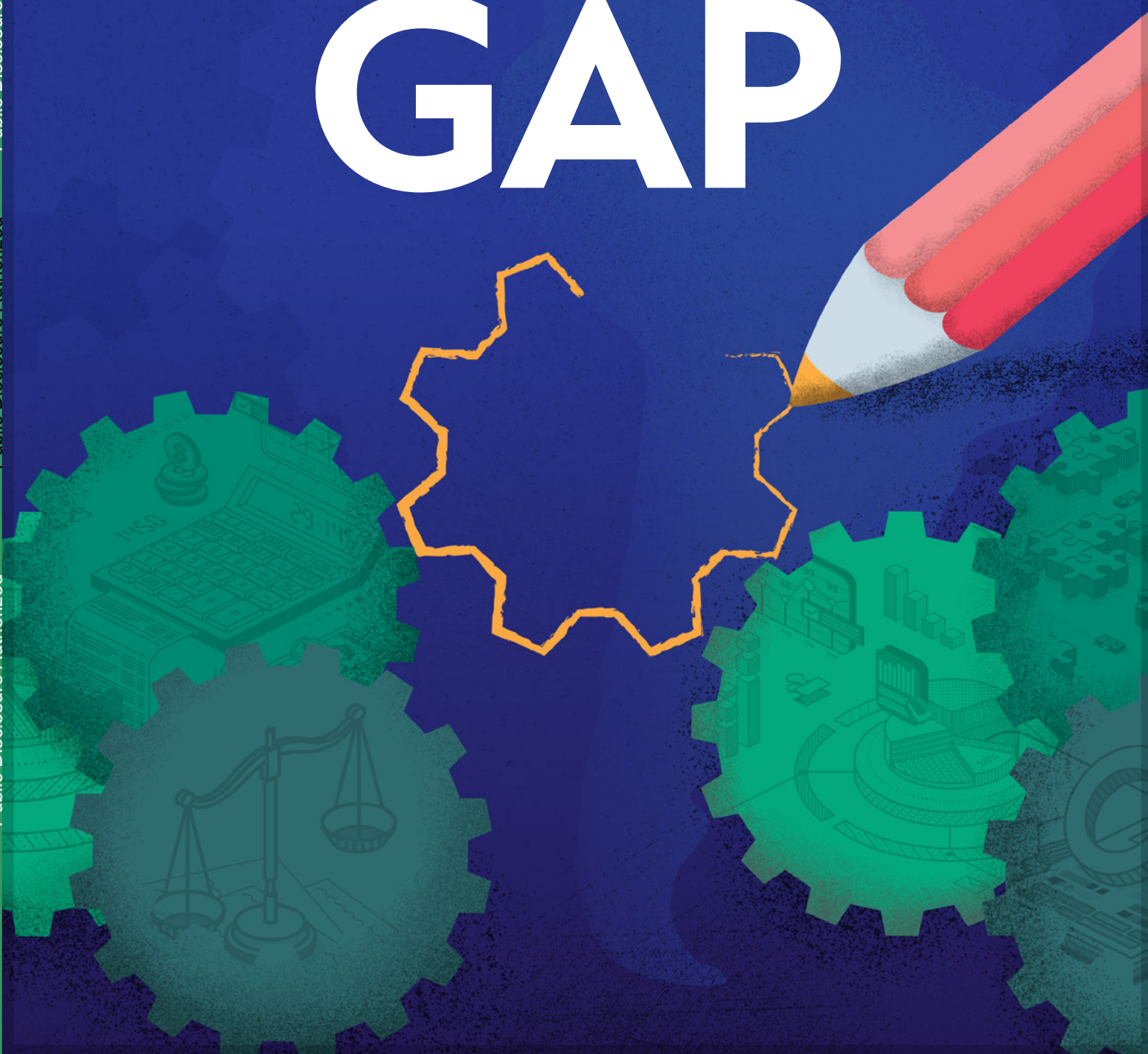


Latin America and the Caribbean  
Economic Review

October 2022



# NEW APPROACHES TO CLOSING THE FISCAL GAP



© 2022 International Bank for Reconstruction and Development / The World Bank

1818 H Street NW, Washington DC 20433

Telephone: 202-473-1000; Internet: [www.worldbank.org](http://www.worldbank.org)

Some rights reserved

1 2 3 4 25 24 23 22

This work is a product of the staff of The World Bank with external contributions. The findings, interpretations, and conclusions expressed in this work do not necessarily reflect the views of The World Bank, its Board of Executive Directors, or the governments they represent. The World Bank does not guarantee the accuracy of the data included in this work. The boundaries, colors, denominations, and other information shown on any map in this work do not imply any judgment on the part of The World Bank concerning the legal status of any territory or the endorsement or acceptance of such boundaries.

Nothing herein shall constitute or be considered to be a limitation upon or waiver of the privileges and immunities of The World Bank, all of which are specifically reserved.

#### Rights and Permissions

This work is available under the Creative Commons Attribution 3.0 IGO license (CC BY 3.0 IGO) <http://creativecommons.org/licenses/by/3.0/igo>. Under the Creative Commons Attribution license, you are free to copy, distribute, transmit, and adapt this work, including for commercial purposes, under the following conditions:

**Attribution**—Please cite the work as follows: World Bank. 2022. “New Approaches to Closing the Fiscal Gap” *Latin America and the Caribbean Economic Review* (October), World Bank, Washington, DC. Doi: 10.1596/ 978-1-4648-1929-2. License: Creative Commons Attribution CC BY 3.0 IGO

**Translations**—If you create a translation of this work, please add the following disclaimer along with the attribution: *This translation was not created by The World Bank and should not be considered an official World Bank translation. The World Bank shall not be liable for any content or error in this translation.*

**Adaptations**—If you create an adaptation of this work, please add the following disclaimer along with the attribution: *This is an adaptation of an original work by The World Bank. Responsibility for the views and opinions expressed in the adaptation rests solely with the author or authors of the adaptation and are not endorsed by The World Bank.*

**Third-party content**—The World Bank does not necessarily own each component of the content contained within the work. The World Bank therefore does not warrant that the use of any third-party-owned individual component or part contained in the work will not infringe on the rights of those third parties. The risk of claims resulting from such infringement rests solely with you. If you wish to re-use a component of the work, it is your responsibility to determine whether permission is needed for that re-use and to obtain permission from the copyright owner. Examples of components can include, but are not limited to, tables, figures, or images.

All queries on rights and licenses should be addressed to the Publishing and Knowledge Division, The World Bank, 1818 H Street NW, Washington, DC 20433, USA; fax: 202-522-2625; e-mail: [pubrights@worldbank.org](mailto:pubrights@worldbank.org).

ISBN (electronic): 978-1-4648-1929-2

DOI: 10.1596/ 978-1-4648-1929-2

Cover design: Alejandro Espinosa/[sonideas.com](http://sonideas.com)

# Acknowledgments

This report is a product of the Chief Economist Office for Latin America and the Caribbean at the World Bank. The preparation of the report was led by William Maloney (Chief Economist), Daniel Riera-Crichton (Senior Economist), and Guillermo Vuletin (Senior Economist) with key contributions from Raul Morales Lema (Research Economist). Invaluable research and editorial assistance were dispensed by Pilar Ruiz Orrico (Consultant), Rucheta Singh (Research Analyst), Jacqueline Larrabure (Program Assistant), José Andrée Camarena Fonseca (Consultant), and Nancy Morrison (editor consultant). Other contributions were provided by Guillermo Beylis (Research Economist), Virgilio Galdo (Research Analyst), Pablo Garriga (Research Economist), Elena Ianchovichina (Deputy Chief Economist), and Luis Diego Rojas Alvarado (Consultant), Ayan Qu (Consultant) in the Chief Economist Office (LCRCE).

Substantive contributions were made from across the regional teams:

Human Development: Luis Benveniste (Regional Director, HLCDR), Emanuela Di Gropello (Practice Manager, HLCED).

Equitable Growth, Finance and Institutions: Robert R. Taliercio (Regional Director, ELCDR), Ximena del Carpio (Practice Manager, ELCPV), Hernan Winkler (Senior Economist, ELCPV), Sergio Olivieri (Senior Economist, ELCPV), Diana Sanchez Castro (Research Analyst, ELCPV), Yira Mascaro (Practice Manager, ELCFN), Faruk Liriano (Financial Sector Analyst, ELCFN), Federico Kalan (Consultant, ELCFN), Oliver Masetti (Financial Sector Specialist, ELCFN), Jose Ernesto Lopez Cordova (Lead Economist, ETIFE), Xavier Cirera (Senior Economist, ETIFE), Santiago Reyes Ortega (Consultant, ETIFE), Franz Ulrich Ruch (Economist, EPGDR).

Country-specific macroeconomic estimates and write-ups were produced by country economists in the Macroeconomics, Trade and Investment Global Practice, under the leadership of Doerte Doemeland (Practice Manager, ELCMU) and coordination of Luigi Butron Calderon (Research Analyst, ELCMU). Contributors included Sonia Araujo, Daniel Barco, Rafael Barroso, Elena Bondarenko, Bledi Celiku, Tamoya Christie, Fabiano Colbano, Barbara Cunha, Anton Dobronogov, Jozef Draaisma, Paolo Dudine, Julian Folgar, Fernando Giuliano, Christian Gonzalez, Marek Hanusch, Santiago Herrera, Fernando Im, Evans Jadotte, Santiago Justel, Woori Lee, Ran Li, Rohan Longmore, David Cal MacWilliam, Rafael Ornelas, Andres Pinchao, Anjali Shahani Moreno, James Sampi, Hulya Ulku, Julio Velasco, Katia Vostroknutova, Pui Shen Yong, Christian Zambaglione, Gabriel Zaourak, Alexander Haider, and Andrew Burns (all ELCMU).

Communications and Dissemination support was provided by Ana Elisa Luna Barros (Manager, ECRLC), Analia Martinez (Online Communications Officer, ECRLC), Ruth Idalina Gonzalez Llamas (Senior External Affairs Officer, ECRLC), Yuri Szabo Yamashita (External Affairs Officer, ECRLC), Francisco Seminario (Consultant, ECRLC), Cecilia Martinez Gomez (Consultant, ECRLC), and Leandro Juan Hernandez (Consultant, ECRLC). Alejandro Espinosa (Sonideas) contributed on design. The cutoff date for this report was September 24th, 2022.

# Contents

## Acknowledgments 3

### EXECUTIVE SUMMARY

## Back to the Old Normal? 7

### Recovery, Inflation, and the Search for Fiscal Space 8

*The Legacy of COVID-19* 8

*Growth: Mediocre but Resilient* 9

### Closing the Fiscal Gap: New Approaches 10

*Toward More Effective Public Spending* 11

### Growth Outlook for the Region 13

### CHAPTER 1

## Are We Back to Normal Yet? Recovery, Inflation, and the Search for Fiscal Space 15

### COVID-19: Receding, but Vigilance Merited 16

### Growth: Resiliently Mediocre—Back to the “Old Normal” 18

*Labor Markets: Uneven Recovery, but Limited Structural Change* 19

### Risks to the Recovery 22

*The Pandemic May Have Long-lasting Effects on Poverty, Human Development, and Inequality* 22

*Head Winds in External Factors Are Picking Up* 24

*Consumer and Business Confidence Is Improving* 26

*The Financial Sector Remains Broadly Sound* 26

### Challenges Ahead 28

*Disappearing Fiscal Space* 28

*The Continuing Battle against Inflation* 31

### Conclusion 39

**CHAPTER 2****Closing the Fiscal Gap: New Approaches** 41

## Increasing Legislated Taxes 43

## To Hike or Not to Hike: A Tale of Two LACs 45

## Possible Impacts of an Increase in Individual Income Taxes 47

## Corporate Income Taxes: High Tax Rates, Moderate Compliance 53

## Toward More Effective Public Spending 55

## Cutting Public Investment: An Easy Fix with Dire Long-lasting Growth Consequences 56

## Cutting Transfers to the Most Vulnerable People (Including Pensioners) 60

## Cutting Waste and Inefficiencies: A “Cost-less” Way to Regain People’s Trust? 61

**Figures**

Figure 1.1. Excess Mortality in Latin America from COVID-19 Appears to Be Converging to Low Global Levels 16

Figure 1.2. Excess Mortality in LAC Was Much Higher than Reported Mortality 17

Figure 1.3. Progress in COVID-19 Vaccination Coverage Varies Considerably in LAC Countries 18

Figure 1.4. Economic Growth Is Expected to Return to Pre-Pandemic Levels in LAC, although with Variation across Countries 19

Figure 1.5. The Conflict in Ukraine and Decisions on Interest Rates by the US Federal Reserve Have Lowered Macro Forecasts 20

Figure 1.6. Total Employment and Labor Force Participation Are Returning to Pre-Pandemic Levels 21

Figure 1.7. Self-Employment, Informal Employment, and Unemployment Are Returning to Pre-Pandemic Levels 21

Figure 1.8. While Covid-19 Vaccination Accelerated, Protection against Other Diseases Lagged 22

Figure B.1.1.1. Most of the Decline in Monetary Poverty during LAC’s Golden Decade of 2003--13 Was Transitory 23

Figure 1.9. Four Main External Factors Drive Movements of GDP in LAC 24

Figure 1.10. The Rise in Commodities Had Opposite Effects in Terms of Trade Across the Region 25

Figure 1.11. The Share of Actual Growth in LAC Explained by External Factors Is Declining 25

Figure 1.12. Consumer Confidence Has Improved for Most Countries 26

Figure 1.13. Business Confidence Has Stabilized 27

Figure 1.14. Non-Performing Loans and Deferrals Have Not Become a Major Problem 27

Figure 1.15. Fiscal Balance in LAC Countries, 2022 Forecast 28

Figure 1.16. Public Deficits and Private Demand Lead to Current Account Deficits Across the Region 29

Figure 1.17. Debt Levels in 2022 Are Significantly Higher than Before the Pandemic 29

Figure 1.18. Implicit Interest Rates on Public Debt Have Increased Moderately 30

Figure 1.19. Emerging Market Bond Index (EMBI) Global Diversified, 2012-22 30

Figure 1.20. As Debt Grows, Sovereign Credit Ratings Slide 31

Figure 1.21. Projected Payment Profiles for Sovereign Debt 31

Figure 1.22. Debt Composition and Share of Central Government Debt Securities Denominated in Foreign Currency in Seven LAC Countries 32

Figure 1.23. Evolution of Reserve Positions in the Region 32

Figure 1.24. Evolution of Headline Inflation in LAC 2000-22 33

Figure 1.25. Headline Inflation for LAC Countries, 2021 and 2022 33



Figure 1.26. Inflation Expectations, Forecasts, and Central Bank Targets for Five Large LAC Countries	34
Figure 1.27. Percent Change of M1 Money Aggregate versus Core Inflation, Selected LAC Countries	36
Figure 1.28. Excess Liquidity in the Markets Remains High	36
Figure 1.29. Central Banks Have Reacted Strongly to Excess Liquidity	37
Figure 1.30. Velocity of Money Has Not Yet Recovered Pre-Pandemic Levels	37
Figure 1.31. The Gap between the Consumer Price Index and Producer Price Index Has Risen	38
Figure 2.1. Value Added Tax Collection	43
Figure 2.2. Individual Income Tax Collection	44
Figure 2.3. Corporate Income Tax Collection	44
Figure 2.4. The Initial Tax Rate Is Important in Determining the Depressive Effect on Growth of Raising Value Added Taxes	45
Figure 2.5. Fiscal Revenues (as percent of GDP)	46
Figure 2.6. Country-level Response of Pretax Income to an Exogenous and Unanticipated Net-of-Tax AMIITR Shock Driven Solely by Legislated Tax Changes	50
Figure 2.7. Changes in Labor Market Extensive and Intensive Margin Variables after One Year of a One Percent Net-of-Tax AMIITR Increase	52
Figure 2.8. Country-Level Impact Response of Individual Income Tax Revenues to Exogenous Unanticipated AMIITR Changes	53
Figure 2.9. Standard Corporate Tax Rates by World Region and LAC Country	54
Figure 2.10. Many LAC Countries Tend to Collect Less (as a Percent of GDP) than Other Countries for Given Levels of Tax Rates	54
Figure 2.11. Many LAC Countries Tend to Have Larger Levels of Informality than Other Countries for Given Tax Rates	55
Figure 2.12. Composition of Government Spending in Emerging Markets	56
Figure 2.13. Public Investment in Developing Countries around the World	57
Figure 2.14. Public Investment Multipliers	58
Figure 2.15. Share of Individuals Living Hand-to-Mouth in Developed and Emerging Countries (Percent of population)	61
Figure 2.16. Cost of Waste and Inefficiencies in Public Spending in LAC as a Percent of GDP and Government Expenditures	62
Figure 2.17. Cost of Waste and Inefficiencies in Public Spending in LAC, as a Percent of 2021 Overall Fiscal Deficits	62
Figure 2.18. Returns to Public Spending under Different Levels of Efficiency	63
Figure 2.19. Determinants and Implications of High Amounts of Government Waste and Inefficiency	64
Figure 2.20. People's Trust in Government, by Region	64

## Maps

Map 1.1. Excess Mortality in 2020–21 Varied Greatly across Regions in Mexico and Brazil	18
Map 2.1. There Is Room to Increase Value Added Taxes in LAC Countries with Low Initial VAT Rates	46
Map 2.2. Share of Top 10 Percent of Taxpayers per Region in Each Country	51
Map 2.2. Share of Top 10 Percent of Taxpayers per Region in Each Country (continued)	52
Map 2.3. Estimates of Public Investment Multipliers around the World	59
Map 2.4. The 50-Year Evolution of the Public Investment Multipliers for Argentinean Provinces	59
Map 2.5. Existence of Automatic Price-based Formula Indexation Mechanisms in the World circa 2019	60

## Tables

Real GDP Growth Rates	13
Table 2.1. Basic AMIITR Statistics Using a Pooled Regional-Year Sample for Argentina, Brazil, Colombia, Ecuador, Paraguay, Peru, and the United States	48

EXECUTIVE SUMMARY

# Back to the Old Normal?







As the COVID-19 crisis recedes, Latin America and the Caribbean (LAC) is back to work and looking forward. Is the region back to normal? As chapter 1 discusses, reported deaths related to the pandemic are low and have plausibly converged to global levels—albeit from much higher levels than previously thought. Yet low vaccination rates in some countries leave them vulnerable to new variants. In most countries, gross domestic product (GDP) and employment have fully recovered their 2019 levels, although forecasted growth rates might be said to be “resiliently mediocre”: banking systems appear sound, and rising debt burdens are manageable so far, but growth is not expected to exceed the low levels of the 2010 decade. Poverty in terms of income (monetary poverty) has largely receded with the economic recovery,<sup>1</sup> but the longer-term scars of the pandemic in terms of education and health have planted deep seeds of future inequality. Redressing these problems and undertaking the structural reforms needed to reach higher levels of growth and reduce poverty remain central on the policy agenda.

The new and unwelcome entrant in the policy space is inflation. While comparable to advanced country levels and well managed by regional monetary authorities, inflation nonetheless is being propelled by forces that may give it more staying power than originally hoped. Finally, financial deficits induced by the pandemic and the need to finance critical government programs and directions have led policy makers to search for ways to raise taxes or cut some types of government spending and costs to ease the constrained fiscal space. The pros and cons of various types of taxes and cost saving being considered is the subject of chapter 2.

## Recovery, Inflation, and the Search for Fiscal Space

### The Legacy of COVID-19

The postmortem on the impact of COVID-19 is overall grim. In a careful retrospective, the prestigious medical journal *The Lancet* showed LAC’s average excess mortality across the pandemic to be among the highest in the world. At 254 deaths per 100,000, the rate was double the global average and second only to Central Europe and Central Asia (COVID-19 Excess Mortality Collaborators 2022). Further, estimates from national health systems in the region range from quite accurate in Costa Rica and Chile, to underestimates by a factor of 10 in Venezuela, Bolivia, El Salvador, and Nicaragua. Errors broadly increase with mortality and hence plausibly proxy for the quality of management of the crisis.

Though with the recovery poverty rates have almost returned to their pre-pandemic levels, falling from 30 percent in 2021 to 28.5 percent in 2022, the structural impact of the pandemic on long-term poverty and



inequality remains severe and largely unaddressed.<sup>2</sup> To date, some 170 million students in the region have been fully deprived of in-person education for roughly half the days that in-person schooling would normally have taken place, which could lead to a 10 percent decrease in their lifetime incomes (World Bank, UNICEF, and UNESCO 2022). Further, these costs were not evenly spread, but fell most heavily on those without access to digital connectivity, thereby exacerbating existing inequalities potentially for decades to come. Food insecurity during the pandemic is expected to have increased child stunting, particularly in households not receiving transfers to cover the cost of food or in-kind food assistance. Vaccination rates in general also fell dramatically leaving the population open to previously controlled diseases. Medium-term measures to ameliorate the losses are needed, but more profoundly, the education crisis highlights the need to redress the long-term dysfunctionality of the region's public education systems. Employment appears to have largely returned to pre-COVID levels and there does not appear to have been a longer-term rise in informality, including for women, or underemployment. This relatively benign view may hide less favorable dynamics due, for instance, to the dramatic increase in migration flows across the region and towards the US border.

### ***Growth: Mediocre but Resilient***

The region's forecasted growth rates have been consistently upgraded since January—in contrast to the downgrades of the rest of the world. LAC is thus closing the gap with global estimates pulled down by the war in Ukraine. Though net importers of food and fuel, such as the Caribbean and Central American countries, have been severely affected, and rising prices of these goods have stressed households across the region, the overall rise in commodity prices has been a boon to regional exporters such as Argentina, Brazil, Chile, Colombia, Ecuador, and Peru.

However, previously favorable tailwinds are expected to become headwinds. Commodity prices are expected to soften by 10 percent in the next year (IMF 2022). The US federal funds rate has already risen 1.5 percentage points and the US Federal Reserve is expected to raise them another 2.5 percentage points (forecasts from Federal Open Market Committee). These developments, along with the Ukraine conflict, are depressing G-7 economies—which, combined with China's continued recession driven by COVID-19 lockdowns, will reduce exports. Political uncertainty in some countries has also increased. All suggest a reduction in growth rates going into 2023 to 1.6 percent from the 3.0 percent estimated for 2022.

These growth rates are low and inadequate to really make a dent in poverty or prosperity. They are also roughly the same as the decade before the pandemic. They hence suggest—if not a growth trap—at least continuing mediocre performance. This in turn indicates a need to address long-standing challenges in infrastructure, education, and technological and managerial innovation (see the October 2021 LAC Semiannual Report, World Bank 2021). Further, as discussed in the previous LAC Semiannual Report (*Consolidating the Recovery: Seizing Green Growth Opportunities*, World Bank 2022), the emerging global green agenda poses challenges but also great opportunities for the region that will require active policy management.

On the other hand, the region appears reasonably resilient in the face of overlapping challenges. Debt burdens are increasing with global borrowing rates, but the lower dollar exposure in borrowing in the region and a stronger reserve position have left international ratings relatively stable. Further, to date, the concerns about hidden non-performing loans for firms and consumers have not materialized in most countries. This said, a significant fraction of loans in many countries were reprogrammed or “evergreened.” Some will become non-performing, which may divert lending from more productive activities. Governments will also need to streamline debt resolution mechanisms that are currently unwieldy and monitor systemic soundness. Overall, external sentiment seems relatively stable, with most countries' emerging market bond indexes (EMBIs) remaining low

in the aggregate and with only modest upticks. The exceptions are the well-understood dramatic rises in Argentina and Ecuador. In many countries the sharp rise in indebtedness has not been punished by ratings markdowns. Together, a guarded optimism appears warranted.

*Rising global and local inflation.* Headline and core inflation rates<sup>3</sup> at 10 percent and 8.3 percent (excluding Argentina and Venezuela), although broadly in line with those of member-countries of the Organization for Economic Co-operation and Development (OECD), have exceeded central bank targets across the region, stressing household budgets and aggravating poverty. Authorities have become increasingly aggressive in hiking interest rates, with concomitant depressive effects on the recovery. To date, however, expectations of future inflation remain relatively unchanged. Hence the fear of fueling a wage-price spiral has not yet materialized. This said, several factors raise suggest that latent pressures will continue going forward: First, compared to pre-pandemic levels, monetary aggregates (captured by M1, which is composed of currency and demand deposits) remain high and velocity low but accelerating. Both trends suggest latent but and increasing purchasing power in the economy. Second, the growth of input prices (captured by the Producer Price Index, PPI) arising from interruptions in supply chains and the Russia crisis has outstripped the growth of consumer prices (captured by the Consumer Price Index, CPI), raising the concern that squeezed margins will eventually give way to greater passthrough to consumers.

*Disappearing fiscal space.* Declining government revenues and extraordinary palliative efforts to protect families and firms during the COVID-19 pandemic have led to high deficits and increased government debt. The average ratio of public debt to GDP in LAC rose sharply during the pandemic by 15 points to 75.4 percent of GDP by the end of September 2021. While this percentage has declined to 70 percent of GDP during the recovery, it will continue to act as a brake on any major investments in equity and productivity-enhancing investments.

## Closing the Fiscal Gap: New Approaches

The need to close the fiscal gap, put debt on a sustainable footing, and generate fiscal space to finance necessary physical and social investments has led to a search for new revenues and in particular to pressure to increase income taxes. In looking at any tax hike, concerns center on the possible depressive effects on growth, overall progressivity, and possible incentives for informality. This chapter presents new evidence on these effects for value added taxes (VAT) and income taxes. It also advocates for steps to cut wasteful government spending and increase government efficiency—both to generate substantial resources and as an entry point to a broader agenda of state modernization and generating public trust.

*The big three taxes.* Latin American collects 23.7 percent of total government revenues from value added taxes, 13.2 percent from corporate taxes, and 10.6 percent from individual income taxes. By global standards, the burden of the first is high and regressive and is intermediate on the second. The low level of the taxation on individual income compared to advanced countries and the possibility of making taxes more progressive has led to renewed interest in its potential for more revenue generation.

*The higher the initial tax burden, the greater the negative growth effects of tax increases.* The experience in the advanced countries suggests that the negative effects of tax increases are high. However, evidence on income taxes from a broader sample suggests that effects are proportionately less damaging where initial rates are lower. That is, the impacts are “nonlinear” due to their distortionary effects on labor and credit markets, increasing more than proportionally as rates increase. Hence, the substantial negative effects of higher rates in advanced countries are a function of their high initial levels. Recent World Bank research documents these

same nonlinearities for the VAT in Latin America (Gunter et al. 2021). This suggests that some countries, such as Bolivia, Ecuador, Mexico, Paraguay, and most countries in Central America, may have room for relatively costless further VAT hikes, while substantial negative impacts on growth would be likely for Argentina and Uruguay, and to a lesser extent Brazil and Colombia. Further, by confirming previous findings in the United States and with income taxes, this new research also suggests that these “nonlinearities” may be a more general feature of taxation.

*To hike or not to hike: A tale of two LACs.* Latin American has a group of countries, including Argentina, Belize, Brazil, Ecuador, and Jamaica, where aggregate tax rates range from 30 percent to 35 percent of GDP and thus are already close to OECD levels. In other countries, such as Costa Rica and Dominican Republic, the aggregate tax rates are around 15 percent. In still others, including Guatemala and Haiti, rates are well below that and have potential for increases with minimum impact of GDP.

*Individual income taxes: How low are they in Latin America?* The relatively low contribution of individual income taxes, at only 2.6 percent of GDP, has moved them to center stage as a possible new source of revenue. And indeed, the average marginal individual income tax rate (AMIITR) in LAC is far below, for instance, that of the United States. However, in most countries, only the top 20 percent of citizens pay any income tax, in contrast to the United States, where more than 80 percent do. Thus, the burden in LAC is unusually concentrated. In fact, the marginal tax rate of the top 1 percent in some LAC countries is almost as high as that of the comparable group in the United States. Hence, when considering raising the AMIITR, it is essential to specify whether this is a question of broadening the tax base or simply increasing the rate on the top earners.

Perhaps because of this already high concentration, the negative impacts from rises in the marginal income tax in LAC are roughly twice as large as in the United States. Possible channels are through the negative impacts on labor market participation and hours worked, as well as small increases in informality. These, in turn, would decrease the actual tax collection to roughly half that expected from simulations without such behavioral reactions. Tax reform plans need to take these important effects into account.

*Corporate taxes: Improving compliance.* Corporate taxes in LAC are already high on paper, but compliance is lower than elsewhere, and higher rates may lead to further evasion. One way to make collection of corporate taxes more efficient, streamlining collections and eliminating exceptions, would be to reduce the nominal burden (lower the rate) but increase overall enforcement.

### **Toward More Effective Public Spending**

In addition to raising new revenues, fiscal reforms also seek to reduce costs. Here again, careful evaluation of the options is necessary. Some cuts may have unexpectedly large negative growth effects or social impacts. Others, such as increasing the efficiency of spending, are arguably nearly costless.

*Cutting public investment: A quick popular fix with bad long-term consequences.* Roughly 40 percent of fiscal adjustments in LAC come from reducing public investment. Given that these investments pay off in the future (the medium to long term), such investment has poorly articulated current constituencies. Hence cuts generate little resistance. However, as with taxes, public spending has very nonlinear effects on growth. Moreover, LAC already has very low rates of public investment—roughly half that in East Asia and the Pacific or Sub-Saharan Africa. Accordingly, further cuts could have very large negative impacts indeed.



*Eroding public pensions and benefits through inflation.* Another stealth source of savings has tended to come from allowing inflation to erode benefits and in particular, public pensions. Numerous countries in the region do not have automatic price adjustment mechanisms. Thus, high rates of inflation can have a sudden and large negative impact on the incomes of the relatively vulnerable retired population.

*Toward greater spending efficiency and public trust.* An alternative source of fiscal space would be to reduce the estimated 4 percent of GDP (17 percent of public spending) that arises from badly targeted transfers (Izquierdo, Pessino, and Vuletin 2018), poor procurement practices, and inefficient human resources (HR) policies. In roughly half the countries of the region, eliminating these inefficiencies would more than cover current fiscal deficits and in the others would make a large down payment. Further, estimates show that such inefficient spending has virtually no stimulative impact on income and hence cutting it would have limited negative effects. From a societal point of view, government waste is closely correlated with lack of trust in government and perceived corruption. LAC is the region with the lowest level of trust in government around the world. Making fiscal adjustments by improving efficiency can serve as an entry point to an agenda of state modernization and reestablishing social trust in government.

## Growth Outlook for the Region

### Real GDP Growth Rates

	2019	2020	2021	2022e	2023f	2024f
Argentina	-2.0	-9.9	10.4	4.2	2.0	2.0
Bahamas	1.9	-23.8	13.7	8.0	4.1	3.0
Barbados	-1.3	-13.7	0.7	10.5	5.0	3.2
Belize	4.5	-13.7	16.3	3.5	2.0	2.0
Bolivia	2.2	-8.7	6.1	4.1	2.8	2.7
Brazil	1.2	-3.9	4.6	2.5	0.8	1.8
Chile	0.8	-6.0	11.7	1.8	-0.5	2.2
Colombia	3.2	-7.0	10.7	7.1	2.1	2.8
Costa Rica	2.4	-4.1	7.8	3.3	2.9	3.2
Dominica	5.5	-16.6	6.5	5.8	5.0	4.6
Dominican Republic	5.1	-6.7	12.3	5.0	5.0	5.0
Ecuador	0.0	-7.8	4.2	2.8	3.0	2.8
El Salvador	2.4	-8.1	10.2	2.4	2.0	2.0
Grenada	0.7	-13.8	5.3	3.8	3.4	3.1
Guatemala	4.0	-1.8	8.0	3.4	3.1	3.5
Guyana	5.4	43.5	20.0	57.8	25.2	21.2
Haiti	-1.7	-3.3	-1.8	-1.5	-0.1	2.0
Honduras	2.7	-9.0	12.5	3.5	3.1	3.7
Jamaica	0.9	-10.0	4.6	3.2	2.0	1.2
Mexico	-0.2	-8.1	4.8	1.8	1.5	2.1
Nicaragua	-3.8	-1.8	10.3	4.1	2.0	2.5
Panama	3.0	-17.9	15.3	6.2	5.0	5.0
Paraguay	-0.4	-0.8	4.1	-0.3	5.2	4.2
Peru	2.2	-11.0	13.3	2.7	2.6	2.6
St. Lucia	-0.1	-24.4	11.9	7.9	6.0	3.6
St. Vincent & the Grenadines	0.4	-5.3	0.7	5.0	6.3	4.8
Suriname	1.2	-16.0	-2.7	1.3	2.3	3.0
Uruguay	0.4	-6.1	4.4	4.8	2.7	2.5

Source: World Bank staff calculations.

Note: The cut-off date for the data is September 28, 2022. "e" stands for estimate; "f" for forecast.

## Notes

- 1 People are considered to be at risk of monetary poverty when their disposable income (after social transfers) is below the threshold that puts them at risk of poverty.
- 2 \$6.85 poverty line. 2021 based on preliminary SEDLAC harmonized data for nine countries. 2022 based on microsimulations. Excluding Brazil, poverty rates would remain slightly higher than pre-pandemic levels.
- 3 While Headline inflation is the raw inflation figure reported through the Consumer Price Index (CPI), Core inflation removes the CPI components like energy and fruit and vegetables that can exhibit large amounts of volatility, which can cause unrepresentative swings to the headline figure.

## References

- COVID-19 Excess Mortality Collaborators. 2022. "Estimating Excess Mortality due to the COVID-19 Pandemic: A Systematic Analysis of COVID-19-Related Mortality, 2020–21." *The Lancet* 399 (10334): 1513–36.
- Gunter, S., D. Riera-Crichton, C. Végh, and G. Vuletin. 2021. "Non-linear Effects of Tax Changes on Output: The Role of the Initial Level of Taxation." *Journal of International Economics* 131 (July): 103450.
- Izquierdo, A., Pessino, C., and G. Vuletin, eds. 2018. *Better Spending for Better Lives: How Latin America and the Caribbean Can Do More with Less*. Development in the Americas. Inter-American Development Bank, Washington, DC.
- World Bank. 2021. *Recovering Growth: Rebuilding Dynamic Post-COVID-19 Economies amid Fiscal Constraints*. Semiannual Report for Latin America and the Caribbean, October 2021. Washington, DC: World Bank.
- World Bank. 2022. *Consolidating the Recovery: Seizing Green Growth Opportunities*. Semiannual Report for Latin America and the Caribbean, April 2022. Washington, DC: World Bank.
- World Bank, UNICEF (United Nations Children's Fund), and UNESCO (United Nations Educational, Scientific, and Cultural Organization). *Two Years After: Saving a Generation*. Washington, DC: World Bank.



## CHAPTER 1

# Are We Back to Normal Yet? Recovery, Inflation, and the Search for Fiscal Space





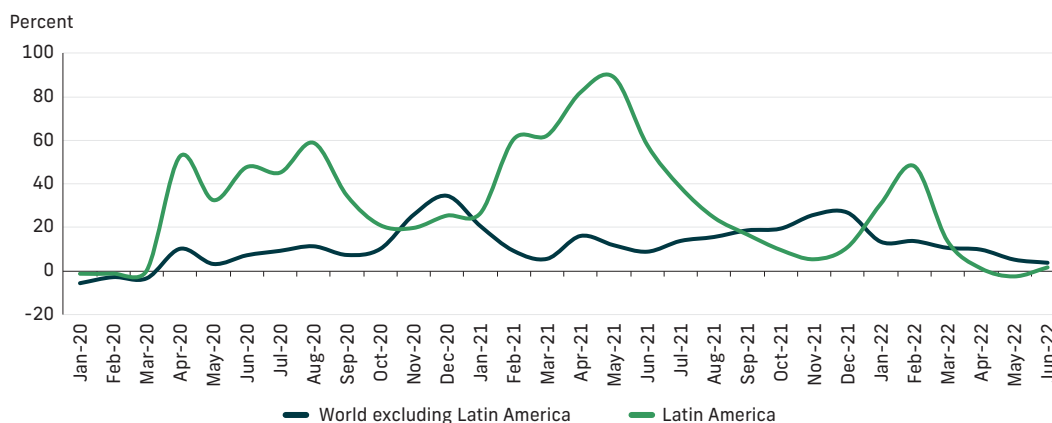


Statistics increasingly suggest that the Latin America and the Caribbean (LAC) region is returning to normal after recovering from the COVID-19 pandemic. While this progress should be celebrated, it is worth taking a look under the statistical hood to get a more fine-tuned view of where the region stands.

## COVID-19: Receding, but Vigilance Merited

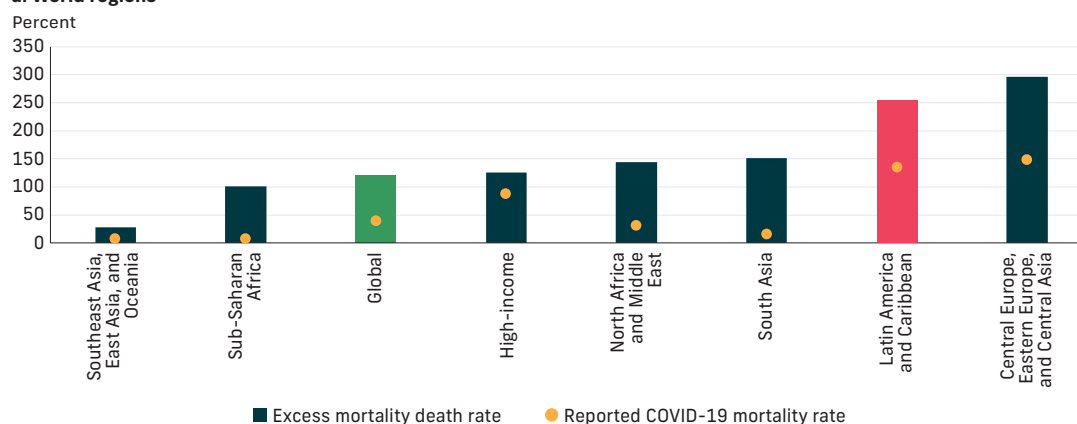
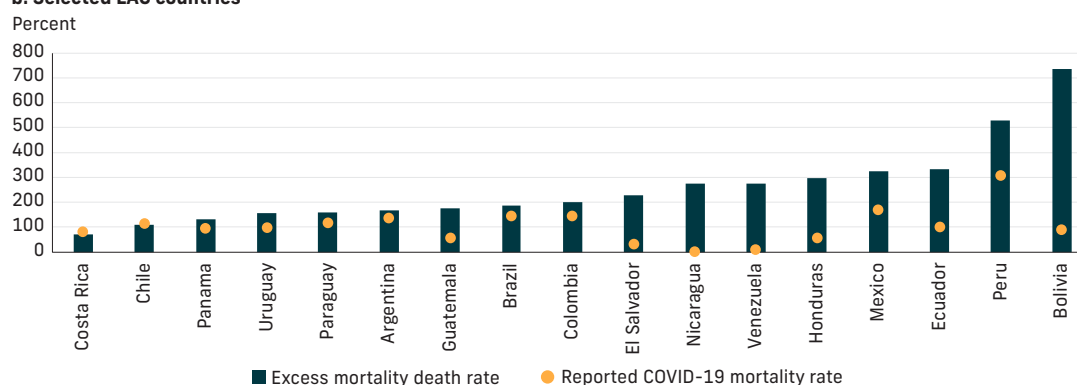
High rates of vaccination across much of the region have proven effective in taming the worst effects of the latest wave of cases coming from the Omicron BA.2 variant and may offer more resilience to emerging variants, such as the Ba.2.75.2 that may cause a wave over the next months. After experiencing exceptionally brutal waves of excess mortality (figure 1.1), LAC seems to have converged with the rest of the world to the lowest level in almost three years, just over 1 percent for the region and 3.5 percent for the rest of the world. Some care needs to be taken with these numbers. In a careful retrospective using standardized measures across countries, the medical journal *The Lancet* finds that rates were underreported by almost a factor of two (COVID-19 Excess Mortality Collaborators 2022): the region suffered almost twice as much as the advanced countries as opposed

**Figure 1.1. Excess Mortality in Latin America from COVID-19 Appears to Be Converging to Low Global Levels**



Sources: Our World in Data; World Bank staff calculations.

Note: The data are based on the excess mortality P-score, which is measured as the percentage difference between the reported and projected number of deaths for each country and time period, as provided by Our World in Data. Latin America includes Brazil, Chile, Colombia, Ecuador, Mexico, Paraguay, and Peru. The world sample covers 53 countries. The aggregates represent simple averages.

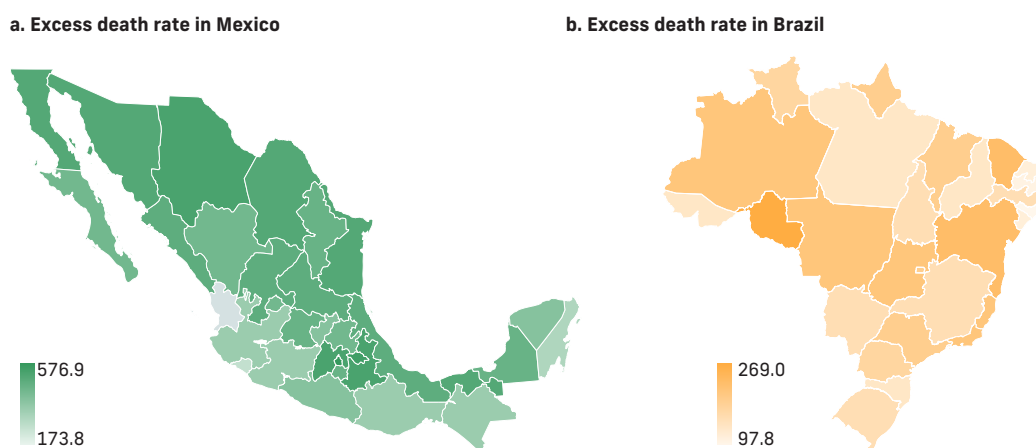
**Figure 1.2. Excess Mortality in LAC Was Much Higher than Reported Mortality****Excess mortality due to the COVID-19 pandemic in 2020–21 (percent)****a. World regions****b. Selected LAC countries**

Sources: Wang et al. 2022; IHME, 2022.

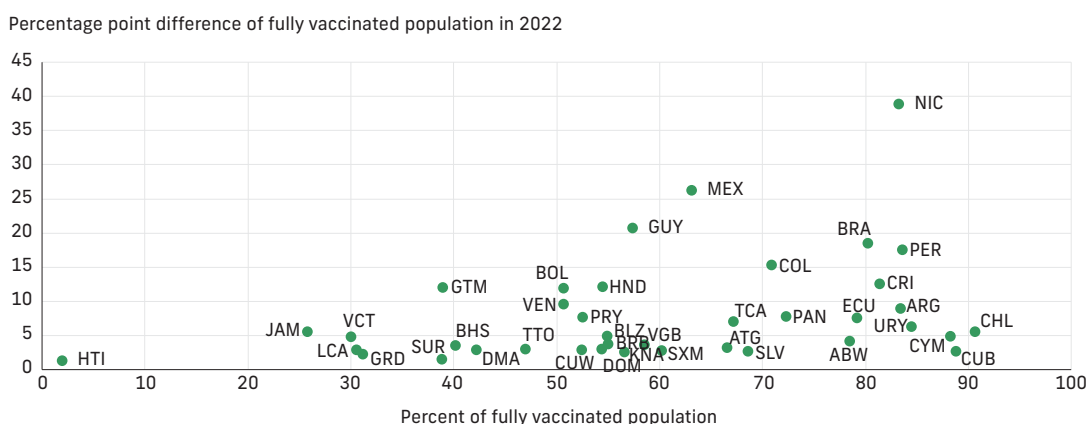
to only slightly more, as reported earlier, and was exceeded in mortality rates only by Eastern Europe and Central Asia (figure 1.2). Within the region, underreporting of rates broadly tracks overall mortality rates: rates for Chile and Costa Rica were broadly correct, while mortality rates in Bolivia, Nicaragua, El Salvador, and Venezuela were underreported by a factor of 10, leaving Peru and Bolivia with 5 to 7 times higher mortality than Costa Rica and Chile. Rates varied not only across countries, but within them. Within Mexico and Brazil, mortality rates varied by almost a factor of 3 across regions (map 1.1).

While the positive regional evolution gives us hope of leaving the pandemic behind, uneven vaccination rates across the region remain a serious source of concern (figure 1.3). Chile, Uruguay, Argentina, Peru, Nicaragua, and Costa Rica all are above 80 percent, while Guyana, Mexico, and Colombia are seeing strong increases that will bring them there soon. However, many nations, mostly from the Caribbean region, have fallen desperately behind and face the risk that new variants could add another round of devastating economic effects, again paralyzing particularly the tourism sector.



**Map 1.1. Excess Mortality in 2020–21 Varied Greatly across Regions in Mexico and Brazil**

Sources: Wang et al. 2022; IHME, 2022.

**Figure 1.3. Progress in COVID-19 Vaccination Coverage Varies Considerably in LAC Countries**

Sources: Our World in Data; World Bank staff calculations.

Note: On the X-axis, percent of fully vaccinated population is based on vaccination status by September 15, 2022. On the Y-axis, percentage point difference in fully vaccinated population is the difference from the beginning of 2022 (average of the first seven days) to September 15, 2022. International Organization for Standardization (ISO) country codes are used to indicate the country.

## Growth: Resiliently Mediocre—Back to the “Old Normal”

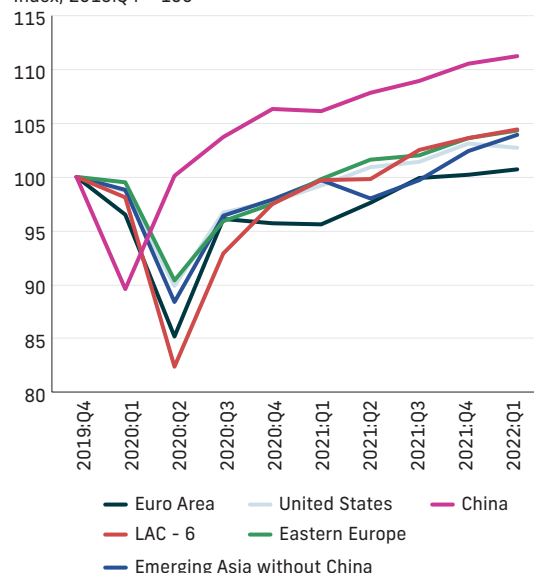
Increased commodity prices and resilient internal demand have led to marginally elevated growth prospects for LAC. Growth is estimated to be 3.0 percent for 2022. By the end of the year, economic activity will have largely recovered to its pre-pandemic levels (figure 1.4, panel a), although with substantial variations across countries. Among the largest economies, GDP in Chile and Colombia is expected to be 10 percent above 2019 levels, while in Brazil and Mexico it remains unchanged (figure 1.4, panel b).

While the conflict in Ukraine and attendant disruption to food and energy markets have led forecasters to reduce growth perspectives around the globe, the overall increase in commodity prices has led to a modest upward revision for LAC, closing the 2 percent gap with global growth forecasts in July (figure 1.5, panel a).

**Figure 1.4. Economic Growth Is Expected to Return to Pre-Pandemic Levels in LAC, although with Variation across Countries**

**a. Evolution of real GDP per region**

Index, 2019:Q4 = 100

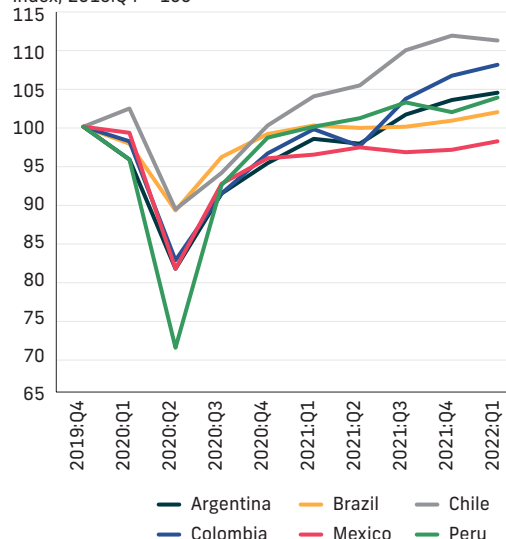


Source: Haver Analytics.

Note: LAC-6 includes Argentina, Brazil, Chile, Colombia, Mexico, and Peru. The aggregates represent simple averages. Real GDP is inflation-adjusted gross domestic product.

**a. Evolution of real GDP in LAC**

Index, 2019:Q4 = 100



Source: Haver Analytics.

Note: Real GDP is inflation-adjusted gross domestic product.

However, LAC's forecasts over the next two years remain low (1.6 for 2023 and 2.3 for 2024) and similar to the lackluster rates of the decade of the 2010s, suggesting the need to deepen structural reforms. With higher interest rates, slower global growth, and lower commodity prices on the horizon, LAC's growth forecasts for 2023 are expected to decline by 1.5 percentage points, almost the same as the decline forecasted for North America and Western Europe (figure 1.5, panel b). For 2023, all forecasts for LAC countries have worsened since the beginning of the year.

### ***Labor Markets: Uneven Recovery, but Limited Structural Change***

LAC has largely recovered from its particularly severe employment losses during the pandemic (figure 1.6, panel a), although again with substantial heterogeneity across countries (figure 1.6, panel b). Some countries, including Mexico and Argentina, recovered quickly and even expanded employment beyond pre-pandemic numbers, while others, including Colombia, have yet to fully recover.

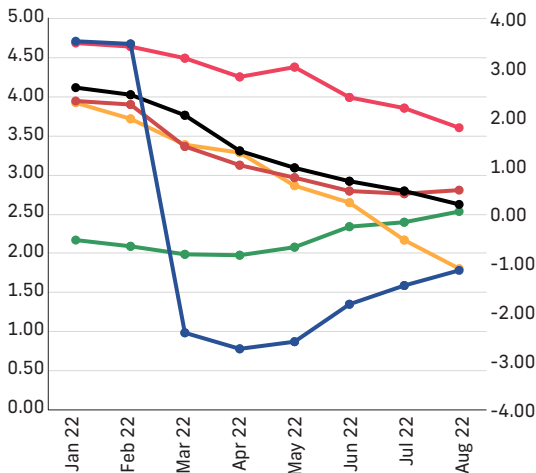
Though the World Bank regional flagship *Employment in Crisis: The Path to Better Jobs in a Post-COVID-19 Latin America* found a pattern of permanent increases in informality after crises (Silva 2021), in the past three years, the distribution of the workforce across types of jobs has changed relatively little. Self-employment and informality overall are at 2019 levels (figure 1.7a). At the same time, underemployment is currently lower for most countries. Chile presents a particularly noteworthy case where all three indicators are below previous levels. Splitting the informality data by Gender and income levels (figure 1.7b) we found similar results with the exception of informality among the most vulnerable in Brazil which is 7 percentage points higher than in 2019.

**Figure 1.5. The Conflict in Ukraine and Decisions on Interest Rates by the US Federal Reserve Have Lowered Macro Forecasts**

**a. GDP consensus forecasts per world region**

1) 2022

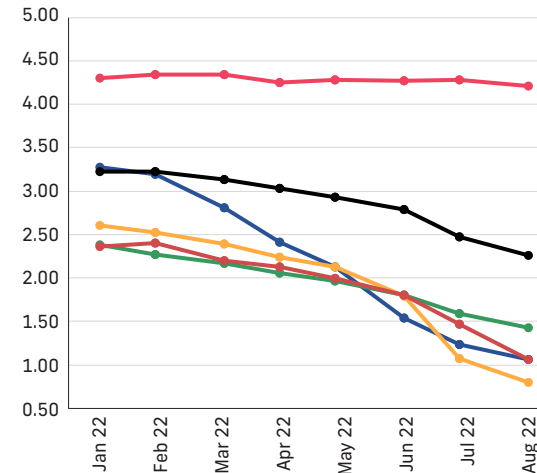
Percent change over previous year



Asia Pacific Latin America North America

2) 2023

Percent change over previous year

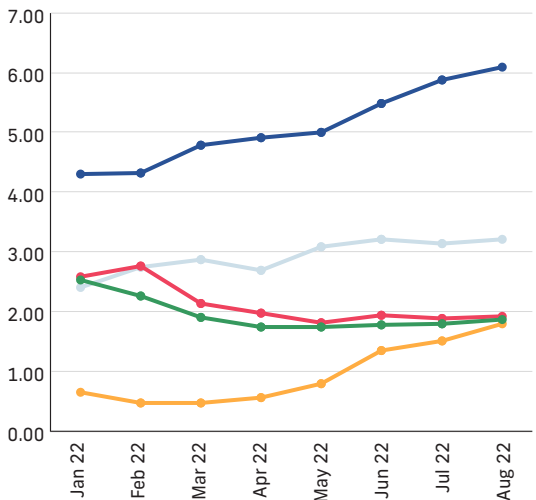


Western Europe World Eastern Europe (RHS)

**b. GDP consensus forecasts for five large LAC countries**

3) 2022

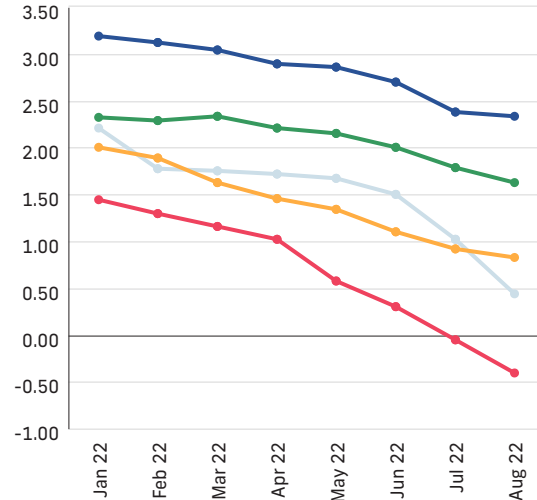
Percent change over previous year



Argentina Brazil Chile Colombia Mexico

4) 2023

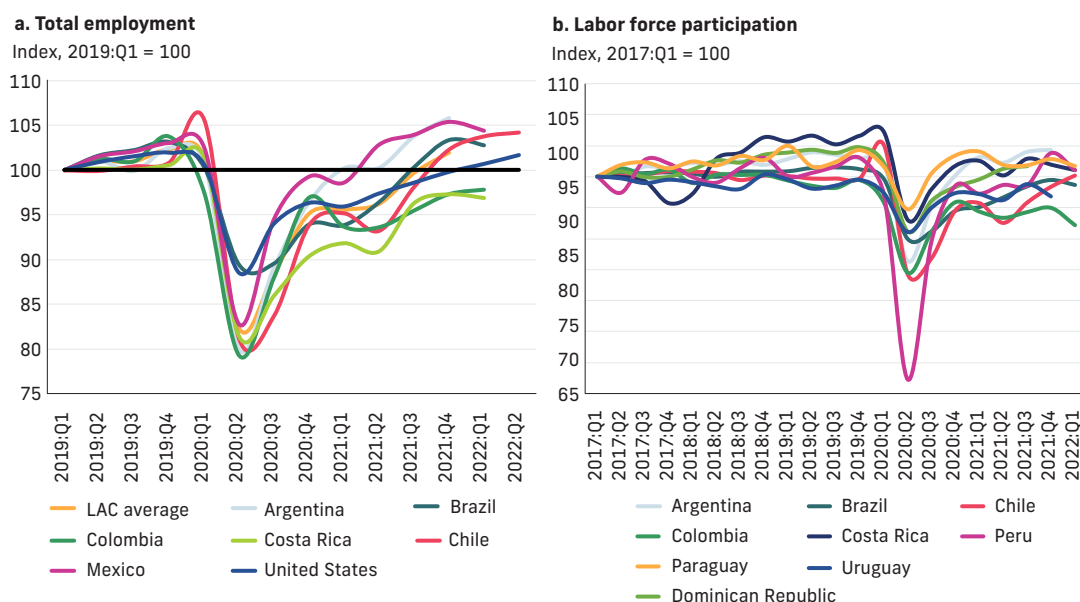
Percent change over previous year



Source: Consensus Economics Inc.

These data may hide other dynamics that may paint a less “normal” picture. In particular, dramatic increases in migration flows across the region driven mainly by instability in Cuba, Haiti, Nicaragua, and Venezuela add to social tensions in countries like Chile, Colombia, Ecuador, and Peru, as well as increases in apprehensions at the US border, which have risen by 63 percent relative to last year (US Customs and Border Protection figures).

**Figure 1.6. Total Employment and Labor Force Participation Are Returning to Pre-Pandemic Levels**

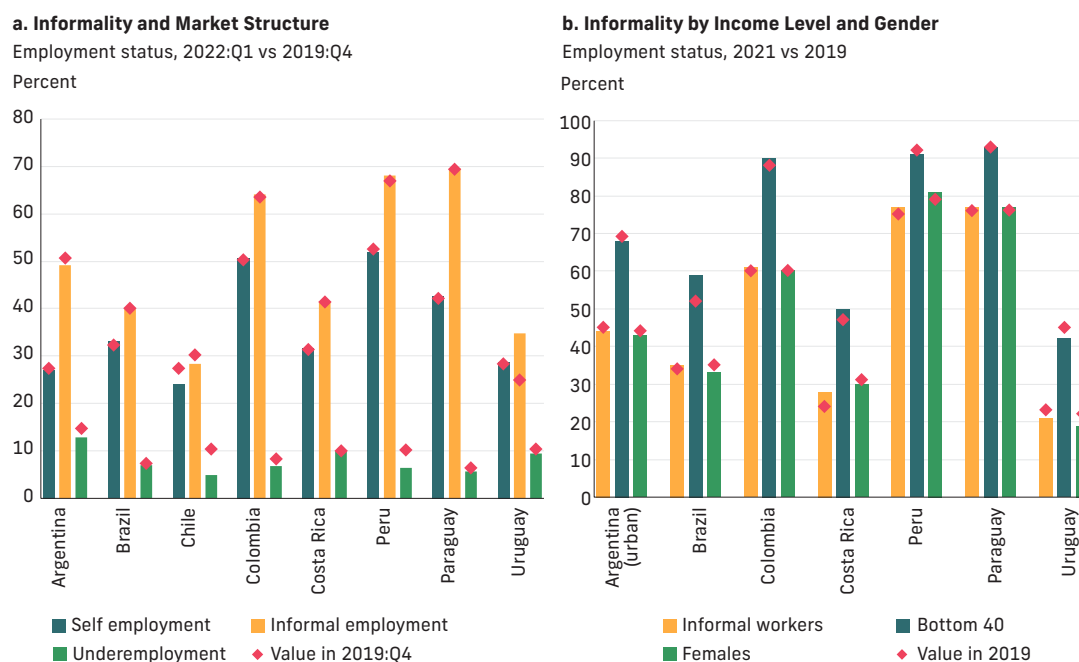


Sources: International Labour Organization (ILO), ILOSTAT database; World Bank staff calculations.

Note: LAC average is the average of indexed values of selected LAC countries that have data available. LAC = Latin American and the Caribbean.

Source: International Labour Organization (ILO), ILOSTAT short-term labor force statistics.

**Figure 1.7. Self-Employment, Informal Employment, and Unemployment Are Returning to Pre-Pandemic Levels**



Source: International Labour Organization (ILO), ILOSTAT short-term labor force statistics.

Note: The bars represent the latest data point (2022:Q1) for all countries except Argentina and Uruguay, where the 2021:Q4 is used.

Source: LAC Equity Lab tabulations of SEDLAC (CEDLAS and the World Bank).  
Note: Data for Uruguay is for 2020 vs 2019.

## Risks to the Recovery

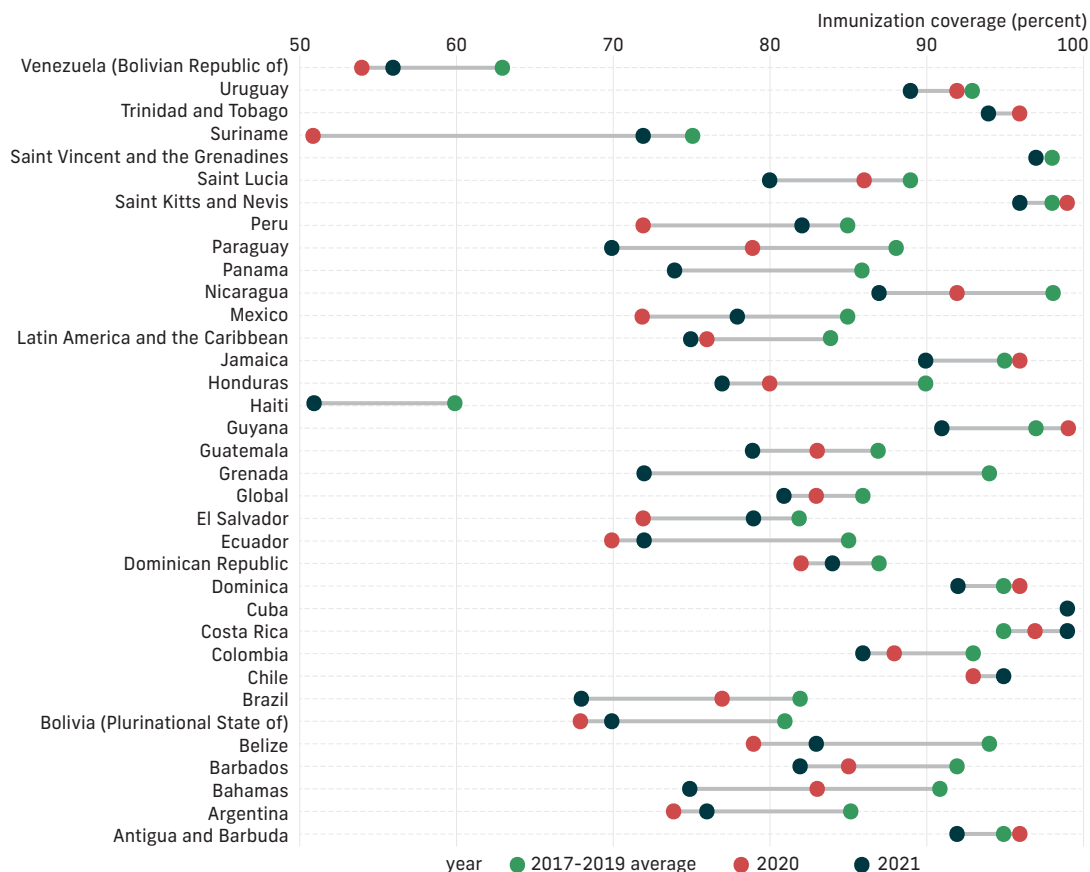
### *The Pandemic May Have Long-lasting Effects on Poverty, Human Development, and Inequality*

While swings in poverty and employment largely reflect cyclical movements, they hide structural damage that will have longer-term impacts on equity and productivity (box 1.1).

First, nearly 170 million students in the region lost 1 out of 2 days of in-person schooling during the height of the pandemic and their expected lifetime incomes are expected to fall by 10 percent (World Bank, UNICEF, and UNESCO 2022). Average primary education scores in reading and math are expected to fall to levels of more than 10 years ago.

The fact that these effects will be concentrated among those of the poorer strata who lacked access to online learning during the pandemic highlights a new source of persistent inequality. The United States, where schools were closed for far less time, is addressing these shortfalls in some cases with “high-dosage tutoring” (Bokat-

**Figure 1.8. While Covid-19 Vaccination Accelerated, Protection against Other Diseases Lagged**



Source: Herrera and Veillard, 2022.

Note: Diphtheria, tetanus toxoid, and pertussis (DTP-3) vaccination coverage, 2017-2019, 2020 and 2021.

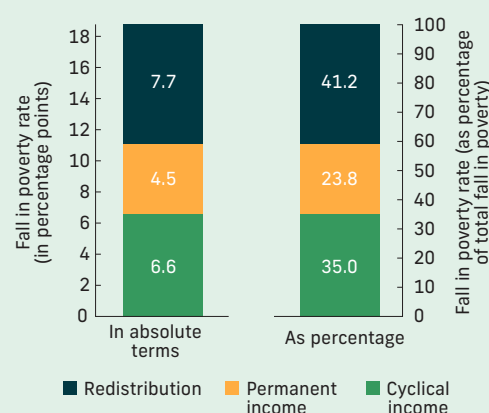


### Box 1.1. Fooled by the Business Cycle: Separating the Structural Effects of the Pandemic on Poverty and Human Development from Transitory Ones

The COVID-19 pandemic worsened most social indicators such as the poverty rate and the human development index (HDI), a composite index of indicators of life expectancy, education (mean years of schooling completed and expected years of schooling upon entering the education system), and per capita income.

As economies consolidate the recoveries they started in 2021 and are continuing in 2022, will these social indicators recover or will long-term determinants play a larger role this time? Not all social indicators are created equal in terms of the importance of business cyclical fluctuations. Thus, the response to the recovery will naturally differ across them. Relying on a global sample, a recent study by Camarena et al. (2022) shows that while the monetary poverty and the income components of the HDI largely fluctuate due to short-term business cycle fluctuations, other social indicators such as life expectancy and education attainments are more structural (and slow moving/rigid) in nature. The authors expand the methodology pioneered by Datt and Ravallion (1992) and further show that more than 40 percent of the decline in monetary poverty observed in Latin America and the Caribbean (LAC) during the so-called Golden Decade (2003–13) can be attributed to improvement in the cyclical income, while only about 24 percent can be associated with permanent increases in income (see figure B1.1.1).

**Figure B.1.1.1. Most of the Decline in Monetary Poverty during LAC's Golden Decade of 2003–2013 Was Transitory**



Sources: Camarena et al. 2022, figure 7, based on data from SEDLAC-CELAS (Socio-Economic Database for Latin America and the Caribbean) and World Bank and IMF 2018.

Note: A poverty line of \$US5.50 per person per day (in 2011 purchasing power parity terms) is used. The aggregate for Latin America and the Caribbean (LAC) is based on 15 countries in the region for which microdata are available at the micro level, weighted by population (Argentina, Bolivia, Brazil, Chile, Colombia, Costa Rica, Dominican Republic, El Salvador, Honduras, Mexico, Panama, Peru, and Uruguay).

While all crises are different and it might be too early to tell, insights from this work suggest that the monetary poverty rate would be expected to return to pre-pandemic levels as economies consolidate their recoveries and people's income starts to recover. (Obviously, the more vigorous the recovery, the faster this type of social indicator can be expected to improve.) On the other hand, the worsening of more structural indicators such as the HDI and other educational indicators (especially due to the loss of schooling during the pandemic) might persist longer in the region. This outcome would require more decisive government and societal interventions to improve the underlying drivers of the recovery.

Lindell 2022). In LAC, the crisis is deeper, and the policy response needs to be bolder. In the short term, the focus needs to be on: (1) safely and sustainably reopening all schools; (2) re-enrolling all students; and (3) preventing dropouts. The recovering and accelerating learning agenda must comprise: (1) prioritizing and consolidating curricula; (2) assessing learning levels; and (3) implementing learning recovery strategies and programs at scale.

More broadly, the crisis should be used as a call to arms to attack the wider challenge of raising the endemically poor quality of public schools in the region. Standardized scores on the Programme for International Study (PISA) continue to dramatically lag the advanced countries. One province in Brazil, Ceara, has shown that large gains can be made with a comprehensive approach including results-based-financing that provides a plausible roadmap for the region (Loureiro et al. 2020).

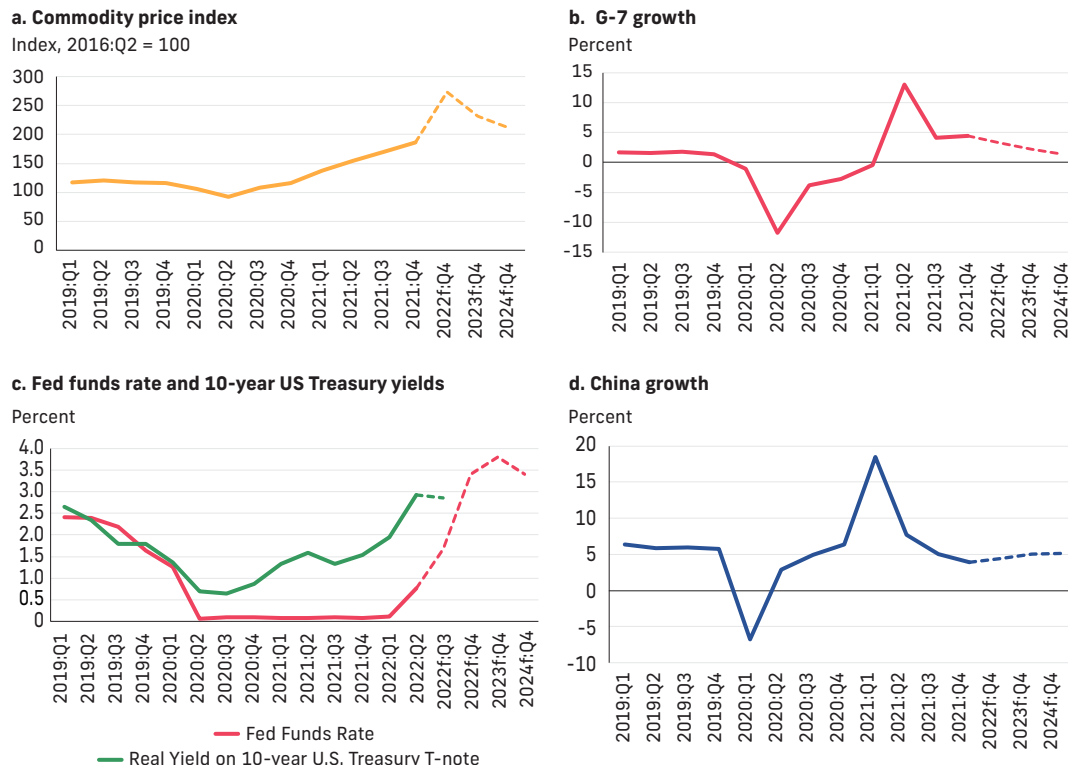
Second, the crisis set back progress on health as well. While progress was made in vaccination against Covid-19, the pandemic disrupted ongoing prevention programs and essential services for all age groups. For instance, despite its central role on children's future health and wellbeing, vaccination rates for Diphtheria tetanus toxoid and pertussis (DTP3) among 1-year-olds dropped and by 2021 these have not recovered.

On the health side, studies from Mexico show that food insecurity during the pandemic, particularly in households without transfers, led to pronounced increases in child stunting and premature deaths as well as large losses in productivity (Unar-Munguía et al. 2022). There is simply no possibility of longer-term equity or growth if these problems are not addressed.

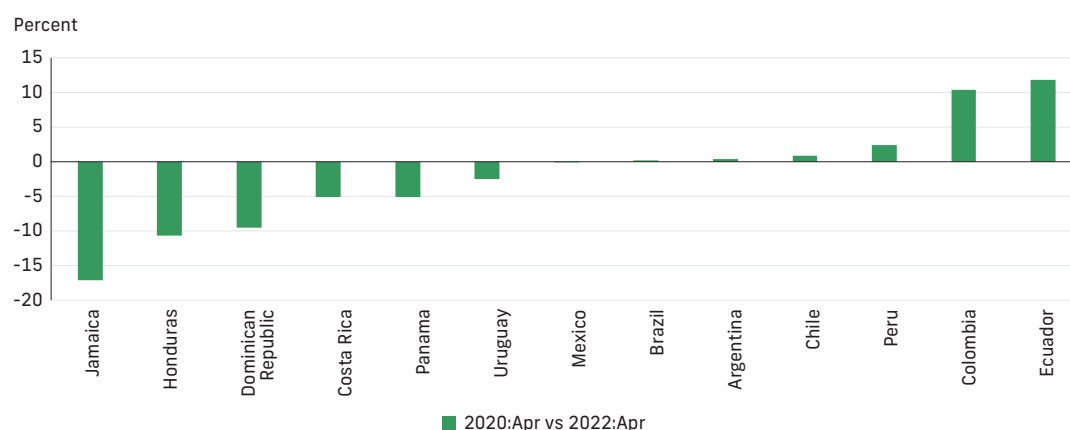
### *Head Winds in External Factors Are Picking Up*

The decline in growth forecasts is largely driven by less favorable movements in four factors - change in the Fed Funds rate, G-7 growth, China growth, and change in commodity prices - that can account for almost 90 percent of LAC GDP movements (figure 1.9). The war in Ukraine, contractionary policies to fight inflation, and China's continued struggle with COVID-19 have slowed the recovery in the Group of Seven industrialized nations (G-7) and China, translating into dampened demand for LAC's exports. At the same time, the sharp rise in interest rates by the US Federal Reserve and the European Central Bank dampen capital inflows and make foreign financing more expensive.

**Figure 1.9. Four Main External Factors Drive Movements of GDP in LAC**



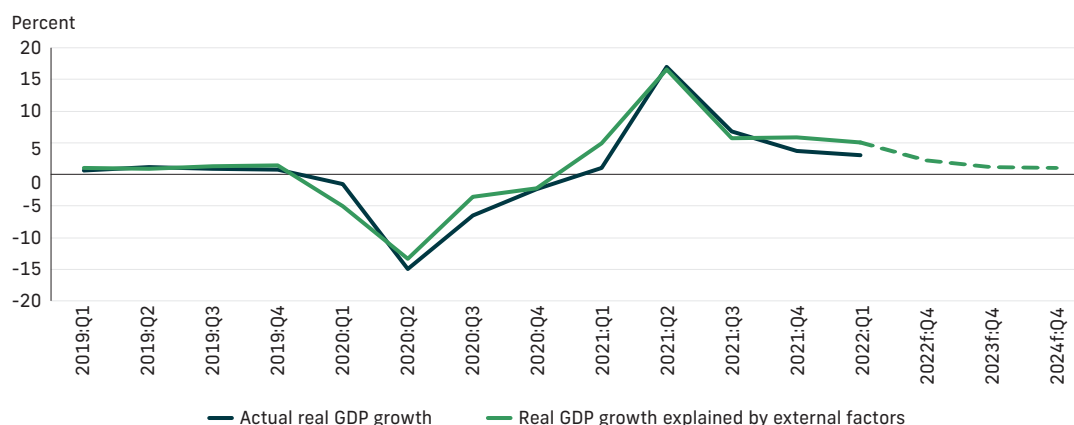
Sources: World Bank Commodity Prices (Pinksheets); International Monetary Fund (IMF) World Economic Outlook (WEO) database; US Department of Treasury.  
Note: f = forecast; G-7 = Group of Seven; LAC = Latin America and the Caribbean.

**Figure 1.10. The Rise in Commodities Had Opposite Effects in Terms of Trade Across the Region**

Source: International Monetary Fund.

The rise in commodity prices, especially for energy and food, continues to benefit large net commodity exporters in the Southern Cone. The terms of trade continue to be favorable for these countries compared to the situation before and at the beginning of the pandemic, even as some countries such as Brazil and Chile have experienced declines over the past year (figure 1.10). On the other hand, Central American and Caribbean countries, which are typically large importers of energy and food, have suffered more than most.

Following previous Semiannual Reports, figure 1.11 presents output estimations based on a simple model capturing the part of GDP growth explained by external variables common to all countries in the region. In this simple model of external factors, real global factors are represented by the growth of China and the G-7, in conjunction with the change in commodity prices. Financial factors are represented by international interest rates. As seen in figure 1.11, with external factors wavering, the model predicts headwinds for the region, with growth associated with external factors predicted to be 1 percent in 2024, down almost 5 points since 2021. The final performance in the economy will depend on the resilience of internal demand factors.

**Figure 1.11. The Share of Actual Growth in LAC Explained by External Factors Is Declining**

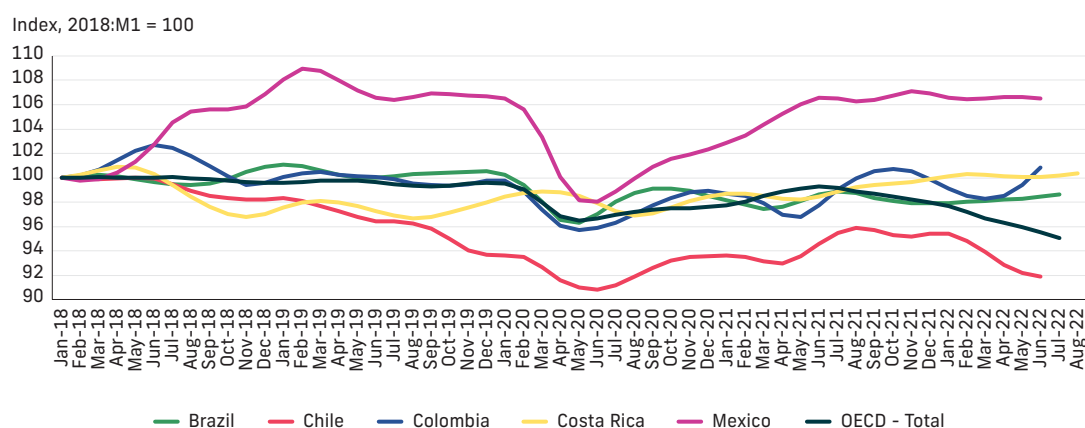
Source: World Bank staff calculations.

Note: Latin America includes Argentina, Bolivia, Brazil, Chile, Colombia, Ecuador, Peru, Paraguay, and Uruguay. External factors considered are change in the Fed Funds rate, G-7 growth, China growth, and change in commodity prices. f = forecast.

## Consumer and Business Confidence Is Improving

As the large economies of LAC were leaving lockdowns behind, household consumption rebounded in the large economies of LAC, supported by a combination of generous fiscal transfers, dynamic labor markets, lax credit conditions, and positive economic prospects. At the beginning of the pandemic, consumers' confidence suffered a sharp decline relative to the OECD countries, and subsequently bounced back swiftly, supporting significant consumption growth (figure 1.12). As the region leaves the pandemic behind, fiscal policy and labor markets are returning to their pre-pandemic levels, and credit conditions are tightening. Consequently, consumption growth is expected to decelerate. In the face of the relatively lower impact of global conditions, growth prospects and consumer confidence have improved relative to the rest of the world, providing a source of resilience for the region.

**Figure 1.12. Consumer Confidence Has Improved for Most Countries**



Source: Organisation for Economic Co-operation and Development (OECD) 2022, Consumer Confidence Index (CCI) (indicator).

Similarly, investment growth was fostered by increased commodities prices, good credit conditions, the materialization of projects delayed due to the pandemic, and business confidence on the economic prospects. After a big (and heterogeneous) drop in early 2020, business confidence rebounded and has stabilized on a level similar to the situation before the pandemic (figure 1.13). During the first half of 2022, business momentum in the region has improved relative to the OECD countries, implying higher levels of confidence and investment growth.

## The Financial Sector Remains Broadly Sound

Though concern remains about hidden distressed loans from firms especially damaged by the pandemic, financial sectors appear robust, again with some variation across countries. As of the end of 2021, the ratio of non-performing loans (NPLs) to total loans in the system is substantially below levels after the global financial crisis (figure 1.14, panel a), and in many cases is coming down. Most countries have NPL levels at or below their peak levels and substantially below those seen in the wake of global the financial crisis. Though reprogrammed loans may be pushing problems further down the road, to date, they remain far below their peak during the pandemic (figure 1.14, panel b). Though NPL data are not available for the Caribbean, countries in the Eastern Caribbean Currency Union (ECCU) do not show especially large rates of reprogramming. Mexico remains a revealing bellwether. It offered very little support to firms and households during the crisis and terminated loan

Index, 2018:M1 = 100



**Figure 1.14. Non-Performing Loans and Deferrals Have Not Become a Major Problem**

## Percent of total gross loans



## Percent of total loans





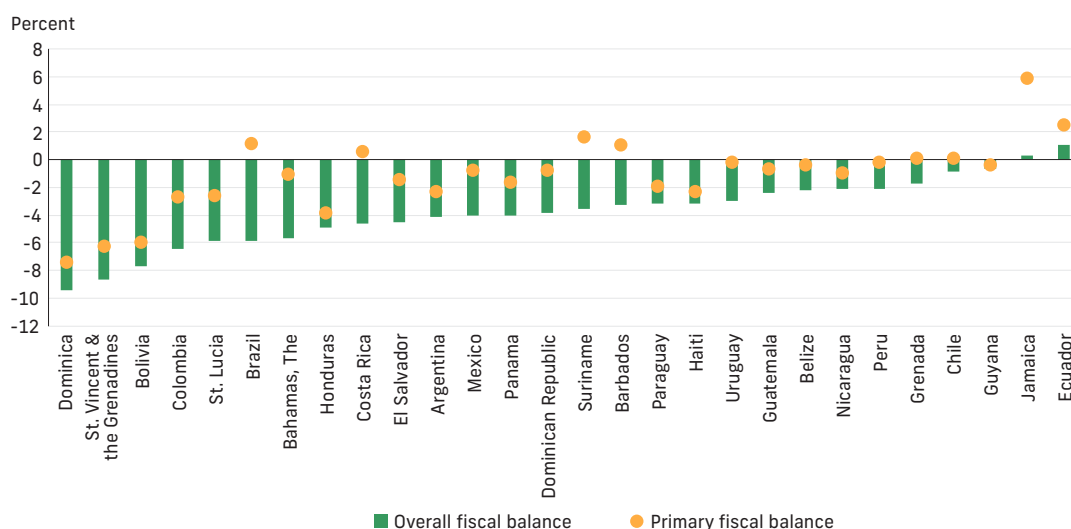
## Challenges Ahead

The region faces two challenges whose overlap will complicate policy action: disappearing fiscal space and inflation.

### *Disappearing Fiscal Space*

Strong countercyclical fiscal policies across the region to support vulnerable households and firms during the pandemic eroded the little fiscal space gained by countries in the region in previous years. The Caribbean was hit particularly hard. Dominica, Saint Vincent, St. Lucia, and the Bahamas all have relatively large deficits, with deficits in the first two countries still exceeding 6 percent. Overall, in the region, progress has been made in reducing primary deficits (as percent of GDP). They have fallen by 0.96 percentage points, on average, across 2022. However, rising interest payments have led to overall deficits similar to those in 2021 (figure 1.15).

**Figure 1.15. Fiscal Balance in LAC Countries, 2022 Forecast**



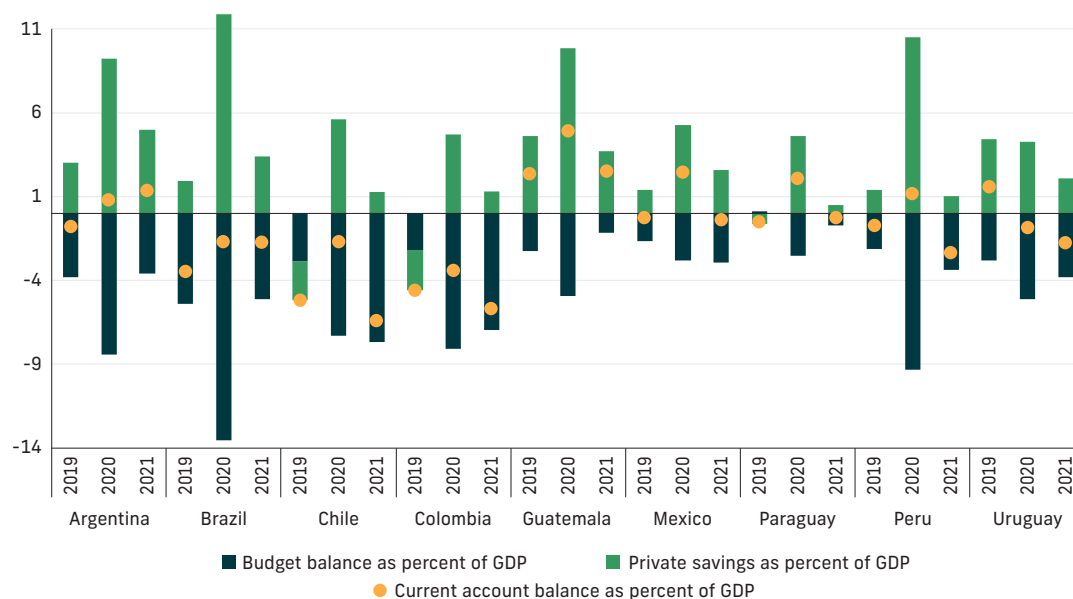
Sources: World Bank, Macroeconomics, Trade and Investment Global Practice -Latin America, based on preliminary projections (as of September 23, 2022).

Across 2020 and 2021, continuing fiscal deficits were not offset by net private savings (private savings minus investment), leading to current account deficits in all countries except Argentina and Guatemala (figure 1.16).

Ongoing deficits have led most countries across the region to substantially increase their stocks of public debt. Figure 1.17 compares public debt as a percent of GDP from 2019 to the estimated level in 2022. Most economies are clearly above the 45-degree line, confirming a substantial rise in most countries. Argentina undertook debt renegotiation during this period.

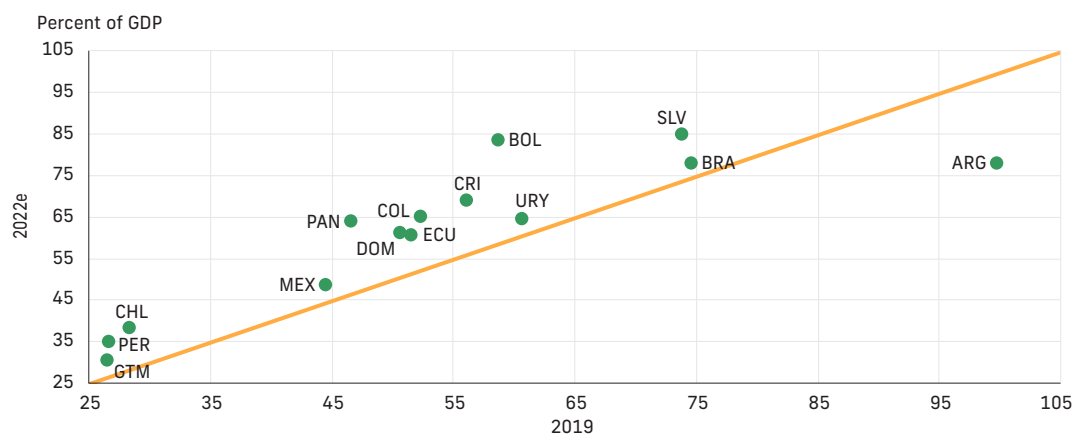
As the stock of debt and international rates have grown, the implicit interest rate for financing public debt—interest payments divided by debt—has risen, so far, only modestly, on average 10 basis points since 2021 (Figure 1.18), with little impact on debt sustainability to date. However, as countries move to roll over debt at higher rates, the repayment burden is likely to rise.

**Figure 1.16. Public Deficits and Private Demand Lead to Current Account Deficits Across the Region**



Source: Haver Analytics.

**Figure 1.17. Debt Levels in 2022 Are Significantly Higher than Before the Pandemic**



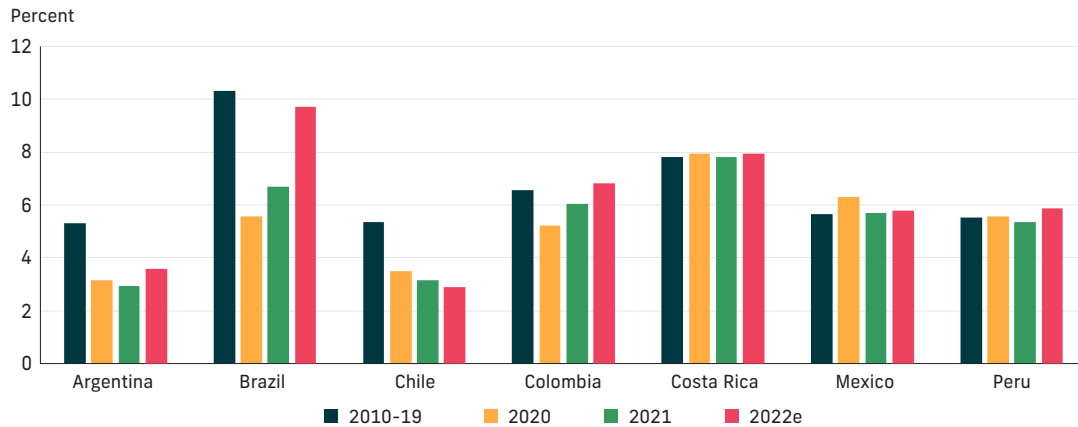
Source: Macroeconomics, Trade and Investment Global Practice, World Bank (as of September 23, 2022).

Note: "e" = estimate. International Organization for Standardization (ISO) country codes are used to indicate the country.

Further, international market confidence in the region remains generally robust. Although the trend is generally upward, and is significant in Argentina, Colombia, and Mexico, after a spike around the height of the pandemic, the Emerging Market Bond Index is hovering close to its pre-pandemic levels (figure 1.19).

Additionally, international credit ratings agencies have been forgiving of the debt accumulation. Despite the typical worsening of ratings as the stock of public debt increases (as shown in figure 1.20), large debt increases such as the ones in Brazil, Dominican Republic, Paraguay, and Uruguay have not been punished by any decrease in rating, and the downgrades for Bolivia, Chile, Colombia, and Peru have been mild.

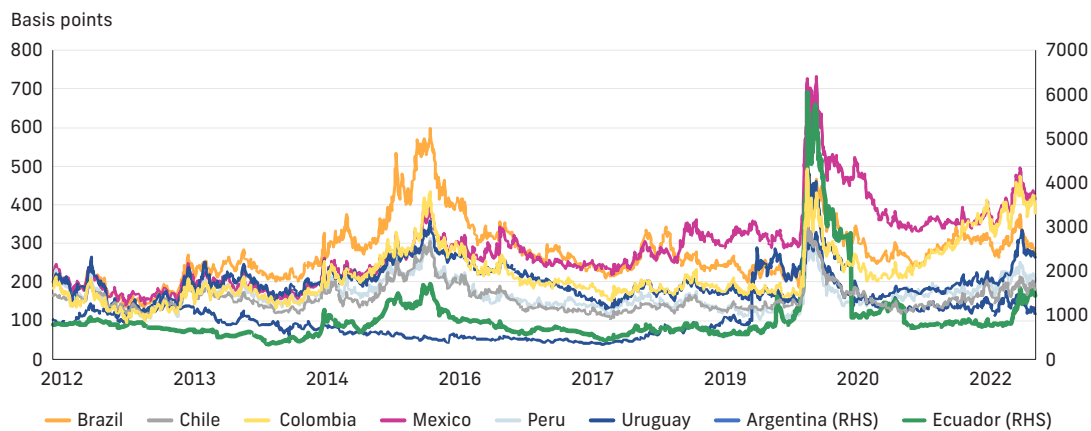
**Figure 1.18. Implicit Interest Rates on Public Debt Have Increased Moderately**



Source: Macroeconomics, Trade and Investment Global Practice, World Bank.  
 Note: "e" = estimate.

**Figure 1.19. Emerging Market Bond Index (EMBI) Global Diversified, 2012-22**

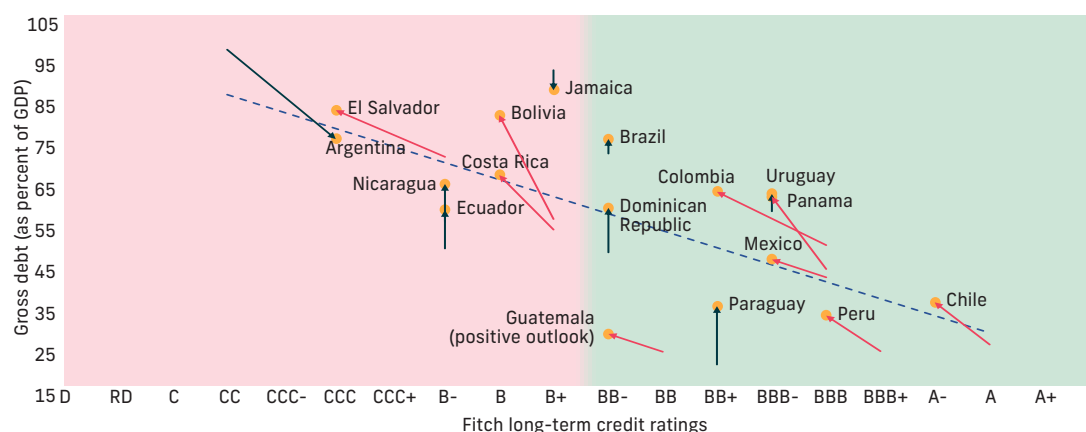
#### Country risk premium



Source: JP Morgan.  
 Note: Last observation is September 12, 2022.

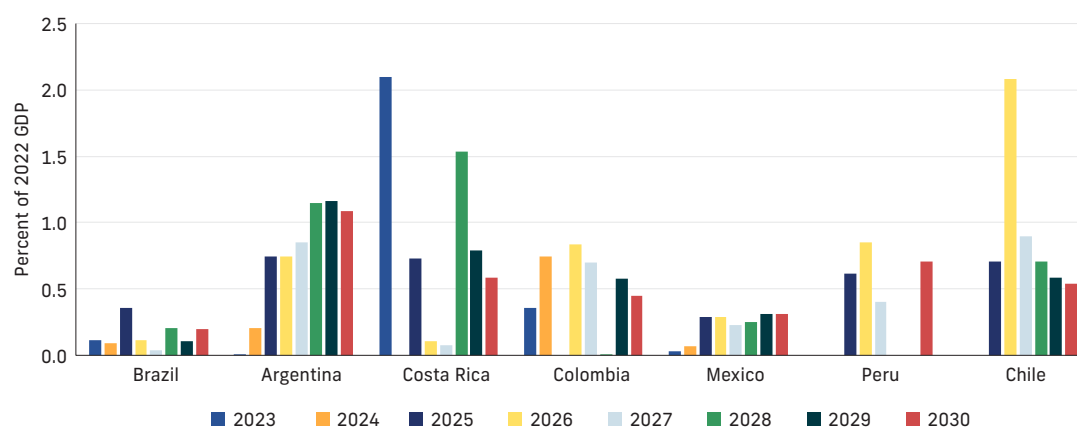
The moderate increase in sovereign spreads and moderate downgrade of credit ratings after relative increases in the stock of public debt seem to indicate an acknowledgment by international investors of financial resilience in the region. Part of the explanation for this vote of confidence may be seen in the next two figures. First, figure 1.21 shows the payment profiles for sovereign debt for the main economies in the region. Beyond Chile, where a large payment is due, and Argentina, profiles seem to be very moderate and distributed over time, making debt repayments or debt rollovers easier. However, as interest rates increase throughout the world, and investors' appetite for assets in emerging markets decreases, debt rollovers (and debt burden) are likely to become more expensive in the near future. Principal and interest payments will become an increasing share of output and government expenditure, adding pressure to the already strained fiscal balances and making fiscal consolidation a priority.

Second, the currency composition of sovereign debt has shifted very favorably since earlier periods of stress. The share of dollar-denominated debt is much diminished, implying far less sensitivity of countries' ability to repay their debt to depreciation in their exchange rate (figure 1.22). Far from the highly dollarized debt found

**Figure 1.20. As Debt Grows, Sovereign Credit Ratings Slide**

Sources: Fitch Ratings; World Bank; and World Bank staff calculations.

Note: Arrows indicate change from pre-pandemic positions to current positions (as of August 31, 2022). Red Arrows indicate worsening ratings while black arrows indicate no change or improvement. Green indicates investment grade and red indicates non-investment grade.

**Figure 1.21. Projected Payment Profiles for Sovereign Debt**

Source: Bloomberg.

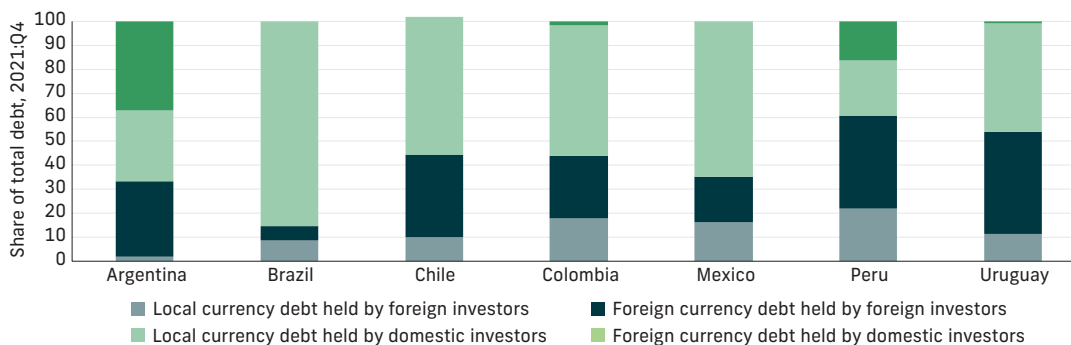
in earlier times preceding banking turmoil or sovereign defaults,<sup>1</sup> almost half of the current public debt in LAC is denominated in national currency. Figure 1.22 shows that the currency composition of government debt has fallen steadily, with the exception of Argentina. Moreover, the reserve position is far stronger—almost 7 percentage points of GDP higher than two decades ago (figure 1.23). Together, these factors suggest that though the debt burden is higher than before the pandemic, it is more manageable than in previous years.

### The Continuing Battle against Inflation

As in the rest of the world, inflation has grown sharply in LAC (figures 1.24 and 1.25), rising from a steady average of about 2 percent in the years preceding the pandemic, gaining about 4 percentage points between 2021 and 2022, and now forecast to reach 6 percent for 2022. Not counting the high inflation environments in Argentina, Suriname, and Venezuela, 2021 inflation rates in 2021 ranged from less than 1 percent in Bolivia to 10 percent in Brazil. In historical terms, these numbers are quite moderate for the region and comparable to those

**Figure 1.22. Debt Composition and Share of Central Government Debt Securities Denominated in Foreign Currency in Seven LAC Countries**

**a. Debt composition**

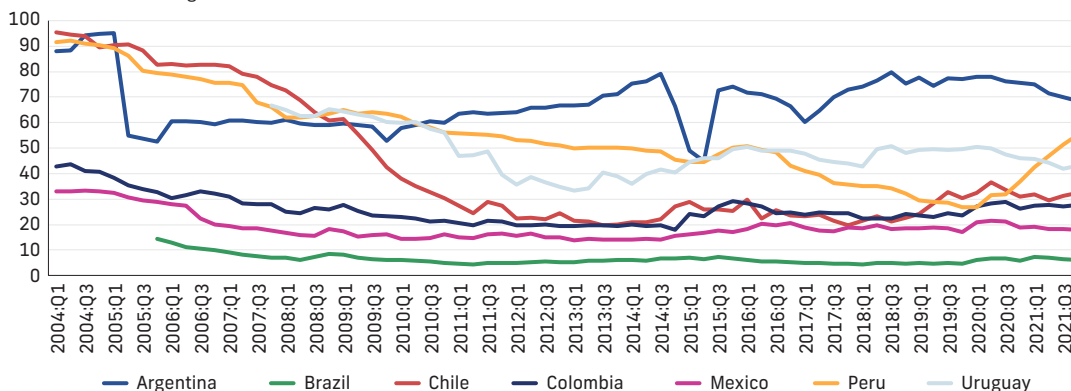


Sources: International Monetary Fund; World Bank staff calculations.

Note: Debt securities make up nearly 90 percent of all debt instruments, on average, for all countries except Chile.

**b. Share of central government debt securities denominated in foreign currency**

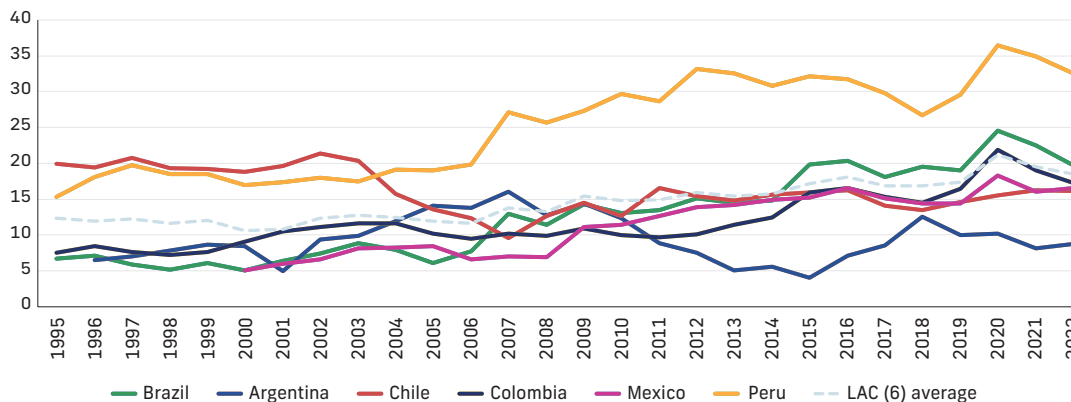
Percent of all central government debt securities



Source: International Monetary Fund.

**Figure 1.23. Evolution of Reserve Positions in the Region**

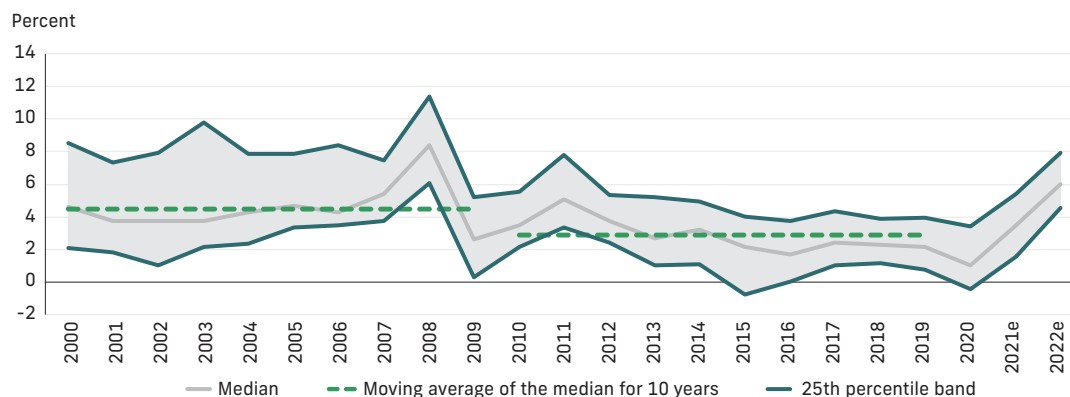
Percent of GDP



Sources: International Monetary Fund; World Bank staff calculations.

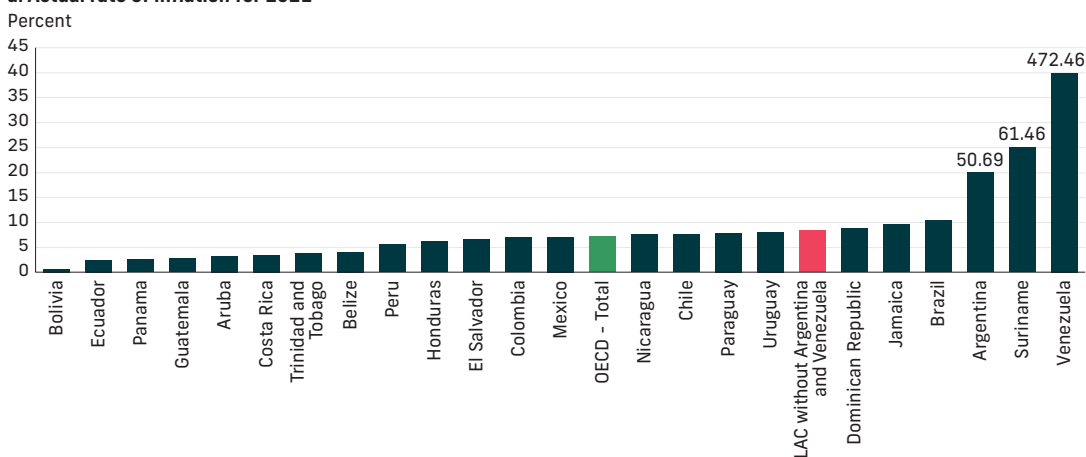
Note: LAC (6) = Six Latin American and Caribbean countries (Argentina, Brazil, Chile, Colombia, Mexico, Peru). Observations for Argentina start in 1996 and for Mexico in 2000.



**Figure 1.24. Evolution of Headline Inflation in LAC 2000–22**

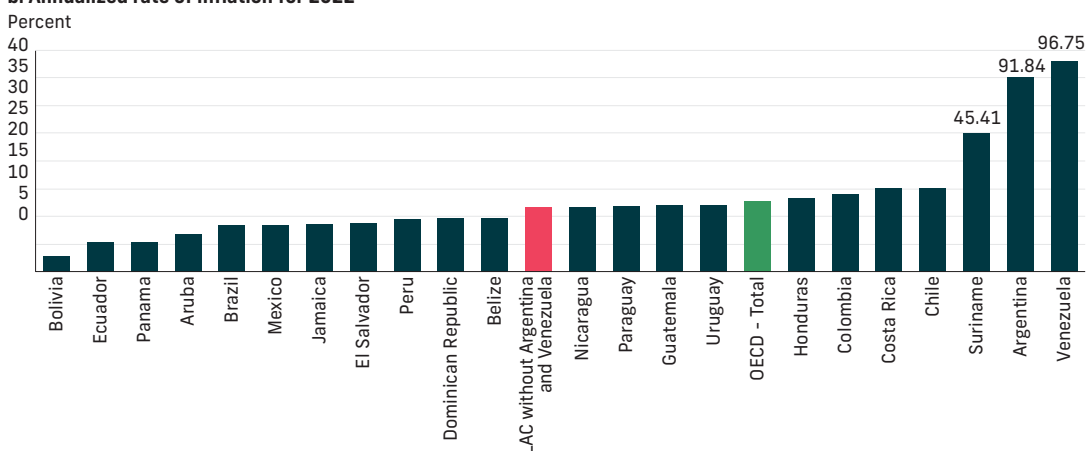
Source: International Monetary Fund, World Economic Outlook database, April 2022.

Note: Annual percentages of average consumer prices are year-on-year changes. "e" = estimate.

**Figure 1.25. Headline Inflation for LAC Countries, 2021 and 2022****a. Actual rate of inflation for 2021**

Source: World Bank staff calculations based on World Bank and OECD data.

Note: Actual rate of inflation for 2021 represents the percent change in headline consumer price index from January 2021 to January 2022. LAC = Latin America and the Caribbean; OECD = Organisation for Economic Co-operation and Development.

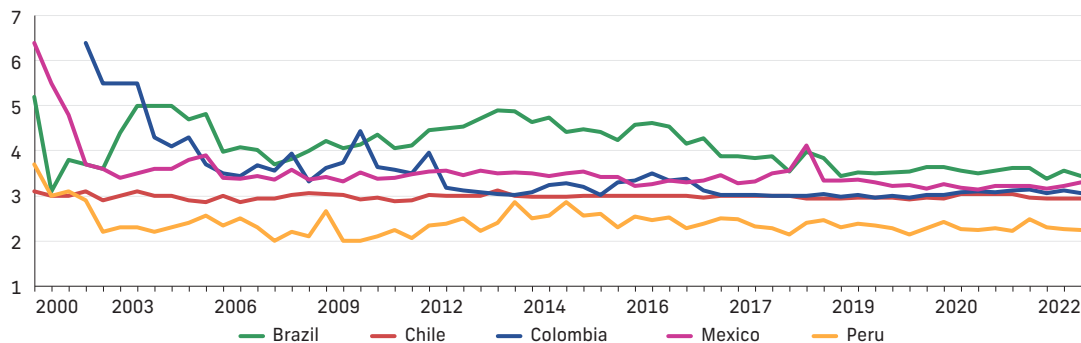
**b. Annualized rate of inflation for 2022**

Source: World Bank staff calculations based on World Bank and OECD data.

Note: Annualized rate of inflation for 2022 represents the annualized percent change in headline consumer price index for the year to date (through July 2022). LAC = Latin America and the Caribbean; OECD = Organisation for Economic Co-operation and Development.

**Figure 1.26. Inflation Expectations, Forecasts, and Central Bank Targets for Five Large LAC Countries**

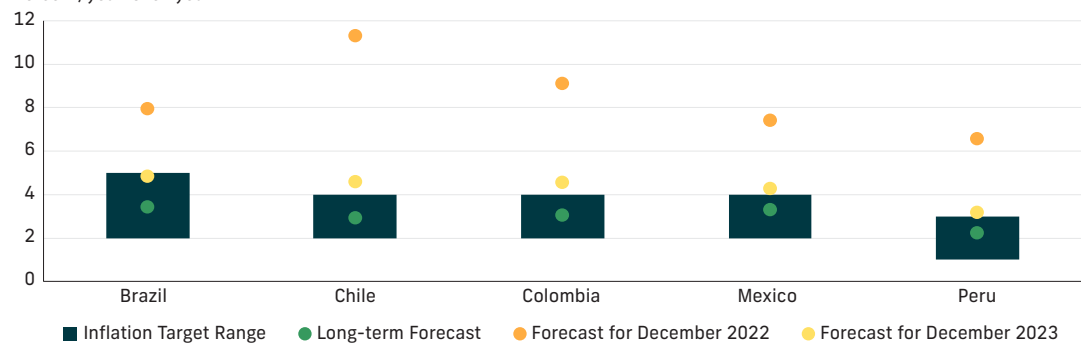
**a. Inflation expectations, 2000–22**  
Percent, year-over-year



Source: Consensus Economics Inc.

Note: Inflation expectations represent the long-term forecasts (6 to 10 years) of consumer price inflation (percent change from previous December).

**b. Inflation forecasts and central bank targets**  
Percent, year-over-year



Source: Consensus Economics Inc.

Note: Survey date is July 18, 2022.

in the advanced countries. They do, however obscure the disproportionate toll on households arising from the unusually high inflation in food prices. The central policy question is whether the current tightening by central banks is sufficient to arrest the rise in inflation or whether upward pressures will continue. There are several reasons to remain vigilant.

*Inflation expectations appear to remain anchored.* As high inflation persists, economic agents will start to build expectations of future inflation in their behavior. Workers will preemptively demand nominal wage gains with the goal of preserving their purchasing power. Employers will try to preemptively push the new costs to consumers by setting new prices. In the process, expectations become their own driver of inflation, particularly in economies with a high share of indexed wage and pension systems. The good news is that, for now, inflation expectations seem to be anchored to levels around central bank targets. Figure 1.26, panel a, shows that there is little change in expectations, for five large LAC countries. Figure 1.26, panel b, shows how inflation expectations drop substantially for 2023 and then return to central bank targets in the long term.

Despite money growth partly driving inflationary pressures over the last two years (see box 1.2), liquidity remains looser than before the pandemic. Which measure of money is most correlated with inflation varies across countries. Figure 1.27 presents two measures. It shows the positive relationship between the growth of

### Box 1.2. Excess Liquidity and the Return of Velocity as Drivers of Inflation

The quantity theory of money (QTM) was originally formulated by Copernicus in 1517 and advanced by followers of the School of Salamanca, who noted that the rise in the quantity of gold and silver imported from Latin American colonies and subsequently minted into coins led to an increase in the prices gold and silver used in the coinage of money in Latin America (Volckart 1997). The theory was further developed and popularized in 1963 by Milton Friedman and Anna Schwartz (1963). It is based on a simple identity matching the amount of money in the economy and its velocity (a measure of the number of times each bill or coin is used in a period and the inverse of the demand for money) to the nominal value of production over a period. According to the theory, the general price level of goods and services is proportionally related to the money supply in an economy (Edo and Melitz 2019). The traditional formula for the QTM is:

$$M_t V_t = P_t Y_t, \quad (\text{B1.2.1})$$

where  $M$  represents the nominal money balances,  $V$  is the velocity of money,  $P$  is the general price level, and  $Y$  is the nominal GDP. Taking the growth rates yields:

$$g_{M,t} + g_{V,t} = \pi_t + g_{Y,t} \quad (\text{B1.2.2})$$

where  $\pi$  represents inflation and is related in a linear fashion to money growth, velocity growth, and nominal GDP growth.

Even when inflationary pressures arise from other sources, such as interrupted supply chains or large government deficits, the overall level of prices remains determined by the quantity of money (hence, other prices in the aggregate index need to fall). Of course, a sharp increase in velocity (decrease in demand for money) would have the same effect as an increase in currency.

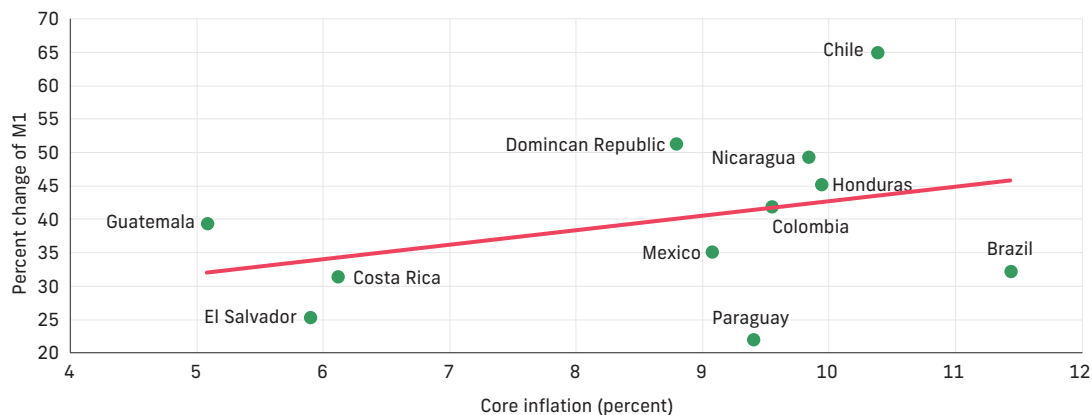
one measure of money,  $M1$  (which includes currency and demand deposits) and core inflation (which abstracts from the most volatile elements of the consumer price index, such as energy or certain foods like fruits and vegetables). Thus, while cost-push factors and the increase in international prices, as continued government deficit spending, have had a sizable effect on inflation, they have occurred in an environment that both validated them and fed demand pressures.

As of the first quarter of 2022, liquidity remains relatively high. Figure 1.28 shows that the ratio of  $M1$  to nominal GDP remains elevated compared to pre-pandemic levels.

This excess liquidity has prompted central banks in the region to react aggressively to the recent developments in inflation. Figure 1.29 shows that compared to the last episode of significant policy rate increases, this time central banks started from a lower level and increased rates much faster, reaching a higher rate in a shorter period. It is also worth noticing that all previous episodes of monetary tightening except the Peruvian one lasted longer than the current episode, suggesting that further rate increases are likely.

Velocity—the number of times each bill circulates—is also rising. Typically, velocity is considered a slow-moving parameter driven by technical change. However, over shorter horizons its movements can proxy for inverse changes in money demand. During the pandemic, as uncertainty and reduced purchasing opportunities led consumers and firms to increase their demand for real (inflation-adjusted) balances, the velocity of money

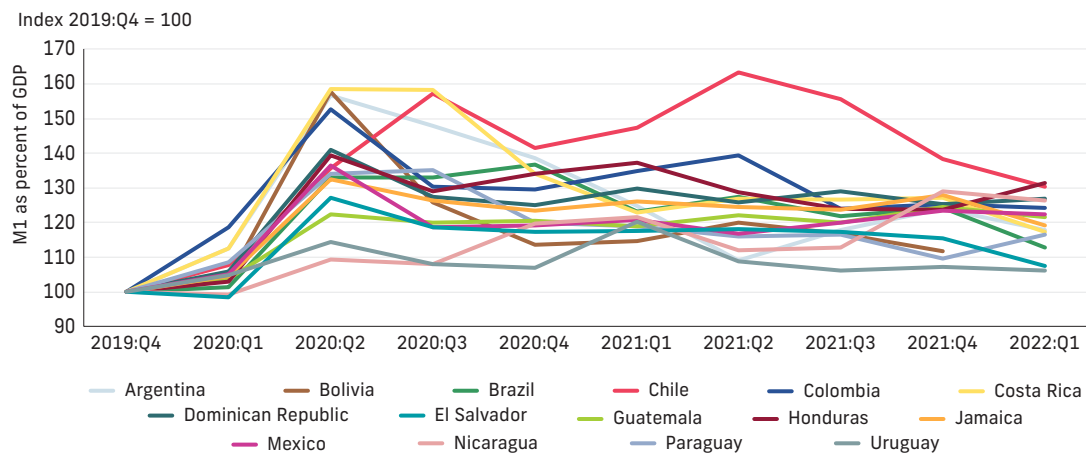
**Figure 1.27. Percent Change of M1 Money Aggregate versus Core Inflation, Selected LAC Countries**



Source: World Bank staff calculations based on Haver Analytics, World Bank and Central Bank of Chile.

Note: Accumulated core inflation is the change in the core consumer price index (CPI) from March 2021 to June 2022. M1 includes currency and demand deposits. The percent change in M1 was made by comparing the M1 in the fourth quarter of 2019 with M1 in the first quarter of 2022.

**Figure 1.28. Excess Liquidity in the Markets Remains High**

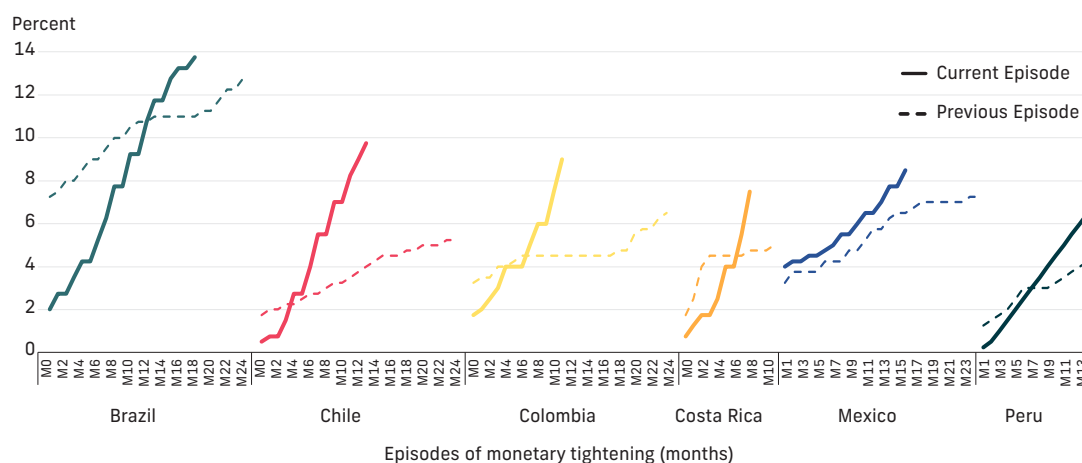


Source: Haver Analytics.

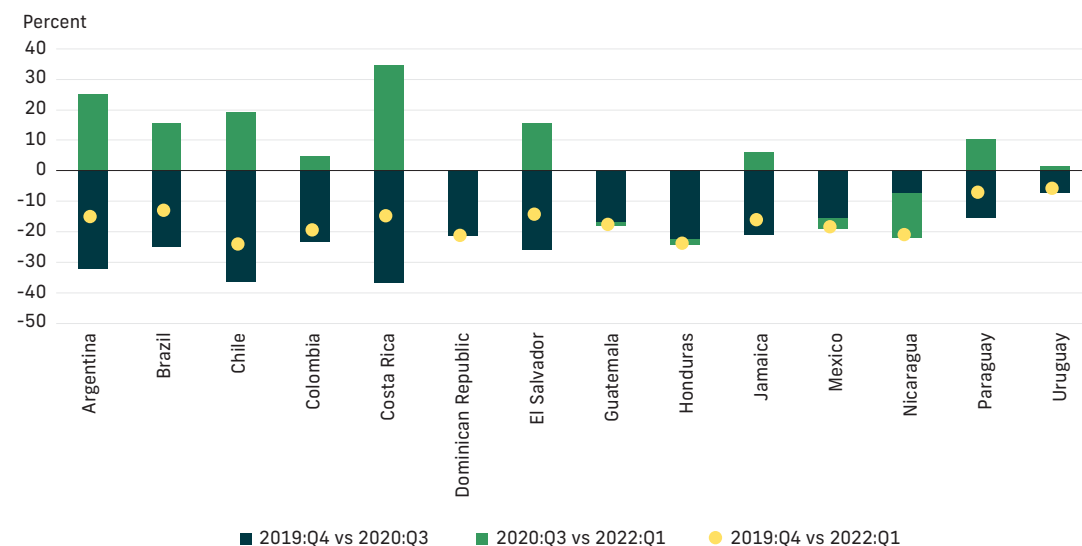
collapsed in most countries in the world, including those in LAC. As economic activity returns to normal and inflation pushes central banks to higher interest rates, people will not want to hold much money relative to the quantity of their transactions and velocity is expected to increase. A large increase in velocity will push prices higher and generate further inflation. Figure 1.30 shows the collapse in velocity during the pandemic and illustrates how velocity is starting to recover in most economies.

*Passthrough of input prices has been delayed.* After the collapse of many global supply chains, and the shift toward goods from services, price inflation first appeared in the price of inputs, measured as jumps in the producer price indexes (PPIs). The passthrough to consumer prices was much slower, implying that the gap between the PPI and CPI grew substantially and hence producer margins were narrowing (figure 1.31). The gap has risen to 60 percentage points in Brazil and to 40 percentage points in Chile and Colombia since



**Figure 1.29. Central Banks Have Reacted Strongly to Excess Liquidity**

Source: Haver Analytics.

**Figure 1.30. Velocity of Money Has Not Yet Recovered Pre-Pandemic Levels**

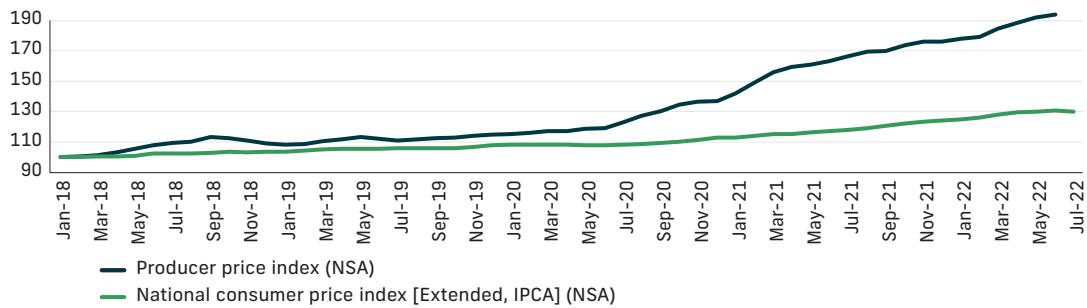
Source: Haver Analytics.

Note: M1 is a measure of aggregate money in the economy that includes currency and demand deposits.

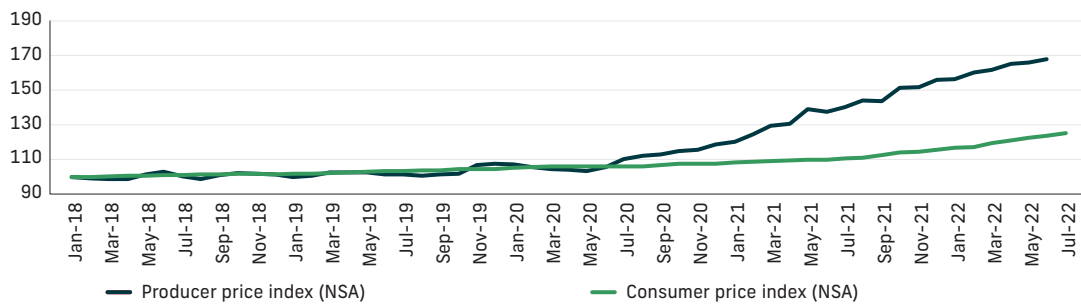
2018. This again raises the question of how much progress has been made working through the “temporary” effects of supply shocks. If supply chains recover in the short term, PPIs could rapidly collapse back toward CPI levels. However, if disruptions persist, consumer prices may begin to pass through input cost more as producer margins return to normal.

**Figure 1.31. The Gap between the Consumer Price Index and Producer Price Index Has Risen****a. Brazil<sup>a</sup>**

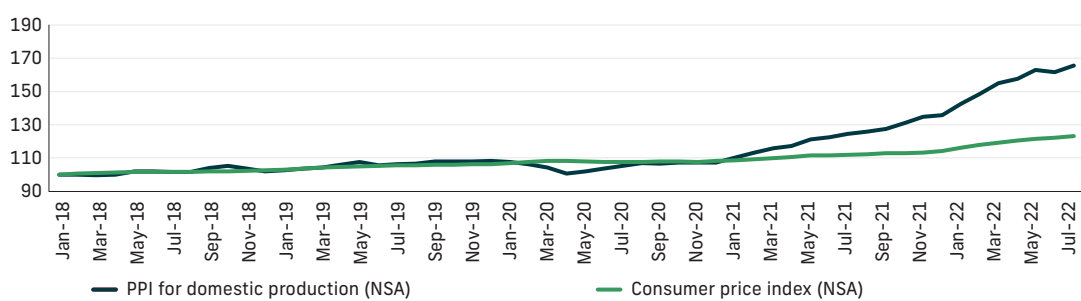
Index, 2018:M1 = 100

**b. Chile**

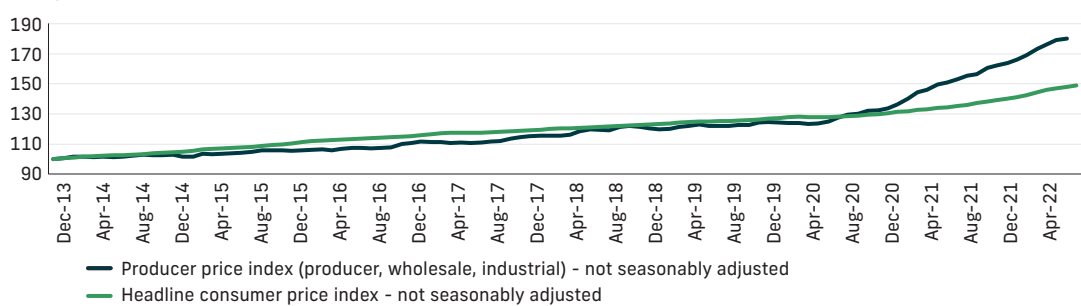
Index, 2018:M1 = 100

**c. Colombia**

Index, 2018:M1 = 100

**d. LAC average (Brazil, Chile, Colombia, Mexico, Peru)**

Index, 2013:M12 = 100



Source: World Bank; World Bank staff calculations.

Note: LAC = Latin America and the Caribbean; NSA = not seasonally adjusted; PPI = producer price index.

a. IPCA is the Extended National Consumer Price Index for Brazil.

## Conclusion

With COVID-19 receding in most countries, the economies of Latin America and the Caribbean are in reasonably sound condition and doing better than many other regions. The region is adversely affected by the slowdown of growth in the G-7 and China, as well as attempts by monetary authorities around the world to curb inflation through higher interest rates. On the other hand, while the war in Ukraine has raised fuel and food prices, putting stress on net importers, especially in the Caribbean, for many LAC countries the net terms-of-trade shock has been positive. That, combined with broadly expansionist fiscal policy and to some degree monetary policy, has closed the gap between the earlier forecasts of regional growth and those of the world as a whole. Labor markets have largely recovered and remain structurally unaltered, with no overall increase in informality, underemployment, or unemployment. Poverty levels have largely receded to previous levels. Banking systems merit continued vigilance, but to date the rate of non-performing loans has not increased.

The challenges remain in growth rates that remain lower over the medium term and similar to the lackluster rates of the 2010s, suggesting the need to address a pending structural reform agenda. Inflation, while at global levels, may prove a longer-term challenge. Despite increasingly aggressive interest rate hikes by central banks, liquidity remains above pre-pandemic levels, velocity is increasing, and higher producer price inflation may pass through to consumer prices as producer margins recover.

Despite progress over the past year, the difficult fiscal situation faced by most countries is moving to central stage as authorities struggle to close pandemic-driven deficits, increased global borrowing costs raise debt service, and radically diminished fiscal space over the foreseeable future constrains both productive investment and expanding social programs. The next chapter looks at how governments may increase this fiscal space. It presents recent findings about the impacts and limits of increasing various types of taxes, as well as the possibility of increasing the efficiency of spending.

## Notes

1 "Original sin" measures calculated by Eichengreen, Hausmann, and Panizza (2005) show that LAC was mostly unable to borrow in local currency during most of the 1990s and 2000s.

## References

- Bokat-Lindell, S. 2022. "Can America's Schoolchildren Recover from the Pandemic?" "Debatable Newsletter," *New York Times*, September 7, 2022. <https://www.nytimes.com/2022/09/07/opinion/school-covid-learning-loss.html?smid=nytcore-ios-share&referringSource=articleShare>.
- Camarena, J., L. Galeano, L. Morano, J. Puig, D. Riera-Crichton, C. Végh, L. Venturi, and G. Vuletin. 2022. "Fooled by the Cycle: Permanent versus Cyclical Improvements in Social Indicators." *Journal of International, Money, and Finance* 127 (October): 102670.
- COVID-19 Excess Mortality Collaborators. 2022. "Estimating Excess Mortality due to the COVID-19 Pandemic: A Systematic Analysis of COVID-19-Related Mortality, 2020–21." *The Lancet* 399 (10334): 1513–36.
- Datt, G., and M. Ravallion. 1992. "Growth and Redistribution Components of Changes in Poverty Measures: A Decomposition with Applications to Brazil and India in the 1980s." *Journal of Development Economics* 38 (2, April): 275–95.
- Edo, A., and J. Melitz. 2019. "The Primary Cause of European Inflation in 1500–1700: Precious Metals or Population? The English Evidence." Working Paper 2019-10, Center for Research in Economics and Statistics, French National Institute for Statistics and Economic Studies.
- Eichengreen, B., R. Hausmann, and U. Panizza. 2005. "The Pain of Original Sin." In *Other People's Money: Debt Denomination and Financial Instability in Emerging Market Economies*, edited by B. Eichengreen and R. Hausman, 13–47. University of Chicago Press.
- Friedman, M., and A. J. Schwartz. 1963. *A Monetary History of the United States, 1867–1960*. Princeton, NJ: Princeton University Press.
- Herrera, C., Veillard, J. 2022. *LAC Regional Report on Resilient Health Systems Post-COVID19 Pandemic*. Washington, DC: World Bank.
- IHME (Institute for Health Metrics and Evaluation). 2022. "COVID-19 Excess Mortality Estimates 2020–2021." IHME, Seattle.
- IMF (International Monetary Fund). 2018. *Challenges to Steady Growth. World Economic Outlook (WEO)*, October 2018. Washington, DC: IMF.
- Loureiro, A., L. Cruz, I. Lautharte, and D. K. Evans. 2020. *The State of Ceara in Brazil is a Role Model for Reducing Learning Poverty*. Washington, DC: World Bank Group.
- Silva, J. 2021. *Employment in Crisis: The Path to Better Jobs in a Post-COVID-19 Latin America*. Washington, DC: World Bank.
- Unar-Munguía et al. 2022. "Effect of the COVID-19 Pandemic on Childhood Malnutrition in Mexico." World Bank Manuscript. 2022.
- Volckart, O. 1997. "Early Beginnings of the Quantity Theory of Money and their Context in Polish and Prussian Monetary Policies, c. 1520–1550." *The Economic History Review* 50 (3): 430–49.
- World Bank, UNICEF (United Nations Children's Fund), and UNESCO (United Nations Educational, Scientific, and Cultural Organization). 2022. *Two Years After: Saving a Generation*. Washington, DC: World Bank.

## CHAPTER 2

# Closing the Fiscal Gap: New Approaches







As discussed in chapter 1, most countries in Latin America and the Caribbean (LAC) face—with different degrees of severity—mounting concerns about debt sustainability due to four compounding factors. First, in several LAC countries, the debt stance was fragile even before the COVID-19 pandemic. This debt buildup reflected in part significant procyclical and rigid increments of public spending during the expansionary phase of the last commodity super-cycle (often referred to as the Golden Decade), as well as large countercyclical and persistent spending efforts during the global financial crisis in the late-2000s. To increase government spending in both good times (characterized by high revenues and low borrowing costs) and bad times (especially in a rigid manner, due to social and political pressures) is unfortunately a recipe for building up debt and risking debt sustainability.<sup>1</sup>

Second, the sharp fall in revenues during the COVID-19 pandemic combined with efforts to assist the most vulnerable families and struggling businesses, especially during 2020 and early 2021, led the debt-to-GDP ratio to increase, on average, by about 4.5 percentage points between early 2020 and early 2022 in LAC.

Third, the lackluster forecasted growth rates for the medium term imply a weak recovery in revenue collection and continued fragility of the fiscal stance. Lastly, in LAC, when it rains, it pours. The recent interest rate hikes by the US Federal Reserve increase borrowing costs and compound debt sustainability concerns on a new front. This combination of long-established structural imbalances on the one hand and “bad luck” on the other has cut fiscal space to zero. As a consequence, growing debt sustainability concerns are swiftly pushing most LAC countries to undertake fiscal adjustments or fiscal consolidations to raise more government revenue or cut spending.

This chapter brings to bear recent research to inform the discussion of the macroeconomic pros and cons of applying different fiscal adjustment instruments. Some of these instruments are well known and well established in policy and academic venues and others are more subtle and unconventional in nature. Unlike many studies that concentrate on the industrial world, this recent evidence addresses LAC in particular by gathering data for a broader and more comparable sample of developing countries. As shown later in the chapter, this approach, which emphasizes that no one size or one instrument fits all, is fundamental to understand the consequences of policy options across different economies and societies. The next subsection focuses on the current stance on tax rate hikes and analyzes the possible implications of increasing rates for some of the types of taxes that generate the most fiscal revenue in the LAC region: value added tax, individual income tax, and corporate income tax. Obviously, this discussion is not all encompassing. It does not discuss other sources of tax revenue such as, for example, wealth taxes and commodity royalties. While for some countries, especially in Central America and the Caribbean, raising taxes might still be a sensible policy option to cope with the current fiscal deficits and the need to increase the provision of basic public goods, implementing tax rate hikes in many others would likely cause important behavioral responses by businesses and individuals—linked to large macroeconomic costs—and, thus, doubtful tax revenue increases. In sum, for many countries in LAC, the option of increasing fiscal space by raising tax rates might already be maxed out. In fact, after properly accounting for



the size of the economy and the level of income per capita, for some LAC countries the size of the government is already comparable to (or even higher than) that of many industrial economies. The chapter then turns to the consequences of cutting spending as a means of fiscal adjustment. The discussion shows that while reducing public investment is a popular tool mainly due to its flexible nature, this easy fix comes at the expense of large costs to economic growth, especially in countries with large infrastructure gaps. The discussion also shows that cutting social transfers, which is especially tempting given the current inflationary spike, might not only affect the most vulnerable (such as pensioners who are in the lowest deciles of the income distribution) but also might be quite recessive in the short term because a large share of populations in LAC—and especially those in the lowest deciles of the income distribution—live hand-to-mouth.

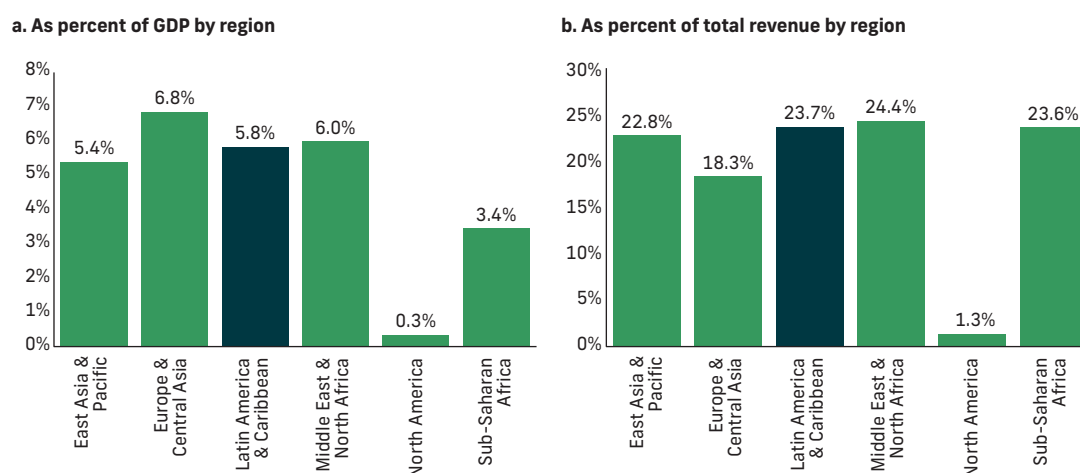
Finally, the discussion turns to waste and inefficiencies in government spending, which represent 17 percent of total public spending in LAC countries, on average. Reducing such waste and inefficiency would be enough to virtually eliminate the current fiscal deficit for many LAC countries. Moreover, it is “cost-less” from a macroeconomic point of view—given that spending inefficiently is like not spending at all. Equally importantly, it could help governments regain people’s trust. Efforts along this dimension can be seen as steps in a larger agenda of creating a more effective and responsive state.

## Increasing Legislated Taxes

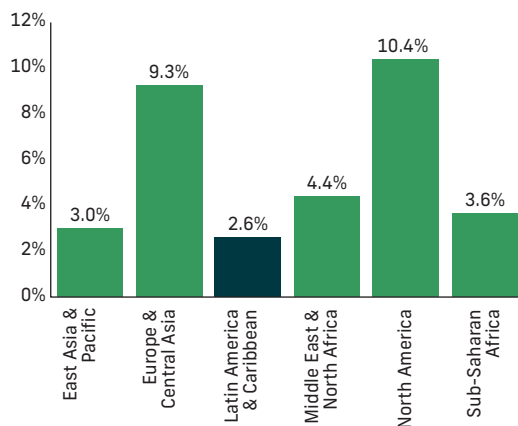
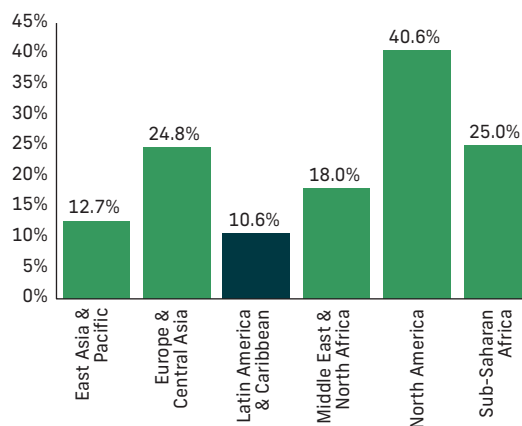
A typical strategy to close the fiscal deficit and put debt on a more sustainable path, especially during bad times, is to increase the rates of key taxes. Such procyclical tax policy behavior is not exclusive to LAC, but rather common in the whole developing world—in sharp contrast with developed countries (Vegh and Vuletin 2015), where tax rates are changed more with an eye to long-term efficiency than responding to fiscal crises (that is, tax policy is a-cyclical).

The most important sources of tax revenue in the LAC region—and in most countries around the world—are value added, individual income, and corporate income taxes. Figures 2.1 to 2.3 show the relevance in revenue

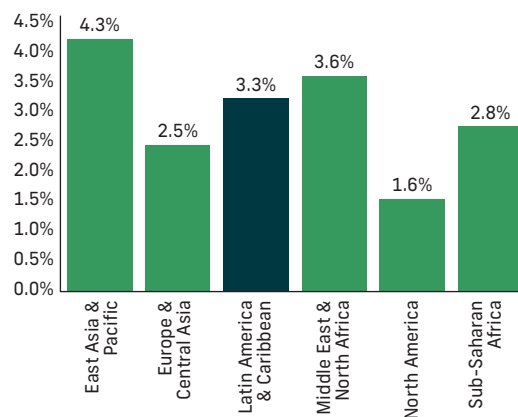
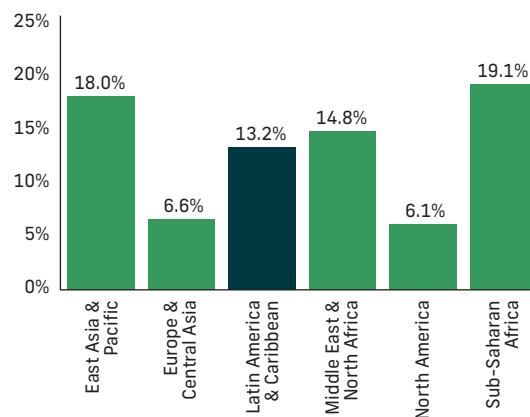
**Figure 2.1. Value Added Tax Collection**



Source: World Bank staff calculations based on Organization for Economic Co-operation and Development (OECD) Global Revenue Statistics Database and World Bank data.  
Note: Country data corresponds to the consolidated government. Regional aggregates are built by weighting country data with their participation in regional GDP.

**Figure 2.2. Individual Income Tax Collection****a. As percent of GDP by region****b. As percent of total revenue by region**

Source: World Bank staff calculations based on Organization for Economic Co-operation and Development (OECD) Global Revenue Statistics Database and World Bank data.  
 Note: Country data corresponds to the consolidated government. Regional aggregates are built by weighting country data with their participation in regional GDP.

**Figure 2.3. Corporate Income Tax Collection****a. As percent of GDP, by region****b. As percent of total revenue, by region**

Source: World Bank staff calculations based on Organization for Economic Co-operation and Development (OECD) Global Revenue Statistics Database and World Bank data.  
 Note: Country data corresponds to the consolidated government. Regional aggregates are built by weighting country data with their participation in regional GDP.

collection of these three types of taxes across regions in the world. Figure 2.1 supports arguments that the weight of the value added tax in LAC is high compared to other regions and has limited potential for further increase, especially considering that its incidence is regressive (Lustig et al. 2014). Figure 2.2 suggests that governments in LAC may be taxing individual incomes relatively modestly. This fact, along with the overall progressive impact, is cited by policy makers to support increasing individual taxes. Figure 2.3 suggests a mixed picture on the corporate income tax, suggesting that while LAC firms are not taxed as heavily as their counterparts in East Asia or the Middle East, revenue collection is substantially higher than in Europe and double that in North America.

Aside from the potential to raise revenue and progressivity, the critical question is how large the negative impact would be of increasing the burden of each of these (or other) tax rates for two reasons. First, cost-benefit analysis of potential reforms needs to integrate their macroeconomic impact (and spillovers). Second, the actual net effect on revenue collection depends on how agents respond to them, captured in the tax elasticity.

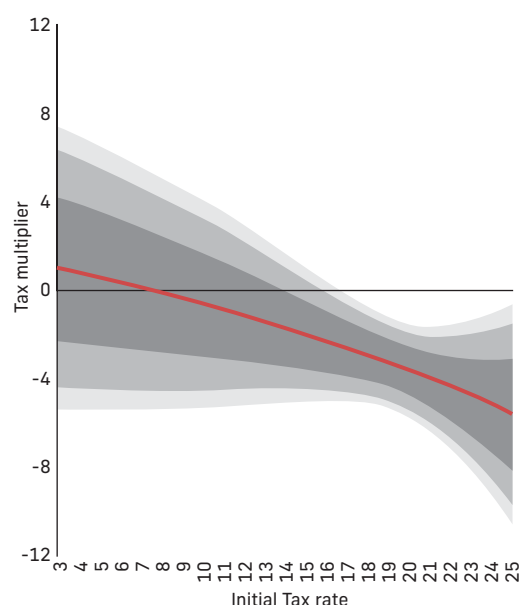
The discussion that follows presents three new sets of evidence for the developing world that inform some of the most heated recent debates. The first part of the discussion presents new evidence on the macroeconomic impact of the value added tax and shows that the initial level of the value added tax crucially affects the macroeconomic outcomes of changing its rate. When value added tax rates are initially low, the effect of tax hikes might be virtually zero, yet the impact grows as the initial tax rate increases. The novel evidence depicted in the second part of the discussion shows that hikes in individual income tax rates in LAC prompt large changes in behavior and, consequently, governments should be careful about raising taxes on this front. Moreover, when focusing on top earners, the marginal tax rates paid in several LAC countries are not so different from those observed, for example, in the United States. Finally, the discussion deals with the corporate income tax and suggests some concerns about pushing for new tax hikes in a region where informality is prevalent and where tax evasion is known to be high.

## To Hike or Not to Hike: A Tale of Two LACs

Evidence from industrial countries, and especially from industrial Europe (such as Alesina, Favero, and Giavazzi 2015), points to large negative tax multipliers in general: that is, as taxes increase economic activity (measured by GDP) decreases, and vice versa. However, a more global sample suggests that the negative impact of the income tax is highly nonlinear, increasing with the tax burden. This finding is in line with theoretical arguments (such as Jaimovich and Rebelo 2017) exploring the distortionary effect of taxes and their capacity to act as disincentives to work, invest, and innovate. Hence, the large negative tax multipliers in industrial countries may simply represent their high initial tax rates.

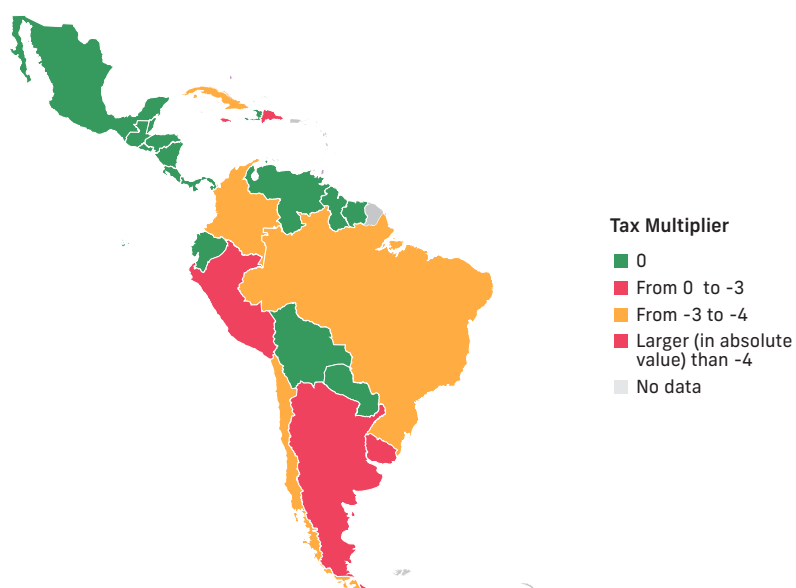
Recent evidence from Gunter et al. (2021) for the value added tax that includes Latin America shows the same pattern: The tax multiplier is essentially zero under relatively low initial tax rate levels but becomes progressively more negative as the initial tax rate increases (see figure 2.4). Map 2.1 suggests that several countries in Central America and the Caribbean, as well as in low-tax countries such as Bolivia and Paraguay, could probably raise the VAT with relatively little depressive effect on growth, while the same tax hike would cause output to fall in countries with relatively high rates, including Argentina and Uruguay.

**Figure 2.4. The Initial Tax Rate Is Important in Determining the Depressive Effect on Growth of Raising Value Added Taxes**



Source: Gunter et al. 2021.  
Note: VAT = value added tax.

**Map 2.1. There Is Room to Increase Value Added Taxes in LAC Countries with Low Initial VAT Rates**

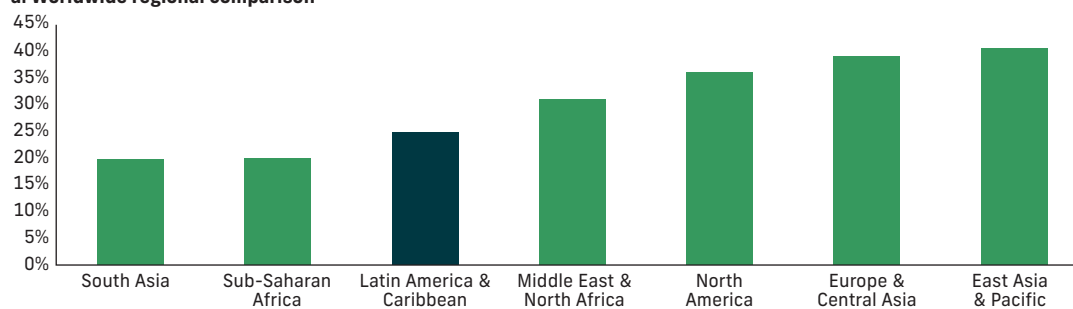


Source: Gunter et al. 2021.

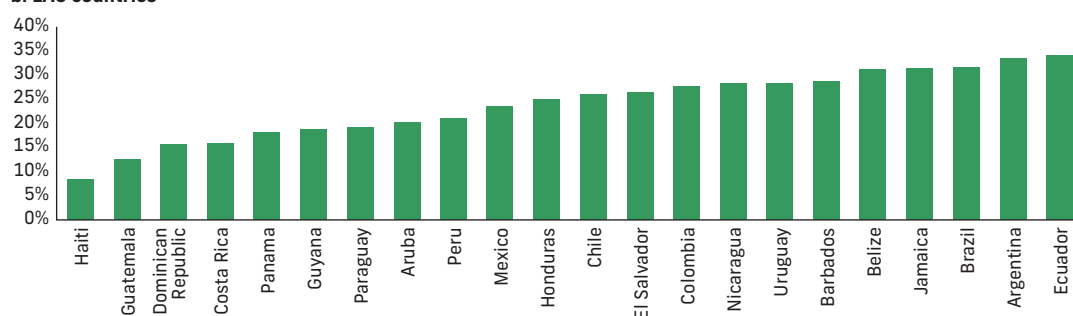
Note: Higher negative values suggest a greater depressive effect on growth of an increase in the value added tax.

**Figure 2.5. Fiscal Revenues (as percent of GDP)**

**a. Worldwide regional comparison**



**b. LAC countries**



Source: World Economic Outlook (IMF).

Note: Panel B excludes ECCB countries.

The findings of nonlinearities in income taxes in a global sample, and the VAT in LAC, also suggest that such effects might occur in aggregate revenues as well. Figure 2.5 offers therefore a very crude view of where LAC may be in terms of the potential for tax revenues before large negative growth effects kick in. It is immediately clear that the region is extremely varied in terms of tax burdens and the levels of taxation. Many Central American and Caribbean countries (such as Costa Rica, Dominican Republic, Guatemala, and Haiti) collect revenues for about 15 percent of GDP. In contrast, some South American countries (such as Argentina and Ecuador) collect about twice that percentage and are closer to industrial-country levels; they would thus have less room to raise revenues without a negative impact on growth. It is also important to note that overall fiscal revenues also vary across countries depending on the prevalence of public based pension systems. For example, unlike most LAC countries which have public pension funds financed in a pay as you go manner, since 1980 Chile mostly relies on a fully funded capitalization system. In practice, of course, the effects on both growth and equity would depend on which instruments are raised.

## Possible Impacts of an Increase in Individual Income Taxes

The relatively low incidence of individual income taxation in the region, and its likely progressiveness, have moved taxation of top earners to center stage and hence merits special focus here. However, lack of access to administrative data in the region has meant relatively little research to date on how the targeted top earners—including the most successful entrepreneurs and business people—will respond to higher individual taxes. Their response will affect the actual collection of resources as well as their willingness to invest and engage in productive activities (e.g., Jaimovich and Rebelo 2017).

A first step to start understanding such behavioral responses is to estimate the so-called elasticity of taxable income (ETI) for LAC, which measures the aggregate income response to net-of-tax rate changes.

As discussed in a recent work titled “The Income and Labor Effects of Individual Income Tax Changes in Latin America: Evidence from a New Measure of Tax Shocks” (Riera-Crichton, Venturi, and Vuletin 2022), most of the existing knowledge on the ETI comes from studies based in the United States (and to a lesser extent from other advanced economies). Short-term ETI estimates for the United States range from 0.02 (Saez 2004) to 1.2 (Mertens and Montiel-Olea 2018). While a 0.02 ETI estimate suggests that income is virtually unaffected by changes in the tax rate, a 1.2 ETI estimate points to a more than proportional response of income to net-of-tax changes. However, little is known about ETI estimates in the developing world due to the unavailability of data series on the average marginal individual income tax rate (AMITR), reflecting limited access to administrative data on tax returns and the individuals’ reported income on those returns. In a recent World Bank study, Riera-Crichton, Venturi, and Vuletin (2022) build AMITR series for six countries in South America—Argentina, Brazil, Colombia, Ecuador, Paraguay, and Peru, and for comparison, for the United States. They rely on the statutory individual income tax code (established in different laws, decrees, and regulations) and, crucially, on individuals’ reported income in household survey datasets. They then identify exogenous and unanticipated tax shocks and study their impact.<sup>2</sup> Several important findings merit highlighting.

LAC’s individual income burden, as measured by the average margin individual income tax rate (AMITR), is relatively low due to low coverage, rather than low rates on top earners.<sup>3</sup> Row 1 in table 2.1 shows that the AMITR is much lower in the sample of six South American countries (at 5.8 percent) than in the United States (at 24.1 percent). Paraguay, which introduced the tax only in 2012, is lowest (at 1.1 percent), while Brazil is highest (at 9.3 percent).<sup>4</sup> However, these relatively low levels of AMITR do not reflect low marginal rates, but rather that a vast majority of individuals face a zero marginal rate.<sup>5</sup>

**Table 2.1. Basic AMIITR Statistics Using a Pooled Regional-Year Sample for Argentina, Brazil, Colombia, Ecuador, Paraguay, Peru, and the United States**

	Argentina					Brazil				
	Mean	SD	CV	Min	Max	Mean	SD	CV	Min	Max
1. All sample	5.4	5.2	1.0	0	27.7	9.3	2.4	0.3	2.0	19.8
2. Lowest 20%	0.02	0.1	3.2	0	0.7	0	0	0	0	0
3. Second 20%	0.03	0.1	2.5	0	1.0	0	0	0	0	0
4. Third 20%	0.11	0.4	3.3	0	2.5	0	0	0	0	0
5. Fourth 20%	1.2	3.2	2.7	0	15.7	0	0	0	0	0
6. Top 20%	11.1	8.8	0.8	0	32.6	16.4	2.3	0.1	3.8	23.8
7. Bottom 90%	1.4	2.7	1.9	0	17.4	0.3	0.3	0.9	0.0	1.3
8. Top 10%	15.1	10.4	0.7	0	34.9	21.7	2.0	0.1	7.8	25.7
9. Top 1%	23.7	11.1	0.5	0	35.0	27.3	0.8	0.0	25.0	29.8
10. Top 10-2%	12.7	10.8	0.8	0	34.8	19.6	2.2	0.1	7.8	24.4

	Colombia					Ecuador				
	Mean	SD	CV	Min	Max	Mean	SD	CV	Min	Max
1. All sample	5.0	1.9	0.4	1.7	12.1	4.7	2.5	0.5	0.7	16.2
2. Lowest 20%	0	0	0	0	0	0	0	0	0	0
3. Second 20%	0	0	0	0	0	0	0	0	0	0
4. Third 20%	0	0	0	0	0	0	0	0	0	0
5. Fourth 20%	0	0	0	0	0	0	0	0	0	0
6. Top 20%	10.3	2.4	0.2	5.0	17.7	8.9	3.9	0.4	1.6	26.0
7. Bottom 90%	0	0	0	0	0	0.3	0.5	1.7	0.0	3.6
8. Top 10%	14.94	2.5	0.2	9.4	22.1	12.1	4.5	0.4	2.6	29.7
9. Top 1%	30.4	0.8	0.0	28.0	32.5	21.3	5.7	0.3	8.6	34.0
10. Top 10-2%	10.0	1.6	0.2	5.6	14.9	8.2	3.6	0.4	0	15.0



**Table 2.1. Basic AMIITR Statistics Using a Pooled Regional-Year Sample for Argentina, Brazil, Colombia, Ecuador, Paraguay, Peru, and the United States (continued)**

	Paraguay					Peru				
	Mean	SD	CV	Min	Max	Mean	SD	CV	Min	Max
1. All sample	1.1	1.0	0.9	0.1	4.7	3.7	1.8	0.5	0	10.4
2. Lowest 20%	0	0	0	0	0	0	0	0	0	0.0
3. Second 20%	0	0	0	0	0	0.002	0.01	4.9	0	0.1
4. Third 20%	0	0	0	0	0	0.003	0.02	5.1	0	0.2
5. Fourth 20%	0	0	0	0	0	0.005	0.02	3.9	0	0.2
6. Top 20%	1.8	1.4	0.8	0.3	6.2	7.5	2.6	0.3	0	13.4
7. Bottom 90%	0	0	0	0	0	0.06	0.1	2.4	0	1.0
8. Top 10%	2.3	1.5	0.6	0.4	6.9	11.2	3.3	0.3	0	18.6
9. Top 1%	6.0	1.8	0.3	2.5	9.1	17.0	2.6	0.2	4.7	26.0
10. Top 10-2%	0	0	0	0	0	9.5	3.5	0.4	0	15.0

	United States				
	Mean	SD	CV	Min	Max
1. All sample	24.1	2.4	0.1	19.5	37.8
2. Lowest 20%	6.8	1.4	0.2	2.0	10.7
3. Second 20%	14.7	0.9	0.1	12.9	18.7
4. Third 20%	19.3	1.7	0.1	16.6	27.0
5. Fourth 20%	24.0	2.6	0.1	19.5	37.0
6. Top 20%	31.6	4.1	0.1	26.6	50.3
7. Bottom 90%	21.2	2.0	0.1	17.5	29.8
8. Top 10%	33.6	5.0	0.1	27.9	53.2
9. Top 1%	38.5	6.3	0.2	28.0	63.4
10. Top 10-2%	32.4	4.9	0.2	27.2	48.3

Source: Riera-Crichton, Venturi, and Vuletin 2022.

Note: AMIITR = average marginal individual income tax rate; CV = coefficient of variation; Max = maximum; Min = minimum; SD = standard deviation.

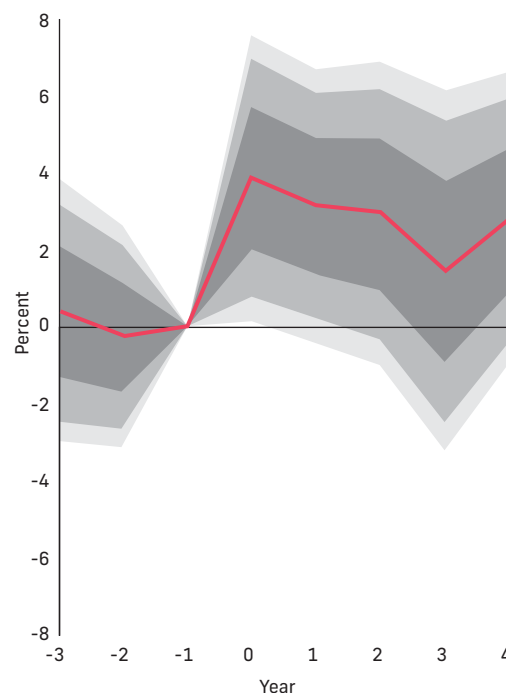
Rows 2 to 6 split the income distribution of each country by quintiles and show that the individual income tax is concentrated in the top 20 percent of the income distribution in all six South American countries, with the exception of Argentina (even though the AMIITR paid by the four lowest quintiles is significantly lower than the AMIITR of the top 20 percent) and to a lesser extent Peru. This contrasts with the United States, where even the first quintile is reached in a quantitatively relevant manner. Moreover, rows 7 and 8 show that it is primarily individuals in the top 10 percent of the income distribution of these countries who pay. While the top 10 percent to bottom 90 percent AMIITR ratio is about 1.6 in the United States, it is 193 in Peru, 77 in Brazil, 38 in Ecuador, and 11 in Argentina. It is not defined (because the mean AMIITR of the bottom 90 percent is zero) in Colombia and Paraguay. Looking at the top 1 percent (row 9), the AMIITR in most of the sample, with the exception of Paraguay, is almost at the level of United States (36.9 percent): it is 30.4 percent in Colombia, 27.3 percent in Brazil, 23.7 percent in Argentina, and 21.3 percent in Ecuador, and 17 percent in Peru. Hence, it is unclear that there is a large untapped top 1 percent. Aligning the Latin American sample's AMIITR with that of the United States would require expanding the income tax further down the income distribution.

There is large variation in income tax across regions. Map 2.2 shows that the heterogeneity in subnational incomes maps to corresponding substantial variation in the AMIITR. Hence, not only is the income tax more progressive by design, but it also contributes to potential transfers of resources across geographical areas at the subnational level.

The effects of higher individual income taxation on growth are larger in LAC than in the United States. In contrast to the maximum short-term ETI estimates of 1.2 noted for the United States, Latin America shows estimates double that, at 2.5.<sup>6</sup> Figure 2.6 shows the response of the cumulative pretax income to an exogenous and unanticipated net-of-tax AMIITR shock at different time horizons (evaluated at the country level).

Part of this effect appears to come through the labor market channel. Riera-Crichton, Venturi, and Vuletin (2022) also study how individual income taxes distort labor decisions, on both the extensive and the intensive margins, as well as labor market informality. Figure 2.7 presents the results. Panel a shows that, on the extensive margin front, labor force participation increases (decreases) both in the short and long term in response to a net-of-tax AMIITR hike (fall). This positive response is driven by the behavior of both employed people (see panel c) and unemployed people (see panel d). Interestingly, while the positive response of employment occurs on impact, it takes a little longer for unemployment to respond intensively. For these reasons, the unemployment rate responds weakly in the first year (see panel e), but positively since the second year after the tax shock. On the intensive margin front, there is a long-lasting positive response in the weekly hours worked per worker (see

**Figure 2.6. Country-level Response of Pretax Income to an Exogenous and Unanticipated Net-of-Tax AMIITR Shock Driven Solely by Legislated Tax Changes**



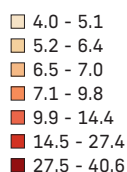
Source: Riera-Crichton, Venturi, and Vuletin 2022.

Note: Dark, medium, and light grey areas show 68 percent, 90 percent, and 95 percent confidence intervals, respectively. AMIITR = average marginal individual income tax rate.

**Map 2.2. Share of Top 10 Percent of Taxpayers per Region in Each Country**

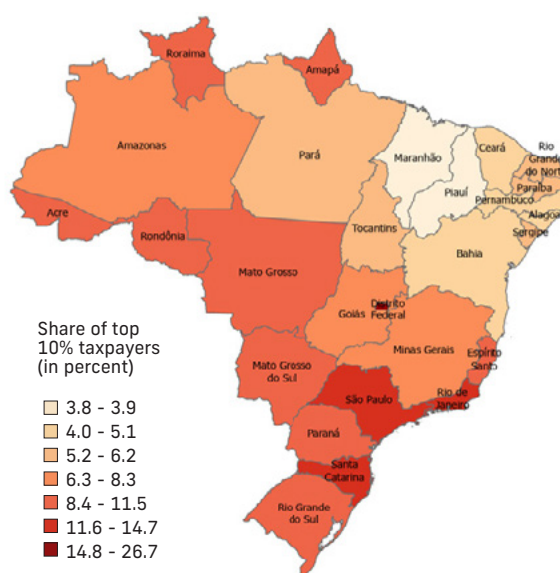
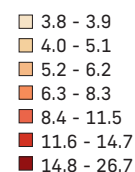
**a. Argentina<sup>a</sup>**

Share of top 10% taxpayers (in percent)



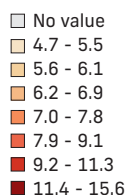
**b. Brazil**

Share of top 10% taxpayers (in percent)



**c. Colombia<sup>b</sup>**

Share of top 10% taxpayers (in percent)



**d. Ecuador**

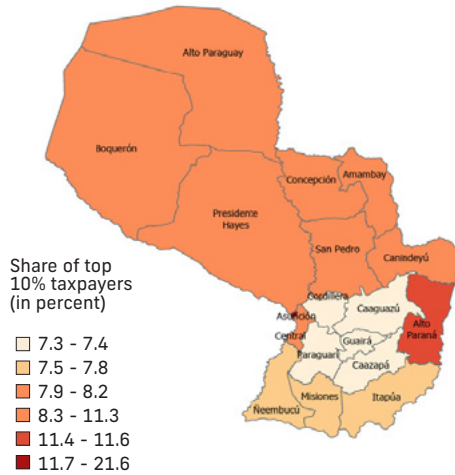
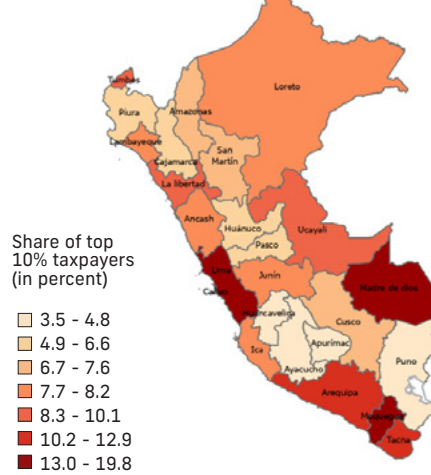
Share of top 10% taxpayers (in percent)



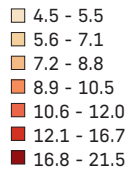
Source: Riera-Crichton, Venturi, and Vuletin 2022.

a. For Argentina, because household surveys are representative solely of urban areas and, in some cases, there is more than one urban area surveyed in the same province, the value assigned to each province in the map is a population-weighted average of the share of top 10 percent taxpayers of the urban areas belonging to each province. The share of urban to total population in Argentinean provinces ranges between 74 percent (in Misiones) and 100 percent (in Ciudad de Buenos Aires).

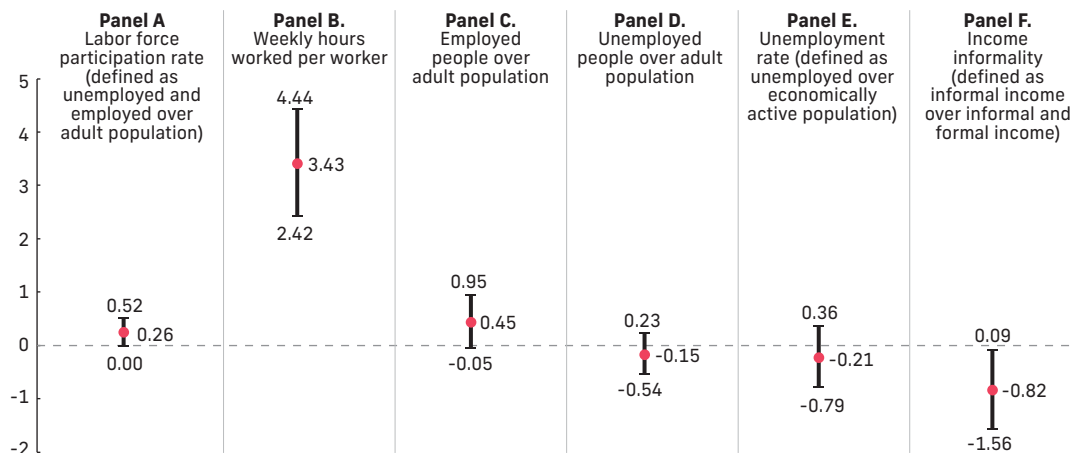
b. For Colombia, the white regions are not included in the country's household survey. These excluded regions only represent 3 percent of Colombia's total population.

**Map 2.2. Share of Top 10 Percent of Taxpayers per Region in Each Country (continued)****e. Paraguay****f. Peru****g. United States**

Share of top 10% taxpayers (in percent)



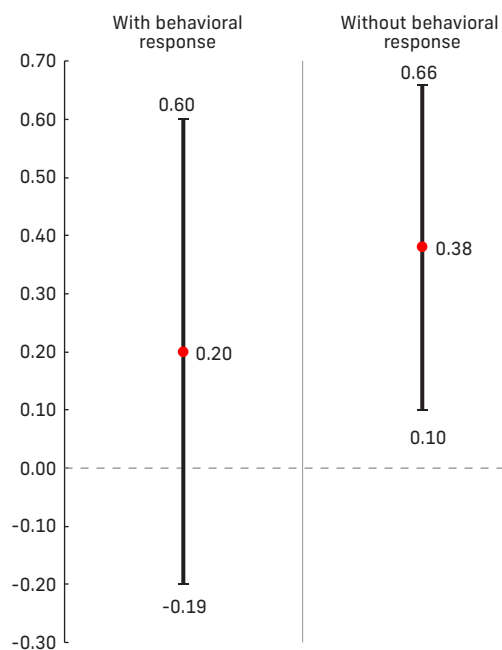
Source: Riera-Crichton, Venturi, and Vuletin 2022.

**Figure 2.7. Changes in Labor Market Extensive and Intensive Margin Variables after One Year of a One Percent Net-of-Tax AMIITR Increase**

Source: Riera-Crichton, Venturi, and Vuletin 2022.

Note: AMIITR = average marginal individual income tax rate.

**Figure 2.8. Country-Level Impact Response of Individual Income Tax Revenues to Exogenous Unanticipated AMIITR Changes**



Source: Riera-Crichton, Venturi, and Vuletin 2022.  
Note: AMIITR = average marginal individual income tax rate.

panel b). In sum, as predicted by simple labor market models, the evidence supports that hikes (cuts) in the individual income tax reduces (increases) the willingness to work both on the extensive and on the intensive margins. After short-term fluctuations (see panel f), labor informality also increases (falls) following hikes (cuts) in the individual income tax rate.

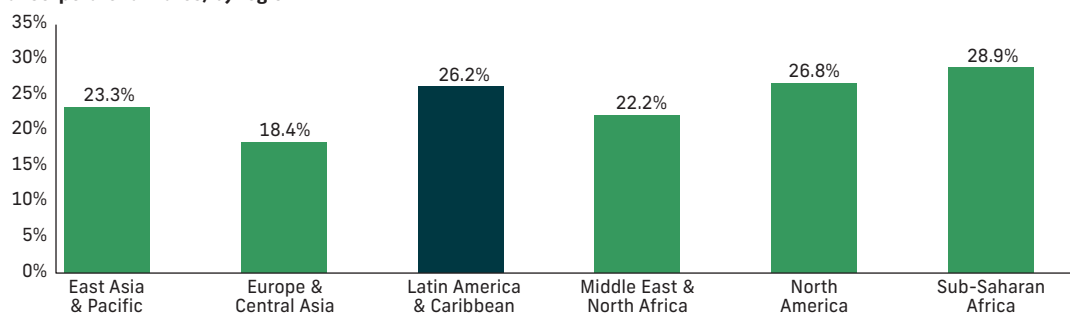
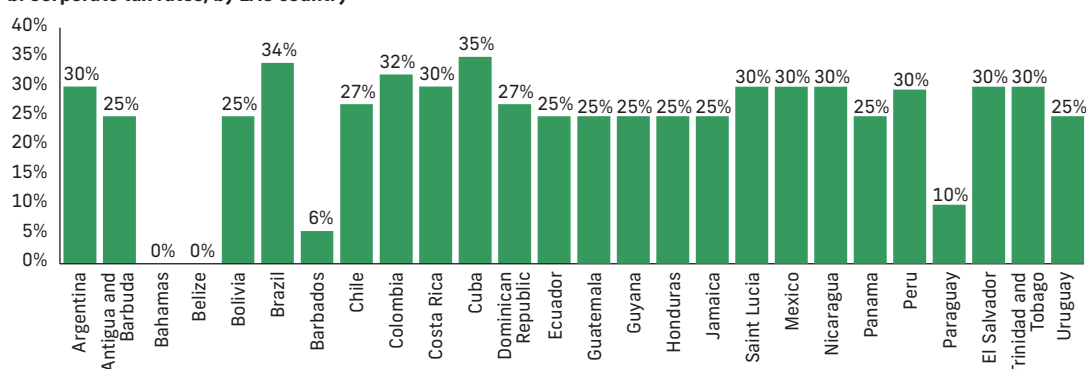
**Policy implications for revenue collection.** These effects, in turn, generate offsetting revenue effects that are usually not incorporated in micro simulations that assume no behavioral responses. As figure 2.8 shows, when these responses are considered, the impact on revenues of a one percentage point increase in AMIITR (0.2) is roughly half that in simple models (0.38) and, potentially is statistically indistinguishable from zero. Preliminary work also suggests that as in theoretical work by Jaimovich and Rebelo (2017), business people tend to be concentrated at the top of the income distribution, which may suggest that other possible mechanisms are at work beyond the labor market response. A rise in AMIITR that allowed for broadening the base might have different effects. In fact, the United States broadened the tax base of the individual income tax after World War 2.

## Corporate Income Taxes: High Tax Rates, Moderate Compliance

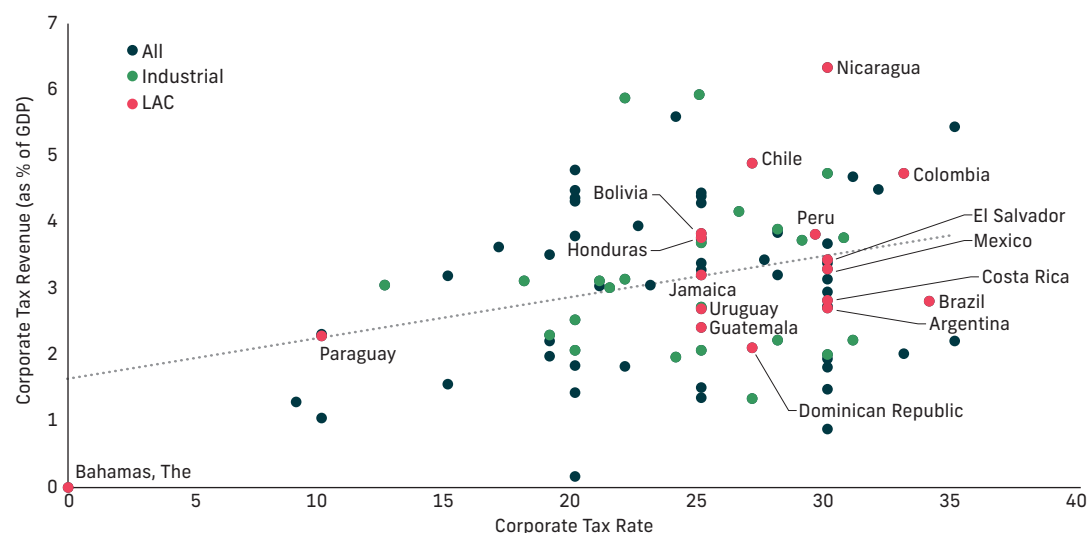
Corporate tax revenues in LAC are higher than in the advanced countries, but below some other regions (see panel a of figure 2.9). Yet, individual LAC countries rank quite high in terms of the average *level* of the corporate tax rate when compared to other country groups (see panel b in figure 2.9).

In terms of the impact of corporate taxes on growth, the literature typically focuses on the US or OECD countries and reports mixed evidence. While some studies point to substantial and robust positive growth effects of corporate tax cuts (e.g. Arnold et al., 2011; Lee and Gordon, 2005; Mertens and Ravn, 2013), others report significantly negative, insignificant or at least mixed results (e.g. Angelopoulos et al., 2007; Widmalm, 2001; Gale et al., 2015; Ten Kate and Milionis, 2019).

A resolution to these seemingly contradictory stylized facts is offered in figure 2.10, which shows that many countries in LAC tend to collect (as percent of GDP) less than other countries for a given level of corporate tax rate. In two-thirds of the LAC sample the revenue collected by the corporate tax is less than expected (that is, is below the worldwide-based fitted line). This “inefficiency” in tax collection is driven by well-known sources such as tax evasion and large levels of informality (see figure 2.11).

**Figure 2.9. Standard Corporate Tax Rates by World Region and LAC Country****a. Corporate tax rates, by region****b. Corporate tax rates, by LAC country**

Source: World Bank staff calculations based on Organization for Economic Co-operation and Development (OECD) Global Revenue Statistics Database and KPMG data.  
 Note: LAC = Latin America and the Caribbean.

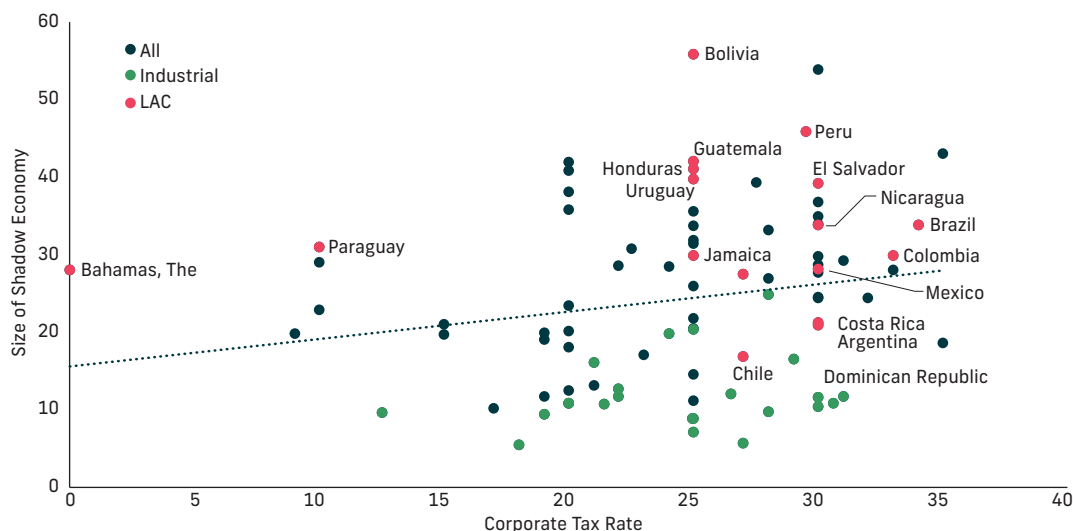
**Figure 2.10. Many LAC Countries Tend to Collect Less (as a Percent of GDP) than Other Countries for Given Levels of Tax Rates**

Source: World Bank staff calculations based on KPMG (for the corporate tax rate) and Organization for Economic Co-operation and Development (OECD) Global Revenue Statistics Database (for the corporate tax revenue).

Note: LAC = Latin America and the Caribbean; Industrial = Countries that acquired OECD membership by 1980, with a population of at least 1 million.



**Figure 2.11. Many LAC Countries Tend to Have Larger Levels of Informality than Other Countries for Given Tax Rates**



Source: World Bank staff calculations based on KPMG (for the corporate tax rate) and Medina and Schneider 2018 (for the size of the shadow economy).  
Note: LAC = Latin America and the Caribbean; Industrial = Countries that acquired OECD membership by 1980, with a population of at least 1 million.

While some recent policy discussions have advocated a hike in the corporate tax rate, if rates rise, these leakages in tax collection could potentially become more severe. Clearly, an argument can be made for tighter enforcement to reduce such evasion, although it is possible that the only reason the very high corporate tax does not meet more resistance is precisely because a certain amount of evasion is feasible. Therefore, reducing the evasion (even if possible, or at what cost) could, in principle, lead to decreases in output. Moving toward a “cleaner” system might involve increased compliance with reduced rates.

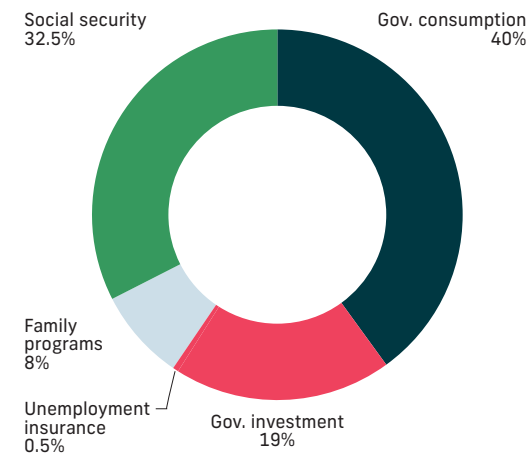
## Toward More Effective Public Spending

Governments can also conduct fiscal adjustment using spending more effectively by cutting spending with perceived low economic or social returns. These efforts have the additional advantage of offering an entry point for reforms oriented toward creating a more efficient and responsive state.

Not all public spending is created equal in its growth or equity impacts. Efficient cost savings require going beyond “Big G” aggregate spending to a finer level of disaggregation. Figure 2.12 shows the largest components of primary public spending in a typical emerging market. A widely used decomposition of primary public spending (total spending excluding interest payments) separates spending elements that are directed by legal mandate (automatic spending) from those that are left at the discretion of the current government (discretionary spending). The two main types of automatic spending are spending on social transfers and on unemployment insurance. Social transfers, in turn, are divided between social security—mainly covering the elderly with pensions or disability benefits—and family support programs. Theoretically, spending on social transfers depends on structural parameters such as poverty levels or demographics. Discretionary spending consists mainly of public consumption, which covers costs associated with the provision of public goods and services, including government purchases of intermediate goods and services, payment of public wages, and public investment.

The discussion that follows presents three recent sets of empirical findings that speak to the most heated recent debates about making fiscal adjustments by reducing spending across these categories. The first set deals with the effects of cutting public investment, a common way of adjusting in many countries in LAC. The findings reveal that this type of spending cut is particularly harmful to economic activity, especially in terms of medium-term economic growth. The second set deals with the effect of cutting social transfers (both to families and to social security schemes). The findings show that this type of regressive cut is also recessive in the short term because the most vulnerable people in the region live hand-to-mouth. The third set of findings shows how reducing large government waste and inefficiencies could provide a “cost-less” way to adjust, which could also help governments regain people’s trust.

**Figure 2.12. Composition of Government Spending in Emerging Markets**



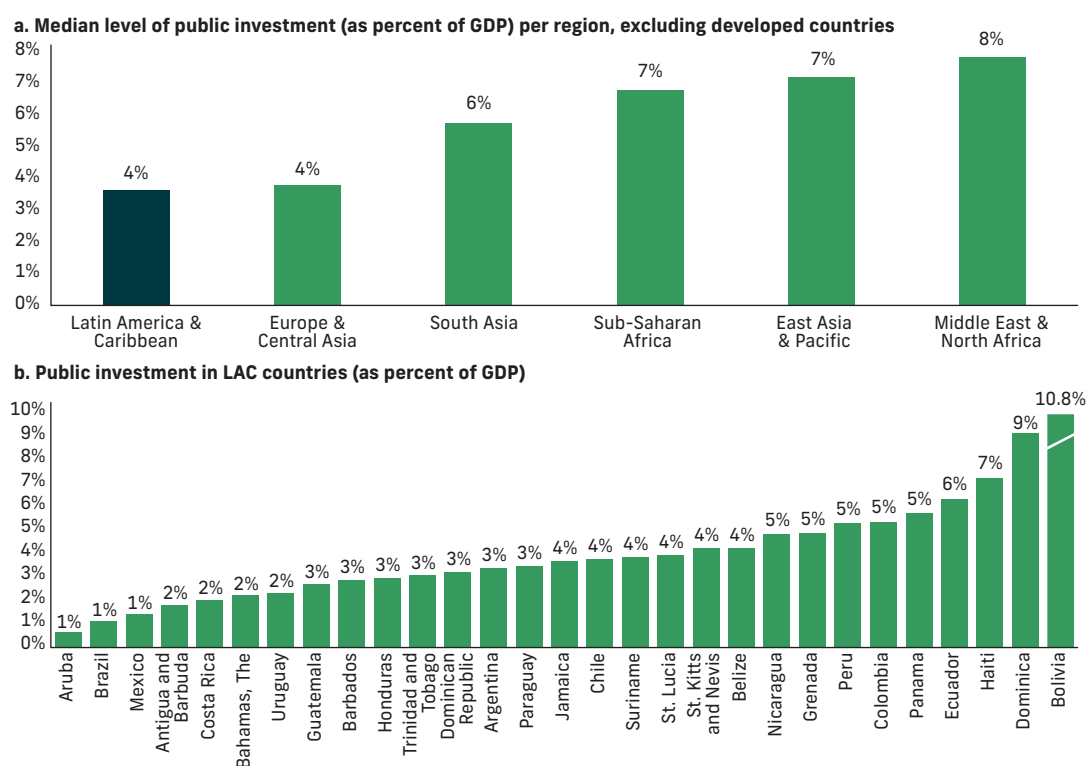
Source: Riera-Crichton and Vuletin 2022

## Cutting Public Investment: An Easy Fix with Dire Long-lasting Growth Consequences

Reducing public investment is a popular manner to implement fiscal adjustments in LAC. About 40 percent of spending-based fiscal adjustments in LAC rely primarily on cutting public investment (Balestrini et al. 2022), even though LAC has the lowest share of public investment among developing country regions (see panel a in figure 2.13) and the level of public investment varies considerably across LAC countries (see panel b in figure 2.13).

During bad times, public investment may seem to be an easy target to cut due to its more flexible nature and its lack of an effective constituency—the beneficiaries are often far in the future. That is to say, cutting public investment, especially in bad times, may prove to be more politically palatable than cutting current expenditures because the costs of cutting investment are harder for voters to perceive.

However, cutting public investment can have sizable costs in terms of depressing long-term growth (Izquierdo et al. 2019). Public investment not only stimulates aggregate demand but also improves productivity in the private sector. Unlike government consumption, public investment directly improves the economy’s productive capacity by increasing the marginal product of private capital and labor. As time progresses, this generates positive effects and synergies on both private investment and private consumption. Moreover, and by the same classical type of arguments, the lower the initial stock of public capital, the larger the output effects of increasing public investment. Specifically, when the initial stock of public capital is low, as is the case in LAC, the marginal productivity of an additional unit of public investment is large. Aided by additional private investment, this public investment will lead to higher public investment multipliers. Figure 2.14 shows these mechanisms at work when the initial stock of public capital is high (panels a.1, b.1, and c.1) or low (panels a.2, b.2, and c.2).

**Figure 2.13. Public Investment in Developing Countries around the World**

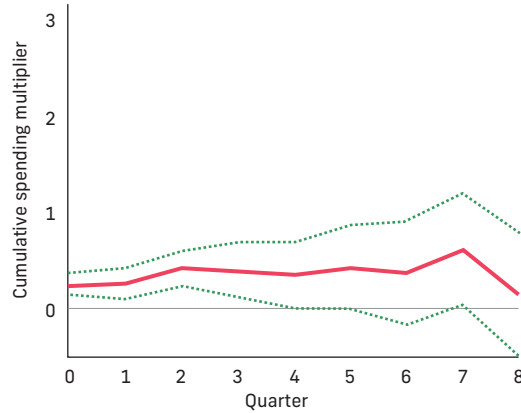
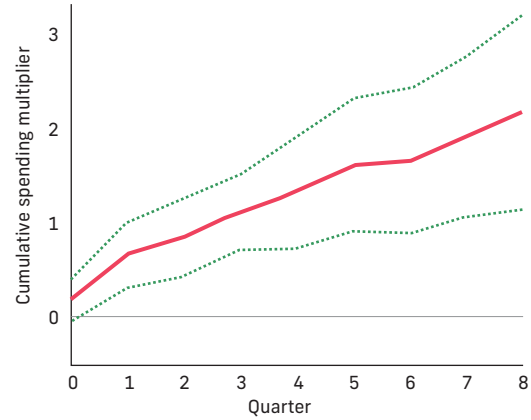
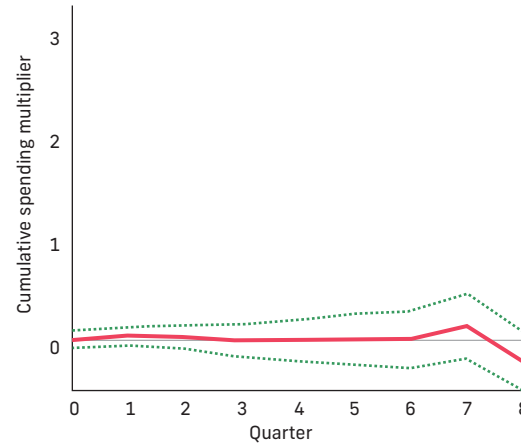
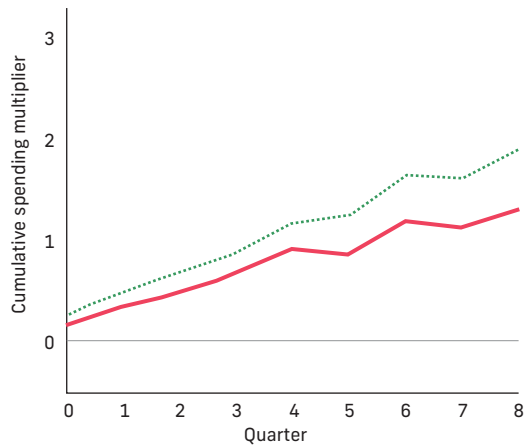
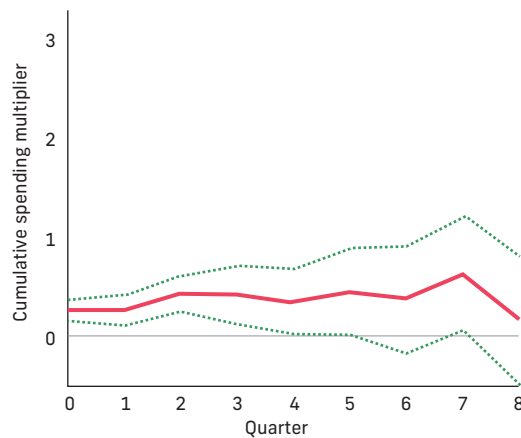
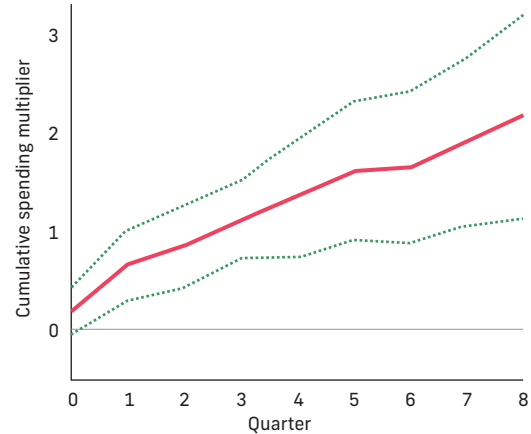
Source: World Bank staff calculations.

Extrapolated estimates of public investment multipliers around the world support the finding that LAC has large infrastructure gaps, on average (map 2.3), and, consequently, large potential returns to public investment.

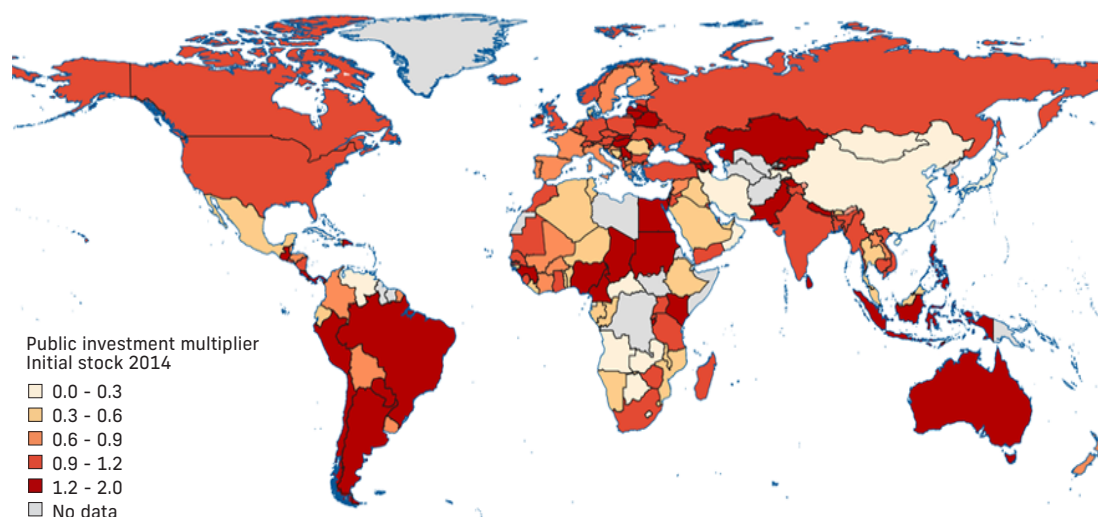
The relevance of public investment as a driver of economic growth also works within countries. For example, evidence from Argentinean provinces focusing on a particular type of public investment—paved highways—(Izquierdo et al. 2019) also shows how public investment can have powerful multipliers initially and evolve dynamically over time (see map 2.4).

The province of Buenos Aires, which accounts for about 40 percent of Argentina's GDP and experienced an almost threefold increase in GDP in the 50 years from 1964 to 2014, barely expanded its stock of paved highways (with less than a 10-percent increase from 4,300 km in 1964 to about 4,700 km in 2014). For this reason, its public investment multiplier almost doubled from 0.80 to 1.50 during this period. In contrast, the province of La Rioja experienced an almost fivefold increase in its stock of paved highways. As a result, its public investment multiplier fell from 1.62 to virtually zero.

Both economic theory and empirical evidence support a powerful conclusion. Given the large potential returns to both labor and private capital given LAC's large infrastructure gaps the temptation to balance budgets by deferring public investment should be resisted.

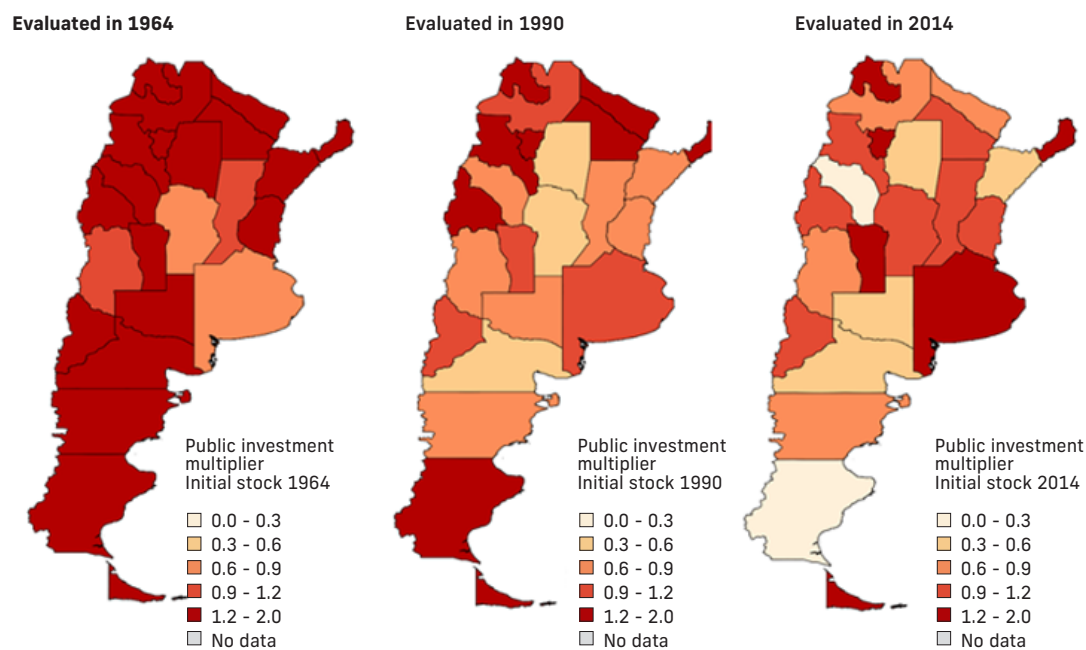
**Figure 2.14. Public Investment Multipliers****Panel A: Effect on GDP, evaluated at high ratio of initial stock of public capital to GDP****Panel D: Effect on GDP, evaluated at low ratio of initial stock of public capital to GDP****Panel B: Effect on private consumption, evaluated at high ratio of initial stock of public capital to GDP****Panel E: Effect on private consumption, evaluated at low ratio of initial stock of public capital to GDP****Panel C: Effect on private investment, evaluated at high ratio of initial stock of public capital to GDP****Panel F: Effect on private investment, evaluated at low ratio of initial stock of public capital to GDP**

**Map 2.3. Estimates of Public Investment Multipliers around the World**



Source: Izquierdo et al. 2019.

**Map 2.4. The 50-Year Evolution of the Public Investment Multipliers for Argentinean Provinces**



Source: Izquierdo et al. 2019.

## Cutting Transfers to the Most Vulnerable People (Including Pensioners)

Another common target for reductions, especially during inflationary times, are social transfers, mostly those related to social security and pensions (Galeano et al. 2021; Balestrini et al. 2022). This type of spending is quite rigid in industrial countries in real terms (after inflation) because it is indexed automatically to inflation. In many developing countries, however, automatic price-based formula indexation mechanisms in pensions are absent (map 2.5). This lack, combined with moderate to high inflation, makes this source of fiscal adjustment tempting for many governments given the large share of pensions in total spending.

This type of fiscal adjustment is largely regressive in LAC because most pensioners in the region have very low incomes, unlike in many industrial countries. Moreover, the negative impact on economic activity of cuts in social transfers is high in the short term because social transfer multipliers are quite large in LAC (Bracco et al. 2021). This is primarily because a large share of the population lives hand-to-mouth (see figure 2.15). Lacking savings or access to credit, these individuals and households are unable to smooth consumption by tapping savings or borrowing through financial markets. They thus consume the vast majority of the transfers. While the share of individuals living hand-to-mouth is around 23 percent in industrial countries and 48 percent in emerging economies, it reaches about 60 percent in LAC.

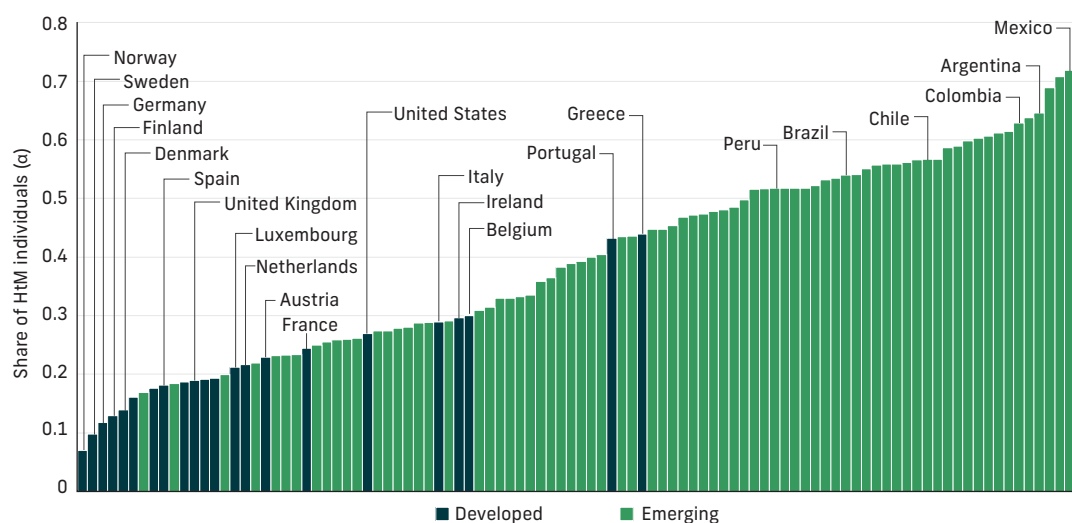
While pension reforms are certainly needed in many parts of the developing world—crucially, extending the retirement age, monitoring the destination and quantity of noncontributory pensions, and generally attending to their often regressive nature—inflation is a crude adjustment across the board that can potentially push many marginal households into poverty.

**Map 2.5. Existence of Automatic Price-based Formula Indexation Mechanisms in the World circa 2019**



Source: Galeano et al. 2021.



**Figure 2.15. Share of Individuals Living Hand-to-Mouth in Developed and Emerging Countries (Percent of population)**

Source: Bracco et al. 2021.

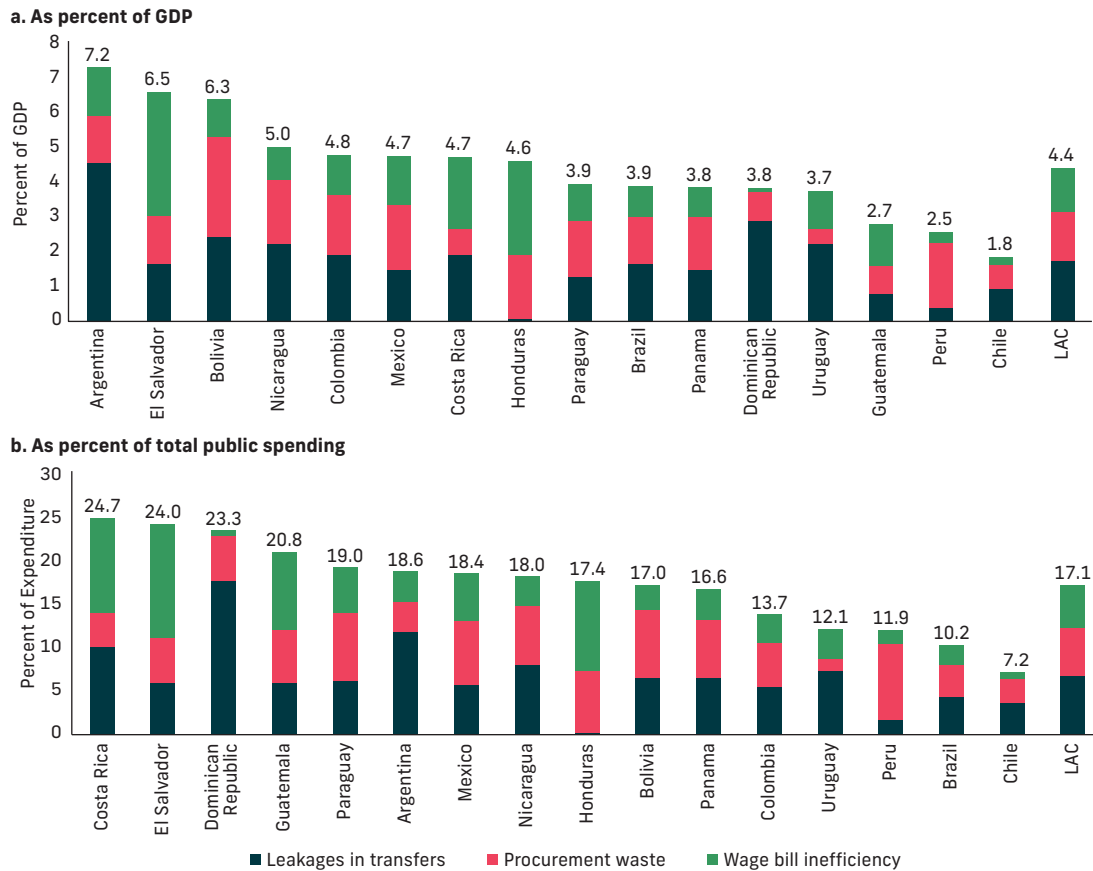
## Cutting Waste and Inefficiencies: A “Cost-less” Way to Regain People’s Trust?

As discussed in several media, policy, and research outlets, there is substantial waste and inefficiency in public current spending in LAC that could, in theory, be redirected to priorities with higher economic or social return. As shown in figure 2.16, while the sizes of leakages in transfers, procurement waste, and wage bill inefficiencies vary across countries, they are quite large. In fact, while these waste and inefficiency figures are calculated for 2018, one would expect them to be currently even larger as increases in oil and other commodity prices have raised the burden of subsidies in the region. They represent, on average, about 4 percent of GDP (panel a) and 17 percent of total public spending (panel b)

**Cutting waste and inefficiencies as a significant source of fiscal adjustments.** Notoriously, for most countries in LAC, the estimated monetary cost of these three key sources of government waste and inefficiencies is equivalent to a substantial share of recent public deficits. While the shares vary widely across countries in LAC, in two-thirds of LAC countries sampled, money linked to these sources of government waste and inefficiencies could be more than enough to cover the equivalent of their overall fiscal deficit for 2021 (see figure 2.17). Therefore, it seems sensible to increase efforts to reduce this type of waste in public spending—for instance, by enhancing the transparency, control, and law enforcement mechanisms, including the crucial role played by the judiciary system.

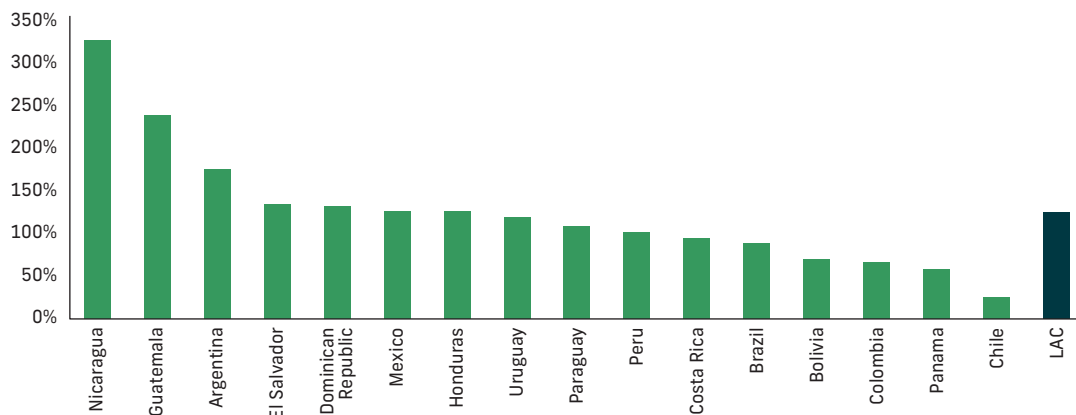
**A “cost-less” type of fiscal adjustment.** Unlike other types of fiscal adjustment, cutting waste and inefficiencies does not seem to have much negative impact on the macroeconomy. Figure 2.18 tests whether there is a difference in the returns to public consumption among the most and least efficient economies. It compares spending multipliers for the most efficient (panel a) and least efficient (panel b) countries around the world, categorized using an index derived from the World Economic Forum measures of institutional quality. Efficient economies see relatively large and persistent gains to public consumption. The least efficient economies see no gains at all; the spending multipliers are statistically indistinguishable from 0. That is, inefficient spending

**Figure 2.16. Cost of Waste and Inefficiencies in Public Spending in LAC as a Percent of GDP and Government Expenditures**

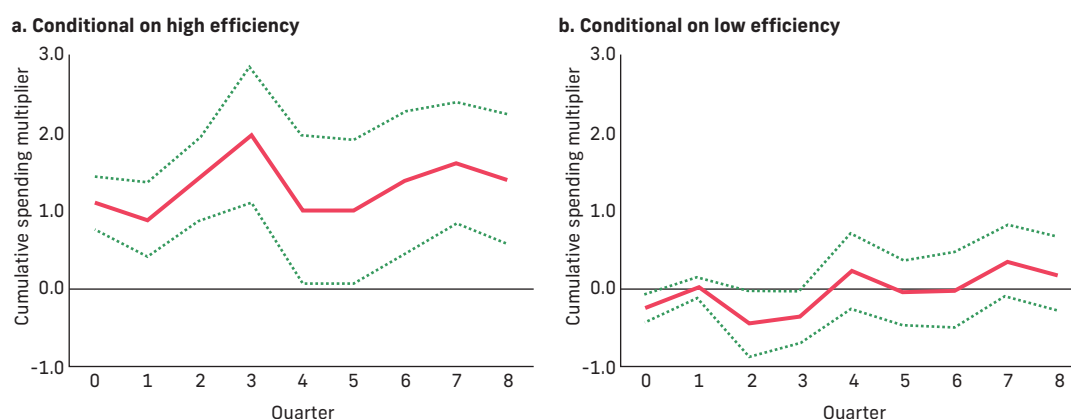


Source: Panel a: Izquierdo, Pessino, and Vuletin 2018. Panel b: World Bank staff calculations based on Izquierdo, Pessino, and Vuletin 2018.  
Note: LAC = Latin America and the Caribbean.

**Figure 2.17. Cost of Waste and Inefficiencies in Public Spending in LAC, as a Percent of 2021 Overall Fiscal Deficits**



Source: World Bank staff calculations based on Izquierdo, Pessino, and Vuletin 2018.  
Note: LAC = Latin America and the Caribbean.

**Figure 2.18. Returns to Public Spending under Different Levels of Efficiency**

Source: World Bank staff calculations based on Izquierdo et al. 2018.

Note: Dashed lines indicate the 95 percent confidence interval for the effect of current expenditure. Measures of efficiency draw on an index derived from the World Economic Forum on the quality of government institutions.

may have the same result as no spending at all. On the flip side, the size of aggregate spending multipliers can be large when public spending is conducted efficiently, with a cumulative multiplier return to primary public spending peaking at almost \$2 after one year.

High amounts of government waste and inefficiency reduce people's trust in government. One of the deeper determinants of large government waste and inefficiencies is the government corruption (see panel a in figure 2.19). Not surprisingly, an important implication of larger government corruption is lower people's trust in the government (see panel b in figure 2.19).

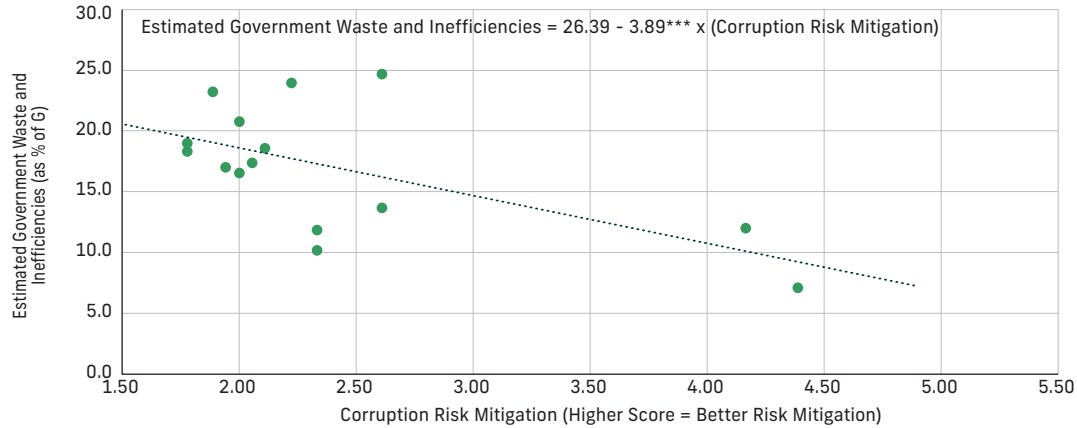
Moreover, LAC is the region with the lowest level of trust in government around the world (see figure 2.20).

All in all, this evidence suggests that there is considerable space in most LAC countries to reduce waste and improve the efficiency of government spending. Such efforts should be first and foremost for the region's government. On average, about 17 percent of total spending is wasteful or not properly allocated to the most vulnerable groups. Steps to reduce waste and promote efficiency will not have negative macroeconomic effects and, moreover, may contribute to reestablishing social trust.

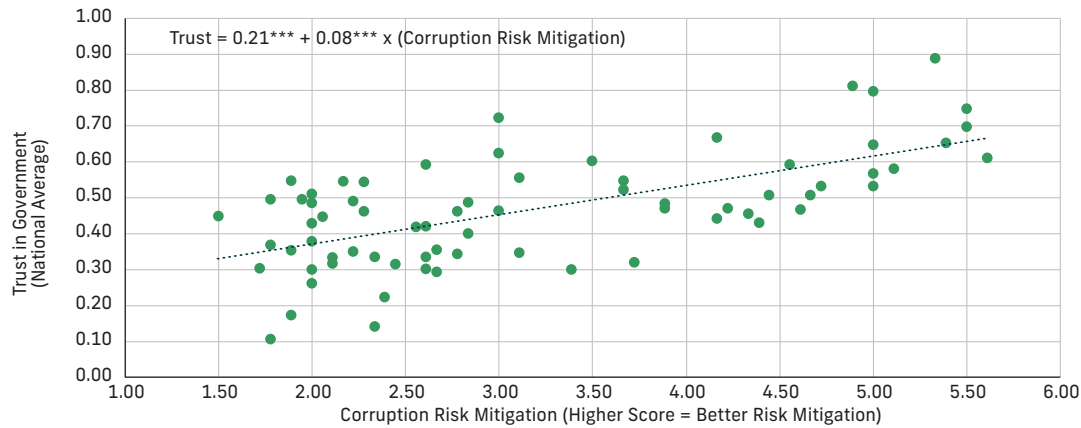
In a context of growing social tensions, finding "cost-less" adjustment options that do not cut critical benefits and incite civil discontent will be essential for governments in the region—especially considering how social gaps have widened due to the pandemic. Some transfers, such as those relating to fuel, occupy a huge part of government spending in some countries and are demonstrably regressive and anti-environmental, and do not obviously contribute to building human capital in poorer families. Phasing them out over the longer term is desirable, but better targeting in the short term would result in large cost savings. Protecting public investment, especially to invest in infrastructure in those countries with large infrastructure gaps, also seems to be extremely important as a determinant of long-term growth and to help unlock positive synergies with private investment. Lastly, while tax hikes are always an option, governments—and particularly those in countries where the tax burden is already high—should be wary of the potentially large response of macroeconomic and labor market distortions. This is particularly relevant in a region that has frequently relied on tax hikes as an instrument of fiscal adjustment in the past.

**Figure 2.19. Determinants and Implications of High Amounts of Government Waste and Inefficiency**

**a. Government waste and inefficiencies on government corruption, using LAC sample**



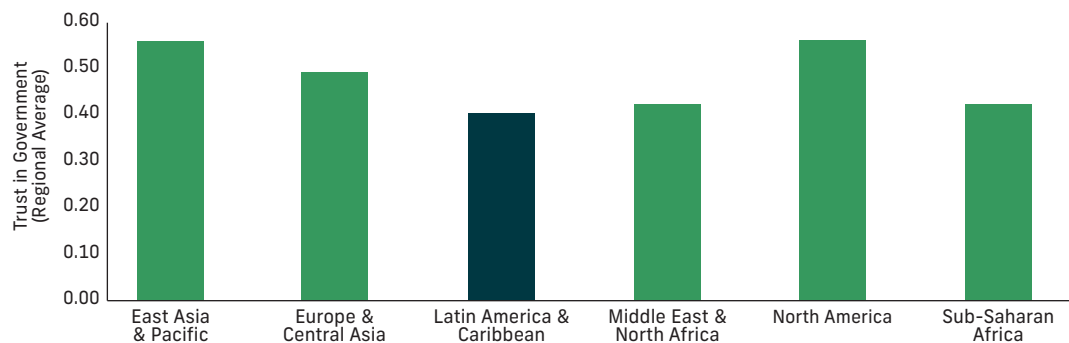
**b. Government trust on government corruption, using a global sample of countries**



Source: Panel a: For the X-axis, International Country Risk Guide (ICRG) 2018. For the Y-axis, World Bank staff calculations based on Izquierdo, Pessino, and Vuletin 2018. Panel b: For the X-axis, International Country Risk Guide (ICRG) 2018. For the Y-axis, Wellcome Global Monitor 2018.

Note: LAC = Latin America and the Caribbean. "Trust in Government" is defined as the ratio of respondents who answered "A lot" or "Some" to the question "How much do you trust the national government in this country?" in the Wellcome Global Monitor 2018.

**Figure 2.20. People's Trust in Government, by Region**



Source: Wellcome Global Monitor 2018.

Note: "Trust in Government" is defined as the ratio of respondents who answered "A lot" or "Some" to the question "How much do you trust the national government in this country?" in the Wellcome Global Monitor 2018.

## Notes

- 1 See Riera-Crichton and Vuletin (2022) for more details on the tragic interaction between spending rigidities and the business cycle.
- 2 To this end, they assign a new narrative-based classification to each tax change (à la Romer and Romer 2010) and then proceed to establish their anticipated nature.
- 3 The AMIITR for a country or region in a specific year is the average of the marginal tax rates of each income bracket weighted by pretax income or adjusted gross income.
- 4 Individual income tax in Argentina, Brazil, Colombia, Ecuador, and Peru dates back to 1932, 1922, 1927, 1926, and 1934, respectively.
- 5 In Argentina, the province of Tierra del Fuego has not required payment of individual income tax since 1974 (Law 19,640); hence the "Min" (minimum) column in table 2.1 is always "0" for Argentina.
- 6 See Riera-Crichton, Venturi, and Vuletin (2022) for details on the identification and econometric approach.

## References

- Alesina, A., Favero, C., and F. Giavazzi. 2015. "The Output Effect of Fiscal Consolidation Plans." *Journal of International Economics*, Vol. 96, No. S1, pp. S19-S42.
- Angelopoulos, K., Economides, G., and P. Kammass. 2007. "Tax-Spending Policies and Economic Growth: Theoretical Predictions and Evidence from the OECD." *European Journal of Political Economy*, Vol. 23, No. 4, pp. 885-902.
- Arnold, J., Brys, B., Heady, C., Johansson, A., Schwellnus, C., and L. Vartia. 2011. "Tax Policy for Economic Recovery and Growth." *The Economic Journal*, Vol. 121, No. 550, pp. F59-F80.
- Balestrini, T., Falcone, G., Riera-Crichton, D., and G. Vuletin. 2022. "Conventional and Unconventional Fiscal Adjustments: When the exception becomes the norm." World Bank, Washington, DC. Unpublished.
- Bracco, J., Galeano, L., Juarros, P., Riera-Crichton, D., and G. Vuletin. 2021. "Social transfer multipliers in developed and emerging countries: The role of hand-to-mouth consumers." WB Working Paper 9627. World Bank, Washington, DC.
- Gale, W.G., Krupkin, A., and K. Rueben. 2015. "The Relationship Between Taxes and Growth at the State Level: New Evidence." *National Tax Journal*, Vol. 68, No. 4, pp. 919-942.
- Galeano, L., Izquierdo, A., Puig, J., Vegh, C., and G. Vuletin. 2021. "Can Automatic Government Spending Be Procyclical?" NBER Working Paper 28521. National Bureau of Economic Research, Cambridge, MA.
- Gunter, S., Riera-Crichton, D., Vegh, C., and G. Vuletin. 2019. "Policy Implications of Non-linear Distortion-based Effects of Tax Changes on Output." Policy Research Working Paper 8720. World Bank, Washington, DC.
- Gunter, S., Riera-Crichton, D., Vegh, C., and G. Vuletin. 2021. "Non-linear Effects of Tax Changes on Output: The Role of the Initial Level of Taxation." *Journal of International Economics*, Vol. 131.
- Izquierdo, A., Pessino, C., and G. Vuletin, eds. 2018. *Better Spending for Better Lives: How Latin America and the Caribbean Can Do More with Less*. Development in the Americas. Inter-American Development Bank, Washington, DC.
- Izquierdo, A., Lama, R., Medina, J., Puig, J., Riera-Crichton, D., and G. Vuletin. 2019. "Is the public investment multiplier higher in developing countries? An empirical exploration." NBER Working Paper 26478, National Bureau of Economic Research, Cambridge, MA.
- Jaimovich, N., and S. Rebelo. 2017. "Non-linear Effects of Taxation on Growth." *Journal of Political Economy*, Vol. 125, No. 1, pp. 265-291.
- Lee, Y., and R.H. Gordon. 2005. "Tax Structure and Economic Growth." *Journal of Public Economics*, Vol. 89, No. 5-6, pp. 1027-1043.

- Lustig, N., Mabile, F., Bucheli, M., Molina, G.G., Higgins, S., Jaramillo, M., Jiménez Pozo, W., Paz Arauco, V., Pereira, C., Pessino, C., Rossi, M., Scott, J., and E.Y. Aguilar. 2014. "El impacto del sistema tributario y el gasto social sobre la desigualdad y la pobreza en Argentina, Bolivia, Brasil, México, Perú y Uruguay: Un panorama general." Commitment to Equity (CEQ) Working Paper Series 13S. Tulane University, Department of Economics.
- Medina, L., and F. Schneider. 2018. "Shadow Economies Around the World: What Did We Learn Over the Last 20 Years?" IMF Working Paper No. 2018/017. International Monetary Fund, Washington, DC.
- Mertens, K., and J.L. Montiel Olea. 2018. "Marginal Tax Rates and Income: New Time Series Evidence." *Quarterly Journal of Economics*, Vol. 133, No. 4, pp. 1803-1884.
- Mertens, K., and M.O. Ravn. 2013. "The Dynamic Effects of Personal and Corporate Income Tax Changes in the United States." *American Economic Review*, Vol. 103, No. 4, pp. 1212-1247.
- Riera-Crichton, D., Venturi, L., and G. Vuletin. 2022. "The Income and Labor Effects of Individual Income Tax Changes in Latin America: Evidence from a New Measure of Tax Shocks." World Bank, Washington, DC. Unpublished.
- Riera-Crichton, D., G. Vuletin. 2022. "Fiscal Policy for Growth." World Bank, Washington, DC. Unpublished.
- Romer, C., and D. Romer. 2010. "The macroeconomic effects of tax changes: Estimates based on a new measure of fiscal shocks." *American Economic Review* Vol. 100, No. 3, pp. 763-801.
- Saez, E., 2004. "Reported incomes and marginal tax rates, 1960-2000: Evidence and policy implications." *Tax Policy and the Economy*, Vol. 18, pp. 117-172.
- Ten Kate, F., and P. Millionis. 2019. "Is Capital Taxation Always Harmful for Economic Growth." *International Tax and Public Finance*, Vol. 26, pp. 758-805.
- Vegh, C. A., and G. Vuletin. 2015. "How Is Tax Policy Conducted over the Business Cycle?" *American Economic Journal: Economic Policy*, Vol. 7, No. 3, pp. 327-370.
- Widmalm, F. 2001. "Tax Structure and Growth: Are Some Taxes Better Than Others?" *Public Choice*, Vol. 107, No. 3-4, pp. 199-219.







**THE WORLD BANK**

IBRD • IDA | WORLD BANK GROUP

Latin America & the Caribbean

*Opportunities for All*