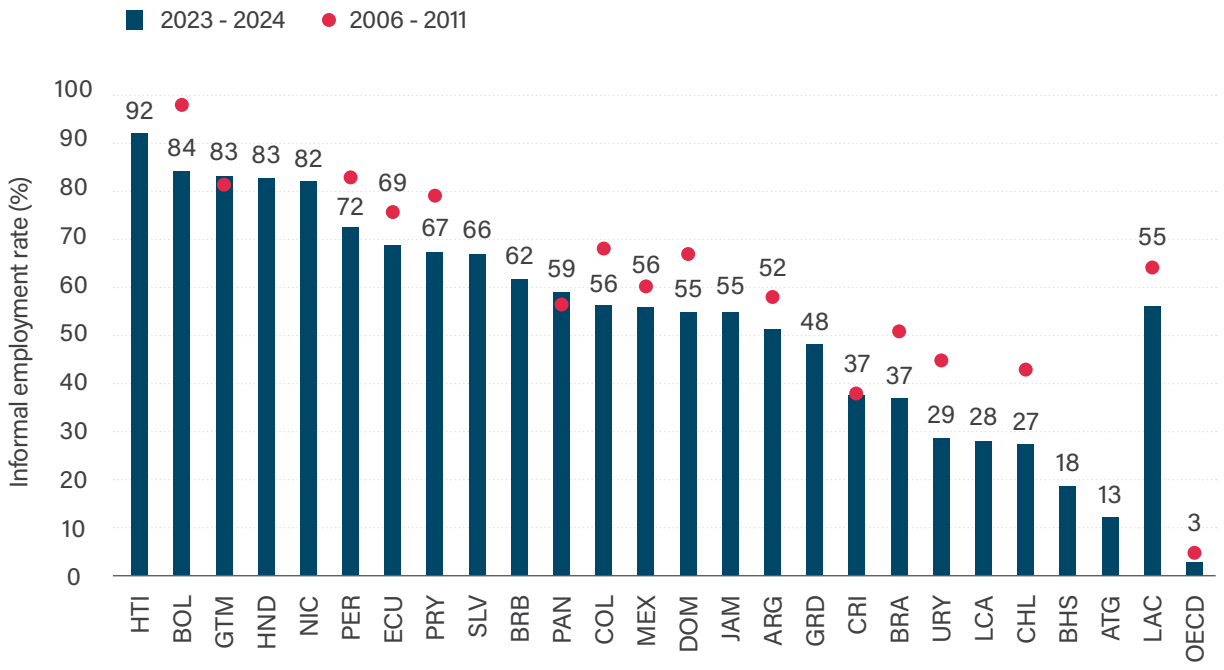
Most countries have reduced their rates of informality compared with the early 2000s, but the decline has been uneven and, in many cases, modest. As a result, a substantial share of economic activity in LAC operates outside tax, labor, and other regulatory frameworks, with far-reaching consequences for growth, inequality, and job quality.

Informality is not a homogeneous phenomenon. It affects workers and firms differently and reflects a range of motivations, constraints, and institutional factors. The following sections examine this heterogeneity from both the worker and firm perspectives.

Informal workers: Profile and consequences

From the worker's perspective, labor informality tends to be concentrated among those facing greater socioeconomic vulnerability. As noted above, it encompasses both wage earners in informal jobs and self-employed workers, the latter being particularly prevalent among vulnerable groups in the region. On average, self-employment accounts for about 39% of total employment in LAC, ranging from 22% in Barbados to 66% in Bolivia. Informality is also more common among youth, older adults, and workers with low skill levels (Álvarez et al., 2020).

Graph 2.1
Informal employment rate (%)

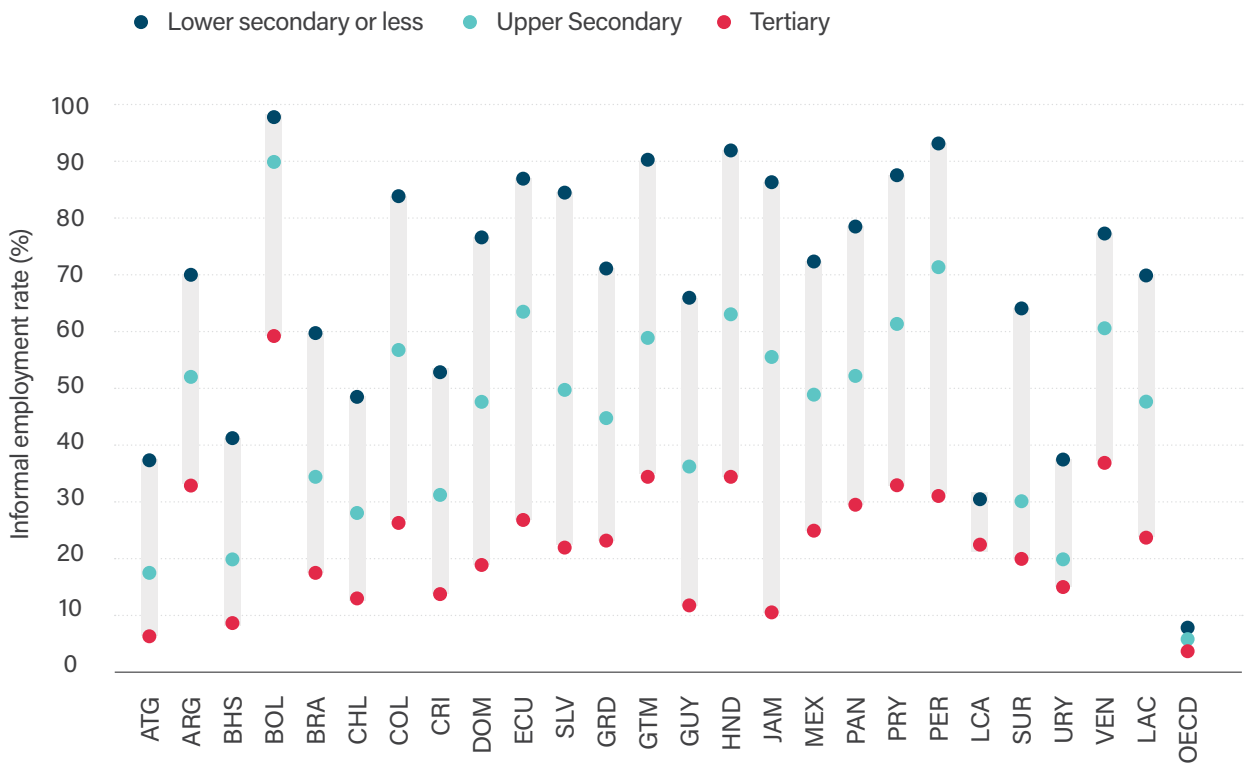


Note: The graph shows the most recent available rate of informal employment for each country (2023 or 2024), along with the corresponding rate from the 2006–2011 period. For the following countries, the most recent data correspond to earlier years: Haiti (2012), Honduras (2017), Nicaragua (2012), Barbados (2016), Bahamas (2019), and Antigua and Barbuda (2018). The LAC average for the most recent period includes all countries in the sample. OECD figures exclude LAC countries. Informality is defined using the ILO's harmonized indicator, based on the employment status and characteristics of a worker's main job.

Source: Authors based on ILOSTAT data (ILO, 2025d).

Gender patterns reveal a nuanced picture. Women experience higher informality rates in wage employment, partly due to the need for flexible schedules to manage care responsibilities that disproportionately fall on them (Berniell et al., 2021). Yet in total employment, gender gaps are generally small and vary across countries (Graph A.2.1). This apparent puzzle reflects two forces. First, composition effects: men tend to be more represented in self-employment (especially in informal activities), while women are relatively more concentrated in salaried work. Second, within-status differences: in several countries and particularly at higher education levels, female self-employment is less likely to be informal than male self-employment. Recent comparative evidence is consistent with this pattern (Berniell et al., 2024). Informality is also systematically higher in rural areas than in urban ones, resulting in sizable urban–rural gaps in many countries (Graph A.2.2). Finally, one of the most robust determinants of informality is a worker's level of education. Across all countries in LAC, informal employment rates decline systematically with higher educational attainment (Graph 2.2).

Graph 2.2
Informal employment rate by educational attainment (%)



Note: The graph shows the most recent available rate of informal employment by educational attainment for each country (2023 or 2024). OECD figures exclude LAC countries. Data corresponds to informal employment and total employment by educational attainment. Educational levels were regrouped to construct harmonized categories. Informality is defined using the ILO's harmonized indicator, based on the employment status and characteristics of a worker's main job. For the following countries, the latest available data refer to an earlier year: Bahamas (2019), Guyana (2019), Haiti (2012), Honduras (2017), Paraguay (2017), Suriname (2016), and Venezuela (2017).

Source: Authors based on ILOSTAT data (ILO, 2025a, 2025b).

Informal employment is further characterized by high labor turnover and unstable job trajectories. Earlier studies have documented that transitions into and out of informality are more frequent—and more sensitive to macroeconomic fluctuations—than in the formal sector, with informal jobs typically shorter in duration and more volatile (Ulyssea, 2020). More recent evidence shows that this pattern is not merely cyclical but structural: most workers in LAC, as well as in other developing regions, frequently move between informal jobs and periods of unemployment or inactivity over the course of their careers. This persistent instability limits the accumulation of job-specific skills. Moreover, informal wage workers receive less firm-provided training, and many self-employed lack opportunities for peer learning, further slowing skill accumulation. These

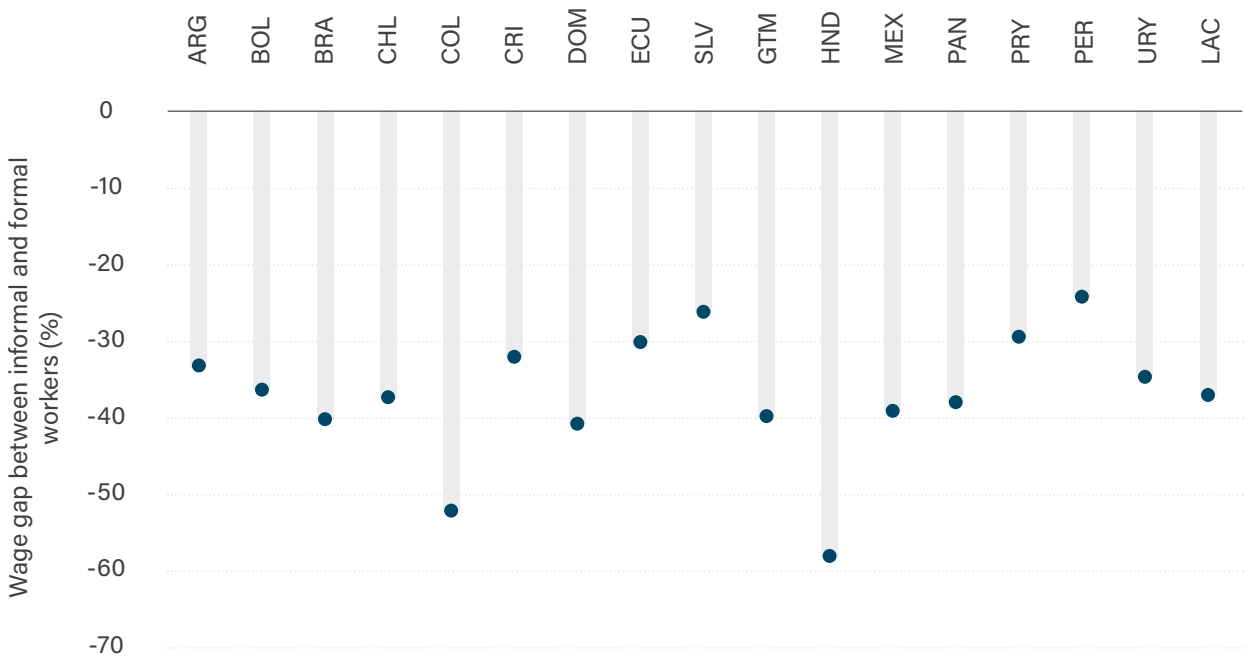
dynamics, in turn, hinder upward mobility and reduce access to employment-based social protection. As a result, many workers remain trapped in precarious labor market trajectories, unable to transition into more stable and productive employment (Donovan et al., 2023).

While informality is often viewed as a constraint on upward mobility, it can also serve a stabilizing function in contexts where formal jobs are scarce. Informal employment may serve as a temporary alternative to unemployment, allowing workers to maintain their income while they search for more stable opportunities. In this sense, informality can buffer the effects of crises or labor market disruptions, providing short-term welfare gains (Villena-Roldán, 2024). However, this stabilizing role often comes at a long-term cost: once in the informal sector, many workers face persistent barriers to transitioning into formal employment (Donovan et al., 2023). This dual nature of informality—as both a short-term safety valve and a potential long-term trap—illustrates the complexity of designing policy responses that protect livelihoods while encouraging sustainable formalization.

Limited access to social protection is a closely related consequence of informal employment. In most countries in LAC, social protection systems are largely tied to formal employment. Benefits such as pensions, healthcare, and unemployment insurance typically depend on payroll contributions. As a result, informal workers—whether self-employed or salaried without a formal contract—are often excluded from these benefits. While many countries in the region have expanded access to non-contributory social protection programs, the high prevalence of informality continues to limit both the coverage and long-term sustainability of contributory systems (Álvarez et al., 2020).

Informal employment is also associated with lower earnings. On average, informal workers earn significantly less than their formal counterparts—a pattern consistently observed across countries in the region (Graph 2.3). Moreover, this earnings gap persists even after accounting for observable characteristics such as education and occupation (Ulyssea, 2025).

Graph 2.3
Wage gap between informal and formal workers



Note: The graph shows the percentage difference in average hourly earnings between informal and formal workers across countries in LAC. The wage gap is calculated as the difference between the average hourly wage of informal workers and that of formal workers, divided by the latter. Negative values indicate that informal workers earn less on average. Figures are unadjusted for observable worker or job characteristics. The LAC value corresponds to the unweighted average across countries. The vast majority of observations correspond to the years 2022 and 2023. However, for the following countries, the most recent available data refer to earlier years: Bolivia (2021), Guatemala (2014), and Honduras (2019).

Source: Authors based on household survey data from CEDLAS and World Bank (2024) and World Bank (2025).

Evidence from matched employer–employee data in Brazil indicates, however, that much of this wage gap reflects differences in firm quality rather than compensation practices per se. Ulyssea (2018) shows that once firm fixed effects are included in wage regressions, the formal–informal wage gap becomes statistically negligible. This suggests that within the same firm, formal and informal workers with similar skills tend to perform comparable tasks and receive similar pay. The earnings penalty associated with informality stems not from the informal status itself, but from unequal access to better-paying firms. Accordingly, policies that merely convert informal jobs in low-productivity firms into formal ones—without raising firm capabilities or improving matches into higher-productivity employers—are unlikely to generate significant productivity gains. This segmentation in access to quality employment opportunities reinforces existing inequalities in the labor market and limits income mobility for informal workers.

Firms and the margins of informality

Labor informality can also be analyzed from the perspective of firms. On the employer side of the labor market, informality appears in two distinct ways: when firms operate outside the legal registry (extensive margin) and when registered firms hire workers without complying with formal labor obligations (intensive margin).[1] This distinction helps clarify the different mechanisms and motivations underlying informal employment.

Informal firms tend to be smaller and less productive than formal firms. They adopt weaker management practices, use less technology, and have more limited investment capacity. They also tend to employ workers with lower educational attainment and pay lower wages (Aberra et al., 2022). In other words, informal firms not only operate outside the legal framework but also, on average, perform worse economically and offer lower-quality jobs. These differences, however, do not imply a rigid segmentation. Recent evidence shows substantial overlap in the productivity distributions of formal and informal firms, with both types coexisting within the same economic sectors, often producing similar goods and services (Ulyssea, 2025).

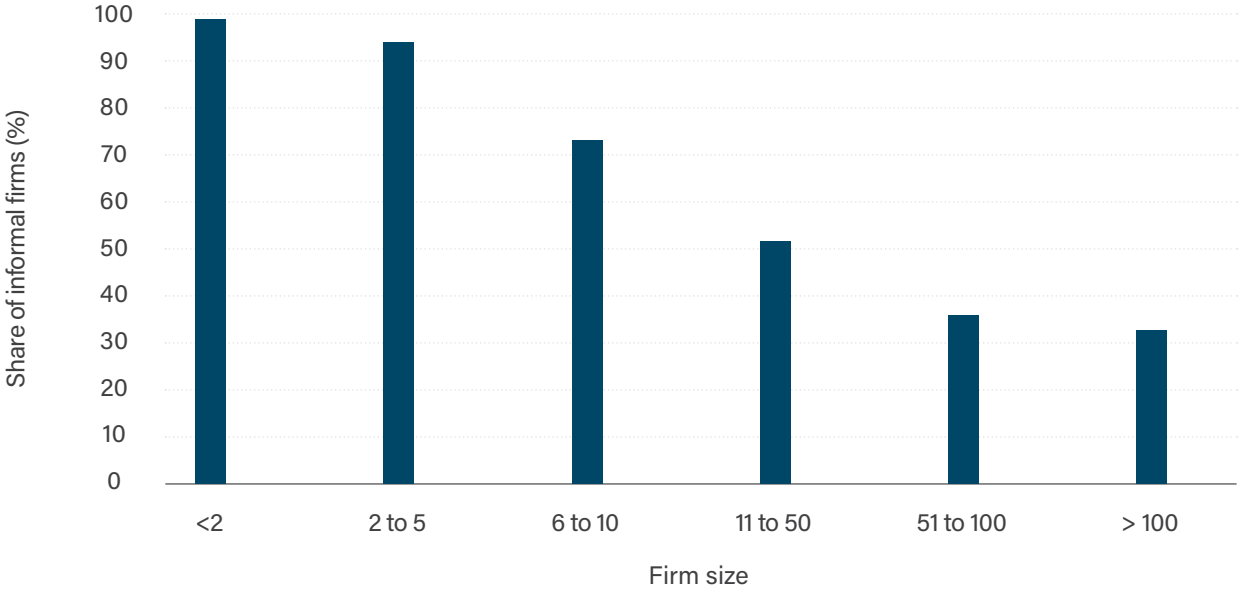
Many formal firms hire part of their workforce without complying with legal obligations, reflecting the relevance of the intensive margin of informality. In Mexico, for example, roughly one-quarter of workers employed in registered firms are not enrolled in the social security system (Samaniego de la Parra and Fernández Bujanda, 2024). In Peru's manufacturing sector, this share reaches 42% (Cisneros-Acevedo, 2022).

Both margins of informality tend to decline as firm size increases (Alvarez and Ruane, 2024; Ulyssea, 2018). Economic Census data from Mexico clearly illustrate this pattern: the share of informal firms (extensive margin) falls steeply from 99% among firms with fewer than two workers to 34% among those with more than 100. Similarly, the share of informal workers within formal firms (intensive margin) declines from 37% to 23% across the same size range (Graph 2.4).

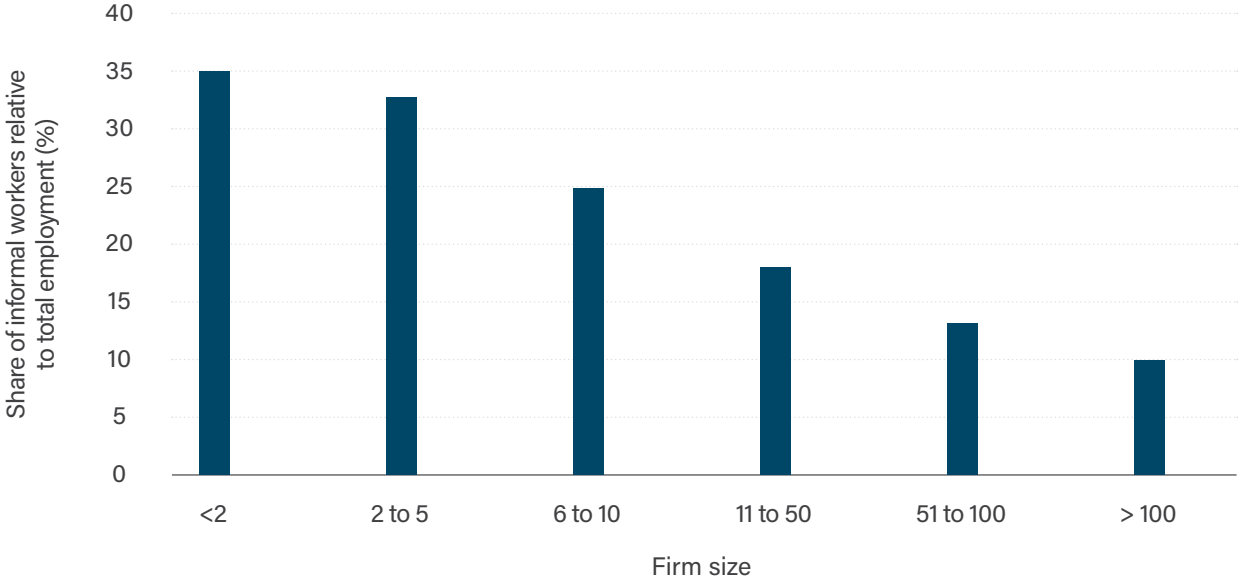
1. For firms, compliance is rarely binary. Following Ulyssea (2018), the distinction is made between: (i) extensive margin—registration and entry fees; and (ii) intensive margin—hiring without formal contracts. Many registered firms also partly evade taxes/standards, so "partial compliance" is common (e.g., tax under-reporting, environmental/industrial safety/sanitary non-compliance).

Graph 2.4
Informality by firm size in Mexico: Extensive and intensive margins (%)

Panel A. Extensive margin



Panel B. Intensive margin

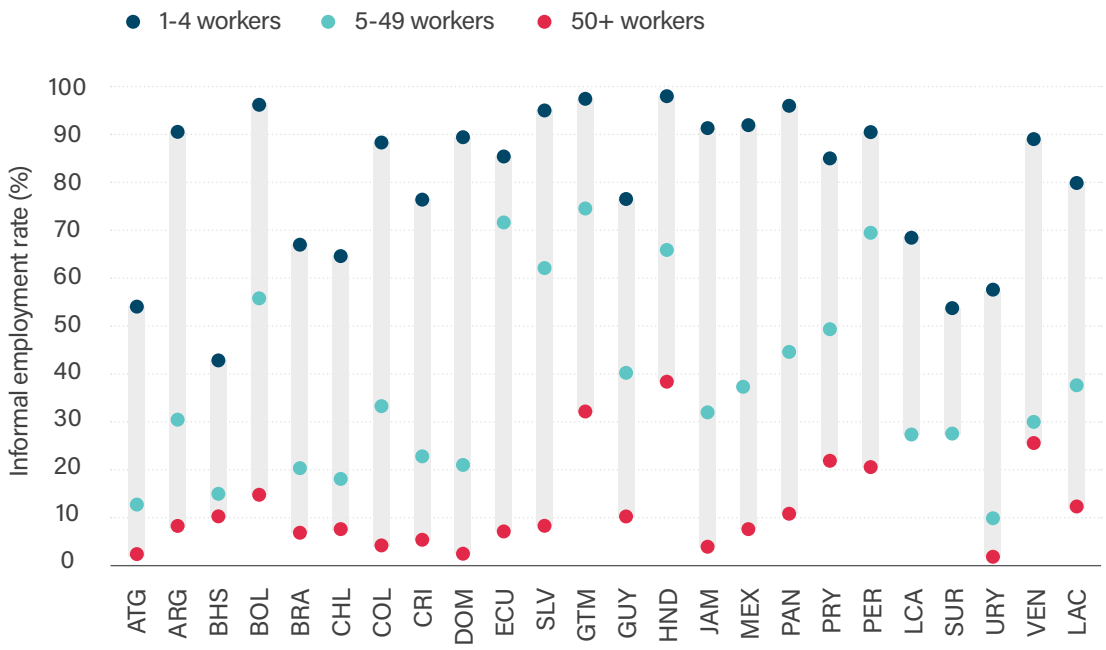


Note: The graph's top panel shows the share of informal firms by firm-size category, while the bottom panel reports the average share of informal workers within formal firms. Estimates are based on data from the 2019 Mexican Economic Census. A firm is considered formal if it is registered with both the Mexican Social Security Institute (IMSS), indicating that it reports its employees for social security coverage, and the Tax Administration Service (SAT), indicating that it is formally registered for tax purposes. Firms that fail to meet at least one of these conditions are classified as informal. An individual is considered informally employed if they do not receive employer social security contributions.

Source: Authors based on microdata from the 2019 Economic Census (INEGI, 2020), processed through INEGI's Microdata Laboratory.

More broadly, cross-country data confirm that informal employment is considerably more prevalent in smaller firms. Across LAC, informality rates among firms with up to four employees are twice as high as in those with five to 50 employees, and four times those observed in firms with more than 50 employees (Graph 2.5).

Graph 2.5
Informal employment rate by firm size (%)



Note: The graph displays the most recent available rate of informal employment by firm size category for each country (2023 or 2024). Informality is defined using the ILO's harmonized indicator, based on employment status and the characteristics of a worker's main job. For the following countries, the latest available data refer to an earlier year: Bahamas (2019), Honduras (2017), Guyana (2019) and Venezuela (2017).

Source: Authors based on ILOSTAT data (ILO, 2025c).

Different mechanisms explain why informality declines with firm size along both margins. On the extensive margin, the costs (or loss of benefits) associated with operating informally tend to increase with firm size. Larger firms face higher risks of being detected by authorities and have stronger incentives to formalize due to their need for credit, invoicing, or engaging in formal business relationships. On the intensive margin, the share of informal workers within formal firms also decreases with size, possibly because larger firms are more visible and therefore more likely to be inspected, while systematic enforcement of labor regulations among smaller firms is more costly for the state.

Taken together, these patterns indicate that informality is not randomly distributed across the productive structure. Instead, it reflects rational choices made by firms facing different costs, risks, and constraints depending on their scale.

The persistence of informality and the impact of the pandemic

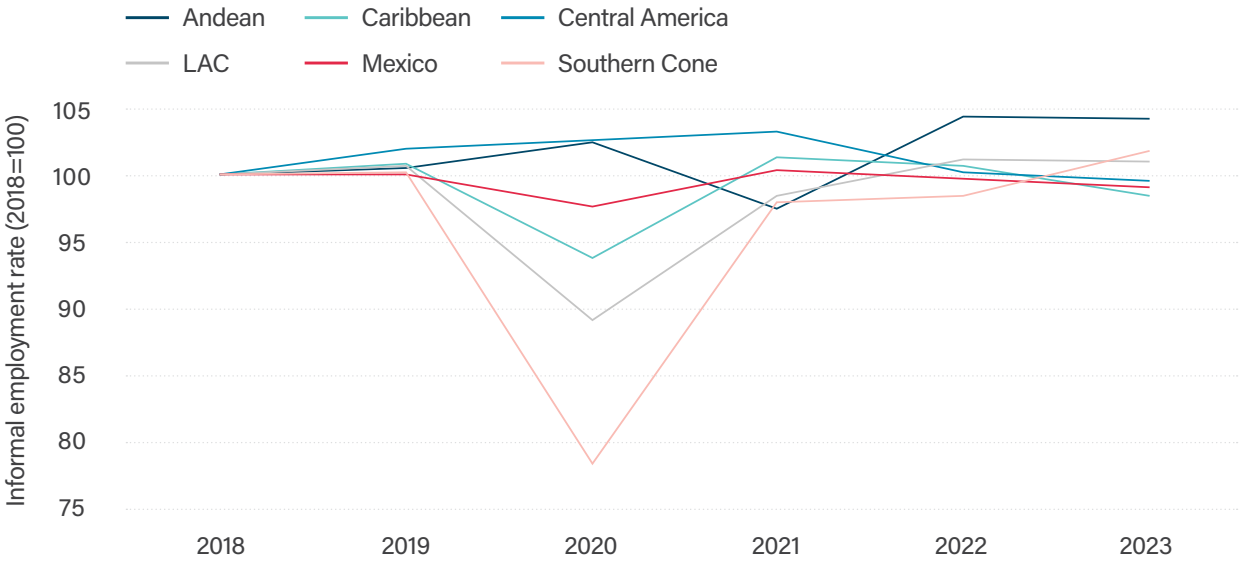
Most countries in the region have reduced informality compared to the early 2000s, mainly driven by formal job creation during the commodity boom. However, progress has stalled in recent years, and informality remains high—underscoring its structural nature.

The COVID-19 pandemic brought new insights into the dynamics of informal employment. Unlike previous crises, more informal than formal jobs were lost in 2020, largely because the shock hit sectors with high informality and strong physical presence requirements—such as trade, personal services, and construction (Acevedo et al., 2021).

As mobility restrictions eased, informal employment rebounded—often faster than formal employment. Graph 2.6 shows this V-shaped trajectory across LAC subregions between 2018 and 2023, with considerable variation across regions.

Some observers have also suggested that the pandemic may have accelerated a shift to new forms of informality among previously formal workers, including temporary contracts, freelance arrangements, and platform-based work offering limited protection. These changes may not be fully captured by household surveys, complicating the monitoring of informality and the design of effective policies (Leyva and Urrutia, 2021).

Graph 2.6
Evolution of the informal employment rate by subregion



Note: The graph shows the rate of informal employment in Latin America and the Caribbean by subregion, using the most recent data available for each country from 2018 to 2023. In cases where data were missing for a specific year, values were imputed using the average of adjacent years. Informality is defined using the ILO's harmonized indicator, based on the employment status and characteristics of a worker's main job.

Source: Authors based on ILOSTAT data (ILO, 2025g).

Emerging challenges: New technological advances and informality

Technological change is a major driver of labor market outcomes, but its effects are complex and uneven. Past waves of technological innovation—particularly during the ICT revolution—displaced workers in routine-intensive occupations and contributed to job polarization, with employment growth concentrated in both low- and high-skill jobs. In LAC, however, recent evidence suggests a different pattern. Brambilla et al. (2023) find limited signs of polarization in the region and show that employment growth has been concentrated in low- and medium-skill occupations. This suggests a more gradual adoption of labor-saving technologies than in advanced economies—possibly due to structural factors such as high informality, low average educational attainment, and the sectoral composition of employment.

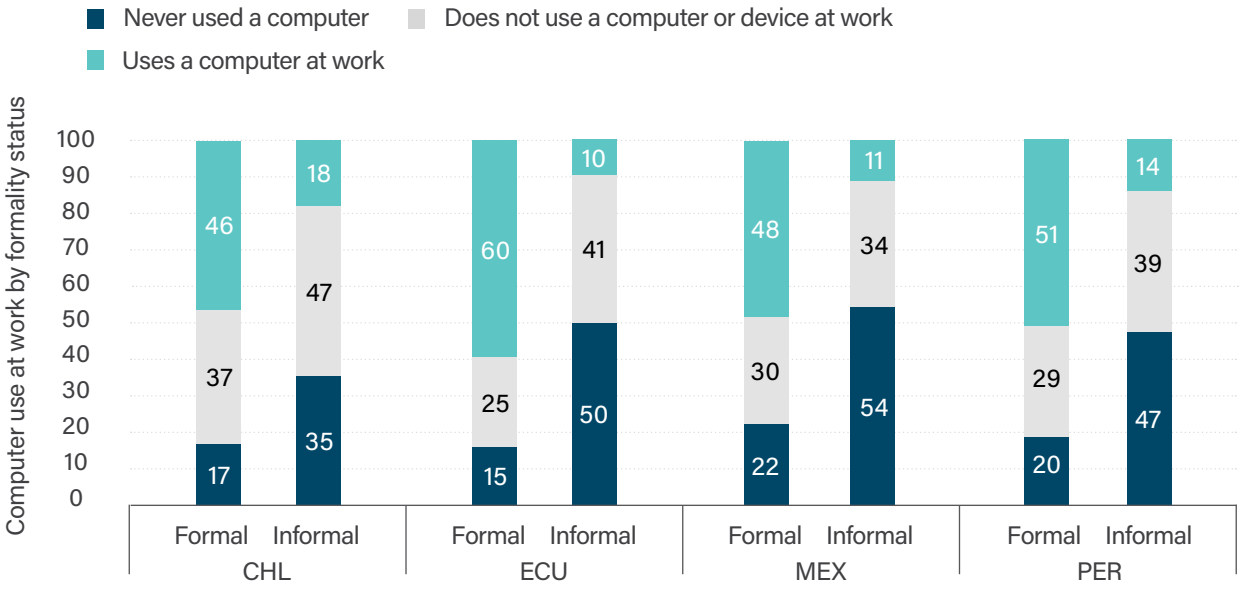
Looking ahead, emerging technologies such as digitalization and artificial intelligence (AI) could reshape labor markets in new ways. Unlike previous waves, AI systems—including recent advances in generative AI (GenAI)—can perform not only routine but also non-routine cognitive tasks, introducing greater uncertainty about their impact. As Autor (2022) notes, the effects of new technological innovations go beyond automation: they involve the creation of new tasks and occupations, changes in skill demand, and organizational transformation. Assessing the implications for employment and informality in the region requires taking these broader dynamics into account.

How will digitalization and AI shape informality? Four main channels are especially relevant in high-informality settings. First, automation and task reorganization can displace routine work while raising demand for complementary tasks, with ambiguous net effects on informality. Second, digitalization could affect matching and skills: e-recruiting and adaptive training may ease some transitions but can widen gaps for low-skill workers. Third, compliance-enhancing technologies—e-invoicing, e-payments, digital IDs—can lower the private cost of formal transactions and raise the visibility of compliance. Finally, platform intermediation reduces entry and search costs but can blur employment status, shifting margins between self-employment and wage informality. In LAC, where informality, cash intensity, and uneven digital access are high, these channels are likely to interact strongly with baseline frictions—so the direction of change in informality is ultimately an empirical question.

Recent studies have begun to assess how these dynamics may play out in low- and middle-income countries. A useful organizing principle is the exposure–capacity gap: potential task exposure to GenAI versus the capacity of workers and firms to adopt and complement it. One approach is to combine occupational-level exposure indices—based on the alignment between job tasks and GenAI capabilities—with labor force survey data, allowing for cross-country and within-country comparisons. Occupational exposure to GenAI is higher in richer countries than in poorer ones, and there is significant within-country variation linked to education, formality, and occupation type. Workers in formal jobs, with higher education, and in office or technical occupations tend to have greater exposure to GenAI—suggesting that these technologies may disproportionately affect more skilled segments of the workforce. Exposure alone

does not necessarily lead to job displacement: it can also reflect opportunities for productivity gains, depending on the capacity of workers and firms to adopt and complement the technology (Demombynes et al., 2025).

Graph 2.7
Computer use at work by formality status



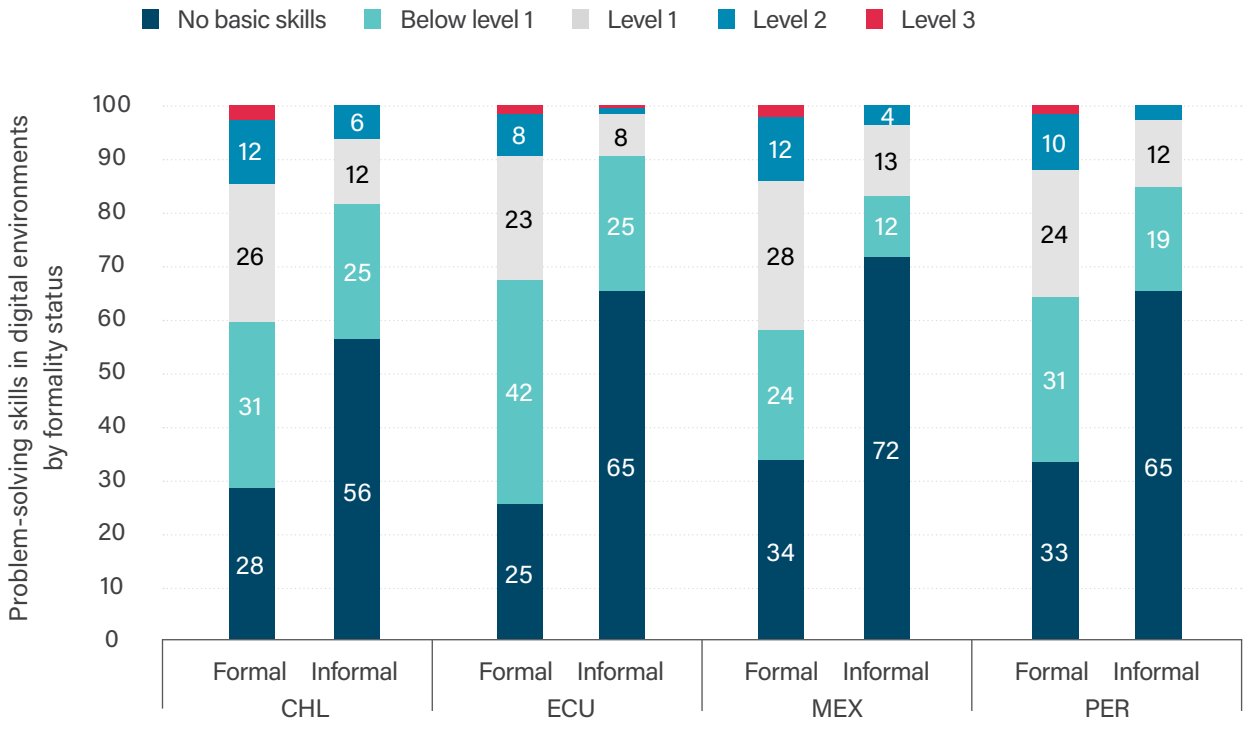
Note: The sample includes salaried workers aged 25 to 65. Formal workers are defined as those employed under a permanent, fixed-term, temporary-agency, apprenticeship, or on-the-job training contract, or any other standardized contract type. Informal workers are those without a contract in their main job or who perform unpaid work.

Source: Authors based on PIAAC data (OECD, 2011).

In LAC, Gmyrek et al. (2024) show that this potential is constrained by stark digital divides. They find that between 30% and 40% of employment in the region lies in occupations exposed to GenAI, particularly urban-based jobs that require higher education and are situated in the formal sector. However, limited access to the internet and low digital literacy among large segments of the workforce reduce the likelihood that GenAI will be effectively adopted and leveraged. These divides are especially pronounced between formal and informal workers: data from the PIAAC survey on adult populations show that informal employees are significantly less likely to use computers in their daily work, reflecting lower levels of digital engagement and a task structure less intensive in information processing or technology use (Graph 2.7)[2]. These gaps are also visible in more advanced digital skills: among salaried workers, informal employees are far more likely to lack the minimum competencies needed to complete problem-solving tasks in digital environments (Graph 2.8).

2. PIAAC is the OECD's Programme for the International Assessment of Adult Competencies, a cross-country survey of adult skills and task use.

Graph 2.8
Problem-solving skills in digital environments by formality status



Note: The sample includes salaried workers aged 25 to 65. Formal workers are defined as those employed under a permanent, fixed-term, temporary-agency, apprenticeship, or on-the-job training contract, or any other standardized contract type. Informal workers are those without a contract in their main job or who perform unpaid work. "No basic skills" includes individuals who have never used a computer, who failed to complete the computer-based assessment's familiarization exercise, or who opted to take the paper-based version.

Source: Authors based on PIAAC data (OECD, 2011).

While digitalization and AI hold substantial potential, their impact in LAC will hinge on preexisting frictions—high informality, unequal digital skills, and uneven access to technology. Informal workers, who tend to have lower levels of digital skills and more limited access to technology, are less likely to benefit from these innovations and more likely to be left behind. Ensuring that technological change leads to more inclusive labor markets will require coordinated efforts to expand digital infrastructure, strengthen skills development, and reduce structural barriers to formal employment.

How informality constrains productivity

Beyond its direct consequences for workers, informality also undermines productivity—at both the individual and aggregate levels. By limiting the development of job-relevant skills and weakening incentives to invest in education, informality reduces the accumulation of human capital. In parallel, it distorts the allocation of resources across firms and hinders firm growth, ultimately slowing economic development.

One reason why informal employment is detrimental to productivity is its effect on skill accumulation in the workplace. Evidence from Mexico shows that human capital builds up more slowly in informal jobs than in formal ones. While formal employment provides greater opportunities for training and learning on the job, informal work offers far fewer avenues for skill development. As a result, informal workers tend to accumulate skills at a slower pace and may even experience skill depreciation during episodes of unemployment or self-employment. This slows wage growth and reduces the productivity of the broader labor force (Bobba et al., 2021). When large segments of the workforce spend much of their careers in informal jobs with limited opportunities for learning, the economy accumulates less human capital over time. Similar patterns are observed in other countries in the region. Donovan et al. (2023) show that in developing economies, informal jobs rarely serve as stepping stones to better job opportunities. Instead, they tend to be part of unstable labor trajectories with workers frequently falling into situations of unemployment or low-quality jobs—a pattern that both reflects and amplifies the limited skill accumulation emphasized by Bobba et al. (2021).

A related mechanism that connects high informality with weak productivity growth is the reduction in ex-ante incentives to invest in education. When young people expect to face unstable and informal labor markets, their anticipated returns to education decline. Indeed, a large body of evidence shows that perceived returns to education strongly shape schooling and skill-investment decisions. Informality discourages investment in schooling and skills, particularly among youth from vulnerable backgrounds. Recent evidence confirms that in highly informal labor markets, educational investments are systematically lower, perpetuating low human capital and reinforcing productivity gaps over time (Bobba et al., 2022). These findings highlight how informality can amplify inequality and reduce the effectiveness of education policies unless accompanied by structural labor market reforms.

At the firm level, informality affects productivity through additional mechanisms. One is the limited scale and underinvestment observed in informal enterprises. These firms tend to remain small, undercapitalized, and less likely to adopt new technologies. Many restrict their scale to avoid detection by authorities, while others lack the financial or organizational capacity to expand. As Álvarez et al. (2025) note, this small-scale, low-capital model restricts firm productivity and weakens overall economic performance by generating low-quality jobs with limited value-added.

Ulyssea (2025, 2018) reinforces this view by showing that many informal firms survive not because they are efficient, but because operating informally allows them to avoid taxes and labor regulations. This environment weakens incentives to invest in physical and technological capital, reinforcing a low-productivity equilibrium. Credit constraints are also more severe in the informal sector, further limiting the ability of firms to grow and modernize. The result is a productivity trap that affects both firm performance and employment quality.

A second mechanism is the misallocation of resources across firms. In well-functioning markets, capital and labor tend to flow toward the most productive firms. However, informality disrupts this process by allowing inefficient firms to survive through regulatory evasion rather than competitive advantage. As emphasized in Álvarez et al. (2025), this misallocation diverts resources away from high-productivity firms and weakens the overall dynamism of the productive sector. Ulyssea (2025) shows that reducing informality—whether through enforcement or incentive-based approaches—can trigger a composition effect, reallocating resources toward more productive firms and improving aggregate outcomes.

A third channel involves the disconnection of informal firms from broader economic networks. According to Álvarez et al. (2025), these firms are often excluded from formal value chains, markets that demand quality standards or traceability, and public support programs. Ulyssea (2025) adds that informal firms are systematically excluded from policy instruments such as credit lines, training, or export promotion programs due to their legal status. This institutional exclusion limits their ability to adopt better practices, expand to new markets, or benefit from productivity-enhancing partnerships—reinforcing their isolation and underperformance.

Understanding the productivity effects of informality requires recognizing the heterogeneity of informal firms. Ulyssea (2018) proposes a typology that distinguishes among three broad categories. Parasite firms are productive enough to operate formally but choose informality to avoid regulatory costs. Resource-constrained firms would prefer to formalize but are blocked by high entry costs or institutional barriers. Survival firms (also referred to as deadweight firms) are so unproductive that they can only remain viable by operating informally. While all three types may contribute to the productivity costs of informality, they do so through different channels and to varying degrees. Parasite firms can distort competition and misallocate resources; resource-constrained firms often operate below their productive potential; and survival firms tend to remain disconnected from markets and public support programs. These differences suggest the need for differentiated policy responses—ranging from enforcement to targeted support and complementary safety nets.[3]

These multiple mechanisms—operating through both workers and firms—illustrate how persistent informality undermines the productive potential of economies.

3. Based on matched employer–employee data from Brazil, Ulyssea (2018) estimates that among informal firms, 42% are parasite firms, 9% are resource-constrained, and 49% are survival firms.

Crucially, the productivity costs of informality are not driven by a single factor, but by a combination of structural barriers, behavioral responses, and institutional constraints that affect different types of workers and firms in different ways. Tackling informality is not only about improving job quality; it is also a necessary condition for unlocking productivity growth and advancing inclusive development.

Why does informality persist? Constraints on skills, firms, and institutions

Despite its well-documented costs for workers and productivity, informal employment remains a widespread and persistent feature of LAC's economies. One of the strongest predictors of informality is low human capital. Workers with limited education and weak technical or digital skills face greater difficulty accessing formal jobs, which often require credentials or certifications. In Brazil, the rise in educational attainment between 2003 and 2012 played a central role in the sharp decline in informality by improving access to formal jobs and boosting overall labor productivity (Haanwinckel, 2017). Yet in many countries, large skill gaps continue to feed the persistence of informality.

From the perspective of employers, operating informally can be a rational response to high labor costs, administrative burdens, and limited growth prospects. Minimum wages, payroll taxes, and firing costs create a regulatory wedge between the total cost of formal employment for firms and the take-home pay of workers. For smaller or less productive firms, these costs often outweigh the perceived benefits of formalization. Moreover, when workers place low value on contributory benefits, the effective wedge is larger, increasing the likelihood that job matches occur in the informal sector. In this context, some firms evade regulation strategically, while others lack the financial or organizational capacity to sustain compliance.

These determinants—low skills among workers and regulatory and financial constraints among firms—help explain why informality persists despite its costs. They also highlight that informality reflects structural and institutional features of LAC economies rather than mere rule-breaking. Recognizing this heterogeneity is essential for policy design. The following section reviews policy responses, focusing on how different instruments can address these underlying drivers and support transitions to more formal and productive employment.

Formalization policies

Broadly speaking, policies aimed at increasing formality can be grouped into three main categories: (i) those that reduce the costs of entering the formal sector; (ii) those that enhance the benefits or lower the costs of remaining formal; and (iii) those focused on regulatory enforcement (Ulyssea, 2020).

The first set of policies primarily seeks to reduce the registration costs that firms—and, in some cases, self-employed workers—face when entering the formal sector, thereby targeting the extensive margin of informality. Examples include providing information and counseling on registration procedures, simplifying processes, and reducing or subsidizing fees. Evidence shows, however, that these policies tend to have modest effects on formalization (Ulyssea, 2020). For cost reductions to be effective, there must be a sizable group of resource-constrained firms—those productive enough to remain formal once registered, but that stay informal because of high entry costs. Ulyssea (2018) finds that only a small share—around 10%—of informal firms in Brazil meet this condition. The same study shows that reducing registration costs tends to bring into formality relatively low-productivity firms, which once registered often employ workers under informal arrangements.

Many policies in LAC aim to lower business-registration costs. One example is the *Formalízate* program in the Dominican Republic. Introduced in 2013, *Formalízate* created an online one-stop shop that merged procedures previously handled separately by the Chamber of Commerce, the Internal Revenue Office, Social Security, the National Industrial Property Office, and the Ministry of Labor. Prior to the program, registering a firm required an average of 20 business days, at least seven in-person visits to different offices, and about USD 1,000 in fees. Under *Formalízate*, only one in-person visit is needed, the cost falls to roughly USD 150, and the entire process can be completed in seven business days. Bobic et al. (2023) find that the reform produced a rise in micro-firm registrations, particularly in the retail and tourism sectors.

The absence of large impacts on labor formality does not imply that lowering registration costs lacks other important benefits. Greater firm formalization enhances tax revenues. Moreover, high entry costs act as a barrier to firm creation. Reducing these costs can therefore stimulate entrepreneurship, labor demand, and economic activity (Ulyssea, 2018). However, because newly formalized firms tend to have below-average productivity, such reforms may reduce productivity at the aggregate level.

A second set of policies aims to increase the benefits or lower the costs of operating in the formal sector—for both firms and workers. A prominent example is tax reductions, which can encourage resource-constrained firms to formalize. Evidence suggests that these policies may have larger effects on firm formalization than those focused on registration costs, but they may not be cost-effective, as their net impact on tax revenue tends to be negative (Ulyssea, 2020). Rocha et al. (2018) evaluated Brazil's *Individual Micro-Entrepreneur Program*, which halved the monthly taxes for firms with up to one employee. They find that the program led to a small—1.9 percentage

points from a baseline rate of 20%—and transitory increase in formalization among beneficiary firms, which was insufficient to offset the program's fiscal cost.

Employment regulations aimed at improving job quality—such as minimum wage, employment protection legislation (EPL, i.e., rules on dismissal and severance) and unemployment insurance—are widespread in LAC. Their design and enforcement can increase the cost of formal employment and thereby contribute to informality through both the extensive and intensive margins (Álvarez et al., 2025). High minimum wages are linked to higher informality, though the overall effect depends on wage levels. Strict EPL, when effectively enforced, can also push firms toward informality, especially in a region exposed to greater macroeconomic volatility and sudden downturns like LAC. In this context, high dismissal costs make firms more reluctant to hire formally.

The impact of unemployment insurance is more ambiguous. Well-designed schemes can increase formal employment by enabling longer job search and better matches, but in some contexts, unemployment insurance may reduce incentives to return to formal jobs if beneficiaries can remain unemployed or work informally while collecting benefits (Álvarez-Parra and Sánchez, 2009; Gerard and Gonzaga, 2021).

Similarly, social policies that alter the relative benefits of formality and informality can influence workers' preferences for (in)formal jobs. On the one hand, in Brazil, for example, formal workers are willing to accept lower wages than in informal employment in exchange for more generous benefits (Almeida and Carneiro, 2012). This suggests that enhancing the social benefits tied to formal employment can attract informal workers into the formal sector. Consistent with this, a 2008 social security reform in Uruguay that expanded health benefits for formal workers increased formalization rates (Bergolo and Cruces, 2014).

On the other hand, social protection programs that target individuals outside the formal sector can lead to unintended consequences—such as higher informality or lower labor force participation—by reducing the relative value of formal employment.

In many countries in the region, access to health insurance has traditionally depended on formal employment, leaving a large share of the population without coverage. Since the 1990s, several programs have been implemented to address this gap by targeting individuals outside the formal sector. Notable examples include Brazil's *Programa de Saúde da Família* (launched in 1994), Colombia's *Régimen Subsidiado en Salud* (starting in 1993), and Mexico's *Seguro Popular* (introduced in 2003). These programs have improved access to health services and reduced out-of-pocket expenditures (Bhalotra et al., 2019; Colchero et al., 2022; Miller et al., 2013). Evidence on labor-market impacts is more mixed: while some evaluations report increases in informality in specific settings (Bosch and Campos-Vazquez, 2014; Camacho et al., 2014; Conti et al., 2019), others find no significant effects on overall informality or formal employment—particularly for Mexico's *Seguro Popular*.[4]

4. For Mexico's *Seguro Popular*, a couple of studies find no significant effects on overall informality or formal jobs (Azuara and Marinescu, 2013; Campos-Vázquez, 2013). Additionally, del Valle (2021) reports effects mainly on labor-supply margins—e.g., reduced transitions from informal work to inactivity among women with dependents—rather than on the formal–informal margin.

Cash transfer programs aimed at alleviating poverty show similar patterns. In Uruguay, a conditional cash transfer program targeting vulnerable households led to a 13% drop in formal employment among beneficiaries, along with an increase in labor market inactivity (Bergolo and Cruces, 2021). In Argentina, the introduction of the *Asignación Universal por Hijo*—a cash transfer per minor child for unemployed and informal workers, previously available only to formal workers—reduced beneficiaries' likelihood of having a formal job by 40% (Garganta and Gasparini, 2015).

Another policy alternative is to strengthen regulatory enforcement. These measures fall into two categories: those aimed at formalizing firms (extensive margin) and those focused on formalizing informal workers employed within formal firms (intensive margin).

The evidence on the impact of increased enforcement efforts targeting informal firms indicates that such measures are effective in reducing informality and can generate significant productivity gains at the aggregate level (Ulyssea, 2020). These gains are partly driven by the exit of low-productivity informal firms—the so-called survival firms—and the reallocation of resources toward more productive formal firms. While these effects lead to higher productivity, they may also increase unemployment. However, a recent series of studies finds that the presence of large, productive firms in the formal sector can absorb workers displaced from the informal sector, thereby minimizing employment losses (Ulyssea, 2020). In any case, implementation costs of such policies merit careful consideration—particularly given the large number of small informal firms—as well as the need to minimize transition costs for informal workers who may lose their jobs.

Evidence on enforcement within formal firms shows a different pattern. Stricter enforcement can increase formal employment, but may also lead to higher unemployment or inactivity (Almeida and Carneiro, 2012; Samaniego de la Parra and Fernández Bujanda, 2024). In addition, stricter enforcement of formal firms may increase the share of informal firms. The reason is that greater enforcement raises the costs of formality, particularly for less productive firms that might switch to the informal sector (Ulyssea, 2020).

In summary, enforcement policies are often the most effective instrument for reducing informality, although they may have adverse short-term effects on employment. By contrast, lowering registration costs tends to produce limited reductions in informality—although removing unnecessary entry barriers can still enhance overall economic efficiency. Increasing the benefits or reducing the costs of formality is a promising strategy, but the design and implementation of specific measures require a more nuanced analysis. Some policies intended to protect formal workers or to extend social protection to those outside the formal sector can unintentionally raise the relative attractiveness of informality, pushing firms and workers away from formal arrangements. Making formality more attractive, therefore, requires systematic evaluation and, when necessary, redesign of such policies to avoid unintended effects and economic distortions. One potential alternative is to decouple eligibility for social protection benefits from employment status.

Box 2.1: Institutional capacity, digitalization, and the detection of informality

Effective monitoring and detection of informality require strong institutional capacity. This entails enforcement agencies having sufficient numbers of competent and motivated staff, access to appropriate technology, and operating within an institutional framework that supports their mission—i.e., a coherent set of rules and institutions.

Digitalization offers significant opportunities to enhance the efficiency of government operations in LAC countries. In particular, it can strengthen the capacity of enforcement agencies to detect firm and labor informality.

One strategy involves the integration of tax, labor, and social protection registries. Interoperable systems enable authorities to cross-reference information across agencies, enhancing their ability to identify businesses and workers operating informally by flagging inconsistencies in employment records and declared income. Complementing these efforts, the use of predictive analytics and machine learning allows enforcement agencies to analyze large datasets, identify anomalies in tax filings or social security contributions, detect suspicious behavioral patterns, and flag potential cases of informality.

Mobile platforms and online services can be used to inform workers of their registration status and to obtain direct information on potential underreporting by employers.

As previously discussed, digitalization can also improve interactions between the public sector and firms by reducing registration costs—for example, through the creation of online one-stop shops—and lowering the costs of operating formally, such as by simplifying worker registration with social security administrations or streamlining tax payments, among other measures.

Active labor market policies for skills development and supporting job transitions

The relationship between low skill levels and informality is both bidirectional and self-reinforcing. Individuals with lower skills are less likely to access formal employment and are therefore more likely to work in informal firms. In turn, informal jobs offer limited opportunities for on-the-job learning and skill development, which hinders human capital accumulation and further reduces the likelihood of transitioning to formal employment. These dynamics underscore the importance of improving education systems and investing in the development of skills to tackle informality in the long run. It also calls for policies that help individuals outside the education system—particularly those with lower skills and limited formal sector experience—gain access to formal employment. In contexts with high informality, Active labor market policies (ALMPs) are a central instrument to foster such transitions and to develop skills that are underdeveloped in informal employment.

ALMPs help individuals acquire the skills needed for formal employment, improve their ability to search for, apply to, and secure jobs in the formal sector, and shorten unemployment spells that might otherwise lead to informal work. ALMPs include training, job search assistance, wage subsidies, support for micro-entrepreneurs, and public works programs. In contrast, passive labor market policies typically provide welfare transfers to unemployed individuals and households with few or no conditionalities. These policies are widely used across the region.

A large body of impact evaluations—including many from LAC—has deepened understanding of how effective these policies are and the factors that influence their success (Card et al., 2018; Escudero et al., 2019; Yeyati et al., 2025). Overall evidence suggests that ALMPs generally have positive effects on employment and earnings, though outcomes vary depending on the type of policy and the specific program design and implementation.

Vocational training programs are primarily designed to equip individuals with the technical skills required for specific occupations. Evidence from LAC indicates that these programs are the most effective ALMPs for improving employment and earnings outcomes—including transitions into formal employment (Card et al., 2018; Escudero et al., 2019). Yet the magnitude of these gains varies widely across programs, underscoring the importance of program design, implementation quality, target population, and context for determining effectiveness (Yeyati et al., 2025).

Longer training programs tend to yield greater effects than shorter interventions lasting less than four months. Programs targeting youth and—to a lesser extent, women—are also more likely to produce positive outcomes. The use of on-the-job training and active participation of the private sector is associated with greater impacts.

In practice, training programs are often implemented alongside other interventions, such as income support and intermediation services, and hence part of their estimated effect is due to these complementary interventions (Escudero et al., 2019). In addition, short-term impacts can be modest or even negative due to "lock-in" effects (i.e., individuals spend time in training rather than working), but their impact tends to improve over time (Nunn, 2024).

When focusing on formal employment outcomes, several studies find that the *Jóvenes en Acción program in Colombia*—which aims to promote human capital development among young people living in poverty and vulnerable conditions—has had positive and lasting effects on formal employment (Attanasio et al., 2011, 2017). A similar program in the Dominican Republic, *Juventud y Empleo*, also shows a positive and sustained impact over time on participants' formal employment and wages (Ibarraran et al., 2014; Ibarrarán et al., 2019).

Providing financial incentives to firms is a way to expand training opportunities. In Chile, the *Servicio Nacional de Capacitación y Empleo* offers tax credits to employers that enroll staff in training or skill-certification courses; in 2016, these credits covered about 8% of the labor force (OECD, 2021). Similar schemes can also target workers beyond the formal sector: *Entrenamiento para el Trabajo* in Argentina, for example, subsidizes companies to train apprentices.

Skills-certification programs address information asymmetries in the labor market by both equipping job seekers with clear, verifiable credentials and signaling their productivity to prospective employers. By formalizing otherwise unverified competencies, these programs are particularly valuable for groups whose abilities are hard to signal through conventional channels—informal-sector workers and migrants without locally recognized qualifications or documented work histories, as well as young people who lack prior employment experience—helping them overcome employers' doubts and enter higher-quality jobs (Nunn, 2024). These programs can complement training courses or certify pre-existing skills through competency assessments. Indeed, most national training agencies in the region operate some form of skills-certification scheme (Daude et al., 2017). For example, Chile's *ChileValora* certifies non-formal skills—especially for workers without formal qualifications; Mexico's *CONOCER*, under the Ministry of Education, oversees a national network that assesses and accredits workers' competencies; and Brazil's *Rede CERTIFICA* converts on-the-job learning into officially recognized credentials (OECD, 2021).

Intermediation services are designed to help individuals secure salaried employment without providing formal training or financial incentives to employers. These programs include a broad range of interventions, such as job vacancy databases, labor market information portals, job fairs with private employers, résumé-building workshops, job search and interview training, and individualized counseling or mentoring throughout the job search process. In many LAC countries, these services are delivered by a government-run agency—commonly known as the Public Employment Service. Although rigorous impact evaluations of these interventions in the region are relatively limited, existing evidence suggests they yield modest but cost-effective results, given

their significantly lower cost per participant compared to other types of active labor market programs (Escudero et al., 2019; Nunn, 2024; Yeyati et al., 2025). Across several LAC countries, online guidance portals have recently been upgraded to serve as single entry points for all employment-intermediation services. Notable examples include *Bolsa Nacional de Empleo* in Chile, *Observatorio Laboral* in Mexico, and *Mi Trabajo Futuro* in Uruguay (OECD, 2021).

Wage subsidies are initiatives through which the state actively promotes employment by offering monetary incentives to private employers—either by covering a portion of workers' wages or by temporarily reducing employers' social security contributions. Although evaluated less frequently than other ALMPs, the available evidence suggests that they can generate significant employment gains, with impacts varying across programs (Escudero et al., 2019; Yeyati et al., 2025). The magnitude and duration of the subsidy appear to be key determinants of a program's impact. For example, Berniell and de la Mata (2017) find large gains in formal employment five years after participation in the *Programa Primer Paso* in Córdoba, Argentina. The program targets youth by offering a first formal job opportunity through a 12-month wage subsidy covering 90% of the minimum wage. In Mexico, a six-month wage incentive equivalent to about 20% of the average formal entry-level wage generated significant increases in formal employment that persisted two years later (Abel et al., 2022). On the other hand, wage subsidy programs may lead to substitution effects—where the hiring of program beneficiaries occurs at the expense of non-beneficiaries—an issue that is often overlooked in evaluations (Berniell et al., 2020).

In public works programs, the state directly hires individuals through public-sector initiatives. These policies have often been implemented in the region during economic downturns, with the dual objective of improving labor market outcomes and alleviating poverty. However, the evidence suggests that they are generally more effective at achieving the latter than the former. A key challenge of public works programs is that they may lock participants into low-quality jobs, reducing their likelihood of transitioning to better-paid formal employment (Escudero et al., 2019).

Support programs for microenterprises and self-employed workers typically provide job skills or business management training, often complemented by cash transfers, subsidized loans, or in-kind asset transfers. The literature generally finds positive effects on employment, although evidence on impacts on profits or earnings is more mixed (Escudero et al., 2019; Yeyati et al., 2025). A common concern with these programs is that they may increase the likelihood that participants remain in informal, low-productivity occupations—both characteristics closely associated with microenterprises—potentially hindering their long-term labor market trajectories (Almeida and Galasso, 2010; Galasso et al., 2004).

Overall, vocational training programs are associated with the largest gains in wages and formal employment among ALMPs, though their effectiveness depends on design, implementation, and context. Job intermediation services yield modest but cost-efficient results, while wage subsidies can also be effective, depending on their size and duration. Public works programs and support for microenterprises or self-

employment may generate short-term employment gains, yet risk locking individuals into lower-quality jobs. Ultimately, ALMPs serve not only as employment policies but also as instruments for formalization. Their effectiveness in LAC hinges on addressing the skill gaps and unstable trajectories that characterize informal employment.

Human capital, formalization, and growth

ALMPs can accelerate short-run matches and transitions, and develop skills among the working-age population. However, their effectiveness depends on the foundational and job-relevant skills that workers bring to the labor market. In the long run, improving education systems becomes a necessary complement: it expands the pool of job-ready candidates who can cross formal firms' hiring thresholds, reduces the incidence of low-quality informal matches, and strengthens the human capital necessary for economic and social development.

Gaps in educational attainment and learning—well documented in LAC, particularly by income levels—translate into lower employability in formal jobs and slower wage growth. Schooling diplomas and certified competencies serve as credible signals for employers, easing screening and lowering selection costs. This reduces search frictions and shortens spells in low-quality informal jobs. Moreover, formal firms invest more in training when matches last longer and separations are less frequent. Because informal workers tend to change jobs more frequently, firms have weaker incentives to invest in their skill development. This creates a cycle in which skill deficits and high turnover reinforce informality over workers' lifetimes.

Human capital shapes aggregate productivity and growth through channels that go beyond formalization. Stronger cognitive, socioemotional, and digital skills raise within-firm productivity by enabling workers to adopt technology, standardize processes, and solve production problems—accelerating learning-by-doing and incremental innovation. At the same time, when more workers meet firms' competency thresholds, economies can reallocate labor toward higher-productivity formal firms and scale activities that benefit from technology adoption and improved work organization. In settings with many small, low-productivity firms, these within-firm gains compound reallocation effects, amplifying the payoff of pro-formalization efforts.

Human-capital accumulation is cumulative. In recent decades, access to schooling expanded in LAC, yet international achievement assessments consistently reveal a skills crisis: many students do not master basic competencies relative to countries' income levels. Early deficits in cognitive and socioemotional skills, if unaddressed, propagate through schooling, depress progression and completion, and lower the likelihood of entering and remaining in formal employment with adequate wages and social protection. This justifies a life-cycle approach to human capital development.

In early childhood, investments in health, nutrition, parenting, early education, and universal pre-primary schooling lay the foundation for later learning. The regional evidence highlights these interventions as among the most cost-effective for building

cognitive and socioemotional skills and narrowing early gaps that later show up as dropout and low completion rates. To be transformative, programs must expand coverage and raise quality, particularly in disadvantaged settings where baseline deficits are largest, and be financed in ways that protect efficiency and equity (Berniell et al., 2016; de la Mata et al., 2022).

LAC countries have achieved universal enrollment in primary education and, to a lesser extent, in lower secondary education. However, concerns about low learning outcomes and persistent socioeconomic and geographic disparities remain. In upper secondary education, low enrollment and high dropout rates are widespread—and are especially worrisome given that completing this level of schooling is a key pathway to formal employment. Moreover, boys increasingly lag behind girls across academic outcomes. Pedagogical strategies that tailor teaching to actual competencies and provide structured remediation in literacy and numeracy are an attractive policy option. Improving school infrastructure in lagging areas, updating curricula with an emphasis on 21st-century skills, and strengthening teacher policy—selection, career development, professional learning, and competitive pay—are central to raising quality (Alvarez et al., 2025; Berniell et al., 2021). Extending the school day can contribute when additional time is used effectively. Counseling systems and strengthening of technical options that connect students to pathways with real labor-market returns help align choices with opportunities and increase the likelihood of a student finishing with skills that employers value. Because disadvantages compound over time, designs should be explicitly progressive—providing more time, support, and stronger teachers where gaps are widest (de la Mata et al., 2022).

Access to tertiary education and post-secondary technical training remains segmented, and the quality is uneven. On the supply side, promising strategies include expanding capacity strategically and decentralizing it geographically, improving quality assurance, and fostering closer employer linkages. Short-cycle technical programs can be cost-effective when curricula are co-designed with firms and assessments certify practical skills; substantial on-the-job components and intermediation services tied to completion improve match quality and increase firms' willingness to offer formal contracts linked to clearly defined skill bundles (Ferreyra et al., 2022; Lavy et al., 2024). On the demand side, targeted scholarships can improve access and completion, but they are more effective at improving learning and employability outcomes—not just enrollment—when programs with demonstrated quality and labor-market relevance are prioritized (Londoño-Vélez et al., 2020, 2023). First-generation and low-income students warrant special attention.

Digital skills cut across all stages and add urgency. As production and services adopt digital tools, the payoff to basic digital skills rises. At the same time, technology makes foundational skills—like literacy, numeracy, and problem-solving—more important, because they enable workers to use digital tools effectively. Embedding digital modules within existing training and intermediation programs—and within technical and tertiary curricula—expands the set of roles in which workers complement technology and improves the chances of transitioning into higher-productivity formal jobs. Reducing territorial gaps in connectivity and ensuring access to devices and

platforms are practical steps that make these modules effective and complementary to other human-capital investments (Dutz et al., 2018).

By sequencing and integrating life-cycle human-capital policies with the short-run instruments discussed in the previous section, countries can expand human capital, a key driver to increase productivity, reduce informality, and achieve human progress.

Promoting formalization and productivity in labor-intensive sectors

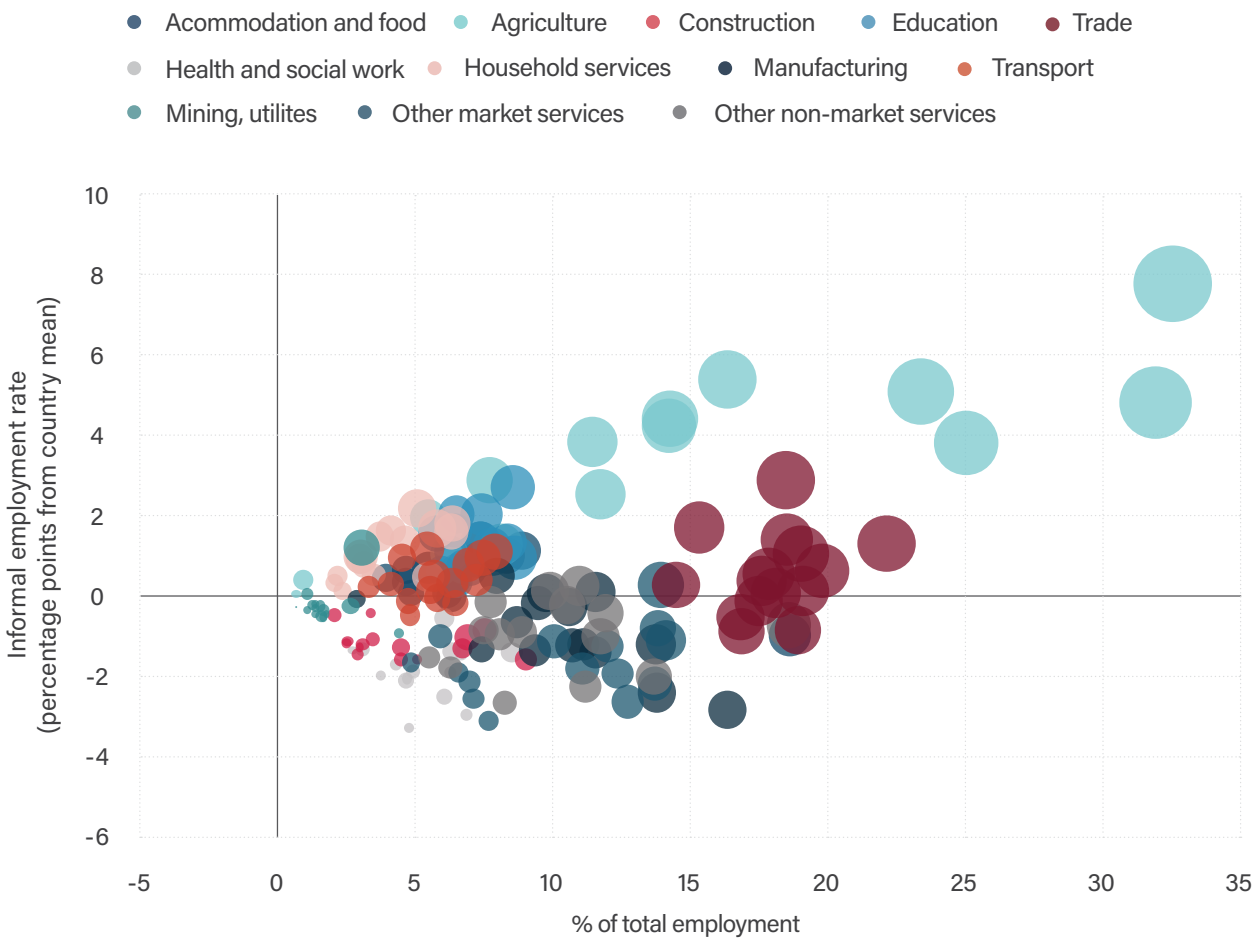
Informality is unevenly spread across the economy. Sectors such as agriculture and trade account for a large fraction of informal workers in most LAC countries because they are both large employers and display informality rates above the national average (Graph 2.9). Construction, transportation, and household services also show high informality, but their employment shares are modest. Manufacturing and other market services (which include administrative services, among others), in contrast, employ many workers and exhibit lower informality. This variation signals scope for sector-specific policies to foster formalization.

There are several reasons behind the variation in informality across economic sectors, and a correct assessment of the underlying causes is essential for designing effective sector-specific formalization policies.

One important factor is the interaction between labor regulations and sector-specific characteristics. For instance, agricultural production is highly seasonal, so EPL that restricts the hiring of temporary workers may encourage firms to rely on informal arrangements. A similar dynamic arises in sectors with seasonal demand, such as hospitality. Likewise, in more volatile industries—like construction—firms may be reluctant to offer formal contracts when separation costs are high.

The prevalence of microfirms (including self-employment) is a strong predictor of informality, as smaller firms are harder to monitor. Understanding why their incidence varies across sectors is therefore highly relevant. For example, microfirms are especially likely to proliferate in activities with weak economies of scale—such as personal services. A similar pattern applies to activities that operate outside other regulations, such as street vending—in this case, because the stronger incentive is to stay small to avoid detection. More generally, low-productivity sectors are more likely to have smaller and informal firms.

Graph 2.9
Informality rate and employment share across economic sectors



Note: The graph shows the scatter plot of informal employment in percentage points from country mean and the share of total employment for each sector, using the most recent data available for each country (2023 or 2024). Data corresponds to informal employment and total employment by economic sectors. For the following countries, the latest available data refer to an earlier year: Argentina, Bahamas, Bolivia, Brazil, Chile, Colombia, Costa Rica, Ecuador, El Salvador, Honduras, Mexico, Panama, Peru, the Dominican Republic, and Uruguay.

Source: Authors based on ILOSTAT data (ILO, 2025e, 2025f).

In the long run, formalization and productivity rise together. Industrialization has long been viewed as a springboard to growth and better-quality jobs, a trajectory exemplified by East Asian economies such as China, Japan, and South Korea. In LAC, the relatively high formality rate in manufacturing aligns with this view of industry as a generator of good employment. Yet Rodrik and Stiglitz (2024) caution that, for today's developing countries, manufacturing now offers fewer opportunities for structural transformation and sustained growth, because modern production is increasingly skill- and capital-intensive, which constrains its capacity to absorb low-qualified workers and

to thrive in settings with weak institutions. This scenario underscores the relevance of pursuing productivity gains—and job creation—across other sectors of the economy.

Most Latin American countries—and, to a lesser extent, those in the Caribbean—have achieved notable gains in agricultural productivity; the region is a net food exporter and a major contributor to global food security (Brassiolo et al., 2023). Yet two major challenges persist. First, productivity varies widely across—and even within—countries, signaling substantial room for improvement. Second, climate change and biodiversity loss threaten both the productivity and sustainability of the sector.

As outlined in CAF's Report on Economic Development 2023, LAC's agricultural sectors could benefit from adopting three complementary strategies. First, scaling up sustainable agricultural practices—such as conservation tillage, crop rotation, agroforestry, and stress-resistant crops—which are cost-effective and privately profitable, but whose adoption remains constrained by financing and information barriers. Second, advancing nature-based solutions (NbS) that conserve or restore ecosystems like forests and wetlands, protecting farms from climate shocks while also delivering co-benefits such as carbon capture, clean water, and biodiversity. Third, investing in adaptation infrastructure, particularly in water management systems, critical to safeguard agriculture, domestic water supply, and hydroelectric generation.

Preserving the region's rich biodiversity—and the ecosystem services on which agriculture and human well-being rely—requires halting deforestation and degradation. Agricultural expansion has long been a key driver of these pressures. The central challenge now is to sustain production gains while limiting further expansion of the agricultural frontier. Protected areas, which cover 22% of land and seas, are vital tools, but improving their effectiveness is key. Co-management with communities and well-designed market instruments—like payments for ecosystem services and green supply-chain agreements—can enhance conservation outcomes when carefully designed and monitored (Brassiolo et al., 2023).

A further challenge for job creation is that gains in agricultural productivity often reduce the share of the workforce employed in the sector, especially as production shifts from labor-intensive to capital-intensive methods. This underscores the need for strategies that expand non-agricultural job opportunities in rural areas, as well as investments in education systems to narrow the urban–rural skills gap.

A large share of LAC's informal workforce is already employed in services. The policy challenge, therefore, is to raise productivity and formalization within this sector while preserving—and ideally strengthening—its role as a key source of employment.

Countries such as India and the Philippines have shown that export-oriented service industries—notably information-technology support and business-process outsourcing—can generate large numbers of jobs. Yet these activities tend to be relatively skill-intensive (Rodrik and Stiglitz, 2024). One comparative advantage for LAC is its overlap with U.S. time zones, which facilitates real-time coordination with the region's principal external market.

Another promising avenue is to promote investment in technologies that complement—rather than replace—low-skill service workers, which can raise both productivity and job quality (Rodrik and Stiglitz, 2024). For example, digital tools can now help entry-level health workers monitor patients and offer customized learning resources, equip retail clerks with more detailed and specialized information to help customers, and boost the performance of call-center agents through generative-AI prompts.

More broadly, governments in the region could benefit from a policy mix that speeds up technology adoption to expand and upgrade job opportunities—especially for low-skill workers (Álvarez et al., 2025).

Concluding remarks

Informality is a complex and persistent phenomenon that affects workers, firms, and economies at large. For workers, it disproportionately affects disadvantaged groups and limits human capital accumulation and access to social protection. For firms, informality restricts access to credit, reduces incentives to invest and scale up, and enables less productive enterprises to survive through regulatory evasion. At the aggregate level, these dynamics undermine productivity growth, perpetuate inequality, and weaken tax collection, making informality not only a labor market issue but also a major development challenge.

As discussed in the chapter, informal firms are heterogeneous. Beyond low-productivity survival enterprises, some firms are sufficiently productive to operate formally but opt to remain informal to evade taxes and regulatory burdens (parasite firms), while others have high productive potential but remain informal due to the high costs of formalization (resource-constrained firms). This heterogeneity highlights the need for differentiated policy approaches.

Broadly, formalization tools fall into three categories: (i) policies that reduce the entry costs to formality; (ii) policies that modify economic incentives by increasing the benefits of formality or reducing those of informality; and (iii) policies focused on monitoring and enforcing labor regulations. In terms of effectiveness, reducing entry costs tends to produce modest formalization gains—although it may still generate broader economic benefits. Enforcement policies are more effective in reducing informality, although they may have short-term adverse effects on employment. Increasing the benefits(costs) of (in)formality is a promising strategy, but careful policy design is crucial. For example, tax subsidies can entail large fiscal costs. EPL and social policies can substantially alter the attractiveness of the formal and informal sectors. Aligning these policies' social objectives with their potential negative labor-market impacts requires case-by-case analysis. In some instances, decoupling benefit eligibility from employment status can help mitigate policies' adverse effects on formalization.

ALMPs can help individuals acquire formal jobs by fostering skill development, supporting job search and matching, and shortening unemployment spells that might otherwise lead to informal work. Evidence from the region shows that training

programs can be a particularly cost-effective policy to increase formal employment—although appropriate design and implementation are crucial. Intermediation services tend to yield modest but cost-effective results, given their substantially lower costs per participant. In contrast, public works programs can have positive income effects in the short run, but they may lock participants into low-quality jobs, reducing their likelihood of transitioning to better-paid formal employment.

In the long run, human-capital policies complement ALMPs by expanding the pool of job-ready workers and strengthening firms' incentives to adopt productivity-enhancing technologies. Life-cycle investments in skills—together with digital competencies—reinforce formalization and productivity and are therefore an essential part of a balanced policy mix.

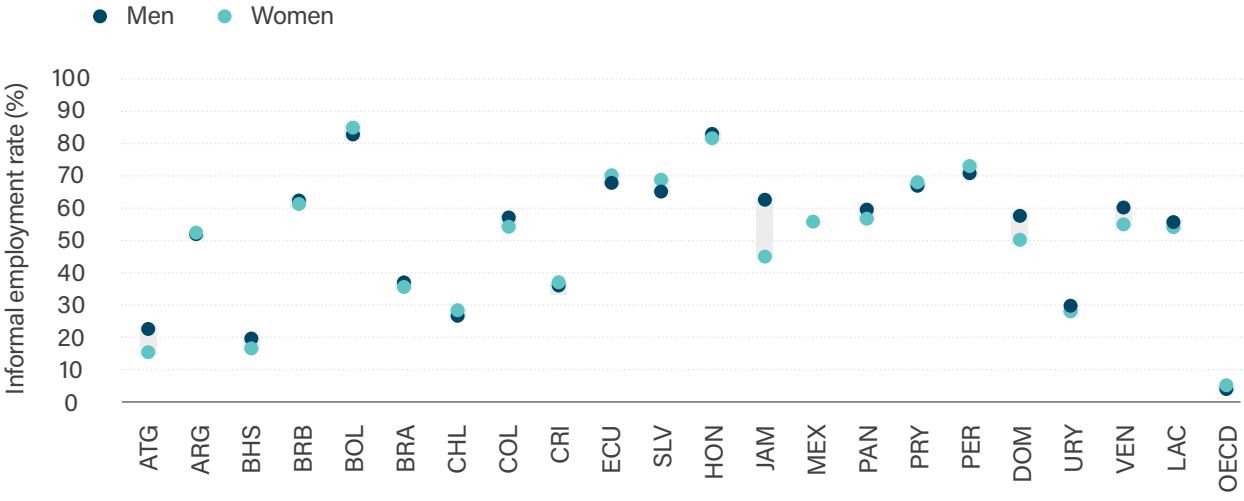
Informality is unevenly distributed across the economy. In most LAC countries, agriculture and trade account for a large share of informal workers, reflecting their scale and high informality rates. This variation highlights the potential for sector-specific formalization policies, while reinforcing the broader insight that productivity and formality tend to rise together. Informality is closely linked to firm size. Supporting the growth of large, productive firms and high-potential startups—without subsidizing low-productivity small firms—can contribute to reducing informality and increasing productivity.

Many of the most effective policies identified in this chapter involve important trade-offs. Enforcement measures often alter the composition of firms in the economy—raising the exit rate of low-productive firms—while informality can serve as a buffer against unemployment and a source of more flexible job opportunities. Key institutions such as EPL and social protection programs may unintentionally discourage the creation of formal employment, even as they provide valuable services to their intended beneficiaries. Moreover, given their legal status, informal firms and workers can become part of clientelist networks that benefit political entrepreneurs. In other words, beyond their effects on efficiency, formalization policies are also redistributive. For that same reason, they are often met with resistance from the groups they affect. A viable reform agenda could therefore identify the likely winners and losers of specific policies, establish compensation mechanisms to mitigate short-term costs when appropriate, and build broad coalitions that can credibly sustain the continuation of implemented reforms.

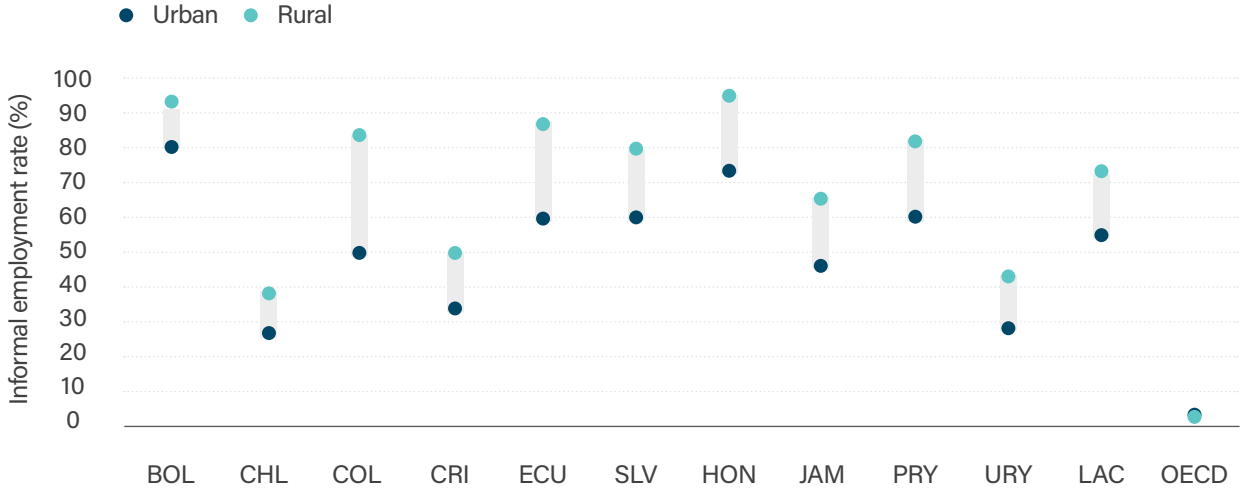
In summary, informality in LAC is deeply rooted in structural factors, from low skills and institutional gaps to firm heterogeneity and sectoral patterns. Tackling it requires a balanced mix of policies: increasing the benefits of formality while strengthening enforcement; promoting skills through ALMPs and education reforms; and raising productivity in labor-intensive sectors. Progress will depend on tailoring responses to country contexts, while recognizing that investing in skills remains the most powerful long-term lever for reducing informality and promoting economic growth. In line with La Porta and Shleifer (2014), a development-first lens suggests that productivity growth and the expansion of modern firms provide the most durable path to lower informality. The relationship runs both ways, but evidence indicates that growth largely drives reductions in informality rather than the reverse.

Chapter 2 Appendix

Graph A.2.1
Informal employment rate by gender (%)



Graph A.2.2
Informal employment rate by region (%)



Note: Informality is defined using the ILO's harmonized indicator, based on the employment status and characteristics of a worker's main job. OECD figures exclude LAC countries. The graph in Panel A shows the most recent available informal employment rate by gender for each country (2023 or 2024). For the following countries, the latest available data corresponds to an earlier year: Antigua and Barbuda (2018), Bahamas (2019), Barbados (2016), Honduras (2017), Venezuela (2017). In Panel B, the graph shows the most recent available rate of informal employment by region for each country (2023 or 2024). For Honduras, the latest available data refer to 2017.

Source: Authors based on ILOSTAT data (ILO, 2025g, 2025h).

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Chapter 3.

PROMOTING INNOVATION AND DIGITAL TRANSFORMATION

Álvarez, Fernando | Toledo, Manuel | Research assistance from Jesús Martínez

Summary

This chapter outlines a firm-centric innovation agenda to close Latin America and the Caribbean's innovation and digital adoption gap, which suppresses productivity, inclusion, and sustainability. The central challenge is not only limited to frontier Research and Development (R&D) but also to the slow absorption and adaptation of proven technologies and practices to local contexts.

The proposed portfolio has three pillars. The first focuses on firm-level interventions, including both financial and non-financial support. The second aims to facilitate knowledge transfer and co-creation among firms and other actors within the innovation ecosystem. The third addresses the foundational policies required to improve the enabling environment in which firms operate.

Throughout the discussion, the chapter highlights the importance of proper policy design and implementation to improve additionality and mitigate risks, presenting key best practices. Finally, it stresses the importance of fostering digital transformation in strategic sectors such as financial services, agribusiness, and the energy and mining industries.

Innovation, digital transformation, and productivity

Innovation and technological adoption are key drivers for economic growth, competitiveness, social inclusion, and sustainability. Their transformative role is widely recognized in the economic literature and global development frameworks such as the UN's 2030 Agenda.

Unfortunately, compelling evidence indicates that an innovation gap lies at the core of Latin America and the Caribbean's (LAC) low productivity. The region's innovation ecosystem is weak, with limited financial resources and scarce specialized human capital devoted to the creation and diffusion of productive knowledge. This scenario is compounded by a challenging business environment—characterized by a lack of competition, weak infrastructure, and limited access to credit, among other frictions—that stifles innovation.

A clear manifestation of this innovation gap is a productive system dominated by a large share of small, poorly managed firms that lack dynamism. These firms have limited capacity to use resources efficiently, generate high-quality jobs, and integrate into global value chains. The scarcity of employment opportunities, in turn, drives workers into informality, another major source of low aggregate productivity.

A particularly disruptive form of innovation and technological adoption is digital transformation. Digital transformation cannot be understood as a simple process of technological modernization; it involves a profound structural change that impacts production models, institutional framework, social interaction, and governance. Emerging technologies like artificial intelligence (AI), the Internet of Things (IoT), and big data analytics (Big Data) are already transforming key sectors such as agriculture, biotechnology, education, and financial services. When implemented with a strategic vision, these tools can improve efficiency in resource management, support data-based decisions, and generate new opportunities for employment, entrepreneurship, and local development. However, they also introduce regulatory and social dilemmas that require urgent and coordinated responses.

This chapter provides guidance for designing policies to promote innovation and digital transformation in LAC. It first presents a diagnosis of the region's innovation ecosystem, and then proposes a policy portfolio aimed at strengthening firms' capacities and incentives to absorb, adapt, and transform new technologies into growth. This portfolio is structured in three layers: interventions targeting individual firms; initiatives promoting coordination among firms and with other actors in the innovation ecosystem; and foundational policies to strengthen the key enabling environment that affects all firms.

This focus on the firm is deliberate and rests on two core justifications. First, as the diagnosis reveals, the region's most significant innovation gaps are found precisely at the firm level. Second, and more fundamentally, it is within firms that innovation is

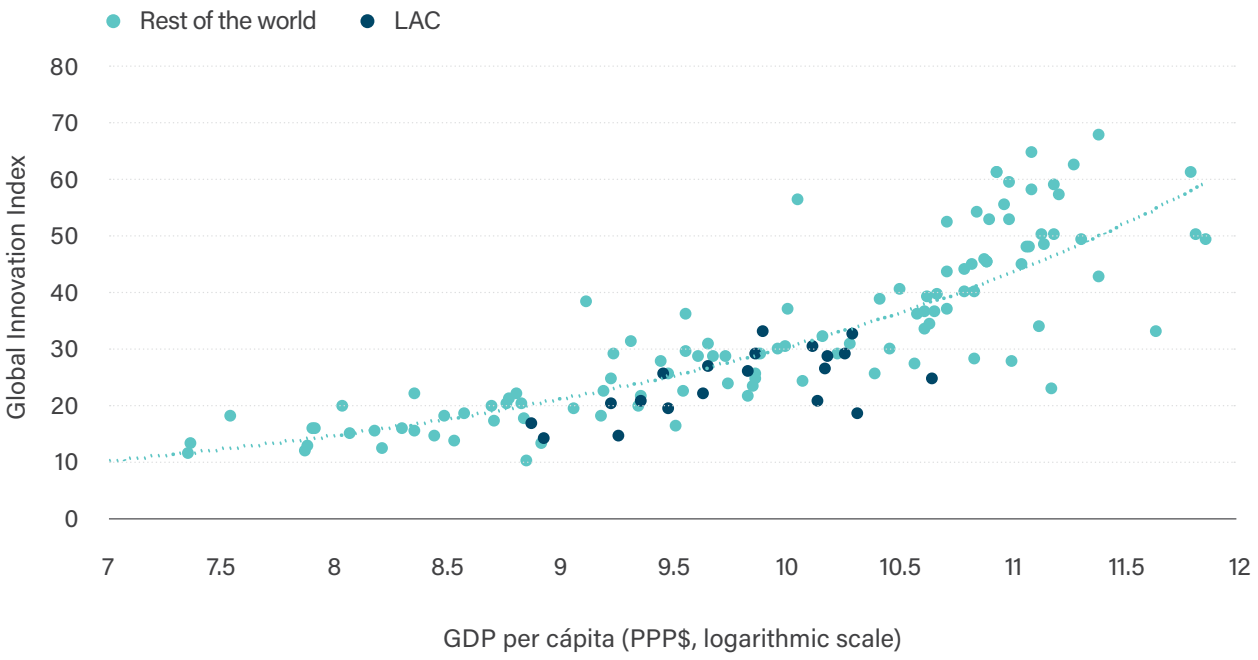
ultimately converted into productivity growth, making them the essential engine of economic transformation. This firm-centric approach does not diminish the role of other actors like universities; rather, it emphasizes that their contributions are most effective when successfully connected to the productive sector.

Finally, the chapter explores the adoption of digital technologies in key strategic sectors—such as financial services, agribusiness, mining, and energy—and concludes with a set of general guiding principles for a successful innovation policy agenda.

A diagnosis of the innovation ecosystem: Fragile foundations, poor outcomes

The Achilles' heel of productivity in LAC is a persistent and profound innovation deficit. This weakness, which manifests as a low capacity of firms to develop and absorb new technologies and ideas, lies at the core of the region's stagnation. The picture is starkly illustrated by the 2024 Global Innovation Index: the regional leader, Brazil, ranks 50th (out of 133 countries), and most of the region's countries perform below expectations for their income level—a clear indication of the failure to convert economic potential into innovative capacity (Graph 3.1).

Graph 3.1
Global Innovation Index relative to GDP per capita (2024)



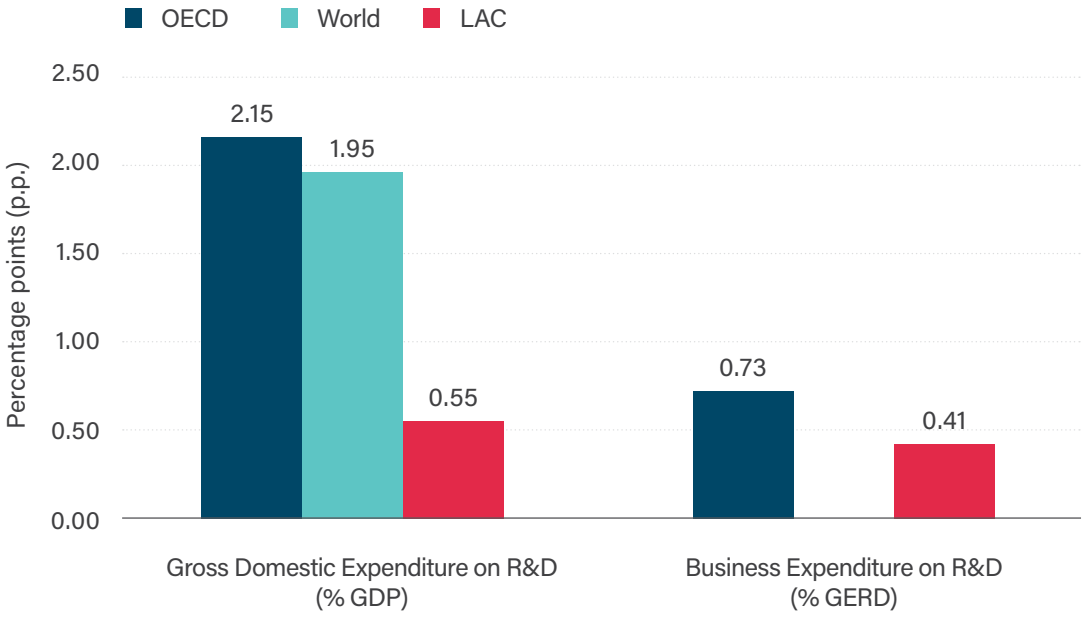
Source: Authors based on the Global Innovation Index Database (WIPO, 2024).

Fragile foundations: A dual deficit in funding and talent

A dynamic innovation ecosystem runs on two critical fuels: risk-taking and patient financial capital, and specialized human talent. The region's chronic failure to supply both is the very foundation of its innovation deficit, crippling its capacity not only to generate new ideas but, more importantly, to absorb existing knowledge.

Regarding financial capital, the deficit is twofold and profound. First, investment in Research and Development (R&D) is alarmingly low, averaging a mere 0.55% of GDP —a fraction of the OECD (2.66%) and world averages (1.95%). Even more telling is the composition of these funds: while in the OECD over 70% of R&D is financed by the business sector, ensuring its market relevance, in LAC this proportion is lower and depends heavily on the public sector (Graph 3.2). This creates an R&D apparatus that is often disconnected from productive needs. Second, and equally critical for a dynamic economy, is the scarcity of seed and venture capital for high-impact entrepreneurship. This lack of early-stage funding is a binding constraint that stifles the growth of new innovative firms.

Graph 3.2
Gross domestic expenditure and business expenditure on R&D (2022)

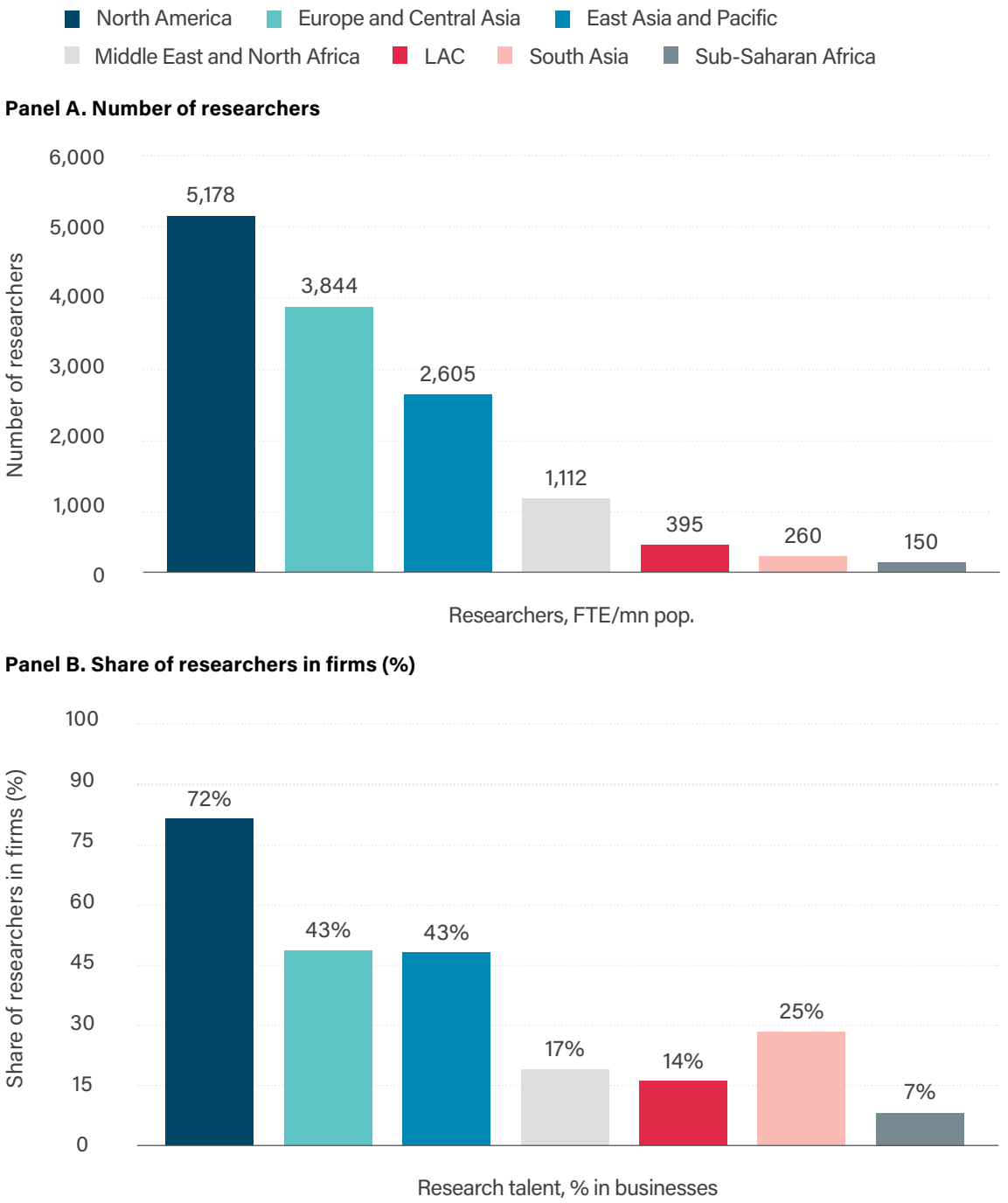


Note: Business enterprise expenditure on R&D (BERD) comprises all expenditure on research and development executed by the business enterprise sector in a given territory. It is the subcomponent of Gross Domestic Expenditure on R&D (GERD) incurred by business enterprises.

Source: Authors based on UNESCO Institute for Statistics (UNESCO, 2025) and the OECD's Science, Technology and Innovation Scoreboard (OECD, 2025).

The deficit in specialized human talent is equally severe. The region has up to 13 times fewer researchers per capita than North America. However, this number tells only half the story; an additional limitation is their location. As Graph 3.3 shows, the proportion of researchers working within firms is extremely low. This talent scarcity limits firms' ability to generate new knowledge, but more critically, it weakens their absorptive capacity—their ability to identify, evaluate, adapt, and integrate external technologies (Crespi and Zuniga, 2012; IDB, 2010).

Graph 3.3
Specialized human capital in R&D (2022)



Note: Panel A shows the number of researchers per million inhabitants, measured in full-time equivalents (FTE). Panel B shows the share of researchers working in the business enterprise sector.

Source: Authors based on the Global Innovation Index Database (WIPO, 2024).

Poor outcomes: A dual failure in creation and adoption

These chronic input deficits mirror weak outcomes on two fronts: a limited capacity to generate frontier knowledge and, even more decisive for the region's productivity, a slow and uneven ability to adapt, absorb, and diffuse the technologies and best practices that already exist globally.

The weakness in creation is evident, with patents granted per capita and mobile app development stuck at very low levels (Graph 3.4).[1] However, for a region that urgently needs to close productivity gaps, perhaps the most important metric is not invention, but adoption. Here, the failure is also striking. The low level of payments for the use of external intellectual property is a sign of a low-sophistication equilibrium: neither is proprietary technology created, nor is licensed knowledge actively "imported" from other countries (Graph 3.5).

Nowhere is this adoption failure more critical than in digital technologies, tools with the potential to generate quantum leaps in productivity. The data reveals a crucial distinction according to the complexity of the digital technology.

As suggested by Maloney et al. (2025), for relatively accessible and inexpensive technologies like Enterprise Resource Planning (ERP) and Customer Relationship Management (CRM) software—tools that are mature and easily customizable by suppliers—leading countries in the region, like Brazil and Chile, show good diffusion rates. However, there is a critical lag in the absorption of more complex, costly, and sector-specific technologies where large productivity gains are concentrated:

- In advanced production technologies, such as industrial robotics or the Internet of Things (IoT), the region shows a large gap compared to North America, Europe, and Asia (Graph 3.6).[2]

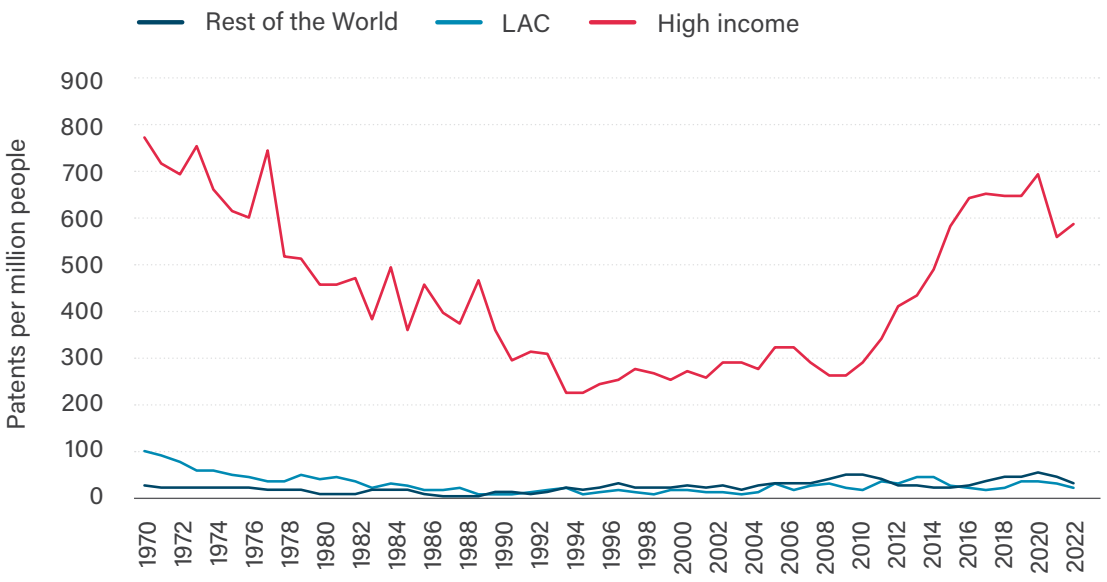
- Similarly, in frontier tools like AI, the Digital Economy Observatory for LAC (Katz and Callorda, 2024) estimates the adoption gap at 30% relative to the OECD.

1. This also translates into smaller intellectual property revenues as a percentage of total trade. LAC shows substantially lower figures than developed economies (0.13% vs 1.49%).

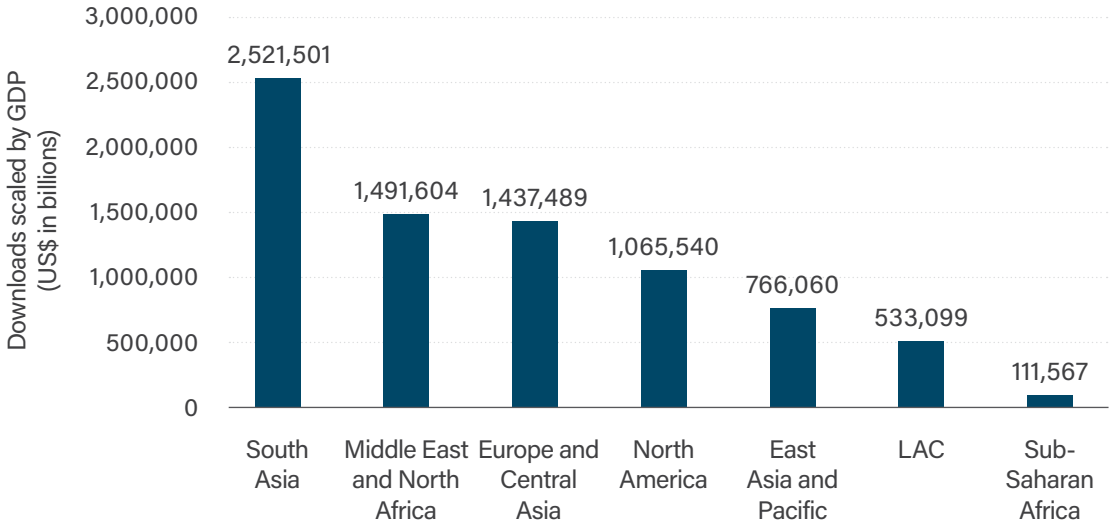
2. Maloney et al. (2025) reports that by 2021, only 20% of Brazilian firms in textile-related sectors had adopted automated sewing machines, compared to 50% in Korea and 70% in Poland.

Graph 3.4
Intellectual property and creativity outputs

Panel A. Patents granted per million people (1970–2023)



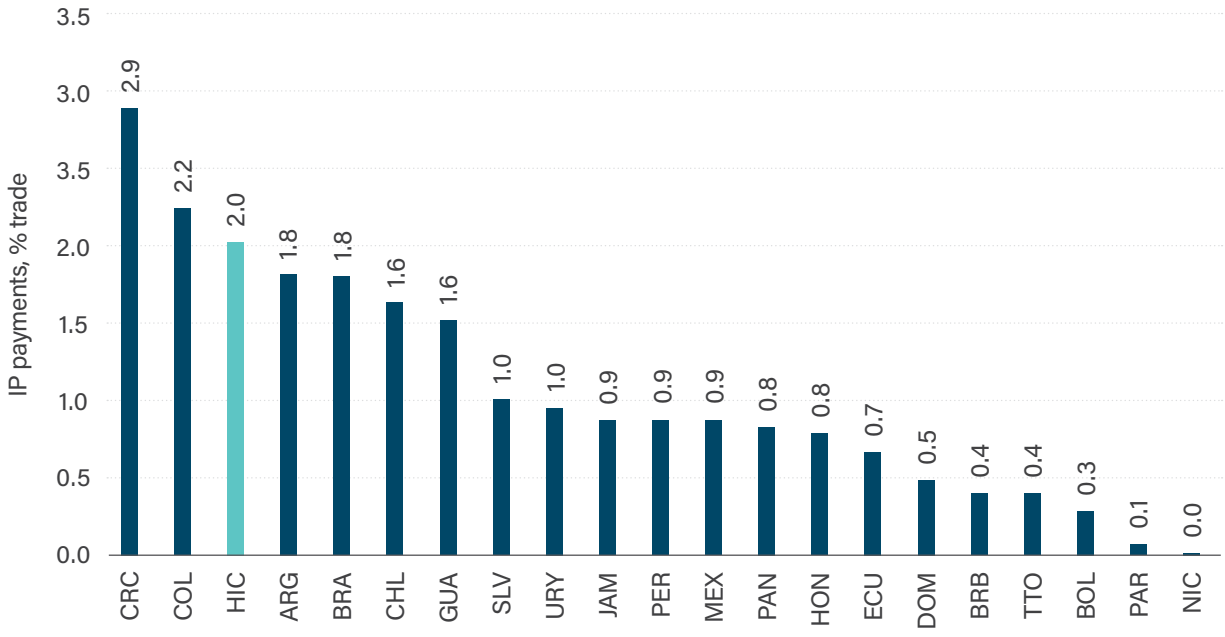
Panel B. Mobile apps development (2023)



Note: A patent is a set of exclusive rights granted by law to applicants for inventions that are new, non-obvious, and industrially applicable. Panel A includes only patents granted, and observations are scaled by population. Mobile app creation (Panel B) is measured as the global downloads of mobile apps on Google Play Store and iOS App Store, by origin of the headquarters of the developer/firm, scaled by GDP constant, 2015 US dollars (in billions).

Source: Authors based on WIPO IP Statistics Data Center (WIPO, 2025) and Global Innovation Index Database (WIPO, 2024).

Graph 3.5
Intellectual property payments, % total trade (2022)

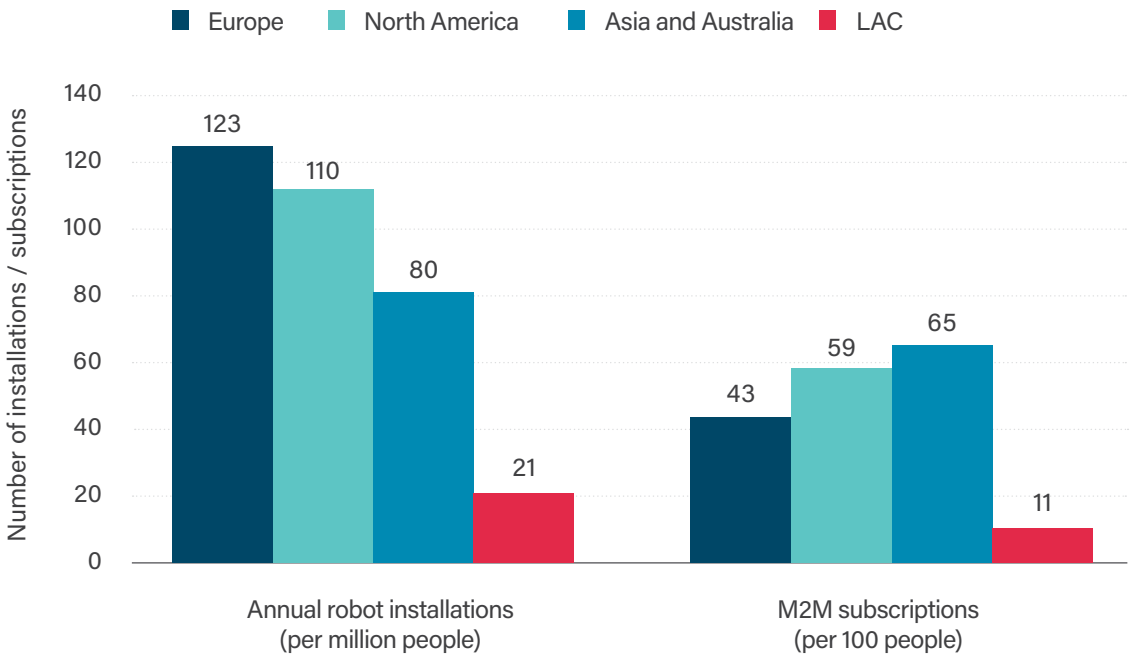


Note: Payments are between residents and non-residents for the use of proprietary rights, and for licenses to reproduce or distribute (or both) intellectual property embodied in produced originals or prototypes, and related rights. The data are reported as a percentage of total trade. HIC denotes High Income Countries.

Source: Authors based on Global Innovation Index Database (WIPO, 2024).

The diagnosis paints a clear picture: fragile foundations and failures in both the creation and absorption of technology, particularly complex digital tools. This conclusion calls for a public policy response focused squarely on the core of the productivity problem: the firm and its ability to absorb, adapt, and convert new technologies into growth.

Graph 3.6
Adoption of advanced technologies: A regional comparison (2023)



Note: Industrial robots are automatically controlled, reprogrammable, and multipurpose manipulators used for automation within industrial environments. M2M subscriptions are non-consumer mobile connections assigned to machines for automated data exchange.

Source: Authors based on the International Telecommunication Union (2025) and the International Federation of Robotics (Müller, 2024).

Public policies as catalysts to encourage and promote innovation

The rationale for public policy

As a vast body of economic theory and evidence shows, there are compelling reasons to believe that private markets, left to their own devices, will systematically underinvest in the creation and diffusion of new ideas (Bryan and Williams, 2021).

The first reason is the public-good nature of knowledge. Generating a novel idea is a costly and risky process, yet once created, it can be imitated by competitors at a relatively low marginal cost. Faced with the impossibility of appropriating the full returns on their investment, many innovation projects are never undertaken.

Second, beyond the problem of appropriability, innovation generates powerful positive externalities, or knowledge spillovers. Today's new ideas are crucial inputs for tomorrow's breakthroughs, creating a virtuous cycle of cumulative progress. Knowledge also diffuses across firms. The empirical evidence is clear: social returns to innovation systematically and substantially exceed the private returns captured by the original innovator (Bloom, Van Reenen, et al., 2019).

Third, a critical market failure that often paralyzes the diffusion of technology is coordination failure (Rodríguez-Clare et al., 2005). This occurs when the return on a firm's investment hinges on complementary investments made by others. While the collective adoption of a new technology could generate major benefits across a value chain, no individual firm has an incentive to move first. A company will not invest in digital infrastructure if its suppliers lack compatible standards, if there is no critical mass of skilled labor, or if its customers are not prepared to interact with it. Likewise, mutually beneficial projects—such as creating a shared industrial laboratory or a sector-specific training program—fail to materialize because they require simultaneous investment by multiple actors, and no single entity has the incentive to act alone. Without mechanisms to align expectations and investment decisions, coordination failures pose an insurmountable hurdle to technological upgrading.

Fourth, innovation is systematically constrained by information asymmetries and failures in financial markets (Hall and Lerner, 2009). The intangible nature of innovation makes it poorly suited to traditional bank lending, since ideas and proprietary knowledge cannot be used as collateral. This naturally pushes innovators toward equity financing, which presents another challenge: to attract investors, entrepreneurs may need to disclose sensitive details about their not-yet-patented ideas, exposing them to the risk of appropriation. This dilemma—disclose and risk imitation or withhold and fail to secure funding—creates a severe financing gap, particularly acute in early-stage ventures, where many promising innovations never reach the market due to lack of capital rather than lack of merit.

These market failures provide a clear and robust justification for public policy. The role of government must go beyond subsidizing R&D. It is about designing a portfolio of interventions that strengthen both the incentives and the capabilities of firms to innovate and coordinate, while minimizing the risk of distorting market decisions. Crucially, the design of this policy portfolio must be contingent on the level of development and the sophistication of the innovation ecosystem of the country or locality in which it is implemented (Maloney et al., 2025).

For developing countries, a common recommendation is to prioritize the adoption of existing global technologies over homegrown R&D. While this approach is broadly sensible, frontier innovations, for example, in sectors like agriculture, are often designed for the specific contexts of high-income countries and are not directly transferable to different climates, soil conditions, or disease profiles (Moscona and Sastry, 2025).

This creates an important role for adaptive R&D. Research and development is not a substitute for adoption, but a necessary complement to it. Building local scientific and technological capabilities is essential for the complex task of selecting, evaluating, adapting, and tailoring global technologies to local realities. Thus, public investment in context-specific R&D is a fundamental tool to unlock the full potential of global knowledge and spur productivity growth.

The following policy section focuses on three core pillars of action: interventions targeting individual firms, including both financial and non-financial support; interventions that foster knowledge transfer and co-creation among firms and other stakeholders; and foundational policies to strengthen the enabling environment in which all firms operate. This focus on the firm is deliberate. It is within firms that innovation is translated into productivity growth, making them the epicenter of any effective policy strategy.

Financial support for firms

Innovation and technological adoption require patient, risk-tolerant capital that the private market often fails to provide optimally due to various market failures. To correct this underprovision of funds, governments have a set of financial instruments at their disposal. These instruments operate not only by directly providing funds or reducing the cost of R&D investment, but also by sending a positive signal about the quality of the recipient firm, which can improve its access to subsequent private financing.

Policy instruments—Financial support programs

The instruments for financial support can be grouped into three broad categories:

Direct support: This group involves a direct or implicit transfer of resources to firms to lower the cost of innovation.

- **R&D grants & vouchers:** Grants are larger, competitive funds used to co-finance specific, complex projects in firms that typically already possess some internal R&D capabilities. They allow for the strategic funding of areas with high positive externalities but usually entail high administrative costs. Vouchers, in contrast, are agile, low-value instruments ideal for small and medium-sized enterprises (SMEs) with less innovation experience to purchase innovation services or assets.

- **Tax incentives:** These instruments reduce a company's tax burden based on its R&D expenditure. An advantage is that they do not require the government to "pick winners." A disadvantage is the risk of firms simply relabeling existing expenses without generating innovations.

Debt and risk mitigation instruments: These instruments aim to facilitate access to credit, particularly for SMEs.

- **Credit Guarantee Schemes (CGS):** A public entity assumes a portion of the risk of a loan granted by a private financial institution. By reducing risk for banks, they mobilize private lending. The main challenge is managing moral hazard, where banks may relax their due diligence.

- **Public credit programs:** Loans from development banks, usually on favorable terms. They directly address liquidity constraints but carry the risk of crowding out the private sector, being captured by political interests, or causing resource misallocation. They can operate directly (first-tier) or through private intermediaries (second-tier).

Equity instruments: These instruments are particularly essential for startups and young, high-growth firms.

- **Public capital funds:** The government invests capital directly into startups in exchange for an equity stake. This can finance disruptive or "deep tech" innovations that the private market might ignore. However, it involves a high risk of failure and loss of public funds.

- **"Fund of Funds" model:** The public entity invests in private seed and venture capital funds rather than directly in startups. Seed funds target the earliest stages, while venture capital funds invest later to scale operations. This model leverages the expertise and market discipline of private fund managers, reducing the risk of poor public selection. The trade-off is less direct control over individual investments.

- **Tax incentives for investors:** Tax reliefs for individuals (angel investors) or corporations that invest in qualifying startups. Their appeal lies in mobilizing private capital in a decentralized, market-aligned manner. However, their design is complex, and they risk low additionality if they benefit investors who would have invested anyway.

Do financial support instruments work?

The evaluation of innovation support policies centers on three key questions: Does the policy lead firms to undertake more innovation activities than they would have without financial support (input additionality)? Does this investment translate into better outcomes and improved firm performance (output additionality)? Under what conditions is financial support most effective?

The cross-cutting lesson from the evidence is clear: while financial instruments can be effective, success is not automatic and depends on design and targeting (Box 3.1). Therefore, the central policy focus shifts from deciding *whether* to use these instruments to determining *how* to design them to maximize additionality and ensure that public resources catalyze productive transformation.

Box 3.1: Evidence on financial support programs

- **Direct support (grants, vouchers, and tax incentives):** The evidence on input additionality is positive. Meta-analyses confirm that R&D subsidies and tax incentives successfully increase private investment in innovation (Wang and Wang, 2025; Ziesemer, 2020). Tax incentives seem to have a faster and more robust effect on private investment than direct subsidies (Beck et al., 2017; Jaumotte and Pain, 2005). Vouchers are effective at initiating short-term collaborations, but their long-term impact depends on complementary support (Kleine et al., 2022). Output additionality is more nuanced and subject to significant time lags: positive impacts on productivity typically begin to materialize only three to five years after a project is initiated (Agosin et al., 2014).

- **Debt instruments (guarantees and public credit):** Well-structured guarantee programs, like Chile's FOGAPE, have been shown to generate both financial and economic additionality, improving firms' sales and profits (Benavente et al., 2006; Larraín and Quiroz, 2006). Similarly, Colombia's FNG increased sales and employment but not productivity, suggesting the credit was used for working capital rather than transformative investment (Arráiz et al., 2012). Public bank lending carries the risk of financing firms that are not credit-constrained, thus showing low additionality (Lazzarini et al., 2015). However, when directed toward genuinely credit-constrained firms, it does have a positive impact on employment growth and exports.

- **Equity instruments:** International evidence demonstrates that public funds are most effective when they co-invest alongside the private sector. Specifically, the analysis shows that GovVC-funded firms are typically riskier than Private VC-funded ones and generally demonstrate lower performance in securing follow-on funding and innovation output. However, when GovVCs partner with Private VC investors, these performance gaps diminish significantly (Berger et al., 2024). At the regional level, an analysis of CORFO's Seed Capital program (Chile) showed that the subsidy increased the likelihood of startups starting sales, growing, and surviving. Others, like Startup Perú, have had a significant impact on the survival rate of firms (Lozada, 2023).

Lessons for financial support programs

The evidence indicates that while financial support programs *can* be effective, their impact is highly contingent on their design and implementation. Success is not automatic; it is critically determined by the interplay between how a policy is designed, the characteristics of the recipients, and the context in which it operates. Understanding this interplay is essential for effective policy. The following insights from the literature provide a guide for optimizing program design and targeting.

Direct instruments:

- **Distinguishing between 'R' and 'D':** The 'R' component is often riskier but more likely to lead to novel patents (Czarnitzki et al., 2009), while 'D' is closer to the market. For developing countries, where technology adaptation is a primary engine for growth, grant programs must be designed with the flexibility to also support 'D'-related activities.

- **Optimizing subsidy amount:** The size of the grant is a critical design choice, as its impact appears to be non-linear. On one hand, the literature shows that a minimum grant size is necessary to encourage firms to expand the scope of their own R&D investment (Aschhoff, 2009). On the other hand, an excessively large subsidy risks a crowding-out effect, where public funds simply replace private investment. This implies the existence of an optimal "band" of funding—neither too small to be meaningful, nor too large to be inefficient—that maximizes additionality. The precise size of this band is not universal; it depends on the nature and scale of the project being funded.

- **Managing the "Relabeling Risk" of tax incentives:** A primary concern with tax incentives is the risk of relabeling, where firms may simply reclassify existing expenditures as "research and development" to capture the tax break without generating new activity. Chen et al. (2020), for example, found substantial relabeling following a change in Chinese corporate tax rules. This highlights the need for clear definitions and robust auditing mechanisms.

Debt instrument:

- **Risk-sharing:** Crucial in Credit Guarantee Schemes. A coverage of 50% to 80% is standard to align incentives and avoid moral hazard problems.

- **Rigorous default management:** To ensure long-term financial sustainability, guarantee funds must actively manage default risk. A widely cited benchmark suggests aiming for low default rates, ideally between 2% and 3% (Levitsky, 1997). An effective mechanism to achieve this is to link the performance of participating banks to clear consequences. By penalizing banks with high default rates and rewarding those with strong portfolio performance, the program directly aligns incentives, mitigates moral hazard, and ensures that banks maintain their own rigorous due diligence.

- **Public credit:** The second-tier model, where the development bank operates through commercial banks, is often superior for avoiding crowding out and leveraging local information (de Luna-Martínez and Vicente, 2012).

Equity:

- **Adopting effective governance models:** To leverage market expertise and mitigate the risks of public selection, the "fund of funds" model and co-investment with the private sector are the most effective governance structures.

- **Careful design of tax incentives:** Tax reliefs can be a powerful tool to mobilize private capital. Following the recommendations of the European Commission (2017), an effective design for tax incentives that target investment in startup equity should be generous but with clear caps, stable over time, directed specifically at equity (not debt), and include minimum holding periods to encourage patient, long-term capital.

Cross-cutting design principles:

Beyond the specifics of each instrument, a set of cross-cutting principles emerges from the evidence. These are the foundational elements that distinguish successful interventions from ineffective ones.

- **Professional and autonomous governance:** To mitigate the risks of political capture and ensure merit-based selection, implementing agencies—such as development banks and guarantee funds—require a high degree of operational autonomy, a clear mandate to solve market failures, and specialized technical capabilities.

- **Strategic targeting to maximize additionality:** Public funds have the greatest impact when they are directed at firms and projects that genuinely face market failures. This implies a strategic focus on segments often underserved by private finance, such as SMEs, young firms, and projects with a high degree of technological uncertainty or intangible assets. Targeting sector/projects with the highest positive spillover is also a focusing strategy.

- **Constant monitoring and rigorous evaluation:** Designing effective policy is an iterative process. It is indispensable to have robust mechanisms for monitoring program performance and conducting rigorous evaluations of additionality. This ensures that programs are truly correcting market failures—not simply subsidizing firms that already had access to finance—and allows for continuous improvement.

- **The "Smart Capital" principle, uniting finance and capabilities:** A common thread throughout the evidence is that financing alone is insufficient. The impact of any financial instrument is multiplied when it is combined with non-financial support. This "smart capital" approach—linking funding to technical assistance, managerial training, or mentorship—ensures that firms not only receive capital but also build the internal capabilities required to use it effectively, thus attacking the root cause of the low-productivity trap.

Initiatives for building innovation capacities

Financial capital is a necessary condition for innovation, but it is rarely sufficient. Firms, especially SMEs, face a "capability gap:" they lack internal knowledge, managerial skills, organizational culture, and external networks to effectively transform financial resources into innovation and productivity. These capabilities not only enhance innovative activity but also determine its impact on the firm's performance. Critically,

absorptive capacity is not innate; it is cultivated through prior investments in intangible capital—such as R&D, employee training, digital infrastructure, and managerial competence (Cohen and Levinthal, 1999; Fukugawa, 2025).

Indeed, one of the most established findings is the complementarity between digital, organizational, and human capital. Internal capabilities are a key factor in technology assimilation; thus, better management practices optimize the use of ICTs (Bloom, Brynjolfsson, et al., 2019), and a suitable organizational culture is key for digitalization to improve performance (Martínez-Caro et al., 2020). Therefore, non-financial support policies are an essential component of the public intervention mix.

Policy instruments—Non-financial support programs

Three of these tools are particularly common:

- **Technology Extension Services (TES):** Initiatives that help firms, especially SMEs, adopt innovative technologies and management models to improve their productivity. They are particularly effective for overcoming organizational inertia and closing technological gaps. Their main challenges are scalability, as they require a network of field experts whose maintenance is costly, and the risk of services becoming overly standardized, losing specificity.

- **Business advisory and training services:** These focus on strengthening capabilities such as strategic planning, financial management, and marketing. They directly address managerial capacity failures, which are often as significant an obstacle to innovation as technological limitations. They improve the firm's ability to absorb other types of support, including financial aid.

- **Incubation and acceleration:** Specialized organizations that offer startups an intensive support package, including mentorship and access to investor networks. The fundamental difference lies in the project's stage: *incubators* typically lay the company's foundation (from idea to structure), while *accelerators* focus on the growth phase. Both provide invaluable access to networks and knowledge. Their main challenge is that the standardized, "one-size-fits-all" model may not be suitable for all startups.

Do non-financial support programs work?

A growing body of literature based on experimental and quasi-experimental designs offers valuable lessons on the effectiveness of non-financial support instruments. Box 3.2 below summarizes some of the most relevant findings.

Box 3.2: Evidence on non-financial support programs

- **Technology Extension Services (TES):** Empirical studies suggest that TES programs can improve SME productivity by bridging internal capability gaps. For instance, an evaluation of the U.S. Manufacturing Extension Partnership (MEP) found that its services had positive and significant impacts on firm productivity and sales per worker (Lipscomb et al., 2018). Similarly, a study of Japan's extensive support network revealed that TES adoption significantly improves firm productivity. Notably, the Japanese study found that firms with higher levels of intangible capital benefited more, suggesting that a firm's absorptive capacity is critical, especially under crisis conditions (Fukugawa, 2024). Evidence from developing contexts, however, is more nuanced. An analysis of an agricultural extension program in Uruguay found that it successfully increased the adoption of specific technologies (e.g., certified seeds) but had limited or mixed effects on productivity in the short term (Cerdan-Infantes et al., 2009). This highlights that while TES can effectively promote technology uptake, direct productivity gains may take time to materialize.

- **Business advisory and training services:** Evidence strongly supports the positive impact of high-quality business and management consulting. A systematic review by the What Works Centre for Local Economic Growth concluded that business advisory services generally have a positive impact on firm productivity and output, though effects on employment are less consistent. It also found that personalized, hands-on programs tend to be more effective (What Works Centre for Local Economic Growth, 2014).

  The strongest empirical evidence comes from randomized controlled trials (RCTs).

  - A landmark RCT in India showed that intensive management consulting for textile firms led to a 17% increase in productivity within the first year (Bloom et al., 2013).

  - Similarly, an RCT in Mexico found that providing SMEs with a year of consulting services increased productivity, return on assets, and the owner's entrepreneurial drive. The study also highlighted substantial, persistent gains in employment and total wages even five years after the program ended (Bruhn et al., 2018).

- **Incubation and acceleration:** Rigorous evaluations find that accelerator impacts depend heavily on program design. A study of Start-Up Chile using a regression discontinuity design identified a critical distinction: basic services like funding and co-working space alone had no significant effect on new venture performance. However, when these services were bundled with structured training and mentorship, they significantly improved outcomes (Gonzalez-Uribe and Leatherbee, 2017). This underscores that it is the combination of resources and capability-building that drives impact.

Lessons for non-financial support programs

- **Start with a diagnosis and demand-driven approach:** The most effective extension and advisory services begin with a deep diagnostic of a firm's specific problems rather than offering a generic menu of services. Support should be designed to respond to the real, expressed needs of firms, which can only be understood through proper needs assessments. This avoids a top-down assumption of what firms require.

- **Subsidize, don't give away:** Requiring firms to co-finance a portion of the advisory service cost acts as a needed filtering mechanism. It ensures that only firms that are genuinely committed to implementing the advice will participate, increasing the likelihood of impact.

- **Quality control is paramount:** The credibility of the entire program rests on the quality of its experts. Implementing rigorous certification, training, and performance monitoring systems for advisors is essential.

- **Embrace the certification role:** For accelerators, the evidence shows their primary value is in building a brand of high selectivity. A rigorous and transparent selection process becomes the program's most valuable asset, signaling quality to the market.

- **Prioritize mentor quality over quantity:** A small, highly engaged network of high-quality mentors is far more valuable than a large, passive one. Programs should invest in carefully curating, training, and incentivizing their mentor pools.

- **Design for ecosystem spillovers:** While direct impact on participating firms may be modest, these programs can generate significant positive externalities by attracting talent, fostering a culture of entrepreneurship, and building community. Policy design should seek to maximize these spillovers.

- **Design for scalability and cost-effectiveness:** High-impact interventions, like intensive consulting, are costly and difficult to scale. Effective programs address this by using a tiered approach: offering light-touch, low-cost digital tools for broad outreach (e.g., online diagnostics, webinars) while reserving intensive, personalized support for firms that demonstrate the highest potential or commitment. This maximizes reach while concentrating resources where they can have the greatest effect. Evaluation, for any kind of initiative, is key to quantifying not only the impact on firms but also the cost of the programs.

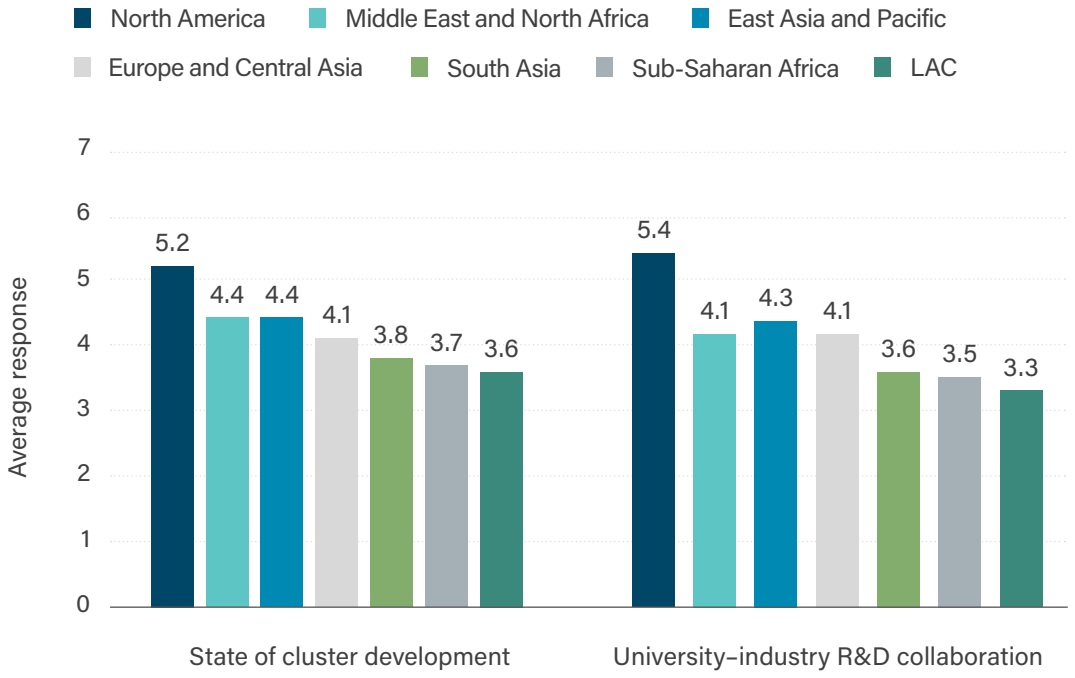
- **Maintain a long-term perspective:** Building capabilities, networks, and trust takes time. The impacts of non-financial support may take several years to fully materialize. Policy must be designed with a stable, long-term commitment, avoiding frequent changes that undermine effectiveness.

Initiatives for knowledge transfer and co-creation

Because innovation is characterized by knowledge spillovers and coordination failures, a central goal of modern innovation policy is to address these issues directly. Collaborative and cluster initiatives are designed to create ecosystems that intentionally amplify knowledge spillovers and solve coordination problems, turning isolated actors into a dynamic, interconnected network.

Unfortunately, innovation surveys reveal very limited collaborative R&D projects between firms and universities in LAC countries, as well as weak cluster formation (Graph 3.7). This situation restricts the diffusion of knowledge, the development of a critical mass of talent, and the emergence of specialized suppliers, thereby hindering the agglomeration economies that drive innovation in the world's most dynamic regions.

Graph 3.7
Collaboration on R&D



Note: University–industry R&D collaboration reflects the average response to the survey question: In your country, to what extent do businesses and universities collaborate on research and development (R&D)? [1 = not at all; 7 = to a great extent]. State of cluster development reflects the average response to the survey question: In your country, how widespread are well-developed and deep clusters (geographic concentrations of firms, suppliers, producers of related products and services, and specialized institutions in a particular field)? [1 = nonexistent; 7 = widespread in many fields].

Source: Authors based on the Global Innovation Index Database (WIPO, 2024).

Policy instruments—Knowledge transfer and co-creation programs

Governments can foster cooperation through different initiatives, including:

- **Cluster development programs**, which aim to foster agglomeration externalities—such as knowledge sharing, specialized input markets, and skilled labor pooling—and cooperation among firms and other actors within a cluster.[3] Government actions typically include providing strategic direction, technical assistance, and specific public goods (e.g., shared infrastructure or training centers). Cluster programs can be horizontal (region-based, spanning multiple industries) or vertical (focused on a specific industry or value chain).

  Cluster policies face four core challenges. (1) Ensuring genuine collaboration—there's a risk that programs are dominated by a few powerful actors rather than fostering a truly collaborative ecosystem. (2) Risk of mis-targeting—if public support is directed to a cluster with a weak comparative advantage or insufficient local capabilities, it can lead to a misallocation of resources with possibly a negative impact on productivity. (3) Achieving financial sustainability—many cluster initiatives are launched with public subsidies but struggle to become self-sufficient once the initial funding ends. (4) Complexity of coordination—aligning the differing incentives of multiple stakeholders (firms, universities, government) is complex and can lead to collective action problems. Strong and skilled management of the cluster organization is essential to mediate interests and maintain focus.

- **Collaborative R&D grants and consortia:** Public–private R&D partnerships are a cornerstone of modern innovation policy, designed to bridge the gap between the scientific and business communities. Instruments like collaborative R&D grants and research consortia explicitly aim for the co-creation of knowledge, combining industry's market know-how with academic expertise to produce commercially relevant innovations.

  These initiatives also face five significant challenges: (1) Misaligned incentives—firms prioritize speed to market and commercial applications, whereas academic researchers often value publications and fundamental inquiry. This misalignment can hamper effective cooperation. (2) Intellectual Property (IP) management—without clear and fair agreements on IP rights from the outset, concerns over confidentiality and ownership can stifle open knowledge exchange. (3) Risk of low additionality—public funds may simply substitute for private R&D that would have happened anyway, rather than stimulating new efforts. (4) Capture by large firms—larger firms with greater internal capabilities may capture a disproportionate share of the benefits, especially if SMEs lack the absorptive capacity to fully engage. (5) Complex governance and evaluation—collaborative projects require careful selection and governance to ensure all partners contribute and benefit. Furthermore, measuring their long-term outcomes (e.g., patents, new products) is inherently complex.

3. A cluster in this context means a concentration of firms in the same industry and location, with ties of cooperation and learning among themselves and with other stakeholders.

Do cluster and collaborative R&D programs work?

Although rigorous evidence is thin (especially compared to traditional R&D subsidies), recent studies suggest that these programs can deliver benefits, though outcomes vary by instrument and context (Box 3.3).

Box 3.3: Evidence on cluster and collaborative R&D programs

Cluster development programs

Evidence suggests that well-designed cluster initiatives can significantly improve firm performance, particularly SMEs.

- In Brazil, an evaluation of the *Arranjos Produtivos Locais* (APL) program found that participating SMEs experienced 17% higher employment and a nearly 90% increase in export value compared to similar non-participating firms. Notably, these effects were not immediate but grew over time, highlighting that cluster benefits take years to materialize (Figal Garone et al., 2015).
- In France, an evaluation of the *Pôles de Compétitivité* found that affiliated SMEs significantly increased their R&D spending, generating an estimated EUR 2.5 in private R&D for each EUR 1 in public support. However, the same study found mixed results for larger firms and only modest effects on regional job growth (Ben Hassine, 2020).

Public-private R&D collaboration

Empirical studies also confirm that fostering collaboration between firms and research institutions can generate significant positive externalities.

- A landmark study in Chile compared two grant programs: FONTEC (for individual firms) and FONDEF (for collaborative projects between firms and universities). While both programs increased the productivity of participating firms, only the collaborative FONDEF program generated positive knowledge spillovers that increased the productivity of other firms in the same sector (Crespi et al., 2020).
- Japan's government-brokered R&D consortia led to increased patenting among member firms (Sakakibara and Branstetter, 2002).

Benefits tend to be largest for smaller firms and those in high-tech sectors. Bureaucratic hurdles can sometimes delay projects and undermine potential gains.

Lessons for cluster and collaborative R&D programs

- **Stage the policy for medium-term consolidation:** Effective cluster support unfolds in sequenced phases. A typical path includes four steps: 1) national mapping to identify existing agglomerations; 2) diagnostic work to clarify binding constraints; 3) an implementation phase to align resources and milestones; and 4) a consolidation phase that shifts governance and financing toward the cluster itself. This phased approach facilitates coordination, allows for adaptation, and reduces execution risk by prioritizing collective goods and trust-building over heavy, front-loaded subsidies.

- **Ensure baseline capacities and complementary inputs:** For collaborative programs to succeed, certain fundamentals must be in place. Firms need a minimum absorptive capacity (skills, technology literacy) to benefit from new knowledge (Cirera and Maloney, 2017). Merely designating an area as a 'cluster' is ineffective if the underlying capabilities of local actors are insufficient. Accordingly, best practices require screening participants to ensure they possess the necessary readiness to benefit from these interventions. It is equally important to provide public and quasi-public goods that individual firms cannot supply alone, such as sector-specific training programs, shared testing and certification labs, or specialized digital infrastructure.

- **Invest in governance, trust-building, and stakeholder engagement:** This process is as crucial as the technical design. Success hinges on a shared vision and mutual trust among stakeholders. Effective governance structures—such as a professional cluster manager or a committee with representation from industry, academia, and government—are essential to balance interests. Strong private sector leadership is usually critical for long-term sustainability. To sustain commitment, roles and expectations should be clarified through charters or MOUs, while transparent procedures and independent evaluation are needed to allocate funds and reduce the risk of capture.

- **Careful targeting and selection:** Given that impacts vary widely, effective targeting is key. Cluster focus areas should be selected based on a solid analysis of latent comparative advantage and innovation potential, not political expediency. Likewise, for collaborative R&D grants, support should be directed toward projects with high spillover potential and firms that would not innovate otherwise. Empirical studies consistently show that SMEs demonstrate higher additionality from this type of support than large firms. A strategic mix of horizontal (open to all) and vertical (sector-specific) programs can also be effective—often starting broadly and then focusing on strategic sectors (Bianchi et al., 2022).

- **Design for monitoring, learning, and adaptability:** Robust monitoring and evaluation should be embedded in these programs from the start. Because outcomes are highly context-dependent, continuous learning is vital. Successful initiatives set clear objectives and metrics at inception and use this data to adjust course mid-stream. Maintaining flexibility in program design and establishing strong feedback loops with participants are essential for identifying problems early and adapting the strategy to ensure long-term impact.

Enabling conditions: The fertile ground for innovation

The effectiveness of the financial, non-financial, and collaborative support policies discussed above is severely limited in the absence of a solid foundation of enabling conditions. These factors provide the fertile ground in which innovation can take root and thrive. Although the spectrum of enabling factors is broad, this section focuses on those particularly critical for catalyzing a dynamic innovation ecosystem in LAC.

Guaranteeing macroeconomic and institutional stability

Innovation is, by nature, a risky, long-term endeavor. As such, a high degree of macroeconomic and institutional uncertainty is an obstacle, as it shortens firms' planning horizons and discourages investments with distant and uncertain payoffs.

- **Institutional stability:** A stable institutional framework, characterized by the rule of law, is crucial. This entails guaranteeing legal certainty, predictable regulations, an effective contract enforcement system, and robust protection of property rights (including intellectual property). Without these guarantees, firms will not invest in creating new assets, whether physical or intangible. This requires robust state capabilities, not only to regulate efficiently but also to act as a credible, strategic partner to the private sector (Chapter 5).

- **Macroeconomic stability:** Macroeconomic stability is also a prerequisite. High and volatile inflation distorts price signals and complicates long-term cost-benefit calculations. Sharp exchange rate fluctuations create uncertainty, especially for firms integrated into global markets, while financial instability can abruptly cut off the credit necessary for investment. While many countries in the region have made significant strides in this dimension in recent decades (Chapter 1), present and future fiscal pressures remain a latent threat that could erode these achievements (Chapter 5).

- **Deeper financial markets:** The region has made significant strides in the depth of its financial markets. However, the credit-to-GDP ratio in the region for 2023 is around 50%, one-third of the values for OECD countries. In the productive sector, problems of access to credit, especially for SMEs, persist. In the region, about 15% of commercial bank loans go to SMEs, while in the rest of the world's regions this figure exceeds 20%, reaching almost 28% in Europe. The digitalization of financial services offers an opportunity to close some of these gaps. Likewise, macroeconomic stability is a key driver for the deepening and sophistication of financial systems, allowing for the development of long-term credit markets and venture capital.

Ultimately, without this dual certainty and a deep financial market, the long-term commitment that innovation demands becomes excessively risky, stifling progress.

Promoting competition and integration

A competitive market environment is a powerful catalyst for innovation. While the theoretical relationship can be ambiguous—forming an inverted-U where innovation may decline at very high levels of competition (Aghion et al., 2023)—empirical evidence for economies like those in LAC, which generally start from a position of low competition, indicates that increasing competitive pressure drives innovation (Bloom, Van Reenen, et al., 2019; Shu and Steinwender, 2019).

Several mechanisms explain this effect. First, tougher competition can push firms to work harder and innovate more to remain viable. Second, competition reduces misallocation, freeing capital and labor currently "trapped" in unproductive firms. Unfortunately, many economies in the region are characterized by high market concentration and significant market power, which suppresses this dynamic process (Álvarez et al., 2018).

Improving competition requires a multi-pronged policy approach:

- **Strengthening antitrust policy** by ensuring that competition agencies have the independence, resources, and technical capacity to enforce the law effectively.

- **Lowering barriers to entry** for new firms by simplifying regulations and reducing bureaucratic costs (as discussed in Chapter 5).

- **Promoting international integration**, which is arguably one of the most powerful tools (see Chapter 4 for policies fostering integration).

Beyond its necessary role as a pro-competitive force, trade openness directly fuels innovation through other channels. First, it enables market expansion by allowing firms to access international markets, scale up, and spread the high fixed costs of R&D over a larger sales volume, making innovation more profitable. Second, it improves access to better inputs and knowledge, facilitating the import of higher-quality capital goods, advanced technologies, and specialized inputs. Trade openness also accelerates the diffusion of international knowledge and business practices.

Closing infrastructure for connectivity and skill gaps

Modern trade infrastructure—such as efficient ports, roads, and customs—is indispensable for connecting firms to global value chains. Unfortunately, the region still has significant room for improvement in this area (Chapter 4).

Equally critical is digital connectivity. Although 73% of the population has internet access (still below the developed world's 90%), the gap in broadband penetration relative to other regions is growing (Graph 3.8, Panel A). The quality gap is also significant: the average download speed in high-income countries is more than 75% faster than the regional average; more than four times higher than in countries like Bolivia, the Dominican Republic, and Haiti (Graph 3.8, Panel B). Limited access

to high-speed internet is a critical bottleneck that prevents the region from fully capitalizing on the opportunities of digital transformation.

Inside countries, there are stark disparities in internet access and quality, which represent a major barrier to bridging internal development gaps. For instance, according to the 2023 Digital Progress and Trends Report (World Bank, 2024), upper-middle-income countries show an urban-rural internet usage gap of 22%, while in lower-middle-income countries, this gap widens to 34%. Similarly, an analysis of connection speeds within 24 countries found that the maximum speed in the slowest subnational regions was less than 50% of that in the median region and less than 30% of the speed in the fastest regions (Álvarez et al., 2025).

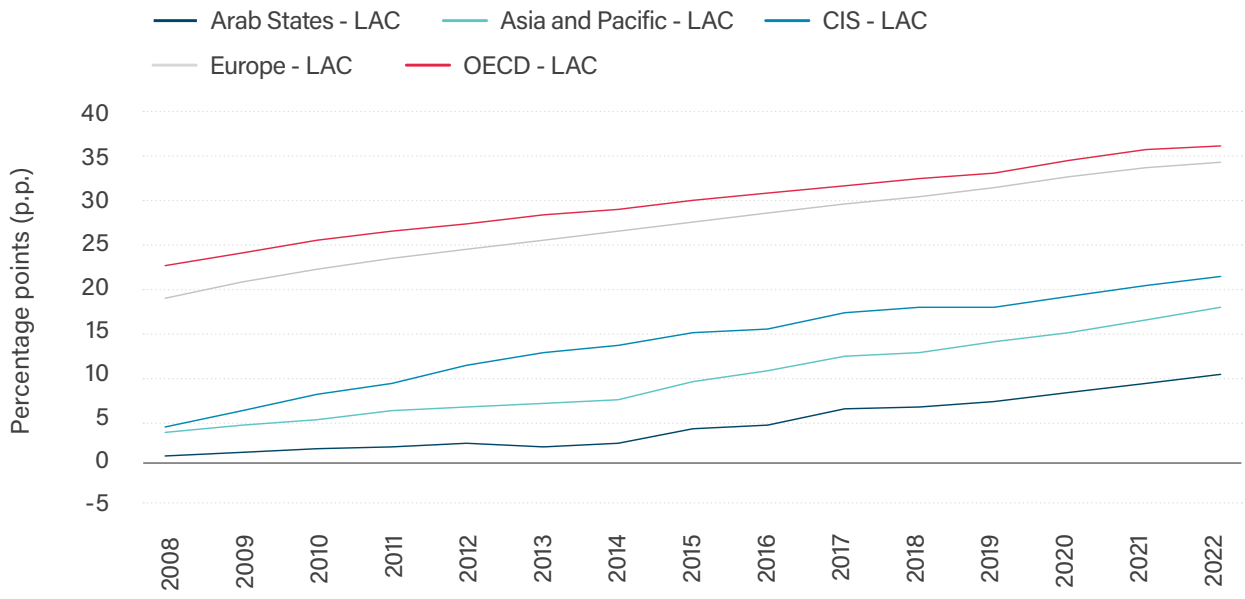
The OECD (2025b) has identified several key policies for closing connectivity divides. A foundational element is a sound regulatory and institutional framework that promotes competition and investment. This includes overarching policies such as easing barriers to infrastructure deployment by streamlining access to rights of way and promoting passive infrastructure sharing (e.g., access to poles and ducts) to reduce deployment costs. This is complemented by efficient spectrum management. For hard-to-reach "last mile" areas, these measures are combined with "tailored policies" like Public-Private Partnerships (PPPs), direct public funding programs, and enabling community-led networks.

Regarding the *institutional* infrastructure for data, another pillar of closing the connectivity gap, "Open Data" initiatives are crucial for unlocking economic and social value, as data can be repurposed and combined with traditional public sources (like administrative data) to improve policies. However, this must be balanced within a "social contract for data" that fosters trust (World Bank, 2021). This requires robust safeguards that protect people from the harm of data misuse, addressing the risk that even nonpersonal data could be statistically analyzed to infer "personally identifiable data". The global standard for such top-of-the-line legislation remains the EU's General Data Protection Regulation (GDPR), which establishes principles like "privacy by design" and is essential for creating the trusted environment needed for a safe and equitable digital economy.

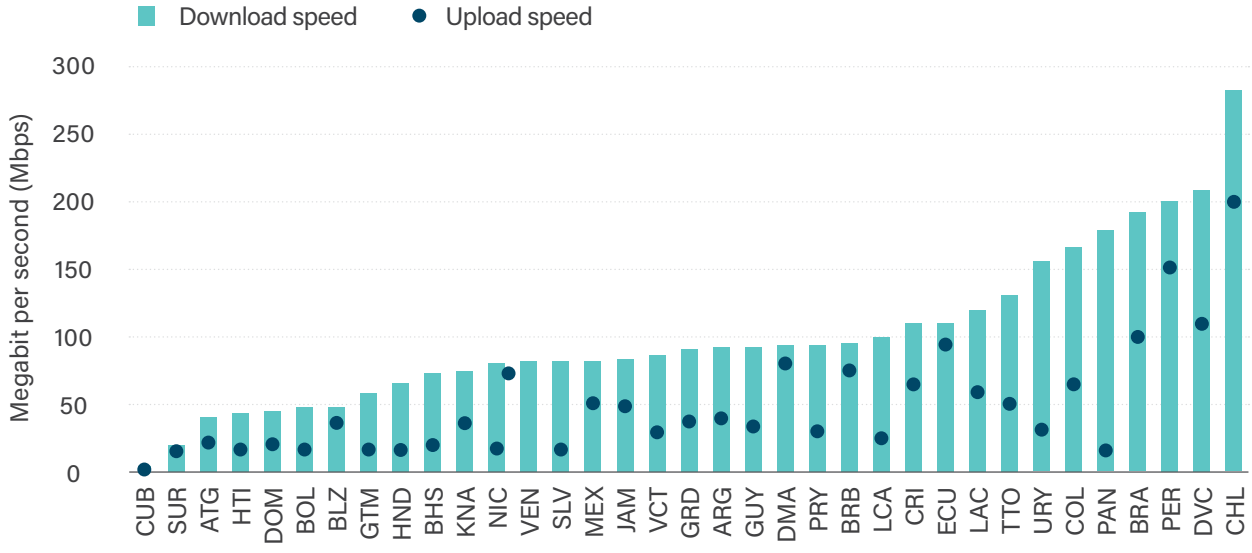
Regarding human capital, the region faces a dual challenge for innovation. First, there is low quality in basic education, as consistently demonstrated by PISA test results. Second, the workforce suffers from several deficits, including a low fraction of the population with a college degree, a small proportion of graduates in Science, Technology, Engineering, and Mathematics (STEM) fields, and a lack of advanced digital skills among the general population (Graph 3.9 and Chapter 2). Closing these skill gaps requires an integrated, life-cycle approach, with interventions ranging from early childhood education to continuous on-the-job training (Chapter 2).

Graph 3.8
Gaps in digital infrastructure

Panel A. Connectivity gap, fixed broadband (2008–2022)



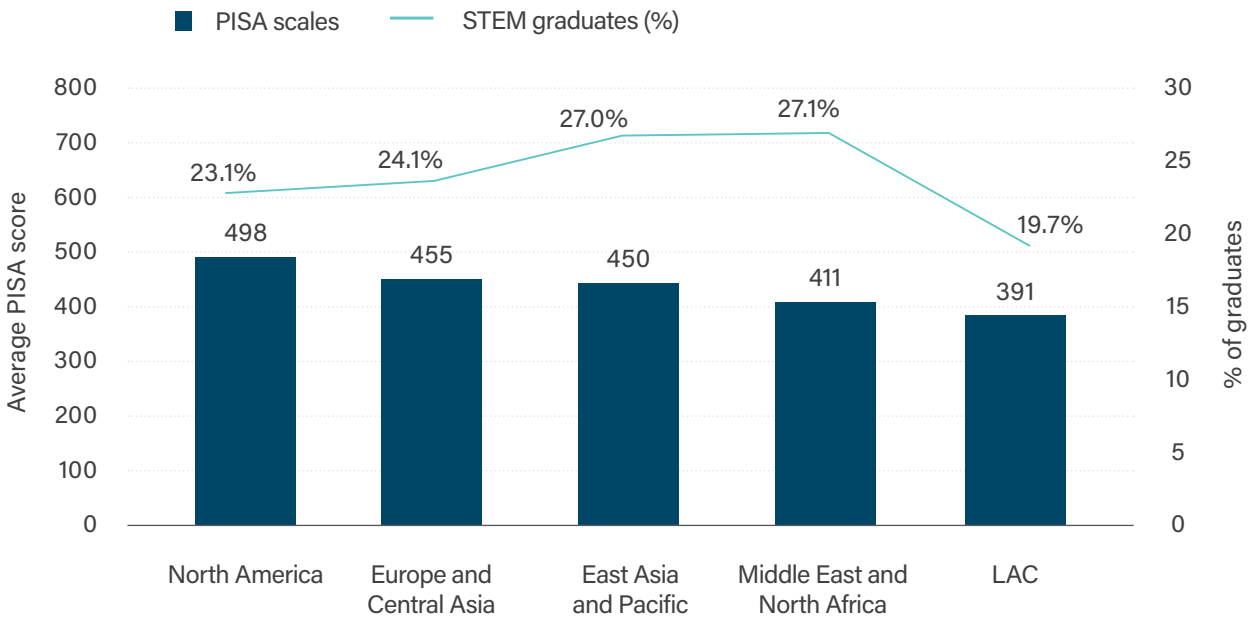
Panel B. Maximum download speed of Internet service on fixed connections by country



Note: The connectivity gap refers to the difference in fixed broadband penetration between the different regions of the world and LAC, subtracting the penetration results in percentage points (p.p.). Download speed measures how quickly data can be transferred from an internet server to a device, while upload speed measures how quickly data is sent from a device to the internet. Speed, measured in megabits per second, corresponds to the median speeds recorded during December 2024.

Source: Authors based on the Observatorio de Desarrollo Digital (2025a, 2025b).

Graph 3.9
Education and human capital in STEM (2022)



Note: Bars represent average PISA scores in reading, mathematics, and science. The line shows the average share of all tertiary-level graduates in science, technology, engineering, and mathematics as a percentage of all graduates.

Source: Authors based on the Global Innovation Index Database (WIPO, 2024).

Building a strong public research system

A public research system is fundamental for developing the knowledge and advanced human capital that ultimately feed into the productive sector and society. To build a robust research system, governments use a portfolio of policy instruments. These include:

- **Funding transfers**, which take two main forms:
  - Competitive funds (grants): These promote excellence and competition by allocating resources to specific projects via peer review.
  - Institutional funding: These are direct transfers to universities and centers to cover core operational costs. This instrument provides stability and long-term vision, but without clear performance goals, it can lead to inertia.
- **Investment in scientific infrastructure**, including the construction of laboratories, the purchase of advanced equipment, and the development of digital networks.

- **Promotion of public-private partnerships** to close the gap between academic research and the needs of the productive sector.

The implementation of these instruments is marked by ongoing debates on how to allocate resources effectively and maximize their impact. In LAC, three debates are particularly pressing:

- **Basic vs. applied science:** Should priority be given to projects that generate long-term, universal knowledge or those that solve immediate, productive problems? In the context of limited resources, this tension requires a carefully balanced investment portfolio.

- **Performance evaluation:** How should success be measured? Traditional incentives for academic publications often discourage technology transfer, patenting, and entrepreneurship. At the core of this debate is determining how to transition toward evaluation systems that also value economic and social impact in the region.

- **Governance and bureaucracy:** Rigid institutional structures and performance evaluation systems misaligned with the needs of innovation hinder the agility and effective collaboration required with the private sector.

Digital transformation in strategic sectors: Powering a competitive future

The innovation policies discussed in this chapter provide an essential toolkit for any form of technological upgrading, including digitalization. Digital transformation, however, is not merely another domain of innovation; it is a cross-cutting force that reshapes business models, value chains, and competitive dynamics across the entire economy.

While this transformation is vital for all sectors, including traditional manufacturing, this section explores its impact through the lens of four areas of strategic importance for LAC: financial services, agribusiness, and the energy and mining industries.

These sectors are pillars of the region's future development and illustrate the diverse and far-reaching potential of digitalization: from driving financial inclusion and expanding access to credit to revolutionizing agricultural productivity and promoting more sustainable practices in extractive industries. By exploring concrete applications and challenges in these sectors, a clearer picture emerges of the tangible opportunities that a digitally driven productive transformation can unlock for the region.

Fintech: Accelerating financial inclusion and efficiency

LAC faces a persistent financial inclusion challenge that curtails economic opportunity for millions. In 2024, only 60% of adults over age 15 held a bank account, lagging significantly behind leading regions (Klapper et al., 2025). This gap creates tangible barriers: SMEs struggle to access credit, households rely on inefficient and often insecure informal financial services, and the most vulnerable populations face higher costs for basic transactions. The digitalization of financial

services, supercharged by AI, offers a powerful opportunity to transform this landscape, creating a more inclusive, competitive, and efficient financial system.

Evidence of this transformative potential is growing. Digital tools have proven effective at reducing poverty and enhancing resilience; in Kenya, for example, the M-PESA digital payments platform allowed households to better manage income shocks. These innovations can also help close gender gaps by providing women with greater financial control and autonomy. They boost SME productivity by opening new credit channels and streamlining payment processes. Additionally, by leveraging alternative data sources like users' digital footprints, advanced algorithms can assess credit risk more accurately and objectively, reducing default rates and mitigating the discriminatory biases in traditional, face-to-face lending.[4] The entry of new digital players also intensifies competition, placing downward pressure on fees and interest rates, directly benefiting consumers.

The LAC Fintech ecosystem has expanded rapidly, quadrupling between 2017 and 2023 with a clear focus on developing solutions for unbanked and underbanked populations (Finnovista et al., 2024). To harness this momentum, a proactive public policy agenda is essential. This requires a strategic approach grounded in a set of proven regulatory instruments designed to foster innovation while ensuring stability (Allub et al., 2025).

A modern regulatory framework should include a portfolio of key instruments. Regulatory sandboxes, already adopted by nine countries in the region, offer controlled environments for testing innovations. They serve an important dual purpose: reducing legal uncertainty for innovators and acting as real-time learning environments for authorities, enabling them to design informed, evidence-based regulations for the future. Open Finance is another transformative mechanism. Through secure Application Programming Interfaces (APIs), users can authorize third-party providers to access their information, breaking down data silos held by incumbent banks. This catalyzes competition and spurs innovation, allowing developers to create personalized financial services. Specific licensing regimes lower barriers to entry by creating rules proportional to the risk of new business models, preventing a one-size-fits-all approach from stifling innovation in areas like digital payments or crowdfunding.

A reliable digital identity system is the gateway to financial inclusion, enabling secure remote onboarding. Clear and robust cybersecurity regulations, mandating proactive risk management and incident-response protocols, are vital to protect consumers and maintain stability. Finally, promoting interoperability between payment platforms, as exemplified by Brazil's Pix system, is crucial to preventing market fragmentation and empowering consumer choice.

4. For more details on this empirical evidence, see Allub et al. (2025).

The success of these policies ultimately depends on closing two structural gaps: the digital infrastructure deficit, ensuring affordable and high-quality internet access, and the need to strengthen financial and digital literacy, so that all citizens can safely and effectively benefit from new technologies.

AgriTech: Unleashing sustainable agricultural potential

Agriculture is a socioeconomic pillar for LAC and an area of global comparative advantage. The region holds the world's largest agricultural area and unique water abundance; with only 8% of the global population and 15% of the world's land surface, it receives 29% of global rainfall and stores 40% of the planet's fresh water (Borquez Schwarzbeck, 2024). It accounts for 14% of global agricultural production and 18% of agrifood exports (Granados, 2024), positioning the region as a potential leader in ensuring global food security.

However, this strength coexists with low productivity. Research shows that adopting existing best practices and technologies could significantly increase production per hectare in the region (Adamopoulos, 2025). Agrotechnology (AgriTech) presents an unprecedented opportunity to close this gap, boosting the sector's productivity and resilience while enhancing its sustainability. A suite of digital tools—from satellite monitoring and biotechnology to precision agriculture—is already transforming productivity globally by optimizing input use, improving water management, and reducing post-harvest losses (Basso, Bruno and Antle, John, 2020; FAO et al., 2025).

Yet, these solutions have not reached their full potential in LAC. The regional AgriTech ecosystem suffers from underinvestment, scarce regulatory support, and weak coordination. Farmers face significant barriers, including limited technical knowledge, financial exclusion, and poor connectivity, all of which hinder the scaling of digital innovations in the field (Loukos and Arathoon, 2021).

To harness the region's agricultural potential, a proactive public policy agenda is essential. This includes credit programs and digital technical assistance, sustained investment in rural infrastructure (especially internet connectivity), supportive regulatory frameworks for agricultural fintech (covering both financing and insurance), and incentives for new technology adoption. Interventions should also focus on integrating startups into agricultural value chains and promoting agricultural clusters.

Global leaders illustrate the transformative power of digital technologies. Israel, despite its desert geography, is an AgriTech powerhouse thanks to decades of public–private investment in R&D and water-efficient irrigation technology (Levin, 2023). Likewise, the Netherlands has leveraged cutting-edge technology to become the world's second-largest agricultural exporter (Reiley, 2021). Promising regional successes also exist, such as Danone's "Flora Project" in Brazil, where regenerative practices increased smallholder incomes by 17% while cutting methane emissions by 40% (Danone, 2024). Scaling such impacts requires

strong public–private partnerships. Governments can catalyze collaboration among startups, cooperatives, research institutes, and food companies to ensure technology is co-developed with farmers, tailored to their specific needs, and capable of unlocking the sector's vast potential.

Energy innovation: Powering a competitive green transition

Despite its advantages in renewable resources, LAC's energy sector faces significant gaps. Inefficiencies persist across the value chain, and pockets of energy poverty remain, with 17 million people still lacking electricity access, primarily in remote rural communities (Álvarez et al., 2024; OLADE, 2024). Furthermore, with the region far from meeting its Paris Agreement goals, innovation is not an option; it is a necessity.

The path forward requires adopting a suite of new technologies. The region is already making meaningful progress in non-conventional renewables, with 79% of new capacity added in 2024 coming from renewable sources (OLADE, 2024). However, managing the intermittency of solar and wind power demands complementary technologies like battery storage and, critically, smart grid deployment.

Digitalization lies at the core of managing this new energy paradigm, driving efficiency through several key mechanisms:

- **Intelligent demand management:** Smart grids, equipped with smart, bi-directional meters, allow for real-time data collection. This enables "demand response" mechanisms that incentivize consumers to shift their electricity use to times of abundant renewable generation. It also allows households with solar panels or electric vehicles to sell surplus energy back to the grid, creating a more dynamic and decentralized system (Cont et al., 2024; IEA, 2024).

- **Grid optimization and predictive maintenance:** By using sensors, big data analytics, and AI, utility companies can monitor grid infrastructure health in real-time. This allows for predictive maintenance to prevent outages, optimize power flows, and minimize technical losses.

- **Enhanced forecasting:** Machine learning algorithms analyze vast datasets—such as weather conditions and consumption patterns—to more accurately predict both renewable supply and consumer demand, contributing to a more stable and cost-efficient grid operation.

Digitalization also plays a decisive role in end-use sectors. In transport, electromobility (particularly for public transportation) is a powerful decarbonization tool, with Chile, Colombia, and Costa Rica leading in the electrification of public buses (OLADE, 2024). Digital platforms for managing smart charging infrastructure support this shift. In heavy-duty transport, digital technologies improve efficiency; for example, on-board computers in trucking have been shown to significantly increase load capacity utilization, reducing fuel consumption per ton-mile (Hubbard, 2003).

While the trajectory is positive, capitalizing on these opportunities requires overcoming significant policy barriers. As the IEA (2023) emphasizes, stable regulatory frameworks—including long-term energy planning and transparent auctions—are needed to attract investment. Adequate financial incentives, such as carbon pricing and phasing out fossil fuel subsidies, are also essential. Finally, developing local human capital is critical. This involves training technicians in new digital and green technologies, supporting research centers, and encouraging local participation throughout the value chain (IEA, 2022; UNESCO and UNEVOC, 2020). For a strategy to be successful, it must be both technologically ambitious and socially inclusive, positioning the region at the forefront of the global green energy transition.

Mining innovation: Forging a smart and sustainable future

The mining industry is a strategic sector in which LAC holds significant natural comparative advantages, particularly in the critical minerals essential for the global economy. The region is a world leader in copper, lithium, and other key resources, making it an indispensable supplier for the energy and digital transitions (Energy Institute, 2025; Vander Molen, 2022). Mining is already a major source of exports and revenue, representing a significant share of GDP in countries like Suriname (27.5%), Chile (14.4%), and Peru (13.8%) (Bazel et al., 2023).

Unlocking further value hinges on technological innovation. Adopting Mining 4.0 technologies can create a virtuous circle, boosting competitiveness, reducing the environmental footprint, and strengthening local value chains (Calzada, 2021). A suite of digital tools—from automation and IoT to AI-powered analytics—is revolutionizing mine operations by lowering costs, significantly improving worker safety, and optimizing energy and water use (Durrant-Whyte et al., 2015; Xu et al., 2022).

Chile is a prominent example of this transformation. Leading companies have deployed fleets of autonomous trucks and drills, reducing worker exposure to safety risks by up to 90% (BHP, 2024). This ongoing integration of technology is paving the way for the "mine of the future"—a model that is safer, more efficient, and more sustainable (Andes Pacific Technology Access, 2021). In parallel, momentum is building around sustainable mining practices, including expanded use of desalinated seawater and renewable energy in operations (ACADES, 2025; Comisión Chilena del Cobre, 2025).

However, delivering on this transformation requires addressing significant environmental and social challenges. Poor mining management can lead to severe negative impacts—ranging from pollution and socio-environmental conflicts to the unsustainable use of natural resources (Dufey et al., 2023). To mitigate these risks, governments must shape a more conducive policy environment. Regional regulations often lag international ESG standards, highlighting the need to raise the bar by adopting best practices like the "Toward Sustainable Mining" (TSM) standard (Rojas-Hayes et al., 2023).

A comprehensive policy framework should include clear and stable regulation, fiscal incentives for green technologies, public–private collaboration for innovation, and the development of local human capital. Initiatives like Chile's National Piloting Center

and Peru's Mining Innovation Hub represent steps in the right direction. Ultimately, attracting the necessary investment will depend on guaranteeing regulatory stability, transparency, and meaningful community participation to avoid social conflicts (Bandura, Romina and Hardman, Austin, 2023; Spiller et al., 2025). By adopting smart, innovation-focused public policies, LAC can leverage its unique mineral wealth, transforming it into a source of technological leadership and shared prosperity.

The path ahead

The true source of growth lies in society's capacity to generate, adapt, and use ideas and knowledge in productive activities. For LAC, placing innovation at the center of the development strategy is the unavoidable path to leverage its natural resources and close the gaps in productivity, inclusion, and sustainability that have long constrained its potential.

Unfortunately, the region's innovation ecosystem suffers from fragile foundations that suppress not only its capacity to generate frontier knowledge but also its ability to absorb and diffuse existing technologies. An active and strategic public policy is vital to escape this low-innovation trap. A key challenge is how to allocate limited public resources across various policy instruments, without placing excessive pressure on government budgets. Prioritization criteria should be based on maximizing additionality, addressing well-identified market failures, and generating broad spillover effects—favoring programs that generate ample, positive impacts across the economy. Strong institutional capacity in agencies leading the innovation agenda is paramount for identifying priorities.

The existence of policies does not guarantee success. Evidence shows that the impact of these interventions depends critically on the quality of their design and implementation. To maximize additionality, reduce the risk that subsidies are captured by politically connected firms, and ultimately catalyze a true productive transformation, it is essential to follow some key principles (see World Bank, 2010):

- **Take a broad view of innovation and its forms and sources:** As emphasized in this chapter, this means focusing not only on creating frontier knowledge but primarily on capturing global knowledge and technologies to adapt and disseminate them in local contexts. All forms of innovation should be considered, from technological to organizational and process-based.

- **Implement efficient institutions and tools:** Success depends as much on the tools as on the institutions that manage them. This requires a balanced policy portfolio and, critically, high-capacity, flexible, and coordinated implementing agencies that operate with professional autonomy to avoid political capture and ensure transparent, merit-based execution (OECD, 2022).

- **Create a receptive and motivating environment:** Remove bureaucratic and regulatory obstacles, establish agile research structures, and foster a

creative population through education systems aligned with the needs of the productive sector.

- **Adapt to social and economic specificities:** There is no single formula for innovation policy. The optimal design of interventions must be sensitive to the specific characteristics of each country: its productive structure, business culture, education system, and the relationship between the state and its citizens.

- **Adopt a whole-of-government approach:** Innovation policy cannot operate in a silo. Its effectiveness depends on coherence with broader economic and institutional frameworks, including competition policy, regulation, macroeconomic stability, and trade openness. It is crucial to maintain an appropriate balance between public intervention and market solutions to create a stable and predictable climate for long-term investment required for innovation.

Beyond these guiding principles, promoting innovation and digital transformation requires addressing other critical factors, such as political-economy barriers to reform, labor-market and inequality impacts of digitalization, and the high levels of informality prevalent in the economy.

Innovation policies—especially those that promote competition or foster industrial clusters—often intersect with the interests of powerful groups. Their effectiveness depends heavily on navigating institutional constraints, power imbalances, and conflicting interests. Understanding the political economy helps policymakers anticipate who stands to gain or lose, enabling them to manage complex relationships among firms, government, and other stakeholders. Without this insight, policies risk either backlash that blocks implementation or capture by vested interests, leading to ineffectiveness and misallocation of public resources.

Nowhere are these stakes more evident than in the labor market. If technological progress disproportionately benefits highly skilled workers or accelerates automation, it risks widening wage gaps and increasing inequality (Gmyrek et al., 2024). While the overall distributive impact depends on each country's occupational structure and labor institutions, complementary policies can mitigate these negative effects. Therefore, social protection and training and labor inclusion (through active labor market policies) are crucial to ensure the technological revolution narrows—rather than deepens—existing gaps.

Innovation and digital transformation strategies must also explicitly address informality, designing interventions that not only encourage technological adoption but also facilitate the transition to formality (Bakker et al., 2024). In the case of informal firms, careful targeting is needed: some have high potential for growth, while many operate at the subsistence level. Policy design must be adapted to those with potential, providing them with complementary support (e.g., training and access to credit) that addresses their first-order barriers.

Moreover, innovation can be part of the solution. On the one hand, digitalization and AI can improve productivity in the formal sector, fostering expansion and the absorption

of informal employment. On the other hand, digital technologies offer powerful tools for formalization itself (electronic invoicing, digital wallets, e-commerce) that simplify processes and reduce costs. Likewise, digital technologies can strengthen the government's ability to ensure regulatory compliance. By helping informal businesses meet legal requirements and by increasing the state's fiscalization capacity, these technologies can reduce informality.

Overcoming the region's structural challenges requires fostering innovation and embracing digitalization. This calls for a comprehensive, long-term policy agenda to strengthen the region’s fragile innovation ecosystems. Such an agenda requires coordination across public, private, and academic sectors and must be oriented toward the region's defining goals: closing persistent productivity gaps, promoting social inclusion, and building a sustainable future. Purposefully steering this transformation is the only way to turn the region's vast potential into tangible, shared, and lasting prosperity.

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Chapter 4.

ADDRESSING THE PENDING INTEGRATION AGENDA IN A PROTECTIONIST WORLD

Juncosa, Federico | Allub, Lian | Cont, Walter | Research assistance from Valentín Corradi

Summary

The Latin America and Caribbean (LAC) region accounts for roughly 6.5% of global GDP and a similar share of trade with 8.5% of the world's population. Underperformance in economic activity and trade are closely related; moreover, comparatively high regional trade costs—stemming from uneven tariff structures, burdensome non-tariff measures, lagging transport networks, and fragmented institutions—explain much of this underperformance. The chapter maps these frictions and proposes a pragmatic agenda across three pillars: (i) tariff reform aiming to simplify tariff schedules while preserving fiscal predictability, and continued efforts to foster regional integration; (ii) modernization and streamlining of non-tariff measures, and facilitation of trade procedures leveraged by digital technologies; and (iii) transport policies that improve the performance of logistic corridors, the physical support of value chains. Finally, this chapter assesses the implications of the recent shift toward protectionism for LAC, outlining risks and opportunities to deepen regional integration as supply chains reconfigure. Rather than pursuing unilateral liberalization, it argues for a strategic and regionally coordinated approach that prioritizes reciprocal market access and targets the removal of the most binding barriers to the region's exports.

Integration as a productivity booster—and its pitfalls

Over the past century, international trade has vastly outpaced economic growth. From the 1960s to its peak in 2008, global trade grew 170% faster than economic output and went from representing 19% to 50% of global GDP. Since then, the global trade-to-GDP ratio has slowly declined to 42%. This process of economic integration can be traced to the evolution of trade policies and technology.

On the one hand, advances in the transport industry—the containerization of freight, large-scale investment in ports, highways, and airports, technical improvements, and upscaling of shipping vessels and more efficient aircraft—have reduced transport costs by one-third and more than doubled the transport intensity per dollar traded in the last 50 years (Ganapati and Wong, 2023).

On the other hand, rapid technological advances and widespread adoption in communications and computing enabled significant fragmentation of production processes. These technologies expanded the span of control of firms, increased the prevalence of multinational firms, and made it possible to coordinate reliable trade in intermediate inputs across firms and borders (Antràs, 2020). Improvements in connectivity that allow for seamless real-time communication of people, systems, and devices have shifted the frontier of what can be traded internationally, notably advancing toward corporate and personal services.[1]

Alongside technological change, after the Second World War period, accelerated by the fall of the Berlin Wall and China's opening to global markets, the world saw a remarkable shift in policies toward trade liberalization. Institutions such as the General Agreement on Tariffs and Trade, the General Agreement on Trade in Services, the Agreement on Trade-Related Aspects of Intellectual Property, and, more recently, the World Trade Organization and the Trade Facilitation Agreement established a framework for what type of trade policies countries could implement to reduce trade costs and promote international integration.

From this joint evolution of technology and policies, a deeply interconnected economic system emerged. Activities that were once considered non-tradable have become routinely exchanged across borders, from personal services (e.g., counseling therapy), to business services (e.g., IT and data warehousing services).

The integration of economic activity is a powerful engine of global and domestic economic growth. It enables the reallocation of production and geographic specialization according to each economy's comparative advantage. It increases the

1. The enabling effect of technology on productive integration is apparent even for early communication advancements: evidence supports the telegraph enabling trade of intermediate goods in the 19th century (Juhász and Steinwender, 2018).

size of the market that local firms can access to sell their production, allowing them to exploit economies of scale. It facilitates their access to a wider variety and better quality of inputs, thereby improving productivity and product quality. Competitive pressure from foreign firms contesting domestic markets and the need for domestic firms to increase productivity to be competitive on the global stage create strong incentives for innovation through technological upgrading and improvements in management practices. Finally, linkages between domestic and foreign firms through trade in inputs and the presence of multinationals foster knowledge diffusion and technological adoption, further boosting productivity.

International integration generates larger benefits for small and less developed economies, where these effects are stronger. In this sense, Latin America and the Caribbean (LAC) could tap substantial productivity gains from deeper international integration. Yet, despite having advanced a far-reaching trade liberalization agenda since the late 1980s, the region has captured a relatively modest share of global trade growth. Moreover, economic growth in LAC has lagged behind developed regions. Today, the region collectively accounts for about 6.5% of global GDP and a similar share of global trade, while hosting 8.5% of the world's population. Thirty years later, the benefits of trade liberalization appear modest relative to their initial promise.

One key reason for the region's underwhelming trade and development performance is that policies have not achieved significant increases in intraregional trade, which has remained at around 16% of total exports since the mid-1990s. In contrast, intraregional trade is a major component of total trade in developed regions like North America (45%) and Europe (60%), as well as in the fast-growing regions of East and South Asia (35%) (Sanguinetti et al., 2022).

The weak leverage of the regional market can, in turn, be traced to comparatively high intraregional trade costs. Although many LAC economies share a common language and deep cultural and historical ties—important determinants of bilateral trade—regional transport networks remain underdeveloped, and political fragmentation is pervasive. This is reflected in the modal composition of cargo transport with limited participation of terrestrial modes and a patchwork of fragmented and overlapping supranational institutions and trade agreements.

This chapter describes the main features of the integration context in the region and proposes strategies to advance in three key areas of trade policy: tariffs, non-tariff measures, and transport. It also explores trade policies that are instrumental for the development of emerging and strategic sectors for the region in the current global context. Finally, it discusses the recent resurgence of protectionist policies linked to geopolitical conflicts and the marked shift in U.S. foreign policy.

This process, which can be traced to the aftermath of the Global Financial Crisis, gained momentum with the US–China tariff escalation that began in 2016, the outbreak of war and instability in Europe and the Middle East, and the recent return of protectionism in the US, culminating in the announcement of sweeping "Liberation Day" cross-cutting tariffs. A defining feature of this new environment is a growing distrust toward multilateral

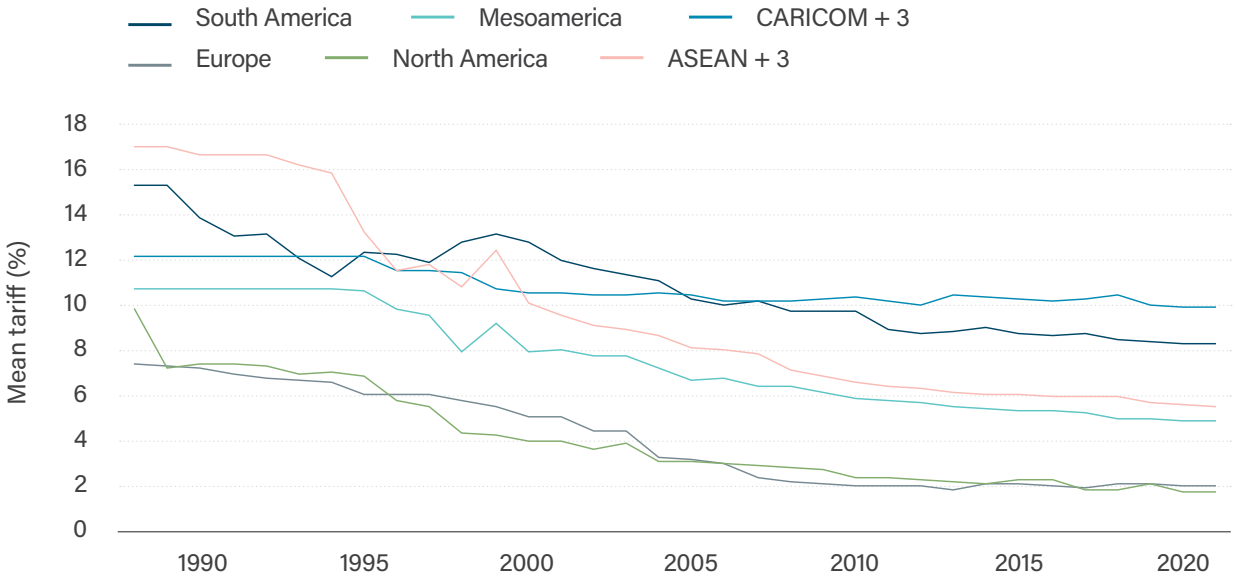
negotiations and global agreements. This is particularly harmful for the integration in production chains and disproportionally affects Mexico and economies in the Central America and Caribbean region. While this global policy realignment may require a more defensive trade policy stance in the region—since temporary trade diversion away from the US–China axis could permanently damage specific sectors—it also creates opportunities for integration by increasing the region's centrality within the global trade-cost network.

The regional integration context

Shallow, undiversified, and distant

Countries in the LAC region underwent a significant wave of trade liberalization, particularly during the 1990s. These trade-opening policies translated into reduced tariffs. The simple average tariff across countries and goods went from 10.7% to 4.8% for Central America, 15.3% to 8.3% for South America, and 12.2% to 10% for CARICOM (Graph 4.1). These reductions were driven by unilateral tariff cuts outside preferential schemes and by the expansion of preferential trade agreements and customs unions. In recent years, preferential trade has spurred additional tariff reductions. Today, nearly 80% of the region's trade is covered by preferential trade agreements.

Graph 4.1
Evolution of tariffs by region

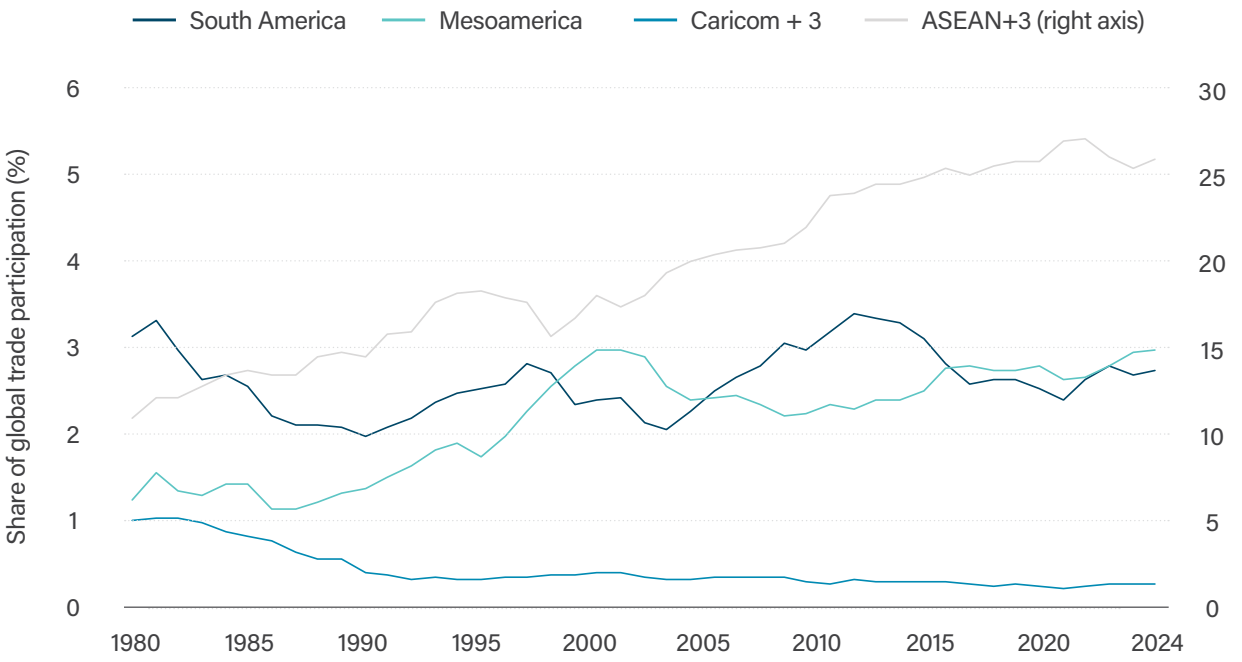


Note: The graph shows the evolution of the mean tariff, considering most-favored-nation (MFN) tariffs and trade agreements. The regional composition is detailed in the appendix to this chapter, available online.

Source: Authors based on Teti (2024).

Despite this progress, the region's footprint in world merchandise trade has remained below expectations. LAC's share of global trade increased only marginally from 5.4% in 1980 to 6% in 2024, and virtually the entire gain came from Mexico's deep integration into North American value chains. Over the same period, key economies in the ASEAN+3 region also undertook far-reaching market and trade integration reforms, raising their share of global trade from 11% to 26% (Graph 4.2).

Graph 4.2
Participation in global merchandise trade by region

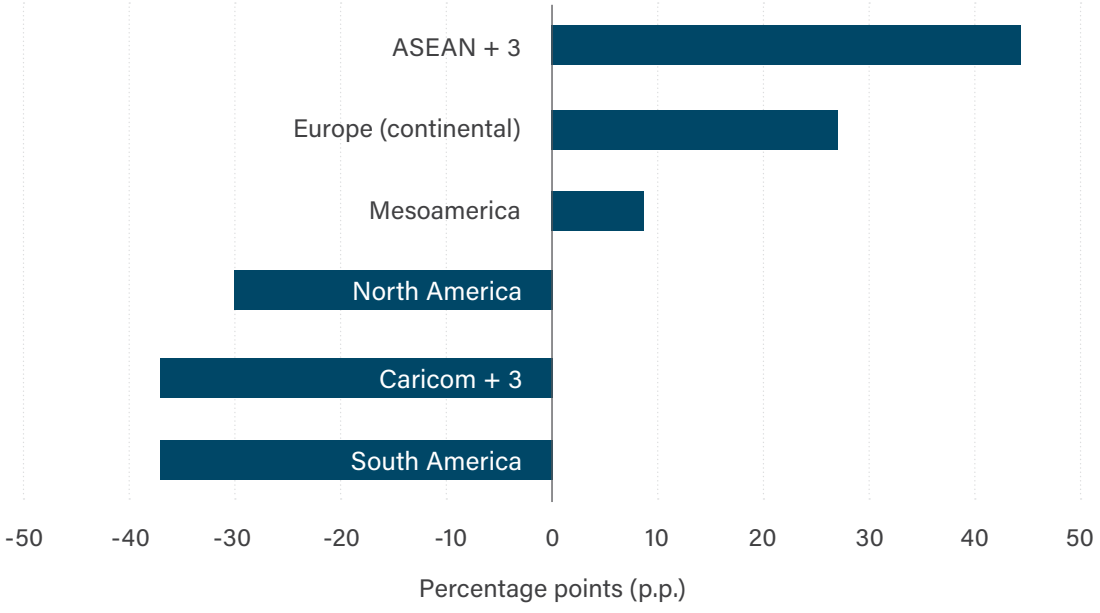


Note: Participation is measured as the sum of each region's imports and exports divided by the total imports and exports of the rest of the world. The regional composition is detailed in the appendix to this chapter, available online.

Source: Authors based on data from UNCTAD (2025).

The region's shallow trade integration is also evident when comparing actual trade levels with those that would be expected for economies with similar GDP. South American economies display a gap of roughly 37 percentage points relative to their expected level of trade, while CARICOM+3 economies show a gap of 31 percentage points. By contrast, Central America exceeds its predicted level of trade (Graph 4.3)

Graph 4.3
Merchandise trade gap relative to predicted trade by region



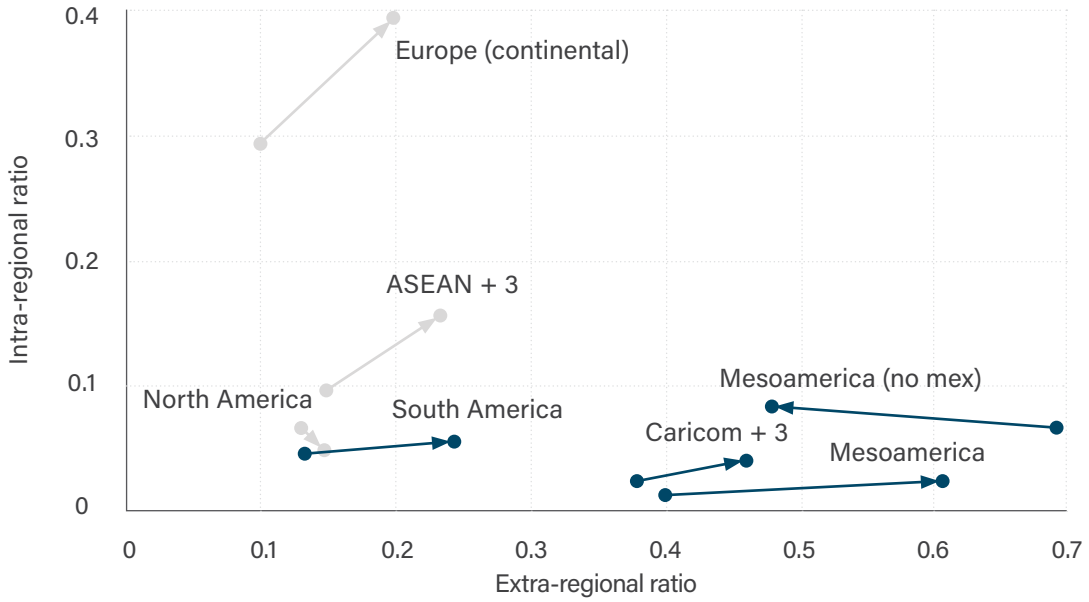
Note: The graph shows the simple average across countries of the residuals of a regression of trade (log of the sum of imports and exports) on (log) GDP. Average residuals are multiplied by 100 and are interpreted as percentage-point deviations from predicted trade. The regional composition is detailed in the appendix to this chapter, available online.

Source: Authors based on data from UNCTAD, retrieved from The Growth Lab at Harvard University (2025).

Trade openness in the region has increased over time, albeit modestly and with a marked geographic pattern. Between 1995 and 2023, South America's extra-regional trade-to-GDP ratio almost doubled, from 13% to 24%, while intraregional trade showed a comparatively modest increase from 4.5% to 5.5%. CARICOM economies increased their overall trade openness by about 10 percentage points or 25%, with a relatively larger rise in their intraregional exposure. Central America (i.e., Mesoamerica without Mexico) experienced a sharp decline in extra-regional openness from 69% to 48%. Including Mexico within this region fundamentally alters this pattern: extra-regional trade went from 40% to 61%, attributable to productive integration with the US (defined as extra-regional in this chapter), while intraregional trade increased but remained low.

In contrast, the regions that grew the most in that period generally experienced a significant increase in their exposure to intraregional trade. This is the case for both ASEAN+3 and Europe (Graph 4.4).

Graph 4.4
Intra and extra-regional merchandise trade openness by region in 1995 and 2023



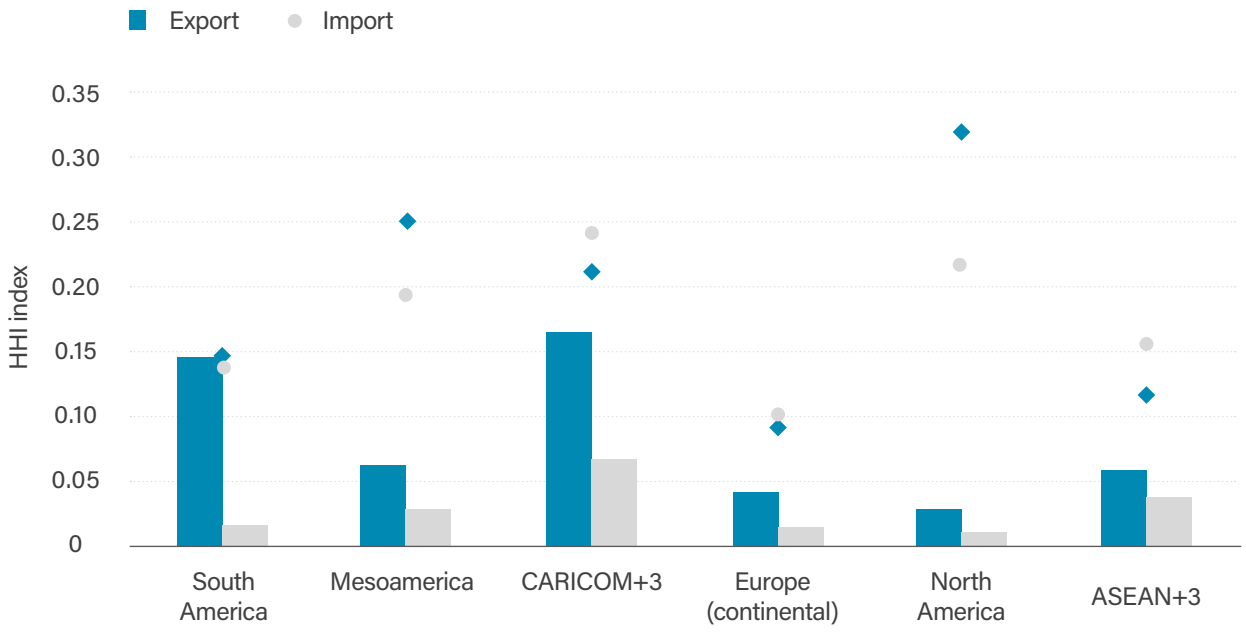
Note: Arrows start in 1995 and point toward 2023. Dots represent the level of intra- and extra-regional trade relative to GDP for the aggregate of the region shown. The regional composition is detailed in the appendix to this chapter, available online.

Source: Authors based on data from UNCTAD, retrieved from The Growth Lab at Harvard University (2025).

Turning to the composition of the export basket, LAC displays a high concentration of exports across goods. The Herfindahl–Hirschman Index (HHI), a commonly used concentration index,[2] stands at around 0.15 for South America and CARICOM+3 countries, roughly double the level observed in ASEAN+3 and Europe. Mesoamerica, in contrast, shows a lower degree of concentration across goods. As for trading partners, South America exhibits a relatively low concentration, though still 50% higher than Europe, while Mesoamerican and Caribbean economies display average concentrations that double those of benchmark regions (Graph 4.5).

2. The Herfindahl–Hirschman Index (HHI) is computed as the sum of the squared market shares that each category represents, in this case, the sum of the share of exports of each partner or good in a country's total exports.

Graph 4.5
Concentration index for goods and partners by region



Note: Bars show the HHI calculated by goods, while shapes represent the index calculated by partners. Light blue represents exports, and grey represents imports in each case.

Source: Own elaboration based on data from UNCTAD, retrieved from The Growth Lab at Harvard University (2025).

There is also significant heterogeneity within subregions. Countries with a particularly high concentration across export partners include Venezuela, Paraguay, and Chile in South America, and Haiti, Mexico, Suriname, Dominica, Nicaragua, and The Bahamas in Mesoamerica and the Caribbean. In Mexico's case, this reflects deep productive integration within the United States–Mexico–Canada Agreement (USMCA, formerly NAFTA), with large flows of intermediate goods trade with the US. Haiti and Dominique have a high exposure to the US and China, while Venezuela, Paraguay, and Chile reflect the high incidence of primary exports associated with oil, agriculture and electricity, and mining, respectively.

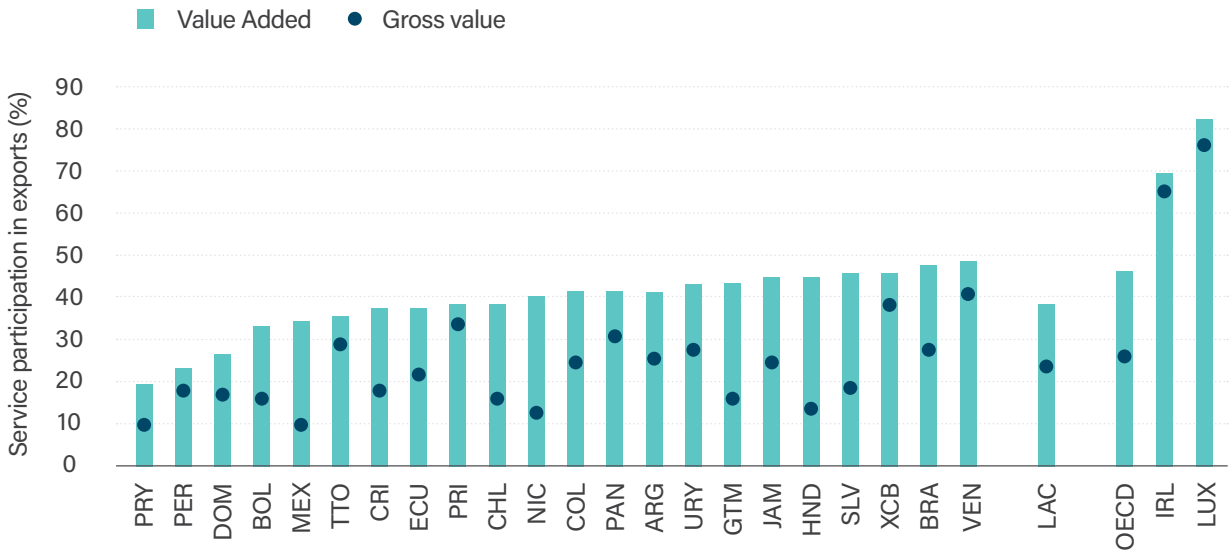
Scope for growth in service value added

Historically, the service sector was not regarded as a central driver of international trade. However, advances in communication and digital technologies reduced the barriers to trading services, leading to an uptick in the sector's share of total trade. According to Miroudot and Cadestin (2017), between 10% and 20% of gross exports in 2015 originated in the service sector. Yet the role of services in international trade extends beyond direct exports. Today, a significant share of the final value of manufactured goods stems from the service activities, such as R&D or financial

services. Accounting for the contribution of services to value added in the production, retail, and after-sales stages of a good raises the contribution of services to global trade to 49% of value added in 2015 (OECD, 2018). This underscores the role that efficiency gains and innovation in the service sector play in enabling integration.

Graph 4.6 exhibits the participation of services in exports for LAC economies and the OECD average. The dots report the ratio of services exports to total exports, while the bars show the share of service-sector value added in total exported value added. On average, services represent 23% of total exports in LAC, compared with 25% in OECD economies. However, the full contribution of services to total value added is substantially larger: 38% in LAC and 46% in OECD countries. In both groups, more than 40% of exported value added originates in service activities. This highlights that successful integration strategies depend on a wide array of sectors contributing to the production of tradable goods and services, with the service sector playing a key role.

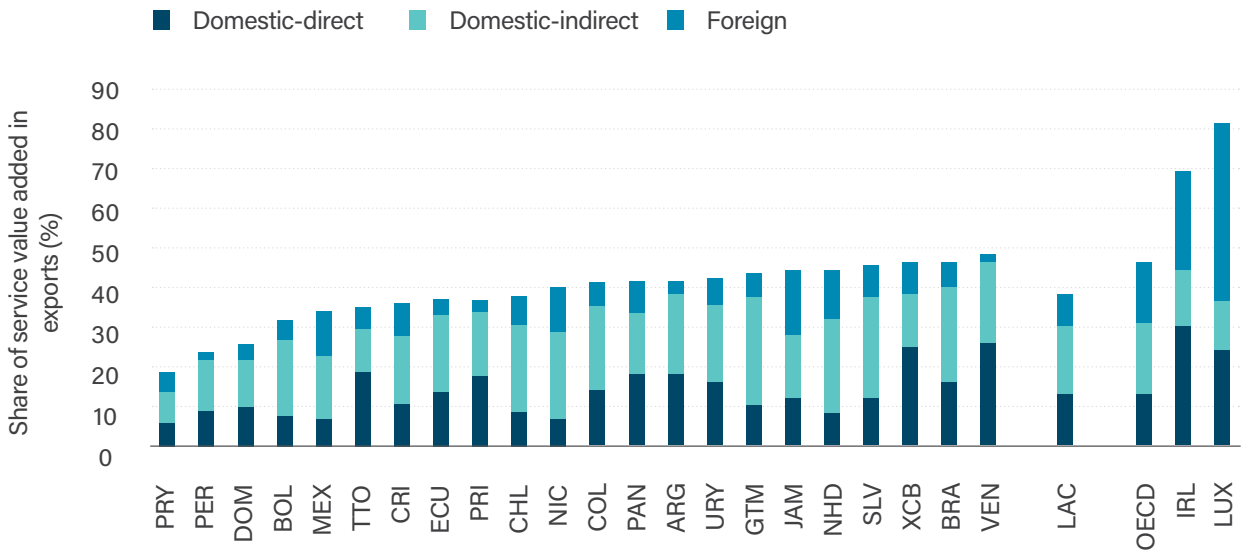
Graph 4.6
Service participation in gross exports and exported value added



Note: Dots show the ratio of services exports to total exports. Bars show the participation of service-sector value added in total exported value added, including domestic service-sector value added that is embedded in exported goods. LAC and OECD report the respective mean values of these groups. Ireland and Luxembourg are also shown as benchmarks because they exhibit the highest levels. The regional composition is detailed in the appendix to this chapter, available online.

Source: Authors based on Aguiar et al. (2022).

Graph 4.7
Type of service participation in exported value added



Note: The graph shows the composition of services value added in exports by country. Bars report the share of domestic direct, domestic indirect, and foreign service value added in total exports. LAC and OECD reflect the respective group averages. Ireland and Luxembourg are included as benchmarks because they exhibit the highest levels. The regional composition is detailed in the appendix to this chapter, available online.

Source: Authors based on Aguiar et al. (2022).

The contribution of services to export value added takes one of three forms: (i) domestically produced services that are exported directly; (ii) domestic service value added incorporated in exported goods, such as product design; and (iii) foreign service value added incorporated in exported goods. Graph 4.7 illustrates these components for LAC and OECD countries. Overall, LAC countries exhibit a lower participation of services than OECD countries. On average, the participation of foreign value added is lower in LAC countries—7% versus 10% in OECD countries. Moreover, as countries become increasingly integrated into global value chains (GVC), foreign service value added tends to rise as a share of total export value added. The low levels observed in LAC therefore reinforce the diagnosis of the region's weak integration into GVCs. Thus, lowering the restrictions on services trade can foster participation in GVC.

This analysis shows that services matter not only because of their direct contribution to exports, but also because they play a crucial role in adding value to exports. If countries want to deepen their international integration, the service sector offers a clear opportunity to raise the value added embodied in exports and to capture greater gains from trade. This does not necessarily require a major transformation of production structures, but rather a strategic focus on identifying the service inputs demanded by exported goods and developing those capabilities domestically.

Low participation in global value chains

The production of a good or service can be understood as a chain of sequential stages, where each production step constitutes a link in the production process. A country may participate in one or several of these links without performing the entire production process, allowing it to specialize in the stages where it has the biggest comparative advantages.

Integration in value chains can be analyzed from two complementary perspectives. The forward perspective indicates the role of a country as a supplier of inputs and is defined as how much value added from the domestic country is used by other countries as inputs for production. The backward perspective, in contrast, measures the use of foreign value added in the domestic production of an economy.

Graph 4.8 presents measures of backward and forward participation in GVCs for countries in the region. The graph distinguishes between extra-regional and intraregional components and reports these measures relative to population (interpreted as US dollars of participation per capita, top panel) and as a percentage of domestic value added (bottom panel). Data is presented for all countries in the continent with available data, split into two regions: Central and North America and the Caribbean (e.g., trade between a Central American country and the US is considered intra-regional); and South America.

The graph shows that countries with higher levels of income per capita also tend to exhibit greater integration in GVCs in per-capita terms. Additionally, it reveals that South America's participation is predominantly extra-regional rather than intraregional. In other words, the outward-oriented trade pattern observed above for trade in general is also reflected in trade in intermediate inputs.

Countries can be broadly grouped into three categories. First, those with fossil fuel or mineral production, like Chile, Peru, Colombia, and Guyana, have a large forward participation at the regional, extra-regional, or both levels. Paraguay displays a similar pattern influenced by its sizeable electricity exports from hydroelectric plants, resulting in a very high regional forward participation.

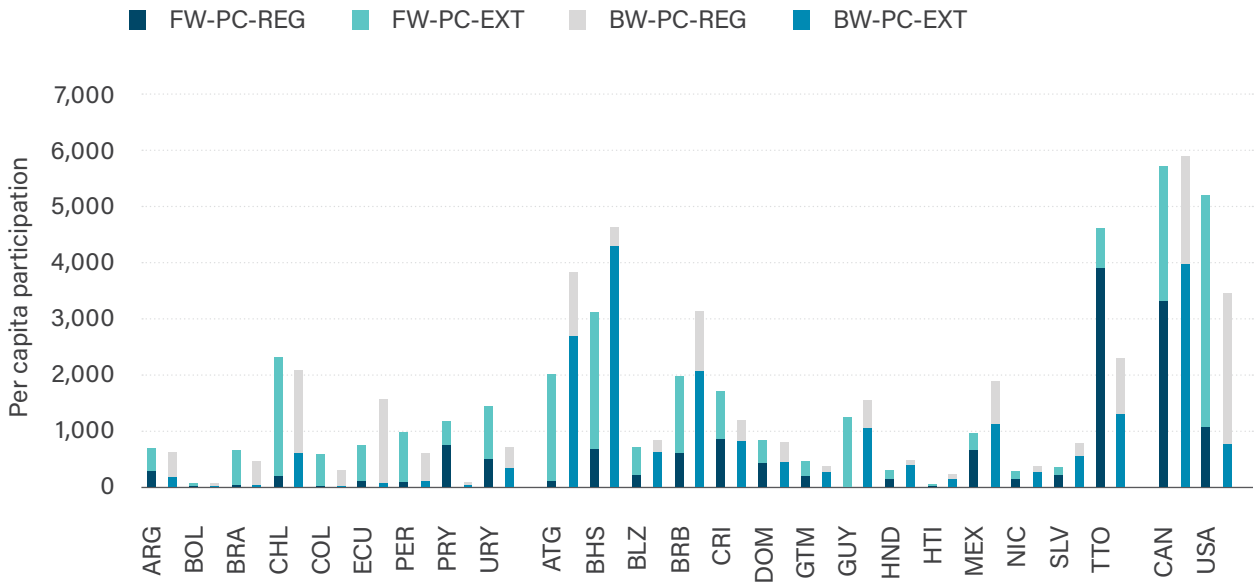
The second group consists of countries deeply integrated with the US, a trait common among many Central American and Caribbean countries. These economies show a very high backward integration, acting primarily as "finishers," using foreign value added in their production, particularly from extra-regional sources.

Finally, a third group of countries—including Argentina, Bolivia, Brazil, Dominican Republic, and Guatemala—exhibits a more balanced forward and backward participation, although with both components representing a relatively smaller share of GDP.

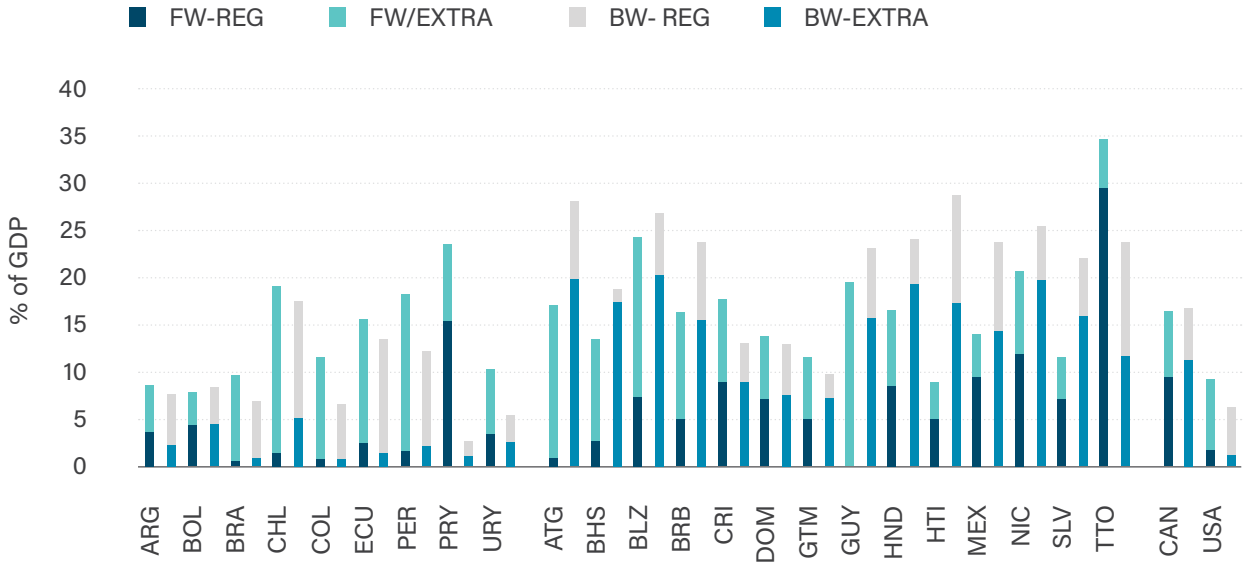
Participation in GVCs shares many of the same determinants as overall trade integration. However, several barriers merit particular attention. First, the fragmentation of production implies that intermediate goods must cross borders

Graph 4.8
Participation in regional and extra-regional value chains

Panel A. Relative to population



Panel B. Relative to GDP



Note: Panel A shows participation in global value chains in per capita terms. Panel B shows participation relative to domestic value added. Bars in shades of blue represent the forward (FWD) perspective, while bars in shades of gray represent the backward (BWD) perspective. The darker segments indicate the regional (Reg.) component, while lighter segments indicate the extra-regional (Extra Reg.) component.

Source: Authors based on Aguiar et al. (2022).

multiple times at different stages of production, leading to an accumulation of pecuniary costs and time delays. Second, GVCs are largely regional in nature, with a substantial share of transactions occurring across borders interregionally. The higher regional trade costs in LAC act as a constraint on deeper GVC integration. Finally, the multiplicity of trade agreements that exist in the region results in a complex tariff and regulatory scheme that is especially restrictive for the formation of complex value chains involving multiple countries.

Rules of origin determine the maximum share of a product's value that is attributed to imported inputs for the good to qualify as domestically produced. This enables the good to be exported to a trading partner under a trade agreement and benefit from the preferential tariff. When these rules are overly stringent or verification procedures are cumbersome, they become a significant barrier to value chains. This seems to be the case for many LAC trade agreements. The Pacific Alliance agreement, which inherits the stringent rule of origins from the USMCA, is a notable example. The simplification and homogenization of rules of origin acts as a key enabler of trade in intermediate goods and, by extension, deeper economic integration.

Participation in value chains does not always yield large benefits for all countries involved. A country may specialize in the assembly stage of a product, adding little value, yet still have high indicators of GVC participation. Additionally, this participation may take the form of enclaves, where a foreign firm locates a specific production stage to exploit local advantage (proximity to a productive resource, access to an export market, or tax incentives) without establishing meaningful linkages with domestic firms.

However, the literature shows that by participating in value chains, domestic firms learn from international firms (either as suppliers or users of the domestic firm's inputs) and become more productive, increasing their profits and sales to other international firms. For example, Alfaro-Urena et al. (2019) show that firms in Costa Rica that entered global supply chains as suppliers of multinational corporations experienced strong and persistent performance gains. The authors found that in the medium term, their sales increased, not only to multinational corporations that initially sourced their inputs from them, but also to other buyers. Part of these gains is explained by the adoption of better management practices. These types of spillovers and gains from interaction with more productive international firms constitute one of the main channels through which participation in global value chains can foster growth.

The globalization turnaround

The rules that govern global trade have been experiencing significant challenges in the last two decades. First, the Global Financial Crisis marked a slowdown in global trade[3] and prompted a large multipronged economic policy response by major economies and blocs, including monetary expansion, fiscal stimulus, and a significant expansion of the social safety net (e.g., the Affordable Care Act in the US). On the fiscal front, there was a notable return to sector-specific incentive schemes and protectionist policies. For example, the US established the American Recovery and Reinvestment Act, which included a Buy American provision, and the Advanced Manufacturing Partnership.

In 2020, the COVID-19 pandemic further exposed the vulnerability of global supply chains, particularly their dependence on foreign—especially Chinese—inputs for the required response in terms of medical supplies, vaccines, and treatment. Additionally, mandated economic shutdowns generated massive shipping backlogs and widespread supply-chain disruptions. The subsequent period was marked by industrial policies aimed at building resilience and reducing foreign dependence in supply chains, to kickstart growth with fiscal stimulus packages and to pursue energy objectives of renewable energy adoption and energy supply security (e.g., the Inflation Reduction Act in the US and the European Green Deal).

In the last three years, wars in Eastern Europe and the Middle East have further heightened the geostrategic importance of supply chains and reinforced the preference for domestic sourcing of key inputs and for trade relations with partners perceived as geopolitically aligned. Trade disruptions were particularly severe for the supply of natural gas to the EU from Russia due to sanctions and the destruction of a major gas pipeline.

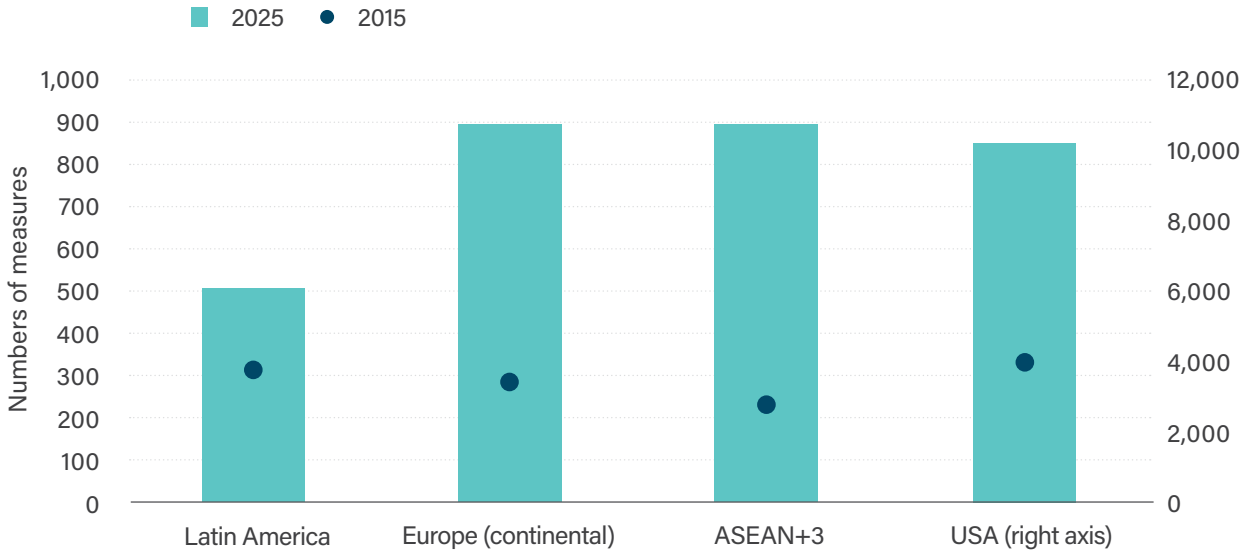
Graph 4.8 plots the incidence of trade-distorting measures by region and policy type associated with the resurgence of industrial policies (Evenett et al., 2024). From 2015 to 2025, the number of such measures in force increased by 60% in Latin America, while in Europe, ASEAN+3, and the US, the number increased about threefold. A salient pattern is that domestic and export subsidies, policies that entail substantial fiscal costs, are much more prevalent in ASEAN+3 (88%) and the US (83%) than in Latin America (49%). This is consistent with a greater reliance in less-developed regions on trade policy instruments that impose a smaller fiscal burden, reflecting more limited fiscal space.

The second Trump administration in the US marked an abrupt departure from the rules-based trading system. The Most-Favored-Nation (MFN) principle—the cornerstone of the World Trade Organization (WTO)—establishes that every economy has the right to the same treatment for its imports in a destination country as the most favored nation's treatment on that same destination, except within trade agreements

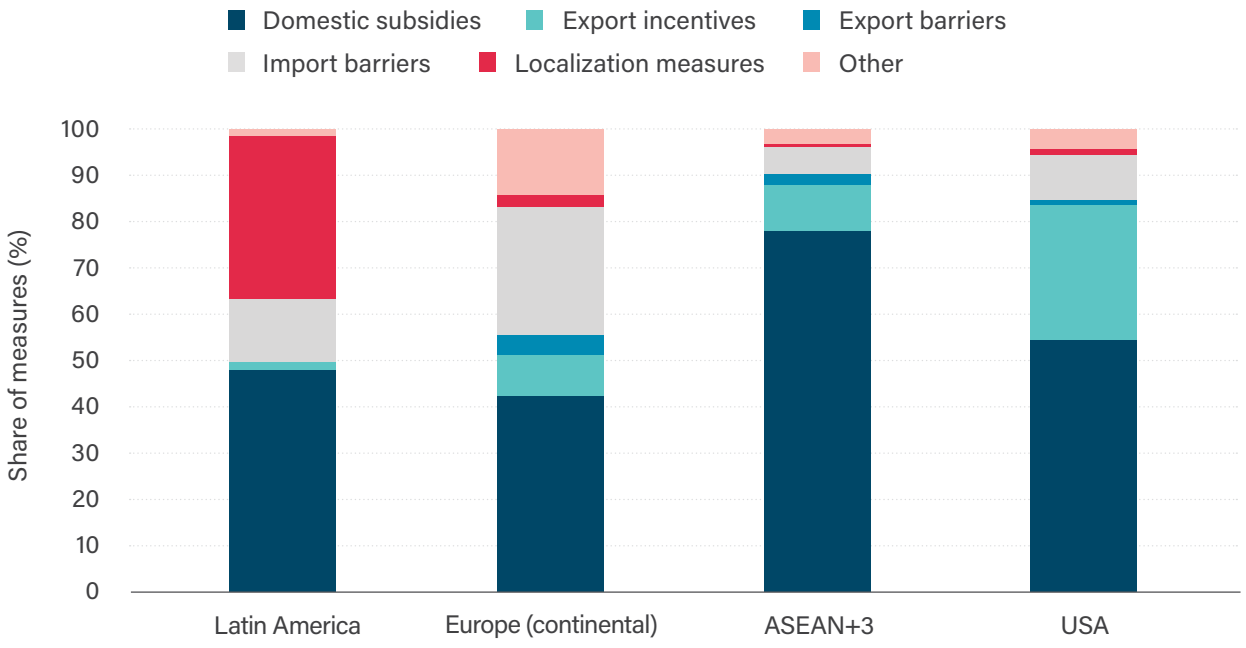
3. This has been heterogeneous across countries, where some countries displayed their peak in trade around 2008 like China and the EU, while other's trade levels continue to grow (Baldwin, 2022 ; Irwin, 2020).

Graph 4.9
Return of trade-distorting measures

Panel A. Stock of trade-distorting measures. Means by region 2015–2025



Panel B. Proportion of trade-distorting measures by type in 2025



Note: The graph in panel A shows the average number of trade-distorting measures across countries within each region. Panel B shows the share of each type of measure in the total. The regional composition is detailed in the appendix to this chapter, available online.

Source: Authors based on Evenett et al. (2024).

that meet predefined standards. On April 2, 2025, the US imposed unilateral tariffs that are overtly discriminatory for every country, with the declared objective of reaching a balanced trade in goods on a country-by-country basis. These measures even affect USMCA trade bloc partners Canada and Mexico for goods not covered by the agreement. The decision prompted swift retaliation from many of the affected countries and triggered requests for tariff renegotiations on a bilateral basis.

The explicit withdrawal of the US from the rules-based trading system does not, in itself, put an end to it. While the US represents a substantial share of global trade, representing 14% of global imports in 2023, its influence has been declining and is today significantly below its 19.2% peak in 2000. However, the broader international response suggests a further erosion of multilateral trading rules. Affected countries have made limited use of the WTO dispute settlement mechanism. In the first nine months of 2025, the WTO received ten cases, six of which pertain to the US, of which two were filed by China, three by Canada, and one by Brazil (WTO, 2025). Additionally, many economies and blocs have sought a bilateral trade deal to escape "Liberation Day" tariffs, which are generally discriminatory in nature and violate the MFN principle, by granting lower tariffs to the US than MFN tariffs. These spillovers further erode the MFN principle.

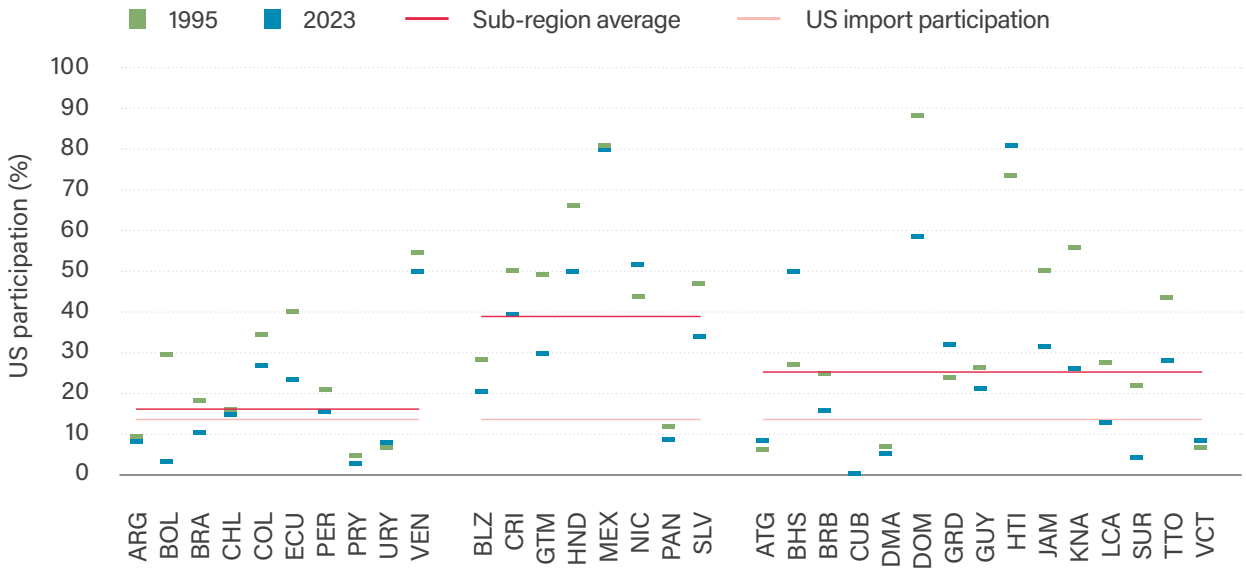
The declining weight of the US in global trade implies an increased power of other economies and blocs in establishing alternative rules of engagement that, in turn, attract other economies. One example is the Multiparty Interim Appeal Arrangement (MPIA). In practice, the WTO's institutional role has weakened over the past decade: progress on new multilateral agreements has been limited, notably on fisheries and trade facilitation. It has played a declining role in oversight of its signatories, as many countries have ignored their notification obligations regarding trade policies. Notably, its role as a dispute settlement forum has stalled, as countries have disagreed with the functioning of the appellate body and the US has objected to the appointment of members of the body, rendering it incapable of addressing disputes (Froman, 2025). As a partial remedy, many countries have formed the MPIA to address trade disputes. This mechanism was recently invoked by the UK and now covers over 57% of world trade.

Another example is the continued interest by many countries in defining and committing to a common set of rules for their trade relations through multilateral agreements. This includes negotiations of the strategic partnership agreement between LAC and the EU, the expansion of the Asia-Pacific Regional Comprehensive Economic Partnership (RCEP)—the world's largest free trade agreement—and the UK's recent accession to the Comprehensive and Progressive Agreement for Trans-Pacific Partnership (Vaillant, 2024).

Despite the unilateral escalation of tariffs marked by abrupt policy reversals, LAC has so far faced a comparatively softer treatment than other regions: most countries were subject to the minimum 10% tariff rate. That implies an increased competitiveness of LAC goods relative to other origins. At the same time, LAC economies may become relatively more attractive as export destinations for countries most affected by the tariff hikes, particularly China. Both moves suggest a greater centrality of LAC countries in the global trade network.

Some economies in LAC are particularly vulnerable to US trade policy shifts. Graph 4.9 shows the participation of the US as a destination for exports from countries in the region. Countries in Central America and, particularly, Mexico are most exposed, while Caribbean and South American economies are less dependent. In line with the general decline of US participation in global input sourcing, most countries in the region show falling exposure and are today at or near their historical lows. Mexico is an outlier in this regard, as the USMCA framework has produced significant trade flows linked to integrated value chains between the two economies.

Graph 4.10
Participation of the US in exports by country



Note: The graph shows U.S. participation as a destination for exports from LAC countries in 1995 and 2023. The light red line indicates the average share of U.S. imports in global trade in 2023. The dark red line represents the average share of U.S. imports in total exports for each subregion in 2023.

Source: Authors based on data from UNCTAD, retrieved from The Growth Lab at Harvard University (2025).

Recent changes in U.S. trade policy are part of a broader consequential shift in its foreign policy stance. Tariffs are levied with declared objectives of eliminating trade deficits, but also, as a bargaining chip to pursue US interests in other domains, such as political alignment (e.g., higher tariffs on countries that import oil from Venezuela), drugs and illegal immigration for Mexico and Canada, even interfering with a sovereign nation's judiciary system (higher tariffs to interfere with Brazil's legal prosecution of a foreign president), among others. In a world of international relations dominated by large economic blocs with an increasing inclination toward the arbitrary exercise of power, small economies hold the losing hand. Promoting effective integration

within the region and with key economies or blocs, can bring back some of the lost predictability needed to achieve reliable trade flows.

The three levers for reducing trade costs

Trade policy operates along three main dimensions: tariffs, non-tariff measures and border procedures, and transport infrastructure and logistics markets.

Governments may impose tariffs to protect domestic production in specific sectors. This protection can serve multiple objectives, such as safeguarding employment or ensuring that a minimum share of production remains domestic to secure supply in critical sectors. For instance, maintaining a certain level of domestic food production capacity is often cited as a rationale for agricultural tariffs.[4] Tariffs can also fulfill fiscal and strategic functions: they generate public revenue and, in countries with some degree of market power, may influence the terms of trade. These instruments are discussed in greater detail in the following section.

International experience illustrates that trade liberalization can generate unintended structural effects when market imperfections and adjustment frictions are present, such as unemployment, rising wage inequality, and growth slowdowns (Atkin et al., 2025); (Dix-Carneiro, 2014); (Helpman et al., 2017); (Pavcnik, 2017). The cumulative evidence on liberalization reform points to positive effects on economic growth on average, albeit with significant heterogeneity across countries. Moreover, tariff reductions on inputs and capital goods have consistently positive effects on economic growth, while the evidence is less conclusive for final goods. These dynamics underscore the need for careful evaluation of trade policy shifts abroad and their asymmetric impacts on small and open economies in the region (Irwin, 2025).

A fundamental challenge lies in the distribution of these effects. While aggregate gains, such as access to cheaper goods and inputs, are diluted across a broad base of consumers and firms, the costs are concentrated among specific producers and workers. This concentration creates strong incentives for affected groups to organize and lobby for protectionism. Furthermore, because industries are often regionally specialized, losses tend to cluster geographically (e.g., Dix-Carneiro and Kovak, 2017), providing additional political leverage for protectionist policies. This structural asymmetry between diffuse benefits and concentrated costs remains a pervasive barrier to trade integration.

Two key considerations emerge from these experiences. First, adopting trade-protective measures can be legitimate and consistent with well-defined policy

4. For example, Adamopoulos and Leibovici (2024) show that a larger food import dependance is associated with more food insecurity, which can rationalize the incentives to protect domestic food markets.

objectives, including responses to distortions such as opaque export subsidies by large trading partners. However, these measures should be selective and account for the structural constraints faced by most LAC economies. Small economies with limited market power are generally unable to influence the terms of trade, and retaliatory protection rarely achieves meaningful concessions from larger partners. Poorly designed measures may therefore generate costs without achieving the intended strategic benefits.

Despite these arguments, reducing trade costs remains a priority for LAC, where tariffs remain high on average in many countries and display wide dispersion across goods, an indication of an overly protectionist stance on trade. In addition, non-tariff measures (NTMs) are widespread, and transport and logistics inefficiencies further exacerbate trade costs. There is a broad and pending integration agenda that can advance independently of the current global trade dynamics, marked by the return to protectionist policies. Priority should be given to policies that enhance efficiency in trade transactions. Improving transport infrastructure and implementing reforms to foster competitive, dynamic transport markets are central to this agenda. Lower logistics and transport costs not only facilitate trade but also support regional value chains and market integration.

Trade facilitation is equally important and focuses on simplifying procedures and rationalizing non-tariff measures. Critical actions include the harmonization of sanitary and technical standards with those of key markets, such as the European Union, and the streamlining of customs processes to achieve high standards of speed, predictability, and transparency. Non-tariff measures are not inherently detrimental: many are essential tools for addressing negative externalities—such as environmental degradation or the trade of endangered species—and for ensuring safety, quality, and coordination through technical regulation. The priority should be to simplify compliance and reduce the incidence of unnecessary regulatory differences with trading partners, for example, by fast-tracking the recognition of standards from trusted partners and ensuring that inspections, when necessary, are agile and transparent.

When governments seek to protect their domestic production, tariffs are a preferable and more transparent instrument than cumbersome non-tariff measures. They generate fiscal revenue, make the level of protection explicit, and reduce the likelihood of disputes in multilateral forums. By contrast, opaque non-tariff restrictions often impose higher enforcement costs, create incentives for corruption among enforcement authorities, and invite trade disputes without delivering equivalent benefits.

Finally, beyond formal trade policies, the integration agenda must also address concurrent barriers prevalent in the region: uneven state capacity and the presence of illegal activities. First, institutional quality varies widely across the region. For trade-related institutions and agencies, this heterogeneity translates into uneven enforcement of sanitary and technical standards that are formally equal or similar across trading partners. This necessitates duplicate controls within customs unions and reduces the effective value of enacting new trade agreements. In addition,

corruption, organized crime, and illegal activities remain a justifiable concern for trade partners in other regions. Tackling these challenges domestically constitutes a complementary lever for integration with high potential gains.

Convergence of non-tariff measures and facilitation of trade procedures

For most countries in LAC, there is still a pending agenda in trade facilitation and regulatory streamlining. The regulations, restrictions, and administrative procedures that firms must navigate to complete a transaction entail high costs for international trade. Their formal (legal) application can vary widely in terms of efficiency and transparency. Together, de jure restrictions, regulations and administrative procedures, and their de facto functioning conform to one of the three key components of trade costs.

The United Nations Conference on Trade and Development (UNCTAD) defines NTMs as "policy measures other than ordinary customs tariffs that can potentially have an economic effect on international trade in goods, changing quantities traded or prices, or both." They fall into three broad groups:

1. Technical measures—sanitary and phytosanitary rules (SPS), technical barriers to trade (TBT), and conformity-assessment procedures such as labelling, marking, and packaging standards, or pre-shipment inspections.

2. Non-technical measures—rules of origin, intellectual-property provisions, export and import licensing, quotas, and other quantity controls.

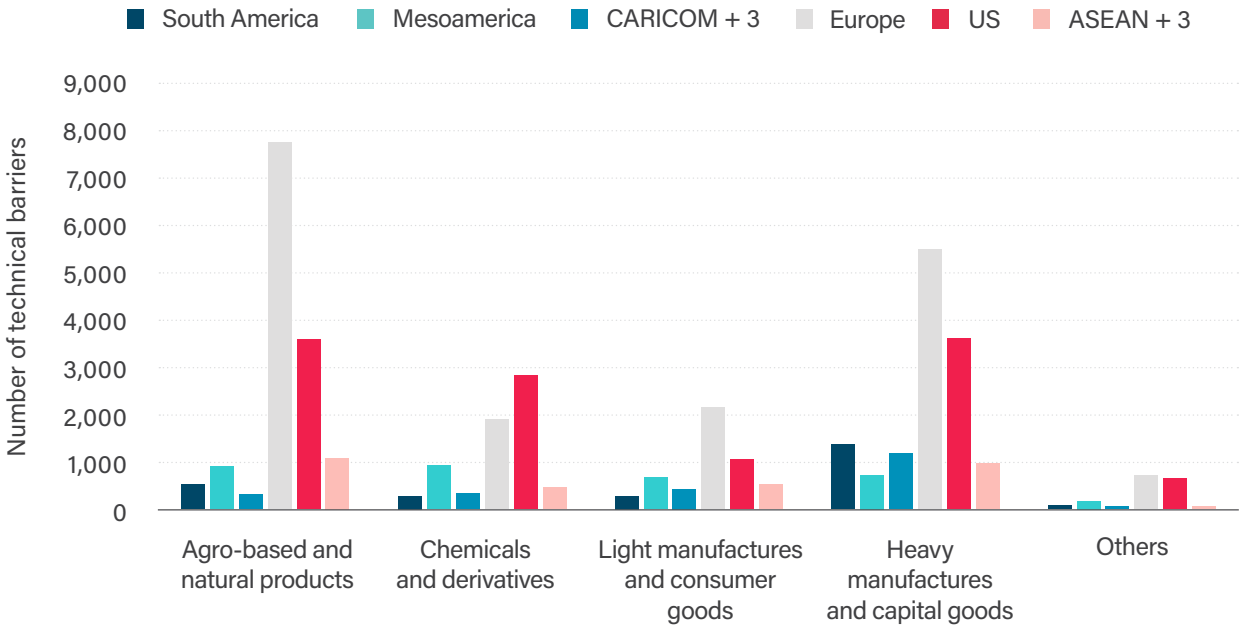
3. Export-related measures—restrictions, taxes, or rebates applied specifically to outbound shipments.

Graph 4.11 shows technical (top panel) and non-technical (bottom panel) barriers to trade by sector group (based on the 2012 Harmonized System classification) and region, computed as a simple average of the number of measures across countries. Technical barriers are generally less numerous in LAC subregions than in Europe and the US and are comparable to ASEAN+3. Among the sectors most affected by technical measures in the US and Europe are primary products, which are of key relevance for LAC exports. The number of measures in this sector group surpasses 7,700 in Europe and 3,500 in the US. Within this group, agricultural manufactures sections 3 and 4 account for more than 1,500 and 3,500 measures, respectively, in Europe (see the appendix to this chapter, available online). These figures are an order of magnitude higher than those observed in LAC subregions.

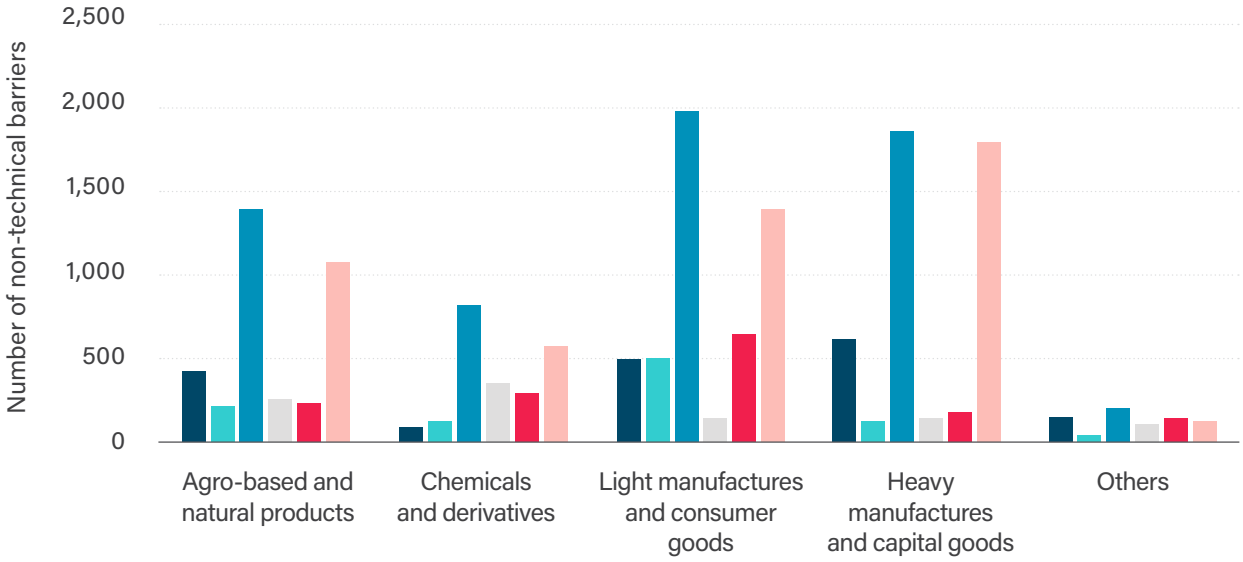
Technical measures can have a positive effect on international trade by increasing information availability, facilitating product comparability, and signaling safety and quality to consumers. These effects are particularly relevant for agricultural and food products, especially in the case of sanitary and phytosanitary requirements. However, such a large prevalence of measures may also be an indication of hidden protectionism.

Graph 4.11
Number of technical and non-technical barriers to trade

Panel A. Technical



Panel B. Non-technical



Note: Graphs show the number of technical (Panel A) and non-technical (Panel B) trade measures by sector and region. Values are calculated as the simple average of the number of measures across countries. Numbers on the horizontal axis correspond to grouped sections of the Harmonized System classification: agro-based and natural products (1–5); chemicals and derivatives (6–7); light manufactures and consumer goods (8–14, 20); heavy manufactures and capital goods (15–17); Others (18, 19, 21). The regional composition is detailed in the appendix to this chapter, available online.

Source: Authors based on UNCTAD (2025).

A key determinant of trade outcomes is regulatory distance, defined as the degree of divergence between the trade-related regulations imposed by two countries.[5] Evidence shows that regulatory distance has a negative effect on trade: a 10% increase in regulatory distance is associated with a 1.18-percentage-point lower probability of trade and a 3.5% reduction in trade volume within a given product category, with significantly larger effects for agricultural goods. LAC economies show a relatively high regulatory distance within regional trade blocs. For instance, the average distance within Mercosur (a customs union with several exceptions) is 0.65, this figure is 0.35 within the Central American Common Market and 0 within the EU. Preferential trade agreements within the region do reduce regulatory distance within blocs relative to across blocs. Regulatory distance also shows marked sectoral heterogeneity, being higher in processed foods, vegetable products, and chemical products (see Blyde, 2024, for estimates and a review of literature).

Technical measures are a necessary component of trade policy. However, their impact on trade costs can be mitigated through three main channels. First, transparency and public availability of information regarding technical requirements and certification agencies, ensuring that it is centralized and easily accessible. The second channel is the mutual recognition of rules, which does not require changing national technical rules but does entail the acceptance of a trading partner's rules and securing a reciprocal treatment in return. Third, harmonization, which can involve enforcing an agreed-upon set of rules with trading partners or, alternatively, harmonizing by adopting international standards. This approach is the most institutionally demanding but also the most effective in reducing firms' day-to-day trading costs. In bilateral or plurilateral harmonization processes, however, converging toward norms adopted in key extra-agreement markets is essential, as the reduction in costs within an agreement that diverges from the rest of the world can also result in further isolation of the bloc.

Digital technologies offer powerful tools to lighten the burden of compliance. For instance, artificial intelligence (AI) can process complex technical product descriptions and, when combined with multiple data sources, aid in elaborating risk scores for trade transactions to better target inspections. Another technological use case in this regard is digital traceability systems and Internet-of-Things (IoT) sensors. Together, they can facilitate real-time monitoring of origin, temperature, and handling conditions—features that simplify proof of compliance with sanitary and phytosanitary rules, sustainability standards, and carbon-footprint reporting. In turn, smart documentation platforms and single-window systems allow firms to submit data once and share it automatically with customs, health, agriculture, and tax authorities, eliminating duplicate paperwork.

Yet technology alone cannot compensate for outdated, overlapping, or discretionary regulations. Digitalizing a needlessly complex process merely automates inefficiency.

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5. The overall regulatory distance index between the two countries is calculated as the average regulatory distance across all products. The index takes all the technical measures that two countries apply to a particular good and calculates what percentage of the measures are different.

Meaningful progress, therefore, requires a dual agenda. First, regulatory streamlining, through the systematic review of existing NTMs to eliminate obsolete requirements, consolidate duplicative forms, and adopt international standards wherever possible. Second, technology adoption, including investment in interoperable platforms, data standards, and human capital, so that customs officers, regulators, and firms can exploit AI, IoT, and blockchain effectively. Addressing both regulatory reform and digitalization jointly can shorten border delays, lower costs for exporters and importers, and create a more resilient platform for deeper integration into world markets.

Experience from early adopters—such as Brazil's Portal Único de Comércio Exterior or Uruguay's electronic phytosanitary certificates—shows that combining regulatory simplification with digital solutions can cut average clearance times by more than half and reduce compliance costs by double-digit percentages. For LAC, technological adoption accompanied by regulatory and procedural reforms suited for the digital age can unlock a substantial competitiveness dividend.

Non-technical measures are more directly associated with market protection, although they may also be justified on security or geostrategic grounds. Some of the most salient measures are non-automatic licensing, quotas, and the prohibition of imports. The incidence of non-technical measures is broadly similar across South America, Mesoamerica, Europe, and the US, averaging between 200 and 350 measures across economies and sector groups. By contrast, CARICOM+3 and ASEAN+3 exhibit significantly larger incidence, averaging 1,250 and 990 measures, respectively. In LAC subregions, the most affected sector is light manufactures, with around 500 measures in South America and Mesoamerica. In Europe and the US, by contrast, non-technical measures are more concentrated in chemicals and derivatives (350) and light manufactures (420), respectively. In general, market protection objectives are better served by tariffs than non-technical measures, as they make the degree of protection explicit and generate fiscal revenue.

Opportunities to simplify tariffs

Despite the significant tariff cuts and regulatory reforms that LAC economies undertook in the 1990s, the region continues to exhibit a significant gap relative to developed regions such as the EU. This gap is less significant for MFN tariffs.

Table 4.1 shows the average applied tariffs under the most relevant trade agreements involving LAC economies: tariffs are zero or close to zero within all the agreements. However, outside these agreements, tariffs applied by LAC blocs do not appear systematically lower for intraregional partners than for trade with partners in other regions. For instance, CARICOM applies tariffs of around 12% across all partner blocs, with similar levels for imports from within Latin America and from other regions. Mercosur is an exception, as it applies relatively lower tariffs to imports from the Pacific Alliance and the Andean Community. Another feature is that extra-regional tariffs in CARICOM are significantly higher than in other blocs. Finally, trade agreements among high-income economies, like the EU or USMCA, have uniformly low tariffs: nearly zero for intra-bloc trade and also relatively low for extra-bloc trade.

Table 4.1
Intra-regional and extra-regional tariffs between trade agreements

Import region	Export Region							
	Mercosur	Pacific Alliance	CAN	MCCA+DR	CARICOM	EU	NAFTA	ASEAN+3
Mercosur	0.07	2.05	0.58	11.20	11.56	11.57	9.95	11.56
Pacific Alliance	1.18	0.06	0.39	1.57	4.93	5.59	0.76	3.79
CAN	0.42	1.47	0.00	6.69	7.17	7.85	4.55	7.57
MCCA+DR	5.73	2.70	4.50	1.06	5.27	5.57	2.37	5.29
CARICOM	12.79	12.79	12.79	12.49	4.43	12.79	12.79	12.79
EU	4.31	0.04	0.03	0.00	0.01	0.00	1.46	1.52
NAFTA	2.77	0.06	1.08	0.51	3.09	4.16	1.16	3.00
ASEAN+3	6.57	4.92	5.92	6.08	6.56	6.60	5.73	0.89

Note: The table reports the simple mean of tariffs applied from one region to another. Gray cells indicate the intra-regional tariffs. The regional composition is detailed in the appendix to this chapter, available online.

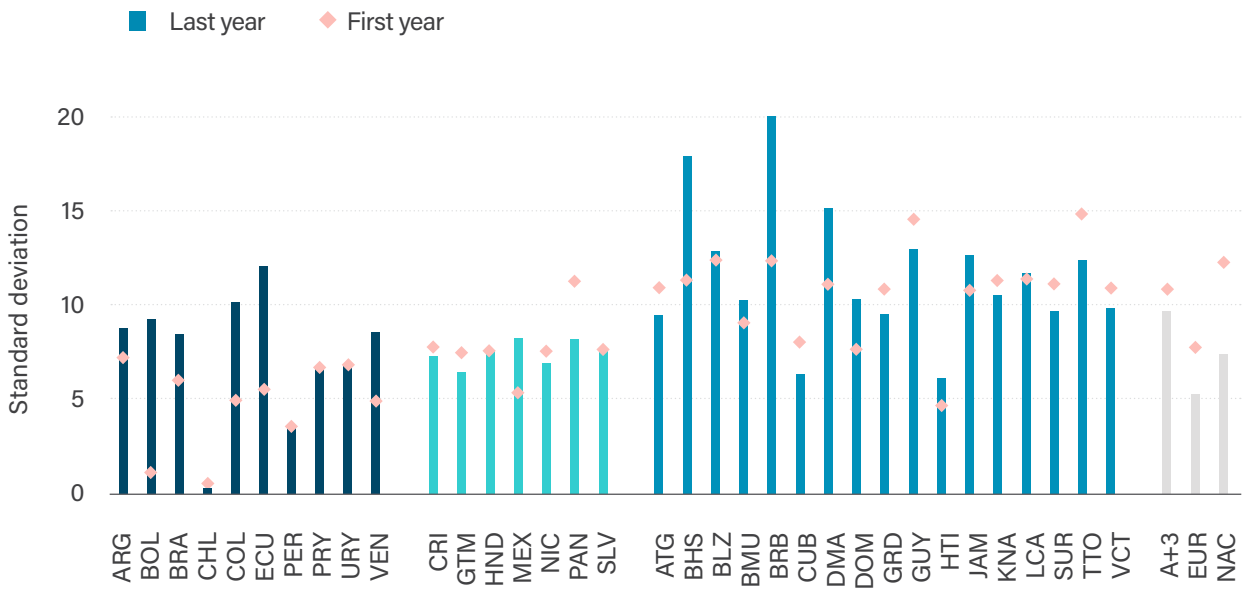
Source: Authors based on World Integrated Trade Solution (2025).

A pronounced gap in tariffs for LAC relative to high-income regions concerns the degree of tariff dispersion. Graph 4.12 shows the standard deviation of tariffs across the product space, used as a proxy for how distortive tariff policies are. For current EU member countries, tariff dispersion declined from the mid-1990s[6] to 2022 as they joined the bloc. In contrast, LAC tariff dispersion has increased in 17 of the 36 countries shown and is currently, on average, 90% higher than in the EU. In the US, tariff dispersion doubled between 1989 and 2022, now reaching levels similar to LAC.

Economies can protect domestic production either through relatively uniform tariffs across all goods or by targeting specific products. The latter is more distortive, as it pushes trade patterns away from countries' underlying comparative advantages, even within similar good categories. Tariff dispersion can also create unintended effects that harm productive sectors through input-output linkages. When essential inputs face higher tariffs than the final goods they help produce, effective protection of those goods may become significantly lower or even negative. Moreover, large dispersion in tariff levels across product categories encourages misreporting and corruption and raises enforcement costs. Gradually reducing tariffs on the most protected goods can simplify tariff structures and reduce distortions, even if the overall levels of protection are otherwise preserved.

6. The first available year in the data is 1995 (circa 1995).

Graph 4.12
Tariff dispersion by country and benchmark regions



Note: Data includes preferential and most-favored-nation (MFN) tariffs. Bars represent data for 2023; diamonds represent data for 1995 or the first available year: 1996 (ATG, BHS, BLZ, DMA, DOM, GRD, GUY, JAM, KNA, LCA, SUR, VCT); 1997 (PAN); 1999 (BHS); 2001 (BMU, HTI). Countries for which the first available data year is after 2001 are excluded. The regional composition is detailed in the appendix to this chapter, available online.

Source: Authors based on World Integrated Trade Solution (2025).

One dimension of tariff dispersion arises from preferential agreements, which grant lower or zero tariffs to partner countries while maintaining higher tariffs for non-members. The observed evolution of tariffs in the region, showing a persistent tariff dispersion and a reduction in the mean value, partly reflects the liberalization strategy adopted. It consists of a pragmatic approach to the adoption of partial agreements that are not harmonized, require burdensome implementation of rules of origin, and result in significant distortions of trade flows. In turn, this structure may impede the type of trade that is arguably the most consequential for productive development: the establishment of the regional component of global value chains.

The Latin American Integration Association (ALADI), composed of 13 member countries,[7] reports 50 preferential tariff agreements in place among its members registered within its framework. In addition to these partial scope agreements, there are 22 general trade agreements that involve countries in LAC. Yet, effective use of these preferences remains low in practice: only 9% of origin–destination–product flows that are subject to positive tariffs and covered by ALADI preferences actually

7. Comprised of Mexico, Cuba, and all countries in South America, except Suriname and Guyana.

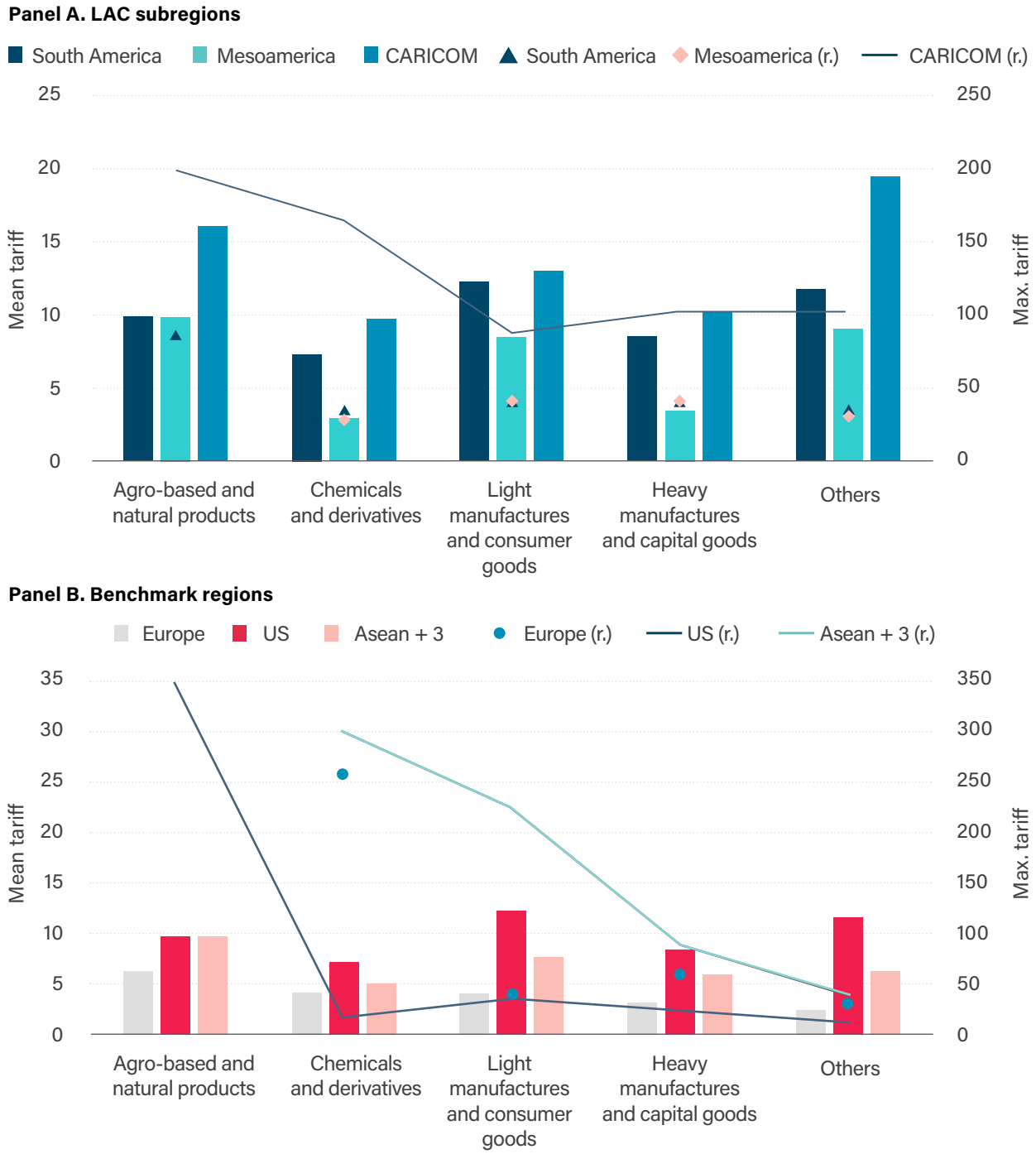
make use of them. Even when restricted to categories with positive imports in the destination country and exports from the origin country, the utilization rate rises only to 23%. The main factors limiting the effectiveness of these agreements identified by ALADI include the stringency and complexity of rules of origin, non-tariff measures, and administrative costs (ALADI, 2024, 2025).

Another important source of tariff dispersion in the region is sector-specific protection, as illustrated in Graph 4.13. The bars show the regional average of simple MFN tariffs by sector, while the points represent the maximum MFN tariff across all importer–exporter–product category combinations within each sector. Tariffs applied by LAC countries to trade outside preferential agreements are high across most sectors. (Chile is an important exception, as it applies a flat 6% tariff and, owing to an extensive coverage of FTAs, most of its trade is zero-rated.) Tariff structures across the region are also highly heterogeneous, with some importer–exporter–product combinations facing tariffs several times higher than the simple average. In agriculture, for example, maximum tariffs reach 90%, 200%, and 250% for South America, CARICOM+3, and Mesoamerica, respectively.

An important consideration for multilateral negotiations between LAC and trading partners like the US and the EU is that their tariff structures are also heterogeneous. Although average tariffs are generally lower, some critical sectors for LAC face very high maximum tariffs. Agro-based and natural products are subject to maximum tariffs exceeding 300 in some cases.

Graph 4.14 reports tariff revenues by country. These remain sizable for several countries in the Caribbean, representing up to 12% of total fiscal revenue in The Bahamas. Within Latin America, tariff revenue exceeds 5% of fiscal revenue for El Salvador, the Dominican Republic, Panama, Uruguay, Argentina, Ecuador, and Paraguay. Notably, they are similar to tariff revenues in continental Europe, even though average tariff levels are substantially higher in LAC, a difference that cannot solely be explained by the difference in trade-to-GDP ratios.

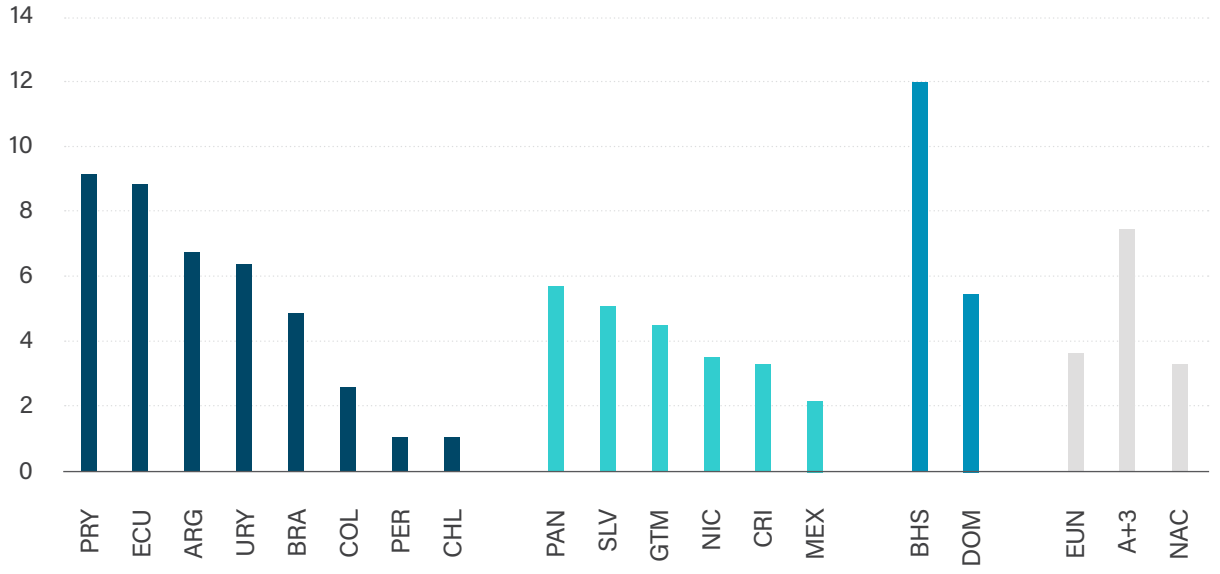
Graph 4.13
MFN tariffs by sector and region—Simple averages and within-sector maximums, 2023



Note: Labels in x-axis refers to grouped HS12 sections. Bars show mean tariffs (left axis), while shapes indicate maximum tariffs (right axis). Europe and ASEAN+3 in agro-based and natural products were excluded for display purposes because of their high values, reaching 555 and 800.3, respectively. Regional and sector composition are detailed in the appendix to this chapter, available online.

Source: Authors based on World Integrated Trade Solution (2025).

Graph 4.14
Tariff revenue as a percentage of total revenue, 2021



Note: Data correspond to tariff revenue as a percentage of total revenue, as reported by source data. Countries are sorted by level and grouped by subregions: South America, Mesoamerica, CARICOM+3, and benchmark averages. NAC denotes the average of Canada and the US; EUN denotes continental Europe. Countries included in each region are detailed in the appendix to this chapter, available online.

Source: Authors based on WITS (2025).

The policy debate on tariffs in LAC has long revolved around two complementary tracks: preferential liberalization through trade agreements and unilateral reduction of the general tariff schedule. Moreira et al. (2019) outline two alternative paths for the preferential route to tariff reductions. The first envisions a full-fledged regional free-trade area. While ambitious, this strategy in practice hinges less on achieving consensus among the region's many small economies than on the willingness of the four largest—Mexico, Brazil, Argentina, and Colombia—to converge on a common external tariff. Two of those countries are already members of Mercosur, and Mexico has partial agreements with the bloc Economic Complementation Agreement No. 54 (ACE 54), suggesting that a grand bargain, though politically challenging, is not implausible.

The second strategy emphasizes a gradual expansion and convergence of existing partial trade agreements within the LAC region. This entails convergence in the preferential tariffs across trading partners within the region and, crucially, regulatory convergence in technical measures and rules of origin that allow accumulation across countries in the region. ALADI remains the natural institutional forum for this step-by-step approach.

Reducing transport costs

Infrastructure is essential for leveraging regional proximity and reducing transport costs in LAC. Key components include land transport networks—roads and railways—that connect productive areas and consumption points to borders or checkpoints. Another vital element is border infrastructure—bridges, tunnels, customs, and migration facilities—that facilitate cargo movement and the completion of customs procedures at land borders, ports, or airports. Transport costs also depend on how the logistics market operates. The productivity of transport companies is shaped by broader economic conditions, especially access to quality inputs, competitive intensity, regulatory effectiveness, labor market conditions, and financing availability (Álvarez et al., 2018)

Transport costs are influenced by the placement and availability of transport and logistics infrastructure, including the availability of transport modes. They are also affected by the functioning of transport markets themselves. Competition in air and road transport can significantly reduce transportation costs. By contrast, in segments of the transport value chain with natural monopoly characteristics—such as airport and railway infrastructure)—state capacity for public provision or effective regulation of concessions is key.

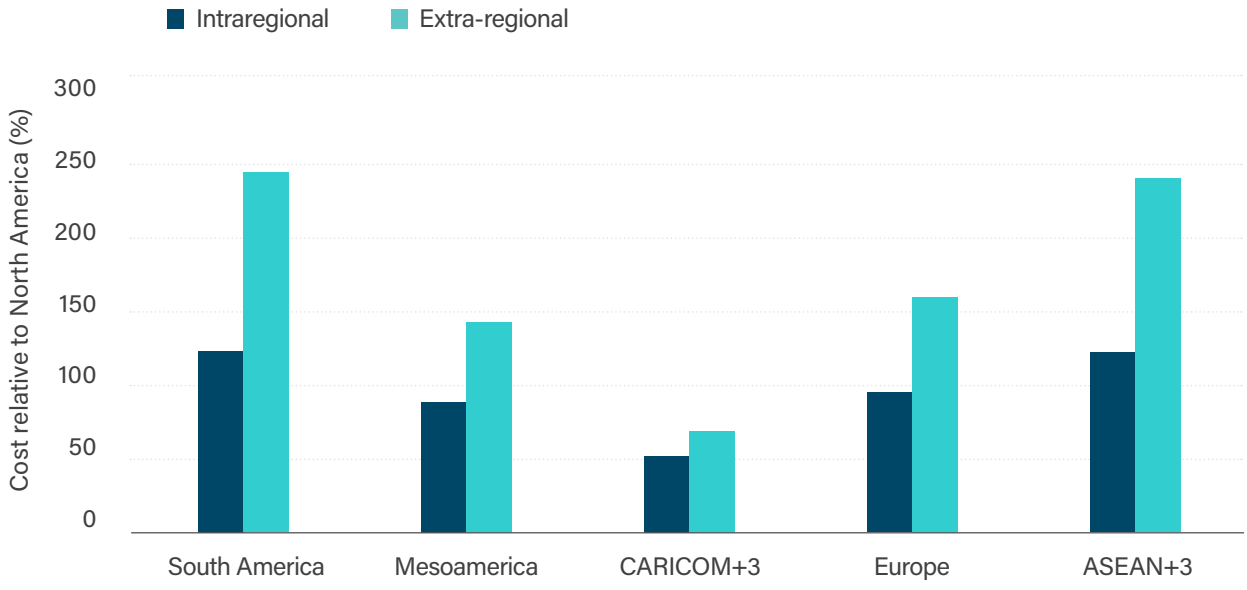
Transport costs are also shaped by the composition of trade, both in terms of trading partners and the types of products traded. Goods differ in their value-to-weight and value-to-volume ratios, which determine their sensitivity to shipping costs. Additionally, different goods require different transportation services to preserve their attributes and quality: some products are fragile, fresh food and flowers require cold-chain preservation, and many products are time-sensitive and perishable, like vaccines and Halloween costumes. Delays for these products could destroy their economic value.

At the same time, transport costs and the available infrastructure affect trade patterns and economic structure. Economies focused on exporting primary products to distant regions like Europe or China require infrastructure that connects production areas to ports, while economies specializing in high-value-added, perishable goods, like certain fruits, demand fast transport infrastructure, such as airports. Conversely, unreliable transport infrastructure between border countries limits the development of short-distance trade relations and regional value chains.

Graph 4.15 presents a measure of transport costs for intra- and extra-regional trade faced by different geographical regions, measured by average CIF–FOB margins for a fixed composition of goods, relative to the costs observed in the US–Canada pair. South America exhibits the highest intraregional cost and the largest gap between intra- and extra-regional costs. This can be part of the reason for the low intraregional trade observed. This is not the case for Mesoamerica and the Caribbean, which display the smallest intra–extra regional gap.

One explanation for the observed transport cost pattern is modal composition. South America primarily depends on maritime transport, while Central America, Mexico, and the US also rely heavily on road transport (Graph 4.16). The increased land transport in

Graph 4.15
Transport costs relative to North America for intraregional and extra-regional exports, 2022



Note: Bars indicate the relative percentage difference in transport costs for each region compared to North America (US and Canada). Estimates are derived from a semi-logarithmic regression of the CIF–FOB margin on regional fixed effects, controlling for product categories. Coefficients $\hat{\beta}$ were transformed as ($e^{\hat{\beta}}$-1) to represent the percentage change relative to the base category.

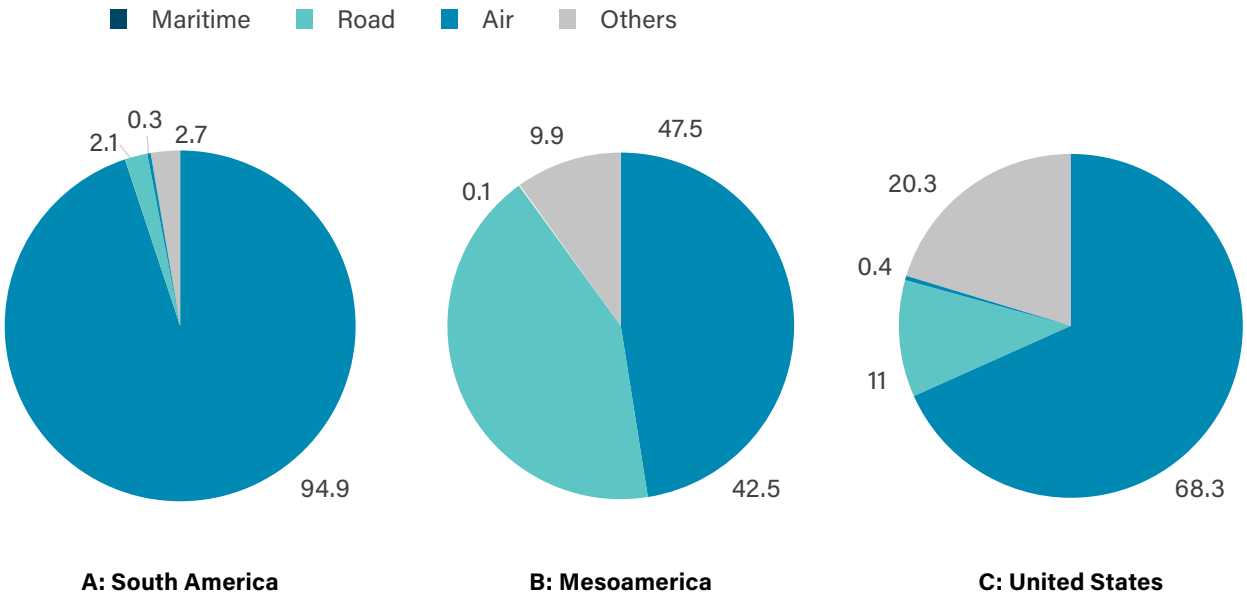
Source: Authors based on OECD (2022).

these countries is driven by higher intraregional trade, which depends on land routes. Within South America, land transport accounts for 46.4% of regional trade (Graph 4.17), although intraregional trade remains a small share of total volume. Maritime trade is significant even within South America's intra-zone trade (47.7%), whereas maritime transport is seldom used between the US and its neighbors (6.4%).

Another determinant of transport costs, as noted above, is the functioning of the logistics market. Graph 4.18 shows indicators from the Logistic Performance Index (LPI) (World Bank, 2025a).[8] Three components in this index are particularly relevant for transport costs: (i) the competence and quality of logistics services, (ii) the quality of trade and transport infrastructure, and, when referring to border crossings, (iii)

8. The LPI considers the following dimensions: (i) the efficiency of customs and border management clearance; (ii) the quality of trade- and transport-related infrastructure; (iii) the ease of arranging competitively priced international shipments; (iv) the competence and quality of logistics services; (v) the ability to track and trace consignments; (vi) the frequency with which shipments reach consignees within the scheduled or expected delivery time (timeliness). Each dimension, as well as the overall index, is scored on a scale from 1 to 5, with higher scores indicating better performance.

Graph 4.16
Modal composition in international trade, 2017



Note: Values correspond to the share of each mode of transport in total exports of each country or region, measured by weight transported.

Source: ECLAC (2019) and authors based on U.S. Department of Transportation, Bureau of Transportation Statistics (2019).

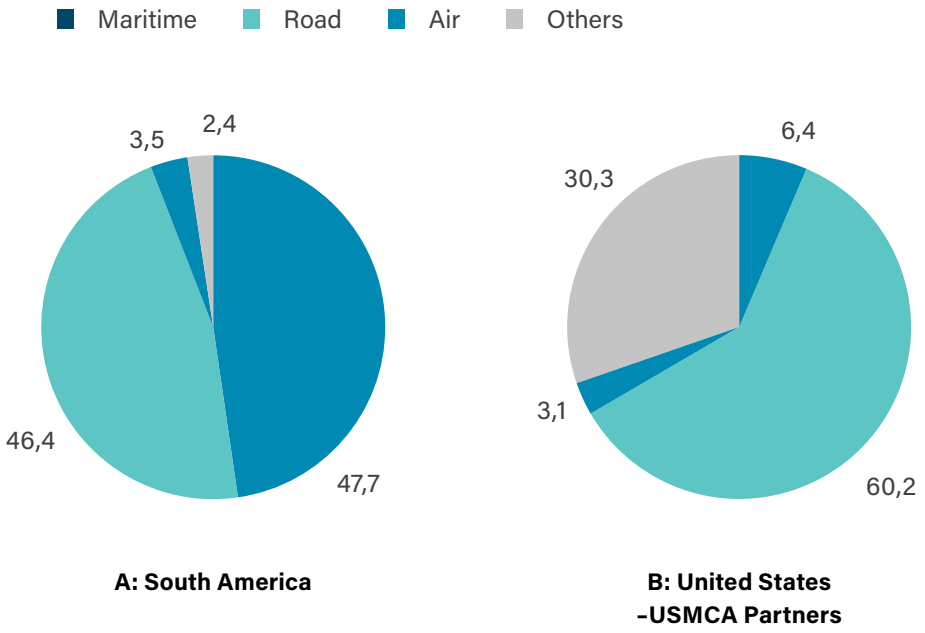
the efficiency of customs and border management clearance. The graph presents all values relative to the Canada-US average (i.e., selected country value minus Canada–US value), one of the global top performers across all LPI dimensions.

All countries in LAC exhibit sizable gaps across all components relative to the Canada–US average. On average, the gap is 1.3 points for the logistics and customs components, while it is larger for infrastructure, reaching 1.5 points. Panama, Brazil, Uruguay, and Chile stand out as the best performers across the three components in the region.

On average, the gaps show no change from 2010 to 2023. However, there is significant heterogeneity across countries. Panama, the Dominican Republic, Honduras, and Guyana show a marked reduction in the gap in infrastructure (a reduction of 0.4 or more), while El Salvador exhibits a marked deterioration. In logistics and customs components, most countries have not shown significant improvements, except Uruguay in logistics, and Brazil in customs, while Argentina, The Bahamas, and Bolivia have worsened.

As stated above, road trade represents a high share of intraregional trade, and an even higher share for neighboring countries, such as El Salvador–Nicaragua (99%),

Graph 4.17
Modal composition in intraregional trade, 2017



Note: Values correspond to the share of each mode of transport in the total exports of each country or region, measured by weight transported.

Source: ECLAC (2019) and authors based on the U.S. Department of Transportation, Bureau of Transportation Statistics (2019).

Brazil–Argentina (85%), and Bolivia–Peru (75%). Borders facilitate goods and people movement and are strategic points in regional logistics. However, Latin America's land border crossings lag behind ports and airports in functionality (Sanguinetti et al., 2021). Bottlenecks such as unpaved roads, poor border facilities, and urban congestion can double logistics costs. In fact, their infrastructure and management directly affect costs and transit times, influencing regional competitiveness. For example, border compliance can account for between 31% and 64% of export transport time (Cont et al., 2024).

Effective border infrastructure practices include bi-national control centers and digital technology, which reduce crossing times. For example, at Chacalluta (Peru–Chile), unified controls in the bi-national center cut car wait times from 47 to 22 minutes and bus delays from 86 to 31 minutes (SUNAT, 2018). Conversely, lack of coordination at Assis-Iñapari (Brazil–Peru) leads to delays averaging up to 90 hours, depending on inspection levels (Cont et al., 2025). These cases illustrate that operational coordination—beyond physical infrastructure—is crucial. Finally, digital tools and institutional cooperation improve border efficiency. Central America, for instance, has implemented interoperable systems like "Declaración Única

Graph 4.18
LPI scores by country relative to the US–Canada average, 2010 and 2023

Note: The graph shows the gap in the selected components of the Logistic Performance Index (LPI) for each country relative to the value for the Canada–US average, for years 2010 and 2023. Countries are listed alphabetically within the subregions: South America, Mesoamerica, and CARICOM+3. The LPI and its components take values from 0 to 5. Levels for the Canada–US average values for the infrastructure, logistics, and customs are 4.09, 3.95, and 3.69 for 2010, and 4.10, 4.05, and 3.85 for 2023.

Source: Authors based on World Bank (2025).

Centroamericana" (DUCA), "Plataforma Digital de Comercio Centroamericana" (PDCC), and "Transporte Internacional de Mercancías" (TIM), which streamline procedures and reduce wait times.

LAC is advancing key logistics projects to improve regional connectivity, reduce costs, and facilitate trade. Their success will depend on political stability, efficient implementation, and financial sustainability.

In Mexico, the Corredor Interoceánico del Istmo de Tehuantepec will connect Coatzacoalcos (Gulf of Mexico) and Salina Cruz (Pacific) via a 303-km railway, boosting ports and logistics. It could compete with the Panama Canal as a bridge between the Americas, Asia, and Europe. In South America, the Corredor Bioceánico de Capricornio—involving Brazil, Paraguay, Argentina, and Chile—aims to link eastern Brazilian ports with western Chilean ports through an integrated road-rail network, offering a potential alternative route to the Panama Canal for Asian markets. Jamaica is working to become a logistics hub, with the construction of the Caymanas Special Economic Zone and port upgrades in Kingston.

These flagship projects are complemented by numerous local initiatives, such as the Belo Horizonte North Bypass to ease metro traffic and improve export corridor links; Alcântara Port Terminal in Maranhão and Ponta Negra Terminal in Rio de Janeiro to strengthen export capacity; Panama's Eastern Pan-American Highway rehabilitation; port modernization in Buenos Aires and expansion in the Paraná-Paraguay Waterway, supported by private investments; and public–private partnership (PPP) projects like Costa Rica's Caldera Port and Guatemala's Escuintla–Puerto Quetzal road, to cite a few.

Improving the quantity and quality of transport infrastructure requires more investment. Yet countries face financial and fiscal constraints, which limit the resources that can be allocated to infrastructure. This makes it essential to adopt long-term investment plans and a transport strategy consistent with national trade, production, and development objectives.

First, an appropriate balance must be struck between new infrastructure, rehabilitation of current infrastructure, and preventive maintenance. It is common for countries to prioritize new infrastructure but neglect maintenance, which results in premature asset depreciation. A core requirement for effective maintenance strategies is the availability of accurate and up-to-date information on infrastructure conditions. Digital technologies enable the collection and low-cost analysis of large volumes of information, reducing the cost of having an updated record of the condition of infrastructure and the required works. Moreover, it helps to analyze the flows of traffic and the changes in traffic patterns, information that could be used as input in updating the transport infrastructure plans.

Second, investment plans should consider transport infrastructure not as isolated assets, but in the context of logistic corridors, satisfying the needs of production networks (B2B) and consumption networks (B2C). A logistics corridor is an interconnected collection of physical and institutional infrastructure that integrates centers of production and consumption, and that provides logistics services to a value chain. The importance of developing infrastructure plans in terms of logistic corridors is that it incorporates all the services needed by a value chain, considering the complementarities between different types of transport and logistic services.

A key challenge is how to finance the scale of investment required. Given the limited fiscal space of most economies in the region (see Chapter 5), mobilizing private capital for this endeavor will be a necessary condition. National and multinational development banks can play a crucial complementary role, not only as financing vehicles, but also as market makers and risk management instruments, and as sources of technical expertise for the design and prioritization of transport infrastructure projects. In this context, existing trade agreements could serve as platforms to discuss and promote bi-national or plurinational transport infrastructure projects, particularly where the distribution of costs and benefits would otherwise impede the development of a project.

Export promotion and sectoral opportunities for integration

Smart diplomacy and export promotion

A key question addressed in this chapter is the reason behind the lack of dynamism in the region's integration process. Many necessary conditions must be in place for countries to increase trade, such as economic stability, simple and reduced tariffs, harmonized and updated trade requirements, and adequate transport infrastructure. Beyond these fundamentals, however, governments can play an additional role in stimulating trade by focusing on the provision of sector-specific public goods, reducing informational barriers to trade, and overcoming coordination failures.

Smart diplomacy combines actions that align political, technical, and private efforts to open markets and eliminate trade barriers. It involves technical negotiations, sector-specific advocacy, high-level political support, and coordinated technical missions (Hallak et al., 2022). Smart diplomacy can help reduce information barriers. Exporters need to acquire detailed information about the target market, including regulatory requirements and certification procedures, among other things. These types of micro trade policies are excellent complements to the necessary conditions discussed before.

Securing preferential access to markets can also be a powerful incentive for integration. Its impact can be amplified when combined with other measures such as trade facilitation, customs simplification process, and export-oriented tables. As firms get involved in international trade through access to different markets, they learn what is needed to export and import. Then, as countries gain access to a larger number of preferential markets, the potential benefits of the learning process increase.

Export promotion programs, like "Exporta Fácil," which reduced entry cost to export markets, have proven successful at expanding the extensive margin of trade, though not necessarily the intensive margin. These programs can help increase diversification of exports, which reinforces the assessment that the main barriers seem to lie in the initial stages of exporting.

Another policy instrument to promote diversification and increase the value added of exports is support for research and development (R&D). Public and private R&D enable product customization, product differentiation, and quality improvements, among other gains, allowing firms to get higher returns from the export activities.

While access to external markets is difficult to secure, trade relationships between buyers and suppliers can be very easily broken. That is, export markets are hard to enter, but access is very easy to lose. This is one of the most important reasons why stability is so important for trade relations, since uncertain environments can increase the probability of delivery failures, breaking the trade relationship.

Integration in the energy and minerals sectors

Climate change is a major global challenge that all countries must tackle together. Globally, fossil fuel consumption and industrial processes are responsible for around 80% of total greenhouse gas emissions. As discussed by Allub et al. (2024), LAC has significant potential to provide solutions to this global challenge, by preserving large stocks of carbon in its ecosystems, by providing minerals that are critical to the clean energy value chain, and by tapping into its large potential for clean energy production.

LAC has substantial potential to produce clean energy. Some of the countries in the region are among the ones with better solar and wind potential, and the region is already exploiting its hydropower potential, although there remains room for further expansion. Moreover, the region also holds significant potential to produce natural gas that can help the global economy to reduce its emissions during the transition to clean energy sources.

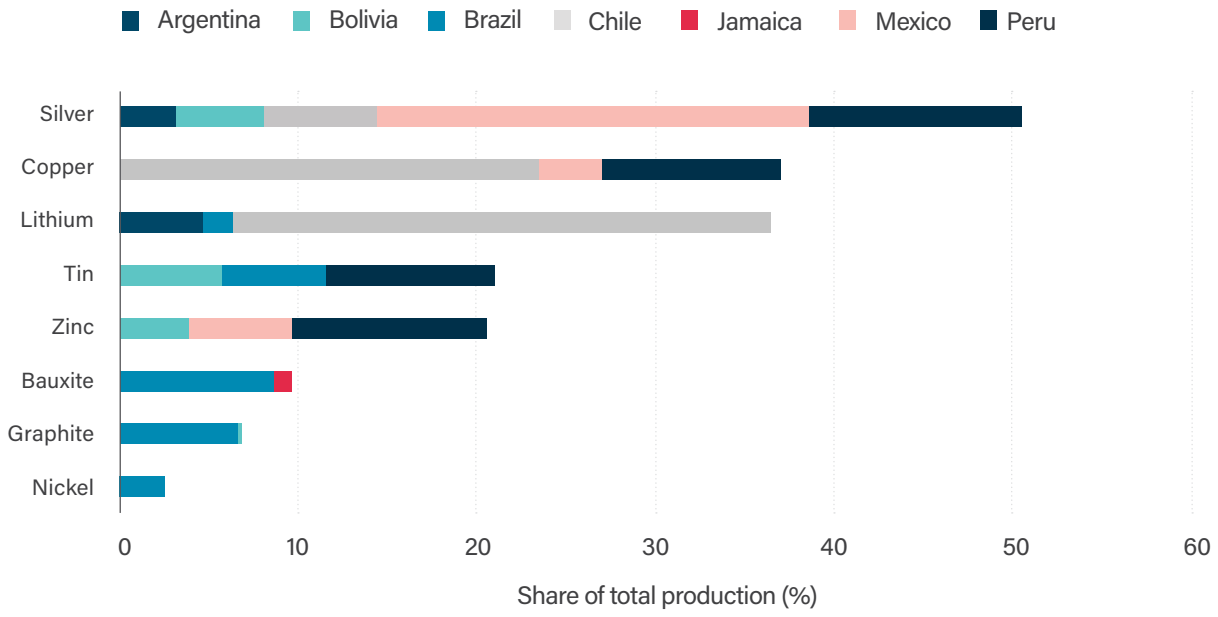
Integration can be a powerful ally in reducing carbon emissions, but it requires coordinated policy action. Energy integration, particularly electricity integration, allows countries to exploit economies of scale, gain efficiency, and reduce emissions at the same time. Emissions reductions come from shifting electricity generation away from fossil fuels to natural gas or clean energy like wind or solar. Power sector integration can aid in managing the intermittency associated with solar and wind energy. The Central American Energy Market (SIEPAC) already hints at how energy integration can promote energy generation and trade, with other benefits such as a reduction in average energy prices and volatility. Unfortunately, even though energy integration is included in most trade agreements in South America, progress beyond isolated interconnection projects has remained limited over time (Sanguinetti et al., 2022).

Clean energy is also a key input in the production of clean fuels, particularly green hydrogen, which is expected to play a central role in clean energy systems. Certification that the energy used in the electrolysis process is clean is required to categorize hydrogen as green.

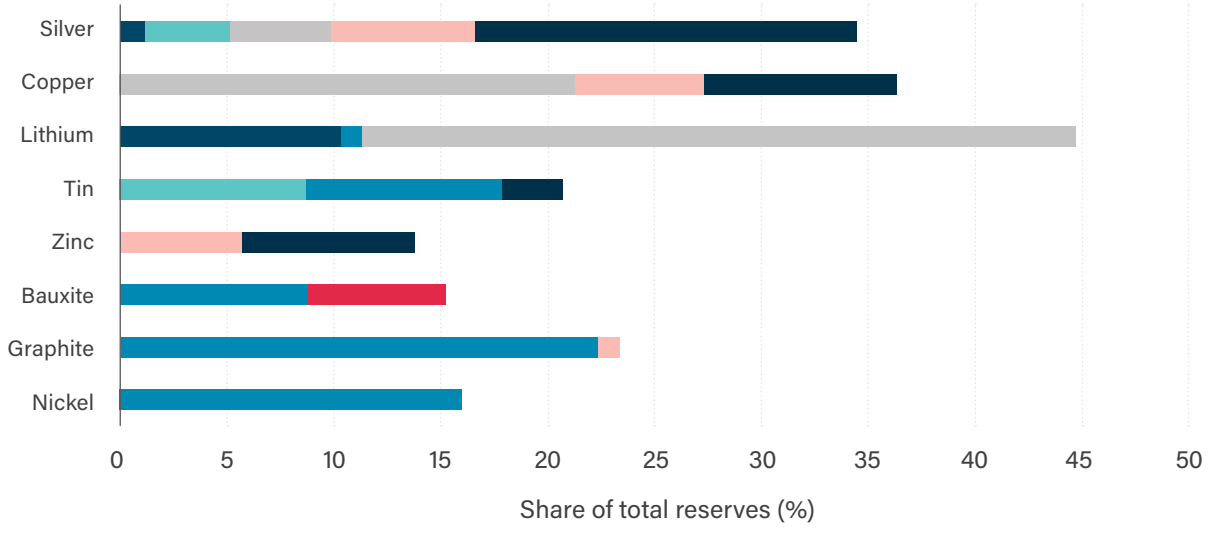
Beyond the ample clean energy potential, some countries in the region also possess substantial endowments of critical minerals. As shown in Graph 4.19, the region's countries have important production and reserves of critical minerals for the energy transition, including silver, copper, and lithium. This creates opportunities for deeper integration into green technology value chains. However, several conditions need to be met for this to become a reality. First, countries must attract the capital and knowledge to get the most from these resources, which in many cases implies engaging foreign firms. Second, production processes must comply with increasingly stringent carbon regulations imposed by several developed countries, particularly the European Union. This makes traceability of inputs and production processes essential to certify the emissions generated in the production of goods. In this regard, digital technologies can play a very important role in reducing compliance costs, through blockchain-based systems for production traceability, for instance.

Graph 4.19
Production and reserves of critical minerals

Panel A. Production



Panel B. Reserves



Note: A *mineral resource* is a concentration of minerals that has been identified and measured with reasonable certainty, but whose extraction has not yet been demonstrated to be economically viable. A *mineral reserve* is the portion of a mineral resource that has been shown to be economically and legally extractable under current socioeconomic and operational conditions.

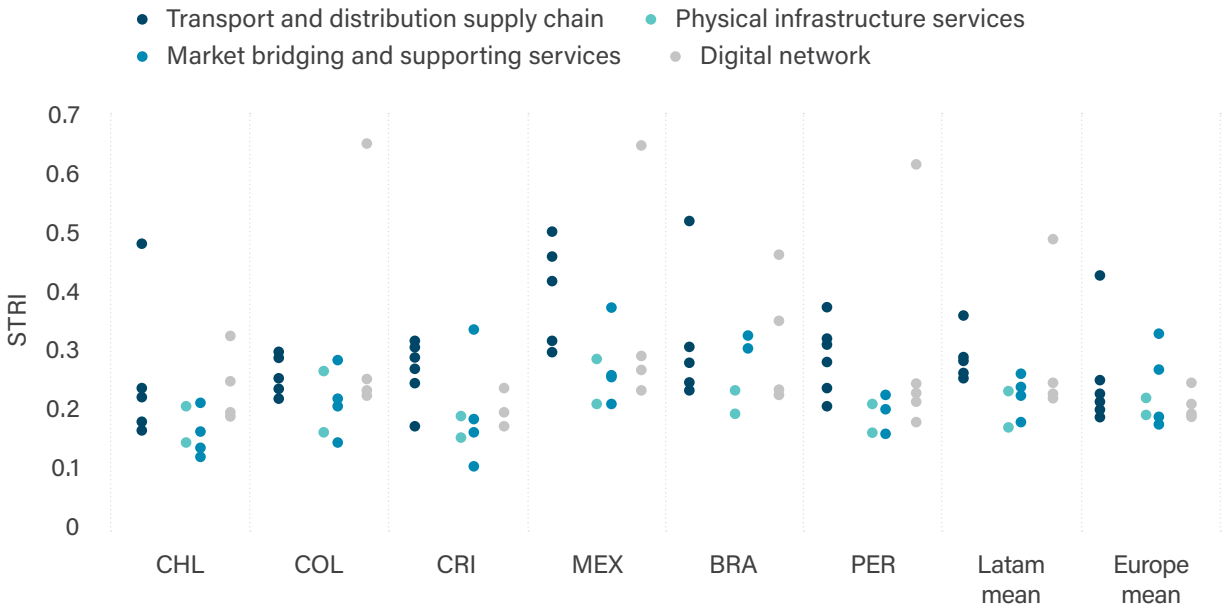
Source: Authors based on U.S. Geological Survey (2023).

China is, by a wide margin, the dominant player in global green energy value chains. It leads most segments related to material processing, cell components, battery cells, and electric vehicle production. The only phase where China does not hold clear dominance is mining. For countries endowed with critical mineral resources, integration with China will be a necessary condition. However, the terms of integration must be cautiously designed to prevent enclave extraction clusters. Countries should seek ambitious and meaningful participation across the value chain to transform the stock of natural non-renewable resources into long-lasting development for their populations.

Tackling restrictions to trade in services

Trade agreements tend to be more restrictive with respect to services, either by excluding them from the agreement or by imposing higher barriers to trading them. Graph 4.20 shows the Service Trade Restrictiveness Index (STRI) compiled by the OECD for 2024 for six Latin American countries (those available in the dataset), their simple average, and the average for continental European countries.

Graph 4.20
Services trade restrictiveness index (STRI), 2024



Note: Each color represents a service sector, and each dot corresponds to a sub-sector according to the STRI classification. Latin America and Europe show averages across countries.

Source: Authors based on OECD (2024).

On average, restrictions in Latin America are broadly comparable to those in Europe, although they are slightly higher overall. Colombia, Mexico, and Peru exhibit relatively high restrictions in some digital network subsectors, while most Latin American countries display higher restrictions in transport and distribution supply chain subsectors, which directly affect the competitiveness of countries participating in GVCs. By contrast, while the European average is higher in air transport, restrictions in most other activities are lower than in most Latin American countries. Lower restrictions in the activities included in the transport and distribution supply chain group can foster competition and reduce logistic and transport costs, promoting integration both at the regional and global levels.

The response to US trade measures

"Liberation Day" has no precedent in modern trade history. One of the guarantors of the rule-based trade system chose to pursue a different course, imposing tariffs that violate different rules from the WTO, like the no-discrimination clause. Moreover, the US is working to induce countries to sign bilateral agreements under new conditions. The problem with this strategy is that countries agreeing to sign these types of agreements would also be in violation of WTO rules. This risks a return to a protectionist world where stronger economies impose the rules, while smaller countries have little recourse if conditions are breached, given the absence of a well-functioning multilateral dispute settlement mechanism.

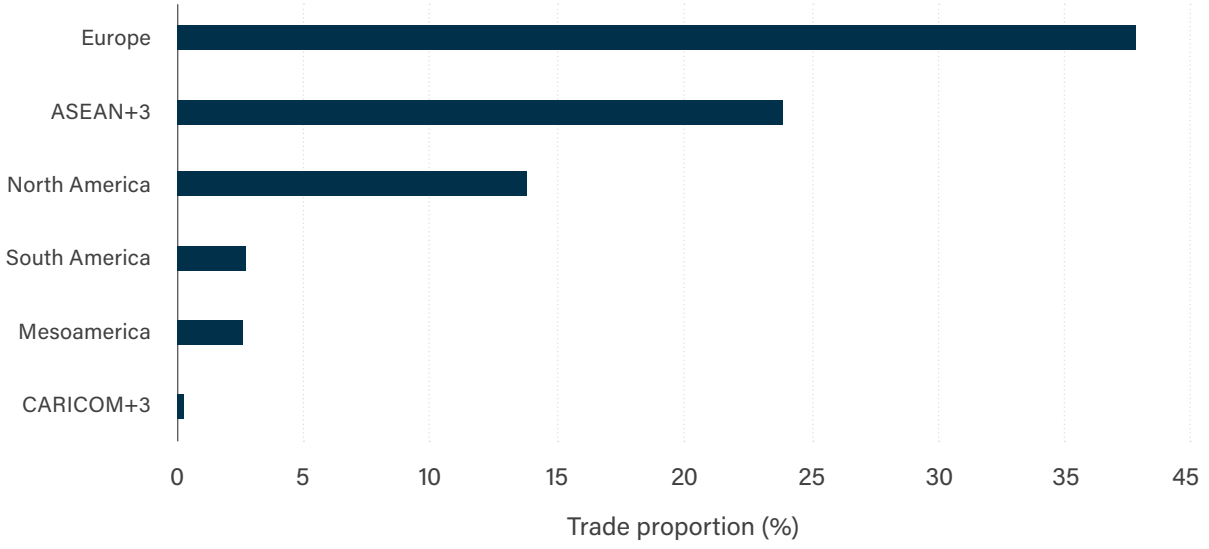
Some authors, including Hinz et al. (2025), argue that countries should adopt a coordinated response aimed at making it very costly for the US to continue with the current trade initiative, while at the same time, not violating the current rules of the WTO. Hinz et al. propose that a coalition of countries (specifically the EU, Canada, Mexico, South Korea, and Brazil), which account for more than 50% of U.S. imports, agree on a coordinated retaliation strategy. While the size of the U.S. market limits the leverage of any single country negotiating alone, a coordinated response would imply a cost that is too high for the US to ignore, deterring the incentives for the US to proceed with the scheduled tariffs. The objective is to reduce the incentives for a tariff escalation through collective action to increase the cost to large economies of imposing trade conditions that harm their partners. Such retaliation would constitute a legitimate instrument under WTO rules.

For LAC economies, a rules-based trade system is crucial. As relatively small economies, they have little power in trade negotiations in a transactional diplomacy scenario. Countries in the region should actively support and engage in coordination initiatives like the one proposed above.

Chapter 4 Appendix

This appendix provides additional information and clarifications on the figures, graphs, and tables presented throughout this chapter. In particular, it details the composition of the regional and income groups used in each graph.

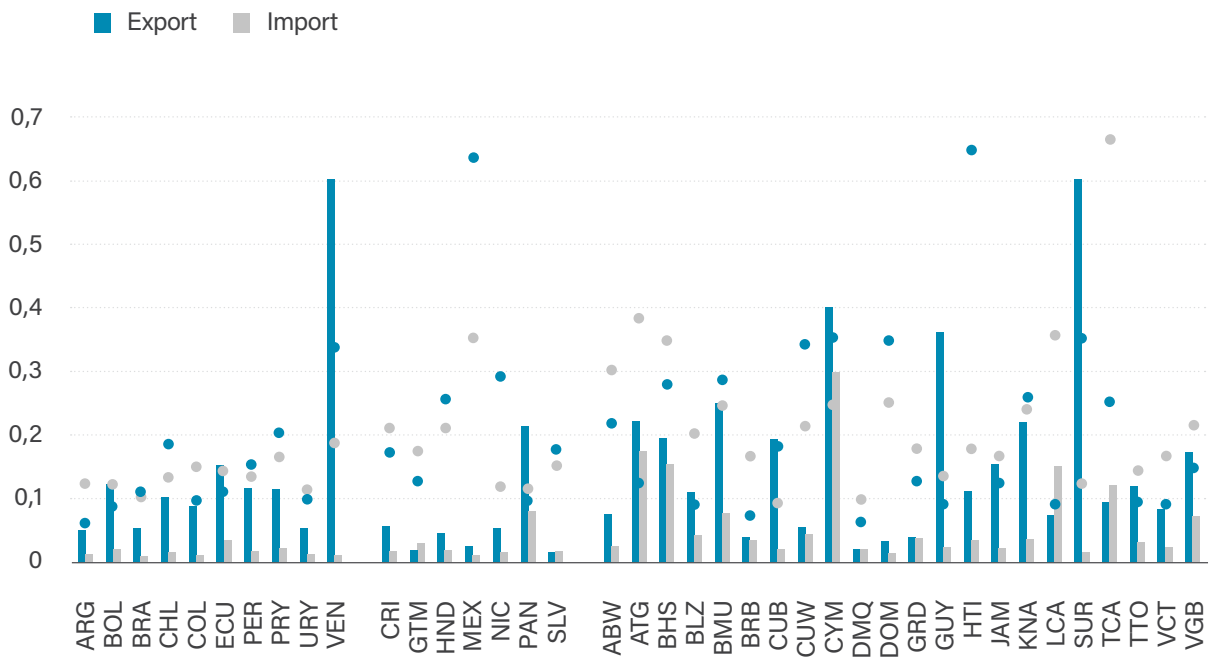
Graph 4.A.1
Trade openness (goods and services) for LAC subregions and benchmarks (%)



Note: The x-axis shows the region trade proportion with respect to world total trade.

Source: Authors based on the World Bank (2025)

Graph 4.A.2
Concentration index across goods and partners by countries

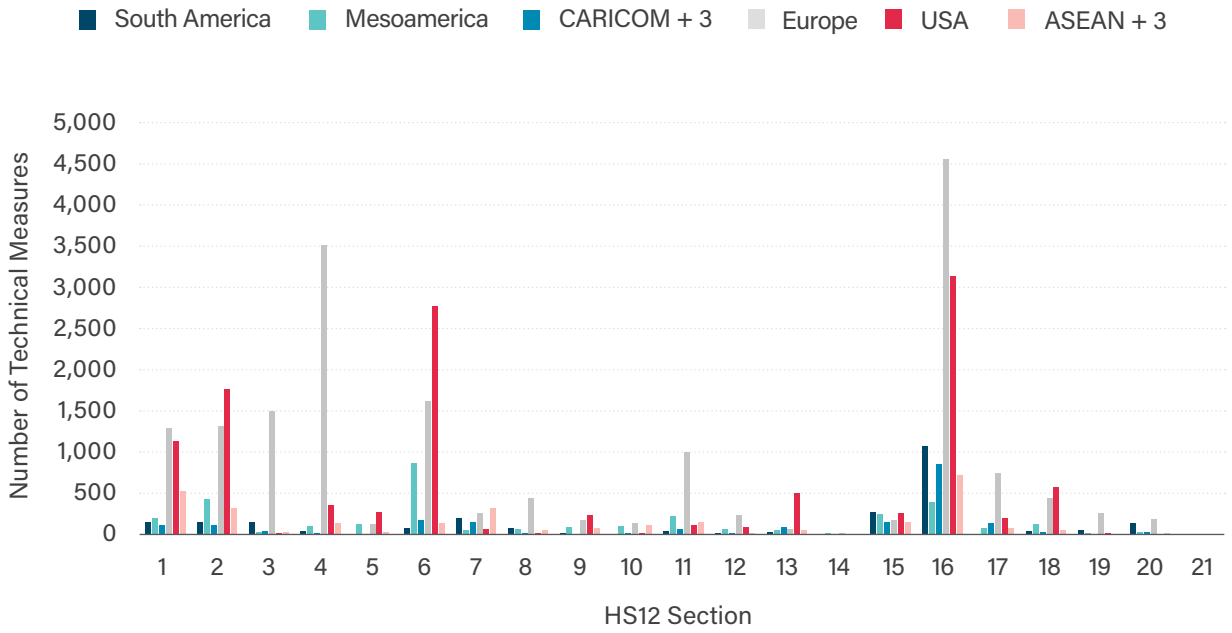


Note: Bars show the HHI calculated by goods, while shapes represent the index calculated by trading partners. Light blue denotes exports and gray denotes imports in each case. The regional composition is detailed in the appendix to this chapter, available online.

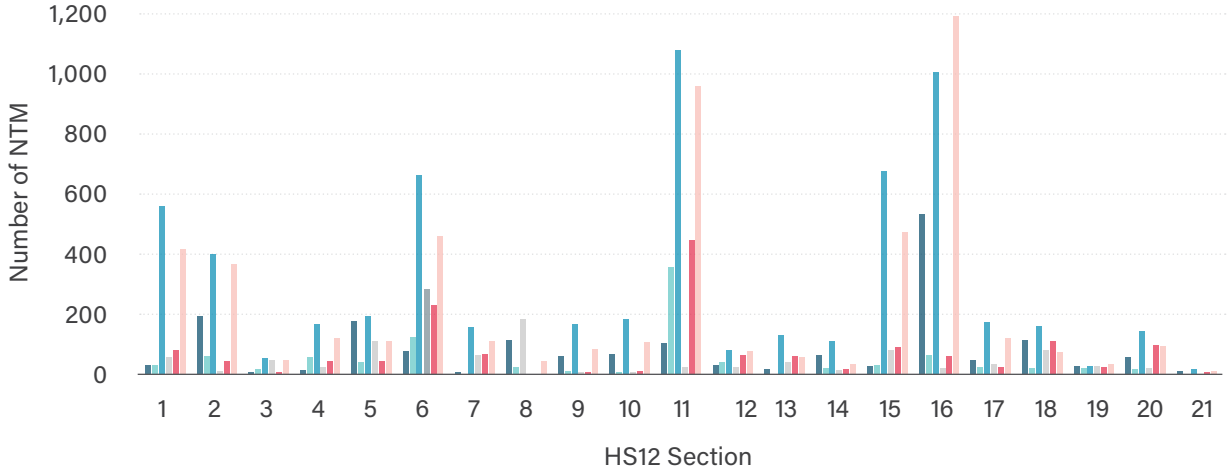
Source: Authors based on data from UNCTAD, retrieved from The Growth Lab at Harvard University (2025).

Graph 4.A.3
Technical and non-technical trade measures by HS 2012 section

Panel A. Technical



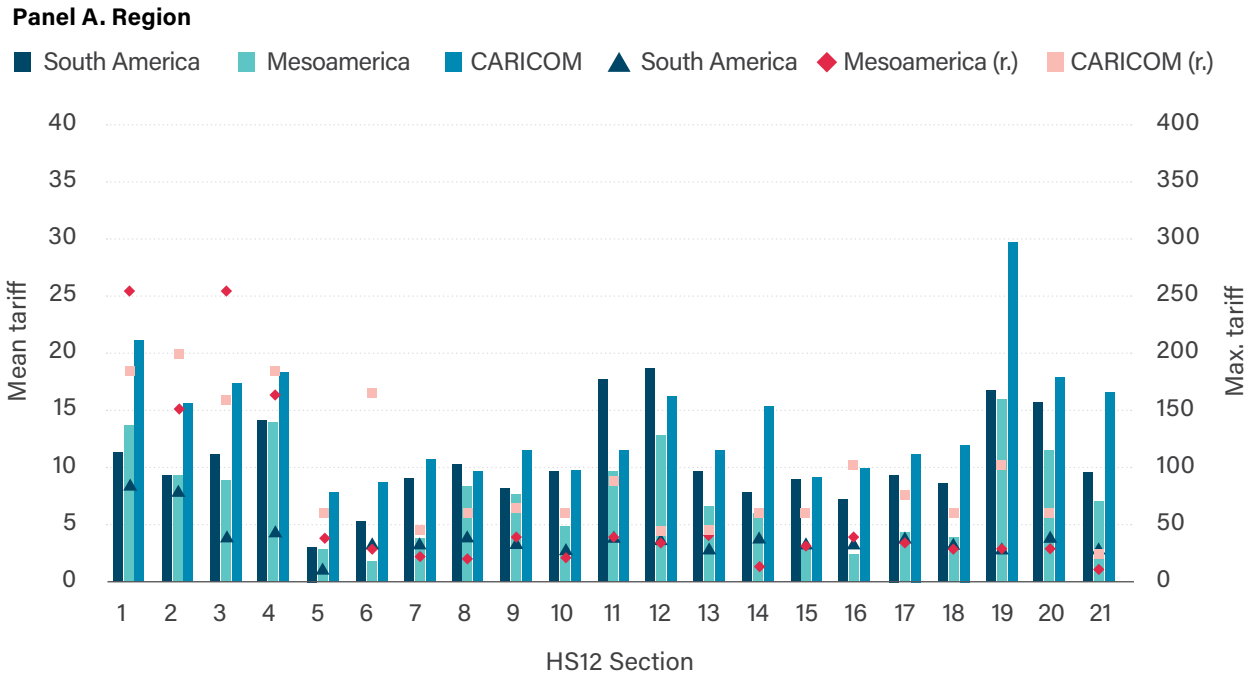
Panel B. Non-technical

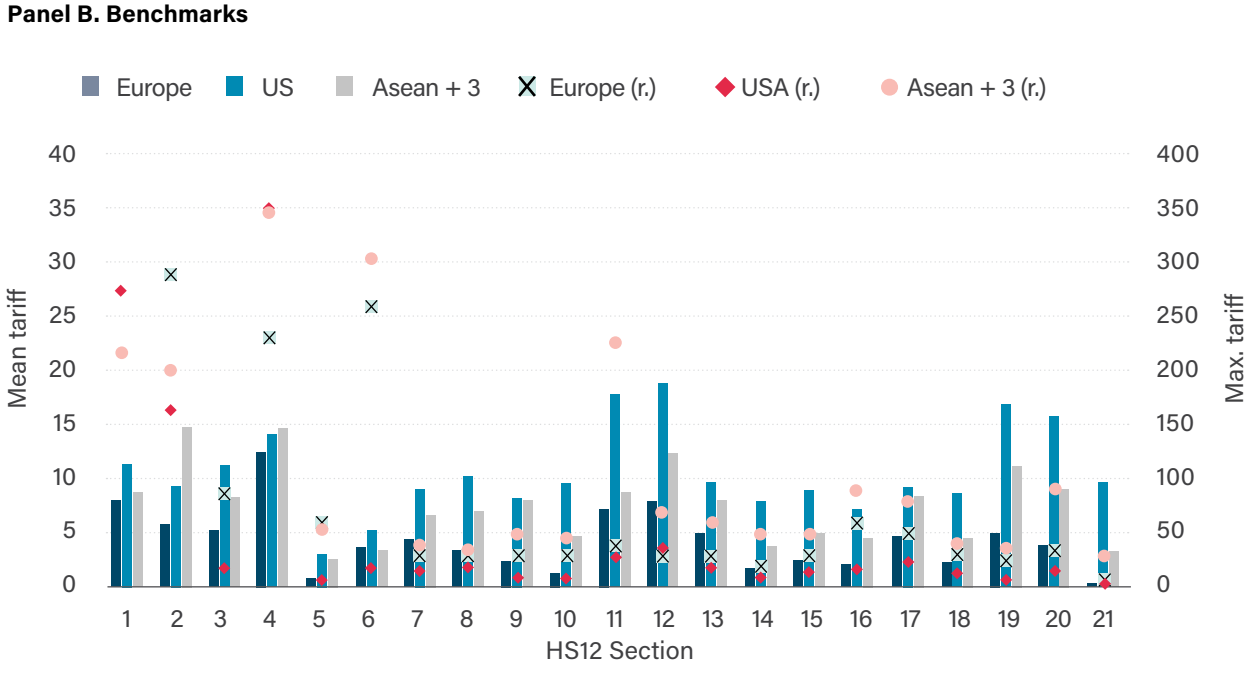


Note: Graphs show the number of technical (Panel A) and non-technical (Panel B) trade measures by section and region. Values are calculated as the simple average of the number of measures across countries.

Source: Authors based on UNCTAD (2025).

Graph 4.A.4
Tariffs by HS 2012 section





Note: The numbers on the X-axis represent chapters of the HS6 classification. Bars show the mean tariffs (left axis), while shapes indicate the maximum tariffs (right axis). Europe in sector 1 and ASEAN+3 in sector 3 were excluded because they were outliers that distorted the graph, with values of 555 and 800.3, respectivelym

Source: Authors based on World Integrated Trade Solutions (2025).

Groups of HS12 Sections

Agro-based and natural products:

1. Animals and animal products
2. Vegetable products
3. Animal or vegetable fats and oils
4. Prepared foodstuffs, beverages, spirits and vinegar
5. Mineral products

Chemicals and derivatives:

6. Products of the chemical or allied industries
7. Plastics and rubber

Light manufactures and consumer goods:

8. Raw hides, skins, leather and furskins, and articles thereof
9. Wood and articles of wood; cork and articles of cork; straw, basketware
10. Pulp of wood; paper and paperboard
11. Textiles and textile articles
12. Footwear, headgear, umbrellas, walking sticks
13. Articles of stone, plaster, cement; ceramic products; glassware
14. Natural or cultured pearls, precious or semi-precious stones
15. Base metals and articles of base metal
20. Miscellaneous manufactured articles

Heavy manufactures and capital goods:

16. Machinery and mechanical appliances; electrical equipment
17. Vehicles, aircraft, vessels and associated transport equipment

Other:

18. Optical, photographic, measuring, medical instruments
19. Arms and ammunition
21. Works of art, collectors' pieces and antiques

Country groups used in each graph and table

Graph 4.1

- **Mesoamerica:** Costa Rica, Guatemala, Honduras, Mexico, Nicaragua, Panama, El Salvador.
- **South America:** Argentina, Bolivia, Brazil, Chile, Colombia, Ecuador, Peru, Paraguay, Uruguay, Venezuela.
- **CARICOM+3:** Antigua and Barbuda, The Bahamas, Belize, Barbados, Bermuda, Cayman Islands, Curacao, Dominica, Grenada, Guyana, Haiti, Jamaica, St. Kitts and Nevis, St. Lucia, Suriname, Turks and Caicos Islands, Trinidad and Tobago, St. Vincent and the Grenadines, British Virgin Islands, Aruba, Cuba, Dominican Republic.
- **ASEAN+3:** Brunei Darussalam, Cambodia, China, Indonesia, Japan, South Korea, Lao PDR, Malaysia, Myanmar, Philippines, Singapore, Thailand, Viet Nam.

Graphs 4.2, 4.3, and 4.4

- **Mesoamerica:** Costa Rica, Guatemala, Honduras, Mexico, Nicaragua, Panama, El Salvador.
- **South America:** Argentina, Bolivia, Brazil, Chile, Colombia, Ecuador, Peru, Paraguay, Uruguay, Venezuela.
- **CARICOM+3:** Antigua and Barbuda, The Bahamas, Belize, Barbados, Bermuda, Cayman Islands, Curacao, Dominica, Grenada, Guyana, Haiti, Jamaica, St. Kitts and Nevis, St. Lucia, Suriname, Turks and Caicos Islands, Trinidad and Tobago, St. Vincent and the Grenadines, British Virgin Islands, Aruba, Cuba, Dominican Republic.
- **ASEAN+3:** Brunei Darussalam, Cambodia, China, Indonesia, Japan, South Korea, Lao PDR, Malaysia, Myanmar, Philippines, Singapore, Thailand, Viet Nam.
- **Europa:** Albania, Andorra, Austria, Belarus, Belgium, Bosnia and Herzegovina, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Montenegro, Netherlands, North Macedonia, Norway, Poland, Portugal, Romania, Russian Federation, Serbia, Slovak Republic, Slovenia, Spain, Sweden, Switzerland, Ukraine, United Kingdom, Liechtenstein, Moldova, Monaco, San Marino.
- **North America:** United States, Canada.

Graphs 4.5 and 4.6

- **LAC:** Argentina, Bolivia, Brazil, Chile, Colombia, Costa Rica, Dominican Republic, Ecuador, El Salvador, Guatemala, Honduras, Jamaica, Mexico, Nicaragua, Panama, Paraguay, Peru, Puerto Rico, Trinidad and Tobago, Uruguay, Venezuela.

- **OCDE:** Australia, Austria, Belgium, Canada, Chile, Colombia, Costa Rica, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Israel, Italy, Japan, Latvia, Lithuania, Luxembourg, Mexico, Netherlands, New Zealand, Norway, Poland, Portugal, Slovakia, Slovenia, South Korea, Spain, Sweden, Switzerland, Türkiye, United Kingdom, United States.

Graph 4.8

- **Latin America:** Argentina, Bolivia, Brazil, Colombia, Mexico, Panama, Paraguay, Peru, Uruguay.

- **Europe:** Austria, Belarus, Belgium, Bulgaria, Croatia, Cyprus, Czechia, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Russia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Ukraine, United Kingdom.

- **ASEAN:** Brunei Darussalam, Indonesia, Malaysia, Philippines, Singapore, Thailand, Vietnam.

Graph 4.10 and 4.11

- **Mesoamerica:** Costa Rica, Guatemala, Honduras, Mexico, Nicaragua, Panama, El Salvador.

- **South America:** Argentina, Bolivia, Brazil, Chile, Colombia, Ecuador, Peru, Paraguay, Uruguay, Venezuela.

- **CARICOM+3:** Antigua and Barbuda, The Bahamas, Belize, Barbados, Bermuda, Cayman Islands, Curacao, Dominica, Grenada, Guyana, Haiti, Jamaica, St. Kitts and Nevis, St. Lucia, Suriname, Turks and Caicos Islands, Trinidad and Tobago, St. Vincent and the Grenadines, British Virgin Islands, Aruba, Cuba, Dominican Republic.

- **ASEAN+3:** Brunei Darussalam, Cambodia, China, Indonesia, Japan, South Korea, Lao PDR, Malaysia, Myanmar, Philippines, Singapore, Thailand, Viet Nam.

- **Europa:** Albania, Andorra, Austria, Belarus, Belgium, Bosnia and Herzegovina, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Montenegro, Netherlands, North Macedonia, Norway, Poland, Portugal, Romania, Russian Federation, Serbia, Slovak Republic, Slovenia, Spain, Sweden, Switerland, Ukraine, United Kingdom, Liechtenstein, Moldova, Monaco, San Marino.

- **North America:** United States, Canada.

Table 4.1

- **MERCOSUR:** Argentina, Brazil, Paraguay, Uruguay.
- **Pacific Alliance:** Chile, Colombia, Mexico, Peru.
- **CAN (Andean Community):** Bolivia, Colombia, Ecuador, Peru.
- **MCCA + Dominican Republic:** Costa Rica, Guatemala, Honduras, Nicaragua, Panama, El Salvador.
- **CARICOM:** Antigua and Barbuda, Bahamas, Barbados, Dominica, Grenada, Guyana, Jamaica, Suriname, Trinidad and Tobago.
- **European Union:** Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden.
- **TLCAN / NAFTA:** United States, Canada, Mexico.
- **ASEAN+3:** Myanmar, Brunei, Cambodia, Philippines, Indonesia, Laos, Malaysia, Singapore, Thailand, Vietnam, China, Japan, South Korea.

Graph 4.12

- **A+3 (Asean + 3):** Brunei Darussalam, Cambodia, China, Indonesia, Japan, South Korea, Lao PDR, Malaysia, Myanmar, Philippines, Singapore, Thailand, Viet Nam.
- **EUR (Europe):** Albania, Andorra, Austria, Belarus, Belgium, Bosnia and Herzegovina, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Montenegro, Netherlands, North Macedonia, Norway, Poland, Portugal, Romania, Russian Federation, Serbia, Slovak Republic, Slovenia, Spain, Sweden, Switzerland, Ukraine, United Kingdom, Liechtenstein, Moldova, Monaco, San Marino.
- **NAC (North America):** United States, Canada.

Graph 4.13

- **ASEA+3:** Brunei, Cambodia, China, Indonesia, Japan, South Korea, Lao PDR, Malaysia, Myanmar, Philippines, Singapore, Thailand, Viet Nam.
- **Europe:** Albania, Andorra, Austria, Belarus, Belgium, Bosnia and Herzegovina, Bulgaria, Croatia, Cyprus, Czechia, Denmark, Estonia, Finland, France, Germany,

Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Montenegro, Netherlands, North Macedonia, Norway, Poland, Portugal, Romania, Russian Federation, Slovakia, Slovenia, Spain, Sweden, Switzerland, Ukraine, United Kingdom.

- **North America:** Canada, United States.
- **CARICOM+3:** Antigua and Barbuda, Bahamas, Barbados, Belize, Dominica, Grenada, Guyana, Haiti, Jamaica, St. Kitts and Nevis, St. Lucia, Suriname, Trinidad and Tobago, St. Vincent and the Grenadines, Aruba, Cuba, Dominican Republic.
- **South America:** Argentina, Bolivia, Brazil, Chile, Colombia, Ecuador, Peru, Paraguay, Uruguay, Venezuela.
- **Mesoamerica:** Costa Rica, Guatemala, Honduras, Mexico, Nicaragua, Panama, El Salvador.

Graph 4.14

- **Europe:** Albania, Andorra, Belarus, Bosnia and Herzegovina, Bulgaria, France, Greece, Iceland, North Macedonia, Norway, Russian Federation, Switzerland, Ukraine, United Kingdom, Moldova.
- **ASEAN+3:** Cambodia, China, Lao PDR, Malaysia, Philippines, South Korea, Thailand.

Graph 4.15

- **Europe:** Albania, Andorra, Austria, Belarus, Belgium, Bosnia and Herzegovina, Bulgaria, Croatia, Cyprus, Czechia, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Moldova, Montenegro, Netherlands, North Macedonia, Norway, Poland, Portugal, Romania, Russian Federation, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Ukraine, United Kingdom, San Marino.
- **ASEAN+3:** Brunei, Cambodia, China, Hong Kong, Macao, Indonesia, Japan, South Korea, Lao PDR, Malaysia, Myanmar, Philippines, Singapore, Thailand, Viet Nam.
- **North America:** Canada, United States.
- **CARICOM+3: A**nguilla, Antigua and Barbuda, Bahamas, Barbados, Belize, Bermuda, British Virgin Islands, Cayman Islands, Curaçao, Dominica, Dominican Republic, Grenada, Guyana, Haiti, Jamaica, Montserrat, St. Kitts and Nevis, St. Lucia, St. Vincent and the Grenadines, Suriname, Trinidad and Tobago, Turks and Caicos Islands, Aruba, Cuba.

- **South America:** Argentina, Bolivia, Brazil, Chile, Colombia, Ecuador, Paraguay, Peru, Uruguay, Venezuela.

- **Mesoamerica:** Costa Rica, Guatemala, Honduras, El Salvador, Nicaragua, Panama, Mexico.

Graph 4.16

- **South America:** Argentina, Bolivia, Brazil, Chile, Colombia, Ecuador, Paraguay, Peru, Uruguay.

- **Mesoamerica:** Belize, Costa Rica, El Salvador, Guatemala, Honduras, Mexico, Nicaragua.

Graph 4.17

- **South America:** Argentina, Bolivia, Brazil, Chile, Colombia, Ecuador, Paraguay, Peru, Uruguay.

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5

Overcoming Regulatory Friction and Narrow Fiscal Space

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Chapter 5.

OVERCOMING REGULATORY FRICTION AND NARROW FISCAL SPACE

Cabral, Guillermo | Ferrer, Roberto | Valer, Paola | Research assistance from Lorena Cuenca

Summary

This chapter assesses two interconnected constraints hindering private sector growth and sustainable development in the region. First, the chapter identifies the problem of regulatory friction. While many countries in Latin America and the Caribbean (LAC) have made progress in simplifying administrative procedures (reducing "red tape" associated with starting a business or conducting a trade transaction), the region still lags significantly behind OECD peers. More critically, the focus on mere simplification is insufficient. An important impediment lies in the poor quality of regulatory governance—the institutional processes for designing, implementing, and reviewing regulations. Tools like Regulatory Impact Assessments (RIA), robust ex-post evaluation, and effective subnational government coordination are underdeveloped, leading to an accumulated stock of inefficient, outdated rules that stifle innovation and investment. Strengthening regulatory institutions and adopting a "whole-of-government" approach is essential to make the state a strategic facilitator, rather than an impediment, to business. Second, the chapter addresses the constraint of narrow fiscal space. The ability of LAC governments to finance growth-enhancing public goods (infrastructure, human capital) is severely limited by structural weaknesses in public finance. Tax collection remains low compared to advanced economies, relying heavily on less progressive indirect taxes while underutilizing personal income and property taxes. Concurrently, public spending is dominated by rigid current expenditures, with capital investment often falling short of development needs. Compounding this, high public debt and rising debt service costs increasingly crowd out productive spending. To break this vicious cycle, countries must pursue comprehensive fiscal reforms that enhance tax efficiency, strengthen public expenditure quality, and leverage innovative financing mechanisms, such as Green, Social, and Sustainable (GSSS) bonds, to mobilize resources for a productive and resilient future.

Regulatory friction, governance, and the path to reform in LAC

Regulation is ubiquitous. Its goals include reducing carbon emissions and improving air quality, ensuring the stability of financial systems, fostering a business environment that unlocks firms' productive potential, creating a level playing field, and protecting consumers from fraud, misinformation, and monopolies. Yet regulation, whether or not it achieves these goals, comes with costs. The economic costs of regulation are multifaceted and extensive, ranging from measurable financial and administrative expenditures to less tangible but significant impacts on efficiency, innovation, and overall economic performance.

Poorly designed, outdated, or overly complex regulations can hinder business management, distort resource allocation, and slow the pace of innovation (OECD, 2003). Cumbersome regulatory frameworks can also negatively affect productivity and GDP per capita (Castilla et al., 2004). Moreover, regulations and the cumulative burden of different formalities from multiple institutions and levels of government can create significant obstacles for new businesses to start, for existing businesses to grow, and for inefficient firms to exit the market. This, in turn, limits competition, stifles entrepreneurship, and reduces job creation. These challenges are felt most acutely by small and medium-sized enterprises (SMEs), but when inefficient regulations reduce performance and undermine competitiveness, they impose costs on society as a whole by constraining economic growth and limiting consumer choice (OECD, 2001).

Red tape and bureaucratic restrictions can act as a "shadow tax" on capital, discouraging investment and leading to inefficient capital allocation among firms. Studies estimate that these factors can lead to substantial GDP losses. Recent research shows that in seven developed European economies, the economic cost of red tape exceeds USD 154 billion annually, with roughly two-thirds stemming from under-investment. At the country level, when computed as a percentage of GDP, the cost of red tape varies widely across countries—from 0.10 % of GDP in the United Kingdom to 3.9 % in France (Pellegrino and Zheng, 2024). In Chile, the estimated cost of red tape is 7.3 % of GDP, largely due to underinvestment and capital misallocation (Dejbord Sawan and Ugarte, 2025).

Administrative complexity undermines policy effectiveness, particularly for businesses. When the regulatory burden is perceived as excessive, it erodes respect for the law and can lower compliance rates. Evidence shows that complex regulatory and tax transactions are associated with higher tax evasion rates and hinder business formalization.[1] Essentially, high administrative barriers incentivize firms to avoid or bypass regulations, resulting in public policies that fail to achieve their intended economic or social objectives (Acevedo et al., 2018a).

1. Chapter 2 explores the institutional determinants of informality, including state capacity and the regulatory framework.

Designing policies that achieve public objectives while minimizing these burdens is a crucial consideration. In Latin America and the Caribbean (LAC), boosting productivity requires strengthening the institutional framework that governs the business environment. A state that acts as a strategic facilitator, with efficient regulatory policies and the capacity to implement productive-transformation policies, is fundamental to unlocking the region's growth potential.

The journey of regulatory reform in LAC shows progress, but the destination—a more dynamic and competitive business environment—remains distant. While the region has made important advances in simplifying administrative procedures to reduce regulatory burden, major challenges persist. Unlocking productivity gains will require enhancing the quality of regulatory processes, strengthening regulatory governance, and ensuring the state acts as a strategic facilitator rather than an obstacle to private-sector development.

The first part of this chapter examines the regulatory burden on the private sector in LAC, assesses aspects of regulatory governance in the region, and reviews potential solutions to mitigate negative impacts. The burden discussed is largely defined by administrative compliance costs or red tape—a subset of the costs businesses incur, which also includes capital costs and indirect or efficiency costs (OECD, 2001).

Assessment I: The evolving business landscape in LAC

The business environment is a widely studied and proven driver of private-sector economic performance throughout a firm's life cycle, directly influencing investment, job creation, and economic dynamism. Its impact depends on several key factors: the ease of starting and securing a business; reliable and affordable infrastructure; a well-functioning labor market and financial sector; and a fair, transparent, and predictable regulatory framework. In addition, a sound fiscal environment, trustworthy dispute-resolution mechanisms, competitive markets, and efficient insolvency procedures are all essential for private sector development and overall economic prosperity (World Bank, 2020a).

These factors operate in multiple ways. For instance, the ability of new, more productive firms to enter the market—and of less productive ones to exit—affects resource allocation, the efficiency of "creative destruction," and the rate at which entrepreneurs launch new projects and sustain successful ones, all of which has major implications for total productivity growth (Sanguinetti et al., 2013; Castilla et al., 2004).

Recognizing this, many countries in LAC have undertaken significant reforms over the past two decades. One area of focus has been on reducing the administrative burdens faced by entrepreneurs.

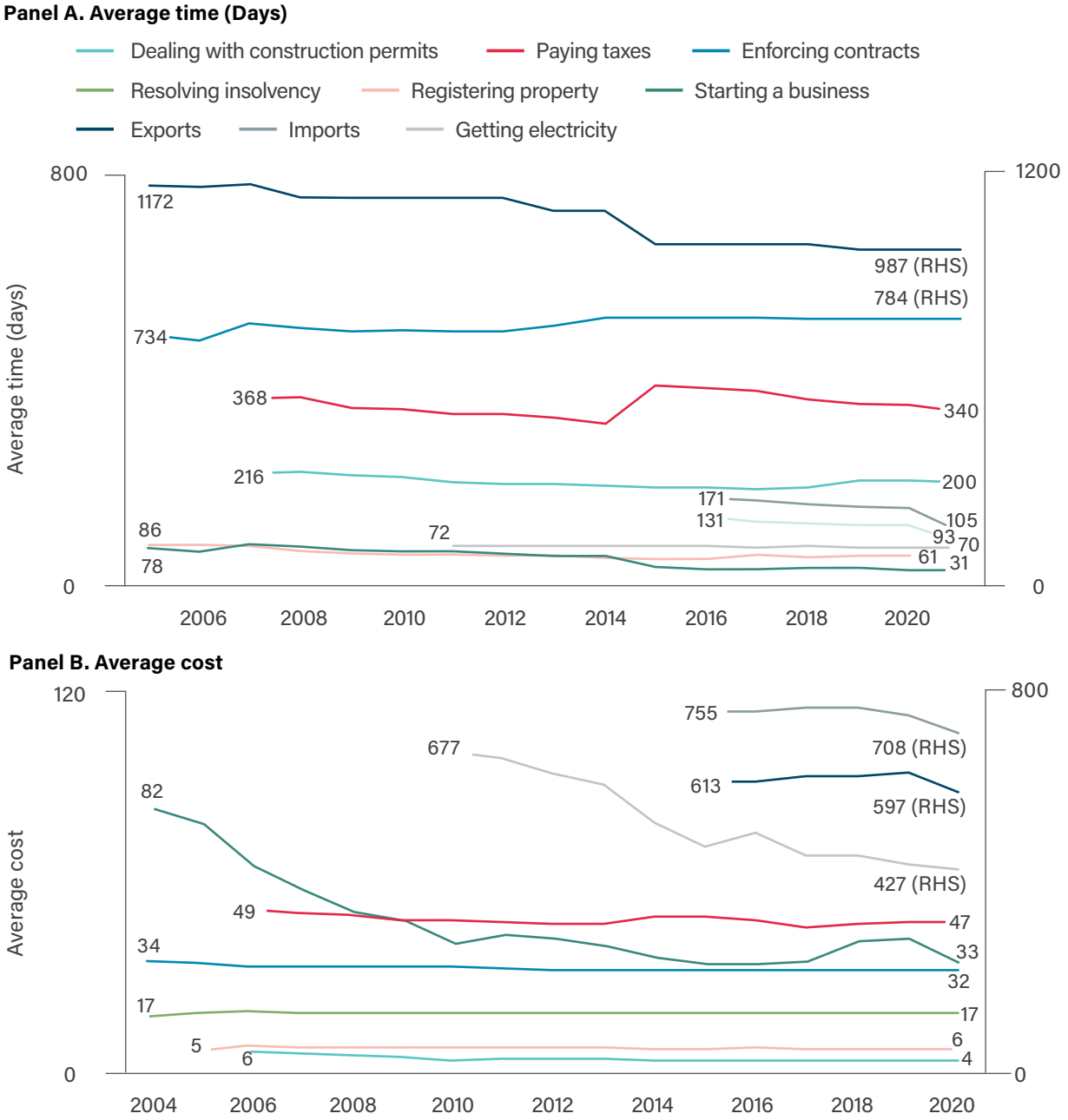
This reform journey in the region has yielded tangible results and a positive trend toward greater administrative efficiency. An analysis of the World Bank's historical Doing *Business* data reveals that between 2004 and 2020, the time and cost

associated with fundamental business operations declined substantially. As Graph 5.1 illustrates, the average time required to start a business plummeted from 78 days to 31, a 55 % decrease.

Significant time savings were also achieved in registering property (down roughly 30 %) and trading across borders (improving by 30 % for exports and nearly 40 % for imports). Similarly, costs, measured against various specific benchmarks (such as a percentage of income or asset value), also fell, with the most substantial drops observed in the categories of starting a business and getting electricity.

Despite this progress, LAC continues to lag well behind high-income OECD countries. Graph 5.2 shows that starting a business or registering property still takes about three times longer in LAC, while trading across borders takes nine to ten times longer. The cost gap is equally stark: starting a business costs ten times more, importing about six times more, and exporting 3.5 times more. In addition, resolving insolvency costs twice as much, and enforcing contracts and registering property are approximately 50 % higher. Compounding these issues, some specific categories have shown little or no measurable change in the period analyzed. Graph 5.3 presents similar behavior for other measures of the same factors: average number of procedures, payments, and Doing *Business* scores.

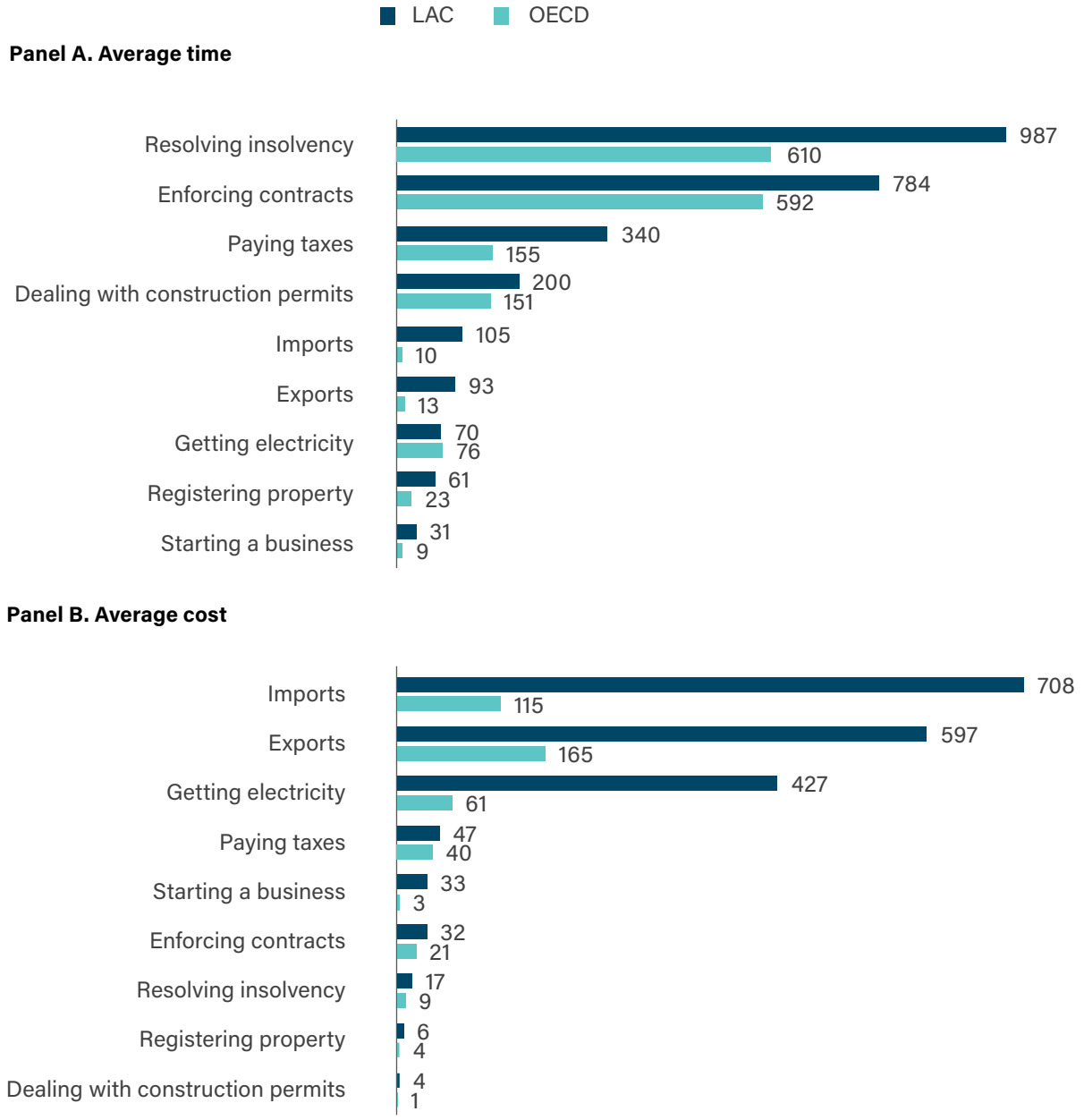
Graph 5.1
Evolution of regulatory burden in LAC



Note: Panel A—Averages are based on data from 29 LAC countries. Values for *enforcing contracts and resolving insolvency* correspond to the right-hand-side (RHS) axis. Time is measured in hours for *paying taxes and exports/imports*. Panel B—Values for *getting electricity, exports*, and *imports* correspond to the right-hand-side (RHS) axis. Costs are measured as follows: *Dealing with construction permits*—% of warehouse value; *enforcing contracts*—% of claim; *getting electricity*—% of income per capita; *paying taxes*—% of profit; *registering property*—% of *property value*; *resolving insolvency*—% of estate; *starting a business*—average % of income per capita (men and women); *exports/imports*—USD.

Source: Authors based on the *Doing Business Report* (World Bank, 2020).

Graph 5.2
Regulatory burden: LAC and OECD, 2020

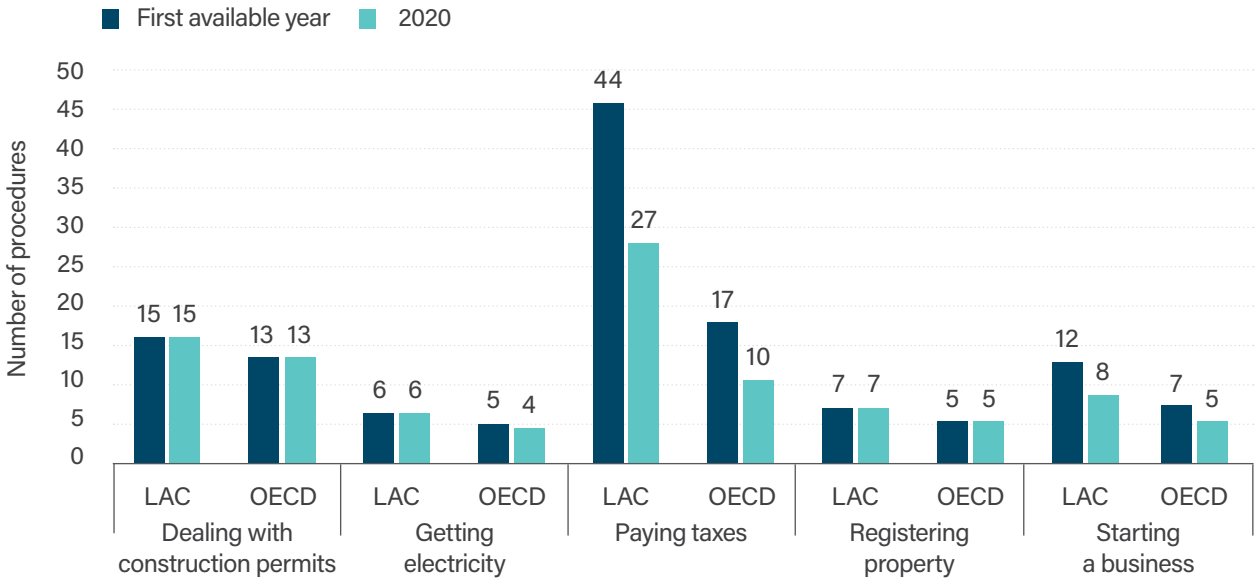


Note: Panel A—Time is measured as follows: *paying taxes* in hours per year; *imports* and *exports* in hours. Panel B—Costs are measured as follows: *starting a business* and *getting electricity* as a percentage of income per capita; *dealing with construction permits* as a percentage of warehouse value; *registering property* as a percentage of property value; *paying taxes* as a percentage of profit; *enforcing contracts* as a percentage of claim; *resolving insolvency* as a percentage of estate; and *exports* and *imports* in USD. OECD includes only high-income countries.

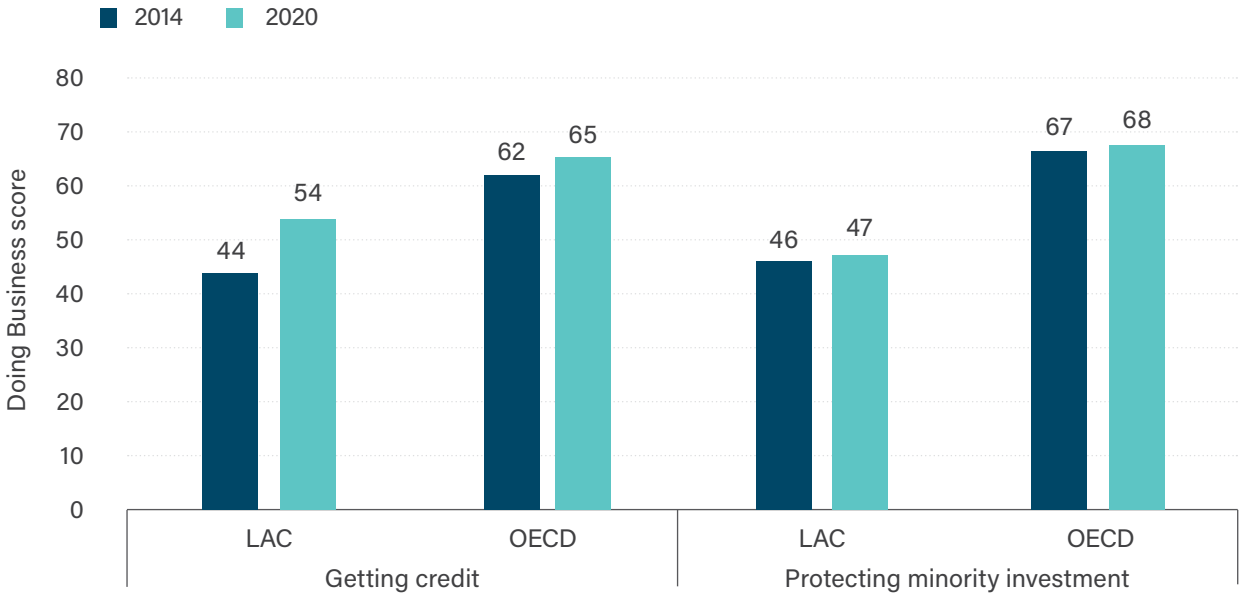
Source: Authors based on the *Doing Business Report* (World Bank, 2020).

Graph 5.3
Process efficiency: LAC and OECD

Panel A. Average number of procedures



Panel B. Average *Doing Business* Scores



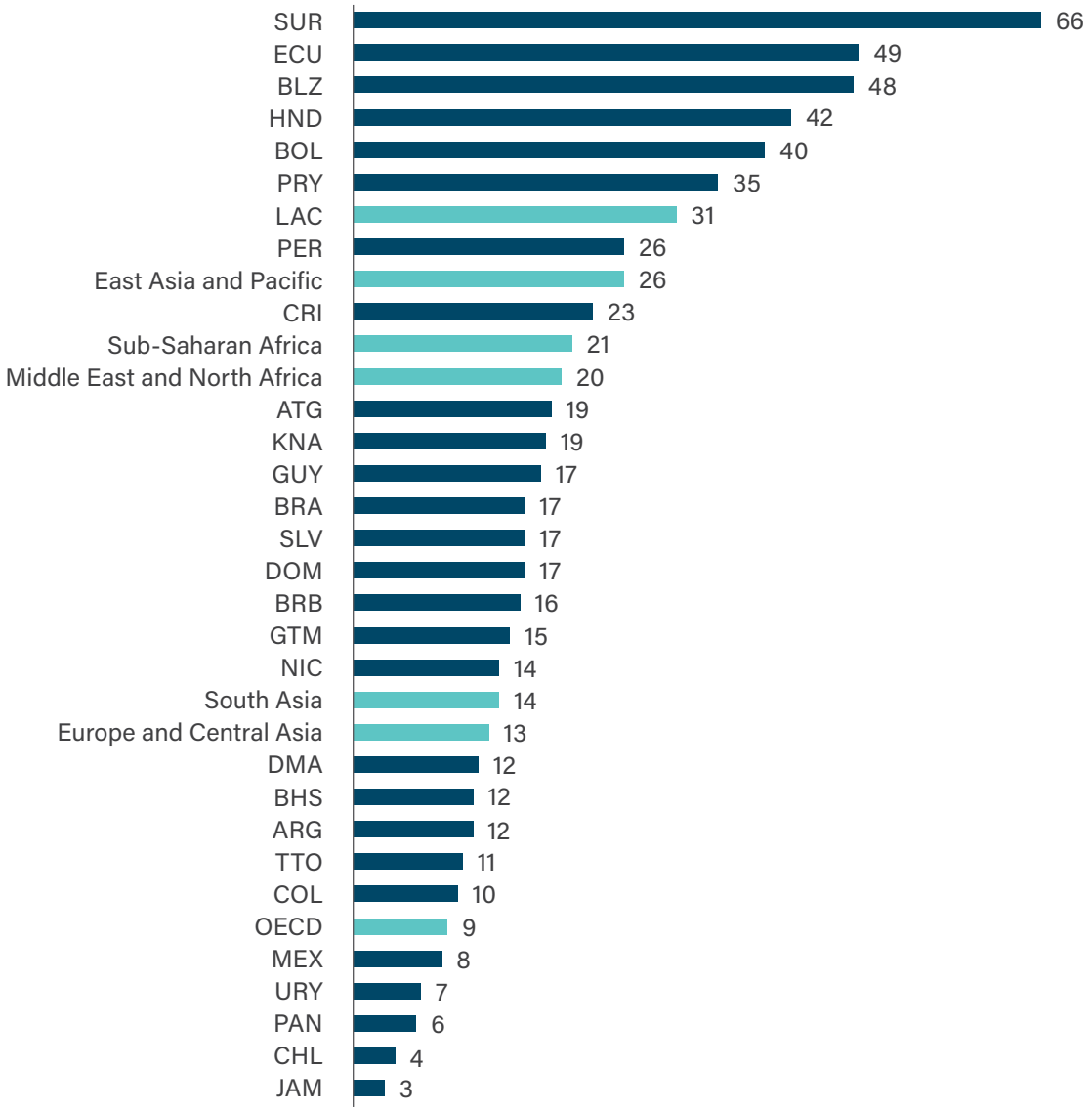
Note: Averages are based on data from 29 LAC economies and 33 OECD high-income economies. Panel A reports the first and last year available for each indicator. The first year varies by indicator: *dealing with construction permits*, 2006; *getting electricity*, 2010; *paying taxes*, 2006; *registering property*, 2005; *starting a business*, 2004. The last year is 2020 for all indicators. All indicators show the average number of procedures, except *paying taxes*, which shows the average number of payments.

Source: Authors based on the *Doing Business Report* (World Bank, 2020).

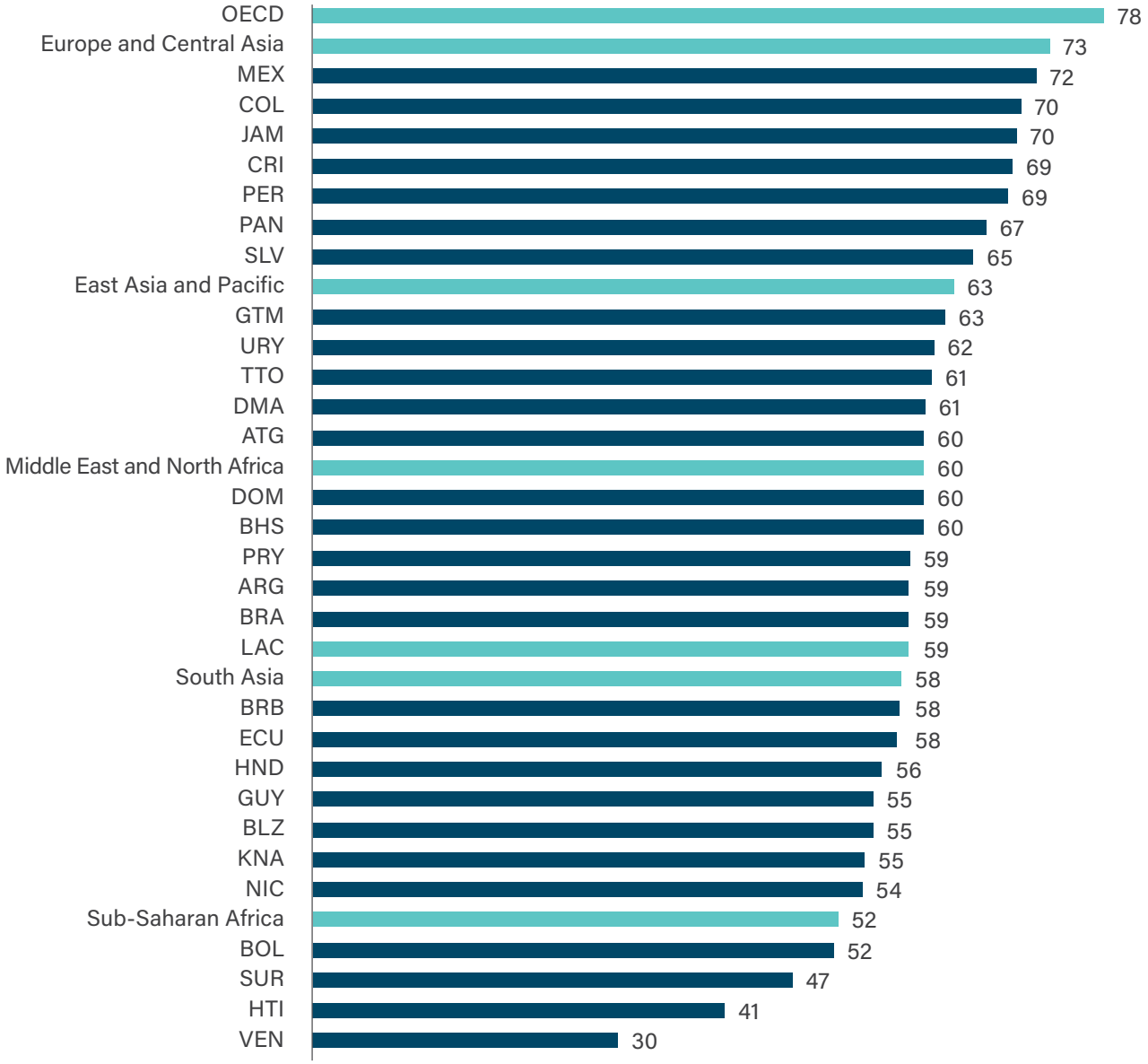
Despite a shared regional commitment to simplifying regulations for firms, progress across LAC has been highly uneven. As Graph 5.4a shows, for *starting a business*, a select group of countries in the region now have regulatory environments that rival or even surpass the average among high-income OECD economies—proof that successful reform is possible at any income level. Yet, despite these bright spots, the region as a whole continues to lag—no LAC economy ranked among the top 50 (out of 190) in the final *Doing Business 2020* report, and as Graph 5.4b shows, no LAC country attained the average *Ease of Doing Business* score of the high-income OECD group (World Bank, 2020a).

Graph 5.4
Administrative efficiency by country, 2020

Panel A. Starting a business in LAC: Average time (Days)



Panel B. Ease of Doing Business in LAC, 2020



Note: Panel A excludes Haiti and Venezuela from the graph, but they are included in the LAC average, with 97 and 230 days, respectively. OECD includes only high-income countries.

Source: Authors based on *Doing Business Report* (World Bank, 2020).

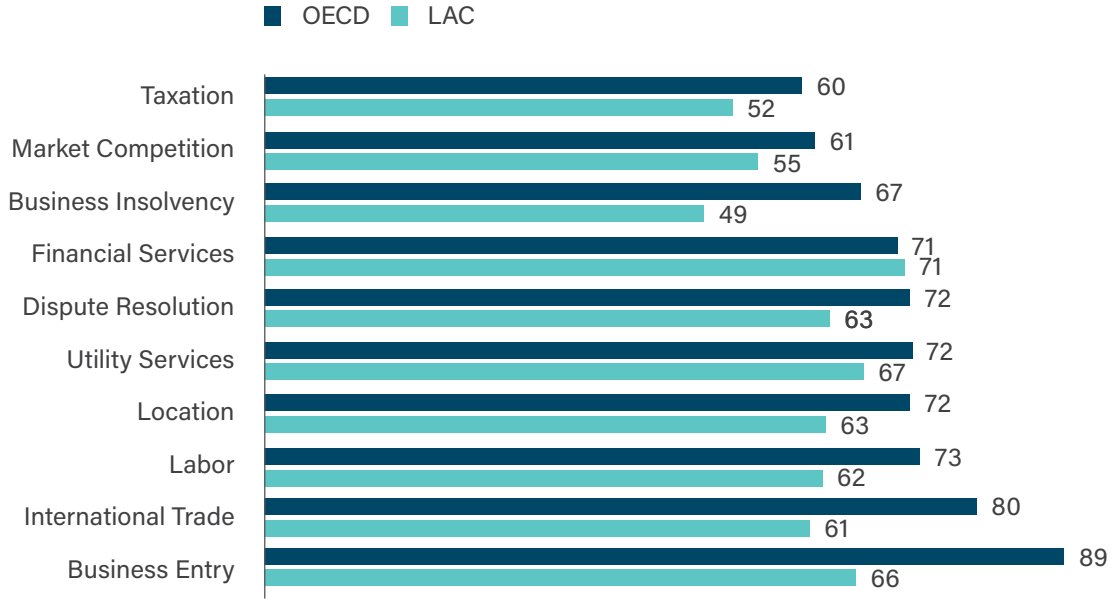
Despite improvements in the ease of complying with administrative rules, regional productivity growth has remained stubbornly low (Álvarez et al., 2018). Broader issues—such as macroeconomic conditions, market organization, rule of law, corruption, human capital, and crime—undoubtedly contribute to this problem but lie beyond the scope of

this analysis. Within the realm of the regulatory environment for private firms, however, the focus on administrative simplification, while necessary, is insufficient. The ease of filling out forms and paying fees is only one component of a productive business environment. The underlying quality and coherence of regulations—and the public services that support them—are critical for long-term investment and innovation. The recent evolution in global measurement tools reflects this understanding (see Box 5.1).

Recent data published by the World Bank's *Business Ready (B-Ready)* program provides data for a group of seven LAC countries: Barbados, Colombia, Costa Rica, El Salvador, Mexico, Paraguay, and Peru. Because the sample in this first report is small—and includes five of the region's top performers under the previous *Doing Business* methodology (Graph 5.4b)—the regional trends are suggestive rather than definitive. Full regional coverage is expected in future editions. Nonetheless, the data already offer various insights into the business environment in LAC countries through B-Ready's three pillars and ten topics (see Box 5.1 for the methodology).

Overall, LAC's performance in the business environment assessment is mixed but notable. As shown in Graph 5.5, topic-level results resemble those from *Doing Business*, with persistent gaps in nearly every category—most visibly in *business insolvency*, *business entry*, and *international trade*.

Graph 5.5
B-Ready 2024 indicators: LAC and OECD



Note: Averages reflect data from seven LAC economies and six OECD High-income economies.

Source: Authors based on the *B-Ready Report* (World Bank, 2024).

For Pillar I (Regulatory Framework), LAC ranks third among global regions, behind OECD high-income and Europe and Central Asia economies. Several countries from the region perform strongly in this pillar. Colombia and Mexico are in the top quintile, indicating they have adopted robust legal and regulatory frameworks. Costa Rica and Peru are in the second quintile, while El Salvador and Paraguay are in the fourth.

For Pillar II (Public Services), the region again ranks third, after OECD high-income economies. Colombia stands out as the only upper-middle-income economy in the top quintile, while Costa Rica follows in the second quintile, with Mexico and Peru in the third. This suggests that while some countries like Colombia provide high-quality public services to support business activity, there is significant variation within the region.

By contrast, Pillar III (Operational Efficiency) is weaker. The region's average score trails that of Europe and Central Asia, East Asia and the Pacific, and OECD high-income economies. Colombia sits in the third quintile, with Mexico, Costa Rica, El Salvador, Paraguay, and Peru in the fourth. This indicates that firms in the region generally face more challenges in complying with regulations and accessing public services.

The B-Ready data reveals a "public services gap" across all regions, where economies tend to be better at enacting regulations (Pillar I) than providing the necessary public services (Pillar II) to support them. In LAC, this gap averages 11.9 points, which is larger than in OECD high-income economies but smaller than in Europe and Central Asia, the Middle East and North Africa, and Sub-Saharan Africa. This result points to significant institutional and infrastructure constraints.

Graph 5.6 shows that LAC's *operational efficiency* scores are generally higher than its average *public services* scores, suggesting that existing firms have developed coping mechanisms, often demonstrating resilience and adaptability even when public services are deficient. Still, improving conditions in all pillars would enable both existing firms to thrive and new firms to enter the market, fostering a more dynamic and diversified business landscape.

In LAC, several economies and specific topic performances stand out. Colombia performs exceptionally well for an upper-middle-income economy, ranking in the top quintile for both the Regulatory Framework and Public Services pillars, and for six of the ten B-READY topics: *business entry, business location, utility services, financial services, dispute resolution*, and *business insolvency*. This makes it one of the top performers among all 50 economies assessed.

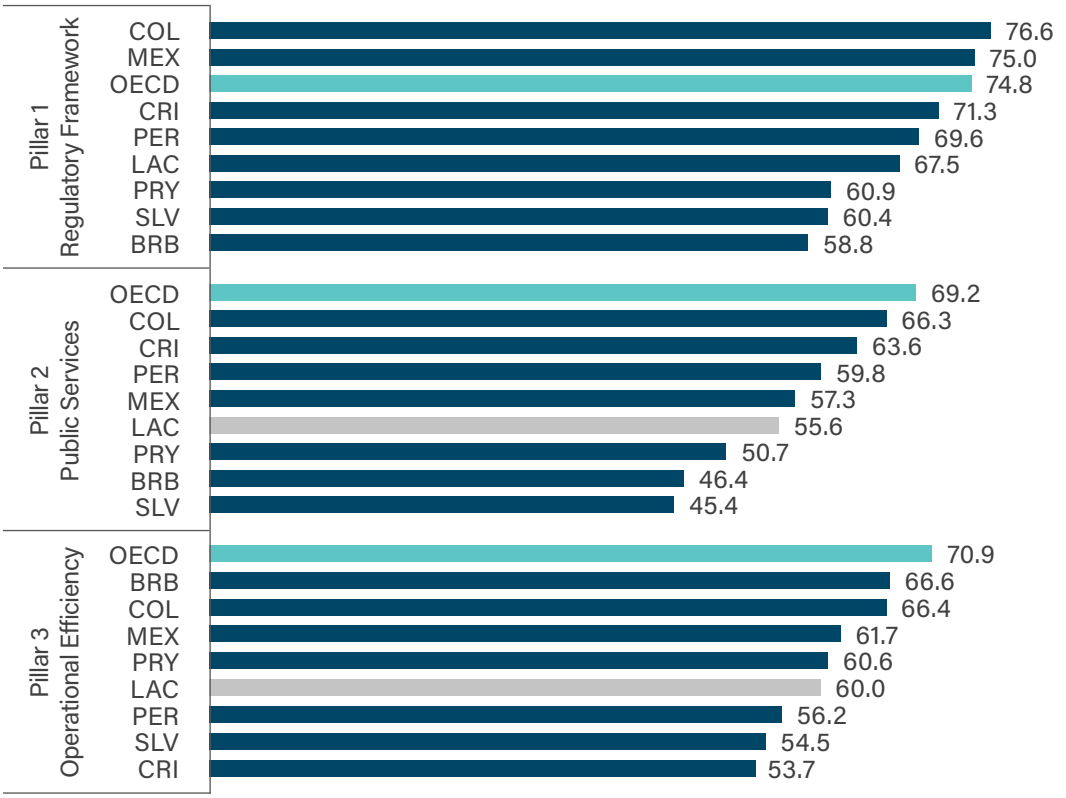
Costa Rica leads in *market competition*, achieving the highest score globally in this topic, which suggests that the country has effective regulations and public services that foster a competitive and dynamic market. Mexico joins Colombia in the top quintile for the Regulatory Framework pillar, indicating a strong legal foundation for business. It also performs in the top quintile for three topics: financial services, international trade, and taxation. The region as a whole shows relative strength in *financial services*, with Colombia, Mexico, and Peru all scoring in the top quintile.

A certain level of heterogeneity can be seen with countries such as Colombia, with a mean score across the three pillars that is comparable to that of high-income OECD countries, and El Salvador, with a mean score comparable to that of Sub-Saharan Africa.

The region is well-represented among top performers across various topics. In total, four economies from LAC appear in the top quintile of at least one topic. Colombia is in the top quintile for six topics, Mexico for three, and Costa Rica and Peru for two each.

In summary, while the region faces challenges, particularly in operational efficiency and closing the public services gap, countries like Colombia, Costa Rica, and Mexico show that middle-income economies can achieve high standards in specific areas of the business environment. Strong performance is not limited to wealthy nations. Several low- and middle-income economies, such as Rwanda, Colombia, and Georgia, rank among the top performers in various categories, demonstrating that robust business environments can exist at any income level.

Graph 5.6
B-Ready 2024 pillar scores for LAC countries



Note: Average of OECD includes Croatia, Estonia, Greece, Hungary, New Zealand, Portugal, and Slovak Republic.

Source: Authors based on *B-Ready Report* (World Bank, 2024).

Box 5.1 Assessing the global business climate 2.0

The World Bank Group has refined its approach to assessing the global business environment. Its new flagship report, *Business Ready (B-READY)*, marks a shift in the global consensus on what defines a favorable business climate. It reflects an effort to provide a more comprehensive, balanced, and transparent evaluation of the business and investment climate worldwide.

Business Ready's analytical framework recognizes that there is more to a healthy business environment than the "ease of doing business." This new approach addresses a fundamental weakness of the previous paradigm: that simplified rules do not always align the interests of firms with those of society. For LAC, the challenge is to ensure that reform agendas emphasize not only the "ease of compliance" but also the "ease of productivity," tackling the deeper institutional frictions that continue to hold the region back.

The new B-READY analytical framework benchmarks economies based on three core pillars that capture different aspects of the business environment:

Pillar I—Regulatory Framework measures the rules and regulations governing how firms open, operate, and close a business. It focuses on de jure measures, assessing regulatory quality in terms of clarity, fairness, and sustainability.

Pillar II—Public Services evaluates the facilities, institutions, and infrastructure that governments provide to help firms comply with regulations and conduct business. It emphasizes digitalization, interoperability, transparency, and adequacy of services, capturing de facto measures of service provision.

Pillar III—Operational Efficiency captures the ease of compliance with the regulatory framework and the effective use of public services as directly experienced by firms. The measurement of this pillar relies on de facto measures reflecting real-world business experiences.

B-READY covers ten topics essential for private-sector development that correspond to various stages of a firm's life cycle: *business entry, business location, utility services, labor, financial services, international trade, taxation, dispute resolution, market competition*, and *business insolvency*. *B-READY* also offers insights into three cross-cutting themes relevant for modern economies: digital adoption, environmental sustainability, and gender. These are embedded in topic scores and assess, for example, the degree of digitalization in government and business, the presence of environmental regulatory provisions, and the collection and use of sex-disaggregated data or gender-sensitive regulations.

The B-READY methodology is more rigorous and transparent than its predecessor. It combines primary data gathered through specialized expert

questionnaires (for Pillars I and II) with firm-level surveys from the World Bank Enterprise Surveys (for Pillar III), providing a balanced view of both de jure (laws on the books) and de facto (in practice) aspects of the business environment.

The B-READY 2024 report covers an initial sample of 50 economies, representing the first in a three-year rollout phase that will expand coverage to over 100 economies in 2025 and approximately 180 by 2026, allowing for ongoing methodological refinement and learning.

By introducing a comprehensive three-pillar framework, expanding topic coverage to include critical areas like labor, and adopting a more rigorous data collection methodology that blends expert and firm-level insights, it aims to provide a more nuanced and action-oriented understanding for policymakers, researchers, and development practitioners. The 2024 findings underscore the importance of not only enacting sound regulations but also investing in robust public services and improving operational efficiency to foster vibrant, inclusive, and sustainable private-sector development worldwide.

Source: Authors based on World Bank (2024).

Assessment II: Beyond administrative burden. The quality of regulatory governance

A modern, productivity-enhancing state recognizes that the way regulations are designed, implemented, and reviewed is just as important as their content (OECD, 2025c; World Bank, 2020a). A predictable, transparent, and evidence-based regulatory process builds trust, reduces uncertainty for investors, and ensures that rules achieve their intended public policy objectives without imposing unnecessary costs.

While many LAC countries have focused their efforts on administrative simplification, they have often overlooked the institutional foundations of good regulatory governance. High-quality regulatory governance indirectly affects the stock of regulatory burdens by curbing the proliferation of new rules that can, in practice, add unnecessary complexity over time.

Many countries in the region would benefit from adopting a more holistic, whole-of-government approach to regulatory quality that systematically assesses both the costs and benefits of regulation, rather than focusing narrowly on reducing administrative burdens (Querbach and Arndt, 2017a). The widespread failure to review existing regulations and evaluate their effectiveness has led to an accumulation of outdated and inefficient rules that stifle economic dynamism (OECD, 2020d).

The OECD's Indicators of Regulatory Policy and Governance (iREG) provide a standardized framework for benchmarking the quality of these processes and

identifying good practices. They draw on survey responses provided by government officials on the processes and practices for developing national regulations in the executive branch of government, and cover the use of tools such as Stakeholder Engagement, Regulatory Impact Assessment, and Ex-post Evaluation.[2]

Stakeholder engagement

Stakeholder engagement measures how effectively a country involves stakeholders in the regulatory process. It is a critical foundation for creating effective and legitimate regulation. This process greatly enhances regulatory quality because stakeholders—including citizens, businesses, and civil society—possess direct, real-world experience that provides invaluable information and data. Drawing on this expertise strengthens the evidence base for government decisions, enabling officials to identify conceptual problems, foresee unintended consequences, and avoid costly mistakes. Engagement is most powerful when it happens in the early stages, helping policymakers fully understand the problem before proposing solutions.

A transparent consultation process also fosters trust and improves compliance. When people feel they have had a meaningful opportunity to shape the rules and they see that their input has been considered—especially when they are given feedback on that input—they develop a sense of ownership, making them far more likely to support and comply with the new regulations.

Finally, broad engagement mechanisms, both online and offline, are essential for fostering inclusivity. They ensure diverse voices (including those from underrepresented groups) are heard. Inclusive dialogue is key to promoting accountability in rule-making, facilitating faster adaptation and innovation—especially important for complex issues like climate change and digital technology—and ultimately helps build consensus that prevents powerful interests from blocking necessary reform.

Regarding this dimension, LAC lags behind OECD best practices (Graph 5.7). The iREG score (0–4) serves as a measure of regulatory policy implementation, with higher scores reflecting advanced adoption of better regulation principles. While a few countries, including Mexico, Brazil, Costa Rica, and Colombia, demonstrate relatively high scores, the region generally lags in this key aspect, with eight of the 11 countries falling below the OECD average.

Moreover, although most countries in the sample formally require public consultation on draft regulations, these processes are often superficial. Consultations tend to be selective rather than broad, and the lack of transparent feedback mechanisms—showing participants how their input was used—erodes trust and undermines the legitimacy of the entire regulatory system (OECD, 2025c, 2024c).

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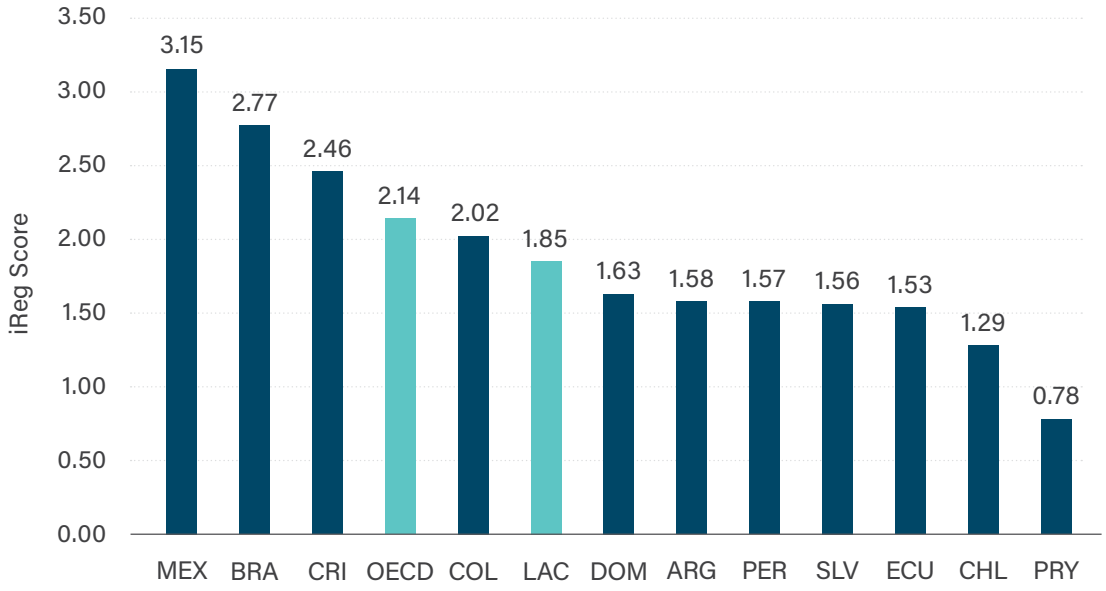
2. Because the iREG Surveys vary between the LAC and OECD cohorts, a direct comparison is only possible for the composite indicator on stakeholder engagement. Unlike OECD countries, LAC lacks composite indicators for both Regulatory Impact Assessment and Ex-post Evaluation, so a comparison for those metrics is not feasible. More details can be found in Annex A of OECD (2024b).

Graph 5.7
Stakeholder engagement in developing subordinate regulations, 2022



Note: iREG Scores for Chile, Colombia, Costa Rica, and Mexico refer to 2021. OECD includes every country in the agreement.

Source: Authors based on OECD Indicators of Regulatory Policy and Governance (iREG) for Latin America and the Caribbean 2022 and 2021 in Government at a Glance LAC (OECD, 2024c).

Regulatory Impact Assessment (RIA)

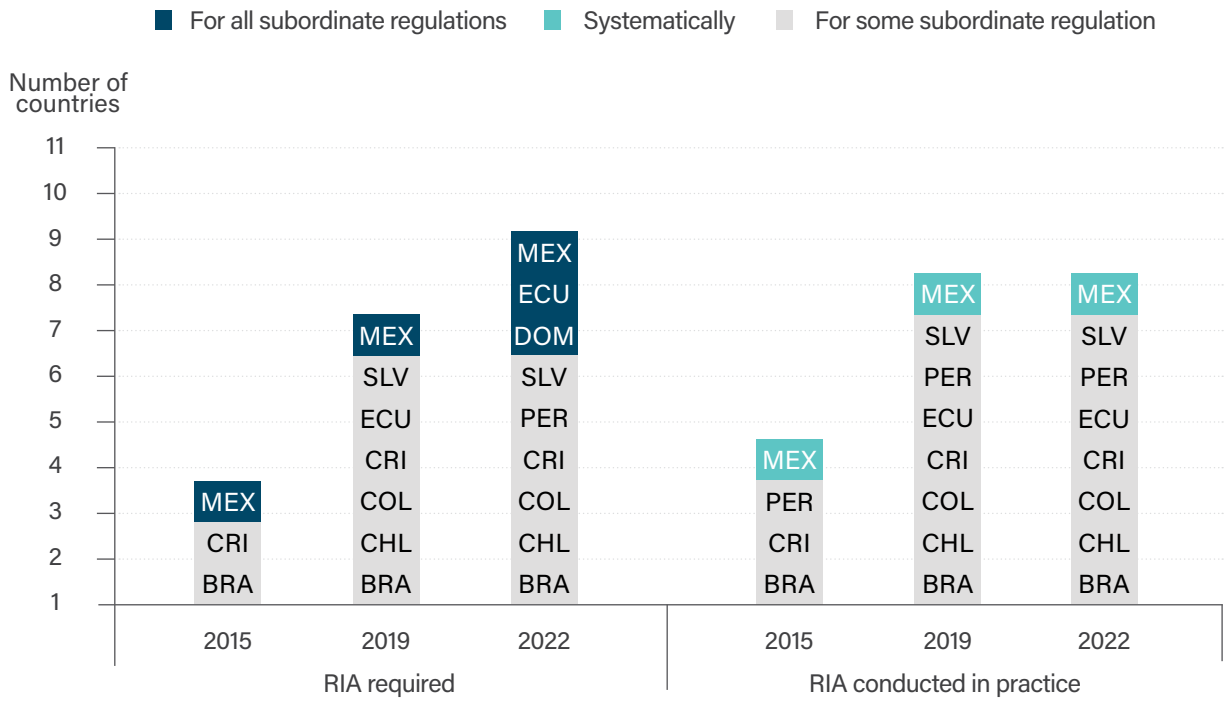
Regulatory Impact Assessment (RIA) is a core tool for evidence-based policymaking, designed to enhance the quality and effectiveness of regulation. By providing decision-makers with detailed information on a regulatory measure's potential effects on the economy, environment, and social structures, RIA ensures that regulations are efficient, effective, and capable of achieving public goals. Its fundamental purpose is to identify and evaluate all potential alternatives, including non-regulatory ones, to determine the most beneficial approach for society.

RIA mandates a holistic assessment of all costs and benefits—both direct (such as administrative fees) and indirect (such as opportunity costs)—for all affected stakeholders. This critical examination helps minimize unintended consequences and integrates broader policy objectives, such as social well-being, climate concerns, and innovation impacts, directly into regulatory design. Furthermore, by requiring regulators to disclose information and justify their choices with empirical data, RIA inherently promotes transparency and accountability, reinforcing public trust and making policymakers directly accountable for the outcomes of their interventions.

To be genuinely effective, RIA must be an iterative process integrated into the early stages of policy development, rather than a mere post-hoc justification. Its systematic use across government fosters good governance by improving rule-making quality, encouraging civil servants to shift from procedure-oriented to performance-oriented thinking, and building the policy capacities of the administration over time. Its outputs—the evidence and data—also form the essential baseline for future ex post evaluations, contributing to a cycle of continuous learning and improvement.

Despite its vital function, the use of RIA in LAC remains inconsistent. Although an increasing number of LAC countries require policymakers to conduct RIAs for subordinate regulations (Graph 5.8), significant implementation gaps persist (Querbach and Arndt, 2017a). By 2022, only Mexico applies RIA systematically. Seven other LAC countries use it selectively, while Argentina and Paraguay have no requirement at all, and the Dominican Republic appears not to use the tool at all (Box 5.2 summarizes Chile's experience building RIA capabilities). Even where RIAs are conducted, they frequently lack rigorous analysis of costs, benefits, and distributional effects, limiting their utility as a tool for informed decision-making.

Graph 5.8
Requirement to conduct RIA versus RIAs conducted in practice, 2015, 2019, and 2022



Note: Data for Chile, Colombia, Costa Rica, and Mexico refer to 2021 instead of 2022.

Source: OECD Indicators of Regulatory Policy and Governance (iREG) for Latin America and the Caribbean 2022 and 2021 in Government at a Glance LAC (OECD, 2024c).

Box 5.2 Institutionalizing better regulation: Expanding the scope and oversight of Chile's RIA system

Chile is an example of a Latin American country building robust Regulatory Impact Assessment (RIA) capabilities. This effort formally began in March 2017 with Presidential Instruction No. 2, which introduced the Productivity Impact Assessment (PIA)—Chile's distinct RIA version. Initially, the approach was cautious, limiting the pilot phase to nine "economic area" ministries and applying only to primary laws originating from the Executive. The PIA successfully forced systemic thinking within ministries, bringing greater clarity to draft bills and fostering collaboration between government lawyers and economists.

Since then, the RIA framework has significantly matured. Presidential Instruction No. 1/2022 introduced a major update, expanding the RIA scope beyond primary laws to include major amendments to Executive bills and clarified requirements for subordinate regulations. To close accountability loopholes, the government introduced a mandatory post-adoption RIA for emergency regulations, requiring completion within three months.

Transparency was enhanced by mandating the publication of RIAs for presidential decrees and primary laws on the proposing ministries' websites. In parallel, new requirements established Citizen Participation Units in 2022 to strengthen engagement. Crucially, an ex-post evaluation system was also created: subordinate regulations subject to a high-impact RIA must now be evaluated four years after enactment.

Looking ahead, Chile is moving to address the remaining oversight gap. An April 2024 bill seeks to formalize better regulation by elevating the framework to a law and, most importantly, establishing an Agency for Quality of Public Policies and Productivity (Agencia para la Calidad de las Políticas Públicas y la Productividad) to serve as the central oversight authority. Chile's commitment to RIA is characterized by clear evolution, having progressively expanded its system and institutionalized independent oversight in response to feedback, yielding a significantly more robust and comprehensive framework.

Source: Authors based on OECD (2017a, 2025c).

Ex-post evaluation

Ex-post evaluation is a critical and fundamental step for assessing a regulation's actual effectiveness and relevance after implementation, ensuring it remains fit for purpose over time. This process is essential for closing the regulatory governance cycle, serving as the crucial feedback mechanism that balances the forward-looking analysis of Regulatory Impact Assessment (RIA) with real-world outcomes. By assessing actual results, ex-post review allows for continuous learning and ensures the existing regulatory framework is constantly improved.

A key value of this process lies in its ability to determine whether a regulation has achieved its intended objectives effectively and efficiently. This review asks crucial questions: Does the rationale for the rule still exist? Has it been effective in meeting its goals? Has it created unnecessary costs or unintended impacts? By answering these, evaluations guarantee that rules are cost-effective and consistent, preventing regulations from becoming outdated due to changes in technology or market conditions. Because the full impact of any regulation—intended or not—can only be observed post-implementation, ex-post review is an indispensable tool for identifying these consequences.

Beyond quality control, ex-post evaluation bolsters transparency and accountability, which ultimately increases public trust. It provides an evidence-based assessment that holds policymakers accountable for their interventions and, when made public, enhances the legitimacy of the entire regulatory process. The practice is also closely linked to administrative simplification efforts, as evaluations can pinpoint regulations that impose disproportionate burdens for citizens and businesses.

Despite its importance, ex-post evaluation remains one of the least developed regulatory tools, often falling victim to governments' tendency to "regulate and forget" (OECD, 2024c). This "set-and-forget" approach means that ineffective or obsolete rules remain on the books, creating an increasingly dense thicket that hinders business activity (OECD, 2025c; Querbach and Arndt, 2017b)

In LAC, approaches vary widely. Eight of 11 countries (72%) now formally require periodic evaluations for subordinate regulations, often using mechanisms like sunset clauses or mandatory review periods. For instance, the Dominican Republic and El Salvador require reviews after five years; Mexico mandates them for costly regulations; and Chile requires them after four years for high-impact rules. However, because these requirements are relatively new in most of the region, the actual implementation of these evaluations is still largely in the planning or early stages (OECD, 2024c).
This highlights the urgent need for greater investment in the systematic practice of ex-post evaluation to ensure the entire regulatory stock remains effective.

(Subnational) government coordination

Most interaction between government and business takes place at the local or regional level (World Bank, 2006). In highly decentralized countries, citizens and firms manage a vast number of transactions subnationally. For instance, Colombia administers a figure equivalent to 95 % of the national total at the subnational level, while Mexico's state-level administration (excluding municipalities) handles an equivalent of 133 % of the central government total (Acevedo et al., 2018b). Local governments underscore their critical role by being responsible for between 10 % and 50 % of total services in eight out of 13 surveyed countries (OECD and CAF, 2023).

Given this high volume of regulatory transactions originating subnationally, multilevel government coordination is essential. Permanent coordination mechanisms between central and subnational governments are crucial and fundamental for effective regulation, primarily because they safeguard against a fragmented regulatory landscape. Without them, policies across national, regional, and local levels are prone to duplication, overlaps, and contradictions, leading to inefficiencies, wasted resources, and bureaucratic conflicts (Kalmenovitz et al., 2025; OECD et al., 2018a; OECD, 2020a; OECD et al., 2022; OECD, 2025c).

These mechanisms are essential for ensuring policy quality, coherence, and effectiveness. They align policy objectives across all government levels—a critical task for addressing complex issues like the green transition (OECD et al., 2013a). Since subnational governments are often best positioned to understand local needs, coordination allows these crucial localized insights to inform broader frameworks, making policies more responsive to specific regional contexts. Ultimately, this whole-of-government approach improves rule-making quality, minimizes unintended consequences, and ensures consistency across all regulators (OECD, 2016a).

Effective coordination also boosts economic development and efficiency. By streamlining regulatory compliance procedures, especially for small and medium-sized enterprises (SMEs), coordination significantly reduces administrative burdens and economic costs. Less burdensome regulations are demonstrably associated with higher subnational government investment (OECD, 2025f). A well-coordinated framework also promotes market efficiency, facilitates innovation, and helps remove regulatory obstacles for innovations like one-stop shops (OECD, 2025d).

Finally, these mechanisms are key to building institutional capacity and resilience. They strengthen administrative capabilities at all levels, which is particularly vital where subnational resources may be limited (OECD et al., 2018). Coordination facilitates peer learning, the sharing of best practices, and the continuous monitoring of regulatory policy, boosting the collective rule-making capacity across the entire government system (Iavorskyi and Sutanovac, 2025; OECD, 2025c; World Bank, 2016a).

The most recent iREG Survey of 11 LAC countries shows that subnational government coordination is less developed, and only a minority of surveyed countries (four of 11) have

mechanisms for ensuring consistency between central and other government levels in the development and review of regulations and the implementation of regulatory policy (even though some have enacted policies mandating it). Within this sample, only Brazil, Costa Rica, Mexico, and Peru have these mechanisms in place (OECD, 2024c).

Peru has concrete experience and good practice within specific ministries, such as Housing, Construction and Sanitation, and Production, which actively engage municipalities in their regulatory processes. Furthermore, the official Regulatory Quality Analysis (RQA) framework is structured to make ministries consider the impact and jurisdiction of their regulations across different levels of government (OECD, 2019b).

The political economy of regulatory barriers

Regulation is a critical tool through which governments seek to foster economic growth and social well-being. However, in LAC, attempts to implement structural regulatory changes frequently encounter formidable political-economic challenges, rooted in ingrained institutional inertia and the resistance of interest groups dedicated to preserving rents and privileges.

A central obstacle facing regulatory modernization is the reality that policy design is often skewed by private interests, leading to rent-seeking and regulatory capture (OECD et al., 2018). Rent-seeking occurs when pressure groups exploit governmental structures to secure benefits through policy distortions. The existence of regulation itself can be a target for this behavior, driven by the "tollbooth view," in which politicians and bureaucrats use rules to create and extract rents in the form of campaign contributions, votes, or bribes (Shleifer and Vishny, 2002).

In this environment, corruption thrives. Inefficient regulation and rent-seeking tend to go hand in hand, as excessive red tape and extensive interactions between the private sector and public agencies create ample opportunities for corruption and bribery. Regulations that unnecessarily restrict competition or increase costs and risks for firms deter new entry, thereby dulling competitive pressure and enabling firms with market power to divert resources from productive activities toward rent-seeking (Maloney et al., 2024).

Resistance to reform is also institutional and political. In highly fragmented governance structures, such as federal countries, the number of government levels involved makes consensus difficult. Political incentives, particularly among competing political parties, can undermine intergovernmental cooperation. Because political incentives can differ across government levels, subnational politicians may oppose central government reforms that do not align with their own political or electoral interests (World Bank, 2021). Reforms must inevitably overcome resistance from those who benefit from the status quo. This opposition is amplified by uncertainty; policies lacking transparency or certainty increase risk for firms and reduce a jurisdiction's competitiveness (Stedman and Green, 2018). Finally, even when permits are obtained, the legal system itself can become a battleground, with judicial proceedings used to delay or block projects when agreements are not reached (Jelmayer et al., 2025).

Overcoming these deep-seated political-economy hurdles requires coherent and sustained strategies grounded in political leadership, transparent governance, and stronger institutional capacity.

Looking forward and back: The state as a strategic facilitator for productivity

In the ongoing effort to foster competitive and dynamic economies, governments are increasingly leading a strategic campaign against red tape—the excessive, disorganized, and burdensome administrative compliance costs that can stifle businesses. This bureaucratic friction, sometimes called *permisología* in Latin America for its frustrating maze of permits, can deter entrepreneurship, hinder investment, and slow economic growth. The story of how policymakers are tackling this challenge is one of evolution: moving from ad hoc cleanup efforts to implementing comprehensive, evidence-based strategies that simplify rules and streamline interactions between the state and the private sector (OECD, 2006a).

At a strategic level, governments are adopting a two-pronged approach that both prevents new burdens and reduces the existing stock of regulations (OECD, 2006a).

- **Looking Forward (Ex-ante Controls):** The first line of defense is to prevent unnecessary red tape from being created in the first place (OECD, 2006a). The primary tool for this is the Regulatory Impact Assessment (RIA) (OECD, 2020a). By quantifying potential compliance costs for businesses and citizens, RIAs provide policymakers with the evidence needed to design rules that are effective without being unnecessarily cumbersome. Some countries have implemented rules to control the flow of new regulations, such as “one-in, x-out” or “compensatory simplification” policies, which require that any new administrative burden be offset by removing an equivalent existing one (OECD, 2020e).

- **Looking Back (Ex-post Review):** The second part of the strategy involves tackling the vast stock of existing regulations that have accumulated over time (OECD, 2006a). This is often done through systematic reviews of existing laws to ensure they are still fit for purpose, using tools like sunset clauses (which cause a regulation to automatically expire after a set period) or mandatory review clauses (OECD, 2020e). Many countries have also launched targeted administrative simplification programs that focus on identifying and eliminating the most burdensome procedures (OECD, 2016b). These efforts are increasingly evidence-based, using business surveys to identify perceived "hotspots" of red tape and sophisticated methodologies like the Standard Cost Model (SCM) to estimate the costs of administrative obligations, allowing governments to set quantitative reduction targets (OECD, 2006a).

To implement these strategies, governments are deploying a broad set of practical actions aimed at re-engineering processes, leveraging technology, and improving governance.

Digital transformation as a core lever

A central theme in modern simplification efforts is the use of digital technology to make government interactions faster, cheaper, and more transparent (Beliz et al., 2023; Beuermann et al., 2024; OECD, 2024b).

- **One-Stop Shops and Centralized Portals:** A cornerstone of this approach is digital one-stop shops (OECD, 2020c). These platforms consolidate information and procedures from multiple government agencies into a single point of contact for businesses. Costa Rica's One-Stop Shop for Investment (*Ventanilla Única de Inversión*, VUI), for example, aims to centralize all formalities for investing in the country. Increasingly, these portals are organized around user-centric "life events," such as starting a business or building a warehouse, rather than around government structures, making them more intuitive for entrepreneurs to navigate (OECD, 2025e).

- **Digitalization and Automation:** Beyond portals, governments are broadly digitizing and automating administrative processes. This includes creating online platforms for business registration, applying for permits, filing and paying taxes, and submitting customs documents. A crucial aspect, however, is that one should not simply "digitalize bureaucracy," processes must first be simplified and re-engineered to eliminate redundant steps before they are moved online (Ghezzi et al., 2022; OECD, 2020b; OECD et al., 2013b; World Bank, 2016a, 2020b).

- **Data Interoperability:** A key benefit of digitalization is the ability to implement a "collect once, use many times" principle for data (OECD, 2006a). By creating interoperable systems where gavernment agencies can securely share information they already possess, businesses are saved the burden of repeatedly submitting the same documents to different authorities (CGEE, 2022). The development of tools like a shared digital file for businesses is a major step in this direction (OECD, 2025e).

Reforming the rules and processes, and facilitating compliance

Alongside technology, governments are fundamentally rethinking the design of regulations and the procedures for complying with them.

- **Streamlining Licensing and Permitting:** The lengthy and complex process of obtaining licenses and permits is one of the main sources of red tape. To combat this, policy actions include reducing the total number of required permits (Dejbord Sawan and Ugarte, 2025), streamlining approval processes (World Bank, 2016b), and shortening official timelines. For activities deemed low-risk, a significant simplification is to replace complex prior authorizations with simple notifications or sworn declarations, subject to later audits (Jelmayer et al., 2025).

- **Adopting Risk-Based and Proportionate Regulation:** Rather than applying a one-size-fits-all approach, a smarter strategy is to tailor regulatory intensity to the

level of risk (OECD, 2025b). This allows regulators to focus enforcement resources, such as inspections, on high-risk areas while reducing the burden on businesses that are largely compliant and pose little risk (OECD, 2006a, 2025c). Similarly, rules should be proportional and flexible, taking into account the differing characteristics of companies, particularly by modifying thresholds or requirements for small and medium-sized enterprises (SMEs) (OECD, 2006a, 2019a).

- **Experimental Approaches:** To avoid creating new red tape in innovative sectors, some governments are using regulatory sandboxes. These provide a controlled environment for companies to test new technologies and business models with regulatory flexibility, allowing rules to co-evolve with innovation rather than stifling it (CGEE, 2022; Herrera and Vadillo, 2021).

- **Facilitating Compliance:** Governments can reduce burdens by making rules clearer and easier to follow. This includes providing clear guidance in plain language, offering advisory services, and ensuring there is adequate notice before new rules come into effect, for instance, by using common commencement dates for new regulations. Promoting transparency through measures like publishing fee schedules and complaint mechanisms also reduces uncertainty and the potential for corruption, which often thrives in complex and opaque systems (OECD, 2006b).

Institutionalizing reform: Political leadership and the fight against regulatory capture

Beyond these technical lines of action, a more comprehensive reform strategy must also address the deep-seated political economy barriers of rent-seeking and institutional resistance.

Establishing strong political leadership and consensus

Sustained regulatory reform is nearly impossible without strong, high-level political leadership. Leadership is crucial to mobilize action and resources, and to overcome bureaucratic inertia and resistance from vested interests. In presidential systems, the support and engagement of the executive are essential to introduce, implement, and sustain reforms (OECD, 2012, 2010; García Villareal, 2010).

To ensure longevity beyond political cycles, commitment must be institutionalized. Governments should consider creating dedicated oversight bodies to promote regulatory quality, signaling to the public and civil servants alike that the issue will be addressed. For large-scale initiatives, an advisory body at the highest political level, involving key ministers and stakeholders, can help identify priorities, discuss progress, and advocate for reform (OECD, 2010; García Villareal, 2010; OECD, 2016c).

Effective communication and consensus-building are equally vital. Governments must clearly articulate the long-term objectives and the relevance of reform, making sure to communicate the potential costs of maintaining the status quo (non-reform).

Transparency in this process is critical, as it ensures legitimacy and improves policy design (OECD, 2010; García Villareal, 2010; Dayton-Johnson et al., 2011).

Enhancing transparency and stakeholder engagement

Transparency is one of the strongest safeguards against regulatory capture and corruption. Governments should provide institutions and regulatory activities with transparency and accountability. This includes offering public access to information about the progress and achievements of regulatory reform (García Villareal, 2010).

Stakeholder engagement is a fundamental principle for sound regulatory policy. Consultation not only helps to improve policy quality but also yields higher acceptance of regulation and increases trust in government. Governments should institutionalize mechanisms for business and citizen participation in the guidance, management, and evaluation of reform. Furthermore, dialogue with affected communities, particularly concerning extractive projects like mining, should commence prior to project initiation and continue throughout the production cycle (Querbach and Arndt, 2017b; OECD, 2022a; García Villareal, 2010; Balza et al., 2021).

Strengthening multilevel governance and capacity

In multilevel governance environments, coordination is necessary to avoid overlapping responsibilities and ensure consistency (OECD, 2012; World Bank, 2021). Red tape is often a symptom of fragmented government, where multiple agencies have overlapping or uncoordinated functions. Therefore, establishing clear mandates, formal coordination mechanisms, and fostering collaboration between national and subnational levels are essential policy actions. Complementary strategies, such as public-private partnerships and continuous dialogue, are also crucial for identifying bottlenecks and designing practical solutions (Rodrigo et al., 2009).

Governments can also leverage competition among subnational units by promoting benchmarking of performance, thereby encouraging subnational governments to reform. It is crucial to capitalize on the proximity of subnational governments to firms and citizens to facilitate effective consultation and policy design that better reflects local needs (World Bank, 2021).

Finally, bolstering capacity at all levels is vital. Subnational governments often lack the staff resources and technical expertise to participate meaningfully in permitting processes. Regional governments can prioritize funding for training and capacity building for municipal and regional staff, possibly partnering with universities and geological institutes to handle complex technical reviews. For reforms to succeed, necessary resources—human, financial, and technical—must be ensured (OECD, 2025a; Rodrigo et al., 2009).

Ultimately, reducing administrative compliance costs is not about deregulation for its own sake, but about creating a smarter, simpler, and more streamlined regulatory environment that is efficient, transparent, and ultimately enables businesses to innovate, grow, and create jobs.

Leadership and skills to be developed by public managers

Institutional strengthening and modernization of the regulatory environment in Latin America and the Caribbean require not only solid regulatory frameworks and effective coordination among levels of government, but also public leadership capable of guiding these processes. However, such leadership faces challenges that go beyond the technical: political and cultural resistance, institutional mistrust, and low openness to change. These tensions are compounded by persistent structural problems such as low productivity, entrenched inequalities, corruption, drug trafficking, crime, and institutional weakness (Fajardo et al., 2019; International IDEA, 2023; Shuldiner, 2023).

Building a state that acts as a strategic facilitator of productivity and sustainability ultimately depends on the capacities of its public managers. Renewing leadership styles and strengthening skills in the public sector is essential to translate reforms into tangible and sustainable results (OECD, 2024c). This leadership requires long-term vision, intergovernmental coordination, and the capacity to address structural agendas such as the green transition, digital transformation, and the fight against corruption (Álvarez, Brassiolo, Toledo, Allub, Alves, de la Mata, and Daude, 2020; World Bank, 2023).

Nevertheless, purely technocratic leadership is insufficient. Inclusive approaches are needed that integrate a gender perspective, rural and urban realities, and the voices of historically excluded groups. Expanding participation spaces strengthens the legitimacy of policies and rebuilds trust in the state (CAF, 2023). Public innovation—understood as a participatory and contextualized process—must be based on collective intelligence, agile methodologies, and collaborative governance models involving public, private, and social actors (Bianchi et al., 2022; CAF, 2015).

In this context, public managers require a wide range of capacities. They must combine technical skills (data analysis, project management, planning), strategic skills (development vision, systems thinking, multilevel coordination), and interpersonal skills (empathy, effective communication, negotiation, mobilization). According to de la Mata et al. (2022), integrity in public service and digital innovation are critical competencies for the next decade, as they directly address the region's main concerns: corruption, democratic governance, inequality, and security. Furthermore, as CAF (Nejamkis and Gilio, 2016) already pointed out, the region needs leaders capable of building consensus, managing social and political diversity, and promoting inclusive leadership styles—skills that remain as relevant today as they were a decade ago.

Regional experiences demonstrate their potential. In Uruguay, the National Development Strategy 2050 has improved policy coordination on sustainability and digitalization (OPP, 2023). In Colombia, leadership training programs supported by the OECD and IDB seek to reduce institutional fragmentation and strengthen territorial capacity (IDB and OECD, 2020). These initiatives align with CAF's findings that governments have tools to confront challenges but need to innovate in their application and create more effective mechanisms (Nejamkis and Gilio, 2016). Among CAF's initiatives, one standout is the program *Women in Management: External Financing for Public Policies* in Brazil, organized together with the Ministry of Planning and the National School of Public

Administration (ENAP). Its second edition, held in 2024 in Brasília, brought together public managers from 14 states to expand women's participation in leadership positions at subnational governments, incorporate gender perspectives in internationally funded projects, and strengthen capacities in areas such as environmental sustainability, health, education, and infrastructure (CAF, 2024). These initiatives are consistent with CAF's view that while governments possess the necessary tools, they must innovate in their implementation and develop more effective mechanisms (Nejamkis and Gilio, 2016).

This type of leadership directly influences institutional efficiency: it improves inter-institutional coordination, accelerates project implementation, ensures continuity, and fosters innovation in public management. By reducing the gap between policy design and implementation (Roseth et al., 2018), effective public leadership becomes an indispensable condition for the state to fulfill its strategic role in inclusive and sustainable development (IDB, 2001; ECLAC, 2022).

To advance in building more effective public leadership, it is necessary to consolidate training programs that develop cross-cutting technical and soft skills for officials at all levels of government. Such programs should balance technical training in planning, results-based management, policy formulation and evaluation, and project administration with the strengthening of soft skills such as collaborative leadership, negotiation, and strategic communication (OECD, 2017b).

In this regard, CAF has already incorporated modules focused on strengthening soft skills into programs such as the *Diploma in Governance and Public Innovation and the Leadership for Transformation 2.0 Program*, which aim to strengthen collaborative leadership, strategic vision, and change management capabilities among public and social leaders in the region. This comprehensive approach distinguishes CAF from other multilateral organizations that tend to focus mainly on technical training.

The challenge is still substantial. CAF (Fajardo et al., 2019) points to corruption as the biggest obstacle and calls for leaders of integrity who can transform public management. Furthermore, monitoring mechanisms are needed to ensure that training translates into practice, alongside a merit-based civil service committed to continuous learning (Dante Sabatto, 2023; Secretaría de Gestión y Empleo Público, 2020).

Digital transformation and public innovation represent another strategic component of institutional modernization. Beyond investing in technological infrastructure, a cultural shift within administrations is needed to foster creativity, institutional resilience, and active citizen participation. Public innovation strengthens democracy by rebuilding trust in the state, creating open and transparent spaces, and placing citizens at the center of action (Asuntos del Sur, 2019; Latinobarómetro, 2021).

Finally, promoting multilevel coordination and collaborative governance mechanisms is essential to articulate development agendas tailored to territorial specificities. Institutionalizing participation and collaborative governance spaces that involve public, private, and civil society actors, and strengthening civil service integrity, are pillars for the legitimacy of reforms (CAF, 2023).

Together, these actions aim to consolidate a public leadership capable of addressing structural challenges, driving innovation, and guiding the region toward more inclusive, resilient, and democratic development.

Fiscal space: Constraints and opportunities for productive investment

The preceding analysis established that poor regulatory governance and excessive administrative burdens—the quality of state intervention—are significant impediments to private sector productivity and investment in the region. Yet, the state's capacity to act as an effective strategic facilitator is equally dependent on the quantity and quality of the financial resources it can mobilize and deploy.

Regulations, whether cumbersome or streamlined, ultimately govern an economy funded by public finance. A state may have the most modern regulatory framework, but if it lacks the fiscal space—the resources to build high-quality infrastructure, invest in human capital, and manage its debt sustainably—its efforts to unlock productivity will be severely constrained. The challenge in LAC is therefore two-fold: not only must governments improve how they govern and regulate, but they must also overcome deep-seated constraints in revenue generation, expenditure efficiency, and debt management.

This section shifts the focus from the institutional friction of red tape to the resource friction of limited fiscal space. It assesses the structural limitations in public revenue, spending composition, and debt burdens, examining how these factors prevent governments in LAC from making the critical, growth-enhancing investments necessary for long-term, sustainable productivity gains.

Why we need to talk about fiscal space to deal with productivity

The state plays a key role in enabling productivity growth. It has various tools to achieve this, but one crucial way, due to its size and impact, is through the provision of public goods and services, like education, health, and infrastructure. These goods and services help protect fundamental human rights, such as life, liberty, and property, while also promoting economic growth. The main instrument to fund these functions is taxes, and effective governments pair reliable revenue collection with efficient, growth-oriented spending.

To sustain this role, governments need fiscal space—the room to raise or reallocate spending (or cut taxes) without jeopardizing debt sustainability. In LAC countries, fiscal space is limited: revenue bases are narrow, expenditures are rigid, and debt service is high. These constraints limit the capacity to invest in the very inputs that raise productivity. The policy challenge, therefore, is to expand and protect growth-enhancing spending while maintaining fiscal sustainability.

Fiscal imbalances can also exacerbate macroeconomic vulnerabilities that hinder productivity. Persistent deficits under conditions of limited fiscal space are associated with higher inflation and sovereign risk premia, leading to elevated interest rates, crowding out of private investment, and a slowdown in capital accumulation and growth (Sargent and Wallace, 1981). Empirical evidence further indicates that expansionary fiscal shocks increase inflation (Cevik and Miryugin, 2023), while unanticipated increases in public debt depress real GDP, particularly in countries already on rising debt trajectories (De Soyres et al., 2022). In short, fiscal imbalances weaken the private sector's capacity to drive productivity gains.

There is a natural tension between increasing government revenues through taxes and productivity, as taxes are a cost for companies. Also, how the government collects taxes and how it spends matters. Certain types of taxes are more economically distortive than others. Some expenditures increase productivity more than others.

In LAC, the structure of tax and fiscal revenue, spending decisions, and the functioning of budgetary institutions have often failed to foster a virtuous cycle linking revenue generation, citizen participation, oversight, reciprocity, budget size, efficiency, and the redistributive capacity of fiscal policy. As a result, the region may be stuck in a "bad equilibrium," where low revenue collection, limited provision of public goods, and poor efficiency reinforce one another, undermining the state's ability to promote development (Sanguinetti et al., 2012).

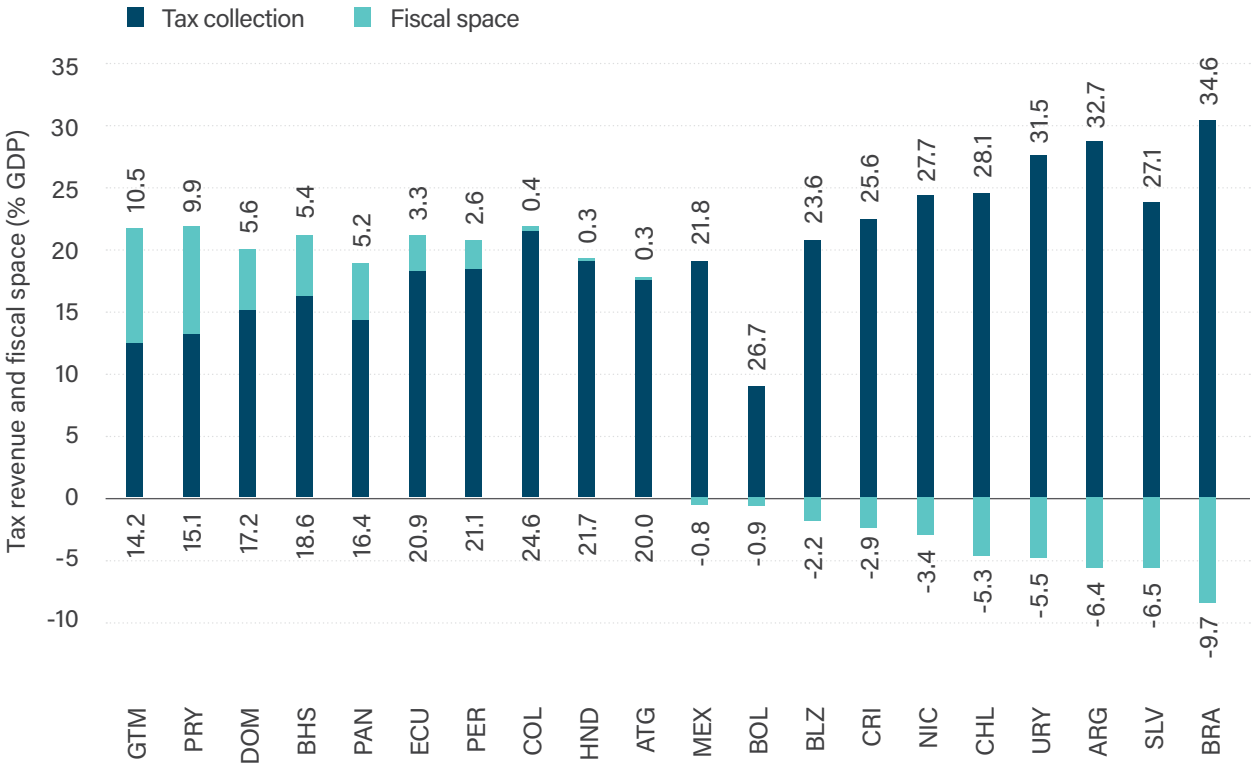
The public revenue structure should include a significant component of income and wealth taxes, not only on corporations but, crucially, on individuals. Unfortunately, this is not the case in Latin America. The high level of informality observed in the region is a factor that has limited the development of a tax structure with a higher proportion of income and wealth taxes. Previous studies (Alves, Guillermo et al., 2025; Sanguinetti et al., 2012) examine evidence of greater willingness to pay taxes if the perception of government quality is better and show that the relationship is stronger when taxes are direct (over indirect) and when financing is done with own resources (over transfers or revenue sharing).

Fiscal space

The following section presents an estimate of the tax revenue that would be expected for each country in the region, based on three factors: the economy's income level (GDP per capita), its degree of openness (measured as international trade as a percentage of GDP), and the share of the primary sector in aggregate GDP.
The indicator of available tax space is calculated as the difference between expected and observed revenue. In other words, a positive value indicates that the country could potentially increase its tax collection, whereas a negative value suggests that the room to expand revenue is limited.

The fiscal space estimates for 2021 (Graph 5.9) yield results consistent with previous studies employing similar methodologies (see, for example, the 2020 RED Report, Álvarez, Brassiolo, Toledo, Allub, Alves, de la Mata, Estrada, et al., 2020)

Graph 5.9
Tax revenue and fiscal space (% of GDP, 2021)



Note: Tax revenue and fiscal space are measured as percentage of GDP.

Source: Authors based on data from CIAT and IDB (2023) and World Bank (2025).

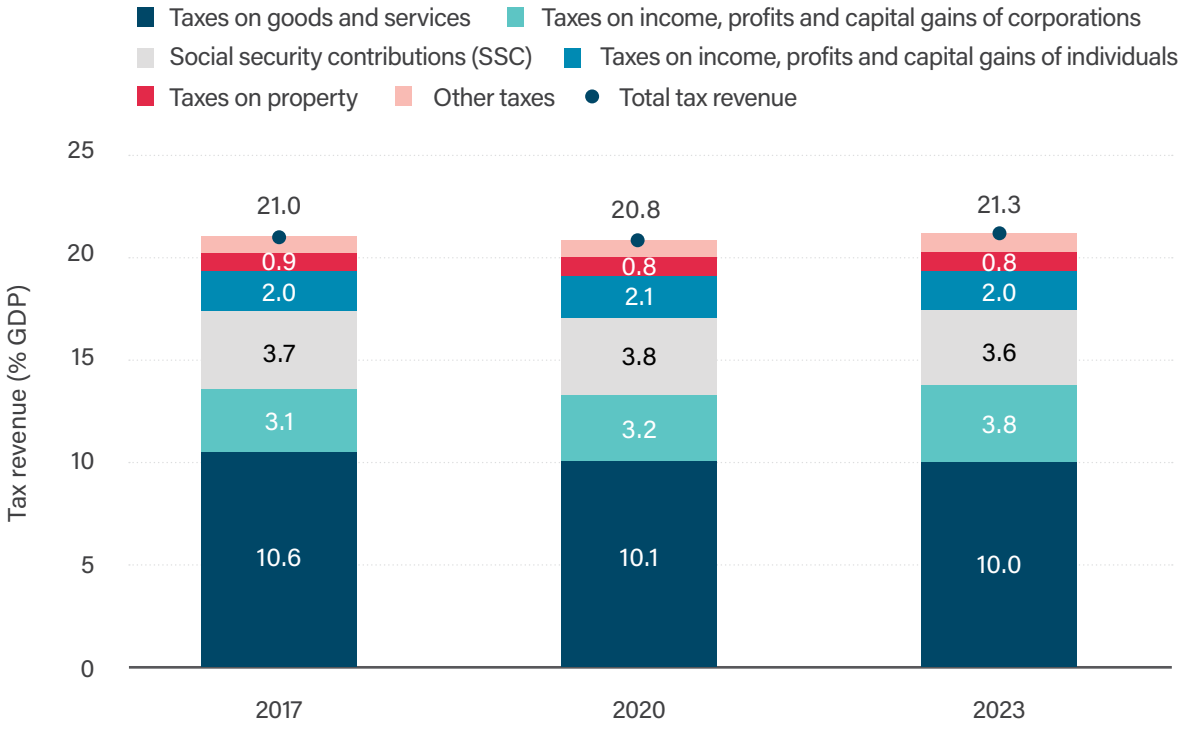
The fiscal space estimates reveal significant heterogeneity across countries. While some economies—such as Guatemala, Paraguay, the Dominican Republic, the Bahamas, and Panama—display fiscal space to increase tax revenue, others, including Brazil, El Salvador, Argentina, Uruguay, and Chile, collect more than what would be expected given their economic characteristics.

Public revenue

Tax structure affects fairness and long-term public revenue. A heavy reliance on indirect taxes, such as VAT or sales tax, generates revenue but distributes the burden uniformly at the point of purchase. This approach tends to be less progressive and more susceptible to economic fluctuations. In contrast, direct taxes, such as personal income and property taxes, can be structured with graduated rates and broader bases. This design enhances redistribution and provides more stable revenue sources. Consequently, the mix of taxes determines how effectively a fiscal system can reduce inequality while ensuring reliable funding for public services and social protection throughout economic cycles.

Tax collection in LAC has remained stable over the past decade, although it remains below advanced economies. In 2023, tax revenue in LAC represented 21.3 % of GDP, compared to the 33.9 % average recorded by OECD countries (OECD et al., 2025). As shown in Graph 5.10, in Latin America, taxes on goods and services made up 47 % of total tax revenue, with corporate taxes accounting for 18 % and personal taxes for 9 %. While the overall revenue levels have remained relatively stable, the region's tax structure shows a heavy reliance on indirect taxes and limited use of more progressive sources, such as personal income and property taxes.

Graph 5.10
LAC: Tax revenue by component



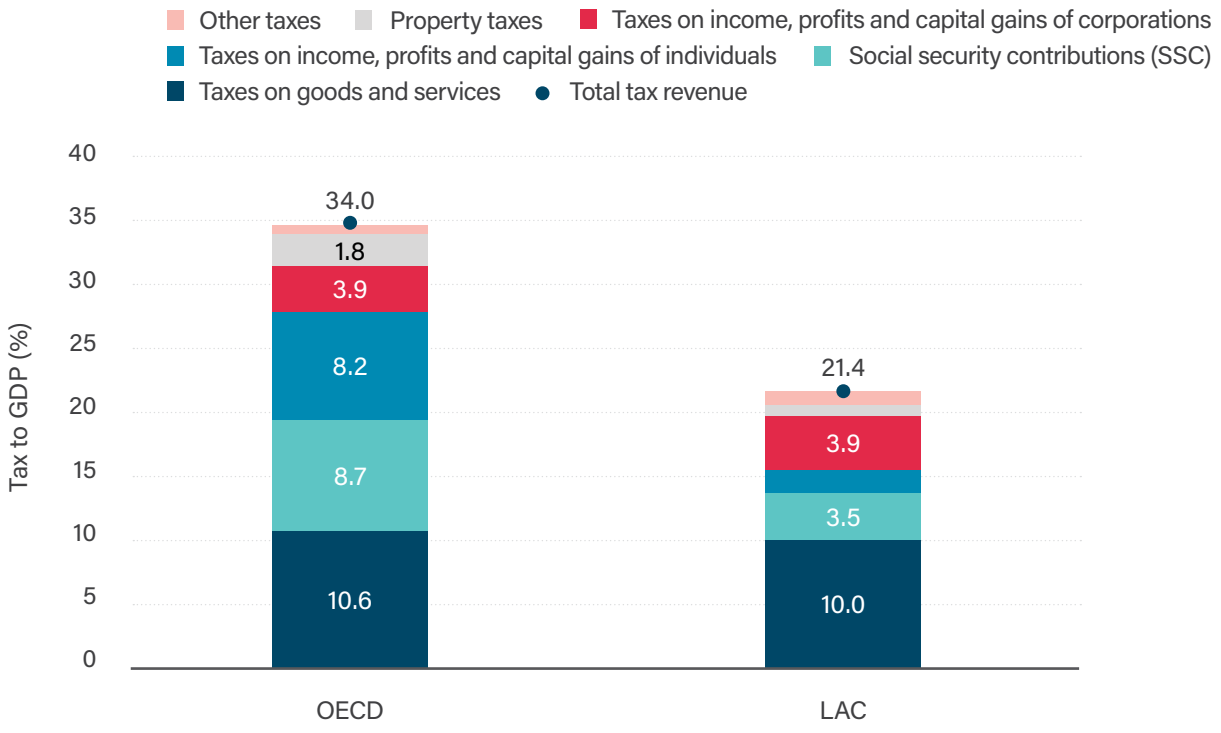
Note: Tax revenue as a percentage of GDP.

Source: Authors based on data from OECD (2024a).

Compared to advanced economies, corporate tax collection in LAC is roughly on par with OECD levels, with both averaging around 3.9 % of GDP. However, personal tax revenues show a marked difference: in the OECD, they represent 8.2 % of GDP, while in LAC they barely reach 2 % (Graph 5.11). This gap marks the missing pillar of LAC's tax system, a stronger direct taxation, limiting the equity and resilience of tax revenue.

LAC is characterized by low personal income taxes, which limit the ability of the region's countries to redistribute wealth. It also makes it more challenging to collect

Graph 5.11
Tax-to-GDP ratios, LAC and OECD averages, 2022



Note: Tax revenue as a percentage of GDP. OECD includes the 36 countries for which data was available.

Source: Authors based on data from OECD (2024a).

revenue from high-income segments. At the same time, imposing an excessive tax burden on businesses can deter formal investment and impede economic growth.

Nevertheless, there appears to be scope to enhance personal income taxation in the region. OECD (2025c) estimates of the tax wedge indicate that the OECD average is 34.9 %, while LAC countries remain substantially below this benchmark: 0 % in Colombia, 7.2 % in Chile, 20.9 % in Mexico, and 29.5 % in Costa Rica. These disparities indicate an opportunity to strengthen the progressivity and efficiency of tax systems in the region, thereby expanding fiscal space for social and productive investments without undermining economic incentives.

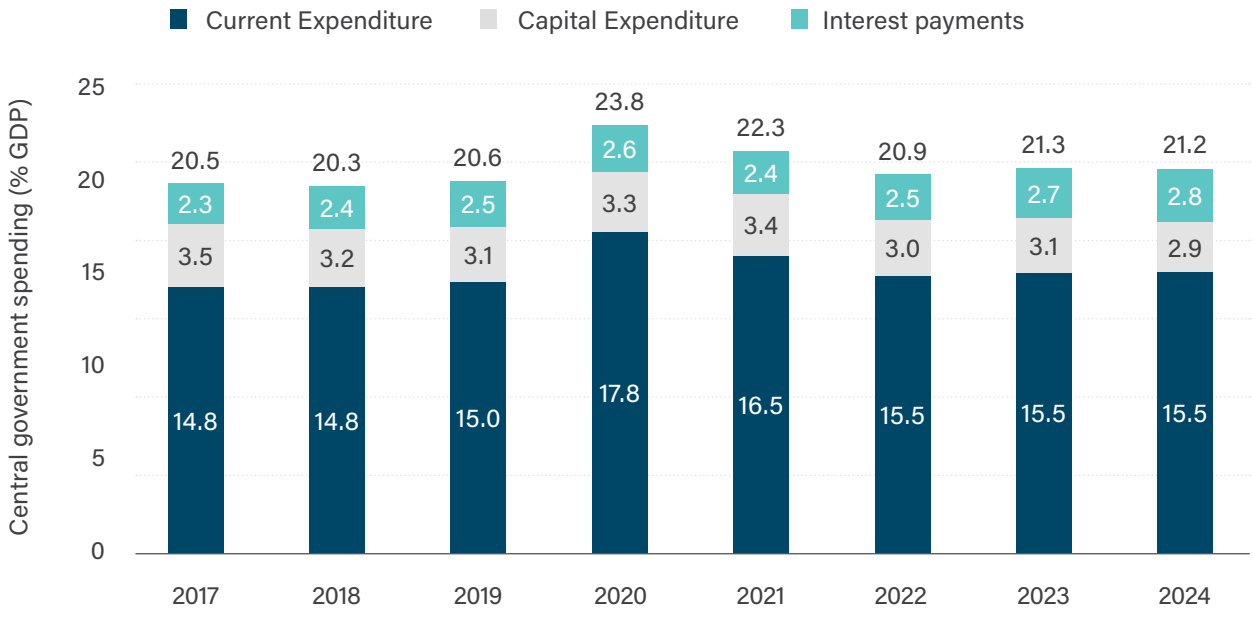
Finally, tax structure interacts negatively with the high degree of economic informality in the region (Ayres et al., 2025), since a large portion of economic activity escapes direct taxation. This reinforces reliance on consumption taxes, which tend to be regressive unless offset by effective compensatory mechanisms. In addition, persistent problems of tax evasion and avoidance, and the erosion of the tax base through numerous tax expenditures (exemptions, deductions, special regimes) often lack transparency and proven effectiveness, further undermining the system.

Public spending

The effectiveness of government budgets in promoting productivity and inclusive growth depends not only on how much is spent but also on what funds are allocated to and how efficiently they are used. In LAC, while overall spending levels appear stable, there is a worrying shift from capital investment toward current expenditures. In addition, significant efficiency losses further constrain fiscal capacity, especially as structural challenges such as an aging population, the climate crisis, and energy transitions become more pressing.

Between 2017 and 2024, central government spending in the region remained relatively stable, ranging between 20 % and 21 % of GDP, with a temporary spike in 2020 (23.8 %) as part of the fiscal response to the COVID-19 pandemic (Graph 5.12). The composition of spending shows a clear predominance of current expenditures—including wages, transfers, and intermediate consumption—which in 2023 accounted for approximately 82 % of total spending, compared with persistently low capital expenditure (OECD et al., 2024).

Graph 5.12
Central government spending by component, LAC average, 2017–2024



Note: Expenditure as a percentage of GDP.

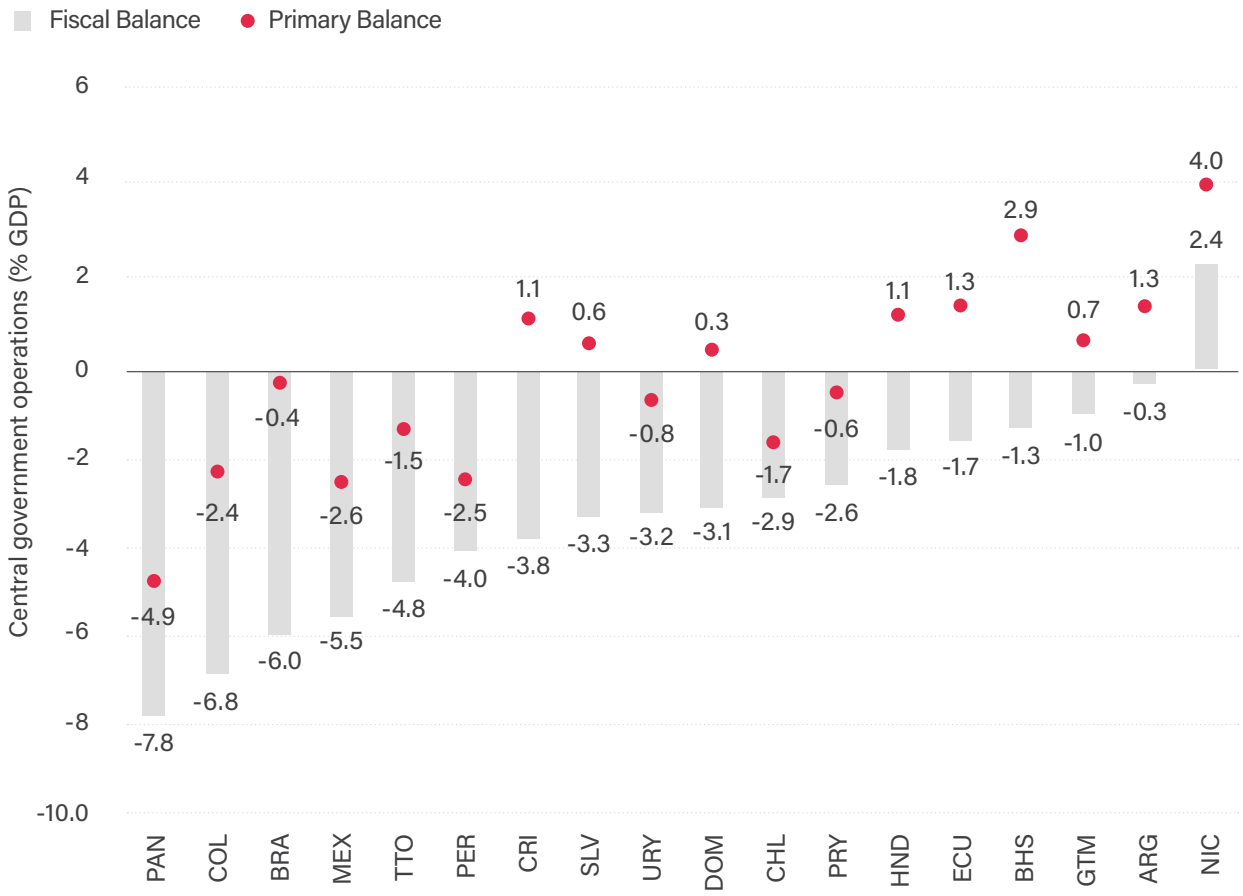
Source: Authors based on data from the ECLAC (2025).

This concentration of spending is accompanied by significant margins of inefficiency, estimated at around 4.6 % of regional GDP in 2022. These inefficiencies are concentrated in key areas such as public procurement, transfers (particularly regressive energy subsidies), and the public wage bill (Ayres et al., 2025). Furthermore,

fiscal space is increasingly constrained by structural budgetary rigidities, an aging population, unmet social demands, and the growing costs of climate change adaptation and mitigation.

Most of the countries in the region have overall fiscal deficits, with around half of them having primary surpluses (Graph 5.13). Three of the biggest countries in the region (Brazil, Mexico, and Colombia) are facing sizable fiscal deficits that, if not reduced, will create problems with the sustainability of their debt.

Graph 5.13
Primary and fiscal balance as a percentage of GDP, 2024



Note: Central government operations as a percentage of GDP.

Source: Authors based on data from ECLAC (2025).

These factors reflect an increasingly rigid budget allocation, leaving limited room to boost public investment and manage a growing debt service burden, which could undermine the state's capacity to support long-term, sustainable, and inclusive economic development.

According to Brichetti et al. (2021), the region needed to increase its infrastructure spending by 1.3 % of GDP compared to the 2008–2019 average to meet the SDGs by 2030. Data from 2020 onward show that investment has not converged to the required level, so the gaps persist and risk widening if investment does not increase.

Expanding fiscal space will be essential in light of demographic shifts expected to exert upward pressure on health and pension expenditures. The RED 2020 report provides estimates for selected countries in the region. These projections suggest that, between 2015 and 2065, public spending could rise by between 1 % and 8 % of GDP, depending on the country. However, it is important to note that subsequent census data indicate an acceleration of population aging, implying that the original estimates may understate the true magnitude of the fiscal challenge.

A further structural factor likely to heighten future financing requirements is the ongoing energy transition. Hydrocarbon-producing countries in the region derive a significant share of fiscal revenues from this sector. According to RED (2024), hydrocarbon-related revenues in LAC average 2.6 % of GDP, though with marked heterogeneity across countries—ranging from 0 % in Guatemala to 8.2 % in Ecuador.

Strengthening the efficiency of public expenditure is critical to creating fiscal space and enhancing the effectiveness of fiscal policy in the region. Although revenue collection remains relatively low, resource misallocation is substantial. Alaimo et al. (2018) estimate that LAC misallocates resources equivalent to 4.4 % of GDP, on average, with significant variation across countries—from 1.8 % of GDP in Chile to 7.2 % in Argentina. Addressing these inefficiencies would improve fiscal sustainability and enable governments to reallocate resources toward priority areas such as infrastructure, health, and education.

Public debt

As a result of persistent fiscal deficits and the extraordinary measures adopted to mitigate the impact of the COVID-19 pandemic, gross public debt levels in LAC increased significantly, reaching an average of 74 % of GDP in 2023 (IMF, 2025). While a slight downward trend in the debt-to-GDP ratio was observed between 2020 and 2022, projections point to a stabilization between 56 % and 63 % of GDP by 2026–2027 (Ayres et al., 2025). There is a large heterogeneity in the region, with some countries with a healthy debt level ratio of less than 40 % of GDP and others reaching 100 % of GDP (Graph 5.14).

Graph 5.14
General government gross debt as a percentage of GDP, 2024

Note: Red indicates countries with gross debt above 70 % of GDP, blue indicates debt between 45 % and 70 % of GDP, and green indicates debt below 45 % of GDP. (*) Estimates for 2024.

Source: Authors based on data from the *World Economic Outlook* (IMF, 2025).

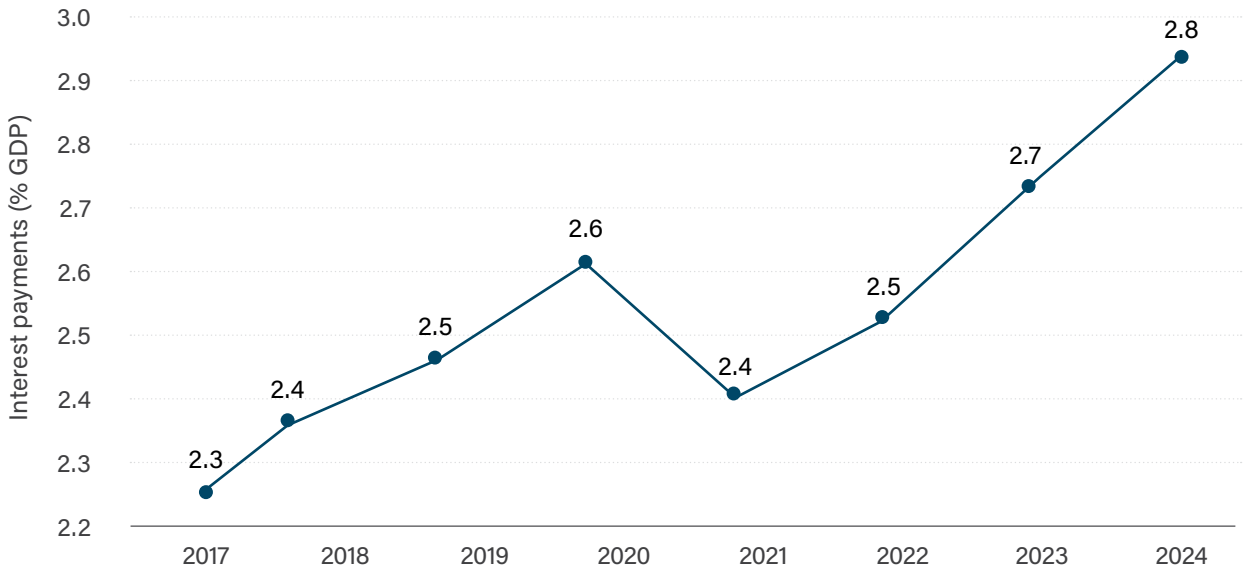
However, a growing factor of concern is the sustained increase in the cost of debt service. As shown by the evolution of interest payments as a percentage of GDP (Graph 5.15a), the regional average went from 2.3 % in 2017 to 2.8 % in 2024, marking an upward trend that puts pressure on fiscal sustainability frameworks. This increase in interest payments reduces the available fiscal space by displacing resources that could be allocated to productive investment or priority social spending (IMF, 2025b).

In some countries, interest payments have doubled education spending or tripled health spending, highlighting the severe constraint that debt imposes on development priorities. This situation also increases the vulnerability of public finances to external shocks, such as rising international interest rates or exchange rate depreciations.

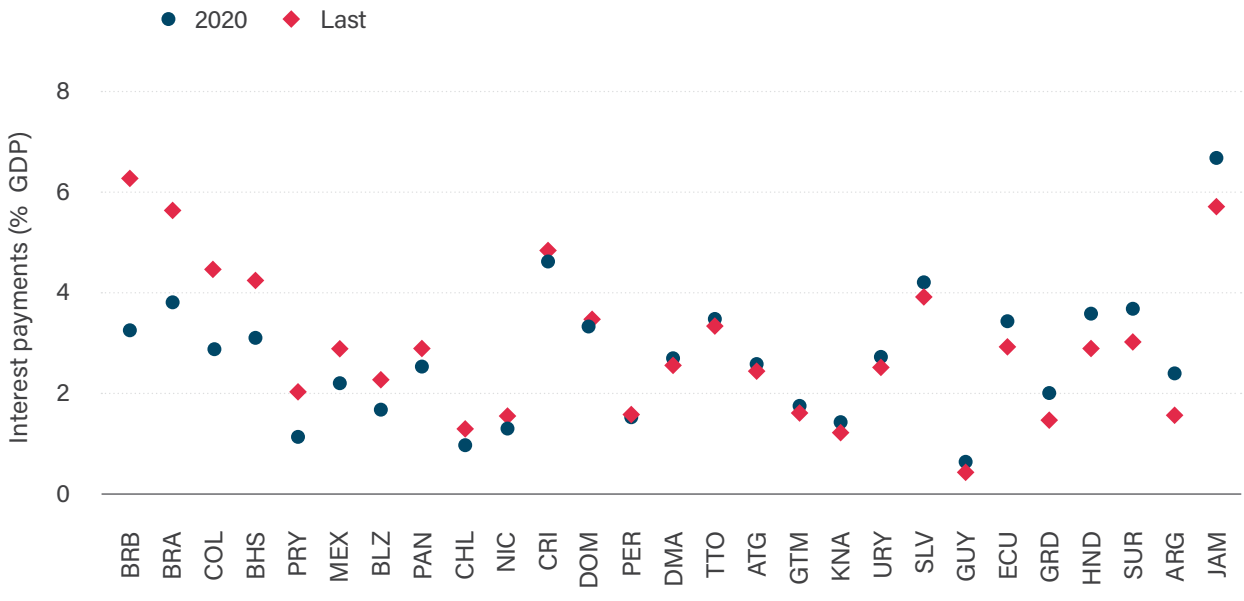
The role of international interest rates in the coming years is a significant issue in the fiscal accounts of LAC countries. The U.S. Fed's benchmark interest rate had remained low since the 2008 crisis, with long periods of interest rates near zero and a period of rate adjustment that raised it to 2.4 % in 2019. Due to the pandemic, the rate returned to near-zero levels until 2022. According to FED projections (Federal Reserve, 2025), the outlook for the future shows an expected long-term interest rate of 3 % for 2028 and beyond (higher rates for 2025, 2026, and 2027). Therefore, all new

Graph 5.15
Interest Payments in LAC

Panel A. LAC: Interest payments trend



Panel B. Interest payments by country, 2020–2023/2024



Note: Panel A: Interest payments as a percentage of GDP, Regional Average. Panel B: The last available year is 2024 for most countries; for Antigua and Barbuda, Barbados, Belize, Dominica, Grenada, Guyana, Jamaica, Saint Kitts and Nevis, and Suriname, the last available year is 2023.

Source: Authors based on data from ECLAC (2025).

debt and debt renewals taken on during the long period of low interest rates will, for most countries, be placed at higher rates, further pressuring the interest account and reducing fiscal space.

Paraguay issued sovereign bonds with maturities of up to 10 years totaling USD 3.2 billion between 2016 and 2021, at a weighted average interest rate of 4.33 %. In 2023 and 2024, the country issued two additional 10-year bonds, partly to refinance the 2026 maturity (bearing a 5 % coupon), at an average rate of 5.95 %, notwithstanding a steady improvement in its credit ratings over time. Should Paraguay refinance the debt issued during 2016–2021 with new 10-year bonds at an assumed rate of 5.5 %, the weighted average interest cost of this debt would rise by 27 %—from 4.33 % to 5.5 %. Such an increase represents a significant additional burden, constraining the government's fiscal space and limiting its capacity to expand spending in other priority areas.

Overall, the combination of low tax collection, rigid and inefficient public spending, and high levels of debt and debt service severely limits fiscal space for most LAC countries. This situation creates a potentially vicious cycle: scarce resources limits investment in key areas for growth and resilience (infrastructure, innovation, climate adaptation, human capital); the resulting low growth hinders efforts to improve fiscal accounts and reduce debt; and fiscal and economic vulnerability increases exposure to shocks (climate, economic, financial), which, when materialized, further erode fiscal space and response capacity, perpetuating the cycle.

Breaking this dynamic requires not only ambitious domestic fiscal reforms, but also a rethinking of international cooperation and the global financial architecture to support the region's investment needs, including innovative climate finance and debt relief mechanisms.

Fiscal policy at the subnational level

CAF's 2025 Report on Economic Development (Alves et al., 2025) analyzes how subnational governments in LAC finance their activities through own-source revenues and intergovernmental transfers. On average, 58 % of subnational income comes from transfers and 42 % from local revenues, although the composition varies significantly across countries. The report's central message is that higher own-revenue collection is positively associated with better public spending quality, as the link between tax payment and political participation strengthens accountability and improves the efficiency of public service delivery. Nonetheless, fiscal decentralization also carries risks: it may exacerbate inequalities between wealthier and poorer regions, generate administrative inefficiencies, and foster "race-to-the-bottom" tax competition among jurisdictions.

The report identifies two main policy goals. The first is to enhance subnational tax collection, which currently faces a complex system characterized by distortionary levies, high evasion, and arrears. Key opportunities include reducing the reliance on gross sales taxes, strengthening property taxation, expanding the role of emerging

taxes, and leveraging digital tools to promote voluntary compliance. The report also underscores the importance of greater coordination and cooperation between national and subnational tax authorities to harmonize policies, share information, and benefit from economies of scale—such as through joint cadastral systems or unified digital tax platforms.

The second goal is to improve the design of intergovernmental transfer systems to make them more efficient, equitable, and transparent. While transfers help mitigate regional disparities, they can also discourage local tax effort and fuel excessive subnational spending and debt accumulation. The report highlights that transfer mechanisms should guarantee funding for devolved responsibilities, reduce territorial inequality, and preserve incentives for fiscal effort and administrative capacity-building. A particular focus is given to resource-based royalties, which tend to have a limited impact on welfare and are highly volatile; thus, they should be governed by clear rules and stabilization funds. The authors conclude that reforming transfer systems involves both technical and political challenges, as such reforms alter intergovernmental power relations and require a broad consensus to ensure long-term sustainability.

Sustainable and innovative financing: Instruments and markets

Given the limitations of traditional fiscal space, the mobilization of private resources and the development of innovative and sustainable financial instruments are crucial to financing LAC's productivity and development agenda.

Optimized tax policy

The fiscal situation in LAC requires significant adjustments to improve both the business climate and the social conditions of its population. Beyond the recurrent calls for greater spending efficiency and improved revenue mobilization, several priority areas emerge. Increasing tax revenues appear essential given rising public debt levels and higher international interest rates, which are projected to remain above those observed during the 2008–2022 period. At the same time, the region continues to exhibit a tax structure characterized by relatively high corporate tax rates and comparatively low personal income tax rates. A more balanced approach would involve reducing the corporate burden to foster investment while offsetting this adjustment by increasing personal income taxation, which remains well below OECD averages.

Enhancing personal income tax collection is not merely a question of increasing tax rates. LAC is characterized by high exemption thresholds, elevated income levels required to apply higher marginal rates, and widespread tax evasion. In the region, individuals become subject to income taxation only when their earnings exceed 1.4 times GDP per capita, compared to 0.31 times in Europe. Furthermore, exemptions

and deductions reduce the effective revenue from this tax by up to 40 % (Álvarez et al., 2020). Potential reforms could focus on broadening the tax base by reducing informality, curtailing exemptions and deductions, and revising exemption thresholds and other structural elements of the tax system.

Although the political economy of tax reform is complex, the current context of rising public debt and narrowing fiscal space underscores the urgency of implementing such measures. If changing the tax code is not politically feasible, there is also a lot of potential for improvements in fiscal space by spending better. According to the 2025 Fiscal Monitor Report (IMF, 2025a), reallocating inefficient public expenditures toward more productive sectors can substantially enhance economic growth. Furthermore, the persistence of significant efficiency gaps in public spending indicates considerable untapped potential for improving economic performance through more effective allocation and utilization of fiscal resources (Table 5.1).

Table 5.1
Policies to foster economic growth without expanding overall expenditure

Reallocation type	Example action	Long-term output gain	Notes
Infrastructure Investment	+1 % of GDP to infrastructure (keeping total spending fixed).	+1.5 % in advanced economies+3.5 % in emerging & developing economies.	Boosts physical capital and productivity.
Education (Human Capital)	+1 % of GDP shifted from government consumption (e.g., admin costs) to education.	+3 % in advanced economies+6 % in emerging & developing economies.	Improves human capital and innovation capacity.
Efficiency Gains	Closing spending efficiency gaps.	+1.5 % (advanced) +2.5–7.5 % (emerging & developing)	Amplifies the benefits of reallocation.
Complementary Policies	Combine investments in R&D + education (advanced) or infrastructure + education (developing).	Further boost beyond the above figures.	Synergistic effects.

Source: Fiscal Monitor (IMF, 2025a).

Property taxation also offers substantial potential for revenue mobilization in the region. In addition to its inherently progressive design, property tax is closely linked to the provision—or absence—of local public services, thereby creating stronger social demand for improved governance and accountability. Equally important is the need to deepen the understanding of "tax morale." In a context marked by high levels of informality, the intrinsic motivation to comply with tax obligations becomes crucial. Empirical evidence associates higher tax morale with the perceived quality of public services, the effectiveness of educational policies, targeted oversight of groups with high tax evasion, and overall trust in government institutions. Leveraging these mechanisms in a strategic manner can enhance revenue generation without requiring further adjustments in statutory tax rates.

At the subnational level, the latest RED report (Alves et al., 2025) highlights several key recommendations. These include reducing reliance on gross sales taxes, strengthening property tax collection, and granting a greater role to emerging tax instruments. In addition, subnational governments should adopt new tools to encourage voluntary compliance and improve coordination and cooperation with national authorities in the design and implementation of tax policy. Together, these reforms could strengthen the fiscal position of both national and subnational governments, supporting more sustainable growth and better social outcomes.

GSS+ financing

To finance sustainable development, it is key to leverage debt instruments such as green, social, sustainable, and sustainability-linked (GSSS) bonds, catastrophe bonds (CATs), debt-for-nature/climate adaptation swaps, and natural disaster clauses. GSSS bonds mobilize sustainable investment and capital markets. CAT bonds increase borrowing capacity by transferring risk to investors, while natural disaster clauses align debt obligations with resilience. Debt-for-nature/climate adaptation swaps are important for indebted biodiverse countries. As these instruments are used, improved regulation and supervision are vital to ensure their effectiveness and reduce risks.

While GSSS bonds represent a small portion of the global market, they are growing. They represent 1 % of total outstanding assets and 2 % of new issuance (OECD, 2022b, 2024d). In LAC, however, GSSS bonds have proven to be an important source of financing, as in 2020, 9.3 % of total international bonds issued in the region had this characteristic, and by 2023, this figure had increased to 35 %(ECLAC, 2024; OECD, 2024d).

One of the greatest challenges to advancing GSSS financing is establishing mechanisms that align private flows with development objectives in a sustainable way. This entails improving and harmonizing regulatory frameworks; better channeling public policies and foreign investment toward areas of productive transformation, including EU financing through the GGIA; and providing the region with the tools to meet its objectives by 2030.

Greater coordination is needed between the actors of the international financial system, particularly multilateral development banks and development finance

institutions of developed and emerging economies, in order to maximize the coherence and effectiveness of limited financial resources, it is necessary to utilize both public and private flows, leveraging the strengths of different actors and providing integrated financing options to the region. LAC can improve its financing prospects by promoting innovative development partnerships with private actors (e.g., philanthropic providers) and leveraging international financing flows with different developing countries. Ensuring that these private and public flows are used for quality investments requires a solid and enabling environment, with clear regulatory frameworks for investment. Strategic partnerships (e.g., with the EU) offer opportunities, for example, to harmonize sustainable taxonomies and mobilization instruments aimed at achieving more sustainable development.

Likewise, it is key to promote international partnerships to advance financing solutions that leverage the region's strengths, including its rich natural environment and renewable energy potential. Debt instruments to finance the sustainable development agenda can address some of the region's most pressing challenges, such as debt overhang, climate catastrophes, and the risk of biodiversity loss. Effective cooperation to develop such instruments and adapt them to meet the region's needs can overcome some of the shortcomings of preexisting financial instruments. Effective implementation of these instruments requires improved regulation and supervision to enhance governance and capacity development.

Finally, a big concern in this area is "greenwashing," where financial products are labeled as environmentally friendly without substantial evidence. This concern draws a parallel with historical economic skepticism around debt-for-equity swaps. Notably, Bulow and Rogoff (1989) analyzed such financial instruments, highlighting concerns about their ultimate value and real benefits, which is relevant today as similar scrutiny now applies to green finance products.

Evidence suggests that greenwashing can significantly undermine the credibility and effectiveness of green finance initiatives. For instance, the European Commission's Action Plan on Financing Sustainable Growth calls for transparency and credibility in green finance through standardized criteria (European Commission, 2018). Such frameworks are essential to verify the environmental impacts associated with financial products. For green finance to succeed, it must be anchored in rigorous scrutiny and management.

Natural resources and stabilization funds

Revenues from hydrocarbon and mineral exploitation have become increasingly important in public finances in the region, rising from 18 % to 35 % of budgets for major producers following the price boom of the mid-2000s (Sanguinetti et al., 2012), and have maintained a strategic role even in lower price scenarios. Beyond commodity price cycles, the energy transition poses structural risks to public finance and the financial system. Scenarios consistent with a 2°C increase in global temperature suggest that some reserves may remain unburnable and the potential for stranded assets, which could increase fiscal vulnerability for hydrocarbon producers.

In LAC, energy activities account for a larger share of GDP than in advanced economies, mainly due to hydrocarbons, oil in Venezuela, Colombia, and Ecuador, and gas in Bolivia and Trinidad and Tobago. Hydrocarbon revenues already exceed 8 % of GDP in Ecuador, 5 % in Guyana and Trinidad and Tobago, and more than 4 % of GDP across the region. The fiscal, external, and price-stability impacts of the energy transition will vary by country group: hydrocarbon-dependent exporters (Bolivia, Ecuador, Trinidad and Tobago, Venezuela) face the sharpest compression of rents; mixed producers (Argentina, Brazil, Colombia, Mexico, Peru) have lower direct fiscal exposure; and non-producers divide between those with high renewable potential, able to benefit via import substitution (Chile), and import-dependent economies, including several Caribbean islands, that are more exposed to supply and price risks (Álvarez et al., 2024).

At the subnational level, royalties from non-renewable natural resources (NRNR) are essential in Andean countries, Argentina, Brazil, and Mexico, reaching up to 60 % of regional government revenues in Bolivia and 35 % for local governments in Peru (Alves et al., 2025). These revenue sources offer the potential to expand fiscal space, finance infrastructure, improve public services, boost growth, and reduce inequalities. The way these rents are distributed poses significant challenges. Concentrating them in producing jurisdictions helps offset costs and environmental impacts, but creates inequalities with non-producing jurisdictions. Some countries, such as Colombia, have moved from producer-focused approaches to more redistributive models (Alves et al., 2025).

While hydrocarbon rents face structural challenges, the region also holds essential minerals for the energy transition, such as copper (Chile, Peru), lithium (Argentina, Bolivia, Chile), silver (Mexico, Peru), and nickel (Brazil, Colombia). These can partly offset hydrocarbon declines (Álvarez et al., 2024). Good governance should encourage the responsible development of these minerals and natural gas as a transition fuel, avoiding blockages by local governments. However, since their revenue does not come from taxes, royalties can reduce fiscal effort and accountability, limiting their impact on services and the well-being of the population.

The high dependence on extractive rents represents another substantial challenge that can weaken the fiscal link between the state and citizens, since financing that does not rely on a broad tax base reduces incentives to demand transparency and quality in spending. Price volatility hampers planning and encourages procyclical spending, while the opacity and complexity of certain tax regimes hinder public oversight and facilitate capture by interest groups. In weak institutional contexts, these rents can intensify distributive conflicts and clientelist practices. Added to this is the need to improve the targeting and transparency of public service subsidies to ensure their sustainability.

Evidence (Sanguinetti et al., 2012) shows that greater reliance on these revenues is associated with lower budget transparency. Although resource-rich countries invest more in physical and human capital, they do not always achieve improvements in spending efficiency in key sectors such as education and health. At the subnational level, studies in Brazil and Peru confirm that municipalities benefiting from

hydrocarbon or mining revenues register higher levels of total spending and investment, but without significant improvements in quality of life indicators such as housing, infrastructure, schooling, or health.

To address volatility and ensure more efficient use of these resources, several countries have adopted stabilization funds and fiscal rules that seek to smooth spending and promote intergenerational savings. Among the successful experiences is Chile, which combines a Structural Balance Rule with two sovereign wealth funds integrated into the budget and with clear rules for contributions and withdrawals, which has provided credibility and stability to fiscal policy. Mexico, for its part, strengthened its Oil Revenue Stabilization Fund through a fiscal responsibility law, improving credibility and containing procyclical spending.

However, other cases show limitations. In Colombia, the Oil Savings and Stabilization Fund was not fully integrated into the budget, which allowed for parallel borrowing and led to its dismantling; in Trinidad and Tobago, the stabilization fund operates with quantitative rules but has had limited countercyclical impact; and in Ecuador and Venezuela, the multiplicity of funds and frequent rule changes have reduced their effectiveness. The Venezuelan case is particularly problematic due to the operation of FONDEN, a discretionary off-budget fund managed without independent auditing (Sanguinetti et al., 2012).

Regional and international experience shows that the success of these mechanisms depends on transparency in their management, full integration into the budget, clear and stable rules that limit discretionary use, and effective institutional checks and balances to prevent political capture. It is essential to align the incentives of those who decide on resource allocation so that they prioritize the long-term and the well-being of the population. Ultimately, abundant natural resources do not in themselves guarantee greater well-being or better fiscal management; transforming them into sustainable development requires solid fiscal frameworks, citizen oversight, and an institutional design that converts natural wealth into real improvements in productivity, equity, and macroeconomic stability.

The multilateral development bank as a catalyst for development

The multilateral development bank acts as a catalyst for sustainable development in LAC. In addition to providing resources, its participation reduces information asymmetries, mitigates risks, and attracts public and private capital to high-impact projects. As infrastructure, climate, and social cohesion gaps require unprecedented investments, it is essential to align the actions of the main multilateral development banks (MDBs) with those of new thematic funds, subregional banks, and bilateral partners to multiply the impact of their investments.

Multilateral financing for LAC remains concentrated in a few actors (IDB, CAF, CABEI, World Bank, EU), yet the number of active organizations increased from eight in 2002

to 40 in 2022. This increase is driven by new, highly specialized funds emerging to mitigate specific crises (such as COVID-19) or in sectors such as climate change. The diversity of actors can be positive if effective coordination and productive specialization are achieved (OECD, 2024d).

Multilateral institutions not only provide greater financing to governments, but also lead the mobilization of private capital for large-scale infrastructure, using instruments such as syndicated loans (33.7 % vs. 8.8 %) and direct investment in companies and special-purpose entities (30.4 % vs. 22.3 %) more intensively than bilateral providers (OECD, 2024d), in addition to promoting investments in global public goods that improve sustainability and reduce poverty, although they remain undervalued and in short supply.

Empirical evidence (Avellán et al., 2022) shows that the presence of an MDB in a subsector can mobilize additional resources equivalent to 0.5 % of trend GDP over three years, with an estimated multiplier of 4.4. This implies that for every dollar invested in infrastructure, more than four additional dollars can be channeled from third parties. These effects are stronger in low- and lower-middle-income countries and those with lower perceived government effectiveness, but are reduced in contexts of high political instability or with strong capital controls.

The coordination between multilateral development banks, bilateral agencies, and partners such as the EU allows for the combination of financial resources, technical expertise, and various instruments (loans, guarantees, grants, bonds). It is key to strengthen cooperation governance, promote policy coherence, and leverage South-South and triangular cooperation. Collaborations can reduce financing costs and improve alignment with national and regional sustainable development agendas.

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6

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Chapter 6.

STRATEGIC PARTNERSHIP BETWEEN LATIN AMERICA AND THE CARIBBEAN AND THE EUROPEAN UNION: OPPORTUNITIES TO CLOSE GAPS AND PROMOTE SUSTAINABLE DEVELOPMENT

Frisancho, Verónica | Finkelstein, Martín

Summary

The evolving geopolitical landscape presents a complex global environment where regions like Latin America and the Caribbean (LAC) must strategically adapt. This shift emphasizes economic nationalism, challenging longstanding multilateral commitments and potentially destabilizing global trade dynamics. As multilateral relations transform, LAC faces mounting pressure to tackle internal challenges such as productivity growth, fiscal deficits, and inflation while leveraging inherent advantages. These include diversified trade partnerships, rich natural resources, and extensive experience in economic crisis management. By broadening trade with regions like Europe and Asia, reducing reliance on traditional partners, and advancing regional integration, LAC can mitigate risks linked to global uncertainties and bolster economic resilience.

The European Union (EU) stands out as a crucial partner for LAC, offering a stable market with inclusive trade agreements grounded in shared priorities like labor rights, environmental sustainability, and democratic values. The EU's commitment to sustainable development, exemplified by the European Green Deal, creates new opportunities for LAC to join global initiatives that prioritize climate neutrality and sustainability. Joint initiatives in technology, renewable energy, and sustainable agriculture can help advance LAC's development goals while minimizing environmental impact. The EU's investment initiatives, including its Global Gateway strategy and support for digital transformation and infrastructure projects, further underscore the prospect of a mutually beneficial partnership. By fostering comprehensive cooperation, both regions can address shared challenges, enhance socio-economic growth, and strengthen their global influence.

Strengthening a LAC–EU partnership: Why now?

Since his first term, Donald Trump has pursued an "America First" strategy, emphasizing the protection of U.S. economic and political interests over multilateral commitments. This approach, revived at the start of his second term, aims to safeguard strategic industries, reduce bilateral trade deficits, strengthen border control and immigration policies, and combat drug trafficking. It also seeks to limit China's influence and decrease dependence on external supply chains, reflecting a shift toward a more unilateral and nationalistic foreign policy that prioritizes sovereignty and economic protectionism over international alliances.

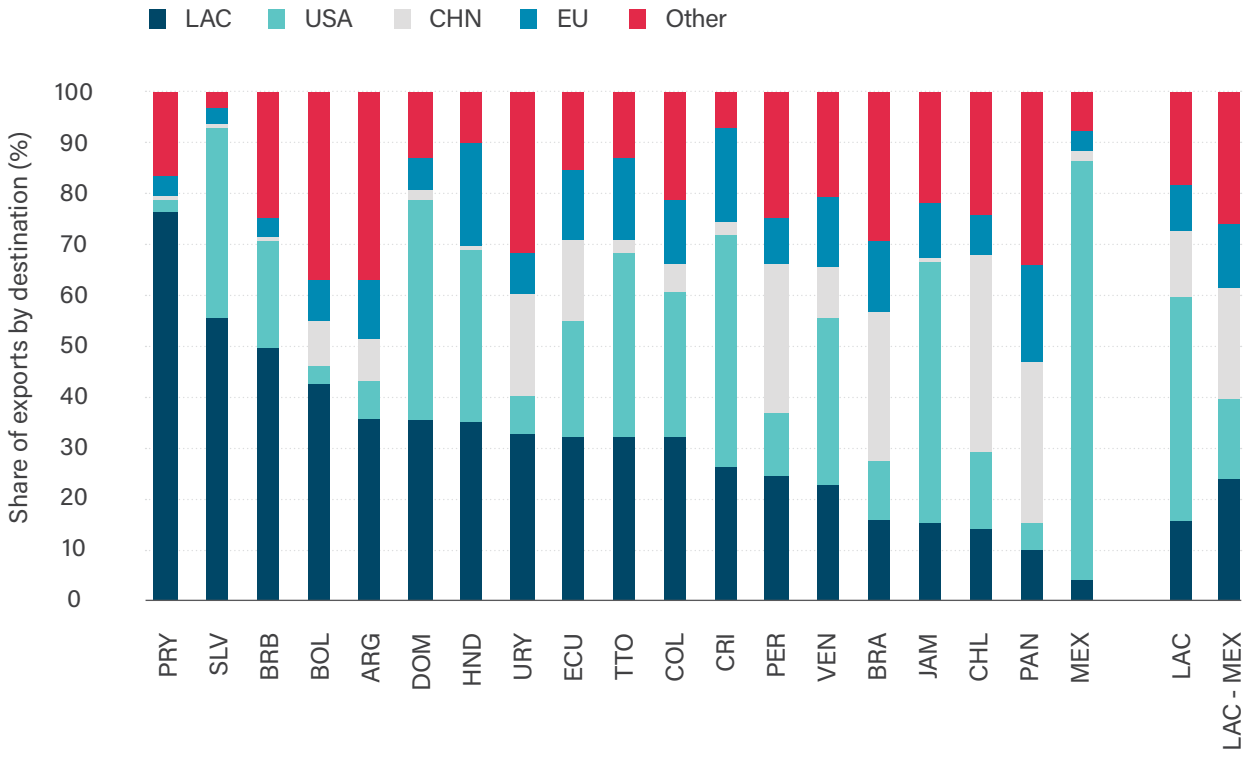
While Washington's policy shift remains an evolving process with uncertain outcomes, there are already signs of a move toward a more fragmented global environment. This represents a paradigm shift from the model of economic integration that has dominated since the mid-20th century, with structural implications that could be far-reaching in the long run. As a result, the current international environment is characterized by deep polarization, widespread uncertainty, and increasing protectionist sentiments. These trends threaten global trade and economic stability, complicating the policymaking landscape for many nations. Notably, the Public Policy Uncertainty Index reached its highest point since 2014 in April 2025, surpassing even the record levels seen during the peak of the pandemic (Policy Uncertainty, 2025).

This heightened uncertainty underscores the urgency for regions like Latin America and the Caribbean (LAC) to strategically navigate evolving global dynamics. LAC faces these global challenges while managing a demanding domestic agenda, aimed at boosting productivity, promoting sustainable growth, integrating traditionally excluded populations, and closing persistent domestic and regional development gaps, while grappling with ongoing inflation, substantial fiscal deficits, elevated public debt, and low levels of national savings (Álvarez et al., 2025). However, LAC as a bloc can capitalize on some advantages that could help it navigate these uncertain waters. In fact, in some cases, existing weaknesses such as low external openness and dependence on commodity exports can become sources of strength in the current setting.

First, although still highly dependent on the United States and China, many LAC countries have diversified their trade relations with new markets in Asia, Europe, and Africa, reducing vulnerability to tensions in major economies. This provides a certain resilience against escalations in protectionism and trade conflicts. Graph 6.1 shows that, on average, 44% of LAC's total good exports go to the US and 12% to China. However, if Mexico is excluded from the analysis, China becomes the most important partner for the region: 22% of goods exports go to China, while only 16% go to the US. Graph 6.1 also highlights that several countries are quite insulated against trade shocks coming from the US (e.g., Bolivia, Argentina, Paraguay, Uruguay, Peru, Brazil, Chile, and Panama). LAC has also diversified its dependence on foreign direct

investment (FDI) by expanding its sources across multiple countries (see Box 6.1). Instead of relying heavily on a few dominant investor nations, the region has attracted capital from a broader range of foreign markets, reducing vulnerability to economic or political shifts in any single source country. This diversification in the country flows strengthens regional resilience, ensuring more stable investment inflows.

Graph 6.1
Goods exports by destination (% of total)



Note: The data corresponds to the final destination of exports, including for landlocked countries. The value of exports is the simple average between 2021 and 2024.

Source: Authors based on IMF (2024).

Second, the region has great potential for regional and global integration. LAC remains relatively isolated in terms of trade integration. In most countries, exports account for less than 20% of GDP, much lower than in regions that are more integrated into global trade, such as ASEAN, where this proportion exceeds 60%. This low level of external openness restricts the region's ability to harness economies of scale and strengthen its global negotiating position. For instance, LAC does not engage with Europe as a unified bloc. This fragmentation diminishes LAC's collective influence in global trade negotiations. In the case of the EU, the lack of regional integration further complicates efforts to secure favorable terms and deepen cooperation.

The region has made progress in creating free trade areas and regional agreements, such as the Pacific Alliance, which offer a platform to strengthen negotiating positions and reduce dependence on external blocs during uncertain times. The ratification of the EU–Mercosur agreement also emerges as a critical step toward strengthening the LAC–EU partnership, fostering greater regional cohesion, and enhancing the region's negotiating position in global trade discussions. Argentina, Brazil, and Mexico's participation in the G-20 may increase the region's leverage in shaping global discussions.

Third, LAC is abundant in natural resources. The region holds a considerable abundance of natural assets, including a vast concentration of critical minerals such as lithium, copper, nickel, and cobalt, among others, as well as significant comparative advantages in renewable energy production (Allub et al., 2024). This natural endowment positions many of the region's countries as potential key players in emerging global value chains linked to the transition toward a low-carbon economy. LAC is also considered the "pantry of the world" due to its vast agricultural resources and capacity to produce a significant share of the world's food supply. The region's extensive exports of grains, fruits, coffee, and other crops underscore its critical role in ensuring global food security (Brassiolo et al., 2023).

Lastly, the region's experience in managing crises remains one of its key advantages. In the coming years, LAC will need to navigate multiple political and economic obstacles —but neither the challenges nor the agility required to overcome them are new. Governments across the region responded to the economic disruptions caused by the COVID-19 pandemic with remarkable speed and adaptability, underscoring their institutional capacity to act under pressure. In studying events in Brazil, Chile, Colombia, Mexico, and Peru, García and Gimeno (2024) highlight how these governments successfully navigated periods of high inflation. As Palazzo et al. (2024) note, the region has implemented numerous stabilization plans with varying degrees of success. This legacy uniquely equips the region to confront future difficulties with informed judgment and resilience.

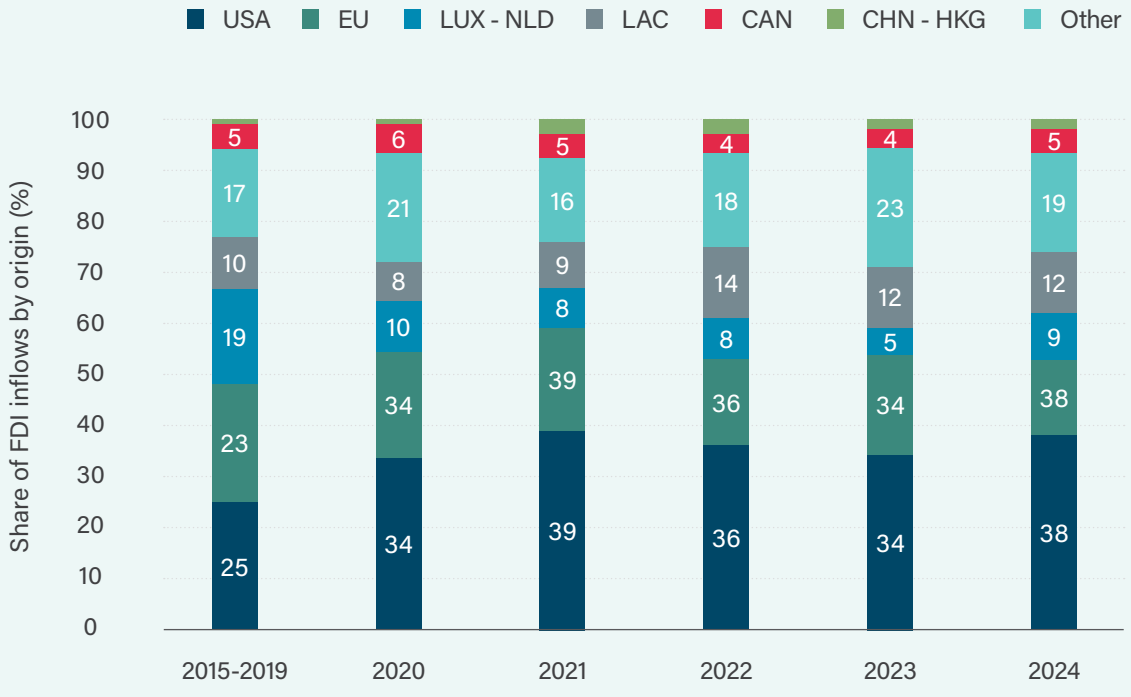
Box 6.1 Foreign Direct Investment in LAC

Foreign Direct Investment (FDI) received by each country is generally correlated with the size of its economy. In LAC, Brazil is the largest recipient of FDI, in terms of total volume, followed by Mexico. As a result, trends and dynamics in regional aggregates largely depend on developments in these two countries. Unfortunately, 2023 was a challenging year for FDI in the region, largely due to declines in both Brazil and Mexico compared to 2022. From a sector perspective, services receive the highest inflows of FDI in the region, followed by manufacturing, with natural resources ranking third. Manufacturing saw a significant increase, primarily driven by the performance of Mexico and Central American countries, whereas Brazil saw a decline in this sector.

Despite the challenges and the significant role FDI plays in shaping development trajectories across countries, LAC has been smart in diversifying its sources of investment, avoiding dependence on any single country at the regional level (see Graph 6.2). From 2020 to 2024, the United States represented the main source of foreign direct investment in the region, consistently accounting for more than 34%. Based on data from ECLAC (2024b), these flows were largely directed toward Brazil and Mexico, with Colombia also attracting a substantial share.

The European Union (EU) has been another major contributor, with flows ranging from 15% to 23% (Graph 6.2). Within the EU, Spain stands out as one of the main contributors of FDI in multiple countries in the region, including Argentina, Bolivia, and Colombia, among others. Canada also plays a key role, accounting for approximately 5% of regional FDI, with a strong presence in Chile. Intra-regional investments, largely driven by Brazil, made up 8% to 14% of total FDI flows.

Graph 6.2
Distribution of FDI inflows to LAC, by origin, 2015 to 2024



Note: The LAC aggregate includes 14 countries: Argentina, Bolivia, Brazil, Colombia, Costa Rica, Dominican Republic, Ecuador, El Salvador, Guatemala, Guyana, Honduras, Mexico, Nicaragua, and Trinidad and Tobago.

Source: Authors based on ECLAC (2024a).

China appears to play a relatively minor role in FDI participation in the region. However, multiple studies, including ECLAC (2021), acknowledge that a large portion of Chinese investment flows to the region actually comes from countries like Luxembourg or the Netherlands. This could lead to an underestimation of China's actual presence in the region.

FDI stocks show key heterogeneities within the region. The EU is a major source of investment, particularly in South America. The US not only plays a dominant role regionally but is also the main investor in several countries, including Costa Rica, the Dominican Republic, and Mexico. Finally, intraregional investment carries significant weight in some Central American countries, notably El Salvador, Guatemala, Honduras, and Panama.

FDI flows are inherently volatile. Data from UNCTAD (2025) indicate that, following the downturn in 2023, the regional decline persisted into 2024. Additionally, some countries that had previously experienced increases in FDI, such as Argentina, faced a significant drop in 2024. Given the rising global uncertainty and polarization, it is crucial, both regionally and at the country level, to continue diversifying investment sources. The objective should be not only to attract FDI inflows but also to avoid excessive reliance on any single country or region. A diversified investment portfolio enhances resilience and helps countries better navigate future shocks.

LAC has the political and diplomatic support framework needed to promote a more coordinated and autonomous stance vis-à-vis major powers, defending regional interests in the global arena. The region already draws on the experience of well-established actors like CELAC, UNASUR, and regional multilateral organizations such as CAF (see Table 6.1). This institutional strength provides a foundation for coordinated diplomacy and collective action, enabling countries to negotiate more effectively and assert their priorities on the international stage. By leveraging these platforms—and despite regional heterogeneities—LAC could move toward greater strategic independence and influence, shaping global policies that reflect regional interests and values.

Yet the region remains far from exercising collective negotiation capacity, and its potential for cooperation, coordination, and integration is largely untapped. It continues to rely on bilateral relations with specific countries or blocs, limiting its influence in multilateral forums and its ability to defend shared interests. Political, economic, and social fragmentation hinders the development of joint strategies that could amplify the region's voice on key issues like trade, climate change, migration, or digital governance. This low level of integration also weakens opportunities for economies of scale, exchange of good practices, and the building of shared agendas to foster sustainable and inclusive growth. LAC's weak negotiating position, combined with low levels of intra-regional trade and political fragmentation, has stalled progress toward stronger ties with the EU.

Table 6.1
Intra-regional alliances and organizations

Country	OEA	OECO	AEC	OCTA	ALADI	PrMeso	Mercosur	AdeIP
Antigua and Barbuda	*	*	*					
Argentina	*		*		*		*	
Bahamas	*		*					
Barbados	*		*					
Belize	*		*			*		
Bolivia	*			*	*		*	
Brazil	*			*	*		*	
Canada	*							
Chile	*				*			*
Colombia	*		*	*	*	*		*
Costa Rica	*		*			*		
Cuba			*		*			
Dominican Republic	*		*			*		
Dominica	*	*	*					
Ecuador	*			*	*			
El Salvador	*		*			*		
Grenada	*	*	*					
Guatemala	*		*			*		
Guyana	*		*	*				
Haiti	*		*					
Honduras	*		*			*		
Jamaica	*		*					
Mexico	*		*		*	*		*
Nicaragua						*		
Panama	*		*		*	*		
Paraguay	*				*		*	
Peru	*			*	*			*
Saint Kitts and Nevis	*	*	*					
Saint Lucia	*	*	*					
Saint Vincent and the Grenadines	*	*	*					
Suriname	*		*	*				
Trinidad and Tobago	*		*					
United States	*							
Uruguay	*				*		*	
Venezuela	*		*	*	*			

Country	SELA	CAN	SICA	CARICOM	CELAC	SEGIB	UNASUR	MCCA
Antigua and Barbuda				*	*			
Argentina	*				*	*	*	
Bahamas	*			*	*			
Barbados	*			*	*			
Belize	*		*	*	*			
Bolivia	*	*			*	*	*	
Brazil	*				*	*	*	
Canada								
Chile	*				*	*	*	
Colombia	*	*			*	*	*	
Costa Rica			*		*	*		*
Cuba	*				*	*		
Dominican Republic	*		*		*	*		
Dominica				*	*			
Ecuador	*	*			*	*	*	
El Salvador	*		*		*	*		*
Grenada				*	*			
Guatemala	*		*		*	*		*
Guyana	*			*	*		*	
Haiti	*			*				
Honduras	*		*		*	*		*
Jamaica				*	*			
Mexico	*				*	*		
Nicaragua	*		*		*	*		*
Panama	*		*		*	*		
Paraguay	*				*	*	*	
Peru	*	*			*	*	*	
Saint Kitts and Nevis				*	*			
Saint Lucia				*	*			
Saint Vincent and the Grenadines				*	*			
Suriname	*			*			*	
Trinidad and Tobago	*			*	*			
United States								
Uruguay	*				*	*	*	
Venezuela	*				*	*	*	

Source: Authors.

The existing governance structure presented in Table 6.1, while promising, could be significantly strengthened by addressing the fragmentation of regional groups within LAC. The region needs to foster intra- and inter-regional platforms that provide a strategic mechanism for greater coherence and cooperation. For example, an EU–Mercosur–Pacific Alliance meeting could prove highly beneficial. Bringing together the main integration blocs actively engaged in or negotiating Free Trade Agreements (FTAs) with the EU would create a vital forum for streamlining coordination. Such a dialogue would ensure that diverse regional interests are aligned, minimize regulatory overlap, and allow both the EU and LAC to maximize the full potential of their relationship, moving beyond the current, often piecemeal approach to interregional cooperation.

Effective regional integration and the establishment of a unified trade voice for LAC ultimately depend on stronger economic alignment between its two largest economies: Mexico and Brazil. A failure to bridge the current economic divide between these giants prevents LAC from speaking with authority on global trade issues. If Mexico's primary focus remains narrowly oriented toward its North American ties, and if Brazil prioritizes accelerating its integration with the wider global economy over deepening its relationships within the region, the goal of creating a cohesive, impactful LAC bloc will remain out of reach. Real regional influence requires both countries to actively pivot their strategies toward deeper intraregional trade and economic connectivity, ensuring that trade policy across the continent is coherent, unified, and truly representative of LAC's collective interests.

The current global context, marked by increased polarization, uncertainty, and protectionism, also presents an opportunity for LAC to seek strategic allies that share democratic values and can offer a stable framework grounded in sustainable development. In this regard, the EU stands out as a natural ally capable of forging lasting economic and political ties. Such a partnership can leverage LAC's strengths to channel capabilities and resources into sectors vital for the region's sustained growth and development. It can also serve as a catalyst for regional leadership through collective efforts that enhance LAC's negotiating power and autonomy in defending its strategic interests.

Together, LAC and the EU hold 60 votes in the UN General Assembly, about 31% of the total. An articulated LAC–EU position provides power and the opportunity to influence multilateral decision-making. The signing of agreements like the EU–Mercosur and the EU's extensive experience with cooperation and financing instruments create a unique opportunity to build a resilient, values-driven partnership. Strengthening ties now can facilitate technology transfer, institutional capacity-building, and inclusive growth, creating a more unified and influential regional presence for LAC in the face of global challenges.

At the same time, LAC has become a key ally that can help the European bloc adapt to changing global contexts, catch up on pending reforms, and accelerate progress in key strategic areas. In response to Draghi's (2025) call for deeper EU integration and accelerated reform, an alliance with LAC could become

a cornerstone for advancing shared goals such as climate resilience, digital transformation, and economic stability. As one of the "willing" allies, LAC has the potential to serve as a strategic partner committed to advancing this shared agenda. By building coalitions with LAC, the European bloc can foster a more united front in global negotiations, pooling resources and expertise to implement transformative projects and joint debt issuance. This partnership can help mitigate the risks of fragmentation, strengthen strategic independence, and ensure that both regions remain resilient and influential amid rising geopolitical tensions and external shocks.

The LAC-EU ties: What's in it for both sides?

Background

The EU has historically been a stable and accessible market for LAC. In commercial terms, Europe offers a less protectionist and more stable environment compared to large economies like China and the US. As seen in Chapter 5, strong evidence indicates that the EU tariffs have remained relatively low and its trade policies has exhibited stability over time.

More importantly, the EU has aimed to establish inclusive trade agreements that go beyond tariff reduction, incorporating clauses on human rights, labor, and the environment. This model fosters social inclusion and sustainability in ways that align with LAC's needs. Chinagorom and Leibovici (2025) argue that, in practice, EU trade policy imposes non-tariff trade barriers that are significant and widespread across sectors compared to, for example, the US.

LAC exporters frequently cite several challenges related to EU non-tariff barriers, including costly and complex technical and sanitary standards, regulations imposed without sufficient dialogue, and burdensome licensing and permit procedures that lead to delays and increased operational costs. Additionally, many perceive these regulations as protectionist measures, often formulated without adequate regional consultation, which limits LAC's capacity to adapt and comply effectively.

However, increased cooperation and dialogue through a strengthened LAC–EU alliance can facilitate mutual understanding and joint standard-setting, reducing trade frictions. Notably, many of these non-tariff barriers are aligned with LAC's sustainable development, environmental protection, and social equity goals and values. Policymakers should promote inclusive regulatory processes, set up joint platforms for standard-setting, and leverage technical assistance to help LAC firms meet EU standards, thereby expanding market access and fostering sustainable trade growth for both regions. In this context, ratifying the EU–Mercosur agreement is key to reducing tariff and non-tariff barriers and deepening integration through regulatory cooperation (see Box 6.2).

Box 6.2 The EU–Mercosur agreement… hanging by a thread?

In June 2019, after nearly two decades of negotiations, the European Union (EU) and Mercosur concluded talks on a far-reaching trade agreement. The deal marked a milestone in bi-regional relations, creating the framework for what could become one of the world's largest free trade areas. On December 6, 2024, the two sides elevated the agreement by introducing new sustainability commitments, including the designation of the Paris Agreement as an essential element of the partnership.

The agreement is designed not only to reduce tariff and non-tariff barriers but also to deepen integration through regulatory cooperation. It harmonizes rules in critical areas such as technical standards, sanitary and phytosanitary measures, and public procurement. By doing so, it seeks to facilitate trade flows and investment in key development areas, while embedding sustainability provisions at the core of the relationship.

If ratified, the deal would ensure that the EU has trade agreements covering 95% of Latin America's GDP, reinforcing its position as the region's main partner. For Mercosur, it would mark a decisive step toward integrating into global sustainable and higher-value-added supply chains. Estimates suggest that bilateral trade flows could increase by as much as 37% without displacing trade with third parties, underscoring the potential gains in competitiveness and diversification. According to Martínez and Talvi (2023), this boost could also have differential impacts, as South American exports to the EU, compared to those to China, are less concentrated in primary products and more concentrated in medium- and high-complexity manufacturing.

Despite its potential, the agreement has faced resistance on both sides of the Atlantic. In Brazil, during Jair Bolsonaro's administration, ratification stalled largely because of opposition to environmental clauses. In Argentina, former president Alberto Fernández argued for revisions better aligned with domestic priorities. On the European side, France has consistently been the most vocal opponent, with concerns centered on protecting its agricultural sector and ensuring strict environmental safeguards. Poland and Austria also expressed reservations at one point. France's position, and the influence it may wield in shaping the votes of other EU countries, could ultimately prove decisive for the future of this historic agreement.

Shifts in geopolitical equilibrium further complicate the outlook. As some Mercosur member countries pursue stronger bilateral ties with the US, the cohesion and collective negotiation strength of the Mercosur bloc may weaken. A U.S. interest in preserving its own leverage could create additional tensions if deeper interregional frameworks such as the EU–Mercosur agreement are perceived as limiting Washington's influence. This dynamic could weaken the bloc's internal cohesion and affect its ability to negotiate collectively with the EU.

A notable example related is the EU–Chile agreement, which includes a chapter on trade and gender equality aimed at eliminating discrimination against women and promoting policies that strengthen their participation in trade. Another example is the EU–Mexico agreement, which underscores both parties' commitment to preventing corruption in trade and investment and to ensuring compliance with labor laws that safeguard fair working conditions.

More broadly, the EU has a long-standing tradition of developing and promoting sustainability-focused policies and has consistently prioritized sustainable development and the green transition. At the center of this agenda is the European Green Deal (EGD), a comprehensive policy framework designed to achieve climate neutrality by 2050 (see Box 6.3).

Box 6.3 The European Green Deal

Launched in 2019, the European Green Deal (EGD) aligns with the Paris Agreement commitments. Its overarching objective is to guide Europe toward sustainable development and climate resilience, while sustaining economic growth and improving living standards.

The objectives of the EGD are organized across seven thematic areas:

1. Climate ambition
2. Clean, affordable, and secure energy
3. Circular economy
4. Sustainable and smart mobility
5. Greening the common agricultural policy/ "Farm to Fork"
6. Preserving and protecting biodiversity
7. Towards a zero-pollution ambition for a toxic-free environment

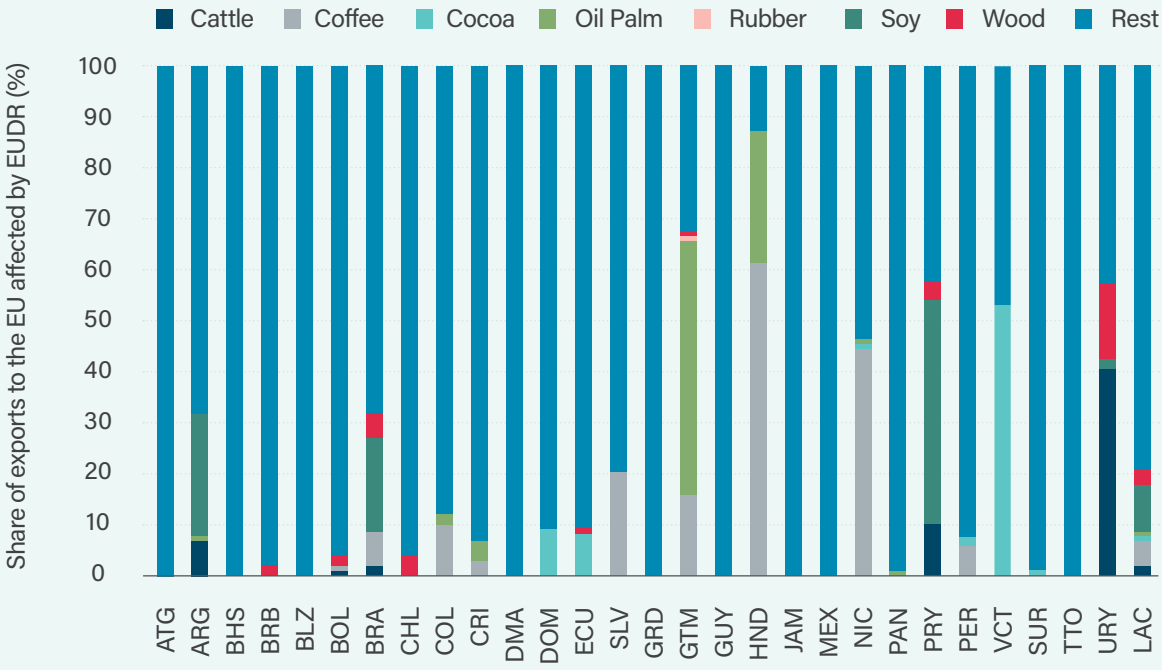
According to the European Commission (2025), of the 154 quantifiable targets under the EGD, 32 are progressing adequately and are on track to meet their goals. Another 64 show a positive trend but require accelerated efforts to stay on schedule. Meanwhile, 15 are stagnating or regressing, and for 43 targets, no data is currently available.

An important element to consider when analyzing the EGD is that its impact will extend beyond the EU. As it transforms how the bloc produces and consumes goods and services, it increasingly impacts its trade partners in visible ways. A clear example of this is the Carbon Border Adjustment Mechanism (CBAM), which is undergoing a phased implementation toward a permanent regime, while ensuring compliance with international trade rules. Another example is the EU Deforestation Regulation (EUDR), which aims to guarantee that products consumed within the EU come from areas free of deforestation or forest degradation.

These measures naturally carry significant implications for LAC countries, particularly those exporting goods to the EU that fall under the scope of the EUDR. Graph 6.3 presents the relative weight of each regulated product group within total exports to the EU (FUNDAR, 2025). At a regional level, approximately 20% of exports show exposure to the EUDR. However, differences across countries are substantial. For example, in Mexico or Trinidad and Tobago, the exposure to EUDR is almost nonexistent. In contrast, Honduras and Nicaragua, where coffee dominates exports to the EU, and Guatemala, where palm oil is a key export, may face stricter trade requirements in the short term.

Lastly, it is important to recognize that the impact of the regulation on LAC economies depends not only on the degree of export exposure but also on each country's capacity to comply with the new standards. Complying with new standards can be costly, especially if future trade requirements become more demanding. This could also be especially challenging for small and medium enterprises, for whom the cost of complying with stricter standards might end up constituting an insurmountable barrier. Mechanisms will therefore be necessary to ensure that the burden does not fall unilaterally on LAC countries.

Graph 6.3
Share of exports to the EU affected by the EUDR (2024)



Source: Authors based on UNCTAD (2024).

Moreover, the Plant Health Rules illustrate the EU's commitment to advancing sustainable development and environmental protection. Adopted in 2016 and periodically revised since, they aim to protect European ecosystems by ensuring the safety of trade and contributing to climate change mitigation. All plants imported into the EU must be accompanied by a phytosanitary certificate, and some are prohibited outright. Another example of these non-tariff measures is the European Union Deforestation Regulation (EUDR).

Overall, the EGD and other EU sustainability commitments offer a framework that could be valuable for LAC, enabling the region to align with increasingly stringent environmental standards and sustainable practices in global markets. Although accessing the European market requires significant effort to comply with these measures, it is in LAC's best interest to do so. The region's natural endowments may help it meet these requirements more effectively. Still, high compliance costs and technical complexities mean that many sectors will undoubtedly struggle to fully comply in the short term. These new regulations will also have uneven effects across countries and among small, medium, and large producers.

It is also important to consider trends in deforestation in the region, along with producers' capacity to demonstrate that their products originate from deforestation-free areas (FUNDAR, 2025). Governments must urgently support these exporting sectors by providing enabling infrastructure, technical assistance, and financial mechanisms to help them comply more quickly and effectively. Strengthening compliance could also open doors to global markets that value traceable, sustainably sourced goods.

Cooperation and collaboration opportunities for the EU and LAC should not be limited solely to trade relations.

Europe is a global leader in innovation and technology, particularly in renewable energy, clean tech, and digitalization. The Global Innovation Index (GII) 2024, presented by WIPO (2024), is a comprehensive indicator that seeks to provide a flexible and holistic measure of innovation occurring around the world. According to GII 2024, five of the ten most innovative countries are EU members (Sweden, Finland, Germany, Denmark, and the Netherlands). In contrast, no LAC country ranks in the top 50. Furthermore, when analyzing the expected level of innovation based on each country's development stage, LAC is the region—along with Sub-Saharan Africa—with the highest number of countries classified as "underperformers."

Deepening relations with Europe can expand access to advanced technologies and facilitate knowledge transfer in strategic sectors essential for sustained economic development. A clear example is leveraging the EU's position as a world leader in clean technologies, as Draghi (2025) notes, to improve the efficiency of decarbonization in LAC economies.

Collaboration with Europe can also strengthen LAC's capacity to address climate challenges. Europe has been an active advocate for international climate agreements,

providing technical and financial support to developing countries for effective policy implementation. Partnerships under the EGD or other EU-backed global climate initiatives can support joint projects, accelerate technology transfer, and deepen knowledge exchange between the regions.

According to the 2023 SDG Index and Dashboard Report by the Sustainable Development Solutions Network (SDSN), most LAC countries are still considerably behind the global average in several key areas, such as poverty reduction, inequality, health, and environmental sustainability. The average SDG progress score for LAC nations is approximately 66 out of 100—reflecting moderate progress but also significant gaps. Based on UNCTAD (2025), the cost of accelerating progress toward achieving sustainable development goals (SDGs) is estimated to be between USD 1.3 trillion and USD 1.6 trillion per development priority. This leaves an average annual gap of USD 99 billion between required spending and current spending levels (OECD and CAF, 2024).

While the financing gap poses a significant challenge on its own, its impact is magnified by the limited fiscal space across LAC. This constrained financial capacity hampers governments' ability to invest adequately in critical areas such as social services, infrastructure, and climate resilience. As a result, progress toward achieving SDGs is often hindered.

Adequate funding is therefore essential for the region to advance its development goals, address the climate crisis, and reduce social inequalities. In this context, as one of the most advanced regions in innovation and sustainability, Europe's financial support is highly valuable, not only because it supplies crucial resources but also because it facilitates technology transfer, knowledge-sharing, and the adoption of best practices. Collaboration with Europe can strengthen local capacities, drive innovative projects, and improve access to international financing.

The EU has been taking concrete and consistent steps to finance projects that boost sustainable development around the world. The Global Gateway (GG) project stands out as a flagship initiative (see Box 6.4). The primary objective of GG is to develop and scale investment projects in five critical areas: digital technology, climate and energy, transport, health and education, and research.

GG aims to mobilize up to EUR 300 billion between 2021 and 2027. Although Africa is the main beneficiary of the initiative, expecting to receive approximately EUR 150 billion, LAC will also be significantly favored, as GG plans to allocate up to EUR 45 billion for projects in the region until 2027. This amount remains well below the annual financing needs of the region, but could help mobilize contributions from the private sector and other European development agencies.

The EU–LAC Digital Alliance, launched in March 2023 with a EUR 172 million budget (EUR 52m from the EU and EUR 120m from member states), is a core element of the Global Gateway Initiative and a key pillar of the LAC–EU partnership to promote inclusive digital transformation. It aims to foster public-private collaboration in areas

like regulation, connectivity, data flows, digital ecosystems, and space services. Key projects include expanding the BELLA cable—a direct high-speed fiber-optic link between Europe and LAC—to create a secure regional digital backbone and establishing a regional EU–LAC Digital Accelerator to boost innovation among startups and firms (see Table 2). Overall, the alliance seeks to harmonize digital policies through structured multi-stakeholder dialogue.

Table 6.2
Selected projects supported by the global gateway initiative in LAC

Project	Area	Scope
Extension of the Building the Europe Link to Latin America (BELLA) cable to Central American and Caribbean countries	Digital	Regional
Establishment of Copernicus Centres	Digital	Chile and Panama
Renewable hydrogen fund	Climate and Energy	Chile
North-east green energy parks and green shipping corridors	Climate and Energy	Brazil
Expansion and upgrade of Santo Domingo's transport	Transport	Dominican Republic
Electrification of public transport	Transport	Costa Rica
Health resilience and vaccine production	Health	Mexico
Stronger linkages among academia, research, and business	Education and Research	Regional

Note: For a more comprehensive list of GG projects in LAC, refer to Global Gateway (2025).

Source: Authors.

Box 6.4 The GG initiative: A counterweight to Chinese financing in LAC

Casano et al. (2024) note that the Global Gateway (GG) initiative initially emerged as a response to China's Belt and Road Initiative (BRI), a project that has significantly expanded China's influence in the world through large-scale infrastructure development and international cooperation.

Although competing with China's investment firepower is a challenging task for almost any economic or political bloc, the GG has areas where it can find standout opportunities in comparison to its Chinese counterpart. According to Nedopil (2025), LAC has not been BRI's preferred destination for investment or construction engagement in 2024.

Chinese BRI construction activities in the region accounted for only 1.6% in 2024, and just 2.5% in terms of investment. In fact, Latin American countries have seen the lowest level of Chinese engagement in nearly a decade. In contrast, regions such as the Middle East, Southeast Asia, and Africa have been the primary recipients of BRI investments in 2024. The secondary role of LAC in the client portfolio creates an opportunity for European investment to enhance its position as a key financier of the region.

Another factor that may make Europe a more attractive partner than China lies in the financing dynamics of its projects (Casano et al., 2024). The Chinese model primarily relies on loans, which, while granted without specific policy conditions, tend to place pressure on public debt sustainability. Moreover, these loans often include contractual clauses that may allow Chinese creditors to influence the domestic and foreign policies of borrowing countries (Gelpern et al., 2021).

By contrast, the Global Gateway model utilizes a diverse mix of financial instruments, including loans, grants, and guarantees, following a blended finance approach (Bilal and Große-Puppendahl, 2016). The objective here is to leverage Official Development Assistance (ODA)—government aid specifically designed to promote the economic development and welfare of developing countries—to mobilize additional capital. Through the use of public resources, the initiative aims to reduce investment risks, attract private financing, and ultimately increase the overall volume of investment. Bertrand and Zoghely (2021), in their analysis of China's lending patterns in Sub-Saharan Africa, point out that Chinese loans in the region have historically included a large number of restrictive clauses with limited flexibility and a high concentration of benefits for Chinese actors. This underscores the potential for GG to offer a more balanced and transparent framework for partner countries.

According to ETTG (2024), LAC is a key destination for the EU's FDI. Unlike other regions, such as Africa, where cooperation is often centered on Official Development Assistance (ODA), many countries in LAC are middle-income economies, which allows actors like the EU to make it possible to forge partnerships driven more by economic and commercial interests than traditional aid.[1] This creates an opportunity for the EU to build broader, more comprehensive alliances in the region.

Crucially, LAC and the EU share a commitment to human rights, as well as to democratic and social inclusion values, which provides a strong foundation for deeper and more effective collaboration between both regions. According to a survey on perceptions of the EU in LAC, 64% of respondents consider the EU the best partner, especially in environmental protection, where it is seen as ahead of China and the US. It is also regarded as the top partner in fighting poverty and inequality (54%), as well as in culture and education (46%), and strengthening democracy (Domínguez, 2023). Additionally, 63% recognize the EU as an important promoter of peace, and a majority (48.1%) favor strengthening ties with the EU, compared to only 19% who prefer closer relations with the US (Latinobarómetro, 2023). This social closeness also promotes tourism, cultural exchange, and innovation. Citizens of both regions demonstrate a high degree of mutual understanding, which reduces the economic and social costs associated with various types of exchanges (Ríos Méndez and Rodríguez Pinzón, 2025).

A win-win alliance

The LAC–EU partnership should be understood as more than a partnership of need but one of compatibility (ETTG, 2024). The EU has several reasons for strengthening ties with the region.

First, its global outlook positions LAC as a trusted partner for secure alliances and supply chains essential to the bloc's evolving production models. LAC is comparatively peaceful and politically stable, unlike several of the EU's suppliers, including the Middle East and Eastern Europe. This reduces the risk of geopolitical trade disruptions and strengthens its role as a reliable economic partner. According to Baker et al. (2025), the EU–Mercosur agreement and renewing the bloc's agreement with Mexico are strategic steps to diversify supply networks and reduce dependence on imports from China and Russia, among other benefits.

Second, both Europe and LAC are major global food producers, but they participate in global value chains in different ways. LAC is a leading producer and exporter of raw agricultural commodities, many of which are shipped to the EU. The EU imports raw materials and exports higher-value processed agri-food products. While this model adds value, Aróstica and Ayuso (2023) note that rather than "feeding the world," the EU imports more calories than it exports. Although their food systems differ, they are fundamentally complementary. With its vast agricultural output and untapped potential, LAC can play a central role in addressing the main drivers of global food

1. However, this does not preclude aid relations with LAC. In fact, the EU intends to provide EUR 120 million in humanitarian assistance to LAC in 2025, with Venezuela, Colombia, and Haiti as the primary beneficiaries of this support (European Commission, 2025).

insecurity. In a world marked by conflict, economic uncertainty, and climate-induced extreme weather events, it is in the global interest to support the development of a dynamic, resilient, inclusive, and sustainable agri-food sector in the region.

Third, LAC possesses extensive natural resources indispensable to Europe's green transition and broader green economy. It is important to challenge the perception that commodities are merely "basic" goods. Producing high-quality agricultural products like seedless grapes that can withstand transportation requires cutting-edge technology and innovation. The same applies to critical minerals such as copper; extraction is only one step in the process, as high-value processing and refining are key to unlocking their full value. Three strategic pillars emerge for consolidating an LAC–EU partnership: critical minerals, renewable energies, and green hydrogen.

In the field of critical minerals, LAC holds significant reserves of essential resources, such as copper, lithium, or nickel, though these are unevenly distributed across countries (Allub et al., 2024). These minerals are crucial for Europe's green and digital transitions. Despite high global demand, China continues to dominate global processing and refining capacity (Draghi, 2025).

LAC's limited integration into global value chains also presents an opportunity: the EU can deepen its support for the region through strategic investments, financing, and institutional mechanisms, thereby helping LAC countries reposition themselves within global value chains. However, expanding integration and strengthening competitiveness will depend on the region's technological capabilities and ability to add value. Regarding lithium, for instance, LAC countries should focus on extracting and injecting it directly into batteries, instead of aiming to manufacture batteries. Europe's approach emphasizes sustainable, value-creating industries that move beyond raw material extraction, setting a benchmark for regional development in LAC.

In return, Europe would gain a reliable strategic partner for the supply of critical inputs. This would be particularly relevant given that, according to Draghi (2025), Europe currently has a high dependency on critical minerals, with many of its imports coming from countries with which it is not strategically aligned. Strengthening LAC's position in value chains would shield both partners from geopolitical volatility.

While LAC has abundant renewable energy potential, infrastructure constraints often limit its full development. Additionally, linking this potential to Europe faces logistical challenges due to geographic distance.

Nonetheless, relocating energy-intensive production to regions with high renewable energy capacity, a strategy known as "powershoring," offers a promising avenue to deliver economic, social, and environmental advantages to both regions. As stated before, according to Draghi (2025), Europe is a leader in clean-tech innovation. For many LAC countries that combine strong political will with favorable natural endowments conducive to decarbonizing their economies, European know-how can significantly enhance productivity.

The development of new fuels, such as low-emission hydrogen, will play a critical role in the path to a net-zero economy. According to Allub et al. (2024), global demand for hydrogen is expected to increase by more than 300% by 2050, while in LAC, demand will need to grow by over 600%.

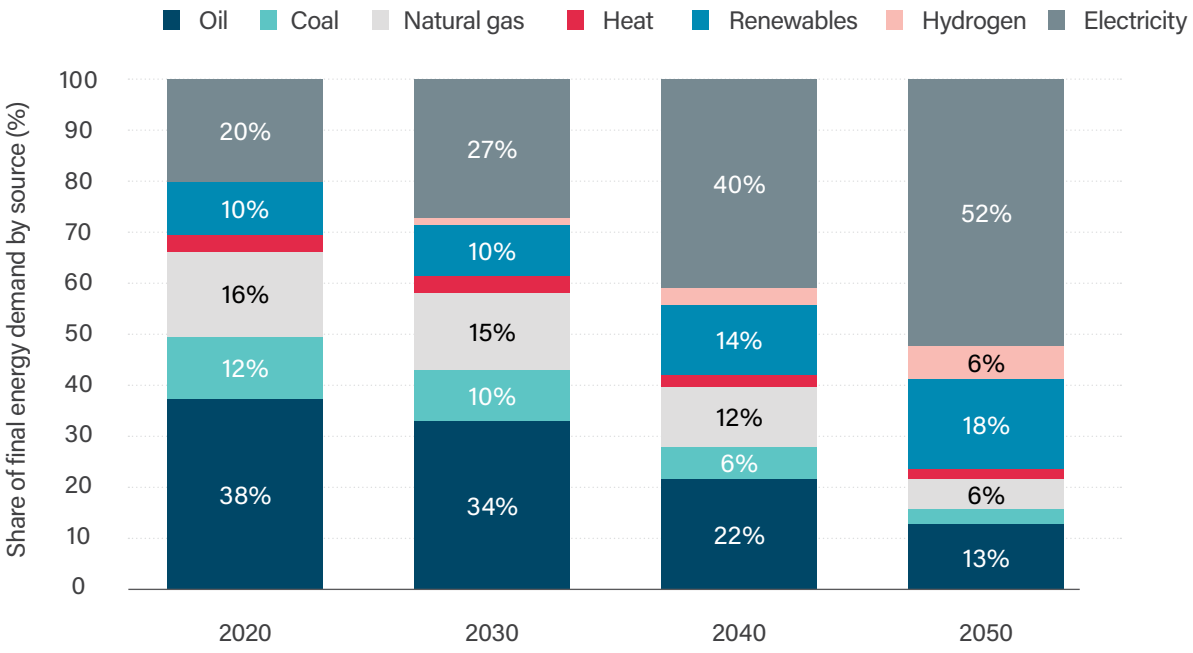
According to data from IEA (2021) shown in Graph 6.4, energy consumption must gradually evolve to meet the proposed environmental targets. Electricity, mainly from renewable sources, is expected to play a leading role in this transition. Additionally, hydrogen is projected to grow significantly, overtaking natural gas and coal, and approaching the share of oil in global energy consumption. Furthermore, in the net-zero scenario, hydrogen production will need to be powered almost entirely by electricity (preferably renewable) or by fossil fuels paired with carbon capture, utilization, and storage (CCUS). This stands in contrast to current scenarios, where fossil fuels are still an important actor in hydrogen production.

Several countries in the region, such as Chile, have significant potential for green hydrogen production, which ultimately depends on renewable energy generation capacity. Areas like the Chilean Patagonia or the Atacama Desert offer exceptional natural conditions for generating renewable energy. These characteristics, combined with Chile's relatively stable political and macroeconomic framework, led the Team Europe Initiative by the European Investment Bank to support a series of green hydrogen-related projects with loans totaling EUR 100 million. The projects range from water desalination and renewable power generation to storage and transport. These loans will be focused on private-sector projects.

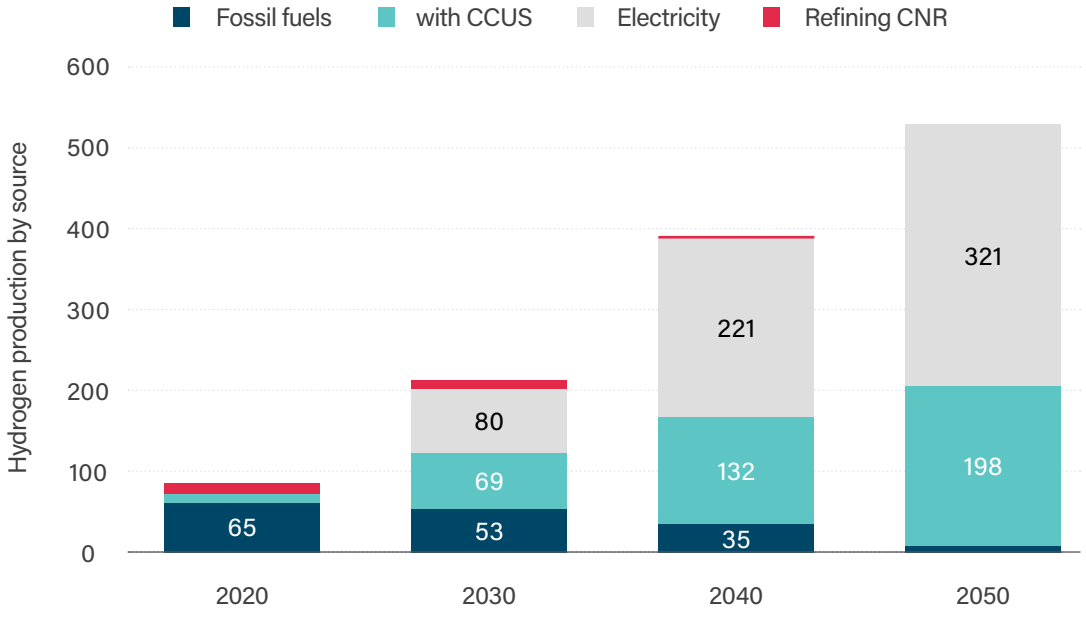
Another advantage lies in the possibility of establishing coordination mechanisms between the two regions. A recent memorandum of understanding signed between Hydrogen Europe and H2Chile exemplifies this potential, helping facilitate industry-level collaboration and public–private exchanges between regions.

Graph 6.4
Energy use and hydrogen sources under NZE

Panel A. Share of total energy consumption by fuel under NZE



Panel B. Sources of hydrogen production NZE (Mt)



Note: NZE refers to the Net Zero Emissions scenario, which outlines a pathway for achieving net-zero greenhouse gas emissions by 2050.

Source: Authors based on IEA (2021).

Fourth, LAC faces significant challenges in terms of productivity, social inequality, and its transition toward a more sustainable and environmentally friendly economy. This scenario unfolds in a context where most countries in the region are constrained by severe economic limitations, limited fiscal space, and already high levels of sovereign debt. The financial support and knowledge transfers provided by EU countries can play a fundamental role in the development of LAC. European investment in LAC can also support the modernization of key productive sectors, which would ensure that Europe has reliable access to strategic resources. This creates a cooperation model that strengthens both regions' economies and contributes to environmental sustainability and equitable development, laying the groundwork for sustained, long-term growth.

The EU can also serve as a key partner for LAC in the redesign of social policies such as education, health, housing, poverty reduction, and social protection. The EU's experience in designing inclusive social programs, fostering social cohesion, and implementing innovative policies can provide valuable lessons for improving public service delivery, reducing poverty, and promoting greater social mobility across the region. Such partnerships could also facilitate knowledge transfer on comprehensive social policy models that balance efficiency with inclusiveness, ultimately contributing to more equitable development outcomes. Additionally, the EU's expertise in managing demographic shifts—such as aging populations and urbanization—along with support for institutional reforms, can strengthen governance and resilience in LAC countries.

Urban development cooperation is another promising area for deeper LAC–EU collaboration. City management and sustainable urban development initiatives—such as electric mobility, recycling, and urban resilience—offer concrete opportunities to foster shared progress and environmental stewardship. The Union of Ibero-American Capital Cities, led by Madrid, is a successful model of regional cooperation in this area, focusing on city-level solutions for sustainability. Expanding this platform to include broader EU participation could enhance knowledge exchange, technology transfer, and joint investments, ultimately promoting more sustainable, innovative, and resilient urban environments across both regions.

Moreover, the EU's experience with convergence funds and the Next Generation EU recovery instrument offers valuable models and best practices for LAC to emulate. These instruments have successfully mobilized financial resources for digital transformation and environmental transition, areas that are critical for the region's future. By leveraging this experience, LAC can develop innovative funding mechanisms, foster public-private partnerships, and accelerate efforts toward green growth and technological upgrading, ensuring a more sustainable and resilient development trajectory.

Finally, at an operational level, the EU can build on its existing free trade agreements with LAC countries and integrate them into emerging regional frameworks. Cornejo et al. (2025) highlight the potential of flexible diagonal cumulation, which enables inputs from third countries to be treated as originating, thereby allowing them to benefit from tariff preferences under a free trade agreement. This mechanism offers dual benefits:

it would not only promote alliances between regions but could also strengthen integration within LAC itself. Expanding existing agreements to include more countries in the region would help prevent further economic fragmentation and reduce widening disparities among LAC economies.

Structural challenges and inherent tensions in a LAC–EU strategic alliance

While the partnership between the EU and LAC can potentially be mutually beneficial, a rigorous analysis requires acknowledging the inherent tensions and structural challenges that could undermine the success of this strategic association.

First, both blocs need to recognize deeply rooted conflicts of interest. A clear example is the agricultural protectionism practiced by some European countries, such as France, which directly conflicts with the interests of LAC's agricultural exports, complicating the negotiation of comprehensive trade agreements (see Box 6.2).

Second, the two regions differ markedly in their internal cohesion. Whereas the EU bloc is historically unified, LAC remains fragmented, with countries characterized by diverse interests and productive structures. This asymmetry exacerbates differences across countries and means that the benefits of the agreements are often unevenly distributed.

Third, regional integration in LAC has historically been marked by persistent failures in establishing long-term agreements, which requires an exploration of the deeper structural causes. Barriers to integration are threefold: political (institutional and democratic weakness), structural (economic fragility), and macroeconomic. A central obstacle is countries' resistance to a perceived loss of sovereignty over economic policy.

External pressure, such as geopolitical competition, opens a window of opportunity, but it will not, on its own, generate effective integration in LAC. Governments in the region need to understand that the current context can be leveraged in tandem with efforts to work toward a unified strategic stance.

The EU and LAC have forged a network of important and positive trade agreements over 20 years, but the alliance's effectiveness is limited by stalled key accords. Despite the challenges, recent initiatives like the Global Gateway investment agenda offer a favorable environment to renew cooperation.

Even though LAC is a peaceful region, the political economy of reforms is complex. On one hand, increasingly close ties between economic and political elites in LAC pose risks to development and the quality of democracy. Understanding these elites is essential to explaining the persistence of inequalities and how they may block reforms needed to maximize benefits from agreements. On the other hand, there is a risk that new EU standards, though well-intentioned, could disproportionately benefit large corporations

with the resources to comply, imposing higher costs on smaller producers or becoming de facto non-tariff barriers for LAC's SMEs in global value chains. Given that LAC continues to be the most unequal region in the world, agreements must be carefully designed to avoid widening disparities between countries and subregions. The EU should actively support the reduction of inequalities as a central objective of the partnership.

The window of opportunity to strengthen the LAC–EU alliance created by current geopolitical fragmentation also brings challenges. A closer LAC–EU alliance exists within the broader competition for commercial and strategic influence in the region. The response of China and the US to this new dynamic will be crucial. Any agreement perceived as an attempt to limit the influence of Beijing or Washington may trigger counter-moves by these powers. Moreover, geopolitical fragmentation of world trade, characterized by the possible emergence of restricted trade blocs, is an increasingly likely scenario. While an LAC–EU alliance seeks to offer an alternative to the approaches of the superpowers, its formation could be perceived as a measure that formalizes another trade axis, thereby deepening global fragmentation rather than mitigating it.

Identifying these structural challenges is not a sign of fatalism but rather a necessary step toward crafting resilient and truly effective policy. Recognizing and addressing inherent conflicts—from domestic elite resistance to the geopolitical reactions of global powers—provides the strategic clarity needed to design agreements that can withstand internal and external shocks.

Despite the difficulties, the alliance is uniquely positioned to leverage shared values—including a commitment to democracy, multilateralism, and urgent climate action—to establish a new benchmark for responsible global partnership. Building on this foundation, the next section turns to concrete pathways and policy guidelines aimed at translating these shared principles into actionable strategies that move from challenge to opportunity.

Pathways to deepen LAC–EU collaboration

The LAC–EU alliance must be based on seven core elements: mutual impact, a focus on sustainable development, flexibility, productive investment, innovation and technology transfer, promotion of social equity and inclusion, and trust.

First, both sides must engage in open and honest dialogue, establishing clear, realistic contributions that each can bring to the partnership. The EU should foster balanced, multifaceted collaborations that do not overly rely on specific countries or blocs within LAC, thereby promoting a more equitable and resilient relationship. The alliance should account for the level of institutional development and management capacity on both sides. Effective cooperation requires both sides to align in technical, regulatory, and administrative terms to implement joint projects successfully and sustain long-term results.

Second, the alliance should align with international commitments such as the SDGs, the Paris Agreement, and future climate and digital agendas. This alignment will enhance the credibility and global impact of joint efforts, ensuring regional cooperation contributes to international sustainability commitments.

LAC should also rethink its approach to environmental and energy agendas. Instead of viewing mitigation, adaptation, and energy transition as external impositions or insurmountable challenges, the region should see these as opportunities to develop more resilient and sustainable production systems. Moving toward models of green growth can unlock substantial socio-economic benefits and foster long-term regional resilience (Álvarez et al., 2025).

Third, the LAC–EU relationship must be adaptable and flexible. In a rapidly changing global landscape, strategies should allow for adjustments based on local conditions, emerging opportunities, and unexpected shocks. The EU can contribute by designing region-specific, flexible programs that respond to evolving needs, fostering a more effective and responsive partnership that can adapt to both geopolitical shifts and domestic priorities. Active participation of diverse stakeholders—including governments, the private sector, civil society, and academia—in a multilateral framework is also essential to enhance sustainability and cohesion across joint initiatives.

Fourth, EU investments in the region should emphasize infrastructure development and productive capacity. Targeted investment in strategic sectors—such as renewable energy, digital infrastructure, and climate resilience—is crucial and in line with the GG Initiative. Promoting complementarities, technology transfer, and innovation-driven partnerships will enable both regions to accelerate sustainable development, enhance competitiveness, and create employment opportunities while safeguarding the environment.

In this context, FDI becomes a central pillar of the strategic partnership between the EU and LAC, signaling long-term economic commitment that extends beyond trade relations. FDI also eases the burden of high public debt levels in the region while contributing to closing the financing development gaps that LAC faces. Moreover, FDI facilitates technology transfer, skills development, and access to new markets, thereby fostering sustainable growth and innovation in the region. Importantly, it anchors LAC–EU ties more deeply, creating a foundation for closer cooperation in areas such as infrastructure, renewable energy, and social development. This multidimensional engagement strengthens the partnership's resilience and ensures mutual benefits that extend beyond immediate economic exchanges.

Fifth, the partnership should be rooted in mutual mechanisms for technological innovation, knowledge sharing, and best practices in key sectors such as renewable energy, sustainable agriculture, smart cities, and digitalization. Innovation not only fosters sustainable growth but also helps bridge technological gaps.

Sixth, beyond economic impact, the alliance must prioritize the promotion of social equity, human rights, and social and cultural inclusion. Embedding these values into cooperation policies will foster more inclusive, sustainable development, particularly in sectors like education, health, gender equality, and Indigenous rights. Given the global

challenges, the alliance should also incorporate mechanisms to strengthen resilience across social, economic, and environmental systems, fostering sustainable practices and coordinated efforts to effectively respond to and recover from various crises.

For instance, there is a great yet untapped potential for extensive collaboration on trade in services in key sectors such as education, health, and retirement services. The EU's expertise, robust regulatory frameworks, and significant investment capacity in areas like vocational training and specialized medical technologies could be leveraged to meet LAC's growing demand for quality services.

LAC offers unique locational advantages and an expanding workforce. Facilitating cross-border provision and investment in these sectors—for example, through mutual recognition of professional qualifications or joint ventures in healthcare infrastructure—would boost bilateral trade and directly contribute to social welfare and human capital development in both regions.

Finally, building and maintaining long-term trust through institutionalized cooperation is paramount. This requires deeper political dialogue, enhanced technical cooperation, and social welfare programs that integrate efforts at the national level. Sustained engagement will foster confidence, create stable frameworks for collaboration, and ensure that partnerships are resilient and aligned with shared values of democracy, human rights, and inclusive growth.

To implement effective change, it is necessary to move from theoretical guidelines to concrete actions. Table 3 lists interregional projects that build upon the desirable theoretical traits of a renewed alliance and outlines specific, tangible examples of flagship initiatives. It also highlights potential regional contributions as well as the relevant LAC–EU framework to ensure the viability of these projects.

As noted, the Global Gateway initiative plays a fundamental role in this bi-regional relationship, which is why Table 3 highlights its significant participation across various dimensions (digital, environmental, productive, etc.). This list is not meant to be exhaustive of all current and future lines of action. The relationship between the two regions can and must continue to deepen and strengthen.

For example, the LAC–EU Digital Alliance has recently taken concrete steps to reinforce cooperation in the field of artificial intelligence (AI). This includes not only the development of infrastructure with sufficient high-performance computing capacity, but also the establishment of action lines aimed at promoting and consolidating responsible use of AI that safeguards human rights, fosters the inclusion of marginalized populations, and combats disinformation. Another example would be the stronger inclusion of LAC countries in the 2028–2034 Horizon Europe Research and Innovation Program, which could represent a key step toward the much-needed transfer of knowledge.

It is essential to underscore the genuine potential to further deepen collaboration between the regions and to continue advancing an agenda that, while respecting the alliance's core pillars, positions both the EU and LAC in a stronger and more prosperous global role.

Table 6.3
Seven pathways to deepen LAC–EU collaboration: A few concrete examples

Pathway	LAC-EU project example	LAC Contribution	EU Contribution	Relevant LAC-EU framework/program
Mutual impact	Joint initiative to export sustainably produced agricultural goods to European markets with recognized sustainability certifications.	Sustainable production methods, local know-how, producer networks.	Market access, certification processes, marketing, and distribution expertise.	AL-Invest Verde, Global Gateway – Sustainable Trade Pillar.
Focus on sustainable development	Development of large-scale renewable energy projects in LAC with financing linked to green standards.	Access to project sites, local permits, operation & maintenance capabilities, and skilled labor.	Capital investment, clean technology, and advanced environmental and safety standards.	Global Gateway – Green Transition, EU–LAC Green Alliance.
Flexibility	Creation of a bi-regional climate resilience fund to support communities facing environmental shocks.	Local knowledge of vulnerabilities, cultural adaptation of solutions, and community engagement.	Flexible financing instruments, risk management tools, and expertise in adaptive planning.	EU–LAC Global Gateway Investment Agenda, Latin America & Caribbean Climate Adaptation Facility.
Productive investment	Establishment of sustainable industrial facilities to process raw materials into higher-value products for global supply chains.	Resource access, labor force, supportive policy environment.	Investment in infrastructure, ESG compliance frameworks, and integration into European and global markets.	Global Gateway – Sustainable Value Chains, Horizon Europe – Industry Partnerships.

Pathway	LAC-EU project example	LAC Contribution	EU Contribution	Relevant LAC-EU framework/program
Innovation and technology transfer	Deployment of smart systems (e.g., digital platforms, sensors, AI) to improve productivity in key sectors such as agriculture, manufacturing, or logistics.	Local data and operational context, pilot sites, sector expertise.	Technology solutions, technical training, and intellectual property protection frameworks.	EU–LAC Digital Alliance, Horizon Europe – Research & Innovation.
Social equity, human rights, and inclusion	Bi-regional policy dialogue to promote social inclusion, foster equality, and strengthen social cohesion.	Local implementation, partner engagement, policy execution, and leveraging regional networks.	Financial resources, technical assistance, and policy support.	Global Gateway - Inclusive Societies Programme, which includes the Inclusive Societies Regional Programme and the Social Accelerator.
Trust	Bi-regional observatory to track and report on the social, environmental, and economic impacts of joint projects.	Access to field data, engagement with communities and stakeholders, and local institutional networks.	Transparent monitoring tools, funding for independent evaluations, and methodologies for participatory governance.	EU–LAC Foundation, Global Gateway – Governance & Rule of Law Pillar.

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Average income per capita in Latin America and the Caribbean amounts to barely one quarter of that of the United States, a gap that has remained virtually unchanged for more than six decades. This persistent divergence has profound implications for the well-being of the population. The report identifies low productivity as the fundamental driver of the income gap, not only because of its direct effects, but also because it indirectly underpins the region's low investment in physical and human capital.

Sustained, broad-based economic growth is both a necessary condition and an essential instrument for advancing toward comprehensive development. Against this backdrop, the report presents a policy agenda structured around three core constraints on productivity: high levels of informality, weak innovation capacity, and limited international integration.

These reforms must be pursued in a global context marked by rising geopolitical tensions, a resurgence of protectionism, accelerating technological change, and the urgency of adapting economic systems to the climate crisis. While these dynamics impose constraints, they also create new opportunities. In response, the report proposes a strategic approach that combines horizontal policies with a targeted focus on strategic sectors, and highlights strengthening ties with the European Union as a key lever to foster growth, raise productivity, and deepen Latin America and the Caribbean's international integration in global markets.

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