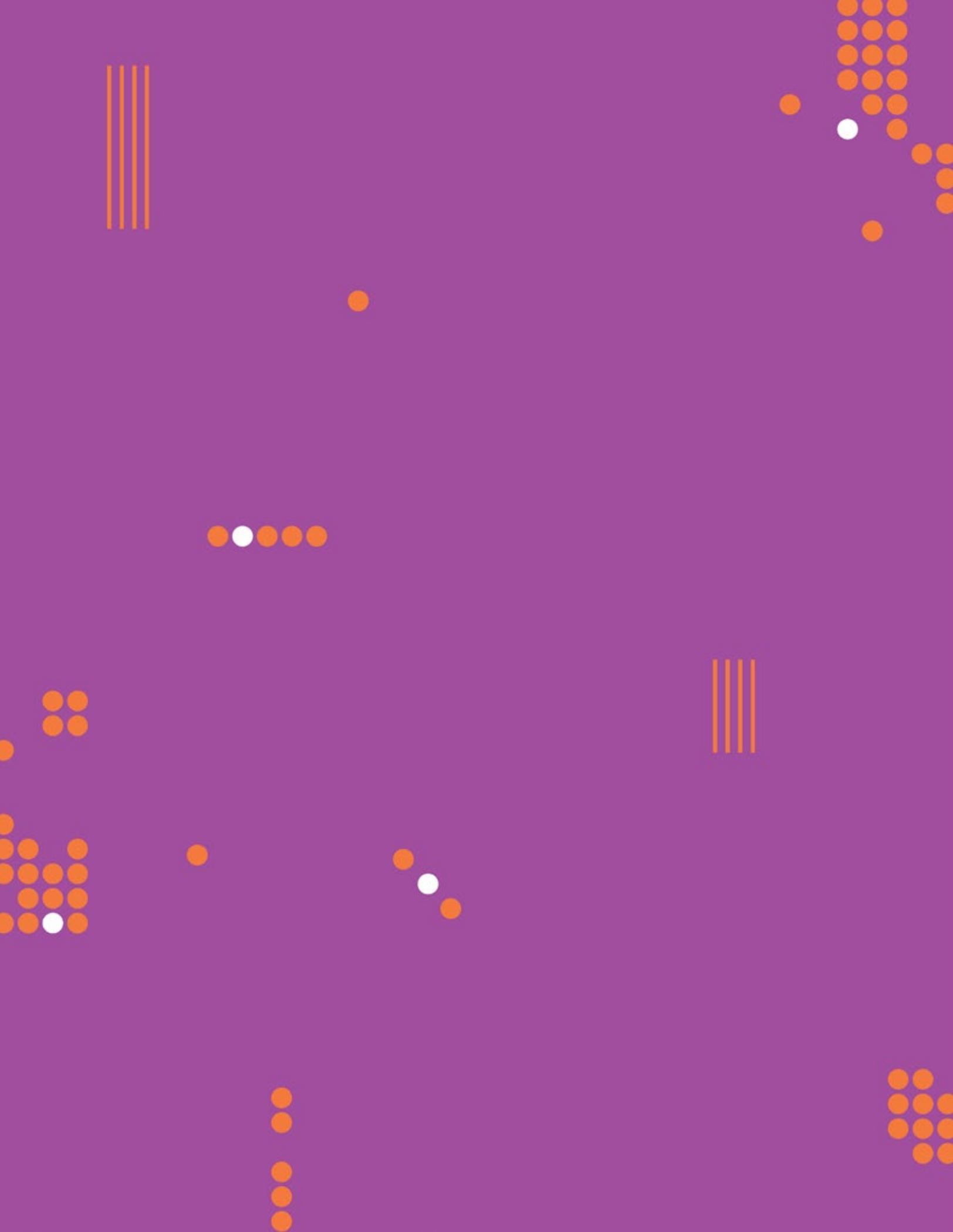


LAC2030



Latin America and the Caribbean 2030: **Future Scenarios**

By Jason Marczak and Peter Engelke
With David Bohl and Andrea Saldarriaga Jiménez





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This report includes several scenarios, understood as plausible descriptions of a possible future state of the world. These are not forecasts or predictions of future events. Rather, each scenario is one alternative image of how the future might unfold, created for the purpose of prompting a discussion about the choices we face today.

About the Atlantic Council

The **Atlantic Council** promotes constructive leadership and engagement in international affairs based on the Atlantic Community's central role in meeting global challenges. The Council provides an essential forum for navigating the dramatic economic and political changes defining the twenty-first century by informing and galvanizing its uniquely influential network of global leaders. This report was jointly produced by the Adrienne Arsht Latin America Center and the Strategic Foresight Initiative. The **Adrienne Arsht Latin America Center's** mission is to broaden awareness of the new Latin America and highlight the region's potential as a strategic and economic partner for the United States, Europe, and beyond. The Center injects new ideas and innovative policy recommendations to challenge the conventional wisdom on Latin America and its place in the world. The **Strategic Foresight Initiative** develops actionable foresight by identifying and assessing long-term, emerging global trends; connecting them to current challenges to inform policy and draw implications for strategy, and designing innovative strategies to reach desired future scenarios.

The opinions expressed in this publication are those of the authors and do not necessarily reflect the views of the Inter-American Development Bank, its Board of Directors, or the countries they represent.

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The Inter-American Development Bank is devoted to improving lives. Established in 1959, the IDB is a leading source of long-term financing for economic, social and institutional development in Latin America and the Caribbean. The IDB also conducts cutting-edge research and provides policy advice, technical assistance and training to public and private sector clients throughout the region.

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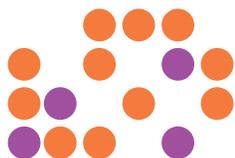


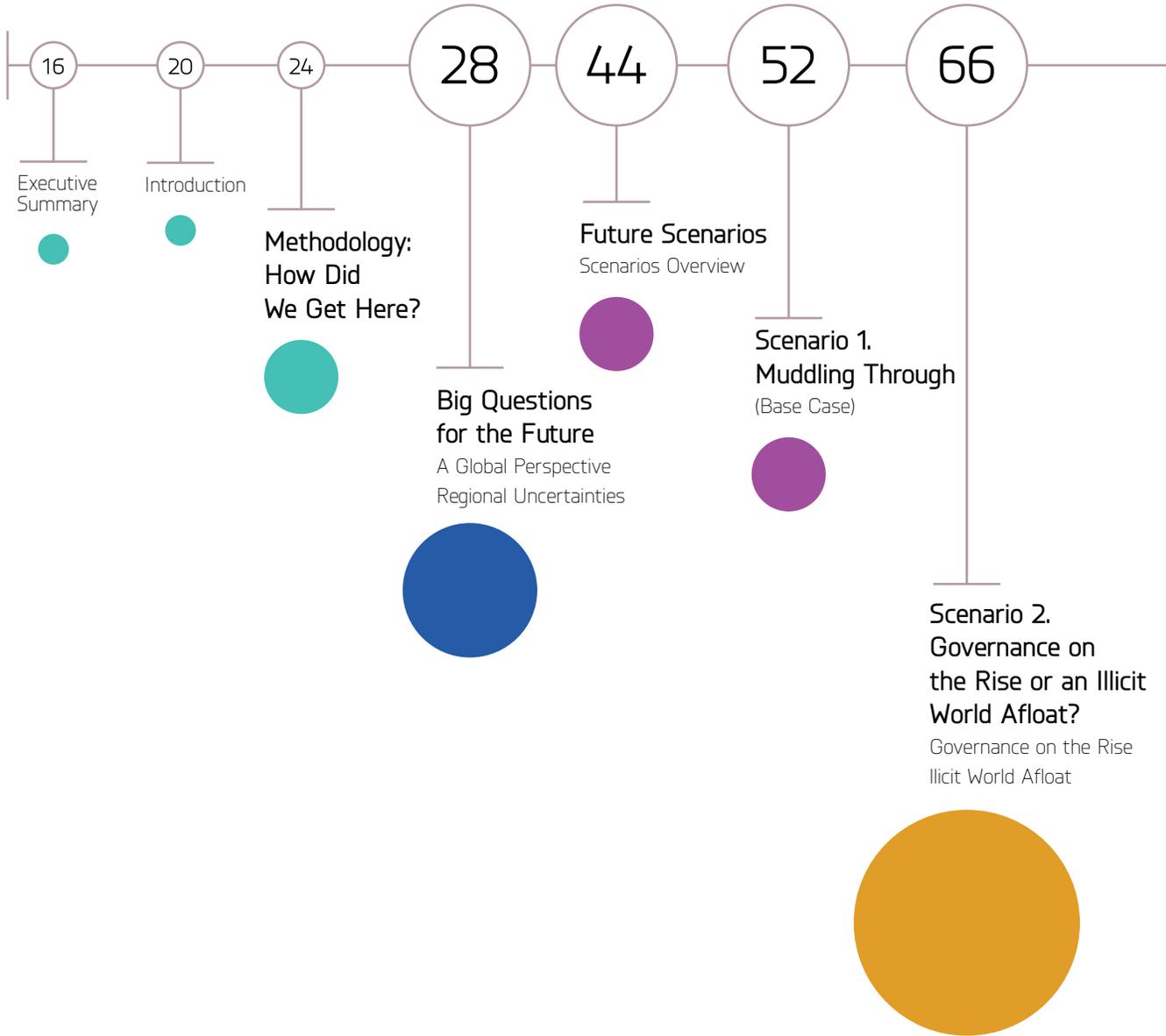


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86	100	110	122	126	144	146
Scenario 3. Toward Integration or Fragmentation Prevails? Toward Integration Fragmentation Prevails	Scenario Vignette: Climate Change	An Ideal World in 2030	About the Authors / Contributors	Appendix 1: Critical Trends Demographic Shifts Human Development Sticky Economies	Appendix 2: Countries and Regions in This Report	Endnotes

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The imperative of foresight





by Luis Alberto Moreno

History teaches that in the lives of nations, costly mistakes are sometimes caused by ignorance, sometimes by hubris, and occasionally, by bad luck.

But all too often, they are the outcome of a lack of foresight.

In our fast-changing age, foresight is often viewed as a luxury. Governments, in particular, tend to be focused on near-term urgencies that are driven by polls, interest rates, conflicts, social needs, commodity prices or natural disasters. In ordinary times, elected officials are unlikely to take their eyes off these demands to consider long-term risks or trends that could impact their next generation.

But these are not ordinary times. As this report goes to print in November of 2016, people around the world are engaged in a passionate debate about the future. The debate is fueled by deep frustration and disagreements over the persistence of income inequality and the effects of globalization and immigration.

It also reflects anxiety about uncertainties that are looming on the horizon. Can political parties and demo-

cratic institutions regain the trust of citizens? How will technologies such as artificial intelligence affect the job prospects of today's high school and college students? What will climate change mean for food security, biodiversity or tourism? Will economic integration accelerate in the coming years, or will fragmentation and protectionism gain the upper hand? And in a digital world, who will protect individual privacy and prevent cross-border criminal activity?

Governments and major corporations in developed countries are increasingly devoting time and resources to analyze scenarios to answer these questions and better plan for the future. In Latin America and the Caribbean, however, this kind of thinking is still scarce. And we don't have to look far back to find examples of how this lack of foresight can hurt the region's development.

Only a few years ago, soaring oil prices instilled a sense of inexhaustible prosperity in several Latin American countries. Governments ramped up public spending, as if \$100 a barrel were a guaranteed floor to a notoriously volatile market, and few built up reserves in case their fortunes

changed. And so the oil bonanza fueled one of the biggest expansions of social programs in living memory.

All that time, the “fracking” revolution that turned the United States into the world’s leading oil producer was already underway. The global energy market was transformed, as previously inaccessible oil and natural gas reserves became commercially viable.

Not surprisingly, when crude prices crashed below \$50 a barrel in 2016, many oil exporting countries were caught unprepared. Instability ensued as governments were forced to wrestle with the realities of dwindling revenues. And today we’re once again in the familiar position of having to tighten our fiscal belt during a sharp slowdown. I am convinced that we can do a better job of anticipating and preparing for such disruptions. And over the past few years, as president of the Inter-American Development Bank, I have sought to introduce prospective thinking into our work with the region’s governments.

We started on a modest scale, holding in-house events where we encouraged our staff to think out loud about the prospects for our borrowing member countries in their respective fields of expertise, looking at both opportunities and risks. We quickly concluded that change was accelerating in almost every one of the areas where we work, in ways that could have dramatic consequences in less than a decade.

Next, we started to reach out to our clients, inviting them to take part in simulation exercises where we would jointly assess possible future scenarios, taking into account political, economic, social, technological, environmental, and even security aspects. Our goal in these exercises was not necessarily to come up with actionable plans, but rather to start a sustained conversation about the big trends, disruptions and opportunities that will shape our region for decades to come.

Recognizing that there was a strong demand for such prospective analysis, the IDB decided to partner with other organizations specialized in that discipline. This report is the result of such collaboration, in this case with the Atlantic Council’s Adrienne Arsht Latin Amer-

ica Center and its Strategic Foresight Initiative and the Frederick S. Pardee Center for International Futures at the University of Denver.

I trust the insights contained in these pages – to my knowledge the first region-wide prospective study of its kind – will provoke fresh thinking among those working on development issues, and that it they will also inspire those responsible for guiding our countries to the future. By looking further ahead, understanding the risks and uncertainties, and spotting potential problems and opportunities, we may yet make smarter decisions that will help us become a more prosperous and happier region.



Acknowledgments





The Atlantic Council produced this report in partnership with the Inter-American Development Bank and in collaboration with the Frederick S. Pardee Center for International Futures at the University of Denver, a globally renowned institution in quantitative futures modeling.

We would like to thank Barry Hughes, Senior Scientist and Mentor and David Bohl, Research Associate for their partnership and contributions to this effort. Barry is the founding director of the Pardee Center and created the International Futures tool that forms the backbone of this report. David Bohl worked tirelessly on the modeling required for this effort, including the quantitative analysis for the Critical Trends section. This project would not have been possible without David's dedication, commitment, and expertise.

At the Atlantic Council, we would like to thank the many staff members—past and present—who contributed to this report. Foremost among them is Andrea Saldarriaga Jiménez, Program Assistant in the Adrienne Arsht Latin America Center, who provided original analysis in helping to develop the scenarios featured in the follow-

ing pages, including drafting some of the original text. Andrea's passion for the topic and attention to detail were indispensable, as was her ability to liaise with the many external contributors and to oversee the production of this report. Carmen Muñoz Melzer, who served as Assistant Director in the Adrienne Arsht Latin America Center until June 2016, was also critical in the earlier phases of this project and put pen to paper in drafting some of the analysis. Mathew Burrows, Director of the Strategic Foresight Initiative and one of the world's leading experts on global trends analysis, provided methodological and substantive guidance for this effort. Many interns contributed to this report with research and event coordination: Marianna Buchalla Pacca, Nicolas Jiménez, Juan Felipe Celia, and Alejandra Rodríguez.

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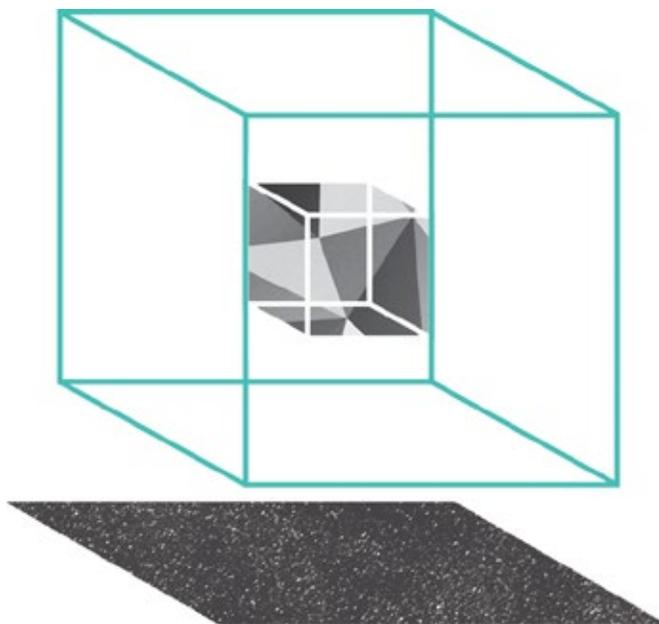
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—Jason Marczak and Peter Engelke

Executive Summary





by Mathew J. Burrows

Strategic foresight is critical to moving a country or region in the right direction. Leaders nearly everywhere in the world are overwhelmed by the crush of events, focusing their attention on the present rather than the long term. Latin America and the Caribbean is no different. But complacency in thinking and planning for the future can no longer be the status quo. At a moment of profound regional and global transformation, the time is now to seize on policy directions that are most likely to take the region in the right direction. While Latin America and the Caribbean has many challenges, through foresight and strategy it could boost its position in the world—as Asia has done already. This publication makes the case for doing just that.

Latin America has made incredible economic and political progress over the past decade. The prolonged commodity boom in the 2000s fueled higher growth rates than the Organisation for Economic Co-operation and Development (OECD) average and generated a dramatic drop in the poverty rate and a huge explosion of the middle class. Today, 288 million, or one in three people, are considered middle class. At the same time, with

a few notable exceptions, democratic institutions are stronger, with universal suffrage and regular elections now largely the norm.

The key question for the future is whether the region can maintain momentum, particularly with China's slowing growth. The end of the commodity boom exposed underlying structural problems in Latin America and the Caribbean. Fiscal and institutional concerns, as well as other social and economic questions, were laid bare. Not only do the next nearly fifteen years require us to solve lingering issues that remain from the mid-teens, but a new direction must be charted so the region can maximize its inherent advantages and best compete in a rapidly changing world.

Boosting Productivity Is Key

The biggest economic concern is modest productivity growth, which is lower than the OECD median. To boost productivity, countries in the region will need to make the right kinds and levels of investment, in areas ranging from education to skills training to infrastructure. While the region has achieved universal access to primary education, for example, enrollment remains low in pre-primary as well as secondary and tertiary schools. Quality continues to be a top problem.

In 2030, Latin America and the Caribbean will remain one of the most urbanized regions in the world. Cities should be thought of in terms of opportunity, as they are engines of innovation and wealth creation when they are functioning properly. In 2030, the region's cities can play this role if governments—in coordination with the private sector—boost investments in better urban infrastructure and resource-efficient technologies. This may help open the door for the long-held imperative that the region embrace the fundamentals necessary for more knowledge-based economies. And it shows why it is time to move beyond talk and into action: investing in small and medium enterprises and in a highly skilled labor force, enhancing university and private-sector links, and pushing for integration among countries to generate regional synergies.

The Demographics Race Against Time

Fortunately, population trends work in the region's favor. Latin America and the Caribbean has experienced one of the most rapid fertility declines anywhere, falling by at least half in the majority of countries.¹ But most of the region will still be experiencing a demographic dividend in 2030, because the ratio of workers to dependents (those who are too young or old to work) will still be positive. In Europe and East Asia, however, more than 30 percent of their populations will be over sixty-five in the next decade or so. This gives Latin America a comparative advantage over much of the world.²

For the region as a whole, the working-age population will increase proportionally until approximately 2025. A favorable demographic "window" will remain open into the 2030s, but will shut in the 2040s. Latin American countries must work hard to realize a payoff during this relatively short window of opportunity—one they have not really taken advantage of until very recently.

Like many other developing states outside of South Asia and Africa, Latin America faces the problem of speeding up development before the aging population reduces the potential for rapid growth. In other words, it could age before it grows rich. As the proportion of its population of working age shrinks, without a boost in productivity, per capita income could decrease dramatically.

Looming Geopolitical Benefits

Geopolitics favors a more prominent position for Latin America in the world if it can enact needed economic reforms. While the US will remain Latin America's biggest trading partner, Asia, and to a lesser extent Africa, are becoming bigger markets. The advent of a multipolar world in the past decade or two has opened a new chapter in regional development. China, in particular, has played a dramatic role in broadening the region's geopolitical horizons.

Alternative Futures

This publication examines the different trajectories that Latin America and the Caribbean could take, out to the year 2030. The goal: provide fresh perspectives on how the future might unfold—and, hopefully, prompt government action. Unlike other forecasts, it examines broader global and regional trends that will shape Latin America's future.

The scenarios in this report sketch several different ways in which the future might unfold, with each based on one or more uncertainties facing the region. These scenarios are based on extensive quantitative and

qualitative research. The following pages sketch out three major scenarios, two shorter “corollary” scenarios (mirror images of major scenarios), and one scenario “vignette” on climate change.

Muddling Through is major scenario where both the global and regional systems play out along a path consistent with their historical development. In essence, it’s the base case. This is a starting point for examining how the future of Latin America and the Caribbean might unfold. This scenario considers governance, regional integration, and how the region adapts to climate change as possible key ingredients for success—or failure. Among its findings: The share of people defined as middle class increases by 57 million to reach 345 million by 2030.

Governance on the Rise, another major scenario, imagines how strengthened democracies across the region might enact politically difficult but necessary reforms. It focuses on the central role the middle class plays in pushing governments to enact these reforms. The scenario also dissects the economic and social benefits that accrue with greater government transparency, stronger institutions, and increased social accountability. Here, the regional economy grows by an additional 7 to 10 percent.

The **Illicit World Afloat** corollary scenario, in contrast, imagines an erosion of governance. Corruption is pervasive and weakened rule of law reduces state capacity, paving the way for global crime syndicates. Insecurity drives a brain drain, while foreign direct investment falls. One result: Foreign direct investment shrinks by more than 50 percent.

The **Toward Integration** major scenario explores a future in which regional integration leads to better economic performance. It examines the impact of integration largely in terms of increased investment in infrastructure and human capital, but also considers collaboration among countries in finance and energy integration. It assumes infrastructure investments will reach nearly 5 percent of gross domestic product (GDP), with the result for Central America being a jump in GDP by over 9 percent.

Conversely, the **Fragmentation Prevails** corollary scenario considers how a globalized world might continue to pull the region’s countries toward different economic, political, and social poles. In following this path, the level of exports declines by \$200 billion annually.

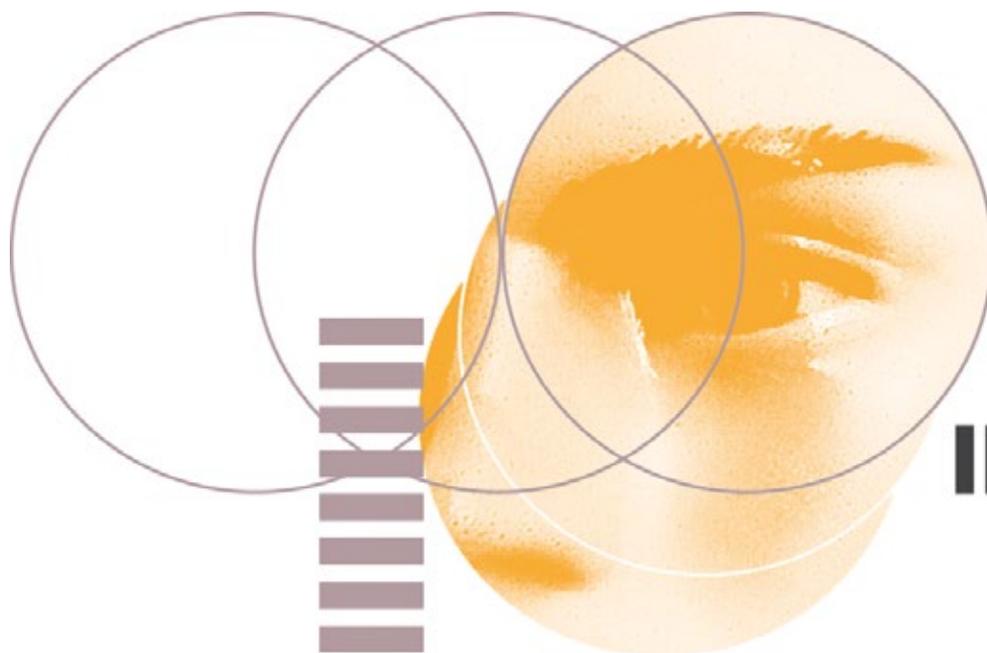
Finally, the **Climate Change** scenario vignette imagines a future in which the region experiences the inevitable consequences of climate change. However, it also envisions an opportunity for Latin America to become the world’s bread basket and the global green leader.

Latin America and the Caribbean 2030: Future Scenarios offers recommendations for the region to become a green, innovative, resilient, and inclusive society. Governments lag behind in a very important area: the ability to create a strategic vision that prioritizes goals and builds political agreement. That is why this publication is so critical. Having written the National Intelligence Council’s *Global Trends 2030: Alternative Worlds* report and seen the useful debates it ignited in the US and the global community, I expect this report to be the cornerstone for strategic foresight analysis in Latin America and the Caribbean.

Dr. Mathew J. Burrows is the director of the Atlantic Council’s Strategic Foresight Initiative in the Brent Scowcroft Center on International Security. He is the principal author of the National Intelligence Council publication Global Trends 2030: Alternative Worlds.

Introduction





Latin America and the Caribbean are at a critical stage in their historical trajectory. In the past decade and a half, much seemed to be going right. A commodity boom spurred a fiscal resource windfall that led to strong gross domestic product (GDP) growth, new or expanded social programs in many countries, and tens of millions of people moving into the middle class or out of poverty. The region seemed to be poised for great things. Looking to the future, is that still the trajectory?

Today, the region is in a transition period as profound as any in decades—perhaps as important as the transitions to democracy during the 1980s that shaped the path to the present. The end of the commodity boom exposed underlying structural questions that now gnaw at many countries. Fiscal and institutional problems, as well as other social and economic concerns, are chief among them. Ongoing insecurity related to transnational criminal networks, often operating smack in the middle of the region's many cities, continues to eat away at the fabric of many otherwise booming countries.

Today, corruption scandals are all too common—though perhaps this is due to strengthened judiciaries rather than more corruption. But while such scandals may have resulted in coups in the past, today democratic institutions, and judiciaries in particular, are dealing with these scandals. Democratically elected leaders are being held accountable, whether in Brazil or Guatemala.

In recent decades, Latin American countries have strengthened their democratic systems and respect for institutions, efficiently managed the macroeconomy, and implemented inclusive social policies that seek to reduce poverty and inequality. However, they lag behind in a very important area: the ability to devise a strategic vision that helps prioritize goals and build political agreement. That is why this publication is so critical.

Preparing for the future, and looking beyond the day to day, is critical to moving a country in the right direction. The region's leaders, like those nearly everywhere else in the world, are mired in urgent problems that need quick attention. Yet, we have seen time and again that a singular focus on the present is a recipe for failure over the



Today, the region is at a transition period as profound as any witnessed in decades, perhaps as important as the transitions to democracy during the 1980s



long run. The future can't be foreseen by merely extrapolating from current conditions. Will Latin America's leaders be able to foresee the possibilities and obstacles in front of them and prepare for the future?

This report looks at Latin America and the Caribbean out to the year 2030, with the goal of providing fresh perspectives on how the region's future might unfold, and thus informing policies that can be enacted now to set countries on the right course. The purpose is not to predict how the future will unfold. Rather, it asks questions about global and regional conditions, examines key trends that will shape the future, and offers several future scenarios, looking out to the year 2030. This analysis is based on how the many drivers—phenomena ranging from demography to human development to natural resources—might shape the ways the future unfolds.

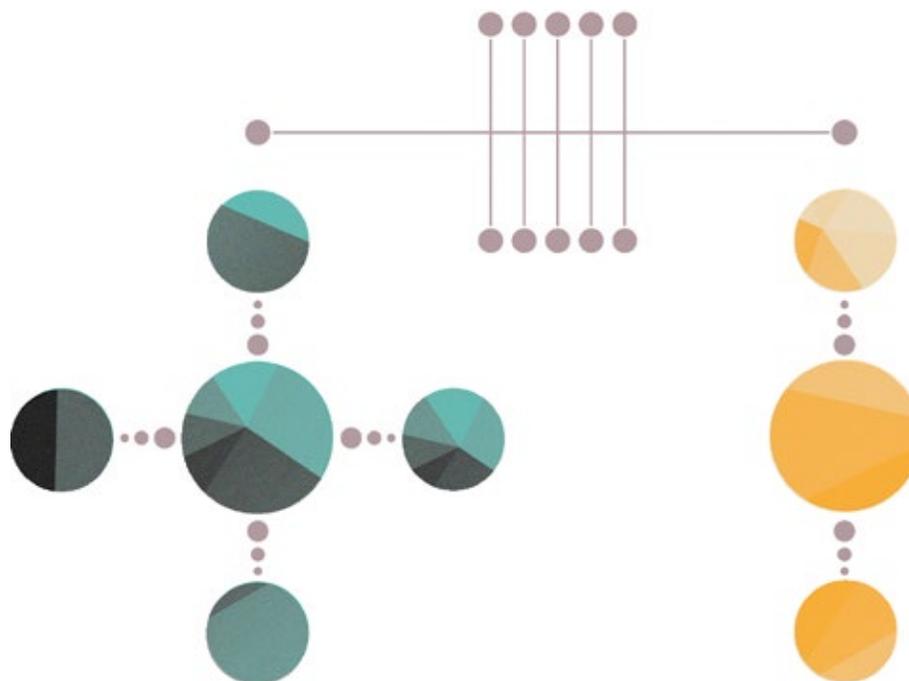
This publication is based on qualitative and quantitative input drawn from countless sources. A futures model designed and developed by the University of Denver provides the quantitative modeling platform to project how some dimensions of the future may unfold. In-person consultations with public, private, and civil society leaders from the region took place at roundtables in Lima, Peru; Rio de Janeiro, Brazil; San Salvador, El Salvador; and Washington, D.C. These roundtables—representing Argentina, Bolivia, Brazil, Chile, Colombia, Dominican Republic,

Ecuador, El Salvador, Nicaragua, Panama, Paraguay, Peru, United States, Uruguay, and Venezuela—ensured that this report reflects the overall reality of the region today. Technical experts from the Inter-American Development Bank (IDB) were consulted as well. In total, more than 110 people participated in these consultations. At the Atlantic Council, the expertise of the Adrienne Arsht Latin America Center and the Brent Scowcroft Center on International Security were essential for this work. The participatory nature of this study is critical for ensuring that the findings are not only credible but, hopefully, embraced by the many decision-makers who have contributed to it.

This is a creative exercise. The purpose is not to pretend to know the future nor to predict it. The goal of this report is to inform the work of any government or business that must constantly be looking around the bend. Too often, analysis looks at one particular sector, one country, or one short block of time. But that is not reality, as everything interacts and time extends both backward and forward.

Methodology: How Did We Get Here?





In an ideal world, foresight would inform both strategic planning and policy. Unfortunately, because policy-makers often must focus their attention on crises, foresight becomes overwhelmed by the crush of events. To help rebalance this equation, in September 2015, the Atlantic Council's Adrienne Arsht Latin America Center and its Strategic Foresight Initiative, in collaboration with the Inter-American Development Bank (IDB) and the Frederick S. Pardee Center for International Futures at the University of Denver, began a one-year project examining the future of Latin America and the Caribbean out to 2030.

This project is built on a rigorous qualitative and quantitative foundation. The quantitative findings are based on the International Futures (IFs) forecasting system, developed by the Pardee Center for International Futures.

Analyses from IFs were used to enhance qualitative insights gained from meetings with key experts and stakeholders around the Western Hemisphere. In addition to two ambassador roundtables in Washington, D.C., regional meetings brought together leading government officials, academics, business leaders, and civil society leaders to

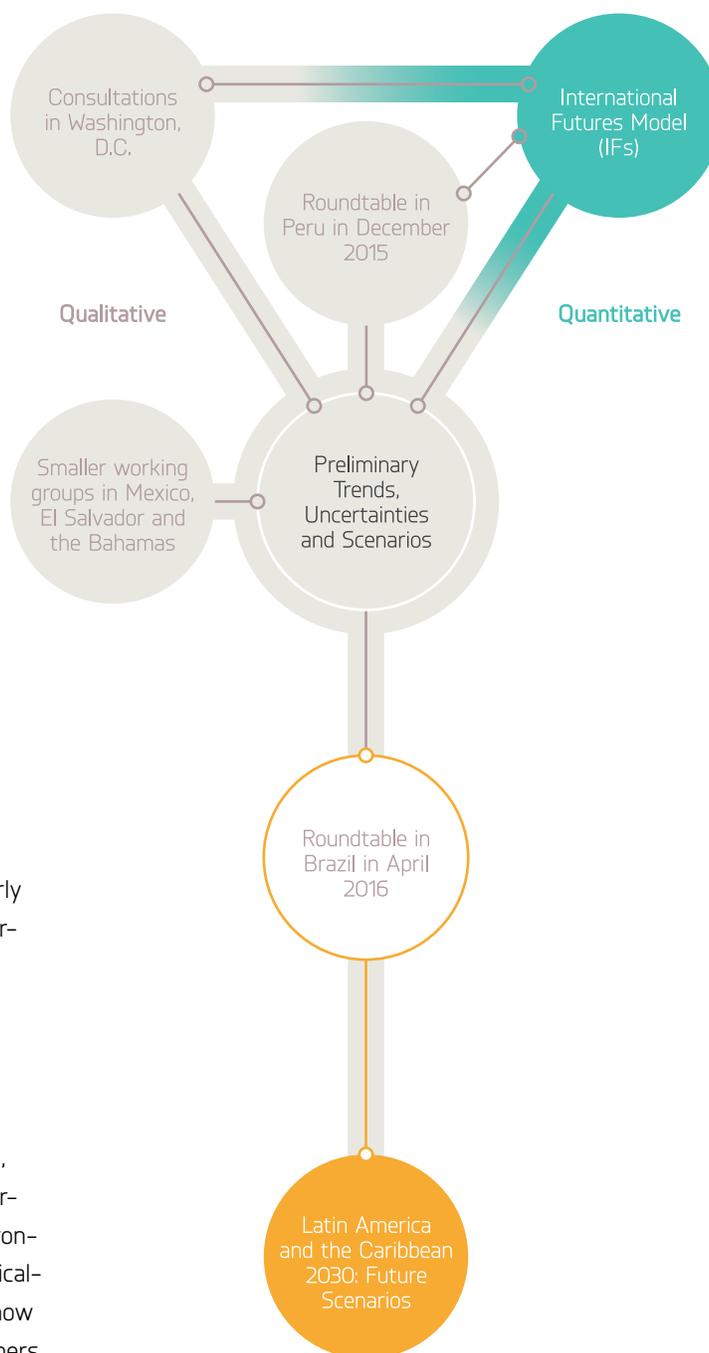
discuss the region's future. This series of meetings aimed to make the process participatory and inclusive, and to gain critical knowledge and perspective from local thought leaders (see [Figure 1, p. 26](#)). Together with IFs, these meetings helped distill the emerging trends and uncertainties that most likely will shape the region over the next fourteen years, and policy interventions that might lead to alternative futures and scenarios.

International Futures (IFs)

International Futures is a tool for thinking in a long-term, integrated way about the future. IFs leverage historical data to identify and measure trends, model dynamic relationships across development systems, and forecast hundreds of variables for 186 countries for every year from 2010 to 2100. There is no other model available to policy-makers today that offers the same breadth of integrated foresight across systems and time.

With IFs, the Pardee Center focuses on exploring past development trends, understanding the complex inter-

Figure 1.
Methodology
Overview



relationships that drive development outcomes, and shaping policies that communicate and achieve a clear development strategy. The IFs database contains nearly 4,000 country-level data series that inform and underpin forecasts across human, social, and environmental systems; they help develop scenarios, evaluate policy trade-offs, and explore alternative futures.

IFs frame uncertainty with forecasts across critical human development systems, including: demographics, economics, health, education, agriculture, energy, governance, government finance, international politics, environment, technology, and infrastructure. They are dynamically connected across time, enabling users to simulate how changes in one system lead to changes across the others.

Using data from trusted global sources, IFs help users understand dynamics within and across global systems, enabling them to think systematically about potential futures and to create more reasonable development goals and targets. There are three main avenues for analysis in IFs: historical data analysis (cross-sectional and longitudinal), Base Case analysis (how systems seem to be developing), and alternative scenario development (exploring if-then statements about the future)

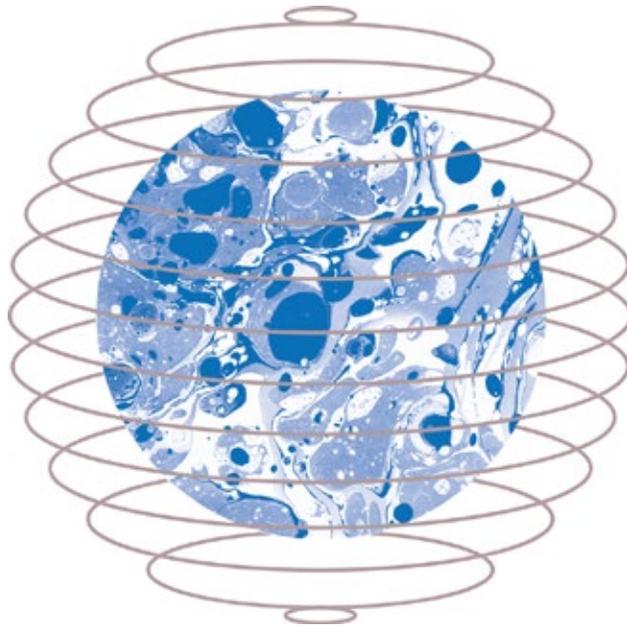
While there are limits to any modeling endeavor, forecasting is still important. Thinking systematically about the future, with input from experts and quantitative models, creates a platform for anticipating the future more effectively. When forecasts are explicit and transparent, the analysis becomes even more useful. The IFs software provides that transparency, helping policy-makers think critically about trade-offs and make better strategic choices in an uncertain global environment.



Chapter 01

Big Questions for the Future

Big Questions for the Future



Looking ahead to 2030, seven major questions should be asked about the region, the answers to which will go a long way toward defining how its future will unfold. In futures studies, these questions are often called uncertainties—events, developments, or shocks that have the potential to alter or disrupt the trajectory of a country, a region, or the world. Uncertainties can be social, political, geopolitical, economic, environmental, or technological. An example is shale gas, a technological breakthrough that upended global energy markets, altered national economic trajectories, and reshaped global geopolitics.

Figures 2 and 3 list the big questions that will shape Latin America and the Caribbean out to 2030. These questions resulted from extensive outreach to stakeholders from Latin American and Caribbean countries and within the Inter-American Development Bank, as well as from analyses provided through the IFs model. Figure 2 poses global questions (how uncertainties at the global level might shape the region), while Figure 3 (p. 37) poses domestic questions (how uncertainties within the region might shape the future).

A Global Perspective Figure 2



What Will Global Growth Look Like?

This question concerns the levels and patterns of global economic growth through 2030, and how those patterns will affect the economies of Latin America and the Caribbean. There are four interrelated aspects: the overall rate of growth, the volatility of that growth, the direction from which growth will come, and the relative productivity of the global economy compared with the region. All of these things are uncertainties.

With respect to the overall rate of growth, in general terms higher global growth rates will ease the region's development path, enhancing governments' abilities to fulfill their social welfare obligations and invest in education, health care, infrastructure, and other areas, while at the same time reducing social discontent (through lower unemployment and higher wages). Lower than expected global growth rates will have the reverse effect, dampening regional growth and making it harder for governments to raise revenue and pay for their obligations. Long-range projections tend to forecast average global growth rates ranging from 2 percent to 3 percent per year—numbers that could be considered the new normal.³

Higher global growth also means more foreign direct investment (FDI) will flow into the region from both private and public sources. While there is no guarantee of any country's willingness to funnel investment into the region, higher global growth rates make it more likely that more funds will be available.

Consistent rates of growth—high, low, or otherwise—are unlikely to characterize the next fourteen years. Volatility of global growth is more likely. Recent economic history suggests that Latin America's prosperity is tied to swings in the global growth rate, especially commodity bubbles. Not all economies are equally exposed to the commodity cycle, nor are all equally exposed to bubbles from specific parts of the world; Mexico's exports, for example, are oriented far more toward the United States than India or China. A major question is whether the region's economies can become more resilient to global shocks.

Volatility, not consistency, to characterize global growth the next few years

Both the United States and the European Union are likely to remain important trading partners, but emerging markets, especially in Asia, should become even more critical in the future. China has been an especially important growth driver and is likely to continue to be an important export destination. Although China's growth has slowed and the country faces long-term demographic decline (low fertility and an aging population), China's share of the global economy—along with other emerging economies, such as India—will rise relative to Organisation for Economic Co-operation and Development (OECD) economies.⁴

The commodity boom, propelled by China's meteoric economic rise and more recent plateau, demonstrated the power of these emerging markets. China's role as importer of primary commodities has been a mixed economic blessing, especially for South American economies, where growth fueled local economies but also displaced select

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industries. How China grows over the next fourteen years will have an enormous impact on Latin America's economic growth and on whether it shifts away from an overreliance on commodity exports.

India might replace China as the fastest growing economy, with India's burgeoning middle class rivaling China's middle class demand. At the same time, rapidly growing Indian cities could take up the slack for construction materials such as copper for electricity grids.⁵ Besides China and India, other important emerging markets should include countries within the Middle East and North Africa (MENA) and sub-Saharan Africa, both of which figure to be bidirectional sources of growth in trade and investment. The rapid expansion of Brazilian trade with Africa after the election of Luiz Inácio Lula da Silva in 2003 provides an illustration of the possibilities of South-South economic exchange.⁶

Finally, productivity growth is a major question for both the global economy and for the region. Given the slow-down in global population growth (sub-Saharan Africa is a major exception), economic growth increasingly must come from productivity improvements. Aging in East Asia and Europe will be particularly rapid.⁷ It will not be as fast in Latin America and the Caribbean, but the slow-down in population growth will have a dampening effect. Although increasing productivity in absolute terms will benefit the region regardless of what other countries and regions do, improving productivity on a relative basis will determine whether it will catch up to the world's richest and most dynamic economies.

How Will Changes in International Trade Affect the Region?

Growth rates are not the only economic uncertainty in the global environment. Shifts in international trade patterns—licit and illicit—will shape the region's future as well.

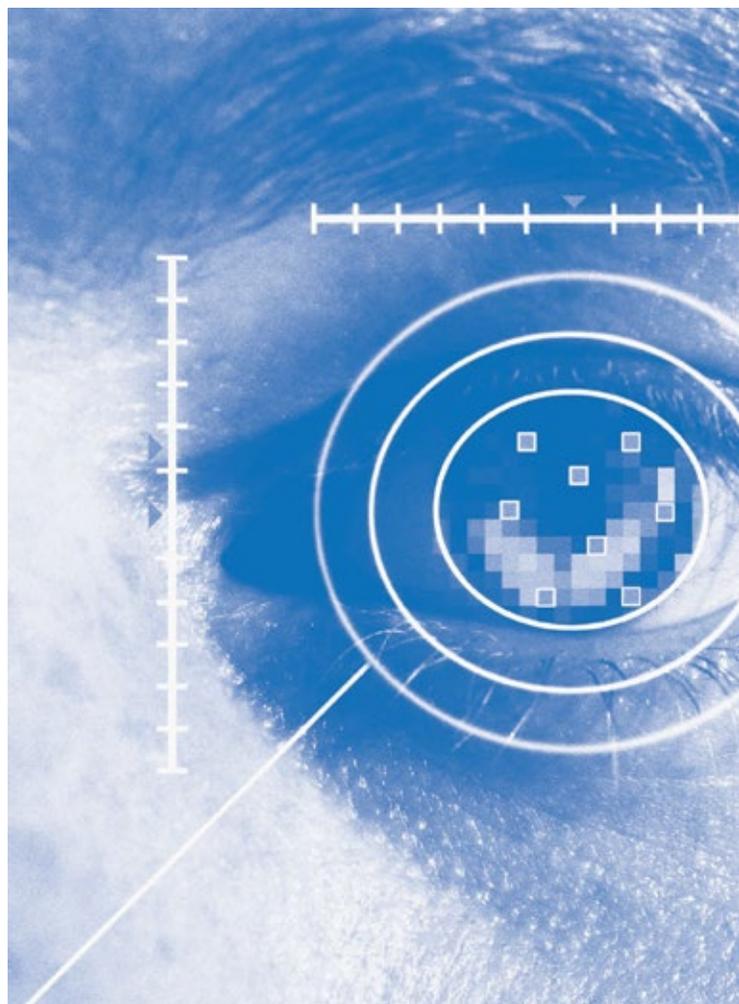
The biggest uncertainty might involve the trajectory of international trade agreements; specifically, the future of new regional trade agreements, such as the Trans-Pacific Partnership (TPP) and the Transatlantic Trade and Investment Partnership (TTIP). These regional trade agreements enable major economies such as the United States, Japan, and the European Union to set standards and rules. Only Peru, Mexico, and Chile are part of the TPP (Mexico and Chile already have free market access to the TPP's major economies), while none of the region's economies are a part of TTIP. If these trade agreements are realized—a major uncertainty in itself—other countries will have to move toward their standards to retain access.⁸

Global trade patterns are also likely to be upended by evolving supply chain dynamics. Generally speaking, Latin American and Caribbean economies are toward the lower end of the global value chain. The region's economies tend to export unprocessed raw materials or low-value-added exports, with a relatively small number of large firms capable of engaging in high-value-added exports of finished goods (for example, Brazil's Embraer aircraft manufacturer). This dynamic is reinforced by the fact that many countries in the region are not well linked to global supply chains, with exports accounting for 12 percent less foreign-valued-added than those from Asia.⁹

Yet technological changes will reshuffle the global division of labor and the region's position in it. Information and communication technologies (ICT) make service production and delivery possible around the world and enable small specialist firms to provide high-value-added services to global markets. Small firms in Latin America and the Caribbean should be able to take advantage of global niche markets using ICT. Emerging technologies such as advanced manufacturing will transform global supply chains, with potentially revolutionary effects on economic geography—though the indirect effects of such change

makes it nearly impossible to quantify. These technologies should hasten the decentralization of manufacturing operations and upend how labor and material inputs factor into manufacturing.¹⁰

On the negative side, illicit transnational flows are a significant uncertainty through 2030. The global illegal drug trade is likely to remain massive, providing a major headache for the region's governments and people. Illegal drug production and shipment routes continue to shift across countries in an attempt to stay ahead of government crackdowns. There is uncertainty about whether the region's governments can successfully fight the corrosive effects of the drug trade, especially its attendant corruption and violence.¹¹



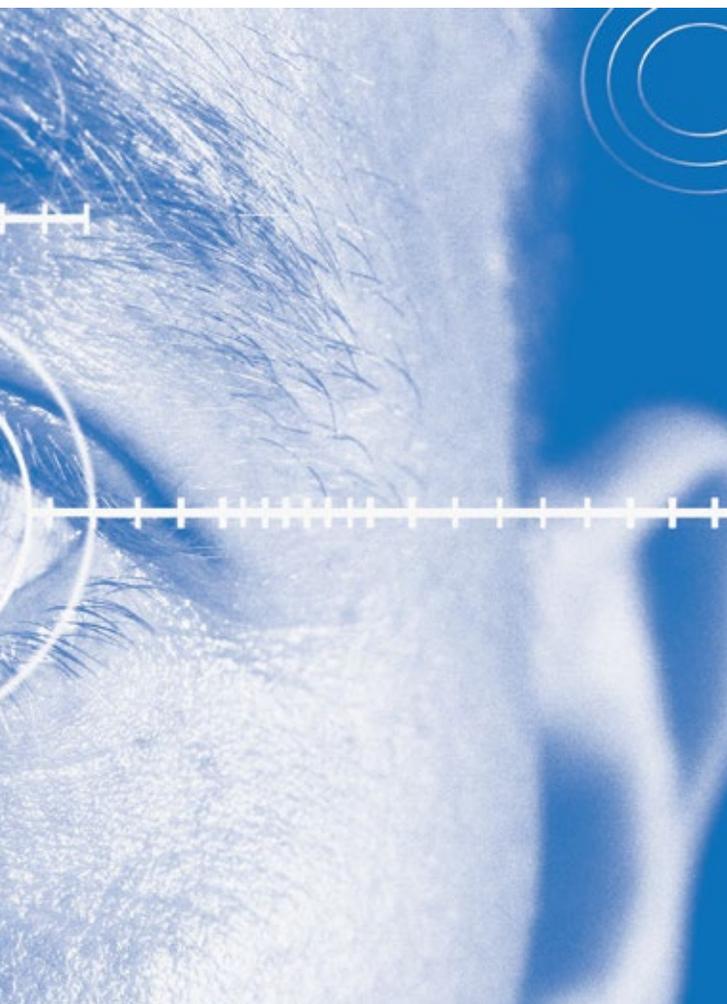
Will an Imbalanced World Drive Latin America Apart?

Global geopolitical and security challenges will affect Latin America and the Caribbean in different ways. In 2030, global trade and investment patterns will be multidirectional, with several major economic poles (including the United States, Europe, China, India, and an array of mid-leweight economic powers). Geopolitical fault lines will continue to shape the international system, including the character of the global economy. Geopolitics will overlap with economic power, although economic clout alone will not determine geopolitical alignment (it is hard to envision a world in which the European Union's member states become geopolitical rivals with the United States).

The single biggest risk is a breakdown in relations between the United States and China and a dramatic increase in their geopolitical competition. In that scenario, China and the United States would vie even more strongly for economic and diplomatic partners in the Americas and seek to exclude or minimize the influence of the other power. Both states might begin to seek partnerships through preferential trade agreements, investments with diplomatic strings attached, and closer security agreements. Arguably, the United States is the only global power with both security and economic interests in the region. These interests will sometimes conflict with one another (the United States' openness toward trade and investment with the region on the one hand, fear of illicit trafficking from the region into the United States on the other). Efforts like Plan Colombia, the \$10 billion of bipartisan US congressional support since 2000, and the ratification of the US-Colombia Trade Promotion Agreement are examples of security priorities complementing economic policies.

On matters of security, the ethnic, ideological, national, and sectarian fissures that roil the Middle East, South Asia, and much of Africa do not threaten Latin America and the Caribbean. It is difficult to foresee a scenario in which such divisions become prominent and threaten to tear the region apart. Similarly, interstate conflict within the region, and military intervention from outside it, are unlikely over the next fourteen years. Terrorism is unlikely to feature as a systemic problem. Europe's terrorism problem is a function of its proximity to the MENA region, its rapidly changing demography, and its foreign and security policies toward MENA states; none of these conditions are present in Latin America and the Caribbean.

However, Latin American countries will have to deal with other global security concerns. In addition to the corrosive effects of illicit trafficking, cybercrime is a concern. As the digital realm expands into every aspect of society, the risks will become greater in the cyber domain. Although the benefits of ICT expansion are expected to dramatically outweigh the downsides, the cost of adverse cyber events (including cybercrime and espionage) is forecasted to reach nearly \$70 million annually by 2030 (up from around \$30 million today).



The single biggest risk is a breakdown in relations between the United States and China and a dramatic increase in their geopolitical competition

Regional Questions

Figure 3



How Resilient Are Latin America's Democracies?

Since the 1980s, the region has moved toward democracy to the point where today, the vast majority of countries are democratic. But recent corruption scandals, ongoing transnational crime and associated violence, poor citizen security, and weak rule of law remain chronic problems. Highly public scandals, ranging from Operation Car Wash in Brazil, *La Línea* in Guatemala, and the Panama Papers, all add to the perception—real and imagined—that democratic systems are not yet fully robust. The uncertainty is whether the region's democracies will be resilient in the face of economic downturns, ongoing criminality, embedded corruption, and the temptations of populism.

Perhaps the biggest single question facing democracies is the role that an increasingly informed, capable, and mobilized middle class will play through 2030. Although the “middle class” (those living on between \$10 and \$50 per day) is a heterogeneous phenomenon that varies in size and composition by country, in general the middle class rose as a share of the overall population during the 2000s. The more positive scenario is that this middle class will remain stable in size, and optimistic and reformist in outlook. Empowered by access to information and with greater connectivity (near-universal access to the Internet), this class' rising expectations could translate into demand for improved services (better urban infrastructure and health care, for example) and more accountability and transparency in local and national government. Their pressure and activism could deepen democratic processes and institutions.

The pessimistic scenario is the reverse. Here, a middle class, its expectations frustrated by poor economic performance and fearful of falling backward into the ranks of the poor, chooses populist or even antidemocratic leadership. Their policy preferences at the local and national levels are oriented more toward protecting their own interests, even if those come at the expense of others. Government is rewarded for effectiveness in delivering tangible goods for them, more than it is for democratic processes.

Corruption and the rule of law are two related metrics of democratic performance. The region has struggled against corruption for decades, and to more firmly ground the rule of law in independent and capable judiciaries. Countries have made progress on both, although Transparency International's 2015 Corruption Perception Index (a measure of perceived corruption in public sectors around the world) gave only three Latin American countries an above-average rating (Chile, Uruguay, and Costa Rica).¹² That is the bad news. The good news is that the 2015 ratings are an improvement over the previous decade, suggesting a trend in the right direction. A steady drumbeat of policy reforms, often brought about by external pressures (frequently, public scrutiny), has made a difference. Whether this progress continues is uncertain.¹³

How Will Governments Respond to an Increasingly Complex and Competitive Global Economy?

Regional economies are exposed to global economic forces, among the most important of which is increasing competition from abroad. Countries in other parts of the world will continue to position themselves for success in global trade, whether by upgrading their human capital, investing in productive infrastructure, building knowledge economy platforms, or taking advantage of their youthful work forces.

Much of the economy is tethered to the global commodity cycle. That dependence can have positive effects, as during the recent commodities boom, which generated economic growth, lowered unemployment, and provided governments with tax revenue. But the negative side

was evident as well: The boom reinforced specialization in primary commodity exports and did not have equal distributional impact (mining and agribusiness benefited much more than other sectors, for instance).¹⁴ When the boom ended, governments had a more difficult time paying for the social welfare schemes they created during the high-growth years.

Generally speaking, the region's economies will need to increase their ability to compete in high-value-added sectors. This is nothing new. Still, its future trajectory and relative prosperity gains will depend on raising competitiveness levels faster than countries in regions such as East Asia, which have outperformed Latin American economies for decades.

The major uncertainties revolve around whether countries can diversify their economies away from commodities to more value-added products and services. These questions involve political as much as economic choices. A positive political outcome would be that the commodities slowdown leads to constructive policy reform, enacted through democratic means, and results in greater transparency and improved performance of government.¹⁵

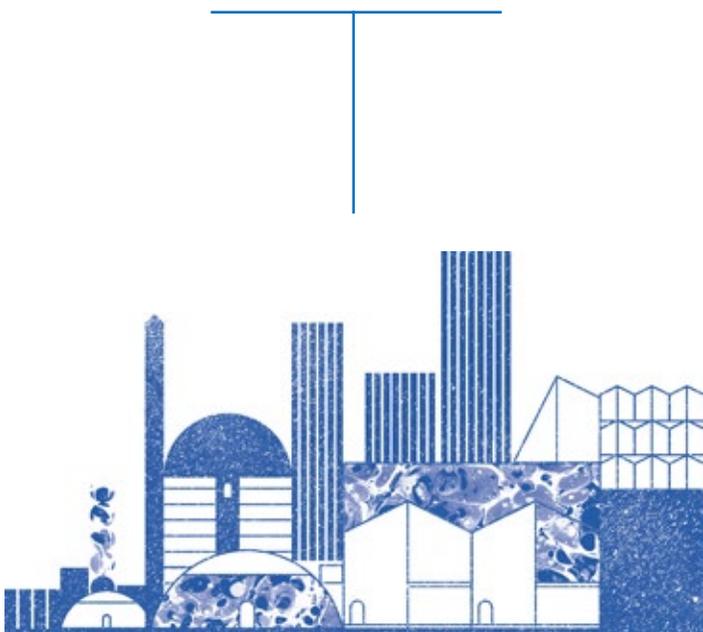
Another uncertainty is whether economies can become more innovative and thereby more productive. Although bright spots exist for some industries in certain countries, the region does not produce innovative firms on par with global leaders such as the United States, Finland, and Singapore—in particular, startups in scientific and technological fields. Put bluntly, there is no Silicon Valley yet. Challenges to creating innovation economies abound, ranging from an undersupply of human capital in STEM (science-technology-engineering-math), to underdeveloped entrepreneurial cultures, to poor commercialization of lab research conducted at universities.¹⁶

Cities will figure into this equation—Latin America is more than 80 percent urbanized. Globally, cities are where innovation occurs; as a general rule, urbanization and wealth are correlated (although there are certainly exceptions). The region has a well-developed network of cities, and at least some of these should garner global reputations as centers of creativity and innovation. This possibility is not far-fetched; Medellín provides an example of a city that has experienced a spectacular turnaround in a relatively short time frame.

Given the heterogeneity in global outlook, one question is whether leaders will have the desire and the political capacity to push for greater regional integration. The region is heterogeneous with respect to trade and outward orientation generally, with Mexico and Central America more oriented toward the United States, and South America oriented toward multiple poles. Intraregional trade is only around 20 percent of total trade, compared with 60 percent within Europe. This is the result of both poor physical connectivity and a lack of common policies. The good news is that there is much room for growth in intraregional exchange, if governments can summon the will to support it.¹⁷

80%

Percentage of Latin America that is urbanized



Will Latin America Take on Much Needed, but Delayed, Social and Economic Reforms?

With the commodity boom having turned into a slump, will governments be able to engage in necessary reforms to avoid large fiscal deficits, ensure social and political cohesion, and make their societies more competitive for the future? This is a twofold uncertainty.

On the political side, will governments have the political will to make difficult decisions that will have both short- and long-term ramifications? Finding the resources to upgrade education or infrastructure will not be easy in an era that will likely be characterized by slowing growth and an aging population. Much depends on citizenries' expectations and degree of engagement on these questions, and in particular on the willingness of the middle classes to align their preferences with the need for reform.

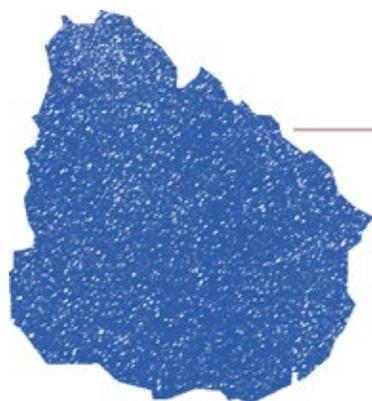
On the fiscal side, will regional governments find the resources to make smart investments over the long term? Regional governments historically have struggled to maintain healthy public finances. Fiscal overspending has been pervasive in certain periods—for example, during the recent commodities boom—exposing governments to large fiscal imbalances when economic conditions deteriorate. To compete with East Asian economies, governments will need to invest in key areas, ranging from infrastructure to education. They also will have to begin handling the consequences of aging, which will have an impact on pensions, health care spending, and other areas. Creative ways must be found to balance competing demands on their resources, for example broadening the tax base by bringing the large informal economy into the formal one.

Urban infrastructure requirements are yet another challenge, requiring annual investments of at least 2 percent of GDP. Although Latin America is on par with OECD countries in terms of share of the population living in cities, the average citizen and city are poorer than their average OECD counterparts. Local governments have less revenue to invest in infrastructure and fewer services to raise the quality of life for inhabitants—including for talented people who might be interested in moving to

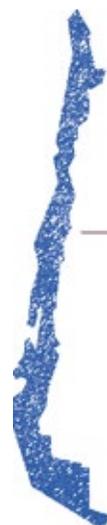
the region's cities from abroad and contributing to development of a local knowledge or shared economy.¹⁹

This story is not an unqualified negative; progress is evident in upgrading and expanding urban infrastructure. Cities, for example, have made significant strides on broadening access to clean drinking water and improved sanitation. In 1990, more than a quarter of all people in the region (the Caribbean excepted) had no access to improved sanitation. That rate has dropped precipitously, to around 10 percent. While much work remains, the fact is that the combination of slowing urbanization rates, *favela* upgrade programs, and infrastructure investment has had real effects.²⁰ Looking to 2030, ongoing investments in a range of areas—including but certainly not limited to water and sanitation—are needed if cities are to compete at world-class levels.

Finding the resources to upgrade education or infrastructure will not be easy in an era that will likely be characterized by slowing growth and aging



Rank
21
Uruguay



Rank
23
Chile

How Will Countries Respond to Climate Change?

Latin America is a resource-rich region, but that resource base will come under increasing stress over the next decade and a half—for two major reasons. The first, on the supply side, is largely a function of how climate change will affect natural and human systems. The second, on the demand side, is largely a function of rising consumption and its impact on natural resources. A changing climate is a given out to the year 2030. The uncertainties lie only in the speed and nature of the change, not whether change is occurring. Therefore, the big question facing the region is how its societies will prepare for and respond to certain climate change.

Hotter temperatures will have multiple adverse effects on Latin America and the Caribbean. The region's leaders can expect more frequent and longer droughts, as well as more frequent heavy precipitation. Climate models cannot yet forecast with a high degree of certainty which areas will get wetter or drier, although in general, regions of the world that are arid or semi-arid should see less precipitation, while those that are wetter should see more precipitation. Such changes will affect the agricultural

sector, which accounts for 5 percent of regional GDP and 23 percent of exports. Agriculture will face greater impact as higher temperatures and uncertain precipitation levels strain yields.²¹ Because agriculture uses 70 percent of the water consumed in the region, shifting precipitation patterns will hit this sector especially hard, unless the sector invests in water-efficient irrigation infrastructure and policies are implemented that encourage more efficient use of water. Neither is common across the region.²²

How farmers respond to increased global food demand is an additional critical question. To produce more food, farmers have only two choices: make existing arable land more productive, or expand the amount of land under cultivation. The odds are high that the region will produce more food both ways—increasing cultivated area at the expense of forested land and increasing yields. Latin America has abundant biodiversity, much of it in its large rain forests (primarily the Amazon). Those forests have been under pressure for decades from increased settlement, ranching, and farming; from 1990 to 2010, only Southeast Asia had a higher deforestation rate. Absent far more significant conservation measures, including proforest conservation policies and large investments in forest conservation from public and private financing,



Three countries in Latin America have a rating above average in Transparency International's 2015 Corruption Perception Index

the region's forest endowment will be smaller in 2030. That, in turn, will worsen climate change, as forests are a carbon sink. Historically, land-related activities such as agriculture and forest conversion have been the region's number one contributor to climate change, by far.²³

Higher temperatures will bring other unfortunate effects. An increase in the number and severity of storms is one, with the worst effects likely to be felt in the Caribbean and along the Central American coastline. Increased precipitation in some areas, coupled with stronger and more frequent storms, likely will increase flooding and hasten saltwater intrusion into groundwater tables.²⁴ Finally, hotter temperatures should create favorable conditions for the spread of some diseases, in particular through disease vectors such as mosquitoes that thrive in warm conditions. As with agriculture, technological advances might have a counter-effect here, if technologies such as the genetic engineering of mosquito species are perfected.

On energy, the region should shift to a lower-carbon energy mix by 2030. The question will be whether the mix will be dominated by natural gas or renewable energy. Global energy demand will continue to increase by 2030,

driven especially by China and India. This will certainly affect Latin America, given its large fossil energy reserves for export. But Latin America can be expected to move away from coal and petroleum and toward natural gas and renewable sources, consistent with global and regional trends that are ongoing now and that should continue.²⁵

There is good reason to forecast that natural gas will continue its rise to prominence globally and in the region. Yet renewable energy production has been growing swiftly as well, with strong annual gains in renewable energy production the norm rather than the exception. Latin America has almost limitless renewable energy potential. Already, Costa Rica and Uruguay get more than 90 percent of their energy from renewable sources. Brazil, historically one of the biggest producers of energy from hydropower and biofuels, has recently invested heavily in wind power as well.²⁶ Much of the growth in renewable sources will depend on the rate of technological change, and therefore the rate of decline in renewable energy prices.



Guest Writers

Marta Lagos

Democracy and Rule of Law: Will we see democratic consolidation or reversal in Latin America in the next fifteen years?

The people of the region think of refrigerators, washing machines, and the jelly they could put on their buttered bread. “With democracy, you eat,” former Argentine President Raúl Alfonsín said.

This quote turned out to successfully predict the demand that has crystallized in the twenty years since Latinobarómetro first began measuring perceptions. Democracy is intrinsically linked to leaders’ capacity to show results. The first result, which seemed the most important at the beginning of these transitions, was the bread and butter—the economy.

This is how 100 million people were lifted from poverty from 2000 to 2010 to comprise the new middle class. The ‘decade of Latin America’, as Inter-American Development Bank President Luis Alberto Moreno remarked at the time, enabled the region to build a middle class. During this period, between the Asian crisis in the early 2000s and the financial crisis at the end of the decade, hyper-presidents garnered approval rates of up to 80 percent.

The decade of 2010 began with a new demand: political goods. This was characterized by a wave of protests from a more inclusive, more educated, more prosperous citizenry (a byproduct of democracy) that defends its rights while paying less attention to its obligations. In this process of putting

forward demands, states are tested: How much is the rule of law worth? Is it worth the same to everyone? Is it applied fairly and equally?

Parties, presidents, and parliaments are subjected to unprecedented scrutiny, in a region where six of ten Latin Americans say they are willing to go out and protest for a given reason.

Democracy is consolidating, albeit with slumps, stumbles, and lags. Changes are swift and slow simultaneously. The reaction of public opinion and the change in political leaders’ rhetoric happen fast, but the structural changes needed to dismantle inequalities are slow to take place. This mismatch produces frustration. In many places, things will get worse before they get better. But Latin Americans everywhere agree on one great demand hidden beneath the call for political and economic goods: dismantling inequalities and discrimination.

Economic growth cannot distract us from identifying the cultural, structural, and social changes that democracy must produce. How these occur will determine how long it will take to achieve a more consolidated democracy. Some countries will undergo reforms by phases; others will enact more abrupt constitutional changes. In any case, the processes of democratic consolidation will be held back without these changes.

While democracies have mostly guaranteed civil and political liberties, many have not solidified social liberties. The road ahead is filled with obstacles, the latest being that of political leadership. Different voices suggest leadership belongs to the people, and those who govern follow plans set forward in protests.

In this sense, traditional politicians don’t seem to have a “second chance,” as Colombian novelist Gabriel García Márquez would say, whereas savior-like caudillos who bash the establishment’s inability to meet demands often do.

Judging by the pace of change in the past twenty years, this story of democratic consolidation needs at least more than one generation to reach its destination. Thus, in fifteen years, we will only be halfway there. History does not repeat itself and there are no shortcuts to the finish line.

Marta Lagos is Director of Latinobarómetro, Latin America's best-regarded annual public survey.



Chapter 02

Future Scenarios

Scenarios Overview



Futures analysis is about forecasting alternative scenarios. The following sections present several alternative scenarios for the region, looking out to 2030. These scenarios are not simple extrapolations of the present onto the future, nor are they “best guesses” about how the region will develop. With a range of uncertainties and complex interactions across sectors and time, and among actors, an endless number of possible scenarios is imaginable. All scenarios have a very low probability of occurring exactly as described. Their purpose, rather, is to stimulate critical thinking about how current choices might shape the future.

The scenarios presented here are based on quantitative and qualitative input, and address one or more of the big questions presented in the previous section. Each scenario presents a story about what the region looks like in the year 2030, with the narrative looking backward over the region’s trajectory as it unfolded from 2016 to 2030. Each integrates lessons from an extensive trends analysis of the region (focusing on demographics, human development, and many other areas). This report includes an appendix, *Critical Trends* (beginning on p. 129), that examines them in depth.

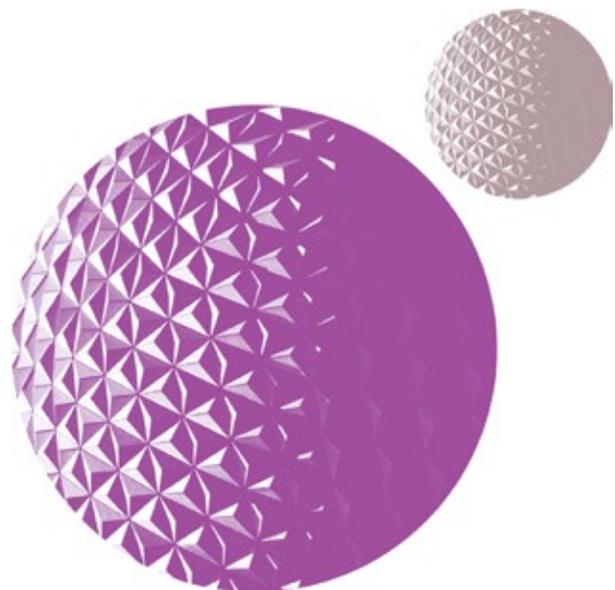
Muddling Through. The Muddling Through scenario (or the base case) assumes that both the global and regional systems will unfold along a path consistent with their historical development, and that current policy choices will be continued into the future. Muddling Through is a starting point for examining how the future of Latin America and the Caribbean might unfold. As is true of all the scenarios presented here, Muddling Through is built on qualitative input from a range of experts, as well as the output from the IFs model. Of all the scenarios, this one hews closest to what the trends alone suggest will happen in the region.

Governance on the Rise or an Illicit World Afloat? There are many uncertainties surrounding the capacity of Latin American countries to enact smart reforms to position themselves for a brighter future. Governance will move in one of two directions by 2030. **Governance on the Rise** imagines how strengthened democracies across the region might enact politically difficult but necessary reforms. It focuses on the economic and social benefits that accrue with greater government transparency, stronger institutions, and increased social accountability.

Illicit World Afloat, a corollary scenario, in contrast, imagines an erosion of governance. Global crime and drug syndicates become deeply embedded in society. Corruption is pervasive and weakened rule of law reduces state capacity and corrodes social protection networks. Insecurity drives an exodus of talent, while foreign direct investment declines.

Toward Integration or Fragmentation Prevails? Integration experiments are not new in Latin America, going back as far as the early nineteenth century with Simon Bolivar's vision of a single pan-American state. While nothing like Bolivar's dream will come to fruition any time soon, the **Toward Integration** scenario explores a future in which regional coordination fosters economic growth. It examines the impact of integration largely in terms of increased investment in infrastructure and human capital. Conversely, the **Fragmentation Prevails** corollary scenario considers how a globalized world and its accompanying political and economic forces might continue to pull the region's countries toward different economic poles. A lack of coordination perpetuates trade and investment strategies that make Latin America more sensitive to global commodity shifts and economic downturns.

Climate Change. This shorter scenario "vignette" imagines a future characterized by a rapidly changing global climate. Countries make some smart decisions to ward off the worst effects of climate change, and even to prosper despite it. However, in 2030 they also suffer from the inevitable consequences.





Guest Writers

Sergio Bitar
Jeremy Bentham
Christine Loh
Manoj Harjan

Why Are Scenarios Important and How Can They Be Helpful?



Guest Writer

Sergio Bitar

Designing Scenarios for Political Action

In recent decades, despite current economic difficulties and social and political tensions, Latin American countries have strengthened their democratic systems and respect for institutions, efficiently managed the macroeconomy, and implemented inclusive social policies that seek to reduce poverty and inequality. However, they lag behind in a very important area: the ability to devise a strategic vision that helps prioritize goals and build political agreement.

Most Latin American countries have shortcomings that will affect their future development:

1. Weak institutions, lack of participation, and in some cases, violence and corruption – factors that compromise democracy
2. Modest productivity growth and low rates of savings and investment – factors that hinder growth
3. Inequality and scant social protection – factors that constrain a sense of community
4. Poor quality of education and low innovation capacity

Latin America must strengthen its ability to plan ahead effectively and strategically if it is to govern better and improve the design of public policies. Achieving this may require countries to familiarize themselves with global scenarios and to explore the type and scale of challenges they might confront. A national perspective is not sufficient; a global vision is essential. Long- and medium-term vision and strategy must be at the service of governing in the present.

Globalization creates a stream of effects that cannot be controlled by individual countries. With an outlook that takes into consideration the rest of the world, governments could improve their capacity to anticipate events and, when those events occur, to respond effectively to uncertainty and rapid change. Through strategic planning that envisions myriad and diverse situations, countries may be able to avoid damage or even find ways to respond to their advantage.

The future is unpredictable, but identifying scenarios opens the mind to the possible consequences of unconsidered or improbable developments. While foresight explores scenarios, strategic thinking helps build a path.

Foresight must assert itself in the political system, and some Latin American governments are now creating strategic planning units. Political

discourse must include medium- and long-term outlooks—a narrative that makes it possible to chart a course and to facilitate agreements.

The better citizens are prepared and informed, the more likely it is that strategic plans will actually be realized. If the essence of politics is to create a better future, foresight studies offer support to inspire action and mobilize society toward that better future.

Sergio Bitar is Project Director of Global Trends and Future Scenarios at the Inter-American Dialogue, and has served in a number of ministerial posts in Chile.



Guest Writer

Jeremy Bentham

Business Planning Requires Foresight

We are all faced with choices that produce consequences for years—and even decades. Whether we are developing new opportunities or anticipating significant threats, decisions are based on our perspectives of the future. So there is huge value in developing as rich an understanding as possible of the drivers, trends, uncertainties, choices, and cycles that will shape unknowable prospects, and that may look very different through the eyes of different actors.

The future is neither completely predictable nor completely random. Any meaningful exploration of possible landscapes inevitably highlights alternative features or patterns. For more than four decades now, we have developed and applied contrasting scenarios to help grapple with

potential outlooks more extensively and deepen our strategic thinking.

Developing and applying scenarios is part of an ongoing corporate process that encourages decision-makers to explore the features, uncertainties, and boundaries of the future vista, and actively engage with alternative points of view. The scenarios go beyond conventional energy outlooks and consider long-term trends in economics, energy supply and demand, geopolitical shifts, and social change. They are based on plausible assumptions and quantification.

Today's scenario builders also use complex econometric modeling and sophisticated methodologies. The scenarios development process includes a multitude of short-, medium-, and long-term portraits of global energy developments, but also individual country analyses and consideration of major trends in areas like public health and urbanization. They help bring to light emerging strategic issues.

For example, it is becoming clearer that a prosperous and sustainable global outlook requires deeper awareness of the connections among water, energy, food, land use, and greenhouse gas emissions, and must encompass both energy-efficient infrastructures like compact cities as well as efficient end use in vehicles and buildings.

The value of the scenarios, however, comes not just through surfacing strategic insights, but also through the approach to developing and sharing these insights. In the private sector, they require corporate decision-makers to consider challenges and opportunities that may be well beyond familiar territory.

Drawing on the knowledge of a network of specialists—both within and outside a company—is central to the process of building scenarios. Scenarios are not intended to be predictions of

likely future events or outcomes, but a way to better prepare us for whatever may be around the corner.

Jeremy Bentham is Vice President, Global Business Environment, at Shell, head of the Shell Scenarios work, and a member of the Corporate Strategy Leadership Team.



Guest Writers

Christine Loh
Manoj Hajani

A Planning Tool Like No Other

The contribution of scenarios to an organization's strategy formulation process often depends on their intended use. We see scenarios as sets of stories describing plausible futures, designed to question existing assumptions. Through this process, organizations can develop an understanding of how the future might look and how it might be shaped. This can contribute significantly toward developing and strengthening structures, processes, and systems that build the agility and resilience needed to weather compressed cycles of change.

Unlike forecasts, which present a single future, scenarios present multiple futures, each driven by a unique combination of driving forces. This is important, because it enables decision-makers to think about and draw connections between the various desired and undesired possibilities. It is impractical (and not very useful) for one set of scenarios to represent every single possibility. This is why a necessary step in the scenario planning process is an assessment of the

assumptions currently shaping an organization's operations and world view.

Scenarios are also helpful when used to frame uncertainty. Decision-makers are often unwilling to commit resources toward an abstract issue that cannot be felt. However, this can limit the agenda to discussing concrete issues that rely on presenting and analyzing available data, leaving the organization vulnerable to "unknown unknowns." The wide variety of formats that can be used to communicate scenarios is particularly useful here. Scenarios that can be experienced are often the most effective in challenging mental models and enabling decision-makers to imagine innovative outcomes. Strategies can then be developed (or existing strategies modified) to align current capabilities and resources to reach these outcomes.

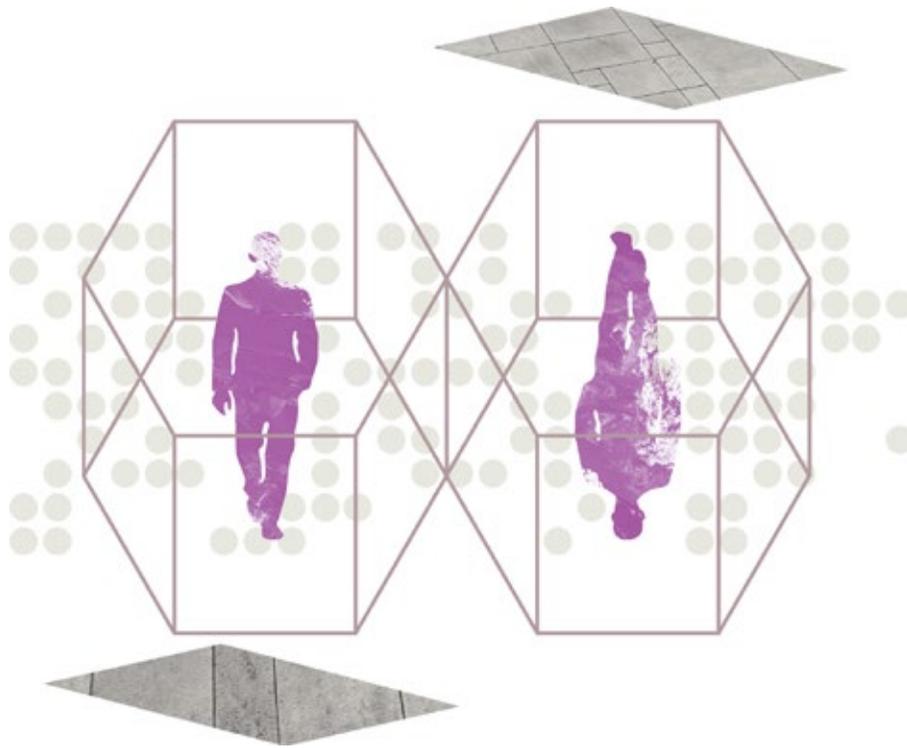
Organizations use scenarios as nonthreatening ways to spur discussion. In the worst case, rejecting scenarios reinforces existing assumptions and limits future opportunities for discussion. This is why a deep understanding of driving forces is a crucial aspect of any scenario planning process; it is the foundation on which a plausible set of scenarios is designed and communicated. In our experience, the research produced on driving forces can sometimes gain more traction than the final set of scenarios themselves! This is a reminder that scenarios often draw their "magic" from the context in which they are set.

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The World in 2030

Scenario 1: Muddling Through



Looking back in 2030, the past fourteen years have been a mixed story for Latin America and the Caribbean. On the plus side, from 2016 to 2030 the region has enjoyed decent economic fortunes, and has seen more good years than bad. Politically, democracies have not gone backward, at least for the most part. The biggest piece of welcome news is that after years of political clashes and economic decline, Venezuela took steps to bridge its domestic rifts and its economy rebounded.

Under pressure from a growing middle class, the region's institutions have become more efficient, transparent, and accountable. Despite some flirtation with populism, long gone are the days of military dictatorships and authoritarian strongmen. And socially, considerable progress has been made in a few key areas. Public health generally has improved, and people are living longer because they suffer from fewer communicable diseases and have access to better medical care.

But not everything has gone smoothly. Much work remains to be done, and the future is uncertain. Economically, the region is in a better place, as its average

growth rates outstripped those of the United States and even some East Asian countries. However, growth was uneven—a historical legacy that has yet to be shed. As in 2016, inequality remains a real challenge. Thanks to solid growth and persistent social investment, Brazil and Colombia are no longer among the world's ten most unequal countries. In contrast, Honduras, El Salvador, and Guatemala are increasingly unequal, as violence and a lack of opportunity continue to plague Central America's Northern Triangle.

South American countries have yet to overcome their heavy reliance on commodity exports, and no country has become a recognized world leader in the knowledge economy. Politically, democracy has survived pretty much everywhere, but public institutions have not always been healthy. Governments suffer from less corruption than they did fourteen years ago, but progress has been uneven, falling short of citizen expectations. In terms of public health, people are living longer, but the practical downside of longevity is higher medical costs.

The Overall Picture

Looking at the top-line regional economic data, the story over the past decade and a half looks reasonably positive. In aggregate, economies have grown from \$6.2 trillion in 2015 to \$9.2 trillion in 2030. Annual GDP growth has slightly outperformed that of the United States (2.4 percent on average versus 2.2 percent). This GDP growth has borne real fruit, as average individual income has increased by \$2,800. In 2030, GDP per capita at PPP (converted to international dollars using purchasing power parity rates) reaches \$18,400 in the Southern Cone on the high end and \$15,000 in the Andean region on the low end.

Looking back, in 2016 many thought the commodity bust and economic headwinds facing Brazil and other countries would last a long time. Happily, that turned out not to be the case. After a few difficult years, growth on par with previous decades returned. The 2.4 percent average from 2016 to 2030 was below the 3-plus percentage points during the booming 1990s and 2000s, but slightly above the 2.2 percent rate during the difficult 1980s.

There are several explanations for this performance. Global growth picked up again in the late 2010s and remained strong during much of the 2020s. Despite slowing population growth (nearly all of the world's major economies are aging), global demand remained reasonably high in the emerging economies, including in the Asian giants (India, China, and Indonesia). After a rough decade, growth also rebounded in the OECD countries. Just as critically, despite many fears that global productivity would slump, a series of technological advancements in areas ranging from robotics to biotechnology helped boost productivity. The region, therefore, benefited from an upswing in global trade.

A series of regional trade agreements in the 2010s and 2020s, including pared-down versions of both the TTIP and TPP, helped boost trade flows around the world and aided regional economies that updated regulations to comply with these new global trade norms. Imports and exports both expanded (imports by \$900 billion from 2015 to 2030, exports by \$800 billion). Ongoing expansion in Asia, plus the settling down of both the

US and European economies, meant regional economies could export at a fairly robust pace. Industrial exports from Mexico to the United States, for example, surged, boosting GDP growth in Mexico. Effects on employment, however, were not as robust, as the increasing importance of robotics in industrial production meant that employment gains were modest.

Global commodity demand rebounded, although with some ups and downs. Food demand, in particular, rose dramatically, given the increase in global population and wealth, plus the negative impact of climate change on agriculture in India and the United States. Although Latin America has been spared the worst effects of climate change, agricultural yields have been stressed. The difference between Latin America and the rest of the world is that the region has not suffered withering and extended drought in its greatest breadbaskets.

\$6.2
trillion

Size of Latin
American
economies
in 2015



The economic storyline has been uneven. Growth has been stronger in the Andes and Central America—annual GDP growth of 2.9 percent and 3.5 percent, respectively—and weaker in the Caribbean (2.1 percent) and Southern Cone (1.8 percent). Demography and productivity were the most important explanations for this divergence: Andean and Central American countries are younger, with more workers and fewer elderly, and positioned to increase productivity more, due to a lower starting base.

Of course, economic growth is not a straightforward function of age profiles; compare, say, the performance of an aging South Korea to a still-youthful Mali. Still, aging tends to be an economic hindrance. The ratio of workers to dependents peaked in the Caribbean (2017), Southern Cone (2019), and Andean (2022) economies in the past fourteen years, and it has fallen precipitously since (although the dependency ratio—the number of workers

compared to both children and the elderly—is still favorable). In contrast, the dependency ratio in Central American countries will peak in 2033. Over the past fourteen years, therefore, they have had increasingly more workers per dependent.

This is critical, and it gives the most pause when considering where Latin American and Caribbean economies go from here. The so-called demographic window, meaning the period when there are many workers and few dependents, is closing for most countries. In Cuba, for example, the window has already closed. Median ages have increased by five years since 2016, the result of both declining fertility and more elderly. Southern Cone countries are the oldest (thirty-six years in 2030 on average versus thirty-two years in 2016), and Central American countries are the youngest (thirty-two years in 2030, twenty-seven years in 2016).

Compared with East Asia and Europe, the region is still youthful, but compared with Africa, it is much older. Yet, relative youthfulness is just that—relative, not absolute. And absolute changes are driving real economic, fiscal, and public health consequences. Economic burdens associated with an aging population—for example, rising public pension and health care costs—are already evident. Few countries have actually reformed their pension systems, as they are not yet in full crisis (remember, most demographic windows in the region remain open). It has helped that there are relatively fewer children in school, which generally has meant less public revenue going to education. Some countries, however, have made larger investments in educational quality, increasing per-pupil spending, building better facilities, and so on.

While responses have varied, the transition to a new demographic reality has been managed reasonably well so far. One of the more promising developments has been the degree to which the informal economy has shrunk in most of the region (from 13.5 percent in 2016 to 10.5 percent in 2030 of the non-agricultural workforce), resulting in a larger tax base and revenues, as well as higher productivity. Historically, the region has had one of the largest informal sectors in the world, but since the early 2010s informal employment rates have



\$9.2 trillion

Size of Latin American economies in 2030

In 2030, the era when there are more workers than dependents is ending for most Latin American countries

fallen steadily. Economic growth has helped. So too has increasing education, with fewer poorly educated people. Policy-makers have paid closer attention to the causes of informality, whittling away at unnecessarily complex tax codes, reducing regulatory barriers for new businesses, boosting enforcement of basic labor rights, and generally working to reduce corruption.²⁷

Another piece of good news is the improvements in public health levels. People are living longer, and infants born today, on average, can expect to live beyond seventy-five years of age. A major reason why communicable disease rates are falling is improved infrastructure (better sanitation and sewerage, primarily) and increasing access to medical services. Another is the impact of medical technology, which has made impressive gains over the past fourteen years. Despite ongoing concerns about cyber-hacking, personal health monitoring devices have become ubiquitous and are now cheap enough to be worn by even the region's poorest citizens. These devices provide real-time personalized health data that enables people to better anticipate health problems and target unhealthy practices, such as poor diets.

There is a catch. Communicable disease rates have gone down, but the overall disease burden has shifted toward chronic diseases such as cancer and diabetes. Despite better technology, like the wearable devices, and more information, an overweight and obesity problem continues, with obesity rates slightly increasing from 39.2 percent of adults over age thirty in 2015 to 42.5 percent today. Technology only goes so far, because the core problems involve diet and lifestyle, which are difficult to change. Getting older also brings more health problems—specifically, a greater chronic disease burden.

As for medical technology, unbelievable leaps have occurred in areas like genomics and biotechnology. However, on balance technological advances have driven medical costs upward rather than downward. For every cheap breakthrough, like wearable medical devices, there are two or three more expensive ones. While the health benefits of these advances are obvious, they have also hindered the ability to control medical costs. Total regional health expenditures rose from \$490 billion (8 percent of

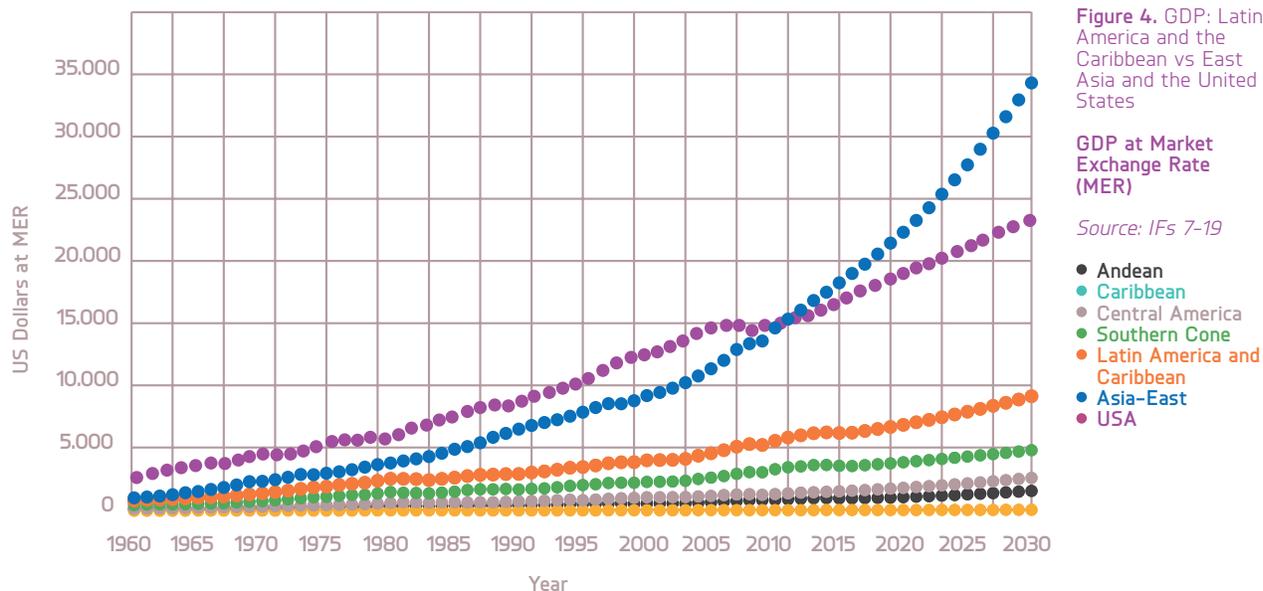
GDP) in 2015 to nearly \$880 billion annually (10 percent of GDP) by 2030, with an aging Southern Cone accounting for over half of this increase.

Pandemics remain a serious threat in 2030. There are more people and goods moving around the world than there were fourteen years ago, which means Ebola-like viruses continue to move with surprising speed. Public health officials are constantly fighting new outbreaks of some kind. Coordination among health ministries is attempted on an ad-hoc basis only, which has meant episodic disease outbreaks have not been contained and defeated as quickly and effectively as they could have been. This was true in 2021, when a particularly severe influenza outbreak spread far faster around the region than health experts thought it might.

The bigger challenge is the impact of climate change on pandemic formation and spread. The Earth is rapidly changing now, and the world is paying the price. Higher temperatures have meant diseases such as malaria and Zika—and new ones unknown to the world in 2016—have spread to previously unaffected areas such as higher altitudes. A bit of good news is that biotech has advanced quite a bit (we can control mosquito populations through genetic interventions), so mosquito-borne diseases can be fought quite effectively. However, as there are many species of mosquito and biotech methods have not been universally effective at controlling all of them; they continue to transmit diseases.

The regional economic trajectory, while generally positive in absolute terms, is muddied relative to the rest of the world. Together, the region's economies did slightly better as a whole than the United States, when measured in terms of GDP growth rates. The United States is a massive and fully mature economy, which for decades has translated into slow but steady growth. Latin America's relatively youthful profile, its (still) relatively cheap labor, and robust commodity production has given the region a slight growth edge relative to the United States.

Against select East Asian economies, the region's record is mixed. Compared to China, South Korea, and Taiwan, Latin America fell even further behind (China grew by



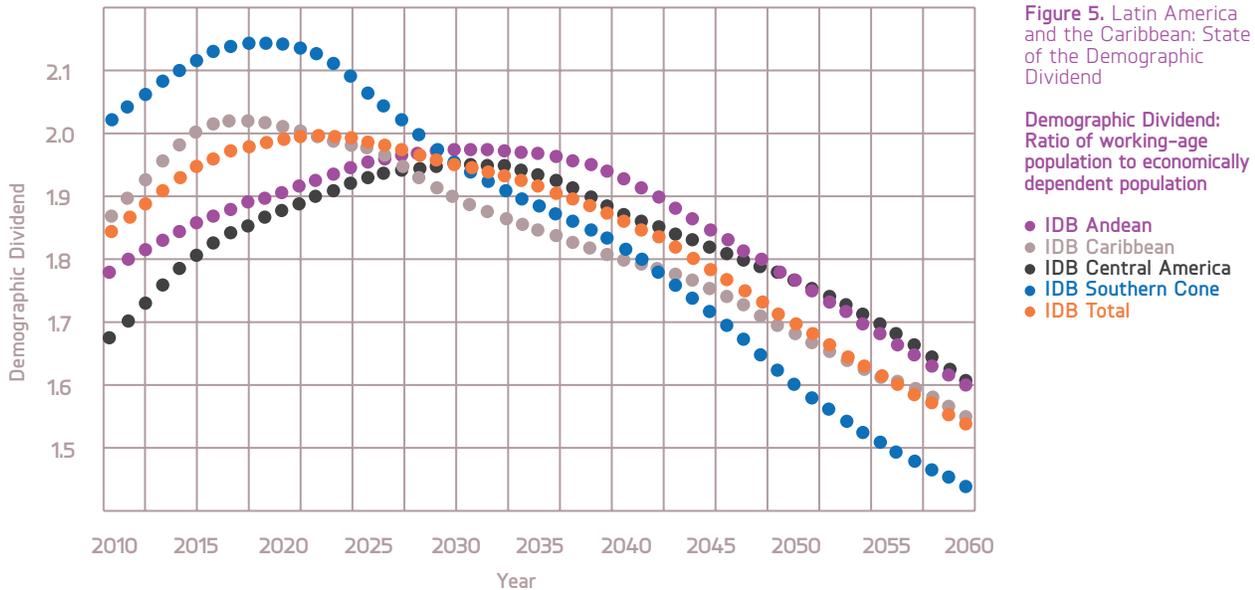
6.0 percent on average, South Korea by 3.4 percent, and Taiwan by 3.1 percent). Measured against Japan, it did quite well (Japan's economy grew at an anemic 0.9 percent average over the period). East Asia's extended boom did not disappear during the 2010s and 2020s, and countries in that region have continued to climb the global economic ladder. In contrast with Latin America and the Caribbean, East Asian growth has been driven by high levels of education, high rates of investment (domestic as well as foreign), payoff from decades of world-class infrastructure investments, and globally competitive technology hubs.

Figure 4 compares GDP growth with the United States and East Asian economies (China, South Korea, Japan, Taiwan, Mongolia, Hong Kong, and North Korea in aggregate). In absolute GDP growth terms the region is growing, but relative to other countries, in particular East Asian economies, it has continued to slide. The same is true on a per capita basis; since the 2010s, East Asian economies (including China) have continued to converge on the OECD per capita income average, but Latin America has not.

Productivity and Governance

Closing the productivity gap with advanced economies as well as other emerging markets—including but not limited to those in East Asia—has been the most difficult challenge over the past fourteen years. While there have been absolute productivity gains, relative performance has not been on par with the most dynamic and innovative emerging economies. Those countries, compared with Latin American economies, have attracted more investment precisely because they have become highly productive. That, in turn, has created a virtuous cycle of even greater productivity and increased investment.

East Asia has continued to outperform Latin America and the Caribbean—an important fact given that several powerful East Asian economies are worse off demographically. The demographic dividend of Latin America as a whole peaked around 2020 (see **Figure 5**), with only Central America on the verge of reaching its peak now. The demographic headwinds of major Asian economies are far worse (see **Figure 6, p. 60**). China and South Korea peaked in the early-to-mid-2010s,



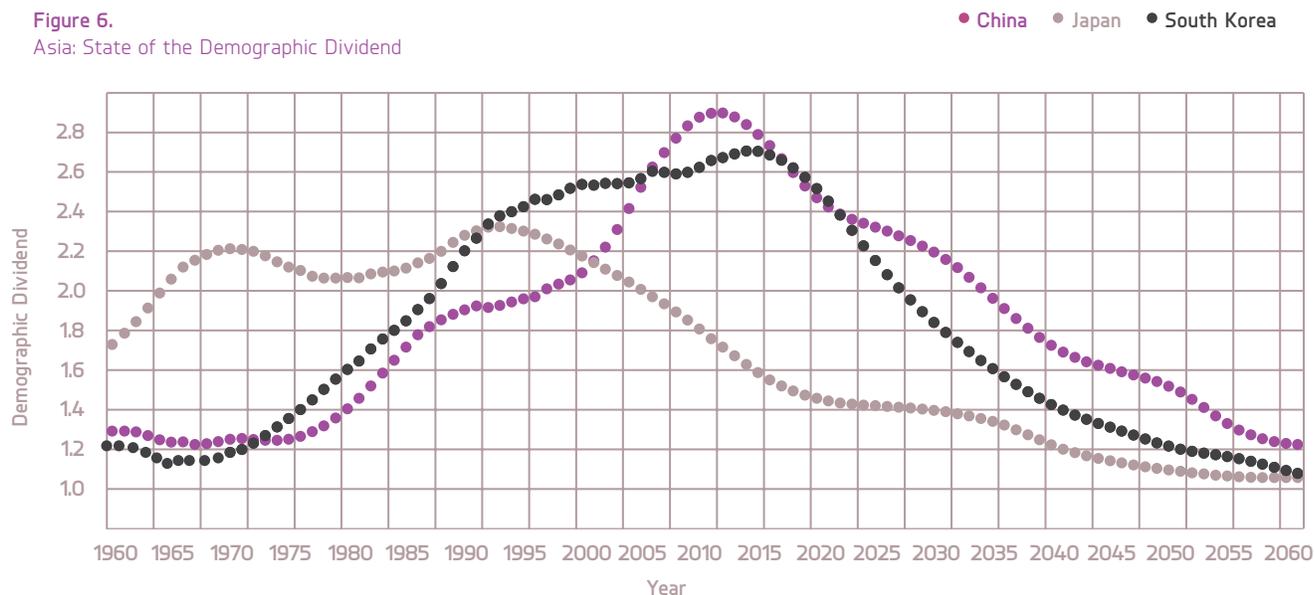
Japan in the early 1990s. Japan's now-elderly status is a major reason why its GDP growth has been so poor since 2016 (0.9 percent on average). In five more years (2035) Indonesia will reach its peak, with India to soon follow. The obvious question is why countries like South Korea have been growing faster than their Latin American and Caribbean counterparts, despite worse demographic conditions.

Imports expanded by \$900 billion and exports by \$800 billion in 2030

The most straightforward answer is that East Asian economies continue to benefit from their decades-long ability to attract capital, to employ that capital productively, and to leverage strategic investments over the long run. Despite being well past their demographic peaks, East Asian economies have managed to avoid the middle-income trap, with many now in the category of high-wage economies that can compete with Europe, the United States, Australia, and other advanced economies for market share in high-value-added goods and services. Latin American economies, in contrast, have benefited from relative youthfulness (more labor), which has fueled growth. But the region has been unable to compete as effectively in attracting capital, employing it productively, and realizing gains from strategic investments.

East Asian economies continue to realize the benefits of many decades of investment in education and infrastructure, plus stable and effective governance and attractive regulatory environments. They have transitioned to a new stage of economic development—one not yet reached by countries in Latin America and the Caribbean, where economies continue to rely disproportionately on the export of raw or poorly processed commodities or of

Figure 6.
Asia: State of the Demographic Dividend



lower-value-added goods and services. There have been some important exceptions, which are discussed below.

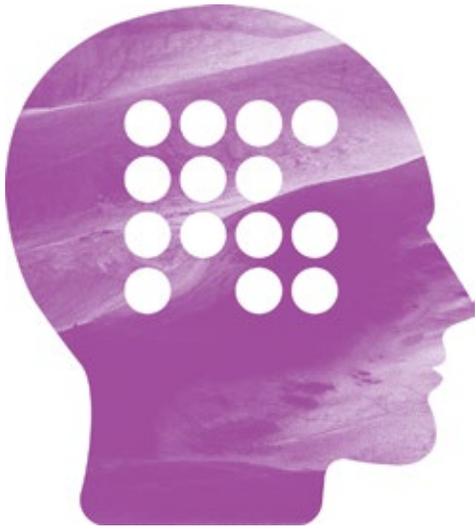
So why does the region remain stuck at lower productivity levels? Countries have had invested in infrastructure (a total of \$2.1 trillion by 2030), but not at rates necessary to close the gap with the rest of the world. Much of the investment is still in basic infrastructure, like the expansion of sewer systems—which just about everyone agrees is imperative. Other investment has been in things like ports and airports, which of course are important but are oriented mostly toward external trade in goods. There has been little focus on improving and extending the road and railroad networks, which continue to lag well behind high-income countries in both geographic extent and density. Even worse, there has been little political will to invest the resources necessary to improve transboundary linkages throughout the region. Generally speaking, it remains difficult to travel from one country to another, hindering regional integration.

In terms of human capital, the region has made strides since 2016. Education rates have increased across all levels of schooling. There are now very few children

with little or no primary education. Completion rates for primary schooling are above 100 percent (including those now returning to school later in life).²⁸

The trouble begins with secondary and tertiary education. Increases were universally seen in both secondary and tertiary enrollment, but from relatively low starting points. Secondary school graduation rates increased from 62 percent to 90 percent (again, including adults).²⁹ The highest rate is in the Southern Cone countries (at an impressive 95 percent, up from 68 percent in 2016), but rates are much lower elsewhere (now only in the mid-50s in Central America). Tertiary education enrollment has risen too, but very gradually and from a low base. Graduation rates have increased by only three percentage points over the past fourteen years (from 20 percent to 23 percent), with only about 12 percent of all adults having a university education.

This is one important area where the region has fallen well behind other parts of the world. In the OECD, 18 percent of all adults, on average, now have a university education. Given the increasing importance of education to the global knowledge economy, this deficit goes some way to explaining why the region has fared poorly relative



90%
**Secondary
 school graduation
 increased from
 62% to 90%.**

to East Asia. Unfortunately, there is no quick fix. Educational investments generate benefits over the long run.

At the same time, educational quality is still a problem. Innovation is the final piece of the productivity puzzle. Comparatively low educational levels, high (but decreasing) informality, and poor infrastructure have all contributed to Latin America's inability to become an epicenter of the global knowledge economy. Universities have been unable to turn their scientific research into commercially viable technology on a major scale, as occurs at the public and private research universities in the United States. Unfortunately, Latin America's universities have not been successful at building better links with the private sector, and the vast majority of university faculty do not work within academic systems that encourage turning their lab research into startup enterprises.

Still, despite these structural challenges, some innovation hubs around the hemisphere have emerged, and these have produced a few world-renowned products. Buenos Aires-based *Sol Ahora*, established in the late teens, launched an initial public offering in 2022 for its solar-operated cell phone technology. The Argentine capital ben-

efited from bold experimentation during the late 2010s, attracting investment and talented people from around the world. Despite this, the region is not known for its innovative outlook. Mini Silicon Valleys like Guadalajara, Mexico, have yet to translate into widespread knowledge-based entrepreneurialism.

There are a few bright spots. Governments have been able to manage without undergoing wrenching transformation. In budgetary terms, reasonable GDP growth plus the effects of some reforms (especially the much smaller informal economy) have provided states with greater resources. Government revenues increased from about \$1.8 trillion in 2016 to \$3.0 trillion in 2030. This increase has not been a windfall, however, as the increase has been consumed by growing demand for infrastructure and public services, including education and health spending, plus dealing with the consequences of aging.

More resources are now being devoted to climate adaptation, at least compared with 2016. The planet has been changing fast over the past fourteen years. Governments have to deal with more frequent drought and flooding, more heat waves, more storms, and rising sea levels (the

latter two have hit the Caribbean and Central American countries hardest). This has meant much more spending on adaptation measures, such as disaster response and defensive infrastructure (storm walls and the like). Caribbean economies have suffered from a decrease in tourism as beaches in countries like Jamaica and the Bahamas have been reduced to thin stretches of sand..

The overall positive fiscal situation is one reason why the region has enjoyed political stability. The behavior of its middle class is another reason. Far from shrinking, as many feared it might in 2016, the middle class has expanded. (The “middle class” is a broad category, and is heterogeneous, with much diversity across the region.) The number of people defined as middle class increased by 57 million to reach 345 million by 2030 (up from 47 percent to 50 percent). Those who are middle income and above (greater than \$10 per day) increased from 52 percent to 58 percent.

The middle class has pushed for gradual rather than radical reform. As long as governments provide competent services at a reasonable price, as long as corruption

does not appear to be getting worse, and as long as the tax burden stays reasonable, the middle class has proven itself to be a less-than-radical force. Politically, this class is committed to democratic accountability, as has occurred when instances of corruption surface at the highest levels of the state. In these cases, middle-class voters made the governing party pay at the ballot box, as in 2018 in Brazil and 2024 in Mexico. But otherwise, the middle class’s political expectations have been modest.

Most of all, the middle class has been satisfied when the public services it needs have been delivered in a reasonably timely and effective manner—whether in the form of acceptable urban infrastructure, decent schools, or competent policing. As long as these things are provided, and they are shielded from the worst aspects of life (for example, violence from the still-powerful illicit drug trade), the middle class has shown that it can live with governance that is not yet at world standards. This lack of political urgency for deeper reform might be the biggest price the region has had to pay in exchange for steady GDP growth.

Middle
class:
345 million
people in
2030





Guest Writer

Arturo Franco

**Mexico in 2030:
Beating the Benchmark**

The year is 2030, and Mexico is, once again, one of the most exciting and dynamic economies in the world. Over the past decade, we have managed to increase growth and productivity rates, realize our innovation potential, and reduce poverty and inequality. It took a lot of effort to get here, so as we move forward, we should not forget our past.

We should not forget, for example, that in the early 1990s Mexico was already among the top ten global economies, thanks to a young and growing population, proximity to the United States, and a large natural resource endowment. Around that time, Mexico embarked on a massive reform process that inspired a generation of policy-makers who believed that pushing forward trade and investment openness, and deregulating and privatizing strategic sectors, would do the trick for growth.

Except it didn't. By the mid-2010s, Mexico's economy seemed to be moving backward. After registering average growth rates of close to 7 percent during the 1960s and 1970s, the country settled for economic growth rates closer to 2 percent for a forty-year stretch. Per capita income and real salaries remained stagnant, and the country's productivity rate saw a modest 2.1 percent cumulative increase, compared to 85.5 percent in South Korea during the same period. As a consequence, Mexico's position in all international competitiveness rankings and in the global economic order went down.

"Will Mexico ever grow more than 2 percent?" was a common question at the time.

However, a historic presidential election in 2024—in the midst of an economic downturn—finally created the political conditions for broad-based agreement among the private, public, and social sectors in Mexico. Through this crucial consensus, which led to the creation of a Partnership for Inclusive Economic Development, the country began exploring a wider set of policy options—particularly around industrial policy, research and development, financial inclusion, business creation, and innovation—that enabled it to explore new paths and models for economic development.

Adopting a strong focus on both economic inclusion and productivity was a major step in the right direction. Fifteen years ago, the average Mexican worker was only a third as productive as the average Spanish worker, and had less than 20 percent of an Irish worker's productivity. But through the work of the National Productivity Committee—a public-private partnership relaunched in 2025—, Mexico was able to provide targeted solutions to some of the country's endemic productivity gaps. Informality was reduced through better policies and the use of technology, including systems that lowered barriers to register a company, eliminated the bureaucracy involved in paying taxes, and others. Large companies were offered productivity-enhancing tax incentives and became more innovative and competitive. And small businesses finally got access to growth capital through the newly created Mexican SME loan guarantee agency.

Most importantly, the past decade has laid the groundwork for a more human-centered, pro-poor, and inclusive economic model for Mexico. This happened by reintroducing workers' and consumers' representatives on management boards, adopting a living wage that replaced the obsolete minimum wage, reducing employment insecurity for the young, and securing equal opportunity to education and jobs for those coming from less privileged backgrounds.



By focusing on these market- and merit-based ways of improving our country's productivity, social inclusiveness, educational outcomes, and entrepreneurial activity, Mexico became a more innovative, dynamic, and prosperous country—from the bottom, up.

Now, in 2030, Mexico is once more one of the most exciting places to invest, work, and live. The country is ready to thrive in an increasingly competitive world. And we finally beat the growth benchmark.

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Guest Writer

Ricardo Sennes

**Brazil in 2030:
A Letter for the Future**

Brazil's success in 2030 was not easy. But a deep process of reforms to modernize the economy and establish its comparative competitive position in the region—and globally—unleashed the economic potential of a country in deep crisis only fifteen years earlier.

How was this achieved? With a combination of socioeconomic modernization, consolidation and improvement of its institutions, and a new social pact that allowed for a substantial increase in economic competitiveness.

Fifteen years ago, in 2016, Brazil had made notable advancements in socioeconomic and institu-

tional modernization. But economic performance was tolerable at best. To overcome this, Brazil took on two major agendas: substantial improvements in education and workforce preparedness; and profound state reform, including taxation, labor, and industry.

In the mid-teens, Brazil had practically universalized basic education and eliminated illiteracy among youth. But its challenge going into the 2020s was to increase the quality of education at the primary and secondary levels, as well as at the universities and vocational schools. This required better management and greater innovation from states and municipalities, as well as from schools and universities. Beyond financial resources, achieving this goal depended particularly on empowering institutions at the subnational level, and on the technological management of public and semipublic educational institutions.

With almost 90 percent of its population living in cities, the challenge Brazil faced in the late teens and early 2020s was to create the conditions that would enable education, professionalism, and quality assurance to reach the edges of the country's large and midsize cities. Achieving this depended on even more support for two educational and political policies.

First, although progress had been made, further increases were needed in the share of resources allocated to public universities (which in 2016 were located in the heart of cities, mostly attended by people in the middle and high classes), and the resources allocated to public schools (which in 2016 were located on the periphery of cities and mostly attended by people in the middle and lower classes). Second was a redesign of the recruitment and career paths of public school teachers at the primary and secondary levels.

In the decade and a half leading up to 2030, Brazil has also focused on reforming the way the state intervenes in the economy. The state's role

had ceased to be effective in the new economic and technological cycle of the world economy. The size, diversity, and sophistication of the Brazilian economy, and the enormous challenge of responding quickly to gains in productivity and technology, demanded a business environment more open and favorable to improvement and innovation.

This is why Brazil focused on revising the role of the state, in particular public banks. New trends in privatization and concessions took hold in the last few years leading up to 2030—an effort preceded by adjustments to regulations and empowering existing regulatory agencies. Regulatory agencies previously did not have the capacity or power to effectively guarantee the competitiveness and dynamism of sectors that were highly regulated by the state. Implementing laws that defined new standards of governance and professionalism for state-owned enterprises was crucial in fortifying this advancement in the past fifteen years.

Important adjustments also had to be made to state-owned banks and the rules governing the capital markets in Brazil. Standards for financing the Brazilian economy were absolutely outdated. Small and midsize businesses had virtually no access to financing, and long-term credit depended entirely on state-owned banks.

A politically difficult but important decision was made to dismantle the apparatus of protection and subsidies to declining industries, creating more open and horizontal processes—even in the service sectors. Industrial and commercial policies were reformulated to meet clear goals, and revised or discontinued whenever goals were not met.

No reform is easy. But Brazil in 2030 benefits from economic modernization and competitive gains that are the fruit of reforms that had previously bedeviled policymakers. Brazil has now set itself apart as the second largest democracy in the world—second only to the United States. It combines a market economy, a representative

democracy, a robust system of protection and social inclusion, religious and ethnic diversity and tolerance, and increasing quality of life.

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The World in 2030

Scenario 2: Governance on the Rise or an Illicit World Afloat?



Scenario: Governance on the Rise

In 2030, rapid expansion of an increasingly demanding and politically active middle class has deepened the mechanisms of social participation. Democratic norms have become entrenched, leading to significant transformations in government effectiveness and popular legitimacy. More than twenty years have passed since the last coup in the region. Universal suffrage and regular elections are the norm rather than the exception. Political debates have taken prevalence over political violence, and governments—for the most part—have embraced civic mobilization as a catalyst for change.

Democracy is clearly here to stay. Shaken by the citizen protests against corruption and inefficiency that began in the early 2010s and continued through the rest of that decade, governments started to take seriously their duty to deliver decent services. Quality improved surprisingly quickly, due in part to a digital revolution that catapulted e-government and open data platforms to the forefront of government practice. In 2030, citizens no longer had to stand in queues for hours to get things done at govern-

ment offices. The uniquely Spanish term *trámite* is falling into disuse, thanks to the governance revolution that has taken place over the past fourteen years.

Looking back fourteen years, the main drivers for this improvement in governance were the impact of the region's growing middle class, the pervasiveness of democratic norms, and the positive effects of information technology on both governance and the citizenry. These variables came together at a time when the region was recovering from the economic downturn of the early 2010s.³⁰ The weak world economy at that time, together with the bust of the commodity cycle that followed a few years later, proved to be a turning point for the region's democracies. Governments seized upon the need for change, and began enacting smart reforms to position themselves for the future. Unlike other regions that also were beset by both internal and external difficulties—for example, the Middle East and North Africa—transformations in Latin America and the Caribbean were politically viable during a time of economic uncertainty, mainly because constituents' demands for better public services aligned with distress caused by a global economic downturn.

Politically Active Middle Class

In 2030, nearly 51 percent of Latin Americans now belong to the middle class, and 60 percent are middle income and above (a percentage roughly in line with that in the Muddling Through scenario, given the limited impact that governance improvements have on its expansion).³¹ It is important to keep in mind that this share is higher in some countries than in others, reflecting different growth rates as well as different 2016 baseline levels. As well, the “middle class” is a broad category that describes a very large and diverse group of people. Nonetheless, the important point is that a larger middle class exists today.³²

Greater middle class participation has been the single most important factor in delegitimizing the belief in political violence as the means to achieve economic and social objectives

Several factors have contributed, including decent economic growth during the 2010s and 2020s and income distribution programs that, although eventually scaled back, helped lift millions out of poverty.³³ A challenge that remains today is to keep newly middle-income families safe, and to create social protection networks to prevent them from falling back into the ranks of the poor.

The effects of this middle class growth have not been limited to the economic and social domains. Politically, a larger middle class also has proven to be a benefit, in particular for democracy. While experts who study regional politics differ in how they interpret what has happened over the past decade and a half, in general they agree on one very important point: A larger, more confident, and more empowered middle class has acquired a stronger voice, one that has translated into greater participation in political processes.³⁴

Greater middle class participation has been the single most important factor in delegitimizing the belief that political violence is the way to achieve economic and social objectives. This point cannot be overstated. Fears of middle class populism—where a frightened middle class seeks protection for itself at the expense of other groups and of democracy itself—have not been borne out. Rather, middle class participation in democratic processes has helped turn the region around.

In 2030, voter abstention has dropped significantly below the level of 2016, mostly the result of increased middle class voting. The increased participation by the middle class through legitimate political processes (not just through voting) has been a major reason why there has been such a demand for sweeping reforms and modernization of law enforcement systems, as well as improvements to judicial and criminal justice systems. These reforms have led to a dramatic reduction in homicide rates.

The growing middle class also has contributed to robust economic growth, through its labor and inventiveness.³⁵ One piece of good news is that many people in the middle class are working at startups. They also have used increasing purchasing power and resources to save,³⁶ consume, and invest for long-term returns.³⁷ To help accomplish this, the

state has provided quality public services that support productive activities. Of course, the state is better at providing such services in large part because the middle class has pushed for accountability.

New technologies also have had a huge impact by connecting people and forging new social relationships. Empowered citizens and nonstate groups, and a stronger civil society, have used technology as a means for mobilization, advocacy, and, ultimately, creation of policies that have proven beneficial to economies across the region.

In 2030, the middle class is a much more active and constructive participant in politics. Civil society has driven reforms to attack the root cause of many social problems, including corruption and informality; transparency safeguards are now embedded in all routine procurement processes. The middle class's economic power has increased tax collection, helping strengthen government institutions through increasing revenue. In this sense, the middle class has become an active agent of change that has transformed the political arena and brought economic and social reforms. These will continue to avert a relapse into poverty and help some Latin American countries navigate the middle income passage.

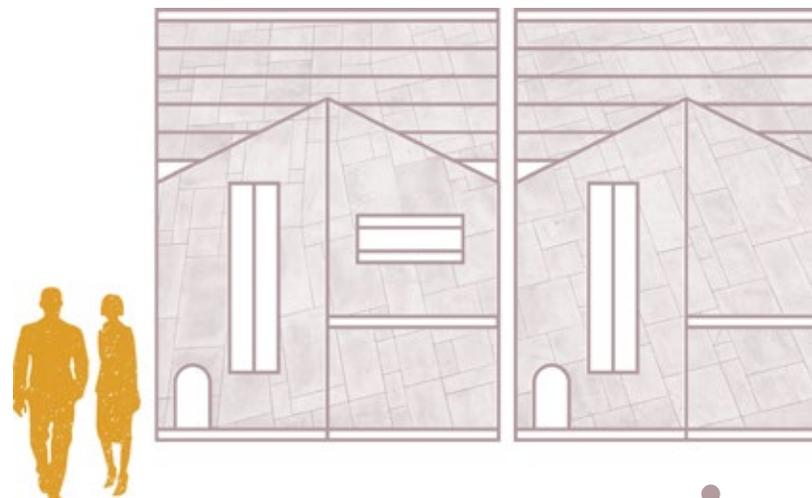
E-Government, Open-Data Platforms, and ICT

In 2030, governments have become much more adept at creating and using effective and efficient e-governance tools. During the early 2020s, several Latin American and Caribbean countries made it a state policy to expand the use of technology in government.³⁸ They allocated special funds specifically to develop new technologies (as recommended by several multilateral institutions in the late 2010s).³⁹ Countries such as Chile, Colombia, Uruguay, Panama, and Mexico led the way in implementing digital government platforms that brought citizens closer to government services.

Following Chile's pioneering introduction of exclusively digital tax filing in the 2010s, today 60 percent of all Latin Americans file their taxes online. Combined with

reforms to national tax agencies, this has led to sharp reductions in overall tax evasion. One knock-on effect is that the rates of informal labor also declined significantly, from an average 50.1 percent of the labor force in 2016 to 32.7 percent in 2030. Over time, as more citizens made use of a tool that proved highly effective, other nations followed Chile's example.

51%
Percentage
of middle
class Latin
Americans
by 2030





Regular elections
are the norm and
political violence
is long gone from
most countries

In countries such as Brazil and Argentina, technology was used to make governments more accountable to their citizens. Initiatives begun during the 2010s, such as *Meu Rio* and *Partido de la Red's DemocracyOS*, pushed governments to improve their ability to respond to citizen demands. A decade later, during the 2020s, these initiatives expanded dramatically. *Meu Brazil*, a nonprofit organization, expanded *Meu Rio* from Rio de Janeiro to all of Brazil. Both platforms focus on fixing governance problems using mobile apps and social media. The effect has been increased pressure on decision-makers to resolve social problems and increased expectations among citizens that their concerns will be heard.⁴⁰

Like cities around the world, those in Latin America and the Caribbean have been among the first to experiment with tech-enabled governance. This is no surprise, since municipal governments worldwide were among the first to jump on the “smart” governance bandwagon two decades ago (remember the “smart city” concept?). Because mayors and city councils have to provide tangible, effective, efficient, low-cost, and real-time benefits to their residents, city governments are inclined toward technical experimentation. Governance innovations that are now commonplace at the national level often began at the local level years ago. After proving successful in city government, some of these technologically oriented innovations migrated upward to other levels of government.



60% | Percentage of Latin Americans who file their taxes in 2030

Before any of this could happen, however, one practical challenge had to be overcome. In 2016, Internet and mobile penetration was far from universal. During the late 2010s and into the 2020s, Latin American countries invested in Internet and mobile infrastructure, enabling near-universal Internet access. This is particularly important for mobile access, as smartphones are so widely utilized, and was instrumental in scaling the Internet of Things from a curiosity to a central feature of life in 2030. Most important, those investments paid off indirectly in helping create a more connected and tech-savvy citizenry.

The private sector proved to be a key partner. Public-private partnerships were crucial to expand the access of ICT. Colombia, for example, was one of the first countries to partner with Facebook to expand broadband and other digital services. This served as a case study for the rest of the region—one subsequently copied by other countries.

In 2030, politicians do not have the luxury of ignoring these transformations. Politicians have become adept at massaging public opinion for their own purposes through these very same technologies. Yet, at the same time, the proliferation of connected and independent voices makes it difficult for politicians to manipulate public opinion. As a result, politicians have found it more constructive to embrace crowdsourcing and open data as a way not only to understand what their constituencies want in the short run, but also to anticipate what they will demand in the future. Hence, they are making better-informed decisions.⁴¹

Democratic Norms and Values

Today, protections for democratic norms and values are stronger in Latin America and the Caribbean than in many other areas of the world.⁴² Regular elections are the norm and political violence is long gone from most countries. Mechanisms for social participation are stronger than ever, women and other minorities have an active role in the political arena, most national constitutions recognize the need for inclusion and pluralism, and the decentralization of power has paved the way for local governments to become more effective, efficient, and transparent.

The insurgent groups, gangs, and powerful criminal enterprises, which controlled large swaths of territory in the region's power vacuums, have now lost much of their power. Coordinated demand-side and supply-side strategies, implemented during the 2020s, aimed at combating illicit markets controlled by criminal organizations, weakened the power of drug trafficking organizations.

Approximately 90 percent of US-bound cocaine used to pass through Central America after authorities put pressure on Caribbean routes. But now, through greater regional cooperation, countries work together to simultaneously clamp down on drug trafficking organizations on all fronts. This, paired with improved and targeted development projects and redistributive policies that attack poverty and inequality in rural areas—the root causes of so much illicit activity—are helping to further consolidate democratic governance. Despite the fact that the countryside contains only about 19 percent of the region's population, governments and civil society have recognized the importance of engaging rural communities to weaken the presence and influence of illegal and illicit groups.

In 2030, it can truly be said that democracy in Latin America and the Caribbean has matured. Brazil is one such example. The political upheaval of the mid-teens eventually gave way to a rebirth of the Brazilian political class. The need for long-term reforms to make the political system more open and transparent could no longer be ignored. This led to reforms of the electoral system so that the approximately thirty political parties in 2016 shrunk to just five. The results include greater cohesiveness and less need for deal-making, and the coalition governments that had marked Brazil since its return to democracy in 1985 are less critical for actually being able to govern. The aftermath of the 2026 election, for the first time, was not overshadowed by deals among parties.

Even so, rebuilding the democratic institutions that eroded during the 2000s and 2010s remains a work in progress. Other challenges remain as well: Judicial systems may be stronger now but are not perfect, for example.⁴³

40%–60%
Drop in average
homicide rate
in the Northern
Triangle countries

Transparency, Security, and Rule of Law

In 2030, Latin America enjoys increased government effectiveness, improved service delivery, and heightened transparency. Democracy levels in 2030 have improved significantly, as measured by organizations that score democratic governance. Today, nearly all countries score well on these indices. Andean countries have improved their performance the most in relative terms over the past fourteen years, although Central American and Southern Cone countries continue to score higher in absolute terms.

Nowhere is the increase in security more striking than in Colombia. A peace deal was approved and quickly put

erage ates in ern untries



into force. In the years following, nearly 15,000 members of the Revolutionary Armed Forces of Colombia (FARC) entered educational programs and vocational training. Rural areas opened for investment, and the state built a nationwide presence. No peace is easy, and the same was true for Colombia. Other armed groups attempted to fill the illicit world vacuum left by a now-demobilized FARC. But a strong Colombian military and reformed police presence stamped out these threats. Today, in 2030, Colombia is booming in areas of the country impassable fourteen years earlier.

For Central American countries, their improvement was partly a result of heightened efforts by the governments of the Northern Triangle to root out corrupt officials and strengthen judiciaries. La *Comisión Internacional contra la Impunidad en Guatemala* (CICIG) proved to be just one

example of how Central American countries were able to attack corruption at the highest levels.⁴⁴ The CICIG example prompted other countries to independently strengthen their judiciaries. It showed how cooperative arrangements between national, regional, and international actors can dramatically alter anticorruption efforts, and contributed greatly to the evolution of strategies to defeat corruption.

During the 2020s, Northern Triangle countries also reformed police forces, beginning with a long-overdue housecleaning of police departments, followed by systematic programs to recruit, train, better equip, and professionalize officers. What started in Honduras in 2016 grew in scale to incorporate all three countries, with a level of diligence that far exceeded initial expectations back in the mid-teens.

Countries improved strategies to attack organized gangs, the major source of instability in Central America. A crucial element in the success of these strategies was the introduction of effective systems for sharing intelligence and tracking the movement of criminals and funds across borders. Police forces benefited from information technology and automated systems to share data across national boundaries, helping them become more effective in tracking the illicit activities of drug cartels and organized crime syndicates. As a result, average homicide rates in the three Northern Triangle countries are 40 percent to 60 percent lower than they were in 2016. Economically, such measures have paid off. Foreign investors see reduced risk across the region, enabling economies to attract greater inflows of foreign direct investment.

Violence associated with the narcotics trade has decreased but has not disappeared. Besides improved policing, the reason for the decline has to do with shifting demand within the US and Europe for illicit drugs. Unfortunately, however, illicit drug use has increased within the region—the result of increasing wealth plus a still-strong desire for some types of recreational drugs among consumers. Serious conversations about legalizing drug use are now commonplace in high-level forums around the world. (Some types of drugs, such as marijuana, have become legal in many countries, including the United States, which lifted its federal ban on marijuana in 2021.)⁴⁵ However, much of the world has been reluctant to embrace global action to address the drug trafficking problem. Russia, a permanent member of the Security Council at the United Nations (UN), has continued to block advancements within the UN system.⁴⁶

Outcomes: Human Development and Its Economic Benefits

Improvements in governance and successful human development policies helped grow the economy by 7 percent to 10 percent beyond what economic forecasters (back in 2016) predicted for 2030. Countries that enjoyed the greatest gains are those that have the most improved social institutions, democratic governance, and human capital over the past fourteen years. These gains translate

into a more than 10 percent increase in GDP for Central America, 8.4 percent for the Southern Cone, 7.8 percent for the Andes, and 6.8 percent for the Caribbean, relative to what forecasters in 2016 thought would occur.⁴⁷

In terms of GDP per capita at PPP, compared with the same 2016–2030 forecast, Central America and the Southern Cone countries have outperformed by over \$1,000, with Andean and Caribbean countries seeing an increase of nearly \$800.⁴⁸

Economists debate why the region has performed so well since 2016, but the consensus is that governance has played an important role. Improving democracy has meant more than just running clean elections and allowing people to file their taxes online, as critical as those things are.



Improving democracy also has enabled governments to enact important policy reforms in a host of other areas.

These include fiscal and tax reforms, which have increased government revenues over the 2016–2030 period by a whopping \$1.9 trillion cumulatively. This increase is the result of more effective and progressive tax collection, broadened tax bases (due partly to a reduction in informality), and a concerted effort to manage public expenditures and reduce fiscal deficits. Together, these reforms have made Latin American economies more resilient to external shocks, and their economies have become less volatile.

Other reforms enacted in the 2020s were aimed at promoting innovation and entrepreneurship. Business start-up costs were reduced, tax filings made simpler,

and bankruptcy laws introduced to encourage taking the risk of opening a formal-sector business. Small and medium enterprises (SMEs) took special advantage, using new ICT to increase their productivity and position themselves in global niche markets. In 2030, SMEs have become a multiplier of growth and an engine for employment in the region.

Making smart investments has also meant prioritizing public spending. Broad fiscal reforms enabled governments to finance better coverage and quality of public services such as electricity, water and sanitation, public transportation, and law enforcement. The reforms, for example, helped the region achieve the sustainable development goal of (nearly) universal access to clean water and sanitation during the 2020s.⁴⁹



Governments prioritized infrastructure and education as two vital public services needing greater investment. Although government spending on education was already quite high at the time (relative to the global average of 4 percent of GDP), governments continued to prioritize education despite a decline in enrollment due to fewer children. Educational attainment, measured by average years of education for those age 15 and older, is now reasonably high, increasing one full year to 9.7 years in 2030. But education quality has remained a challenge; despite increased investment, educational systems still are not performing at the highest global standards. Improvements have been made, in other words, but these reforms take time.

Other advancements are the result of investments in health care, which helped reduce mortality from heart disease and cancer, while regional initiatives were able to successfully curb the growing burden of diabetes and obesity. Cheap wearable medical devices, connected to the Internet, are now common—a good example of the power of the Internet of Things. But these technological innovations are just one part of the story.

Equally important are strategies designed to change lifestyles and habits. These are almost too numerous to count, but include things like increased emphasis on physical activity through daily activities like bicycling. Cities in the region have embraced walking and bicycling for public health reasons, in addition to mobility and environmental reasons. Other strategies, developed by regional governments in cooperation with one another, are designed to address the emergence of new global diseases. These measures have helped ensure that communicable diseases like Ebola and Zika, which terrified the world during the 2010s, did not again reach pandemic levels.

Looking back, the region has gone through an immense transformation. Fourteen years ago, few would have thought Latin America and the Caribbean would be in such a privileged position. Gains have not come without pain, but the region is finally rewriting its story to one of hope and widespread opportunity.



7%–10%
Growth of
economy thanks
to improvements
in governance
and successful
human
development
policies



Guest Writer

Gina Montiel

The Northern Triangle: An investment paradox?

The Northern Triangle of Central America (El Salvador, Honduras, and Guatemala) is ripe with potential. With 30 million people and a combined GDP of \$110 billion, it's the ninth largest economy in Latin America and the fourth largest exporter of manufactured products, by value. Geographically, it's close to its main trading partner, the United States, with which it has a free trade agreement. The Northern Triangle countries grew an average of 3.1 percent per year between 2000 and 2015, slightly above the average for Latin America (2.9 percent per year) and with fewer stops and starts.¹ As a consequence, poverty and inequality have fallen since the beginning of the century.²

One tantalizing question is where the Northern Triangle economies and their populations' well-being would be without the high levels of crime and insecurity. The blessing of geography has also been something of a curse; being at the midpoint between South America and the U.S. has turned the area into a hub of illicit activities. The Northern Triangle's average homicide rate is fifty-two murders per 100,000 inhabitants (in 2015); one in five families has been the victim of crime.³ Recent estimates show that the economic cost of crime and violence is around 10 percent of GDP for El Salvador and Honduras, and almost 8 percent of GDP for Guatemala.⁴

This erosion of otherwise steady growth exposes the Northern Triangle to a vicious cycle. Moderate economic expansion generates fewer jobs

for youth; this, in turn, creates greater incentives for illegal activities and crime, which then hurt growth. Between 2000 and 2015, the 19-to-29-year-old population increased by 2.5 million, almost 40 percent. Local economies absorbed part of this increase, but in sectors with relatively low salaries and limited potential for improvements in productivity, such as services and agriculture. Furthermore, around 30 percent of the people in the 15-to-24 age bracket neither work nor attend school. This could worsen, as an additional 1 million young people enter the labor market over the next fifteen years.

What if the vicious cycle could be reversed? A secure Northern Triangle could generate robust growth, creating opportunity for all its citizens. Conservative estimates⁵ suggest that a decrease in crime and violence would allow for per capita growth rates 44 percent higher in the next fifteen years, compared with the past fifteen years.⁶ A higher growth rate would help create around 900,000 new jobs in this same period.⁷ Moreover, there is evidence that crime affects economic diversification and foreign direct investment.⁸ Therefore, a secure Northern Triangle could have more and better jobs associated with diversified economies, which would be attractive for foreign investors.

El Salvador, Guatemala, and Honduras have already taken decisive actions to address some of these issues. With the Plan of the Alliance for the Prosperity of the Northern Triangle (2014), they expect to reduce homicide rates by 10 percent per year over the first five years. The plan includes measures to strengthen police and judicial institutions, increase crime prevention initiatives, improve access to justice, and reduce corruption and impunity. However, these measures will not be successful if the region's growth potential is not combined with an investment in security that increases competitiveness by improving infrastructure and reducing logistics and energy costs. Similarly, the plan calls for investments in human



capital, improving access to and the quality of education, health services and job training.

These investments, if done correctly, will generate the appropriate environment for the region's young populations to thrive by 2030.

As opposed to the images often depicted in news accounts and popular forecasts, the future of the Northern Triangle countries could be bright. Successfully implementing the plans adopted by Northern Triangle governments will unlock much of the potential of the region and should generate prosperity and security for its citizens.

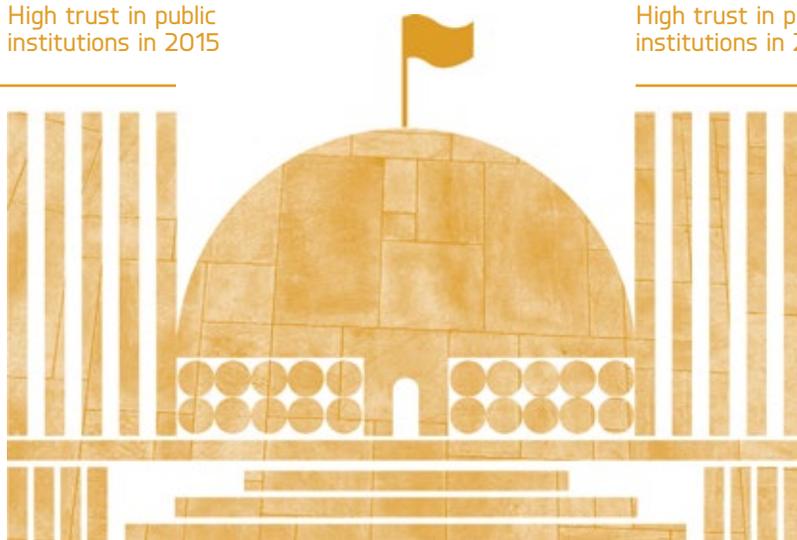
Gina Montiel is IDB Manager for Central America, Mexico, and Dominican Republic

7.8%

High trust in public institutions in 2015

High trust in public institutions in 2030

3%



Corollary Scenario: Illicit World Afloat

The region has gotten much worse over the past fourteen years. In 2030, democracy in Latin America and the Caribbean is stagnant at best, crumbling at worst. Alongside corruption scandals, the cumulative effects of transnational crime, weak rule of law, and citizen insecurity have taken their toll. Economic and personal insecurity, especially, have accelerated a brain drain; the best and brightest now look to other countries to make a living and live better. Among other things, countries have a much harder time attracting foreign direct investment.

Around the region the common perception is that corruption remains high and pervasive. In 2015, the *Latinobarómetro* index found only 7.8 percent had high trust in public institution.⁵⁰ That number fell to an all-time low of 3 percent by 2030. Most people do not believe the incentives for public-sector corruption have been dismantled. The legitimacy of government institutions has fallen sharply.

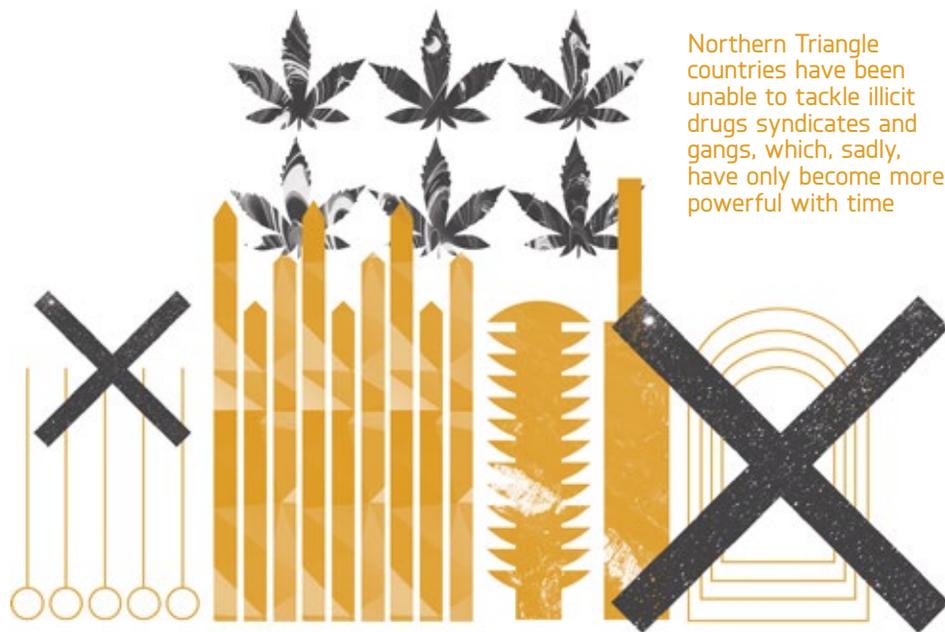
Northern Triangle countries have been unable to tackle illicit drug syndicates and gangs, which, sadly, have

only become more powerful with time.⁵¹ Not much has changed in the war on drugs over the past twenty years, and—no surprise—it still has yielded few results. There are several reasons for this unhappy state of affairs.

Drug cartels have effectively taken over large swaths of rural territory in parts of Mexico and Central America, creating zones where governments are unable to enforce the law or deliver basic services. Government, in essence, is left with few options other than to effectively institutionalize organized crime.

Just as bad, the region's cities often suffer from similar neglect. Entire districts exist where the state is absent or in ongoing conflict with gangs and criminal enterprises, which have stepped in to fill a governance void and which, it must be said, operate largely unchallenged and with impunity. Countries across the region, including the biggest and most powerful, such as Mexico, have suffered grave consequences as a result.⁵²

In the Southern Cone, the 2015–2016 Brazil crisis led to a decade of crippling paralysis as established parties resisted efforts to reform the political system and root out corruption.⁵³ Brazil's citizens came to believe that



corrupt politicians covered one another's footprints and managed to remain in power into the 2020s. Whether this is true is beside the point; this state of affairs contributed to an already-eroding faith in the country's democratic governance system. Farther south, Argentina also struggled to rebuild the institutions that crumbled during the economic crisis of the early 2010s.⁵⁴ Both countries faced tremendous opposition to rebuilding their institutions and norms, and to enacting open-market policies that may have helped their economies recover.

Looking back fourteen years, the main drivers for this relapse were the unwillingness to be inclusive, the breakdown of the democratic order due to the ongoing corrosive effects illegal actors have had on governance, and the inability of governments to reinvent themselves by adopting and applying modern technologies.

The middle class has not expanded as quickly as experts projected in the 2010s, and although increasingly demanding, its politics have not turned out to be as positive as hoped. Mechanisms for social participation have remained limited as political and economic elites have hung on to power. Democratic norms have been slow to take deeper root in a great many places. For instance, in 2017

there was an attempted military coup and heightened social unrest in Venezuela,⁵⁵ and regression toward an even more powerful executive branch in Nicaragua.⁵⁶ Haiti has also remained relatively unstable.⁵⁷ Even though universal suffrage and regular elections remain the norm rather than the exception, political violence has, unfortunately, crept back into the region's story line.

Civic mobilization is ongoing, and at some times and in some places it has intensified. But instead of embracing the popular forces behind this mobilization, governments have been resisting or even repressing them. Governments have not managed to translate the demand for greater participation into inclusive political systems. As a result, citizens' wishes for greater government effectiveness and accountability have not been realized. Instead, mobilizations have resulted in popular frustration with the nature and pace of change, which in turn has produced social unrest.

To make these problems worse, the digital revolution that has been a springboard for e-government and open data platforms around the world has not been fully embraced by Latin American governments. Rather than helping curb corruption, increase transparency, and strengthen

Drug cartels have effectively taken over large swaths of rural territory in parts of Mexico and Central America

democracy and the rule of law, as in other countries in other regions, these disruptive technologies have provided opportunities for organized crime and have made governments vulnerable to cyberattacks. Governments did not embrace change when ICT emerged back in the 2000s and 2010s, resulting in missed opportunities. Even worse, governments did not protect themselves and their societies from abuse of their digital systems (cyber hacking has gotten worse).

Given these developments, government performance has suffered. Public-sector transparency across the region has retreated to the levels of the late 1990s. For some countries in the Andes and Central America, little has changed over the past fourteen years, but for countries in the Southern Cone and the Caribbean that are accustomed to higher levels of transparency,⁵⁸ the noticeable shift has been painful. The Southern Cone's government transparency index dropped from 4.8 (with 10 indicating full transparency) in 2015 to 4.1 in 2030, and the Caribbean's went from 4.8 in 2015 to 4.1 in 2030. The story is similar for government effectiveness, where instead of an increase, regions saw a decline in their ability to manage affairs.

These variables came together at a point in time when the region was recovering from the economic downturn of the early 2010s.⁵⁹ The stagnant world economy, together with the downturn of the commodity cycle, was a turning point. Governments were unable to step through a window of opportunity and enact smart social and economic reforms.

Economies have suffered as a result. In 2030, FDI inflows as a percentage of GDP declined by more than 50 percent relative to what was expected in 2016. Emigration, particularly of the well-educated, has increased dramatically. Economists estimate that the region has lost 11.9 percent of GDP, compared with the forecasts made back in 2016. To make matters worse, the gap in per capita income between high-income countries and Latin America has continued to widen. It almost goes without saying that innovation and entrepreneurship have stagnated in most places, and regressed in some.

During the 2020s, there was a gradual reduction in government expenditures for education and research and

development (R&D), freeing up some additional resources. But as already mentioned, the revenue savings were used mostly for patronage and failed to address structural problems such as systemic inequality and persistent poverty rates.

Few would have thought that the region with two of the most promising economies in the world (Mexico and Brazil)⁶⁰ would have so failed to live up to its promise. But just as in the BRICS,⁶¹ the Latin American dream has dissolved. People fear the dark years of the 1980s could be coming back.



Disruptive technologies have provided opportunities for organized crime and have made governments vulnerable to cyber-attacks



Guest Writers

David Bohl
and Jess Rettig

The Push and Pull of Informality

We could call them entrepreneurs. Others might see them as survivalists. But “taxpayer” is not a common label for many who thrive in Latin America’s informal economy. And in the long term, that’s a problem for everyone.

In 1995, tax revenues as a percent of GDP in Latin American countries was around 6 percentage points lower than those of their OECD counterparts. In 2016, even while revenues continue to grow, the gap has risen to around 10 percentage points.

Given the relative stages of development, this gap may not be much of an issue on its own. Yet, as the advantages these Latin American countries once relied on for growth begin to lose their relative value in the world, governments need to focus on long-term productivity-boosting policies, all of which will require significant investment.

In Latin America, a number of governance issues drive informality. Poor enforcement or overly complicated filing requirements are significant obstacles. Corruption also discourages those who would play by the rules and limits the positive impact government can have on firms’ future productivity. Systemic bribery might even be framed as a de facto tax in some places, especially when it cuts into the margins of the businesses that are forced to comply.

Governments might work on certain pull factors, or incentives, to bring both individuals and businesses above board. Financial incentives, such as access to affordable credit, could offer a partial solution.

Education, including vocational skills training, could also attract those hoping to gain a relative edge in their local market.

Still, such interventions require funding of their own. Intermediate steps might be taken instead to focus on raising revenues from within the informal sector itself, to build momentum for a greater overhaul. These may include reevaluating a value-added tax (VAT) or other consumption-based taxes. Still, policymakers need to keep in mind whether the cost of implementing a parallel tax regime is worth the potential revenue it could generate. Finally, although they’re not contributing to government revenues, informal markets are critical for the survival of large portions of the population; taxation could cripple these survivalist enterprises, and the communities that depend on them, if not rolled out strategically.

If handled effectively, however, our scenario analysis highlights potential gains that greater levels of formal employment could achieve at the national level. In the Governance on the Rise scenario in this report, the informal labor force decreases from around 124 million people in 2015 to 94 million in 2030 due to general improvement in a number of economic, social, and political areas, including the business regulatory environment, household transfers to unskilled workers, and a reduction in corruption.

Suppose, however, that these measures are not enough to curb the growth of informality in the region, and that it remains at an average of 50 percent of non-agricultural labor through 2030. Even with the economic benefits accrued to Latin American countries from the scenario’s other improvements in human capital and governance,

the region would miss out on a cumulative \$760 billion in revenue by 2030. Furthermore, under this scenario, the foregone goods and services that this revenue could have provided, combined with the lower level of productivity sustained by a large informal economy, could translate to a cumulative loss of \$1.8 trillion in GDP by 2030.

For Latin America to boost its productivity enough to compete with other global players, the region must address the informality trap soon and take advantage of the economic gains and the potential government revenue that it's now missing.

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Scenario 3: Toward Integration or Fragmentation Prevails?



Scenario: Toward Integration

The Latin America of 2030 is more coherent than in 2016. This is because over the past decade and a half, countries decided to invest in one another, making a bet that they could realize more together than they could apart. This bet has paid off. Countries started to cooperate in making investments and coordinating policies, with the goal of increasing the region's level of integration. Investments and policy changes designed to accomplish this covered several areas: infrastructure, education and skills, innovation policy, energy, and financial coordination.

One of the first things countries did was to invest big in infrastructure. In the late 2010s, they decided that upgrading chronically poor infrastructure would yield large dividends by improving competitiveness in global trade and by expanding intraregional trade. Greater investment in infrastructure did not just go to upgrading national systems (roads and rail lines), nor even systems geared primarily to global trade (port facilities). Much of the surplus was dedicated to improving

linkages across national boundaries, to bind the region more tightly together and facilitate trade and commerce around and through the region.

Countries increased infrastructure investment from an average range of 2 percent to 3 percent of GDP to almost 5 percent of GDP.⁶² Given constraints on public resources, this was accomplished by increasing private investment through public-private partnerships. From 2016 to 2030, private-sector investment in infrastructure jumped from about 0.6 percent of GDP to 1.7 percent, while public investment jumped from 2 percent to 3 percent. Countries were able to attract private investment through public-private partnerships because they had spent years investing in the know-how and capacity to make such partnerships work.⁶³ In addition to much-needed capital, the private sector also provided technical and managerial know-how for large-scale projects.

Infrastructure investments have had the largest pay-off for Central American countries, which back in the 2010s had faced the largest opportunity cost of underdevelopment in this area. In 2030, economists estimate that Central American economies have experienced a whopping 9.4 percent increase in GDP above and beyond what was forecast in 2016—which, since that year, has translated to a nearly \$4,000 increase in GDP per capita at PPP (now estimated to be around \$18,300 in 2030).⁶⁴ Other subregions benefit too; the Caribbean and Andean regions have seen a 7 percent increase in their economies above 2016 projections.

In 2030, all subregions have come close to, or surpassed, the infrastructure spending target of 5 percent of GDP. As stated, this investment has paid off. But there has been a price, too, as the heavy push has left less room in government budgets—and less political capital—for increased investment in other areas.

Countries decided to make investments and coordinate policies in cooperation with each other, with the goal being to increase the region's level of integration

Energy Integration

In 2016, Latin America and the Caribbean were ripe for energy integration, because some countries were energy-deficient while others were energy-abundant. To meet growing demand, countries revised energy subsidy policies during the 2020s to encourage efficiency and equitable allocation. On the supply side, they diversified energy sources (in 2015, hydropower generated about 52 percent of Latin America's power supply)⁶⁵ by taking advantage of the global shale gas revolution to continue boosting production and use of natural gas. They also invested in scaling the ample nontraditional renewable energy resources—solar, wind, geothermal, ocean, small-scale hydro-power, and bio-energy.⁶⁶ Institutions and market regulations that previously favored oil and coal have become more friendly toward lower-carbon sources in 2030. As with infrastructure, countries made a conscious decision to invest in regional energy systems. Regional power pools have incorporated demand response, storage technologies, and shorter scheduling and dispatch intervals. These have improved reliability and lowered costs.

The Central American Electrical Interconnection System (SIEPAC)—the first interconnected network of power grids in Latin America, uniting Panama, Costa Rica, Honduras, Nicaragua, El Salvador, and Guatemala—already provided electricity to 37 million⁶⁷ people in 2016 and was complemented by a regional electric market that facilitated buying and selling electricity among the six countries.⁶⁸ In 2030, SIEPAC has completed its second and final stage of “duplicate circuits” along the transmission line, doubling the network's capacity. Additionally, SIEPAC has successfully completed its expansion from Panama to Colombia, further diversifying the power matrix, improving the system's reliability, providing backup energy in emergencies, and reducing overall emissions, given Colombia's high share of renewable power generation.

Although SIEPAC is the region's first and most advanced energy integration project, it is not the only one. In 2030 the Andean Electrical Interconnection System has achieved its targets (set out in the 2014 Lima Declaration) to integrate the power grids of Colombia, Ecuador,

Peru, and Chile by developing transboundary energy infrastructure. As with SIEPAC, improved efficiency and reliability helped lower electricity costs. It also diversified the region's energy sources, and today uses renewable energy to help smooth out variable generation from solar, wind, and tidal energy sources.

Financial Integration

Building off the successes and lessons learned from the Pacific Alliance—a regional integration initiative comprising Mexico, Colombia, Chile, and Peru as its four founding members—and the Integrated Latin American Market,⁶⁹ during the 2020s Latin America mobilized to integrate banking and capital markets. This improved competitiveness created economies of scale, diversified risk exposures, attracted outside capital, and increased liquidity. Regulatory harmonization eliminated duplication of compliance tests. Pension and insurance funds diversified with crossborder investments and today allow pension-holders to easily move accounts across borders. In the event of a global economic downturn, these steps make Latin America and the Caribbean better equipped to recover.

One example is Venezuela. In the mid-teens the country was on the brink of disaster. Money was being printed with less and less value. Political turmoil seemed to have no end in sight. But change finally came after the economic situation deteriorated to the point that most people couldn't survive from one day to the next. Profound, difficult economic reforms came next. Unemployment spiked after millions were kicked off state payrolls. One result: The economy was forced to open up to external agents. Capital controls were lifted and limited foreign investment allowed in. Even though the situation was tenuous, coming from near rock bottom (over 700 percent inflation) meant that it could only get better. Neighboring countries joined to support Venezuela in its economic transition, with multilateral development institutions ready to jump in.

Human Capital and Labor Mobility

A final piece of the integration puzzle involves investment in human capital. Over the past decade and a half, governments decided to increase attention to upgrading skills, to produce higher-value-added goods and services for export. Now, in 2030, just over 17 percent of adults have a tertiary education, which is a significant improvement over the 8 percent figure in 2015. This was part of a larger strategy put forth during the 2020s to pivot away from dependence on extractive industries.

The four founding Pacific Alliance⁷⁰ countries, along with the new members from Mercosur,⁷¹ have led the way by investing in technical education and setting up programs that allow student exchanges within the different member countries. They have standardized university credits, facilitated student exchanges with visa waivers, and built

\$4,000

Increase in GDP per capita at purchasing power parity

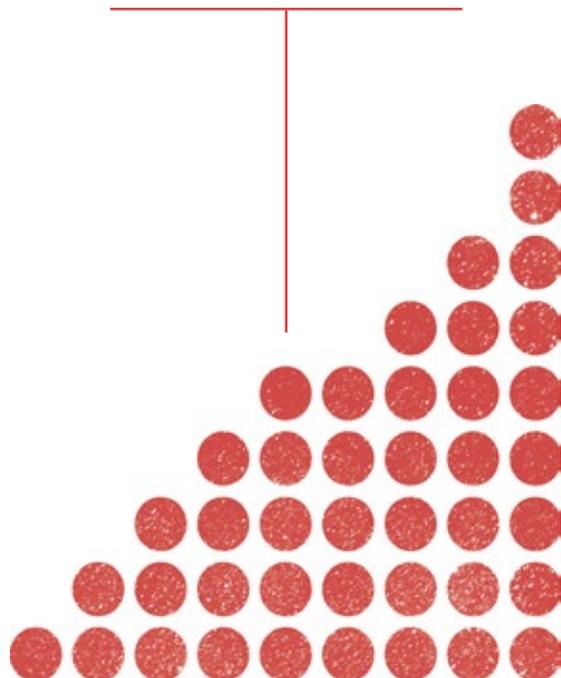
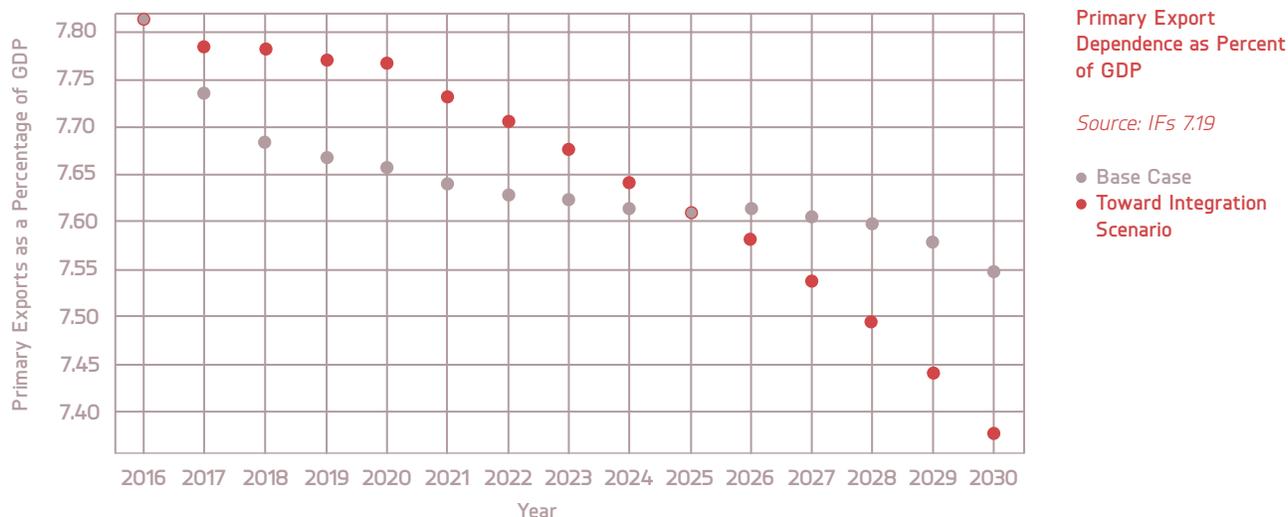


Figure 7. Primary Export Dependence: Toward Integration.



an integrated financial aid program. But better connecting universities to the business community has been one of the top achievements. Technical certificates are recognized regionally and people access the Cloud to freely work from different countries.

Across the rest of the region, countries now recognize degrees and credentials across borders, which has helped remove barriers to labor mobility. Labor flows to the sources of its demand. During the 2020s, the Internet and communications technology facilitated global interactions, which allowed companies and employees to be more mobile. Young labor also temporarily gravitated toward emerging economies, as lesser-developed countries caught up.

Finally, it was critical to align education and research and development with areas of the economy in which Latin America has a comparative advantage.⁷² Universities and technical schools are now training the workforce in alignment with the growth needs of the regional economy. These investments in education, infrastructure, and other areas, coupled with stable macroeconomic conditions, have facilitated the transition to a higher-value-added

and innovation-driven economy. In 2030, it is true that the region has a more diversified export profile than it otherwise would have had (see [Figure 7](#)). But, there is a considerable way yet to go.

The Economic Complexity Index (ECI), which ranks how diversified a country's export basket is, shows that in 2030 many Latin American economies are still too resource-dependent and far less complex than developed economies.⁷³ Petroleum still accounts for 93 percent of exports for Venezuela and 50 percent for Ecuador, while mineral products and gold still account for 74 percent of Bolivia's exports.⁷⁴ This overwhelming dependence put Ecuador, Bolivia, and Venezuela in the bottom 20 among 124 countries in the 2014 ECI rankings.⁷⁵

Despite this reservation, however, greater integration has had tangible results in the lives of those in the region. In 2030, favorable trade, strategic investment in human capital and infrastructure, and increased labor mobility have translated into a general reduction of informality across the region. Millions more people are now living above minimum income thresholds than would otherwise have been the case.



8%

Percentage of adults
with a tertiary
education in 2015

17%

Percentage of adults
with a tertiary
education in 2030

As countries became more collaborative on a wide range of international issues, this has also helped mitigate external shocks and threats to democracy and security. Today, economic interdependence, founded on mutually beneficial economic linkages, promotes peace through increased communication, information sharing, and shared interests.⁷⁶ Although Latin America already enjoyed low levels of interstate violence in 2016, in 2030 intrastate violence has decreased because of increased opportunities in the formal economy and regional support for countries facing economic and political shocks.

Countries now recognize degrees and credentials across borders, which has helped remove barriers to labor mobility



Guest Writer

Antoni Estevadeordal

Enabling Trade: What can Latin American and Caribbean countries do over the next 15 years to take advantage of trade-facilitating emerging technologies?

Technological advances are revolutionizing trade and creating new opportunities for consumers and businesses. The rise of technologies such as cloud computing, 3D printing, robotics, and wireless networking has changed what we trade as well as the operating environment in which we trade.

The Internet enables consumers to purchase goods from around the world with the click of a button. One result: a surge in digital trade, which translates into more goods moving across borders. It has also affected business-to-business and business-to-consumer markets, including transportation patterns and the way companies manage supply chains. This can be seen in the proliferation of just-in-time inventory management, where the inputs in a supply chain arrive as needed, instead of being held as inventory.

While this new trade environment has created opportunities to capture new markets and to diversify trade, it has also highlighted a whole new set of trade barriers. Among them, regulatory misalignment and cumbersome administrative procedures can add unnecessary cost to transactions. To overcome these barriers, countries should focus on adopting new technologies that facilitate trade.

There are four areas where Latin America and the Caribbean could revolutionize trade by 2030.

- Public-private partnerships. Under the new operating environment for trade, public and private stakeholders must work together to create sophisticated transportation and logistics systems that are harmonized across borders. Public and private-sector entities can collaborate to design and implement procedures that improve the efficiency of supply chains. This includes harmonizing standards and regulations, and making these systems operate across borders.

Technology can play a key role. Trade-enabling technologies connect stakeholders, automate and digitize processes, and allow for 24/7 operations. Private-sector entities that design supply chains already use technologies such as remote sensors, cloud computing, and automatic data capture and processing to improve supply chain efficiency. Through public-private partnerships, these technologies could be applied to the public management of supply chains (in areas such as customs collection, phytosanitary inspections, etc.). Such technology-focused, trade-enabling public-private partnerships would remove barriers, lower costs, enhance security, and improve the overall efficiency of regional and global supply chains.

- Smart transportation and logistics networks. Twenty-five percent of trade delays in Latin America are a result of poor infrastructure; 75 percent are due to inefficient processes. Countries should therefore upgrade transportation and logistics chains with the help of new technologies, such as the Internet of Things (IoT). IoT uses machine learning, cloud computing, and networks of data-gathering sensors to streamline logistics and transportation networks, enabling actors to capture and analyze data at every level of the supply chain. This translates into better monitoring of

goods in transit, more efficient route planning, and more secure cargo handling. The result can be a dramatic reduction in costs, as IoT technology helps extend the life of products, improve safety, and make the supply chain more reliable.

- Digital trade. The biggest enablers of digital trade are the Internet and other technologies such as wireless, broadband, and data transfer. They help countries increase trade, enter new markets, and diversify exports. To promote digital trade, the region should support an open Internet, including guaranteeing the free flow of data, harmonizing rules on data protection and privacy, and investing in technologies such as high-speed broadband and wireless access. This will enable businesses to sell online, process payments, and access financing, services, and technology.
- SMEs trading like multinational corporations. Small and medium enterprises (SMEs) represent 90 percent of Latin American companies and are the source of 50 percent of jobs. Yet they generate only 13 percent of exports. Why? SMEs face high entry barriers, including minimal knowledge of international trade rules and regulations, and limited access to financing and trusted international contacts.

To overcome these barriers, new technologies, such as digital business networking platforms, should be embraced that enable greater participation of SMEs in international trade. These platforms enable actors in the supply chain to come together virtually through a single platform. This connects individual sellers with potential buyers, provides greater access to information, facilitates communication, and introduces greater flexibility throughout the chain. The virtual component reduces inefficiencies and lowers the overall cost of doing business. This is especially important for SMEs that are constrained by size, geographic location, and financial capacity.

Latin America is well positioned to embrace the digital revolution currently transforming international trade. But to adapt to future trade-enabling technologies, the private and public sectors must work together. By combining the private sector's technical expertise and market know-how with the public sector's capacity to develop and implement policies that support technological modernization, countries can seize new opportunities to become major players in future commerce.

Antoni Esteveadoral is Manager of the Integration and Trade Sector of the Inter-American Development Bank.



Guest Writer

Esteban Bullrich

Education: How Can Latin America Educate Its Workforce More Strategically?

The UN General Assembly has adopted among its Sustainable Development Goals the commitment to “ensure inclusive and quality education for all and promote lifelong learning,” recognizing that economic, social, and human development are not possible without education.

To achieve this, we need to work on strategies, on education reforms, on long-term public policies, and on consolidating the progress achieved thus far. Our main lines of action include early childhood education, which is the foundation for a life-long learning experience; teacher excellence, the true agents of change; and learning evaluations, to establish high-quality standards and expectations.



However, these education policies will not be enough without greater integration between the global workforce and education. First, we must increase the number of workplace training hours for students and teachers, to update them on new technologies, lower dropout rates, and increase the rates at which people find jobs that match their skills. To get there, better coordination is needed between the public and private sectors.

Second, we must enhance technical and vocational education and nonuniversity tertiary schooling. This will provide new alternatives for those who excel in post-secondary education while increasing the labor market penetration for youth and adults.

Third, it is necessary to keep our curriculum up to date and guide young people on decisions regarding their professional future.

Fourth, it is essential to incorporate soft skills and socio-emotional skills into education. Studies show that teamwork, the ability to compromise, responsibility, and curiosity will be the most sought-after skills in the near future. Today, a young adult will switch jobs seven times during their professional career, so the ability to adapt to the uncertainties of the labor market will be fundamental.

Finally, it is crucial to work on achieving deeper regional integration, incentivizing exchanges of experiences, and replicating best practices. We face the challenge of further elevating the social necessity of a better education, and obtaining buy-in from society to make this happen.

Esteban Bullrich is the Minister of Education of Argentina.



Guest Writer

Paul Farmer

International Response to Epidemics: How can Latin America position itself to react through collaborative efforts?

I'm writing this column from a hospital in rural Haiti. I just saw a patient I've been following for about six weeks. The first time I met this twelve-year-old from the south side of Port-au-Prince, he couldn't speak to me: He was paralyzed and on a breathing machine in the intensive care unit (ICU).

That boy was an orphan. His aunt told me that he'd been on his way home from school when he felt numbness and weakness in his feet. Soon he could not walk. As his condition worsened, his aunt sought care for him in five Port-au-Prince hospitals. At the last of these, the staff recommended that she take him—by then paralyzed from the waist down and with a fever—to University Hospital in Mirebalais. This was an almost three-hour drive north, during which she worried he might stop breathing. When they arrived, he was intubated and transferred to the newly opened ICU.

The boy had been on a breathing machine for almost two weeks when I was consulted about the likely cause of his paraplegia. Whether it was caused by Zika or some other infectious pathogen (prior to its eradication in the Americas, polio might have headed the list of possibilities in rural Haiti), the only way to save this child was critical care. Now, as I write this, he is recovering.

The story of Zika, polio, and other pathogens, ranging from dengue to cholera, has always been one of transnational spread. Stopping them has posed multiple challenges across Latin America. Strengthening regional health networks, such as the Pan American Health Organization, is vital to fight their threat. But even more important are strong national health systems that can integrate both prevention and care. Only national systems can link community-based services to clinical care that is best delivered in a hospital, train local health professionals, and generate new knowledge about how to improve care delivery.

For vector-borne diseases like Zika and dengue, so far such integration has been far from complete. In the case of Zika, for example, control-only paradigms that focus solely on prevention fail patients like this boy. They also fail young women who seek contraception or mosquito repellent, and also prenatal care and access to safe delivery. The same may be said of dengue, which may cause hemorrhagic fevers requiring supportive and critical care. For cholera as well, an ounce of prevention is worth a pound of care.

In fact, prevention has failed in parts of Latin America at least twice in the past three decades, and in both instances pandemic cholera caused many deaths before countries improved care delivery for the afflicted. In wealthier countries like Peru in the late 1980s, as well as in poorer countries like Haiti after 2010, fatality rates were high early in the epidemic; sometimes close to a quarter of those afflicted died. In all countries, improved detection of cases and higher quality of care brought fatality rates under 2 percent well before the epidemics were over. And now we have effective oral cholera vaccines. But integrating these vaccines into national programs requires strong advocacy and comprehensive health systems.

It is crucial that our response to epidemic diseases links efforts to prevent local and transnational spread of these pathogens to improved

care delivery for those for whom prevention has already failed. As important as regionwide coalitions are to the control of pandemic disease, the work of caregiving is primarily that of national governments, which must ensure that such care is available and well-regulated.

Public investment in integrated prevention and care makes sense regardless of how much care delivery is privatized, since the increasingly shared goal of universal health coverage requires stronger safety nets. When lessons from these epidemics are forgotten or unheeded, disease-control efforts are tarnished. When benefits are privatized while risks and costs are socialized, the chances of broad support for disease-control efforts are inevitably undermined.

Dr. Paul Farmer is co-founder of Partners In Health, Kolokotronis University Professor and Chair of the Department of Global Health and Social Medicine at Harvard Medical School, and Chief of the Division of Global Health Equity at Brigham and Women's Hospital.

Corollary Scenario: Fragmentation Prevails

In 2030, the global economy and its centrifugal forces have pulled the region toward different economic poles. During the 2020s, given their geographic proximity, Central America, Mexico, and the Caribbean economies continued to be pulled toward the North American market. Given the complementarity of their economies, South America gravitated more toward individual agreements with Asia-Pacific countries, often negotiating without the upper hand due to their go-it-alone approach. Transatlantic agreements gained momentum, creating another—albeit weaker—pole. With fewer economic ties binding them, countries pursued individual paths without much regard for acting in concert with the rest of the region. In short, Latin America retreated from the partnership ideal, and in 2030, the region is less coherent than it has ever been.

Regional disintegration amplified a few things that were of concern back in 2016. One of the more serious was the particularly bad exposure of the region to global economic shocks. During the 2010s and 2020s, the region's lack of coordination perpetuated isolated, extraregional trade strategies that, in turn, made it more sensitive to the global commodity cycle. As leaders made no efforts to build regional trade through upgrading infrastructure and coordinating policies, each country became even more dependent on extra-regional trade and investment. Global economic downturns, therefore, hit countries harder than what may have otherwise transpired.

In 2030, the region has lost out on productivity gains and enhanced physical and human capital, due to lack of investment in infrastructure and higher education. With limited export mobility and without regional support and coordinated strategies to improve infrastructure and extend educational attainment, GDP per capita in Latin American and Caribbean countries in 2030 has not been as robust as forecast in 2016, further delaying convergence to high-income levels and preventing the region from avoiding the middle-income trap. The regional export profiles of many Latin American countries have shifted back toward the sectors in which they have

a comparative advantage—primarily commodities and low-value-added goods.

There is considerable irony here. The overall level of exports has declined as a result of the region becoming less competitive in higher-value-added goods and services, to the tune of \$200 billion annually. But it exports more agricultural products and other primary commodities, again compared to what was expected fourteen years ago.

Central America has seen a 16 percent uptick in crop exports as a percent of total exports, relative to what was expected in 2016,⁷⁷ and the Caribbean has seen a 9 percent increase. The return to agricultural exports (and other primary goods) has come at the cost of other higher-value-added manufacturing exports. In 2030, Southern Cone countries have seen the largest change in



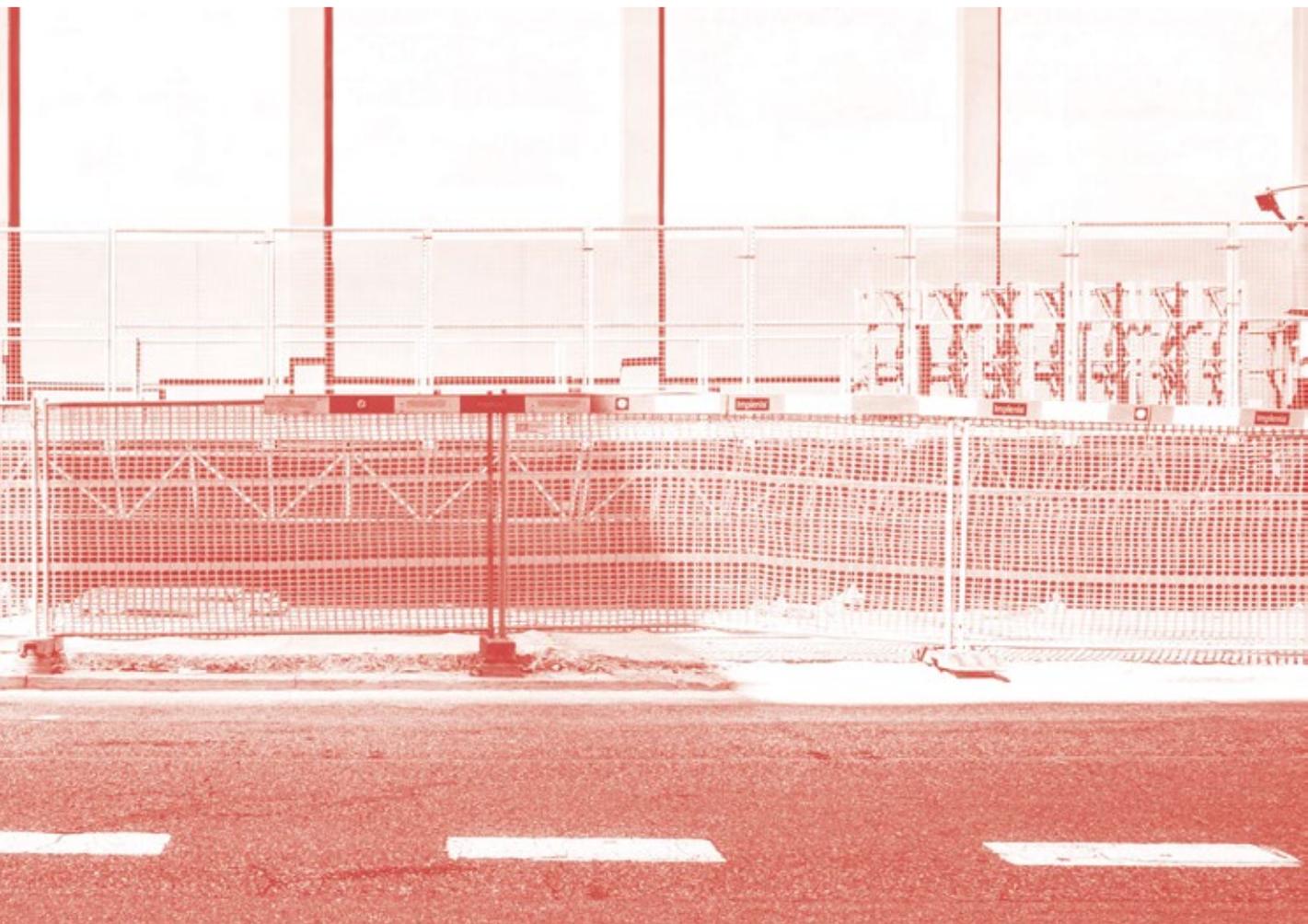
manufacturing export profile, with a 7 percent decrease in manufacturing exports (as a percent of total exports).⁷⁸

Without the incentive to improve intraregional infrastructure during the 2020s, Latin America and the Caribbean has seen a negligible improvement in transportation infrastructure.⁷⁹ This has had wide-ranging implications for economic growth, the price of consumer goods, productivity, and environmental sustainability.

With poor infrastructure and without coordination and strategic planning, climate change effects and natural disasters affect subregions unequally. Nations are slower to respond to pandemics and natural disasters, which, by 2030, have resulted in both increased loss of life and reduced faith in government institutions.

The lack of collaboration has contributed to the political, economic, and social breakdowns of individual states, as neighboring countries were uninterested in providing assistance or working toward a common solution. This atomization has been conducive to a resurgence of populist regimes and criminal organizations, which affects the stability of the region as a whole.

In 2030, the region is less coherent than it has ever been





Guest Writers

David Bohl
and Jess Rettig

The Short Story of Long-Term Trade-Offs

When confronted with important domestic development issues, such as eliminating poverty, achieving middle-income status, or addressing climate change, a longer view can help identify challenges and opportunities that shorter-term frameworks might not. This is because many of these issues are part of multiple, interconnected systems—systems that often evolve too slowly to notice, are too complex to fit tightly within a single bureaucratic silo, or have implications that are too distant to see. Yet, with the exception of Brazil's 3 Tempos and Peru's Bicentenary Plan, few Latin American governments have adopted a strategic planning framework that extends beyond three to five years.

But the rules of the game change when we deal on time scales that extend past a particular political administration or beyond a generation. Computer simulations like International Futures (IFs) can help us navigate this new set of rules, as we synthesize familiar relationships and explore human, social, and environmental transformations within a country and amid a larger global context.

Take demographics as an example. The change in the age-sex distribution of a population can be so slow-moving as to be nearly imperceptible over short time horizons, but the macroeconomic, financial, and social implications can be enormous. In Latin America, the demographic trends of the

next fifteen years will be unlike those of the previous one hundred fifty, as the region becomes one of the world's most rapidly aging. By 2030, most countries will have passed the peak of their demographic dividend, when their worker-to-dependent ratio is at its greatest.

This transition brings with it a number of opportunities and challenges that could go unnoticed with shorter-term exploration. By 2030, there could be 10 million fewer children in the region's primary and secondary schools. This decline could theoretically free up resources that have been devoted to educating large youth cohorts. But will it? There actually could be three potential outcomes, depending on the specific conditions of countries and their choices.

1. Educate a greater portion of the young population or educating those already in the system for longer.
2. Raise expenditures per student from levels that are currently below those of higher-income countries (relative to GDP per capita in each case).
3. Shift some education spending to other priorities, ranging from infrastructure to R&D to caring for a growing elderly population.

This is an urgent decision. While it took the elderly population 115 years to double (from 7 percent of the total to 14 percent) in France, Latin American countries can expect to undergo that transition in only twenty-four years. That's one-fifth the time to reap the benefits of the region's demographic dividend, one-fifth the time to prepare for the oncoming pension and health care crunch, one-fifth the time to enact the necessary reforms to ensure prosperity after commodities- and labor-driven growth are a thing of the past. Postponing these tough decisions will only make future adjustments more difficult.

Short- and medium-term planning will always be central to the policy-making process, but embedding them within a longer, more integrated narrative can help provide new insights regarding some of the hidden trade-offs they incur. To explore how short- or medium-term budgetary policies can have significant impact on these longer-term trends, let's look at the Toward Integration scenario. One key intervention (among a wide array of other financial and political interventions) found in this scenario is that governments achieve their target of infrastructure investment totaling 5 percent of GDP, split between public and private sources. This influx in infrastructure investment helps to close the infrastructure gap found in Latin America early on, resulting in higher levels of competitiveness and productivity. Gains are felt throughout the economy, and eventually translate into increased government revenues, which can be reinvested back into public goods and services.

In a variation of this alternative future—one very similar but in which countries choose not to include infrastructure investments as part of their strategic plan—by 2030 the region experiences an additional cumulative \$300 billion shortfall between the pension and health care needs of society and government funds allocated to these needs (relative to the original scenario). That's an annual gap of over 7 percent of GDP.

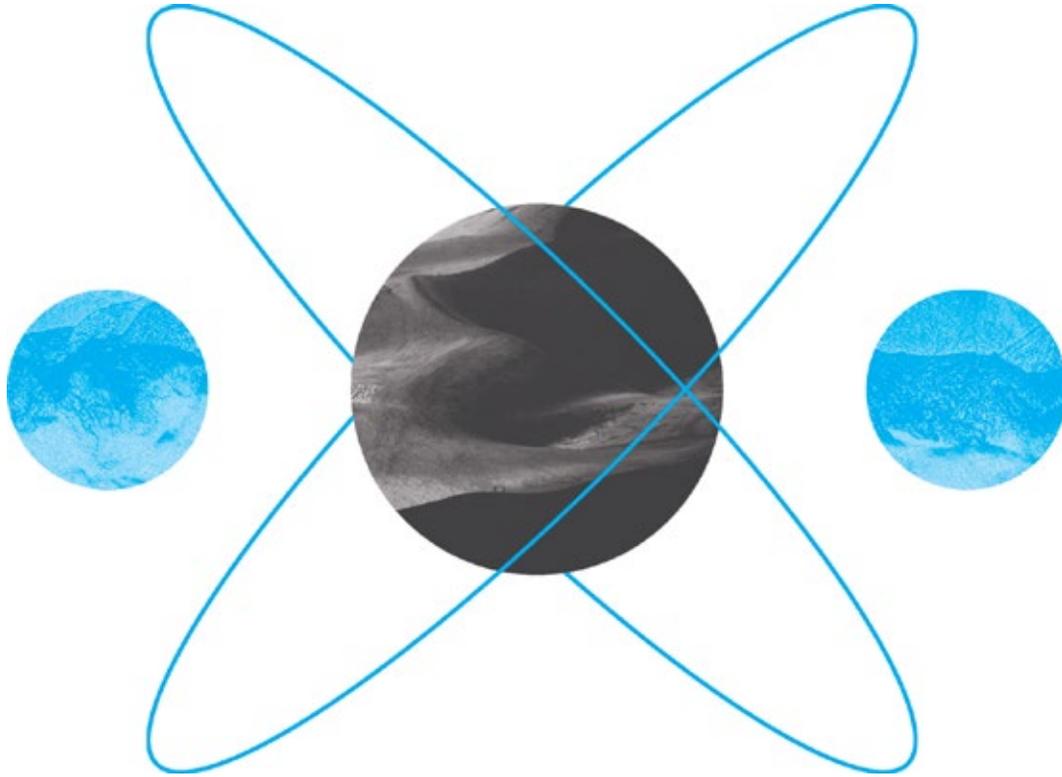
Another interesting insight with this long-term demographic lens is that if countries push to achieve the 5 percent infrastructure spending target without public-private partnerships, the pension and health care shortfall widens early on, as the initial investment in new construction expands to meet demand, then begins to close after funds are needed only to maintain existing projects. A big difference, however, is that without private partners, public resources are diverted from other productivity-enhancing projects (such as investment in schools, R&D, or health care systems) to meet the infrastructure target. It's a decision that

could cost the region nearly a trillion-dollar cumulative reduction in GDP relative to the original Toward Integration scenario.

While the policy-making process will forever be influenced by business and political cycles (and perhaps rightfully so), the most successful public expenditure strategies will be the ones where policies achieve a balance between short-term agility and long-term insights. By thinking about policies and uncertainties across all time horizons in terms of long-range tradeoffs, planners and policy-makers can gain a unique perspective—one that can shed light on hidden obstacles and opportunities.

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Scenario Vignette: Climate Change



In 2030, the average global temperature is now 1.3°C warmer than the preindustrial average, a discouraging marker about our rapidly changing Earth.⁸⁰ During the 2010s and 2020s, global heat records were set with depressing regularity. With only a few exceptions, each new year brought with it a new global temperature record.

As in every other region, Latin America and the Caribbean have felt the impact of these changing conditions. In some places, it is clear that climate change is to blame for effects on the ground. During the 2020s, the melting of tropical glaciers in the Peruvian and Bolivian Andes, ongoing since the 1970s, accelerated to the point where most glaciers below 5,000 meters (16,404 feet) elevation disappeared entirely, reducing, and in some places, even eliminating a critical source of water for downstream users (particularly in summer months).⁸¹

In other places, climate change certainly appears to be responsible for nature's increasingly erratic behavior. Atlantic hurricanes have increased in both frequency and intensity. In 2026, Hurricane Paulette, the most powerful

Atlantic hurricane ever recorded, devastated the Dominican Republic, Haiti, and Cuba, before striking the southern United States.⁸² In a worrisome trend, Mesoamerican countries saw more frequent Pacific Ocean storms. Some of these also struck with unusual ferocity, similar to 2015's Hurricane Patricia, the strongest tropical storm ever recorded at that time. Although people overstate the scientific evidence linking each one of these individual disasters to a changing climate, it has become very hard to deny that climate change is the cause.

Climate change is affecting the region in other ways, too, through more frequent and severe coral bleaching in the Caribbean's warmer waters, lengthier droughts in places as diverse as north-central Mexico, coastal Brazil, and southern Chile, and intense rainfall followed by severe flooding. Unfortunately, coral bleaching is now common across the Caribbean. What had been decadal events are now biannual or even annual events. A number of reefs are now dead, especially in the southern Caribbean, where the water has warmed the fastest.

Most glaciers in the Peruvian and Bolivian Andes below 5,000 meters (16,404ft) in elevation have disappeared entirely in 2030



Increased temperatures and changing rainfall patterns are also shifting the incidence and pattern of diseases. Malaria has become more common as temperatures have increased, meaning mosquitos now survive at higher altitudes. The genetic engineering of mosquitos, which once promised to eradicate all mosquito species, has proven only partially effective. Cholera warnings occur more frequently as seawater temperatures have risen.⁸³ Worst of all are the effects of hotter air temperatures in the region's cities, which make heat waves more frequent and increase asthma, heatstroke, and heart attacks.⁸⁴

Nor are such disease shifts limited to human beings. Crops and domesticated animals (livestock, etc.) also have suffered from climate-driven changes. Coffee rust, which in 2016 was already harming Central American coffee production, has proven even harder to fight. Although scientists know more about the disease now, and have developed tools to attack it, the fact is that higher temperatures and more variable precipitation have made it a lot more difficult to confine the spread of this disease, which is now everywhere throughout the region.⁸⁵

A changing climate has not been all bad. Increasing world population and levels of wealth, plus squeezed agricultural production in other regions, has resulted in skyrocketing global demand for food. Blessed with about a quarter of the world's arable land and nearly a third of its fresh water, the region has become a breadbasket.⁸⁶ Upward pressure on food prices has attracted increased investment in agriculture all over the region. Better seed varieties, improved on- and off-farm infrastructure (transportation, irrigation, storage, etc.), the expansion of smart agricultural systems (use of big data, for instance), and a variety of intelligent policies have increased yields, at least for some crops and in some key places. Unlike sub-Saharan Africa and much of Asia, much of the resulting food bounty can be exported to other parts of the world without harming local people. That is because population growth in Latin America and the Caribbean has been almost nonexistent.⁸⁷

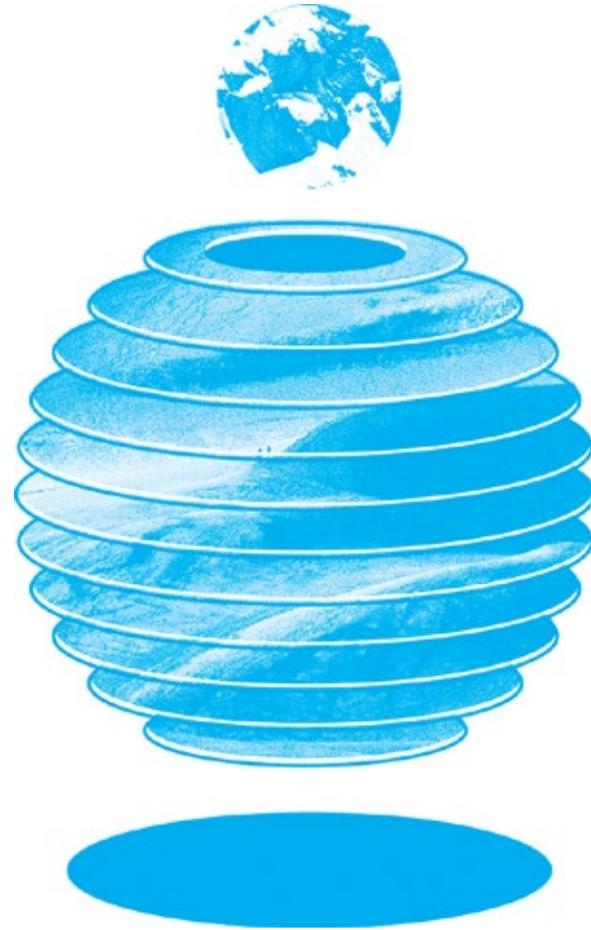
Fortunately, a few of the largest and most productive agricultural regions have had increased rainfall. Brazil's immense Cerrado has been spared drought, although

Blessed with about a quarter of the world's arable land and nearly a third of its fresh water, Latin America has become a breadbasket

there are exceptions in its north, which has become both drier and hotter. Most of the vast Río de la Plata Basin, shared by Argentina, Paraguay, Uruguay, and Brazil, is wetter rather than drier. Agriculture in these areas has become extremely productive. Farms are now incredibly efficient, with new technologies to maximize limited water resources, and many of the largest are more productive than any found in the US Midwest. In aggregate, the wetter parts of Latin America have benefited from global conditions, and the region has become the world's chief oilseed exporter, surpassing the United States. But again there is a big caveat, because everyone knows that this happy situation will last only as long as the rains hold in the most fertile parts of the region, and drought does not get worse elsewhere.

Indeed, some parts of the region have not been so lucky. A few food-producing areas—for example, the Bajío region in north-central Mexico—have been suffering sustained drought. These areas have benefited from

During the 2010s and 2020s, global heat records were set with depressing regularity



increased investment, innovative policies, and better technology. New drought- and heat-resistant seeds for several crop types, such as wheat and corn, have helped immensely. As water for agriculture is being stressed to the breaking point in these places, a few governments have undertaken painful water-sector reforms. The hardest to undertake were reductions in water subsidies and a rise in water prices for big users. Although governments paid a heavy political cost, the reality is that these price rises, combined with increased investment in agricultural infrastructure (irrigation systems primarily), have had some beneficial effects. Water has been conserved through increased irrigation efficiencies, crop switching, and a few other improvements.⁸⁸

Together, all these things have helped ward off the worst effects of drought. But the big problem is that in places like the Bajío region, both higher temperatures and less water have occurred at the same time and for

longer periods. Although agriculture remains viable in drought-stricken areas, yields there have not improved, and in some cases they have actually dropped. That frightens everyone. The implication is that food production may not always increase.

Rising global food demand is having an impact on the region's vast forests. The international climate negotiations, which have made real progress over the past fifteen years (since COP-21 in Paris, back in 2015), have emphasized conservation of the world's remaining forests, because forests are carbon sinks. Although bilateral and multilateral forest conservation funding has been rising, and a robust private conservation financing system is now fully in place, the amount of capital flowing into forest conservation has not been enough to offset market pressure to turn forests into farms and ranches.

But this battle is not over. Governments across the region have embraced pro-conservation policies, and local communities recognize the importance of their intact forests for social, environmental, and economic benefits. Some good news is that the Amazon and Central American rain forests have been resilient in the face of increasing heat, showing few signs of dieback. Yet, here too, everyone is worried, as scientists now are convinced that dieback will begin at some point beyond the feared 2°C threshold.⁸⁹

After the Conference of Parties (COP)–21, Latin American and Caribbean countries continued to champion the fight against climate change within the UN system. At COP–29 (in Seoul in 2023) most joined China, the European Union, and the United States to finally sign a legally binding agreement to make substantial cuts to global carbon emissions. This transition within the UN framework resulted from decades of work by NGOs and scientists, plus rising popular sentiment around the world that the planet needs greater protection. But evolving economics played a major role too. By the early 2020s, most leaders realized that shifting to a low-carbon economy was in their country’s economic interests, as the booming green tech marketplace showed. Everyone, it seemed, now knew that they were in a race to gain global market share in green industries.

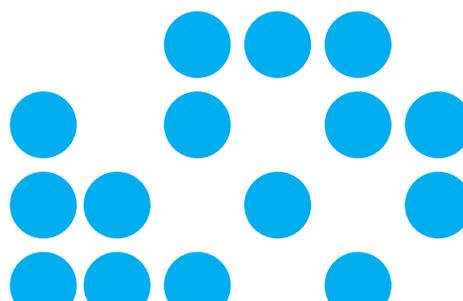
Latin American and Caribbean countries had little to gain and much to lose from maintaining the status quo. Land use (deforestation and agriculture, primarily), not energy, continued to be the main source of the region’s carbon emissions, so moving to a low-carbon energy model involved less pain and quite a few benefits compared with other regions.⁹⁰ Blessed with abundant sunshine, countries took advantage of plummeting solar and wind energy costs—as did many other countries—and rapidly improving “smart” technologies to swiftly scale up renewable energy production and integrate solar and wind power into electricity grids.

This energy transition did not mean that the region shifted to a zero-carbon model. The shale gas revolution that upended global energy markets earlier in the century has continued to have an outsized impact all over the world, including within Latin America. In 2030, more of the re-

gion’s nonrenewable energy production is generated by gas than by renewables (although oil still slightly outperforms both, albeit with a rapidly declining share). While the contributions of gas and renewables are both rising, growth in renewables has been rising even faster than gas. It is now expected that renewables will contribute about the same amount of energy as gas in 2040, and by then both will well outstrip oil. As is often the case with energy, however, technology remains a wildcard, especially with renewable energy and storage systems. Both have been advancing so rapidly that these trend lines could easily shift even more to favor renewables.

The region’s climate story is also very much about cities. The green city has become synonymous with the creative, inventive, livable, and prosperous city. Following precedents that had been set decades earlier in places like Curitiba and Bogota, some cities have embraced low-carbon solutions to their challenges, in areas as diverse as public transportation, building codes, green infrastructure, and other innovations almost too numerous to count. Collectively, these innovations improved residents’ health and quality of life while reducing their carbon footprints.

A few cities, such as Montevideo, Medellin, and Quito, have become international leaders in the shift to low-carbon transportation and housing options. For the region’s megacities, however, this shift has been only partial, as the cost of switching to greener alternatives has been challenging. City leaders have the means and the information to import best practices from anywhere in the world, and citizens often demand those practices. But costs to implement the biggest solutions at scale remain a real hurdle. There is still a long way to go to solve the climate problem, but at least the tools exist to attack the challenge. The question is whether those tools can be put to use in the swiftest and most effective manner possible.





Guest Writer

Juan Pablo Bonilla

Cities and Climate:

How will cities confront climate change in Latin America and the Caribbean?

Cities will be frontline responders to climate change and the environmental trends outlined in this groundbreaking report. Cities occupy just 3 percent of the planet's land, but account for up to 80 percent of energy consumption and 75 percent of carbon emissions.

As the most urbanized region on Earth, Latin America and the Caribbean, with nearly 80 percent of its population living in cities, has little choice but to prioritize sustainable urban growth. The urgency to find urban climate solutions will only increase.

The United Nations recognizes this in Sustainable Development Goal 11, which underscores the need to “make cities and human settlements inclusive, safe, resilient, and sustainable.” It encourages cities in the region to take concrete actions to tackle rising sea levels, water stress, and extreme weather events. Cities have critical mandates over zoning, utilities, public transportation, and energy, and will play pivotal roles in promoting clean water and sanitation (Goal 6), clean energy (Goal 7), and taking action on climate change (Goal 13).

Latin American cities have enormous potential to help reduce global greenhouse gas emissions. By implementing the right policies, they could reduce 2.5 kilotons of CO₂ emissions by 2030—the equivalent of taking more than 500 million cars

off the road. But adaptation measures will require paradigm shifts to align urban planning with climate considerations.

From mega metropolises to midsize cities, action should be encouraged across four areas.

- Sustainable city plans. City officials have conducted futures and foresight analyses for decades through strategic city and metropolitan plans. Increasingly, these are being used to guide cities to become more dense, walkable, energy-efficient, and resilient. As the Fifth Intergovernmental Panel on Climate Change report (2014) stresses, effective mitigation strategies will require mutually reinforcing policies, including transit-oriented development, mixed-use zoning, and integrated urban development programs that unify city agency interventions to help create density and prevent urban sprawl. Especially important are programs to reduce the vulnerability of coastal cities, given the rise in sea levels and the fact that more than 35 million people in the region live in low-elevation coastal zones.
- Greening buildings, infrastructure, and streets. Municipal governments can increase energy efficiency by approving tougher requirements in building codes and using green procurement that prioritizes LED streetlights, waste-to-energy programs, and greener vehicles. Cities will also need to respond to increasing heat shocks and health risks. Expanding the built-up area of cities has created urban heat islands—the result of limited canopy and the excessive use of asphalt, which absorbs 95 percent of sunlight. Sustainable land use, expanding green areas (including green roofs), ecological corridors, and “cool pavements” have emerged as tools to both decrease temperatures and control runoff. They illustrate the importance of win-win strategies that create co-benefits while pursuing mitigation and adaptation measures.



- Nature-based solutions. Leveraging nature-based solutions through ecosystem adaptation will enable cities to use biodiversity to help adapt to the adverse effects of climate change. This will be especially important during droughts, such as the one São Paulo experienced in 2015. To avoid water shortages, cities will need to respond to the implications of changes such as the Andean glacial melt, pollution, and salinization of overexploited watersheds. Actions might include protecting green areas, using mangroves for flood retention, balancing water infiltration, and replenishing watersheds.
- Citizen involvement. Local governments will need new mechanisms of collaboration with civil society –key stakeholders in helping guarantee sustainability beyond political cycles. Recent activities, such as participatory budgeting and urban planning, illustrate the centrality of citizen input to achieve successful outcomes and to mainstream sustainability. Additional initiatives, such as monitoring through partnerships with different groups—citizens, academia, and the private sector—demonstrate the powerful impact of data collection to inform environmental policy.

Cities will play an important role in climate change solutions, but their policies should not be viewed in a vacuum. Climate change knows no borders. Municipal leadership must be complemented by inter-city collaboration, metropolitan green governance, and local-national environmental coordination.

Juan Pablo Bonilla is the Manager of the Climate Change and Sustainable Development Sector.



Chapter 03

An Ideal World in 2030

An Ideal World in 2030



Arriving at the best possible regional scenario in 2030 means making the right set of policy choices years in advance. The decisions necessary to do so should not be put off out of concern for short-term political convenience. A change in mindset is needed. Government officials who are wired to think in terms of political cycles should look a generation ahead. Doing so might prove beneficial over the short run as well—and not just for politicians. Business leaders, who typically look at annual profits and losses, will benefit from treating foresight as a robust part of corporate strategy. Civil society, meanwhile, bears the responsibility of helping ensure that the challenges—and opportunities—that lie around the corner are front-and-center in the public mindset.

Is it possible to arrive at an ideal future in 2030? The scenarios laid out in this report show that inertia will not bring us to the preferred outcomes. Instead, policy-makers must consciously put into action a carefully thought out plan that maximizes short- and long-term opportunities and minimizes risks.

We should be under no illusions about this task. Each action will have direct and indirect implications across sectors. For example, as shown in the *Toward Integration* scenario (see [p. 87](#)), investing 5 percent of GDP in infrastructure may seem like a win-win move, and the scenario shows the real benefits that will accrue to societies that do so. But this investment strategy also means less funds will be available for other areas, such as education, health care, and the environment.

There is only a small chance that any of the scenarios laid out in this report will happen exactly as they are described. The trends that are taken into account (and listed in detail in Appendix 1) are unlikely to deviate much from the projections. But the global and regional uncertainties that will play out over the next nearly fifteen years make it impossible to draw a straight line into the future. In Latin America and the Caribbean, actions can be taken to steer the regional uncertainties to the best possible outcome, but little can be done to affect the larger global uncertainties. And in an increasingly connected world, developments across the globe will play a growing role in shaping the future of our region. Still, policy-makers can steer toward a trajectory that will prepare the region to best weather an uncertain global environment, while at the same time maximizing the opportunities the world will provide.

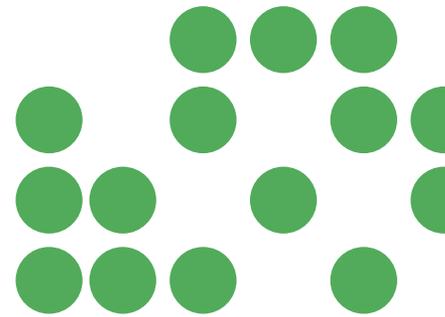
Regional leaders should look to five critical themes to shape the region toward the best outcomes in 2030.

- **Strive for resilience.** Shocks are inevitable within the region and from around the globe. It is impossible to predict what they will be, but it is certain that there will be disruption. History provides plenty of evidence. Take the shale gas revolution in the early 2000s and its effect on global and regional energy markets, for example, or the conflict in Syria and its implications for Europe and the rest of the world. Building resilience into institutions, cities, governments, and entire societies increases the odds of swift recovery from unforeseen disturbances. While no single policy builds resilience, a mix of approaches can create it over time. Resilient societies value traits such as prudence, inclusiveness, redundancy, self-reliance, foresight, and sound planning.
- **Build an inclusive society.** The Illicit World Afloat scenario (see [p. 80](#)) describes societies that are rife with marginalization. While this scenario places corruption-related challenges at the center, it also points to how the failure to build economically, politically, and legally inclusive societies is an underlying driver of social decay. Unfortunately, Latin America and the Caribbean is the most unequal region in the world.

A change in political cycles is needed. Officials will have to think in terms of a generation, not a political cycle.

For this to change, leaders will have to devote attention to inclusive solutions. Fortunately, the trend lines are working in this direction. Education is forecast to improve through 2030 (although the region will not close the gap with OECD averages), while informality is also on track to decline. Policy-makers should find ways to bolster these trends so that marginalized communities, for example some youth demographics, become invested in the trajectories and successes of their communities. As Latin America's demographic window closes, it will be increasingly critical to ensure that very few in working-age population are left on the margins of society.

In mindset Government who are wired terms of cycles should generation ahead



- **Create a dynamic, innovative economy.** The region can no longer afford to rest on the laurels of its rich resource endowment. To become a more prosperous, high-income region in 2030, strides must be taken to become more innovative and competitive in knowledge-based industries. This is possible. The commodity boom delayed much-needed reforms, which should be prioritized now. The fourth industrial revolution is upon us. Following the lead of East Asia will help Latin America to become a formidable actor in this new-generation economy.

Higher quality, more accessible education is required to upgrade skills alongside the demands of the new economy. As detailed in the *Toward Integration* scenario (see [p. 87](#)), recognizing technical certificates across borders and greater labor mobility and finan-

cial integration will help societies become more productive. Universities should be viewed as engines of the knowledge economy, and ways must be found to encourage the commercialization of research done within them, along the lines of successful universities in the United States. Cities need to be treated as assets in the global knowledge economy race, with the recognition that vibrant, safe, tolerant, and green cities are the best candidates for innovation hubs.

- **Prioritize green policies.** Climate change is altering the world, and rapidly. Rising sea levels, new weather patterns, and more natural disasters will be impossible to escape, as described in the *Climate Change Scenario Vignette* (see [p. 100](#)). These effects should be expected to accelerate as we move toward 2030. Climate change might have unexpected and even

more worrisome consequences in store for us, as well. This makes it critical to adopt green policies to both slow the effects of climate change and to enable societies to adapt to its consequences. Rising temperatures cannot be escaped. Putting policies in place today that respond to this new reality will enable countries to mitigate some of the greatest repercussions. These policies do not have to drag down or hold back economies. Rather, imaginative approaches to reduce emissions, conserve forests, and shift energy sources can and should have positive social and economic effects, as well as environmental ones.

- **Embrace democratic norms.** There is no guarantee that democracy will continue to deepen. It is inevitable that democratic societies in the region and elsewhere will continue to be tested. As detailed in the Governance on the Rise scenario (see [p. 67](#)), expanding democratic norms is a critical driver of improving government effectiveness and the popular legitimacy of elected government. (The others include the roles to be played by the region's middle classes and the effects of technology on governance.) For the region to be best prepared to navigate the uncertainties that lie ahead, strong democracies and the institutions that underpin them will be essential. History has shown that strong democratic systems are best capable of translating peoples' wishes for themselves and their societies into practice.

The year 2030 is fast approaching. At a time of much uncertainty, foresight analyses such as this report are critical for policy-makers to begin to imagine how the future may unfold. The next step is taking action to chart the best course forward.

The region
can no longer
afford to
rest on the
laurels of its
rich resource
endowment





Guest Writers

Steve Long

Alicia Bárcena

Manorma Soeknandan

What two things does
LAC need to do
to position it best for 2030?



Investment in Technology is the Secret to Progress By Steve Long

The world is changing and technology is accelerating these changes, challenging, inspiring, and transforming our society. The speed at which this occurs and the expectations for access to information are growing every day.

Latin America is no exception. To place ourselves at the vanguard and to change projections for the next fifteen years, we must increase our investment in new technologies and facilitate access to information and participation in the digital economy.

Opportunities are becoming more democratized, and we can expect a more collaborative future. Everything will become more digitized and connected to the cloud and to the analysis of data. Going digital will not only foster the exchange of

information between multiple real-time connected devices, it will enhance our ability to analyze critical data and to solve problems, while transforming our experiences with machines and the rest of the world.

In Latin America, we began with a good foundation. Users are highly interconnected. Brazil and Mexico are the most active in social networks due to smartphone use, which has seen a 500 percent increase in the past five years. The influences on society resulting from advances in technology are so great that, according to the Inter-American Development Bank, a 10 percent increase in bandwidth coverage corresponds to a 3.19 percent increase in a country's GDP.

By definition, with every new invention or product that reaches the marketplace, lives are changed. As leaders, we must help increase the adoption of this kind of life-changing technology. Innovation and the ability to take technological risks are critical to accomplishing this. To find efficient solutions to accelerate our competitiveness in the global market, Latin America must be an early adopter of creative solutions.

Latin American governments must also make investment in digital infrastructure a priority. Accessibility, cost, ease of use, and reliability are fundamental underpinnings. 5G is expected to be substantially different from today's mobile networks, marking the beginning of an array of new applications. Access to a variety of spectrum bands will be crucial for facilitating these outcomes.

Finally, public and private entities need to agree on and implement an integrated, pragmatic digital agenda. This requires focus, with ministries dedicated, incentivized, and empowered to execute a cross-sectorial agenda. Virtual security in the new data-driven economy is imperative, so we can agree on standards for how we are going to operate in this digital world. Several countries

have attempted to develop legal frameworks to establish minimum standards for data definition and protection. More must be done.

Latin America has a real chance at significant progress—to take a leap forward over the next decade. This will happen only if we incentivize wider adoption of a more focused digital agenda. The positive impact of information and communications technology on countries that have already made these investments is undeniable. As a region, we must participate. It is important to adopt a proactive attitude, so that together we define the future—one built on a technological base that looks toward where we want to go and not back from where we came.

Steve Long is Vice President of Sales and Marketing and Latin America General Manager at Intel Corporation.



**The Future of Latin America
and the Caribbean in 2030
By Alicia Bárcena**

The 2030 Agenda for Sustainable Development, adopted by the 193 countries of the UN General Assembly in September 2015, outlines the future we want for our planet and our region. The 2030 Agenda converges with the efforts of the Economic Commission for Latin America and the Caribbean (ECLAC) to support the analysis and design of policies promoting equality and structural change in Latin America and the Caribbean.

ECLAC proposes progressive structural change, defined as the transformation of activities and production processes, based on three characteristics.

1. Intensive learning and innovation (Schumpeterian efficiency)
2. An active fiscal policy that promotes increases in productivity and employment (Keynesian efficiency)
3. Environmental protection and economic growth linked to decreasing generation of carbon emissions (environmental efficiency)

The overall goal here is to take advantage of the alignment of two powerful processes: the technological revolution and the urgency of climate change.

The current technological revolution, together with public policies, can create the necessary conditions for decoupling growth and employment from carbon emissions. A coordinated expansion of economies, with a focus on investment that encourages growth on the path of low-carbon emissions, would be a form of global environmental Keynesianism that would break with the recessionary bias that characterizes the dominant style of development. The logical counterpart of this expansion, nationally, would be a big environmental push. Such a push would mean encouraging policies that complement different types of investment, including education and technological capabilities; expanding markets for less carbon- and natural-resource-intensive goods; and sustaining public investment during the period of progressive structural change, until private investment can sustain the expansion.

Globally, this task involves creating new governance mechanisms in at least four areas.

1. International coordination to support aggregate demand.
2. A new financial architecture to reduce uncertainty and fluctuations generated by international capital flows.
3. Mechanisms that reward environmental regulatory efforts to reduce production

and emissions of pollutants and curb the exploitation of resources.

4. A robust global tax system to reduce inequality among countries, thus closing gaps that hinder cooperation and compromise countries' ability to contribute to the production of global public goods.

Achieving the shift toward these mechanisms of governance requires global and national coordination among all development actors—political, business, labor, and social—and forming long-term alliances and coalitions. Incorporating environmental issues into economic and social development and reducing capacity gaps could lead to the new internal and external alliances that are necessary for sustainable development.

Undoubtedly, progressive structural change is a political task, and it will depend on each society's choice between two paths: maintain the trajectory of the past, which is unsustainable and is associated with an increasingly fierce conflict over distribution and social, institutional, and political fragmentation; or transition to a new development pattern in which collective action and long-term pacts within and among democratic societies promote equality, transparency, and participation. The choice is ours.

Alicia Bárcena is Executive Secretary of the Economic Commission for Latin America and the Caribbean.



**Voice from the Caribbean:
Youth and Education
By Manorma Soeknandan**

Youth and education are the linchpins that will determine how successful we are in the future.

Watching our athletes compete in the Rio de Janeiro Olympics, I couldn't help thinking that these young Caribbean citizens proved that commitment, dedication, and sacrifices lead to victories and success for their communities. Our boys and girls choose their heroes from their own region; for them, the success of those athletes shows we must place more value on the aspects of life that are not part of official curricula. Those intangible resources—responsibility, dedication, accountability, commitment, and transparency (REDACT)—are crucial for the success of any society, country, or strategy.

These are the ingredients that provide a solid base for development, regardless of which strategy is adopted. No brilliant development or strategic plan will succeed or generate benefits without REDACT at the core. Here we are reminded of the definition of "The Ideal Caribbean Person" a visionary creation of the Caribbean Community (CARICOM) leaders in 1997.

How do we include those REDACT elements in our curricula and how do we make them visible in our daily lives? The answer demands a holistic approach, starting within the family structure and going right up to the highest political level.

REDACT should become a mantra for every citizen at all levels in our community. The education system should be the means through which

REDACT ideals can reach young men and women who so desperately need the skills to implement strategies and development plans for the benefit of their countries and the region.

Against that background, policies must also be put in place to deal with youth at risk. Qualified teachers and other educators should be equipped with skills and an open and positive mindset to stimulate students to advance in life. Knowledge is not enough; teachers must have social and communication skills to touch the lives of youth in positive ways. This is the legacy they will leave to further our society.

Our youth should regard all professions and skills as valuable and respectable. For a society to prosper, it cannot prioritize only scientists, doctors, lawyers, or professors. It must also invest in technical education. Communities grow with the contributions of masons, interior decorators, clothing designers, tailors, farmers, and a host of other skilled personnel. We need athletes like Usain Bolt and artists like Rihanna.

This begs for widening educational curricula and broadening our value system to give prominence to careers in art, health services, traditional medicine, hospitality, and clothing and jewelry design. Aligning the REDACT principles with this reinvigorated curricula and values, our region could perform like Usain Bolt in any field.

Manorma Soeknandan is Deputy Secretary General of CARICOM. The views expressed here are her own.

About the Authors





Jason Marczak is director of the Latin America Economic Growth Initiative at the Atlantic Council's Adrienne Arsht Latin America Center. He is at the forefront of its forward-looking work on the region's strategic role in the global community, focusing on issues such as trade and commerce, future regional trends, China–Latin America, energy, and countries ranging from Mexico to Brazil. Among other issues, he leads the new Northern Triangle Security and Economic Opportunity Task Force.

Marczak is also currently a lecturer in International Affairs at The George Washington University's Elliott School of International Affairs. He previously served as director of policy at Americas Society/Council of the Americas in New York City, where he was a cofounder of *Americas Quarterly* magazine. Marczak has also served in positions at the US House of Representatives, the National Endowment for Democracy, and the Andean Community General Secretariat, and was a founding member of Partners of the Americas' Center for Civil Society.

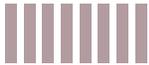
He received a bachelor's degree from Tufts University and a master's degree in international affairs and economics from the Johns Hopkins University Paul Nitze School of Advanced International Studies. Marczak frequently publishes in major media outlets and provides

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Prior to the Atlantic Council, Dr. Engelke was a visiting fellow at the Stimson Center's Environmental Security program. Formerly, he was on the research faculty at the Georgia Tech Research Institute, where he co-authored his first book, *Health and Community Design*. His second book (*The Great Acceleration*), published in 2016, is a history of global environmental change since 1945. Dr. Engelke is a former Bosch Fellow with the Robert Bosch Foundation in Stuttgart, Germany. He holds a PhD in History from Georgetown University and is on the adjunct faculty at Georgetown's School of Continuing Studies.

Contributors





David Bohl is a research associate at the Frederick S. Pardee Center. His research interests are in using, developing, and promoting quantitative methods to model issues impacting long-term human development.

David's other focuses include trends analysis and scenario development for national government and non-governmental partners, the development of a crowd-sourced data analytics platform, and extending the modeling capabilities of the International Futures integrated forecasting platform to better understand and forecast changing patterns of global trade.

David received a bachelor's degree in physics from Bates College and a master's degree in global finance, trade, and economic integration from the University of Denver's Korbel School of International studies.

Andrea Saldarriaga Jiménez is a program assistant at the Atlantic Council's Adrienne Arsht Latin America Center. Before coming to the Council, she was a research assistant at the Center for Latin American Studies within the Edmund A. Walsh School of Foreign Service at Georgetown University, where she worked on a project to support the Peace Process in Colombia.

She has previously worked at the Permanent Mission of Colombia to the OAS, Airbus SAS, Universidad de los Andes and Fundación Nueva Vida para Todos, a nonprofit organization aimed at eradicating child illiteracy in Bogotá. Andrea holds a master's degree in Latin American Studies from Georgetown University's Edmund A. Walsh School of Foreign Service.

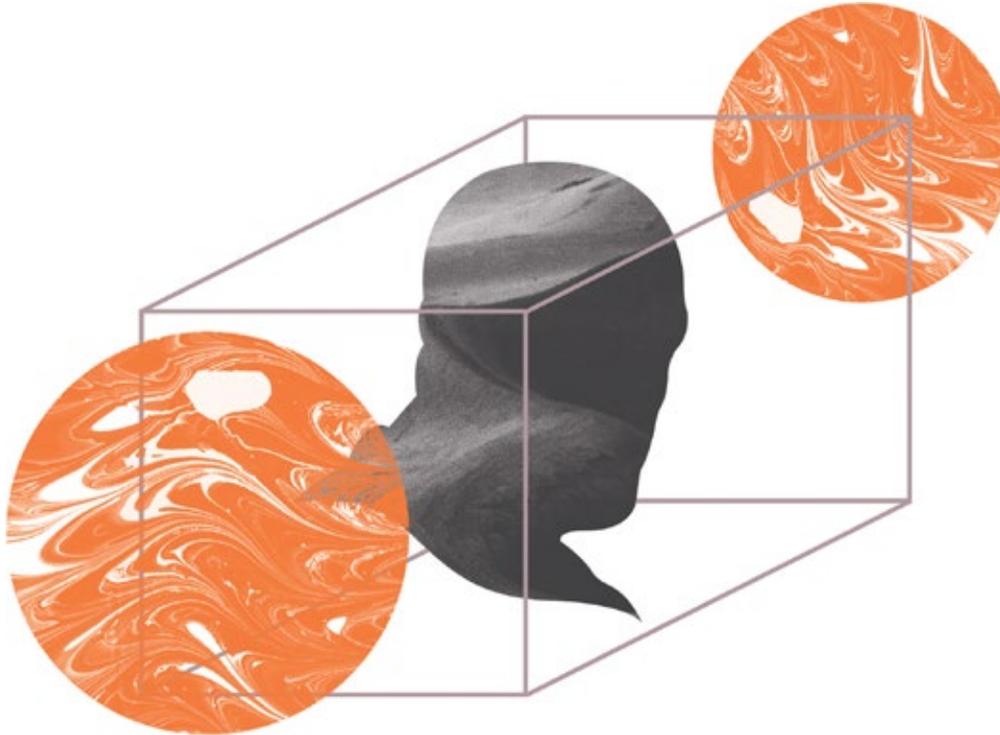
Originally from Bogotá, Colombia, she graduated from Universidad de los Andes with a degree in Economics and a degree in Business.



Appendix 1

Critical Trends

Critical Trends



A trend is a phenomenon that has been increasing or decreasing over time and can reasonably be expected to continue into the future. While there are many trends, some are more critical drivers of future events than others. For example, demographic phenomena such as fertility rates are almost always included in futures analyses as critical trends. This is because demographic phenomena are both difficult to alter in the short run (making them trends), and they affect areas ranging from economic growth to public health to public finances and much more (hence they are important).

What are the critical trends that are most likely to shape Latin America's future, looking out to 2030? Using stakeholder outreach as well as input from the IFs model, this section identifies the most important trends that will shape the region out to 2030 (see [Figure 8](#)).

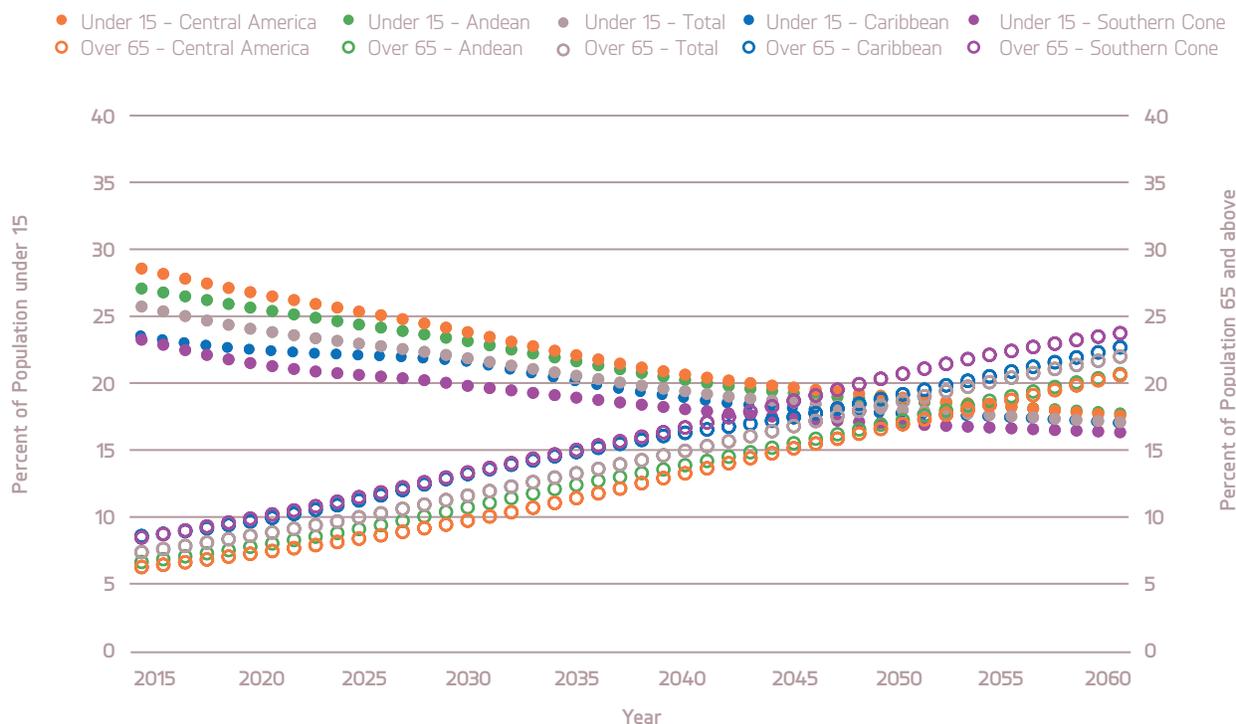
Latin America's Critical Trends Figure 8



Figure 9. Latin America's Demographic Window

Demographic Window

Source: IFS 7.19



Critical Trend 1: Demographic Shifts

By 2030, the region's population is expected to increase from 633 million to 691 million people. While the population growth rate is on the low end for developing countries, it is nevertheless forecast to remain approximately double that of OECD countries.

A rapid decline in fertility rates since the 1960s, paired with longer life expectancy, means Latin America's demography is changing rapidly. While the region remains youthful, by 2030 fewer workers and more elderly people will begin to strain productivity and social welfare systems. The vast majority of the region's people (nearly 84 percent) will live in cities, which will bring with it great opportunity but also considerable risk. Finally, migration will continue, but the direction of and reasons for migration will evolve.

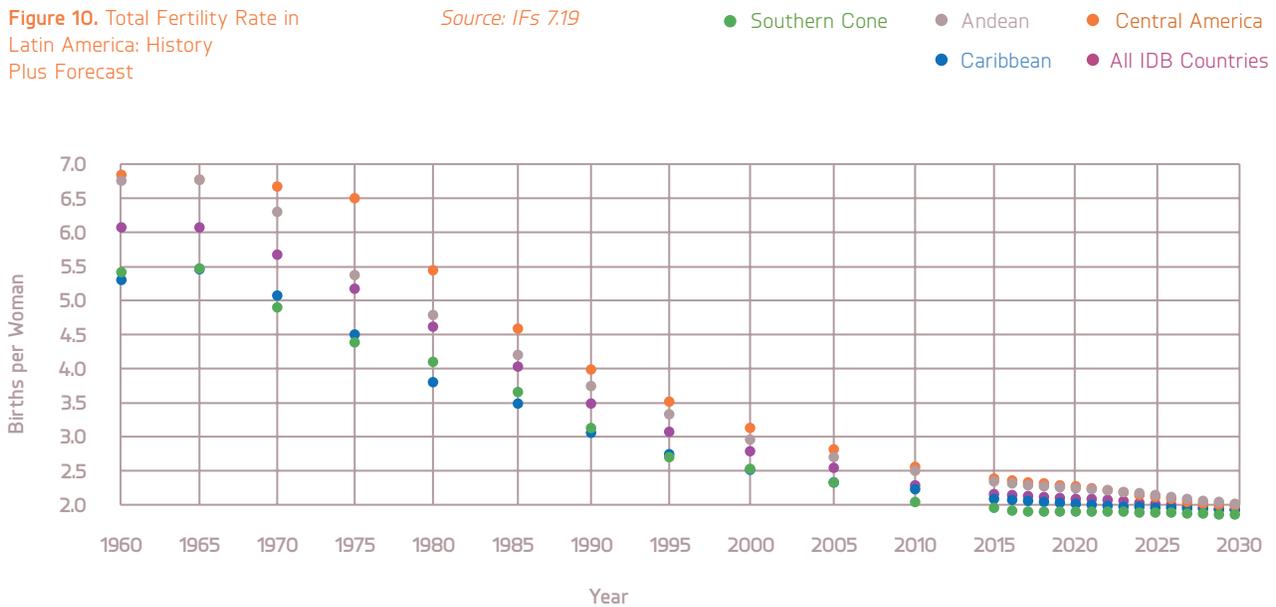
Through the Demographic Window

The region will enjoy the benefits of an open demographic window out to 2030. This window is considered open when a country or region has a low dependency ratio—relatively few dependents and relatively more workers.⁹¹ A low dependency ratio means a society has lots of workers to support its dependents (less than 30 percent of the population is under fifteen years old and less than 15 percent of the population is over sixty-five years old).⁹² The region's window will remain open into the 2030s, with a dependency ratio (those of nonworking age relative to the working age population) of 0.51, but it will shut during the 2040s (see Figure 9).

When the window is open, societies spend less on the young (schooling, primarily) and the old (pensions, health care). As the window closes due to the inexorable demographics

Figure 10. Total Fertility Rate in Latin America: History Plus Forecast

Source: IFs 7.19



at play, governments can expect rising costs of pensions and health care from an increasingly older population, while experiencing lower economic growth from labor, given the declining share of working-age people in the population.

The drivers of the region's demographics are declining fertility and increasing longevity. In 2015, the region's fertility rate was 2.15 children per woman—only slightly above the replacement rate of 2.1 children (see [Figure 10](#)). In 1960, the fertility rate was 6.1, meaning women now have four fewer children, on average, compared with then. This rate is still declining. By 2030, the fertility rate is expected to reach, and perhaps fall below, the replacement rate.

At the same time, life expectancy has risen dramatically over the past half century, largely due to a reduction in the prevalence of communicable diseases. Today, life expectancy averages 73.8 years regionally, with the lowest rates of 73.0 years in the Caribbean. This trend is expected to continue, so that the average Latin American

baby born in 2030 can expect to live beyond the age of seventy-five. As a result of these trends, the region's median age is expected to increase by nearly five years between 2015 and 2030.

An older demographic profile will shift the demand for social services. With an increasing share of retirees, consumption as a percentage of GDP and the demand for government pension transfers will increase. Government pension transfers should increase from 5 percent to nearly 7 percent of GDP by 2030. In the Southern Cone, the problem will be further magnified due to an even older population and larger pension commitments, rising from nearly 6.3 percent now to about 9.4 percent in 2030. However, the number of seniors is expected to surpass the number of children only in the 2040s.

Cities at the Center

Although the region's period of rapid urban growth is over, urbanization will continue through 2030. By then, the urban population will reach 85 percent to 90 percent of the overall population.⁹³ The Southern Cone is the most urbanized subregion (above 84 percent now), and is expected to reach 88 percent urbanization by 2030. The least urbanized subregion (after the Caribbean) is Central America, which will fall just short of 80 percent in 2030.

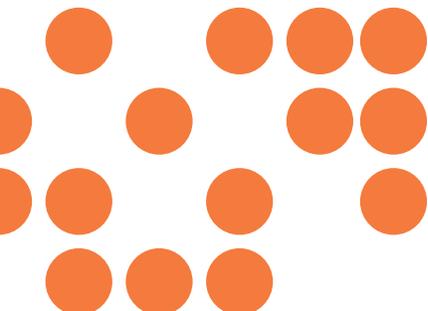
In 2030, one noteworthy trend is the growth of both megacities and smaller cities.⁹⁴ The region has four megacities now (Buenos Aires, Mexico City, Rio de Janeiro, and São Paulo). Bogotá and Lima are likely to join them, with each projected to have more than ten million inhabitants by 2030.⁹⁵ While internal migration likely will drive much of the region's growth, these megacities also could become attractive places for global migrants.

If built and governed well, cities can bring great benefits and opportunities. Cities spur innovation, as people share ideas, open channels for public-private partnerships, and increase economic opportunities in general.⁹⁶ Urbanization can help reduce poverty levels and contribute to the growth of the middle class.⁹⁷ But urbanization also has significant challenges. Some of these have long plagued the region: poor infrastructure, widespread informal settlements, concentrated poverty alongside great wealth, traffic congestion, and criminality. Fortunately, the period of rapid informal settlement growth has ended.

Critical Trend 2: Human Development

Human development is the rudder for navigating the middle-income passage, but achieving more than mediocre advancements will not be easy. The good news for 2030 is the growth in educational attainment levels overall, and especially for the adult population. This is a result of enrollments increasing dramatically in recent decades, which now means that more adults have higher education. Still, the region continues to lag behind in its ability to rise to the level of international test scores.

In health, the largest burden will continue to be from diseases of affluence such as diabetes, cancer, and heart disease. These are partly the result of high levels of obesity. Yet, poverty and inadequate access to clean



water for the poorest residents will continue to be a drag on public health. Securing access to clean water and sanitation for the population still living in inadequate conditions should reduce the number of people affected by chronic malnutrition (nearly 30 million malnourished people are forecasted by 2030, down from nearly 38 million in 2016).

Education: A Mixed Grade

Looking ahead to 2030, the number of people receiving little to no education will decrease substantially, with younger generations having widespread access to primary and secondary education. Gender disparities in education levels should also decrease. However, school completion levels will remain much lower than the OECD average.



With a relatively small percentage of people with an advanced education, economies will have more difficulty competing at the global level in high-value-added sectors.

Net enrollment rates for primary school education will increase.⁹⁹ With the exception of the Caribbean, the region already was close to the OECD average of 97 percent in 2010. By 2030, all but the Caribbean region (which will be at 96.9 percent, partly due to Haiti's low enrollment rates) will likely be close to 100 percent enrollment. Still, Caribbean enrollment will have dramatically increased from just 90.1 percent in 2015. Given increasing enrollment rates, regional primary school completion rates will eventually reach almost 100 percent by 2030.⁹⁹

As with primary school, trends for enrollment in both secondary and tertiary education are positive. The problem lies with their lower levels overall and greater dispersion across the region. For secondary education, enrollment rates are lower and more varied than for primary school. In 2010, the region's rate of nearly 71 percent was significantly below the OECD average of 89 percent. While enrollment rates should increase steadily through 2030, only the Southern Cone will reach the OECD's 2010 average. Central America, the worst-performing subregion, will be at about 87 percent. The region as a whole will see net secondary enrollment rates¹⁰⁰ increase from around 80 percent in 2016 to around 92 percent in 2030.

A more difficult barrier to crack is upper secondary education, the final years of high school. The percent of the adult population with high school diplomas are forecast to increase to around 50 percent for the region (starting at 41 percent in 2015), with Southern Cone countries averaging closer to 52 percent, and Central American countries averaging around 49 percent.

Given the projected underperformance at the high school level, tertiary education (university level) should be expected to suffer as well. Unfortunately, while the region should experience increases in tertiary education enrollment over the next fourteen years, those increases are likely to be minor and from a very low base. On the current path, in 2030, only 12 percent of all people aged

15 years and older will have a university degree. There will be gains in educational attainment for the younger generations. However, these gains are likely to remain behind OECD averages. For those who are of university graduate age, in 2030 the region can expect that 23 percent will have university degrees. That figure compares poorly with the expected OECD rate of 51 percent.

How does this compare more broadly globally? By 2030, 12.1 percent of the adult population in Latin America and the Caribbean will have completed tertiary education, up slightly from 8.4 percent in 2016. This tracks with Asia Pacific, where 11.0 percent will finish this grade level (compared to 6.4 percent in 2016), and a 12.8 percent completion rate in the Middle East (excluding Israel and compared to 9.4 percent in 2016). Eastern Europe will perform much better by 2030, with 27.2 percent completing tertiary education, up from 21.1 percent in 2016.

What does this mean for government spending on education? Since the mid-1990s the region has seen gradual increases in government spending on education as a percentage of GDP. Yet, increased spending is unlikely to continue at the same pace. Through 2030, government spending could decline slightly, as there will be nearly 10 million fewer school-age children (a total of 146 million). An important unknown is changes to the amount of spending per pupil.



Guest Writer

Hector Salazar

Latin America and the Caribbean: How to Stay Healthy While Aging?

The region's health story is a good one. Progress in combating communicable diseases and a two-thirds reduction in child mortality rates over the past quarter century have led to an eight-year increase, to seventy-five years, in life expectancy.

Over the next decade, the region will face the challenge of ensuring that its people live longer and inequities in life expectancy are addressed. Another task will be to help people live free of disease and disabilities for most of their lives. How countries tackle these challenges has implications for the region's future growth, for the long-term sustainability of public health expenditures, and for financial protection from the shock of illness and death.

While injuries and communicable, maternal, neonatal, and nutritional diseases still represent an important share of the region's burden, over the past two decades non-communicable diseases (NCDs) became the leading cause of morbidity and mortality. NCDs are now associated with four out of five deaths. Tobacco use, physical inactivity, unhealthy diets, and the harmful use of alcohol are higher among vulnerable populations, who have much lower access than wealthier individuals to early screening for NCDs. More than a third of NCD deaths are premature, meaning they occur between thirty and seventy years of age. These deaths are a human tragedy, and also represent an enormous productivity loss.

UN Sustainable Development Goal 3 underscores the need to "ensure healthy lives and promote well-being at all ages," encouraging countries to continue reducing maternal, neonatal, and under-five mortality. It also calls for substantially lowering premature mortality from NCDs through prevention, treatment, and promotion of mental health and well-being. The goal sets the basis for managing disease risks through preparedness, early detection, and prompt action. The health, economic, and fiscal costs of inaction are too large to ignore.

Ensuring steady increases in the average years of healthy and productive life is an enormous opportunity, but it will require a more decisive change in policies and actions from the public and private sectors in many areas, including:

- **Health promotion and disease prevention.**

Health authorities are rightly emphasizing these, yet NCDs also require interdisciplinary and inter-sector action. More must be done to increase access to cost-effective preventive care and disease management interventions. In many countries, fewer than 40 percent of adults receive basic preventive screening every year and fewer than 30 percent receive a reminder to do so.

Effective strategies will require strengthening primary healthcare services, promoting funding mechanisms that encourage prevention and early detection, implementing and enforcing legislation and regulations aimed at reducing tobacco use and harmful use of alcohol, and promoting healthy eating habits and physical activity. Technology and communication will be essential to engage individuals in informed decision-making around disease prevention, management, and treatment. Medicine will progressively center on the individual and data will revolutionize how health care is provided. Information from electronic medical records and diagnoses from personal sensors will be

increasingly used to improve preventive and predictive medicine. Entrepreneurs, researchers, and health care providers will have more incentives to break silos and find solutions to close the gaps in access for the most vulnerable populations.

- **Service delivery platforms.** Pressures on health expenditures will continue to rise, driven by population growth, aging, technological innovations, and a greater need for continuity of care. Efforts to reach a balance between accessibility, care quality, and fiscal sustainability will be pursued. The region will see the delivery platforms for health and social care services transformed, to create a mix that best serves the evolving needs for continuous care and acute care, and mitigates the chronic shortfall in human resources.

- **More value for money.** Amid growing concerns about inefficiencies and unsustainable expenditures, a few governments and other players are developing and implementing new purchase and payment strategies. The aims are to improve service access and quality, as well as provider productivity, with the ultimate goal of improving health outcomes. This trend will strengthen over the coming decade.

- **Pandemic prevention, preparedness, and response.** Total investments in this area are still insufficient. The good news is that the frequent episodes over the past few years—and the resulting health and economic consequences—seem to finally be translating into a quest for long-term solutions.

Health authorities alone cannot meet the challenge of furthering healthy aging in Latin America and the Caribbean; it will require a multisector approach that involves the commitment, coordination, and actions of many actors.

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Healthier, But Higher Costs

Latin America and the Caribbean continue to show remarkable health gains. The communicable diseases that plagued many developing countries during much of the previous century are declining in importance. Infant mortality rates, one important indicator of the prevalence of communicable diseases (in particular, water-borne infections), have improved significantly in the past several decades. While infant mortality is still noticeably higher than OECD rates (six deaths per thousand live births in 2010), it should steadily decline through 2030 (from 18.5 per thousand live births in 2015 to 11.8 in 2030).

Looking ahead, health care systems will be burdened more by diseases of affluence, such as diabetes, obesity, heart disease, and cancer. Obesity rates, for example, will rise from 39.2 percent in 2016 to 42.5 percent by 2030. The largest contributors to noncommunicable disease deaths will be cancers and cardiovascular diseases resulting from increasing wealth, longevity, and shifting lifestyle patterns (sedentariness, unhealthy diets). Facing rising health care costs, Latin America will have to look at how to promote healthy living, focusing on interventions such as urban planning that promote exercise and education systems that teach health basics.¹⁰¹

Years of life lost—a measure that estimates the additional years of life a society would have enjoyed without premature death due to disease or injury—shows that the region already suffers more from noncommunicable than communicable diseases (see **Figure 11**). Beginning in 2020, more years of life will be lost due to injury from road accidents and violence (twenty-five million years in 2030) than communicable diseases (seventeen million years in 2030).

Communicable diseases are forecast to contribute progressively less to mortality rates through 2030. The expansion of clean drinking water, sewer systems, and water treatment facilities are perhaps the most important reason behind the decline in communicable diseases. Twenty-five years ago more than one in four people (33 percent) did not have access to improved sanitation in Latin America and the Caribbean, while in 2030, that figure is down to one in eight individuals.¹⁰²

Extending access to clean water and sanitation to the remaining population will be expensive, which means that in 2030 nearly 7 percent of the region’s population will live without improved sanitation. Concerns for water and sanitation through 2030 include financial sustainability and the efficiency and management of water and sanitation utilities. Tariffs are often too low to support long-term maintenance of utilities.¹⁰³

Figure 11.
Years of Life Lost
in LAC by Disease Type

- Communicable
- Noncommunicable
- Injuries

Source: IFs 7.19

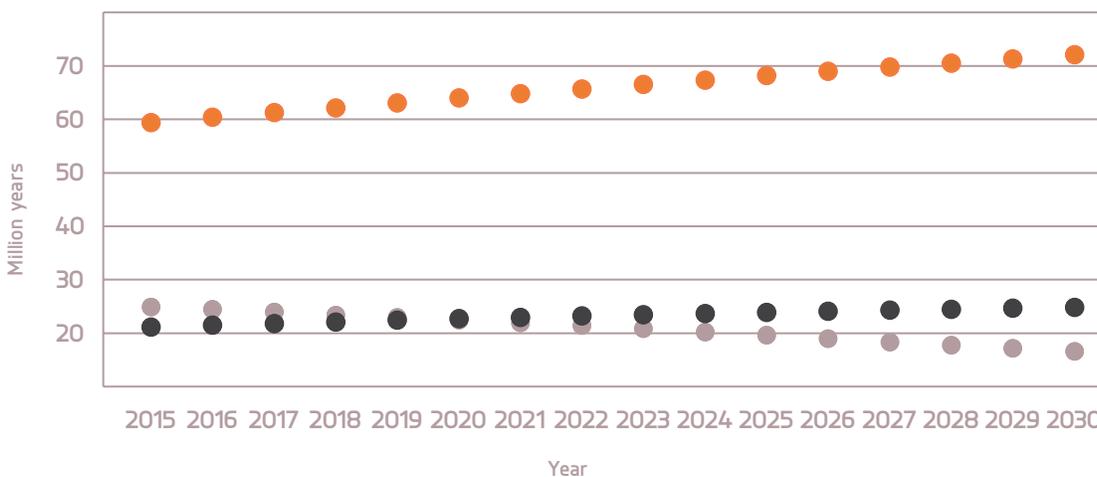
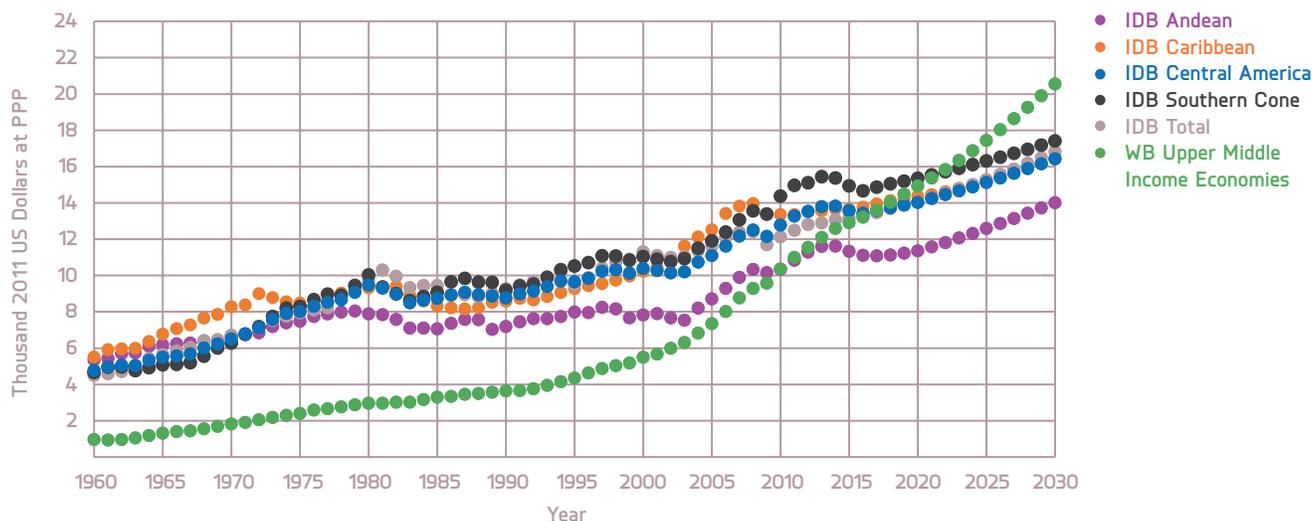


Figure 12.
GDP per Capita (PPP): History
Plus Forecast

Source: IFs 7.19



Looking toward 2030, the chronic disease burden will dominate public health issues. Obesity, often the result of rising wealth and increasing urbanization, provides an example. In 2010, obesity rates in the region were roughly equal to the OECD average of about 33 percent (in contrast, in 2010 the estimates for Asia and the Pacific were just over 13 percent). In 2030, Central America's obesity rate is 46 percent, one of the highest in the world.

As obesity rates are likely to increase going forward, the region can expect a higher incidence of diabetes, which will have a significant cumulative impact on years of life lost by 2030. The obesity rate for the Andean countries in 2030 is forecast to be 43 percent and will cost 1.05 million years of life; it will reach 39 percent in the Caribbean with a cost of 0.13 million years. But the worst effects will be in Central America and the Southern Cone. Rates will hit 37 percent in the Southern Cone, costing 2.50 million years of life, and 50 percent in Central America with 3.24 million years of life lost.

Critical Trend 3: Sticky Economics

Given no major policy interventions or unexpected boosts to the global economy between now and 2030, the region's economies will experience low to moderate growth, volatility of that growth, and chronically high inequality.

This expected expansion, paired with the open demographic window, should provide countries with the momentum to transition out of middle income into high income status. Yet, since the 1960s, Latin American economies have failed to converge with high-income countries. It is unclear if the region will follow a convergence pathway.

Figure 13. Economic Distribution by World Bank Economic Classification: 2015, 2020, and 2030

Source: IFs 7.19

	2015				2020				2030			
	Poor	Vulnerable	Middle	Rich	Poor	Vulnerable	Middle	Rich	Poor	Vulnerable	Middle	Rich
Andean	25.8	49.0	57.9	3.6	27.2	50.0	62.0	5.3	25.8	48.2	73.3	11.1
Caribbean	0.9	2.1	2.9	0.2	1.0	2.0	2.9	0.3	0.8	2.0	3.1	0.4
Central American	33.2	62.1	80.7	5.4	33.5	63.7	88.6	7.3	30.3	63.8	105.9	13.0
Southern Cone	35.1	79.1	141.6	20.6	35.0	80.5	148.4	23.8	31.5	77.4	162.9	34.1
Total	95.0	192.2	283.2	29.7	96.6	196.2	301.9	36.6	88.5	191.3	345.3	58.6

* Million people, using 2011 USD at PPP

Growth and Convergence

The combined GDP of the Andean countries is forecast to increase by 59 percent—almost double over the next fourteen years.¹⁰⁴ During this time, Central America's economies will grow by around 69 percent, and the Caribbean and Southern Cone economies by 35 percent to 37 percent. In 2015, the region's total GDP was roughly the same as Japan, and by 2030 it could reach a level approaching that of the 2014 Chinese economy (\$9.2 trillion).

Despite gains, per capita GDP within the region is being eclipsed by other upper-middle-income countries (see [Figure 12](#)). Relative to US levels, the region's per capita GDP has stagnated. By 2030, per capita GDP is forecast to be about one-third of US levels. China has already begun to pass Latin American countries, and is expected to follow a trend similar to that of South Korea and Japan.

In 2015, all Latin American countries were classified as middle-income (including lower-middle-income) except for Chile, Argentina, and Uruguay, which have reached the status of high-income economies.¹⁰⁵ Of the middle-income countries, only Panama, Peru, and Suriname were converging (defined as a fifteen-year moving average GDP per capita growth rate of 3.5 percent or higher), with all others, including Brazil, classified as stalled.¹⁰⁶ These stalled countries have fallen into the so-called middle income trap, where the economy is unable to transition to high-income status. By 2030, IFs forecast that Argentina, Barbados, Panama, Chile, Uruguay, Bahamas, and Trinidad will reach high-income status.¹⁰⁷ Due to persistent inequality, all countries are likely to include large populations of poor and vulnerable.

Figure 14. Percent of Population Living on Less Than \$4 per Day

Source: IFs 7.19



Expanding Middle Class

The great story of Latin America from the past fifteen years is the continued growth of its middle class. The World Bank classifies poverty as people living on less than \$4 per day, vulnerable populations as those living on \$4 to \$10 a day, middle income as living on \$10 to \$50 per day, and the rich as living on \$50 or more per day. Fifty-seven million entered the middle class between 2016 and 2030, and an additional twenty-eight million are now earning \$50 or more per day in 2030.¹⁰⁸

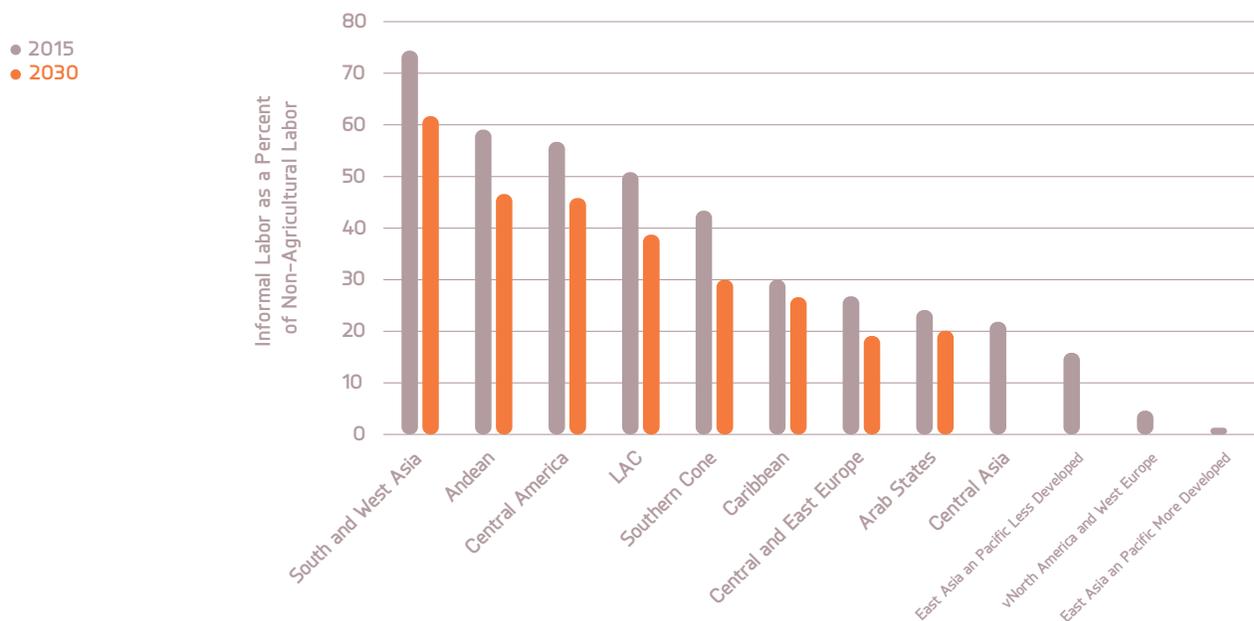
In 2015, the poor and vulnerable were a majority in all subregions except the Caribbean and the Southern Cone. By 2030, though, over half of the region’s population will be middle class (about 345 million people) and the rich will nearly double to 58 million (see [Figure 13, p. 139](#)).

The share of the population living on less than \$4 a day will continue to decline to below 20 percent from almost 26 percent in 2015 (see [Figure 14](#)).

However, in the Caribbean, little change is expected until after 2020, when poverty should begin to decline. For Andean countries, this transition is forecast to occur within the next five years. For some countries, such as Colombia, this transition has already occurred, and for others, such as Venezuela, it is not expected until around 2040. Despite these gains, Latin America will not lose its distinction as the most unequal region in the world.

Figure 15. Informal Labor Share Across the Global Economy, 2015 vs. 2030

Source: IFs 7.19



High Labor Informality

For most of the region, the informal sector is the largest employer, averaging over 50 percent of the nonagricultural workforce. In fact, the region has one of the highest levels of informality in the world. The individual and social costs associated with a large underground economy include low productivity, stagnating human capital, and low tax revenue. The drivers of informal employment include low human capital development (particularly education), high taxation or overly burdensome government regulations for small businesses, and corruption.

While levels of informal employment are expected to drop, the informal sector will still play a large role in most Latin American economies in 2030, averaging about 35 percent of the workforce (see [Figure 15](#)). While informal labor exists in all countries, informality rates in the region are much higher compared with global peers at similar levels of GDP. The Muddling Through scenario addresses some of the options for reducing informality ([p. 53](#)).

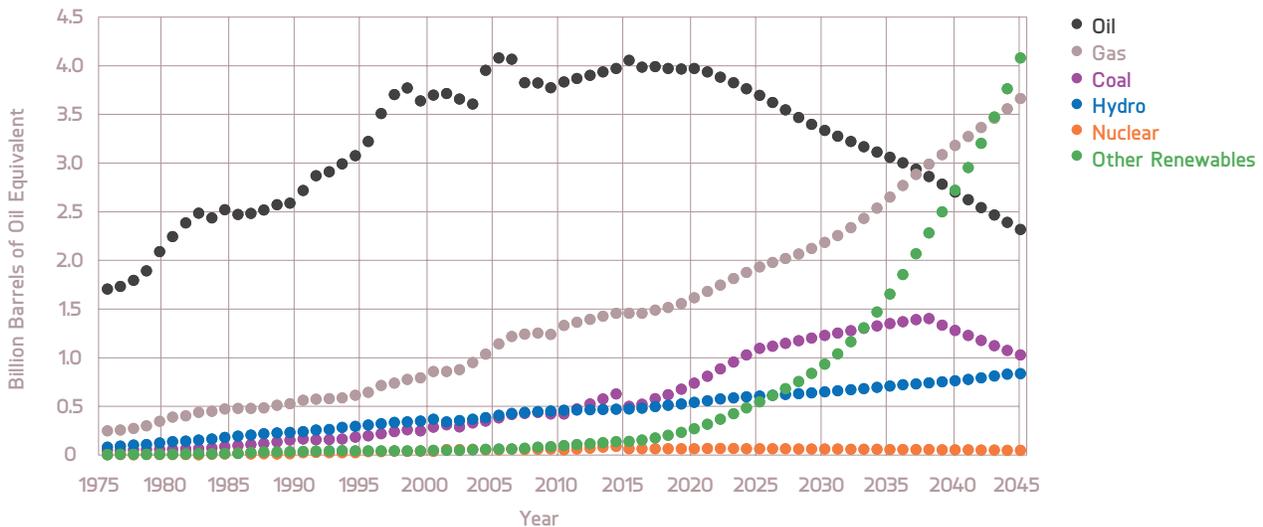
Addicted to Commodities

The commodity boom in the first decade of the 2000s led to unprecedented growth, enabling millions to enter the middle class while cutting poverty in half. This surge was short-lived, however, as Chinese demand fell, which hit particularly hard in South America with somewhat less effect on Central America.¹⁰⁹

The region will continue to have a strong base for commodities production. With nearly a quarter of the world's arable land and a third of the fresh water supply, Latin America has the potential to be one of the largest suppliers of agricultural products. The region contains nearly a quarter of the world's forests, so increasing agricultural production will bring greater deforestation if there is not a dramatic improvement in productivity and increased forest conservation measures.

Figure 16.
Energy Production:
History Plus Forecast

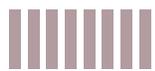
Source: IFS 7.19



Food production within the region will continue to exceed demand because population growth is low. Currently, regional surplus production provides the world with around 16 percent of its imported agricultural goods—a share that should remain constant through 2030. Average crop yields within the region have risen gradually for decades, which suggests gradual improvement over the next fourteen years. An increase in yields could be augmented by a reduction in crop losses (the share of the harvest that is lost to spoilage and waste).

The future looks bright for renewable energy. While new technologies that reduce the cost of extracting natural gas may enable a second wave of energy production, growth in the renewable energy sector, driven primarily by Southern Cone economies, could enable Latin America and the Caribbean to be powered primarily by renewable sources by 2040 (see [Figure 16](#)).

Appendix 2: Countries and Regions in this Report





Andean

Bolivia
Ecuador
Colombia
Peru
Venezuela

Caribbean

Bahamas
Barbados
Guyana
Haiti
Jamaica
Suriname
Trinidad and Tobago

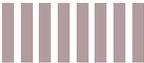
Central America

Belize
Costa Rica
Dominican Republic
El Salvador
Guatemala
Honduras
Mexico
Nicaragua
Panama

Southern Cone

Argentina
Brazil
Chile
Paraguay
Uruguay

Endnotes





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¹⁰⁰ The number of students enrolled in secondary school for a given year represented as a percent of the age-appropriate persons.

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Endnotes for “The Northern Triangle: An investment paradox?” By Gina Montiel

¹ While the standard deviation of GDP growth was 2.41 percent, for the Northern Triangle the figure was 1.67 percent.

² The population living on less than \$3.10 per day fell from 27.4 percent to 25.5 percent, while the Gini coefficient dipped from 0.53 to 0.52.

³ According the 2014 LAPOP victimization survey

⁴ Acevedo (2008) estimates.

⁵ Based on elasticity estimated by the World Bank (2008) for a reduction of 40 percent in homicides rates in five years.

⁶ For Guatemala, the figure is even more telling: Even though it has the lowest murder rate in the Northern Triangle, a reduction would imply a growth in income per capita 75 percent higher than that observed during the 2000–2015 period.

⁷ IDB estimations based on World Bank (2012).

⁸ Rios (2016), and Krkoska and Robeck (2006).

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