THE GRADUAL RISE
and
RAPID DECLINE
of the
Middle Class

in Latin America and the Caribbean

WORLD BANK GROUP

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CONTENTS

About the Poverty Reports in LAC

The *Poverty and Labor Brief* (*PLB*) and *Poverty and Inequality Monitoring* (*PIM*) series present the latest trends in poverty, inequality, and shared prosperity in Latin America and the Caribbean (LAC) using comparable regional household and labor force surveys (SEDLAC and LABLAC, respectively). The reports are produced by the Latin America and Caribbean Team for Statistical Development (LAC TSD) in the Poverty and Equity Global Practice.

PLBs and *PIMs* are designed to inform fact-based decision-making and discussion by providing readers with detailed and comparable statistics related to the World Bank's twin goals of eradicating extreme poverty and boosting shared prosperity. *PLBs* offer a deeper explanation of the labor market as well as other issues related to poverty dynamics. *PIMs*, on the other hand, tend to be shorter and more specific. Along with the previous reports, many of the indicators reported in the series are available at the country level in the LAC Equity Lab website at www.worldbank.org/equitylab.

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FOREWORD

The Latin America and Caribbean (LAC) region is at a crossroads. The region has been disproportionately affected by the COVID-19 pandemic, with many countries still struggling to contain the virus. With 8 percent of the global population, the region has borne 20 percent of infections and 32 percent of accumulated global deaths. The depth of the health crisis has been matched by the largest economic recession ever on record. LAC's economy contracted by 6.5 percent in 2020, the sharpest regional economic contraction seen since we have reliable data. And the rebound in 2021 will be insufficient to return to 2019 GDP levels.

This report documents important trends, facts, and figures about poverty, inequality, vulnerability, and the middle class in LAC. It illustrates that despite twenty years of reductions in overall poverty and inequality, and a gradual increase in the size of the middle class, the devastating effects of the COVID-19 pandemic have led to significant reversals in these gains.

The impact of the pandemic is particularly concerning given that the region had managed to reduce poverty by half between the early 2000s and 2014. Two decades of gradual improvements in earnings helped lift people out of poverty and vulnerability and into the middle class. In fact, in 2018, for the first time ever in the region, the number of households classified as middle class was larger than the number of households living in either poverty or vulnerability.

All subregions saw their middle class grow, with Brazil and the southern cone leading the charge. But much like with poverty alleviation and reductions in inequality, the rise of the middle-class was faster in the first decade of the new century (2002-2014), and much slower in the five years before the COVID-19 pandemic year (2020).

Latin America was a region that was already struggling with slow growth in the years before the pandemic, particularly since 2014. The per capita growth rate for the region was below 1 percent over the past decade, a reflection of poor productivity growth and faltering reform efforts. The pandemic intensified inequality, with progress reversed back several years. In addition, most countries in the region saw a deepening of poverty levels and an erosion of the middle class.

Many countries put in place mitigation mechanisms that helped supplement income losses with emergency transfers. Targeted social transfers were scaled up to include new beneficiaries and prevent them from falling into vulnerability and poverty. However, despite these mitigation measures, millions of people shifted out of middle-class status; some fell into vulnerability and some into poverty as the 'new' poor. Brazil is a notable exception, where income losses were fully mitigated in 2020 thanks through a ramp up in temporary support measures that are unlikely to be sustained for long.

Despite the shock waves caused by the pandemic, there are rays of hope in the region. This has also been a time of unprecedented structural transformation in the region. The COVID-19 crisis brought a surge of high-productivity sectors, including ICT, finance, and logistics. The use of digital technologies has accelerated and promises to change the way Latin Americans work, the way they get education, health, finance, and the way they access financial resources. There are growing new employment opportunities in these new areas of the economy. The region's future growth and prosperity will very much depend on the way Latin Americans and their leaders manage to turn these opportunities into a better future for all.

Carlos Felipe Jaramillo
World Bank Vice President,
Latin America and Caribbean

ACKNOWLEDGMENTS

The findings, interpretations, and conclusions expressed in this work do not necessarily reflect the World Bank's views, 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. 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.

The numbers presented in this brief are based on two regional data harmonization efforts known as the Socio-Economic Database for Latin America and the Caribbean (SEDLAC) and the Labor Database for Latin America and the Caribbean (LABLAC), joint efforts of the World Bank and the Center of Distributive, Labor and Social Studies (CEDLAS) at the National University of La Plata in Argentina. They increase cross-country comparability of selected findings from official household and labor surveys. For that reason, the numbers discussed here may be different from official statistics reported by governments and national offices of statistics. Such differences should not be interpreted in any way as a claim of methodological superiority, because both sets of numbers serve the same important objectives: regional comparability and the best possible representation of the facts of individual countries. The welfare aggregate used in this study is income based.

EXECUTIVE SUMMARY

Latin America and the Caribbean (LAC) reported over 30 million Coronavirus (COVID-19) cases and around 960,000 deaths as of May 2021. Official tracking data shows that Brazil, Colombia, and Argentina have the highest number of reported cases throughout LAC, which in turn is the region with among the highest numbers across all developing regions.[1] Moreover, Brazil is the third-worst affected country worldwide, after the United States and India, with approximately 15.4 million infections. Dramatic declines in economic activity are expected throughout the LAC region due to the global pandemic. Unfortunately, many LAC countries entered the crisis with low potential economic growth and high levels of inequality, following the region's recent period of stagnant growth.

The 2020 COVID-19 crisis will likely reverse in a short time frame many of the social gains that took decades to materialize in Latin America and the Caribbean. In the past two decades, the region has seen a reduction in the number of people living in poverty by nearly half and an increase in the size of its middle class.[2] Income inequality also decreased, as income growth has been primarily pro-poor in recent years. Despite variations across countries, most have experienced positive welfare gains since the early 2000s.[3] However, the growth deceleration of 2014–2019 cou-

pled with the dramatic fall in activity caused by the COVID-19 crisis will negatively impact living standards and well-being across the region. Poverty projections for 2020 suggest that the number of the poor increased in most LAC countries. Brazil, however, implemented a generous emergency transfer program that benefited almost 67 million people and lifted millions out of poverty. As a result, poverty in the LAC region is expected to decline marginally from 22 percent in 2019 to 21.8 percent in 2020. Had no mitigation measures been implemented, the region may instead have seen 28 million new poor in 2020.

The current global crisis is expected to result in a rapid decline in the size of the middle class in most countries, setting LAC back as a majority-middle-class region. By 2019, Latin America was predominantly a middle-class region, with 38 percent of its population, approximately 230 million people, reaching middle-class status. However, this socioeconomic group is projected to have declined to 37.3 percent of the population in 2020, resulting in a net loss of 4.7 million people from the middle class. Without mitigation measures, in particular without Brazil's emergency transfers, projections suggest the global pandemic could have resulted in more than 20 million people losing middle-class status.

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1   Data from the Center for Systems Science and Engineering (CSSE), Johns Hopkins University, at https://systems.jhu.edu/.

2   The LAC aggregate used for poverty, inequality, and the middle class is based on 18 countries in the region for which microdata are available at the national level (i.e., "LAC-18") over a long period of time. In an effort to increase cross-country comparability, microdata are harmonized as part of the project called the Socio-Economic Database for Latin America and the Caribbean (SEDLAC), a joint effort between CEDLAS and the World Bank). In cases where data are unavailable for a given country in a given year, values have been interpolated using *WDI* data only for the purpose of calculating regional measures.

3   Welfare monitoring and poverty estimation requires reliable and frequently collected household-level data. In the case of Venezuela, such data have not been shared with the World Bank since the mid-2000s, barring the World Bank from calculating reliable poverty and inequality estimates for the country and a Venezuela-inclusive regional aggregate for the LAC region. The most recently collected data are not available for public use, and in addition, due to the ongoing crisis and economic instability in the country, we believe that any estimation of poverty from such a survey will inherently suffer from many shortcomings.

Persistent inequalities throughout the LAC region add to the challenge of overcoming the ongoing crisis and will likely result in unequal pandemic impacts. Latin American countries face high levels of informality and self-employment, particularly among the poor, resulting in lower-quality and more-vulnerable jobs. The crisis has put governments and health systems under immense stress, highlighting the region's limited access to and quality of affordable health care. In addition, lockdown measures implemented to contain the virus's spread underline inequities in access to basic services, such as electricity, water and sanitation, and even the internet. Households who were already poor, and have now lost further human or physical capital accumulation, will have the hardest time recovering from this crisis, and inequality across multiple dimensions is likely to get worse.

The LAC region must continue to target policies to prevent contagion and support the most vulnerable populations, yet careful to protect livelihoods. Moreover, as lockdown measures are phased out, governments should address preexisting inequities. Though general lockdowns are the most effective way to prevent mass contagion, they come at the expense of an increase in unemployment, general loss of income, and an increase in poverty. Well-targeted temporary income transfers do provide vulnerable groups with at least some income security during containment periods. Although these policies adequately support low-income households, they are temporary, and in addition, they may not be enough to prevent the sharp decline of the middle class. On the other hand, social protection programs can be re-assessed to adjust their reach and thus incorporate new beneficiaries. Given

the high degree of uncertainty as to the impact and duration of the COVID-19 crisis, especially if another wave hits the region, LAC countries should prioritize equitable access to essential services such as water, sanitation, and electricity.

The recovery from 2021 onward may also depend on the vaccine rollouts. Latin American countries face important challenges in terms of vaccine rollout, and to date only Chile has reported significant progress. Chile has administered more than 49 doses per 100 people (above the United States—40—and the United Kingdom—47). In contrast, other LAC countries lag significantly, with only 1 to 13 doses having been administered for every 100 people.[4] Across the region, governments are having problems securing enough doses of vaccines to cover their populations, as well as efficient and effective systems to distribute and administer them.

The accelerated digital transformation in the region has been an unexpected positive outcome of the COVID-19 pandemic. Stay-at-home orders and social distancing have highlighted the need for alternative methods of purchasing goods and services. A significant boost in e-commerce and e-services has been evident throughout the region as several supermarkets and restaurants have shifted to online delivery services, in some cases through social media. Moreover, several governments have switched to online platforms to continue operating. It is unlikely firms will return to business as usual once the pandemic ends. Thus, countries should continue to invest in digital infrastructure to accelerate these changes and enact legislation for the expansion of the digital economy.

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4   Data from Our World in Data, https://ourworldindata.org/covid-vaccinations. Accessed on 05/13/2021

SECTION 1.

COVID-19 CONTEXT
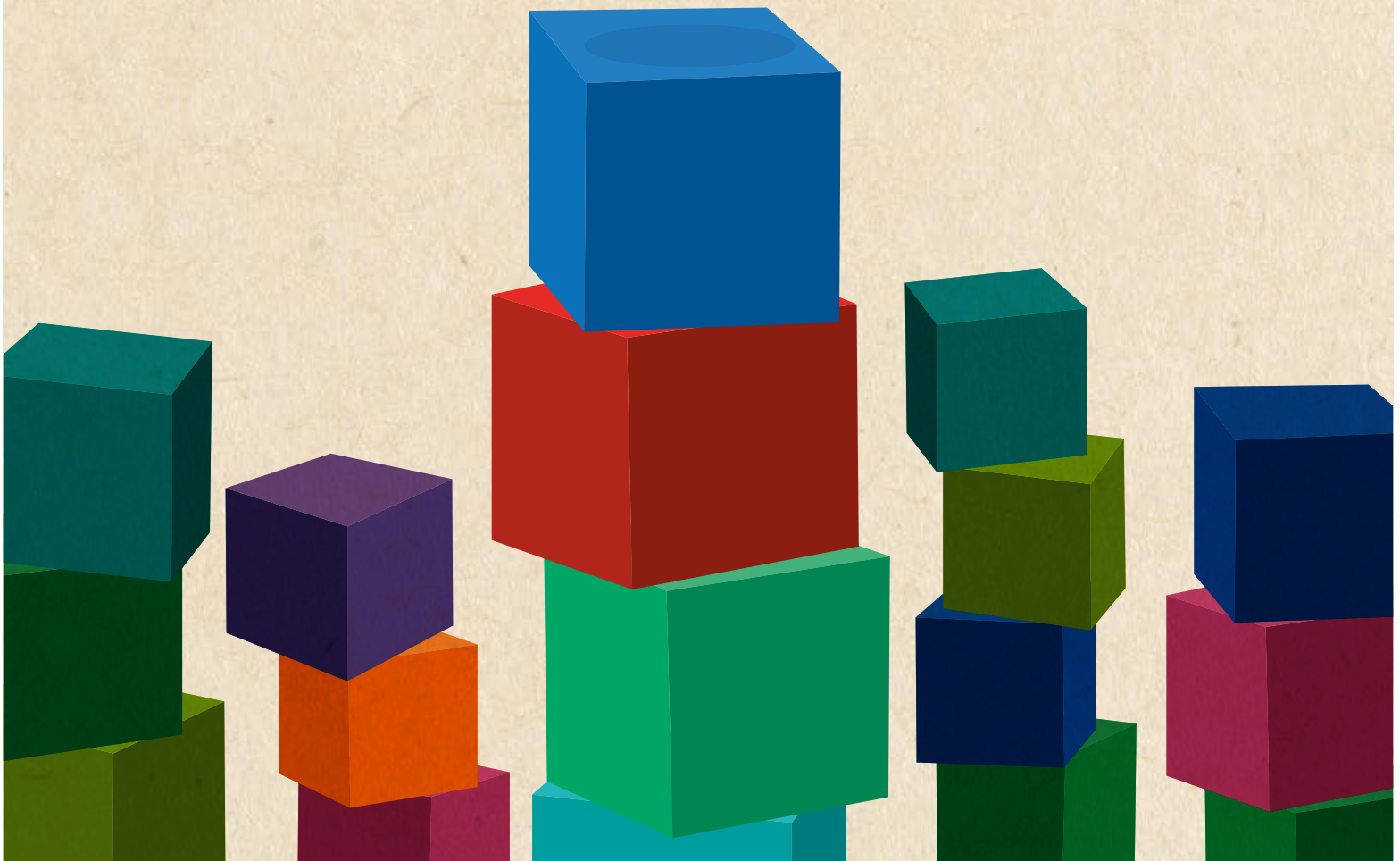
As of May 2021, the Latin America and the Caribbean (LAC) region has reported over 30 million Coronavirus (COVID-19) cases and approximately 960,000 deaths. The region's two most populous nations, Brazil and Mexico, have seen the highest number of deaths, with more than 428,000 and 219,000, respectively. Brazil is the third-worst affected country worldwide, after only the United States and India, with approximately 15.4 million infections. However, Panama has the highest number of cases per 1 million people (approximately 87,000), followed by Brazil (73,000) and Argentina (71,000). Within countries there are substantial differences in terms of the impact of the disease,

with more COVID-19 cases identified in urban centers (Maps 1.1 and 1.2).

Measures to slow the spread of the virus and to mitigate the resulting economic and poverty impacts have varied across the region. Most countries have adopted nationwide lockdowns—in some cases voluntary and in others compulsory—to slow the spread of the virus. Some of the most common mitigation measures include the use of face masks and coverings in public spaces, health screenings, quarantines, school closures, and travel restrictions. In response to lockdowns, countries have had to apply fiscal and monetary measures to protect the most vulnerable

M A P 1.1

Confirmed cases of COVID-19 in Latin America and the Caribbean
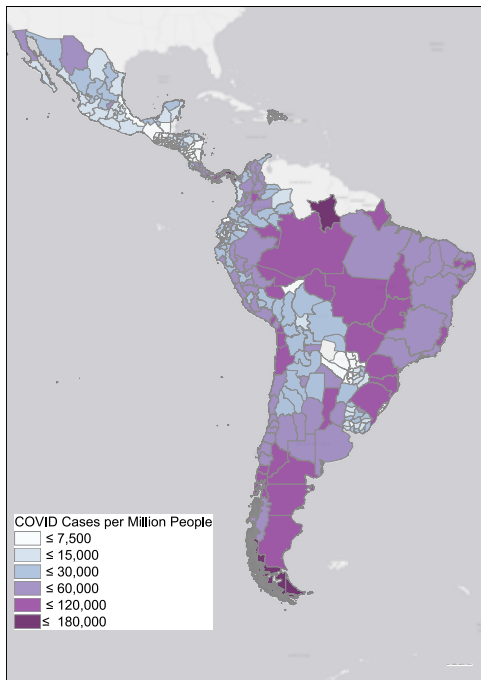
M A P 1.2

Confirmed deaths from COVID-19 in Latin America and the Caribbean
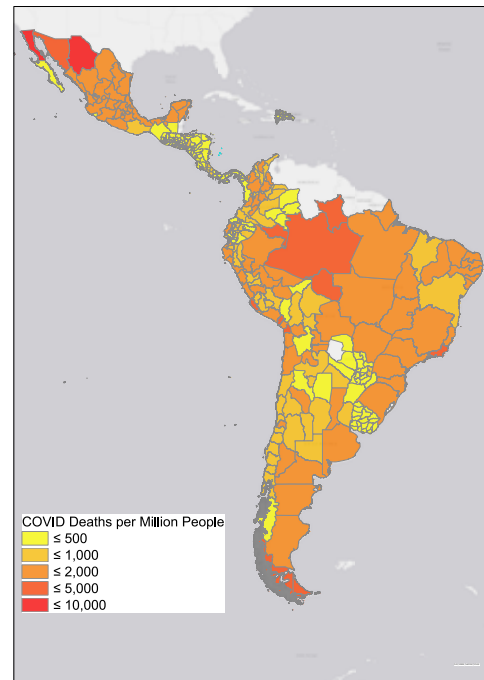
Source: Public health ministries.
Note: Confirmed cases of COVID-19 in these maps are as of March 25, 2021.

and contain the fall of economic activity. Along these lines, most LAC countries have introduced, adapted, or expanded their social protection programs in response to COVID-19.[5] In Brazil, the government expanded the Bolsa Familia program and implemented emergency measures that reached almost 67 million people. Similarly, most nations have approved additional borrowing to support the public health systems and provide support to the vulnerable.[6] The amount ranges from 1 percent of GDP in Uruguay and Mexico to 11 percent in Brazil. Moreover, several countries have extended tax filing deadlines and temporarily suspended payment by households for some public services (water, electricity, telephone, internet).[7]

Dramatic declines in economic activity are expected throughout the LAC region due to the global pandemic; additionally, many countries entered **the crisis with low potential for growth.** Over the last decade, there are two distinctive periods in terms of growth and poverty in the region: one of sustained growth and strong poverty reduction (the "Golden Decade" up to 2013), and a subsequent one of poverty stagnation and growth deceleration (2014 to 2019).[8,9] Just when the region was experiencing a glimpse of recovery from the stagnation period, the COVID-19 outbreak forced economies to shut down. The LAC economy is expected to contract by 6.7 percent in 2020, making it the most profound recession in the region,[10] with significant differences across countries. Brazil's GDP declined by 4.1 percent, whereas Central America's GDP is expected to contract by 6.1 percent. Similarly, per capita, household income is estimated to have decreased by 3.2 percent in 2020. By 2021, the LAC economy is expected to recover, growing by 4.4 percent (Figure 1.2).

5   (a) Economic Commission for Latin America and the Caribbean (ECLAC) 2020 and (b) Gentilini *et al*. 2020.

6   Many countries in LAC have requested emergency financing from the International Monetary Fund (IMF), the World Bank, the Inter-American Development Bank (IADB), and the Development Bank of Latin America (CAF).

7   For more details on government responses, see IMF, Policy Responses to COVID-19, at https://www.imf.org/en/Topics/imf-and-covid19/Policy-Responses-to-COVID-19#H.

8   The first period (2003–2013) saw the LAC-18 region registering GDP per capita growth at a higher rate than the world average, with the exception of the global Great Recession of 2009. This period of mostly continuous growth was characterized by a sustained reduction in poverty. Similarly, growth in Per Capita Household Income (PCHI) (from the household surveys) was positive during the whole period and in line with macro trends. In the second period (2014–2019), the region experienced growth deceleration and a contraction, growing far less than the world. Poverty decreased slightly or stalled completely, depending on the poverty threshold, and PCHI decreased in 2015 for the first time in a decade and remained largely stagnant from 2016 to 2019.

9   Brazil's importance is evident in both its share of the total LAC population (almost 38 percent) and its share in the population living in poverty (almost half of the total population of LAC under the International Poverty Line of $1.90 per day, 2011 PPP). Hence changes in poverty in the LAC aggregate are mainly driven by changes in Brazil. During the 2014–2018 stagnation period, some countries like El Salvador and Panama actually managed to lift people out of poverty. However, because of the smaller populations of these countries, these instances of poverty reduction do not visibly impact the regional aggregate.

10   During Latin America's Debt Crisis of the 1980s and the 2009 global financial crisis, the LAC economy contracted by 2.5 and 1.9 percent, respectively (World Bank 2020b). The estimates for 2020 are from World Bank 2021b.

Box 1.1

Government Response to the COVID-19 Outbreak in LAC

The Oxford COVID-19 Government Response Tracker (OxCGRT) provides a systematic cross-country, cross-temporal measure to understand how government responses have evolved during the COVID-19 outbreak. Daily information on government interventions is monitored across a set of standardized indicators to generate four composite indices: (1) containment and health, (2) stringency, (3) economic support, and (4) an overall government response index. These cover data on school closures, stay-at-home orders, restrictions on domestic and international travel, fiscal measures, and emergency investment in health care, among others. Indices range from 0 to 100 and are intended to reflect government action level—not their effectiveness—in certain dimensions.

Governments throughout LAC have varied in the measures they have taken to mitigate the COVID-19 outbreak and how quickly they have adopted them (Annex 1). Except for Nicaragua, all countries expanded their policy responses as the number of confirmed COVID-19 cases increased throughout the region. In the case of Brazil and Mexico, though these countries have some of the highest infection rates, the governments have enacted less-severe lockdown measures than their peers. Others, like El Salvador and Costa Rica, implemented mitigation measures before the first reported case. As of May 12, 2021, Nicaragua shows an overall lower policy-action level than the average LAC country. Conversely, El Salvador has a high level of response and a low number of cases (Table 1.1 and Figure 1.1).

Table 1.1

Reported COVID-19 cases and maximum government response level, as of May 12, 2021

Country	Number of COVID-19 cases	Maximum government response level
Brazil	15,400,000	78.4
Argentina	3,215,572	84.9
Colombia	3,048,719	83.3
Mexico	2,371,483	66.9
Peru	1,865,639	81.8
Chile	1,260,448	87.6
Ecuador	404,632	78.1
Panama	368,930	79.2
Bolivia	322,578	71.4
Paraguay	304,889	71.9
Costa Rica	276,887	60.4

Country	Number of COVID-19 cases	Maximum government response level
Dominican Republic	273,497	77.6
Guatemala	237,682	76.6
Uruguay	228,102	81.6
Honduras	222,992	83.3
Venezuela, RB	210,948	78.9
El Salvador	70,915	85.9
Haiti	13,227	61.5
Nicaragua	7,086	20.0
LAC	**30,104,226**	74.2

FIGURE 1.1

Response-to-risk ratio
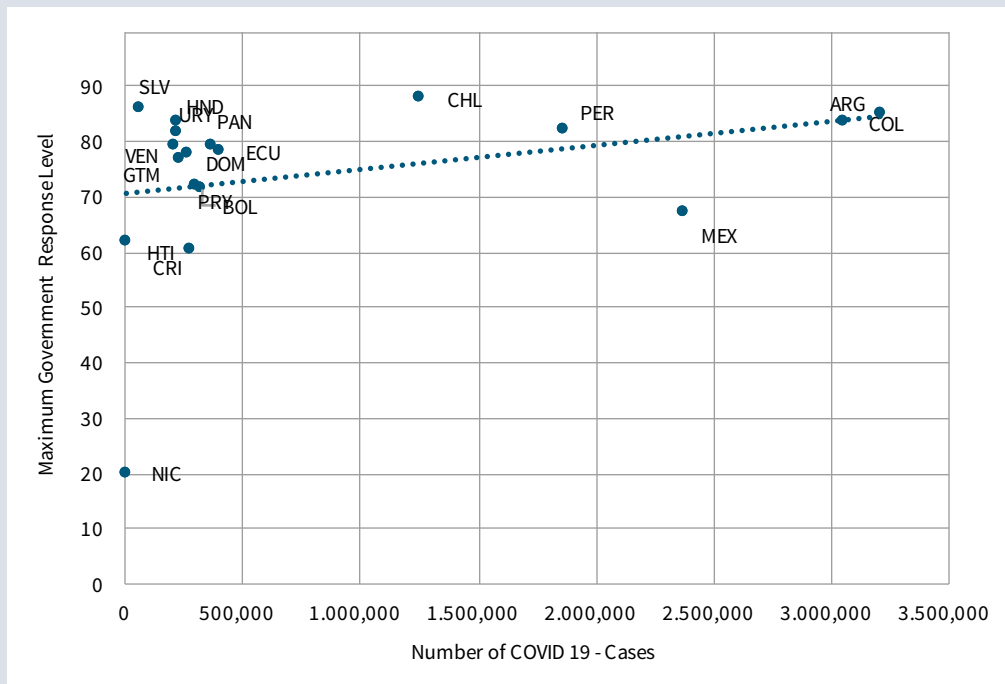
Source: Thomas Hale, Sam Webster, Anna Petherick, Toby Phillips, and Beatriz Kira 2020. Oxford COVID-19 Government Response Tracker. Blavatnik School of Government. Available at www.bsg.ox.ac.uk/covidtracker.
Note: Brazil was excluded from the scatter plot due to the high volume of cases reported. Data as of May 12, 2021. Countries above the trend line can be interpreted as having stricter measures than the average LAC country per their number of confirmed cases. Conversely, countries below the line show a lower level of policy action.

Two discernible periods of growth in Latin America in the last decade

FIGURE 1.2

Growth of GDP in Latin America and the world, and growth of mean Per-Capita Household Income (PCHI)
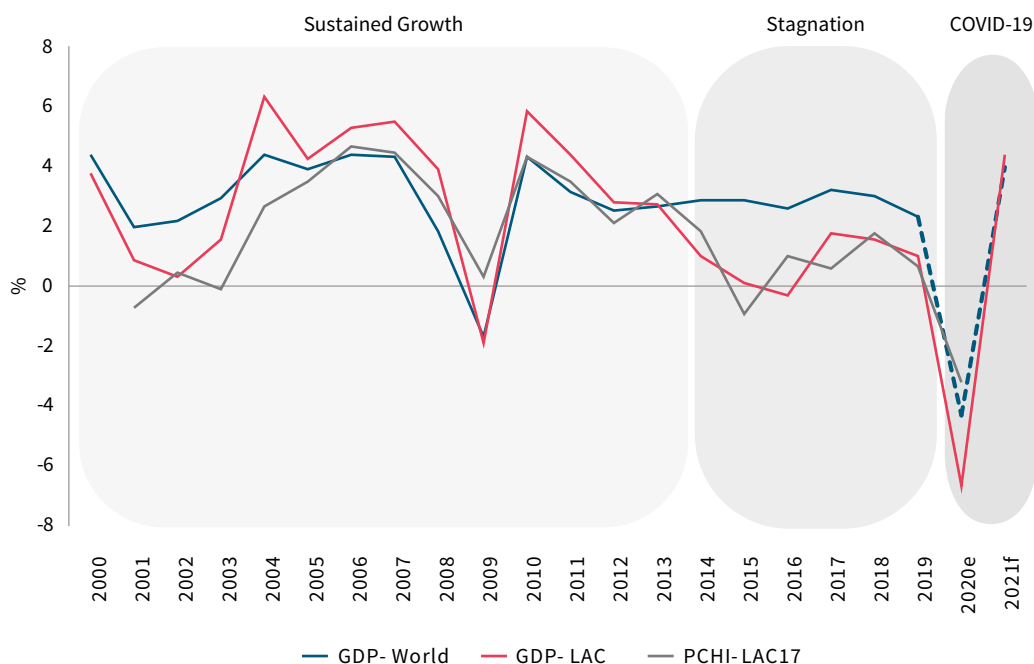
Source: SEDLAC (CEDLAS and World Bank); WDI 2020; World Bank 2021b; and original calculations for this publication.
Note: Per capita household income (PCHI) is calculated using pooled data as described in Annexes 2–4 for LAC-18. PCHI projections based on 2019 SEDLAC (CEDLAS-World Bank) microdata projected using National Accounts data (private consumption per-capita), job losses, and remittances from the World Bank Macroeconomics, Trade and Investment Global Practice (MTI GP) and the Poverty and Equity Global Practice (POV GP), based on a macro-microsimulation model that assumes 12 months of labor income loss and mitigation measures. See Diaz-Bonilla, Moreno, and Sanchez (forthcoming) and Annex 5.

The weak growth in GDP per capita during the stagnation period was worse for the poorest households. Between 2015 and 2019, GDP per capita increased by 0.1 percent and poverty rates under the international poverty line (IPL) increased from 4.2 percent to 4.4 percent, while poverty under the $5.50 per day poverty line (2011 PPPP) decreased by nearly 2 percentage points (Figure 1.3).[11] This highlights that economic growth in the most recent years was not enough to restart social gains, particularly among the poorest households who are also among the most vulnerable to the effects of the COVID-19 crisis.

The region's high levels of inequality and informality pose a significant challenge in relation to

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11   The International Poverty Line (IPL) is USD 1.90 per day per person in 2011 Purchasing Power Parity (PPP). All dollar amounts are US dollars unless otherwise indicated.

The growth elasticity of poverty was higher for poorer households in the past, but the current weak economic growth is not enough to help the poorest.

FIGURE 1.3

Changes in poverty, GDP, and elasticity

■ Poverty Change   ● Elasticity
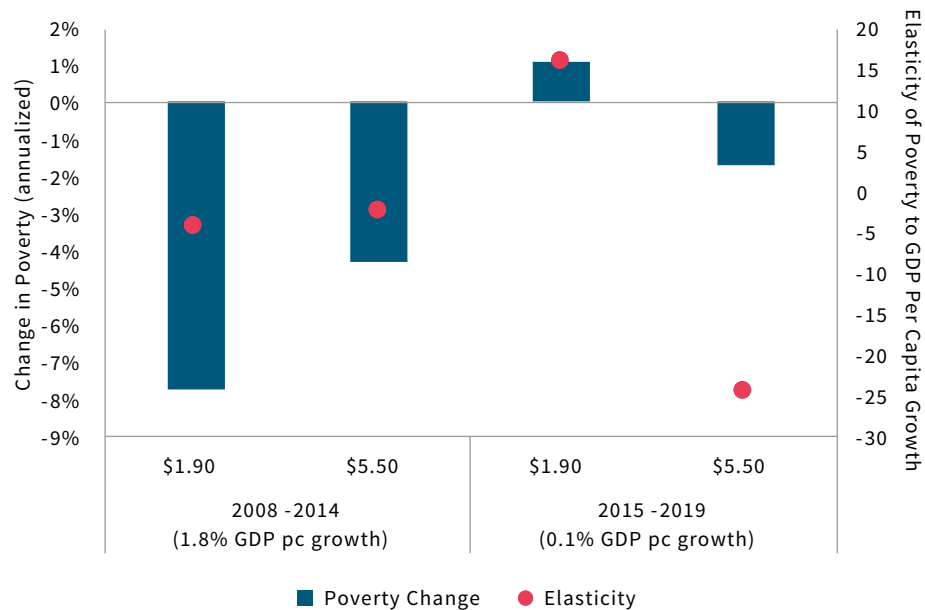
Source: Author's estimations using SEDLAC (CEDLAS and World Bank) and *World Development Indicators 2020*. Annualized growth rates.
Note: For the years of early stagnation, we have an important break in the survey series for Brazil and Mexico, as explained in Annex 4. GDP refers to GDP at factor cost (NY.GDP.FC.ST.KD). GDP per capita growth is a change of GDP over total population between two periods.

overcoming the pandemic. Many countries continue to present high income-inequality levels as mirrored by the Gini Coefficient (see Figure 2.9) and unequal access to basic services. Moreover, Latin American countries face high levels of informality and high self-employment levels, resulting in lower-quality and more-vulnerable jobs. High levels of remittances in some countries are also seeing dramatic drop-offs, affecting poor, near-poor, and even middle-class households (see Section 4). The crisis has put governments and health systems, as well as the economy and employment, under immense stress.

The 2020 crisis will likely reverse, in a short time frame, many of the social gains that took decades to materialize in Latin America and the Caribbean. During the last 20 years, the region has managed to reduce poverty by nearly half, decrease income inequality, and simultaneously increase the size of the middle class, making LAC in 2019 a predominantly middle-class region (Figure 1.4). Similarly, access to basic services has improved throughout Latin America (see Section 3). However, the 2020 crisis is expected to have led to poverty increases in almost all countries, with the important exception of Brazil, thanks to the

FIGURE 1.4

Poverty trends and projections (2000–2020)
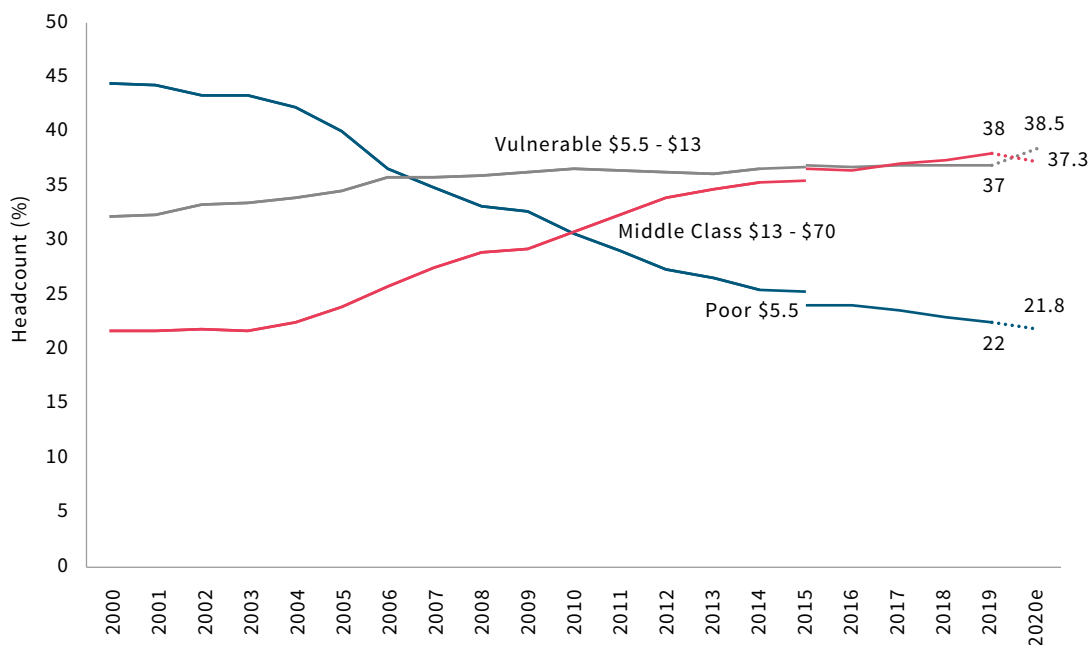
Source: Projections based on 2019 SEDLAC (CEDLAS-World Bank) microdata and macroeconomic projections of private consumption per capita, job losses, and remittances from MTI and POV GPs. The current projections shown are based on a macro-microsimulation model that assumes 12 months of unemployment. See Diaz-Bonilla, Moreno, and Sanchez (forthcoming) and Annex 5.
Note: (1) The Latin America and Caribbean regional aggregate is estimated based on a sample of 18 countries (LAC-18); see Annex 2 and Annex 3. In cases where data are unavailable for a given country in a given year, values have been interpolated or extrapolated using World Development Indicator (WDI) data and then pooled to create the regional estimate. (2) Due to important methodological changes in Mexico's official household survey in 2016 that created a break in the poverty series, we have created a break in the LAC-18 aggregate. More details are available in Annexes 3 and 4.

government's generous, but temporary, emergency transfer program that benefited almost 67 million Brazilians.[12] Poverty in the LAC region is expected to decline from 22 percent in 2019 to 21.8 percent in 2020 due to Brazil's transfers (see Section 4), for a net decline of almost 400 thousand poor. This net decline is a combination of transitions into and out of poverty for different households. Projections suggest more than 20 million people across the region fell into poverty (below the $5.50 poverty line), with another 1.4 million increase due to population growth. On the other hand, social transfers across the region lifted 22 million people out of poverty, of whom more than 77 percent were in Brazil. Poverty in the LAC region without Brazil, however, is projected to have increased by 3 percent-

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12 World Bank Macro Poverty Outlook, available at https://pubdocs.worldbank.org/en/114751582655277329/mpo-bra.pdf (April 2021). Brazil's Auxilio Emergencial (AE), conceived as a temporary program, ended in December 2020. However, the government of Brazil launched a new wave of AE in April 2021 with lower benefits that targeted about 44 million individuals.

FIGURE 1.5

LAC poverty and middle-class trends and projections, with and without Brazil (2019–2020)
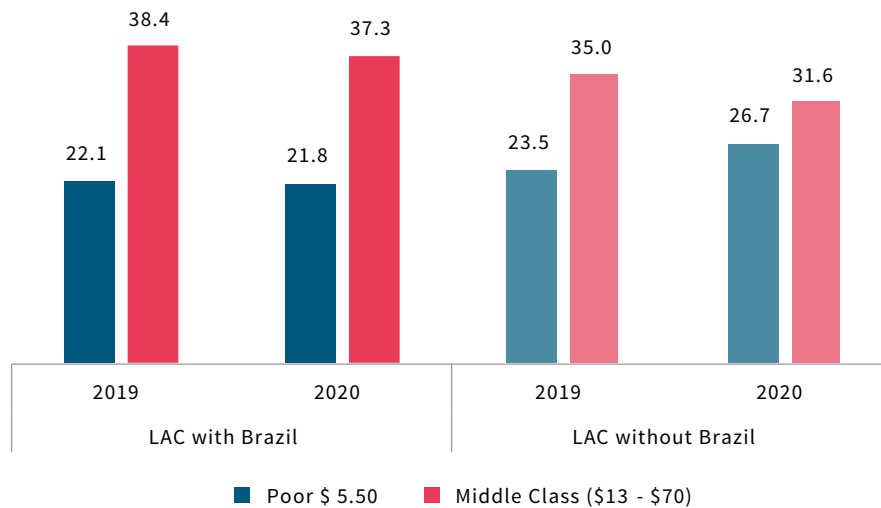
Source: Projections based on 2019 SEDLAC (CEDLAS-World Bank) microdata and macroeconomic projections of private consumption per capita, job losses, and remittances from the MTI GP. The current projections shown are based on a macro-microsimulation model that assumes 12 months of unemployment. See Diaz-Bonilla, Moreno, and Sanchez (forthcoming) and Annex 5.

age points between 2019 and 2020 (Figure 1.5), for a net increase of almost 13.7 million people in poverty.

After decades of a gradual rise in incomes, LAC had finally become a predominantly middle-class region, until the global pandemic caused millions to lose income and fall out of middle class status. LAC's middle class, defined as those households whose income is between $13 and $70 per day (2011 PPP), became the largest income class in the region for the first time in 2018. By 2019, 38 percent of the population (around 230 million people) were considered middle class, while 37 percent were considered vulnerable class (those living on $5.50 to $13 per day; around 220 million people), and 22 percent poor. Despite region-wide mitigation measures,[13] the middle class is project-

ed to have declined to 37.3 percent of the population in 2020, resulting in a net loss of 4.7 million people from of the middle class, while the vulnerable class has increased to 38.5 percent. Without mitigation measures, in particular without Brazil's emergency transfers, projections suggest the global pandemic could have resulted in 20 million people losing middle-class status (see Section 4).

This report presents an overview of LAC's social gains in the past two decades, followed by an analysis of the region's vulnerability to the pandemic. The last two sections include poverty and inequality projections in light of the COVID-19 outbreak and a series of policy recommendations going forward.

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13 Estimates are limited to cash-transfer mitigation measures that were measurable in household surveys. In-kind transfers were not included.

LATIN AMERICA AND THE CARIBBEAN'S (SLOW) SOCIAL GAINS

Over the last decade, LAC saw a 22 percent gain in average per capita household income. In 2008, the average PCHI was about $13.9 a day in 2011 PPP prices. By 2018, the region's average PCHI was $17.1 a day (2011 PPP), or almost 3 PPP dollars more per day on average. Similarly, the *median* per capita household income increased from $8 per day (2011 PPP) in 2008 to $10.6 a day in 2018. Although the region's median per capita income grew by 25 percent in the 10-year period, the growth at the subregional level was not homogeneous, as Mexico and Central America became a larger share of the population below LAC's median PCHI. Brazil, the Andean Region, and the Southern Cone became relatively wealthier than Mexico and Central America in this period.

In 2018, for the first time in nearly two decades, LAC's middle class became the largest socioeconomic group. The middle class, defined as people with incomes between $13 and $70 a day in 2011 PPP, increased from an estimated 28.9 percent of the population in 2008 to 37.4 percent in 2018 and 38 percent in 2019. The size of the vulnerable class (or aspiring middle class), defined as people with incomes between $5.50 and $13 a day (2011 PPP), hardly changed throughout the decade. This class made up 36 percent of the population in 2008 and 36.9 percent in 2019 (Figure 2.1).

The movement towards a larger middle class was stronger between 2002 and 2014 than during the most recent five-year period (2014–2019). The regional distribution barely changed between 2014 and 2019, affecting the "almost middle-class" trend in 2002–2014 (Figure 2.1). Between 2002 and 2014, as poverty fell from 43 percent to 25 percent, the middle class increased from 22 percent to 35 percent of the regional population. This means that poverty declined by 18 percentage points and the middle class grew by 13 percentage points. In the most recent six-year in-

terval (between 2014 and 2019), these trends slowed markedly, to -0.9 percentage points for poverty and +1.5 percentage points in the middle class. The final year shows that about 2 in 5 people in LAC lived on more than $13, classifying them as either middle class or higher, a number slightly higher than in 2014.

All regions experienced an increase in the size of their middle class over the decade, but at different paces. As with median and mean income, the LAC region has clear differences by subregions across the income distribution. As the region became wealthier, poverty declined, and both the size and share of the middle class became bigger. However, using the same picture of the distribution as in Figure 2.1 but overlapped with the different income thresholds, one can see differences in the trends in middle-class growth across subregions (Figure 2.2). The Andean subregion's middle class saw a large increase, from 23.8 percent in 2009 to 32 percent in 2014, and then a much smaller one, reaching 33.4 percent in 2019. Similarly, Brazil's middle class grew strongly from 34.6 percent to 44.5 percent in 2009–2014, and then more slowly to 44.6 percent by 2019. Central America's middle class, on the other hand, experienced a very modest increase between 2009 (22.6 percent) and 2014 (24.6 percent), but then grew strongly in the next six years to reach 29.3 percent of the region's population. The Southern Cone's middle class grew almost continuously throughout the decade, from 44.3 percent in 2009 to 55 percent in 2019. The size of Mexico's middle class, on the other hand, barely changed in the past decade.

At 42 percent, Brazil accounts for the largest share of the Latin American middle class. Although its share is much smaller, the Andean subregion's middle class increased from 13.3 to 16.5 percent between 2002 and 2019. On the other hand, Mexico's share of the Latin American (LA) middle class declined from 19.3 percent to 17 percent during the same period. Similar-

Changes in distribution were small during 2014–2019 compared with 2002–2014

F I G U R E 2 . 1

Distribution of income in Latin America and the Caribbean
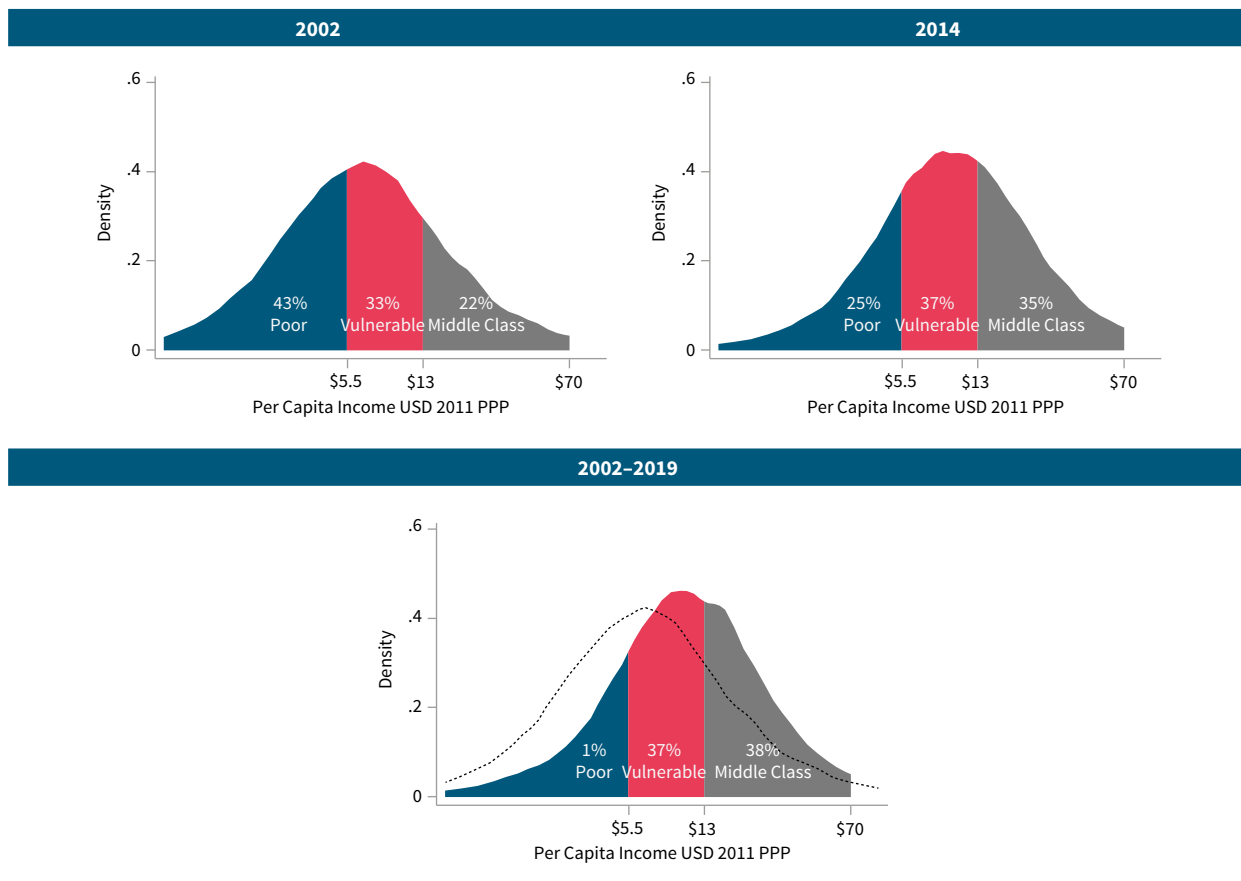
Source: SEDLAC (CEDLAS and World Bank).
Note: Pooled data using logarithmic scale and values lower than 99% of the distribution. Solid lines indicate the different poverty and income thresholds; dotted line in the 2002–2019 graph refers to the income distribution in 2002.

ly, Central America's share of the LA middle class declined at first and then remained relatively stable in the past decade, with 7.7 percent by 2019 (Table 2.1).

Likewise, LAC has reduced poverty by nearly half since 2000, with differences across countries. With a $5.50 (USD 2011 PPP) a day poverty line, the region's population living in poverty fell from 44.5 to 26.5 percent between 2000 and 2013. Similarly, with a $3.20 per day (USD 2011 PPP) poverty line, it fell from 24.8

to 11.5 percent during the same period. While poverty reduction in Central America was stagnant during most of LAC's 'Golden Decade,' the Andean region and Southern Cone experienced steep declines. However, from 2013 to 2019 the trends reversed, as Central American countries led poverty reduction in LAC with an 8.5 percentage point decrease under the $5.50 (USD 2011 PPP) line (Figure 2.3).

Box 2.1

Defining the vulnerable and middle classes

Evidence-based policy making requires an analysis of transitions in and out of poverty. It is important to not only lift the poor above the minimum income threshold (poverty line), but to protect the vulnerable (those close to the poverty line) from falling into poverty. Moreover, as countries grow and move toward middle-class income status, which characterizes most LAC countries today, it becomes imperative to analyze the transitions into the middle class over time. Thus, at any point in time, an individual can be classified as poor (based on the IPL, lower middle-income [LMIC], and/or upper middle-income [UMIC] thresholds), as vulnerable, or as being in the middle class. These classifications are dependent on economic stability, i.e., low transition probabilities of falling in and out of poverty.

For example, an individual is defined as vulnerable if the probability of falling back into poverty over a five-year interval is greater than 10 percent, which is approximately the average probability of falling into poverty in countries like Argentina, Colombia, and Costa Rica (Ferreira *et al*. 2012). This, in turn, yielded an upper bound of $10 per person per day in 2005 PPPs to be classified as vulnerable. This upper bound also served as the lower bound for the classification of individuals in the middle class.

The upper bound for the middle class was set at $50 per person per day using self-perceptions data, based on analysis from Brazil, Chile, Colombia, Mexico, and Peru. The key consideration here is to pick an income threshold that is robust to changes in the distribution of income right around the threshold, so that changing the upper bound slightly should not move a significant proportion of people in and out of the middle class. In contrast, moving the lower bound should significantly affect the percentage of the excluded/included population.

More recently, the thresholds were updated to be expressed in terms of 2011 PPPs. First, using the 2005 PPP conversion factor of each country, the vulnerable- and middle-class lines were converted to local currency units at 2005 prices. Second, these values were deflated to 2011 prices using each country's CPI and converted back to US dollars using their corresponding 2011 PPP conversion factors. Finally, a simple average of the resulting lines was taken to obtain a regional value. By rounding to the closest unit, the vulnerable- and middle-class lines in 2011 PPP for LAC were then set at US$5.5–13 and $13–70 a day, respectively.

This implies that an individual/household can be (1) earning below the IPL ($1.90), (2) earning between the IPL and the LMIC line ($1.90 to $3.20), (3) earning between the LMIC and UMIC lines ($3.20 to $5.50), (4) vulnerable, i.e., earning between $5.50 and $13; (5) be in the middle class (earning $13–$70), or (6) earning more than $70.[14]

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14 Previously, the income thresholds used to identify the vulnerable and the middle classes were set at $4–10 and $10–50 vis-à-vis the $1.25, $2.50, and $4 as the IPL, LMIC, and UMIC thresholds, respectively. All these were expressed in terms of 2005 PPPs.

Fewer people in poverty, more moving in the middle class, but at different paces.

FIGURE 2.2

Distribution of income in Latin America and the Caribbean by subregion
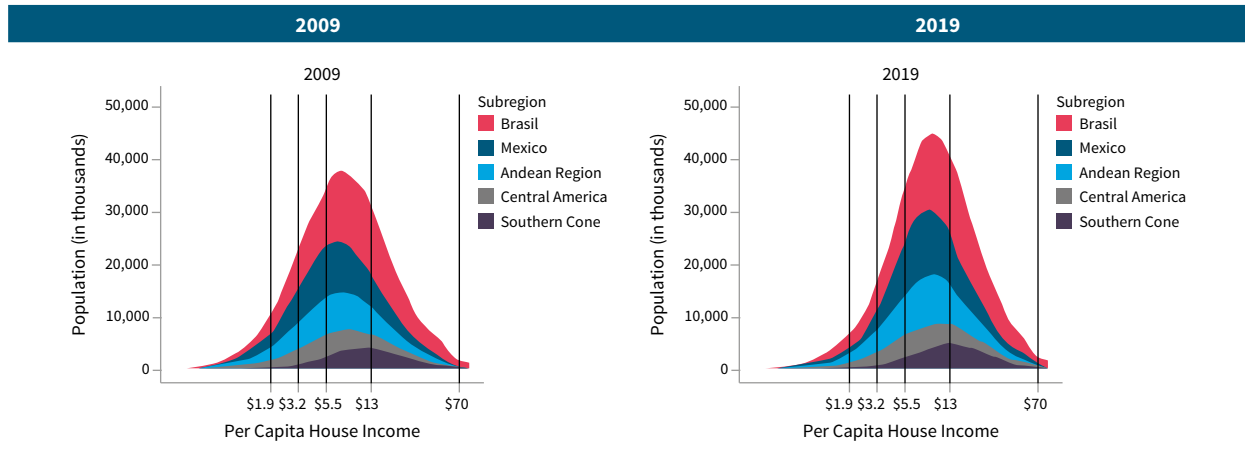
Source: SEDLAC (CEDLAS and World Bank) pooled data.

Note: Data representation uses the logarithmic scale and trims values higher than 99% of the distribution. Lines indicate the different poverty and income thresholds. In cases where data are unavailable for a given country in a given year, values have been interpolated or extrapolated using WDI data (World Bank 2020b) and then pooled to create the regional estimate. More details are available in Annex 3 and Annex 4. See Annex 2 for complete information on the availability of surveys.

TABLE 2.1

Share of the Latin American middle class by subregion and by year (%)

REGION	2002	2008	2014	2019*
Andean	13.3	14.7	16.8	16.5
Brazil	42.7	41.7	45.3	41.6
Central America	9.1	7.6	6.9	7.7
Mexico	19.3	18.7	13.6	17.0
Southern Cone	16.4	18.7	18.8	18.1

Source: SEDLAC (CEDLAS and World Bank) pooled data.

Note: The Andean subregion is the aggregate of Bolivia, Colombia, Ecuador, and Peru; the Central American subregion is the aggregate of Costa Rica, Guatemala, Honduras, Nicaragua, Panama, El Salvador, and the Dominican Republic; and the Southern Cone subregion is the aggregate of Argentina, Chile, Paraguay, and Uruguay.

*Latest data for Mexico is 2018.

FIGURE 2.3

Poverty trends by subregion (2000–2019)
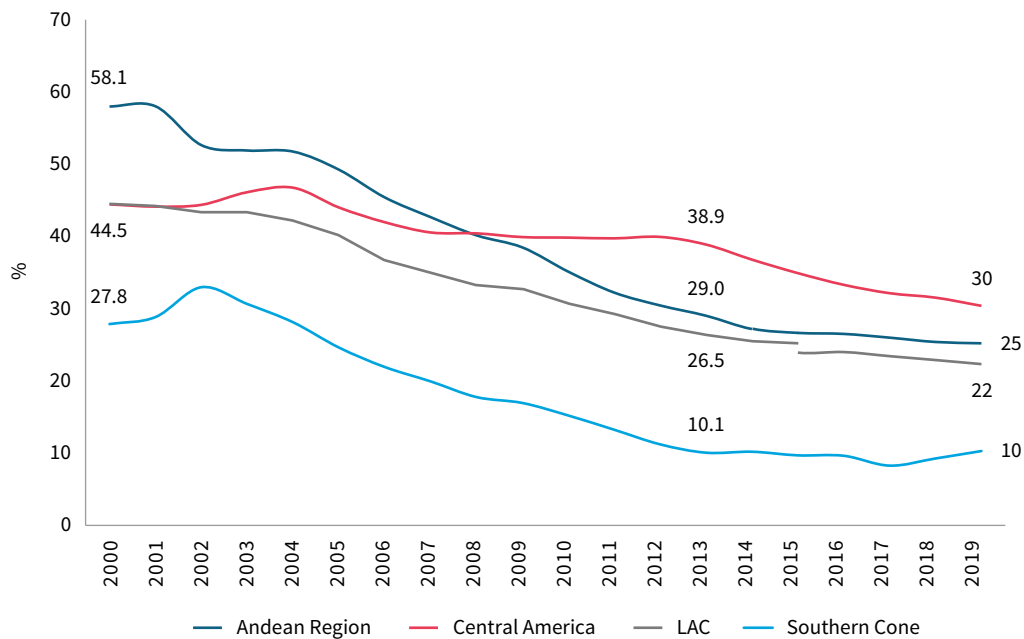
Source: SEDLAC (CEDLAS and World Bank) and World Development Indicators 2020.
Note: (1) The Latin America and Caribbean regional aggregate is estimated based on a sample of 18 countries (LAC-18); see Annexes 2 and 3. In cases where data are unavailable for a given country in a given year, values have been interpolated or extrapolated using WDI data (World Bank 2020b) and then pooled to create the regional estimate; (2) due to important methodological changes in Mexico's official household survey in 2016 that created a break in the poverty series, we have created a break in the LAC-18 aggregate. More details are available in Annex 3; see Annex 4 for more information.

Despite accounting for a lower share of the overall population, rural areas continue to host a larger number of the poor in LAC. In 2019, rural areas hosted 21 percent of the total population while accounting for over 54 percent of the poor population under the $1.90 line and 41 percent of the poor under the $5.50 2011 PPP line. Moreover, despite a reduction in overall poverty over time, the rural-urban poverty gap persists. Based on the $5.50 poverty line, the poverty headcount was 60.1 percent in rural areas and 14.8 percent in urban areas in 2019 (Figure 2.4).

This contrast between urban and rural areas is not shared by all countries, with Andean and Central American countries having deeper differences than the rest of the region. Colombia, Bolivia, and Peru have rural-urban $5.50-based poverty differences of between 27 and 45 percentage points; in Central America, Honduras, Nicaragua, and Guatemala face rural-urban poverty differences of about 30 percentage points. Countries with relatively low poverty levels tend to have very small gaps (mostly per definition), with the notable exception being Panama, where the poverty rate is less than 12.1 percent, but there is a sizeable gap between urban and rural areas (23.3 percentage points) (Figure 2.5).

FIGURE 2.4

Urban vs. rural poverty headcounts under the $1.90 a day line (IPL) and $5.50 a day (UMIC) (circa 2019)
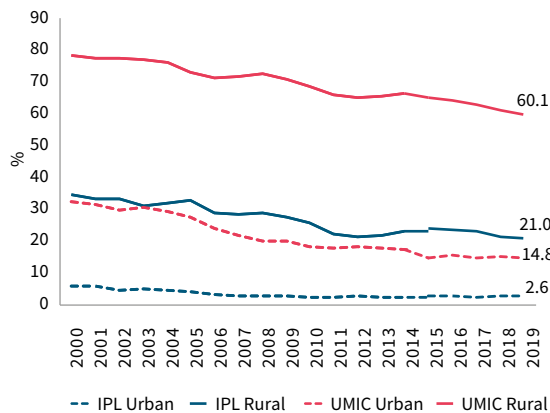
FIGURE 2.5

Urban vs. rural poverty under the $5.50 a day line, last year of data for each country (circa 2019)
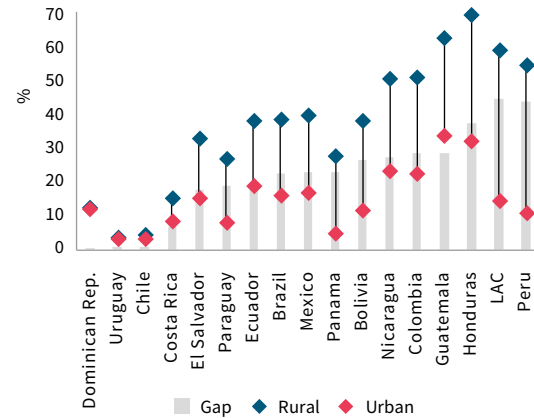
Source: LAC Equity Lab using SEDLAC (CEDLAS and World Bank).
Note: Data are from 2019 or the closest available dataset for each country. The Latin America and Caribbean regional aggregate is estimated based on a sample of 18 countries (LAC-18); see Annexes 2 and 3. In cases where data are unavailable for a given country in a given year, values have been interpolated or extrapolated using WDI data (World Bank 2020b) and then pooled to create the regional estimate. Due to important methodological changes in Mexico's official household survey in 2016 that created a break in the poverty series, we have created a break in the LAC-18 aggregate. More details are available in Annex 3; see also Annex 4.

In line with the slow poverty reduction in recent years, progress on shared prosperity indicators has also been limited.[15] Prior to the economic slowdown, LAC shared prosperity was relatively high, with the region being second among the World Bank regions in terms of average shared prosperity.[16] For instance, between the years 2009 and 2014, income growth for the bottom 40 percent (B40) (4.1 percent) was nearly one percentage point higher than the income growth (3.5 percent) for the total population. The top five performers (Chile, Ecuador, Paraguay, Uruguay, and Brazil),

with total population growth rates of about 5 percent, registered annualized increases of 7 or more percent for the B40. This, however, changed significantly after 2014. Between that year and 2019, although the region reported a positive shared prosperity premium, at 0.45 percentage points it was much lower than the previous five-year period. Moreover, the top five performers (El Salvador, Dominican Republic, Panama, Chile, and Bolivia) saw between 3 percent and 5.5 percent growth in the incomes of the B40 (Figure 2.6).

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15 Shared Prosperity is defined over a five-year period. For each country, only the surveys that are comparable can be used for the five-year period of shared prosperity. This means that if a country has only three years of comparable data during that period, Shared Prosperity is calculated for those three years only. See Annex 2 for more information on the surveys used.

16 According to data from circa 2009-2014. World Bank 2018.

A slowing in the gains in shared prosperity

Shared prosperity (circa 2009–2014 and 2014–2019). Five best and five worst performers by B40 growth.

a. 2009–2014

b. 2014–2019

■ Growth Total ● Growth b40
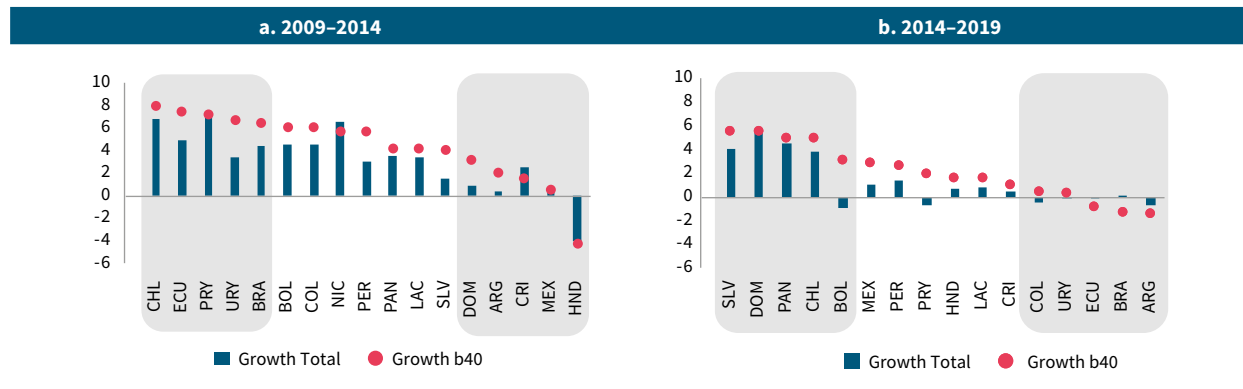
Source: LAC Equity Lab using SEDLAC (CEDLAS and World Bank).
Note: Growth rates are annualized. Although the shared prosperity indicator is purely national in focus (World Bank 2018), previous editions of the Poverty and Labor Briefs have included LAC averages. For these averages, we used pooled data for the given years using extra- or interpolations. Panel a shows annualized growth rates for 2009–2014 for all countries except Chile (2009–2013), Costa Rica (2010–2014), Mexico (2010–2014), and Honduras (2009–2013). Panel b shows annualized growth rates for 2014–2019 for all countries except Mexico (2016–2018), the Dominican Republic (2017–2019), Chile (2013–2017), and LAC (2015-2019).

Income growth and its redistribution both reduced poverty during the 'Golden Decade.' However, during the period of stagnation, distributional changes offset the negative changes in income. From 2002 to 2014, changes in the distribution and the growth of income were both important drivers of the reduction in poverty. Income growth accounted for 63 percent of the reduction in poverty at the $1.90 line and for 76 percent of the reduction at the $5.50 line (Figure 2.7). The period of early stagnation saw a change in the usual pattern of the effects of growth and distribution: (negative) changes in growth in income were responsible for an increase in poverty but were partially offset by distributional changes. In fact, for the $3.20 and $5.50 lines, distributional changes effectively countered the effects of the negative income growth, leading to an almost stagnant poverty rate.

Despite low overall growth and correspondingly lower shared prosperity premiums since 2012, income growth in most LAC countries continues to be pro-poor. Only 4 out of 16 LAC countries for which we have the harmonized data had a negative shared prosperity premium during 2014–2019. Most countries moved around in terms of their ranking based on B40 growth. Chile, for instance, had comparatively average growth (7 percent as a total) during the first period (2009–2014) but managed to maintain a relatively high growth rate in the latter years, both overall and for the B40. El Salvador and the Dominican Republic jumped from the worst to the best performers in terms of overall and pro-poor growth. Brazil became one of the worst performers in terms of overall growth, despite being the fifth-best performer in the preceding five years. Mexico continued to register one of the lowest

Growth was the main driver during the sustained growth period, while distributional changes contributed to lower poverty during the period of stagnation.

F I G U R E   2 . 7

Distribution and growth decomposition (annual changes)
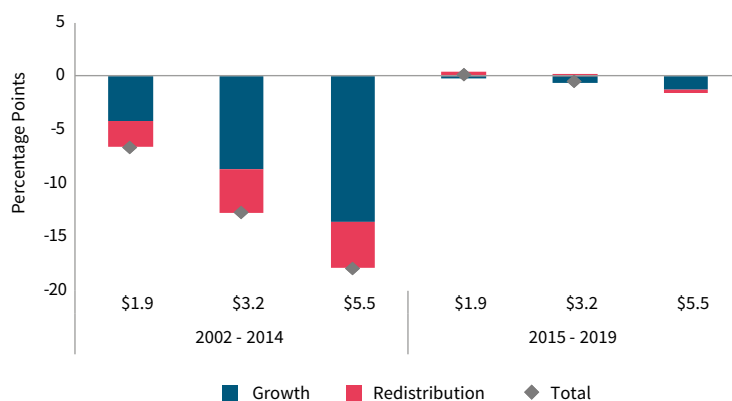
Source: SEDLAC (CEDLAS and World Bank).
Note: See Annex 6 for the Datt-Ravallion decomposition.

overall growth rates in the region: between 2009 and 2014, both overall and B40 growth hardly registered any significant change. After 2014, both overall and B40 income growth were positive, but were still small.

Given that most countries experienced pro-poor growth during the sustained growth period, the region as a whole was also marked by higher income growth in the bottom deciles during that period but mixed results during the stagnation period. The growth incidence curves (GIC), which plot growth rates at each quantile of per capita income, show that between the years 2008 and 2014, income growth in the bottom decile (5.1 percent) was almost twice the growth of income in the top decile (2.7 percent), and 50 percent higher than the mean percentile growth rate (3.4 percent). During the stagnation period (2015–2019), there was a general reduction in incomes at all levels of the income distribution (Figure 2.8).

These distributional changes can help explain the reduction in poverty at the $5.50 and $3.20 pov-

erty lines on the one hand and the increase in poverty based on the $1.90 on the other. The headcount of $1.90 poor is related to the decrease in income per capita in the bottom decile. Because the income per capita in the lowest decile decreased by 0.1 percent, poverty headcounts under the $1.90 line were higher in 2019. However, since the second and the third deciles had growth rates around 1 percent, the overall effect on the $5.50-based poverty rate was positive. The $3.20 headcount, which almost overlaps with the first decile, did not increase, most likely because the largest income declines must be among the poorest households in that income decile.

These changes also help explain the reduction in overall income inequality as mirrored by the Gini coefficient. During most of the 'Golden Decade,' the Gini coefficient declined considerably in LAC, from 56.4 in 2000 to 51.9 in 2011. From that point on, the reduction rate slowed, with the Gini coefficient remaining flat through 2019 at around 51 (Figure 2.9). Mexico and

Growth was pro-poor during the sustained growth period; during the stagnation period, the poorest and richest households saw the deepest decreases.

Growth incidence curves, 2008–2014 and 2015–2019

Growth rate	2008–2014	2015–2019
Mean	2.9	0.9
Median	3.1	1.0
Mean percentile	3.4	0.9
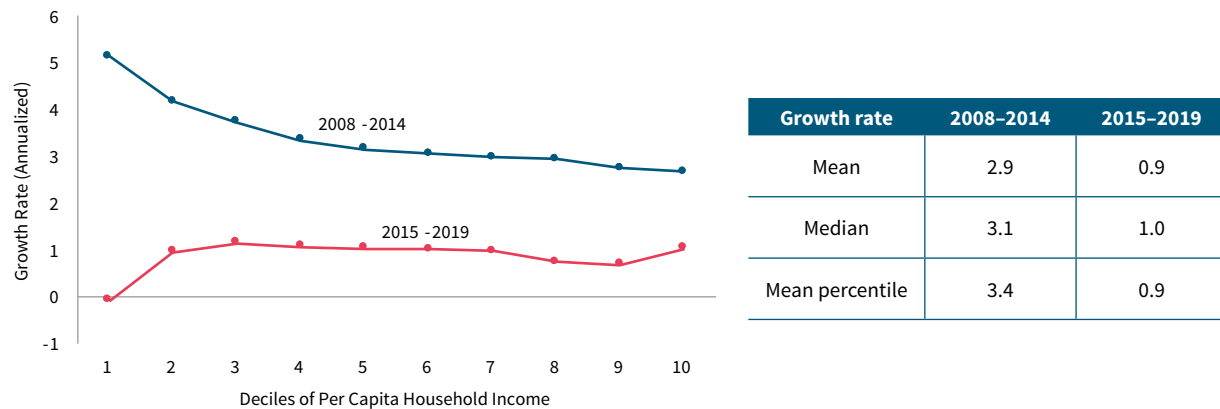
Source: SEDLAC (CEDLAS and World Bank).

several Central American countries have driven this inequality stagnation, with some countries even experiencing increases in inequality between 2014 and 2019. Even though the Andean subregion and Southern Cone have contributed to the decline in inequality since 2000, inequality reduction has slowed since 2013.

Labor income has been the main driver of poverty reduction in Latin America. Increases in labor income have been invaluable in decreasing poverty during the sustained growth period (2009–2014). In fact, labor income alone drove about half of the poverty reduction for the $1.90 line, two-thirds for the $3.20 line, and about three-fourths for the $5.50.[17] While labor income contributed the most to poverty reduction throughout the 'Golden Decade' for most countries, in Costa Rica, Argentina, Panama, and the Dominican Republic nonlabor income was the main driver (Figure 2.10).

Poverty reduction was associated with increases in earnings within sectors; nonetheless, the poor continue to work in low-paying sectors with high levels of informality. In Brazil and the Andean and Southern Cone subregions, poverty reduction during the 'Golden Decade' among unskilled workers was associated with an increase in earnings in the services (construction, commerce, and hospitality) and agricultural sectors. In Mexico and Central America, construction was associated with some reduction in poverty among unskilled workers.[18] As of 2019, LAC's poor are concentrated in low-paying sectors such as agriculture, commerce, and construction (Figure 2.11). Moreover, 54.5 percent of workers in the LAC region are in the informal economy, particularly in the agriculture and services sectors (Figure 2.12).

17 For $1.90 and $3.20 Shapley decompositions, visit the LAC Equity Lab: https://www.worldbank.org/en/topic/poverty/lac-equity-lab1.

18 World Bank (2015).

FIGURE 2.9

Gini coefficient by subregion (2000–2019)

Source: SEDLAC (CEDLAS and World Bank).

Note: (1) The Latin America and Caribbean regional aggregate is estimated based on a sample of 18 countries (LAC-18); see Annexes 2 and 3. In cases where data are unavailable for a given country in a given year, values have been interpolated or extrapolated using WDI data (World Bank 2020b) and then pooled to create the regional estimate; (2) Due to important methodological changes in Mexico's official household survey in 2016 that created a break in the poverty series, we have created a break in the LAC-18 aggregate. More details are available in Annex 3; see Annex 4 for more information.

FIGURE 2.10

Shapley decomposition of poverty by income source and country ($5.50 a day 2011 PPP)

(2014–2019)

Source: SEDLAC (CEDLAS and World Bank).

Note: See Annex 7 for Shapley decomposition. Panel a shows annualized growth rates for 2009–2014 for all countries except Chile (2009–2013), Costa Rica (2010–2014), Mexico (2010–2014), and Honduras (2009–2013). Panel b shows an-nualized growth rates for 2014–2019 for all countries except Mexico (2016–2018), the Dominican Republic (2017–2019), Chile (2013–2017), and LAC (2015-2019).

FIGURE 2.11

LAC earnings and employment by sector and number of poor ($5.50 a day 2011 PPP), (circa 2019)
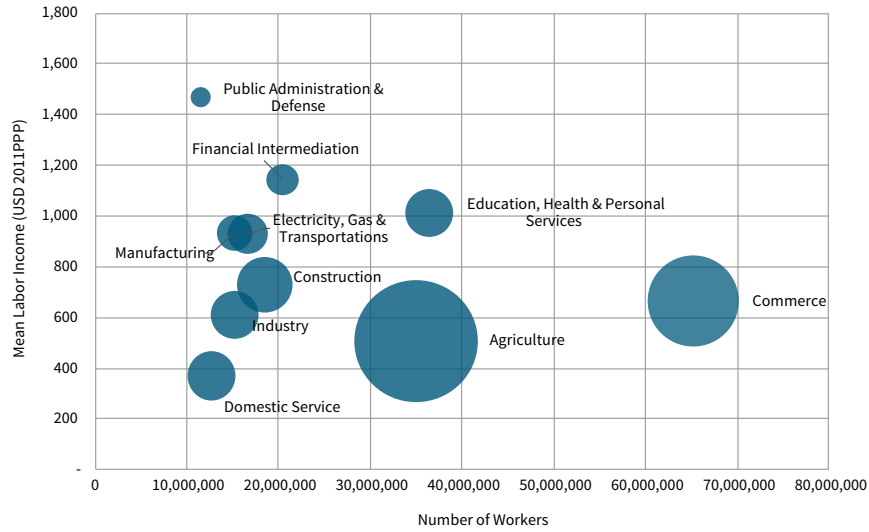
Source: SEDLAC (CEDLAS and World Bank).

Note: Size of circles represents the number of poor in each sector. The number of workers is limited to individuals ages 15–64.

FIGURE 2.12

Workers by sector and informality (circa 2019)
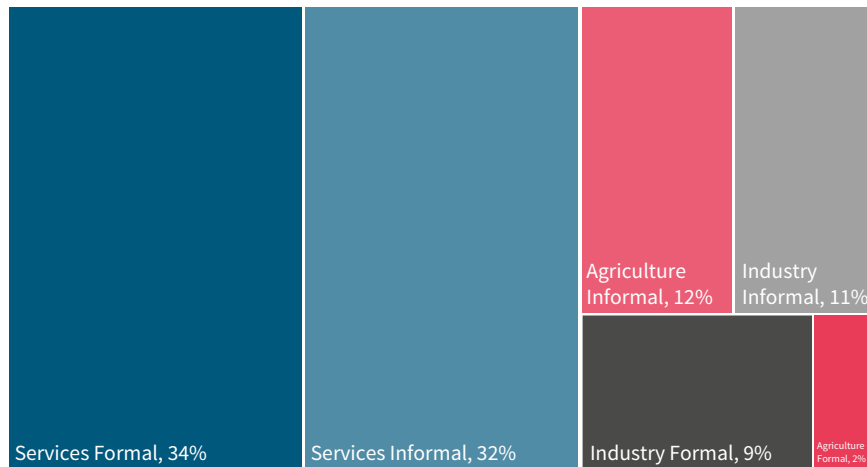
Source: SEDLAC (CEDLAS and World Bank).

Note: Informality refers to workers ages 15–64 who do not receive a pension. For Panama, estimates are limited to work-ers receiving an *aguinaldo* (salary bonus). In Argentina, Ecuador, Panama, and Mexico self-employed workers are not asked about pensions; therefore, in this report self-employed workers in these four countries who have completed ter-tiary education are considered formal workers.

SECTION 3.

THE VULNERABILITY OF LATIN AMERICA AND THE CARIBBEAN TO THE IMPACTS OF COVID-19

Persistent inequalities throughout the region will likely result in the pandemic having unequal impacts. As was presented in the previous section, poverty reduction and income growth have not been homogenous across and within countries. Rural areas continue to host many of the poor, and one in four individuals continues to live on less than $5.50 a day (2011 PPP) (Map 3.1). Moreover, a larger share of the poor works in the informal sector and at low-paying jobs, making them particularly vulnerable to income shocks. Some countries in the region have mobilized significant amounts of resources to strengthen their health systems in order to confront the global pandemic; others have limited capacity to provide quality affordable health services. In addition, lockdown measures put in place to contain the virus's spread have highlighted in-

MAP 3.1

Subnational poverty rate ($5.50 2011 PPP) and COVID-19 confirmed cases
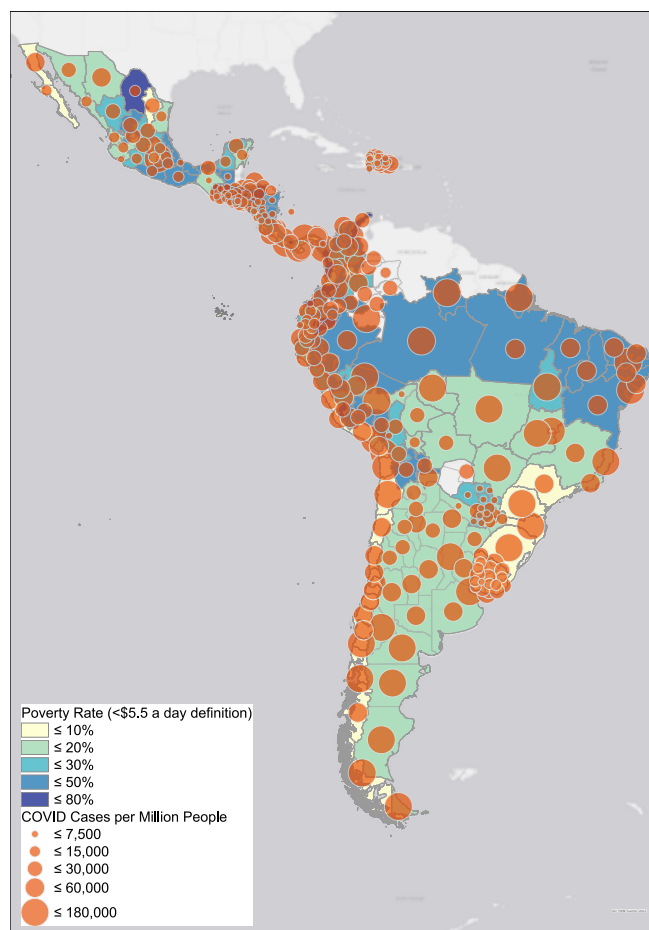
Sources: Tabulation of SEDLAC (CEDLAS and World Bank) for poverty data; public health ministries for COVID-19 confirmed cases (circa March 25, 2021).
Note: Groups denote the population with income per capita lower than $5.50 a day (2011PPP). Subnational representative data at the administrative level are currently not available for Argentina, Costa Rica, Honduras, and Uruguay; therefore, the map currently shows the same poverty rate/indicator across states/departments/provinces within these countries.

FIGURE 3.1

Informality rate (Middle class and poor, $5.50 2011 PPP), circa 2019
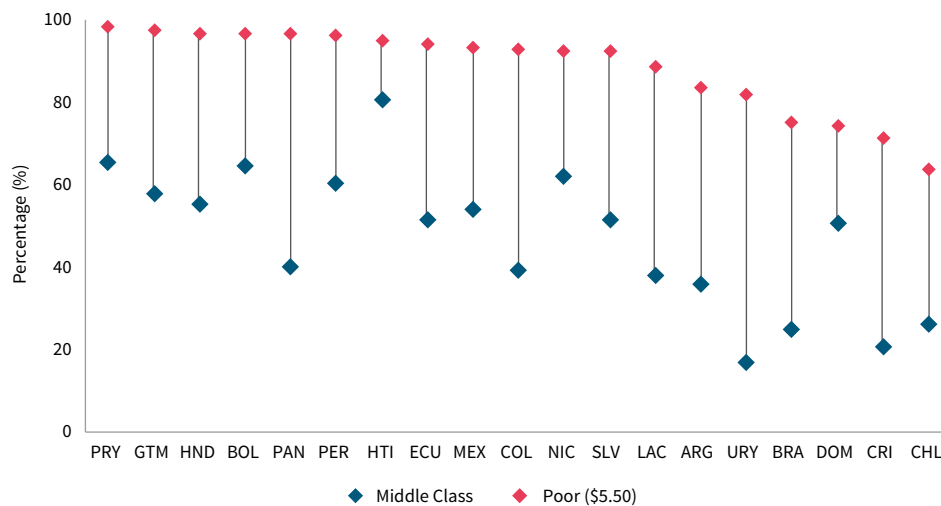
Source: SEDLAC (CEDLAS and World Bank).

Note: Informality refers to workers ages 15–64 who do not receive a pension. For Panama, estimates are limited to workers receiving an *aguinaldo* (salary bonus). In Argentina, Ecuador, Panama, and Mexico self-employed workers are not asked about pensions; therefore, in this report self-employed workers in these four countries who have completed tertiary education are considered formal workers.

equities in access to basic services such as electricity, water, and sanitation, and even the internet.

Latin American and Caribbean countries face high levels of informality[19] and self-employment, resulting in lower-quality and more-vulnerable jobs. Over half (54.4 percent) of the region's workers are in the informal sector, though there are significant variations within countries and socioeconomic groups (Figure 3.1). In Guatemala and Honduras, ap-

proximately four out of five workers are in the informal sector, whereas in Uruguay, Chile, and Costa Rica less than a third are informal. Nearly 90 percent of workers living on less than $5.50 a day (2011 PPP) are informal relative to over a third among middle-class workers.[20] Similarly, whereas only one of every five middle-class workers is self-employed, over 30 percent are among the poor (Table 3.1). These numbers account for a large segment of the population who do not have labor con-

19 Informality refers to workers ages 15–64 who do not receive a pension. For Panama, estimates are limited to workers receiving an *aguinaldo* (salary bonus). In Argentina, Ecuador, Panama, and Mexico self-employed workers are not asked about pensions; therefore, in this report self-employed workers in these four countries who have completed tertiary education are considered formal workers.

20 Although informality is linked most closely to poverty, it is still the case that one-third of middle-class workers are considered informal. Hence, policies involving payrolls and unemployment insurance, for example, that could be used to mitigate shocks like COVID-19 would not reach this group. In addition, these households could be more subject to shocks, even though for the moment their incomes are high enough for them to be considered middle class.

tracts or access to unemployment insurance and rely on day-to-day work that cannot be carried out from home. This may force many to keep working during the confinement period to acquire basic necessities, ultimately exposing them to infection. Inequalities between skilled (often salaried workers) and unskilled labor (commonly self-employed/informal workers) throughout the LAC region will likely be heightened, because those who can work from home will not experience such drastic drops in income. Even though salaried workers may also experience income loss in the short run due to furloughs or wage cuts, informal or self-employed workers do not count with benefits such as unemployment insurance.

Health systems across Latin America and the Caribbean have limited resources for dealing with the COVID-19 crisis. On average, LAC countries invest only 8 percent of GDP in health care, with some like Peru spending below 5 percent. This contrasts with 10 and 12.5 percent of GDP health expenditure globally and among OECD countries, respectively. Similarly, the LAC region has on average 2 doctors per 1,000 people and only 2.1 hospital beds per 1,000 people, well below the OECD average of 3.5 and 4.7, respectively. Countries like Guatemala, Honduras, and Haiti have just 1 doctor per 1,000 people. As of early 2020, there were on average just 9.1 intensive care units (ICU) beds per 1,000 people in Latin America and the Caribbean. The lowest ratios were observed throughout Central America, whereas Brazil and the Southern Cone countries were above the regional average. High out-of-pocket health expenditures perpetuate inequities in access to health services and reflect a worse baseline at the onset of the pandemic. Out-of-pocket health expenditures range from 54 percent of total health expenditure in Guatemala to only 15 percent in Argentina. Moreover, many Latin American and Caribbean countries entered the

pandemic with health systems that had recently dealt with or were facing seasonal diseases such as dengue, chikungunya, and yellow fever. While this may have prepared some of them, it also implied an overburdening of the systems. World Bank High-Frequency Monitoring Surveys (HFS) have found that nearly half of household members in Ecuador and 41.5 percent of individuals in Peru needed but could not access medical treatment during quarantine. In Guatemala and Honduras, approximately one in five household members could not access medical treatment, compared with less than 10 percent in Costa Rica.

Access to basic services such as water and sanitation is marked by a high level of inequality. Frequent handwashing has been widely promoted to reduce the risk of contagion of COVID-19. Inadequate access to water (both quantity and quality) poses additional challenges to the maintaining of a clean environment and the sanitizing of physical surfaces. Moreover, not having an adequate water source inside the dwelling[21] can limit households' ability to socially distance and follow other recommended guidelines. While there has been an expansion in water and sanitation provision in Latin American and Caribbean countries, there are still significant gaps, particularly among socioeconomic groups. As of 2019, nearly 38 percent of poor households did not have adequate sanitation relative to only 12 percent among the middle class (Table 3.1). Similarly, nearly 1 in 10 poor households did not have access to improved water relative to 0.9 percent among the middle class. Inadequate access to improved sanitation remains an issue especially across Central American and Caribbean countries like Guatemala and Haiti, where more than 60 percent of poor households experience deficient sanitation levels. Costa Rica, by contrast, performs significantly better, with indicators

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21 Access to water from outside sources includes public standpipes, wells, or surface water bodies.

FIGURE 3.2

Population without improved sanitation (middle class and poor $5.50 2011 PPP), circa 2019
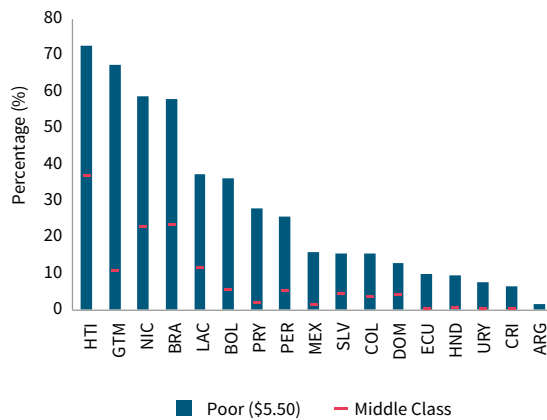
FIGURE 3.3

Population without improved water supply (middle class and poor $5.50 2011 PPP), circa 2019
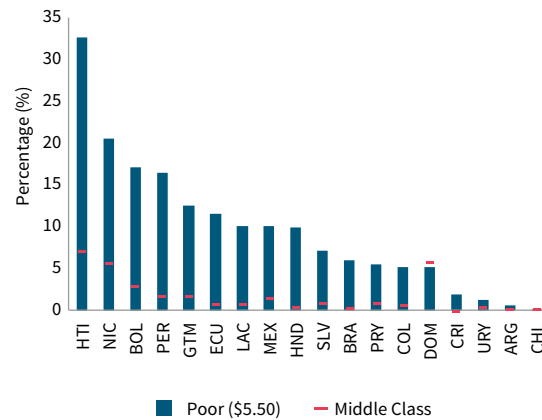
Source: SEDLAC (CEDLAS and World Bank).

closer to those of more-developed countries (Figures 3.2 and 3.3).

Overcrowded living situations combined with inadequate access to water and sanitation exacerbate the epidemic's risks. A large part of the Latin American and Caribbean population faces a higher risk of illness within their households, especially under confinement measures. Physical distancing can be virtually impossible in crowded places, increasing the risk of diseases, especially in urban areas where the cost of living tends to be higher and several family members are forced to share a single room. Overcrowding may also pose threats to household members' mental health during lockdowns, increasing the probability of conflict within the household. One in three women is affected by gender-based violence in Latin America and the Caribbean and in some countries from which data are available, domestic violence has doubled or even tripled with stay-at-home orders (World Bank 2020a). In El Salvador, Guatemala, and Nicaragua, overcrowding affects

more than half of poor households in urban centers. Conversely, Chile and Mexico have less than 2 and 4 percent overcrowding, respectively, in their metropolitan areas (Figure 3.4).

The COVID-19 pandemic has caused a rise in food insecurity due to financial hardship and a lack of storage. Access to durable goods such as a refrigerator may be considered invaluable under lockdown measures. Stay-at-home orders across the LAC region have limited daily visits to supermarkets or local stores to purchase food. As of 2019, over a third of poor households did not have a refrigerator, compared with only 5 percent among middle-class households. Under lockdown measures, adequate food storage is particularly important, because households cannot replenish food items properly. Results from a set of World Bank HFSs suggest an alarming increase in food insecurity. In Honduras and Ecuador, over 40 percent of households report having adults who had to skip a meal in the last 30 days because of lack of money or other resources.

Household overcrowding (middle class and poor $5.50 2011 PPP)
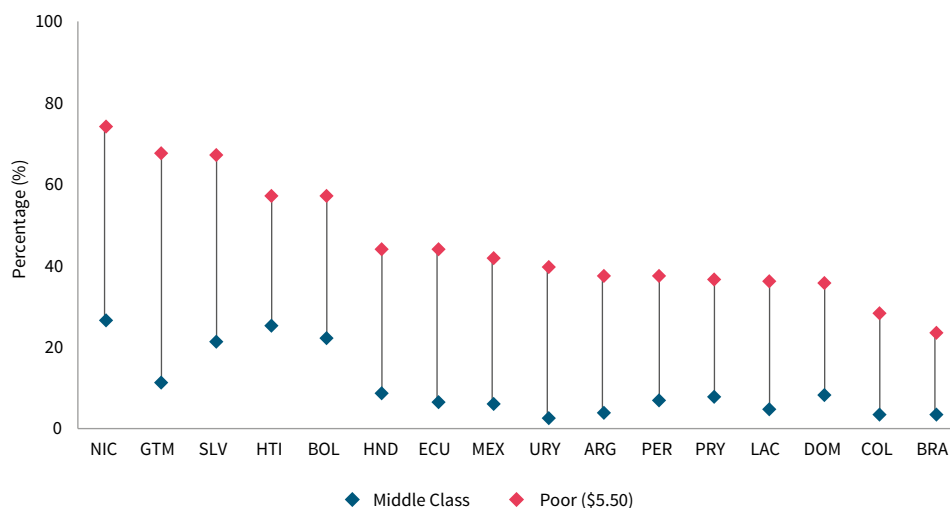
Source: SEDLAC (CEDLAS and World Bank).
Note: Overcrowding is defined by the number of household members divided by the total number of bedrooms in the household. If this ratio is 3 or more, or if the household does not have a bedroom, it is considered "overcrowding".

Also, nearly half of households in Honduras and Ecuador report running out of food in the last 30 days because of a lack of money.

Limited access to electricity and the internet is yet another source of vulnerability. As countries were forced to shut down economic activity, beginning in mid-March 2020, many businesses and schools opted for telework and remote learning. However, individuals without access to electricity and the internet were not able to adjust to these new regimes. This will likely limit productivity in the region and, in some cases, increase unemployment. As of 2019, 9 percent of individuals living on less than $5.50 a day (2011 PPP) did not have access to electricity, compared with less than 1 percent of the middle class (Table 3.1). Similarly, only half of the poor report using the internet, whereas over 70 percent of the middle class report doing so. Internet usage at home is even rarer among poor households, with less than a third using it, compared with 64 percent of mid-

dle-class families. Across the region, over 75 percent of the Southern Cone countries' population uses the internet, approximately 57 percent do so in the Andean subregion, and less than half in Central America do so (Figure 3.5). Access to a mobile phone can be an alternative means by which households can connect either for work or school. In the LAC region, there are on average over 100 mobile cellular subscriptions per 100 people: the number of subscriptions ranges from 57 in Haiti to 160 in Costa Rica (Figure 3.6). Results from the World Bank HFSs indicate a large share of students could not access the platforms designed for e-learning and are relying on other social networks as alternative contacts.

Many countries in the region are highly dependent on remittances, making them particularly vulnerable to a global economic slowdown. International remittances, mainly originating from the United States, account for 23 percent of Haiti's GDP and 21 percent of the GDPs of El Salvador and Honduras (Fig-

FIGURE 3.5

Households with access to the internet (%), circa 2019
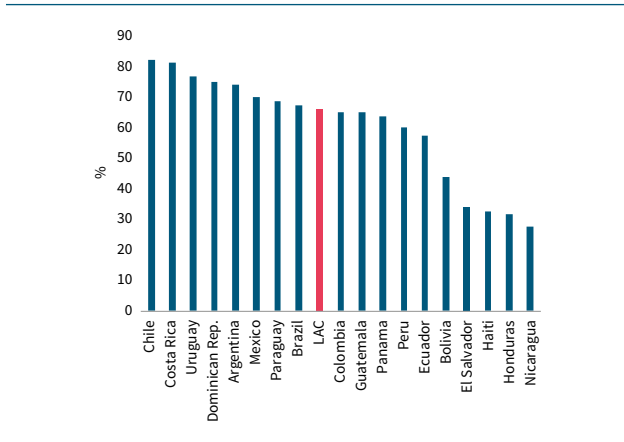
FIGURE 3.6

Mobile cellular subscriptions (per 100 people)
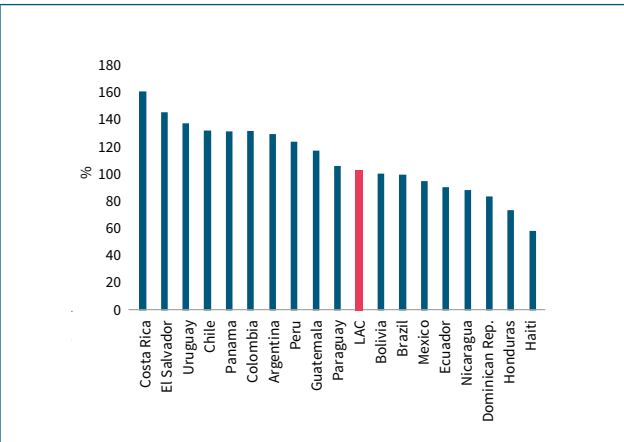
Source: World Bank 2019b.

FIGURE 3.7

Remittances as a share of GDP (2019)

Remittances as a % of GDP
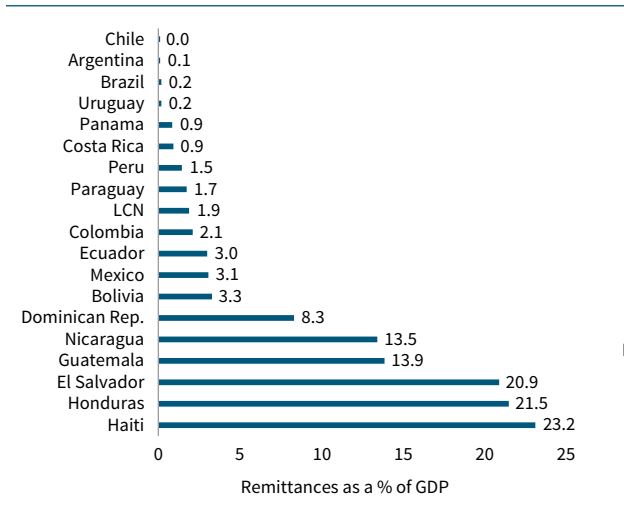
FIGURE 3.8

Remittances from abroad as a share of household income (circa 2019)

Remittances as % of household income
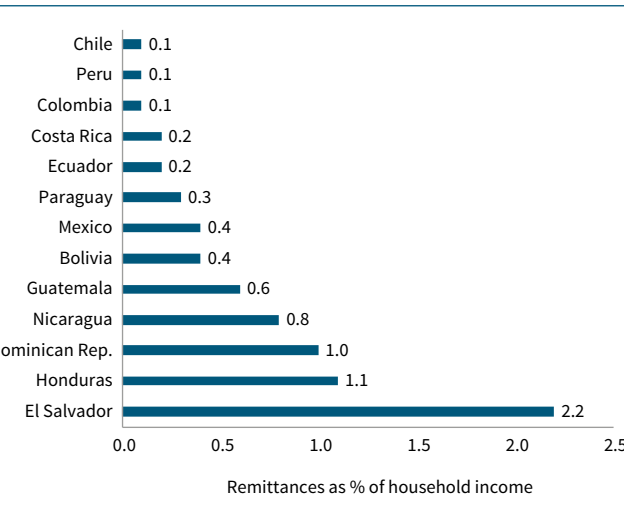
Source: World Bank 2019b.

Source: SEDLAC (CEDLAS and World Bank).

ure 3.7). However, remittances represent a small share of total household income, ranging from 0.1 percent in Chile to 2.2 percent in El Salvador (Figure 3.8). While a

large share of international remittances tends to go to the non-poor, a sharp fall in remittances can increase the likelihood of families falling into poverty, and in

some cases, reduce investments in human capital that are often financed by remittances. Moreover, domestic remittances are an important income source for rural households, particularly in countries with a large segment of agricultural workers. Since domestic remit-

tances are often sent by urban informal-sector workers, including seasonal migrants, to their families in rural areas, a substantial shock to the urban informal sector is likely to directly reduce nonlabor income in rural areas.

TABLE 3.1

Profile of the poor ($5.50 2011PPP) and middle class, LAC (2019)

	Middle Class			Poor ($5.50 a day 2011 PPP)		
	Total	Female	Male	Total	Female	Male
Access to Services						
Electricity	99.6	99.8	99.4	91.0	92.8	89.9
Internet (at home)	63.6	65.5	62.3	29.2	40.4	21.7
Internet usage	72.9	70	74.7	50.2	55.9	47.2
Mobile Phone	93.6	92.5	94.3	83.4	86.1	81.5
Mobile Phone (individual)	87.6	87.3	87.9	52.7	52.8	52.6
No Sanitation	11.8	11.3	12.3	37.6	36.9	38.4
No Water	0.9	0.7	1	10.3	9.9	10.8
Refrigerator	94.2	96.1	92.9	66	74.1	60.6
Education						
Average Years of Education	9.4	9.5	9.3	5.2	5.4	5
Never attended	7.1	7.2	6.9	17.3	17.4	17.1
Incomplete Primary	19.9	19.7	20.1	38.4	36.5	40.4
Complete Primary	8	7.9	8	10.8	10.7	11
Incomplete Secondary	13.8	12.8	14.9	20.1	20.3	19.8
Complete Secondary	21.6	20.7	22.5	10.3	11.4	9.1
Incomplete Tertiary	11.6	11.8	11.4	2.2	2.5	1.8
Complete Tertiary	18.1	20	16.1	1	1.1	0.9
Sector						
Agriculture	6.3	3.2	8.8	40.4	28.2	48.0
Industry	26.5	13.8	36.7	21.6	12.3	27.4
Services	67.2	83.0	54.5	38.0	59.5	24.6
Type of employment						
Employer	5	3.6	6.1	4.9	3.5	5.9
Not salaried	1.9	2.9	1.2	11.2	16.1	7.9
Salaried worker	68.2	69.9	66.8	36.9	30.6	41.2
Self-employed	20.3	18.3	21.9	31	30.1	31.7
Unemployed	4.6	5.3	3.9	15.9	19.7	13.3
Informality						
Informal Workers	38.0	37.0	38.8	89.0	91.7	87.2

Source: SEDLAC (World Bank and CEDLAS).
Note: Type of employment, sector, and informality limited to working individuals ages 15–64. Informality refers to workers ages 15–64 who do not receive a pension. For Panama, estimates are limited to workers receiving an *aguinaldo* (salary bonus). In Argentina, Ecuador, Panama, and Mexico self-employed workers are not asked about pensions; therefore, in this report self-employed workers in these four countries who have completed tertiary education are considered formal workers.

SECTION 4.

EXPECTED IMPACT OF COVID-19 ON POVERTY AND THE MIDDLE CLASS

The growth deceleration of 2014–2019 coupled with the dramatic drop in economic activity caused by the COVID-19 crisis has negatively impacted living standards and well-being across the region. Among other emergency measures undertaken to protect households, LAC governments introduced, adapted, or expanded their social protection programs in response to the pandemic. Nevertheless, the 2020 crisis is expected to have led to poverty increases in almost all countries, with millions of people falling into poverty.[22] Brazil, however, is an important exception.[23] The government of Brazil implemented a generous emergency transfer program benefitting almost 67 million Brazilians that not only protected families from falling into poverty but also lifted many people out of poverty in 2020.[24] Poverty is therefore projected to decline sharply in Brazil in 2020. As a result, poverty in the LAC region is expected to decline marginally from 22 percent in 2019 to 21.8 percent in 2020 (see Figure 4.1, panel a).[25] Without the emergency measures taken by governments across LAC, poverty could have instead increased to 26.5 percent in 2020.

LAC is projected to have almost 400 thousand less poor in 2020 than in 2019, as social transfers, primarily from Brazil, helped lift millions of people out of poverty. More than 20 million people across the region are projected to have fallen into poverty (below the $5.50 poverty line) in 2020, with an increase of 1.4 million more poor due to population growth. On the other hand, emergency social transfers across the region in 2020 are projected to have lifted 22 million people out of poverty, of whom more than 77 percent were from Brazil. The combination resulted in a net decline of almost 400 thousand poor in LAC. Had no mitigation measures been implemented, the region may instead have added 28 million new poor in 2020. To understand the substantial impact of Brazil, poverty rates for the LAC region excluding Brazil were also projected. These projections suggest that poverty in the rest of LAC has increased even with mitigation measures (resulting in 13.7 million more people in poverty), but less than if no measures had been implemented at all (see Figure 4.1, panel b). In summary, mitigation measures, especially in Brazil, helped limit the negative impacts in the short term. However, without a fast and inclusive economic recovery and similar levels of mitigation measures, poverty may rise again in 2021.[26]

Even though most countries adopted emergency measures to counteract the negative impact of the COVID-19 crisis, such policies' generosity were

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22 Based on poverty projections from Diaz-Bonilla, Moreno, and Sanchez (forthcoming); see also Annex 5. World Bank forecasts are frequently updated based on new information and changing (global) circumstances. Consequently, macro- and microprojections presented here may differ from those contained in other World Bank documents, even if basic assessments of countries' prospects do not significantly differ at any given moment in time. Due to lack of reliable data of adequate quality, the World Bank is currently not publishing economic output, income, or growth data for Venezuela, and that country is excluded from the cross-country macroeconomic aggregate (World Bank 2021a).

23 Another exception is Chile, where poverty is projected to remain constant under the $5.50 poverty line. Chile's social protection measures are expected to have helped offset the worst effects of the crisis, maintaining poverty at prepandemic levels. In all other countries, the poverty-mitigation measures were not enough to avoid poverty increases.

24 Brazil Macro Poverty Outlook (April 2021) https://pubdocs.worldbank.org/en/114751582655277329/mpo-bra.pdf

25 Brazil's Auxilio Emergencial (AE) was conceived as a temporary program and ended in December 2020. However, the government of Brazil launched a new wave of AE in April 2021 with lower benefits that targeted about 44 million individuals.

26 See Annex 8 for country-specific poverty projections for 2020.

FIGURE 4.1

LAC poverty projections for 2020 (with and without mitigation measures)
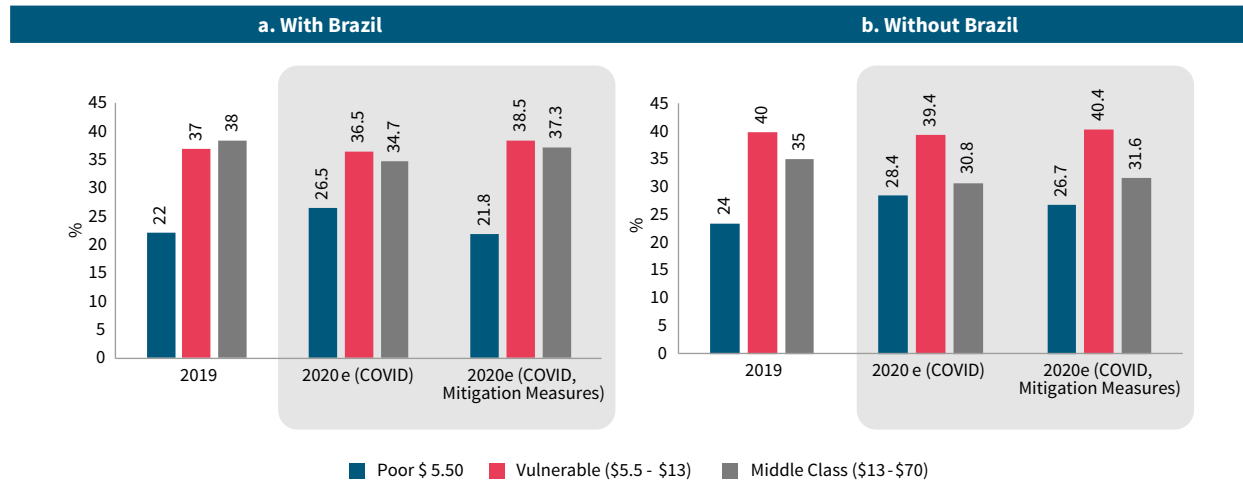
Source: Projections based on 2019 SEDLAC (CEDLAS-World Bank) microdata and macroeconomic projections of private consumption per capita, job losses, and remittances from the MTI and POV GPs. The current projections shown are based on a macro-microsimulation model that assumes 12 months of unemployment. See Diaz-Bonilla, Moreno, and Sanchez (forthcoming) and Annex 5.
Note: The LAC aggregate includes projections for Haiti based on its 2012 household survey.

quite low across the region.[27] With the exception of Brazil, the benefit incidence as a share of pretransfer income was on average a mere 15 percent. It ranged from 3 percent in Ecuador to 33 percent in Argentina (Figure 4.2).[28] Likewise, countries varied in the way they reached their populations and in their ability to target benefits. Colombia, Brazil, Uruguay, and Chile showcase a clear effort to ensure that support reached those who needed it most. While Costa Rica, Mexico, and Argentina provided minimal support across the income distribution, Bolivia and Guatemala provided

substantial benefits to their entire populations (Figure 4.3 and Annex 9).

The current global crisis is expected to result in a sharp decline in the size of the middle class in most countries, setting LAC back as a majority-middle-class region. After decades of gradual rise, LAC's middle class (per capita income between $13 and $70 per day in 2011 PPP) finally became the region's largest income class. By 2019, the middle class accounted for 38 percent of LAC's population, or around 230 million

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27 Estimates are limited to cash-transfer mitigation measures that were measurable in household surveys. In-kind transfers were not included.

28 Coverage of emergency social transfers is simulated, based on potential recipients' eligibility criteria. In the case of Argentina, the coverage includes Emergency Family Income (Ingreso Familiar de Emergencia—IFE), additional payments to Universal Child Allowance (Asignación Universal por Hijo—AUH and Asignación Universal por Embarazo—AUE), and Tarjeta Alimentar. Projections for Argentina are based on the population covered by the household survey in the first quarter of 2020, which represents around 62 percent of the total population. Coverage for all countries may be underestimated in the simulation results given the assumptions and data restrictions.

FIGURE 4.2

Mitigation-measure coverage and benefit incidence (%)
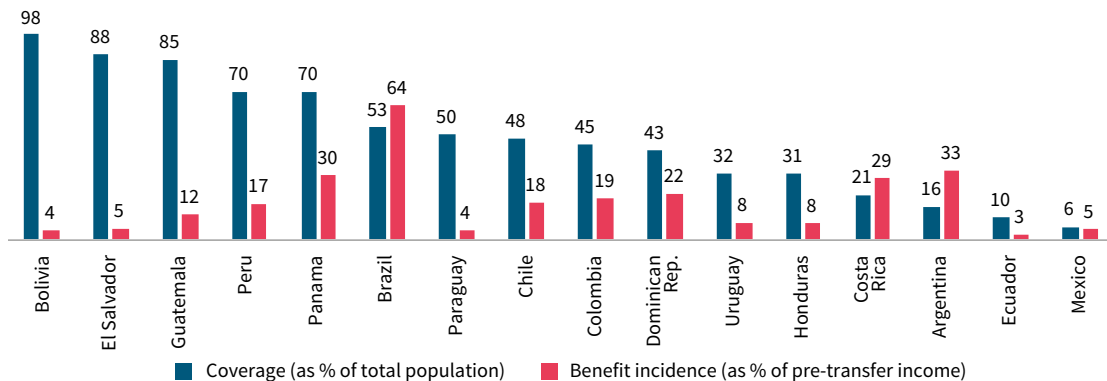
■ Coverage (as % of total population)   ■ Benefit incidence (as % of pre-transfer income)

Source: Projections based on 2019 SEDLAC (CEDLAS-World Bank) microdata and macroeconomic projections of private consumption per capita, job losses, and remittances from the MTI and POV GPs. The current projections shown are based on a macro-microsimulation model that assumes 12 months of unemployment. See Diaz-Bonilla, Moreno, and Sanchez (forthcoming) and Annex 5.
Note: The LAC aggregate includes projections for Haiti based on its 2012 household survey.

FIGURE 4.3

Population covered by mitigation measures, by percentile (%)

Source: Projections based on 2019 SEDLAC (CEDLAS-World Bank) microdata and macroeconomic projections of private consumption per capita, job losses, and remittances from the MTI and POV GPs. The current projections shown are based on a macro-microsimulation model that assumes 12 months of unemployment. See Diaz-Bonilla, Moreno, and Sanchez (forthcoming) and Annex 5.
Note: The LAC aggregate includes projections for Haiti based on its 2012 household survey. See Annex 9 for all country-specific distributions. Estimates are limited to cash-transfer mitigation measures that were measurable in household surveys. In-kind transfers were not included. See Annex 5 for more details.

T A B L E   4 . 1

Transition matrix (%)

2019	2020 (COVID) with mitigation measures			
	$3.20 or less	$3.20-$5.50	Vulnerable	Middle Class
$3.20 or less	7.0%	2.1%	0.4%	0.0%
$3.20-$5.50	1.1%	8.4%	3.0%	0.1%
Vulnerable	0.7%	2.3%	31.8%	2.0%
Middle Class	0.2%	0.2%	3.2%	34.8%

Source: Projections based on 2019 SEDLAC (CEDLAS-World Bank) microdata and macroeconomic projections of private consumption per capita, job losses, and remittances from the MTI and POV GPs. The current projections shown are based on a macro-microsimulation model that assumes 12 months of unemployment. See Diaz-Bonilla, Moreno, Sanchez (forthcoming). *Note:* The LAC aggregate includes projections for Haiti based on its 2012 household survey. Estimates reported with mitigation measures.

people, while the vulnerable class,[29] who are near poor but not yet middle class, accounted for another 220 million people. However, the 2020 global pandemic is expected to reduce the middle class to 37.3 percent of the population, for a net loss of 4.7 million people. Table 4.1 shows the transition of the middle class (by 3.5 percentage points) into either the vulnerable class or poverty in 2020 due to the negative impact on incomes and employment. The projected net loss is less negative than originally expected, due primarily to the generous transfer program implemented in Brazil.[30] While 21.6 million people in LAC are projected to lose middle-class status due to the crisis, around 17 million are projected to be added to LAC's middle class (including through population growth), thanks primarily to the emergency transfers, with Brazilians making up more than 70 percent of this gain. Without Brazil, the rest of the region will likely show a sharp decline in the size of the middle class, with a projected net loss of 12 million people. With or without Brazil, the final result is a leftward shift in the region's income distribution,

with the vulnerable class representing once again the largest socioeconomic group (Figure 4.4).

Estimates suggest income growth for the bottom deciles would have been the most negatively affected by the global crisis, but mitigation measures provided support. Income growth is expected to be even lower throughout the income distribution relative to the region's stagnation period (2015–2019). However, taking into account the mitigation measures adopted by various countries, income growth is projected to be positive for the bottom two deciles: growth estimates range from 4.5 percent for the bottom decile to -4.7 for the top decile. In the absence of emergency measures, all income deciles would have experienced negative income growth, with the bottom decile experiencing over three times what the top decile would have experienced (-20.1 percent and -6.1 percent, respectively) (Figure 4.5).

Because lost labor income was supplemented by the emergency transfers, income inequality is projected to decline in the region in 2020. As noted

29   The vulnerable class is defined as persons whose per capita income is between $5.50 and $13 per day in 2011 PPP.

30   Table 4.1 also shows the positive transition of the poor and vulnerable class (by 2.1 percentage points) into the middle class in 2020 due to cash transfers, netting out the negative 3.5 percentage point fall out of the middle class.

F I G U R E 4.4.

Distribution of income in Latin America and the Caribbean (2019–2020)
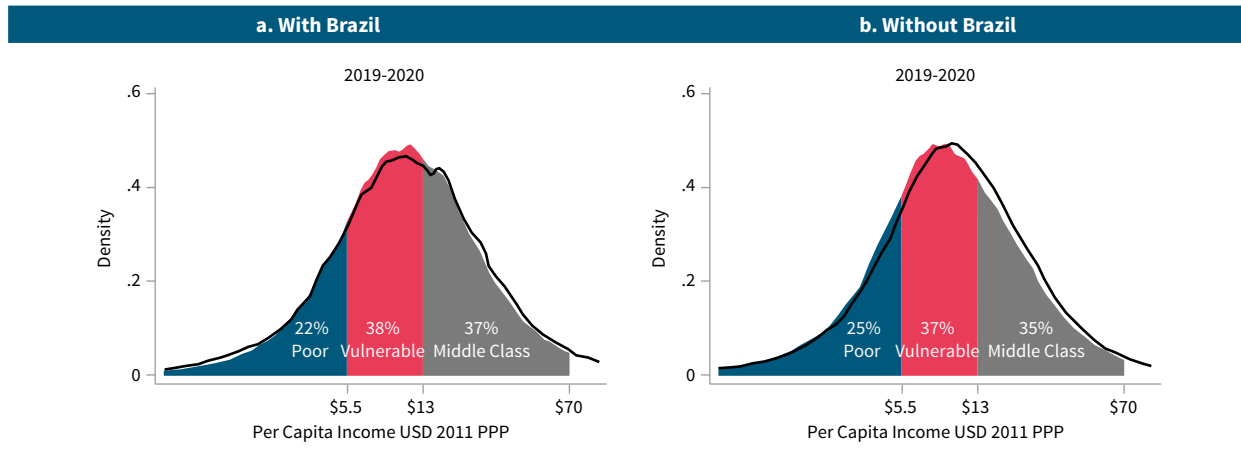
a. With Brazil
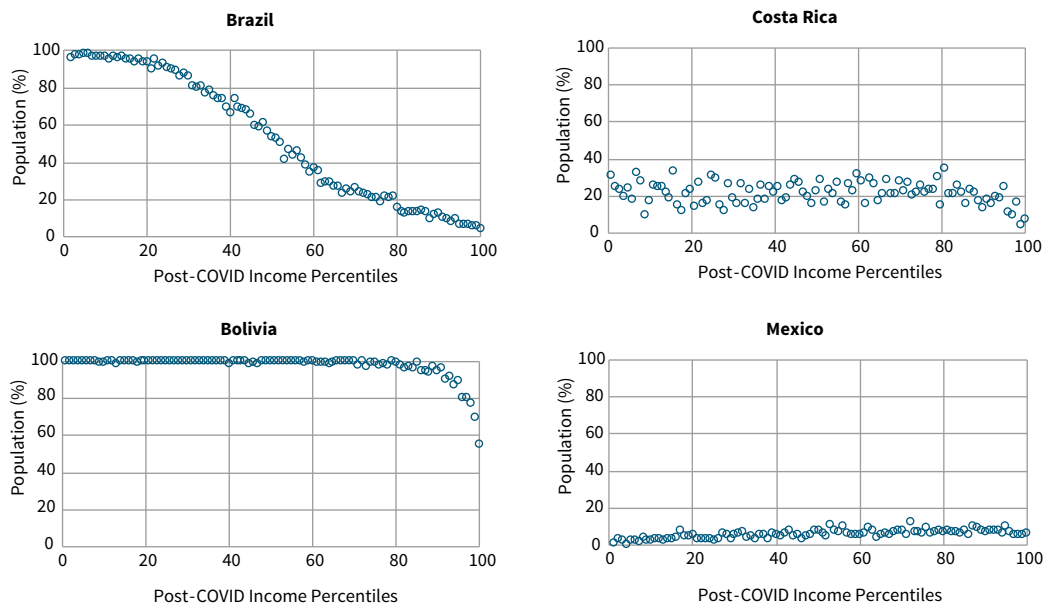
b. Without Brazil

Source: Projections based on 2019 SEDLAC (CEDLAS-World Bank) microdata and macroeconomic projections of private consump-
tion per capita, job losses, and remittances from the MTI and POV GPs. The current projections shown are based on a macro-micro-
simulation model that assumes 12 months of unemployment. See Diaz-Bonilla, Moreno, Sanchez (forthcoming) and Annex 5.
Note: The LAC aggregate includes projections for Haiti based on its 2012 household survey. Estimates reported with
mitigation measures.

F I G U R E 4.5

Projected growth incidence curves, Latin America and the Caribbean (2019–2020)
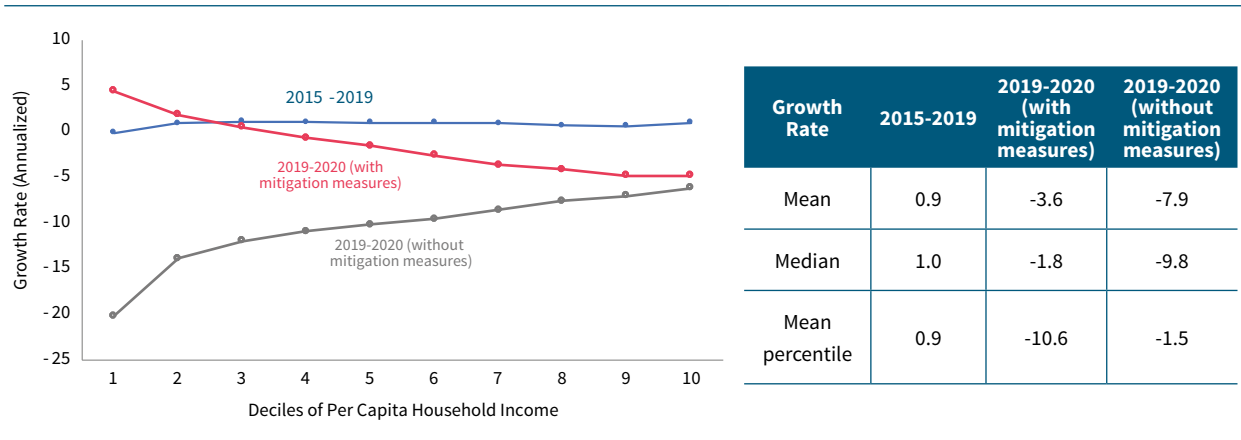
Growth Rate	2015-2019	2019-2020 (with mitigation measures)	2019-2020 (without mitigation measures)
Mean	0.9	-3.6	-7.9
Median	1.0	-1.8	-9.8
Mean percentile	0.9	-10.6	-1.5

Source: Projections based on 2019 SEDLAC (CEDLAS-World Bank) microdata and macroeconomic projections of private
consumption per capita, job losses, and remittances from the MTI and POV GPs. The current projections shown are
based on a macro-microsimulation model that assumes 12 months of unemployment. See Diaz-Bonilla, Moreno, Sanchez
(forthcoming) and Annex 5.
Note: The LAC aggregate includes projections for Haiti based on its 2012 household survey.

earlier, Brazil's generous emergency transfer program provided additional income to almost 67 million individuals, which contributed to a strong decline in poverty and inequality in Brazil in 2020. Although not as generous, emergency transfers in other countries also helped either to decrease inequality or minimize the increase in inequality. Overall, inequality in the LAC region, as measured by the Gini coefficient, is expected to have declined from 51 to 49.8 in 2020. On the other hand, the Gini coefficient is projected to be higher in 2020 if we exclude Brazil from the regional estimates, increasing from almost 48 in 2019 to 48.2 in 2020 even with mitigation measures (Figure 4.6).

Household welfare will primarily be affected by the reduction of labor income through lockdown-induced job losses, particularly in the service sector.

As discussed in Section 2, labor income has been the main driver of poverty reduction in the LAC region; thus, this component's negative impact is expected to affect overall household income significantly. Closure policies and mobility restrictions had an immediate effect on the service industry, as it forced many businesses to close, including restaurants, shops, and other tourism-related firms. As mentioned in Section 2, many workers in the service sector are informal, so they are especially vulnerable to income fluctuations. Moreover, not all companies were prepared to operate under the conditions of a pandemic and remain open for months without generating income. Thus, the largest job losses in most countries are expected to be in the service sectors. COVID-19-related job losses in services to date range from 2.1 percent in El Salvador to 30.5 percent in Peru (Figure 4.7).

F I G U R E 4 . 6

LAC Gini coefficient trends and projections for 2000–2020
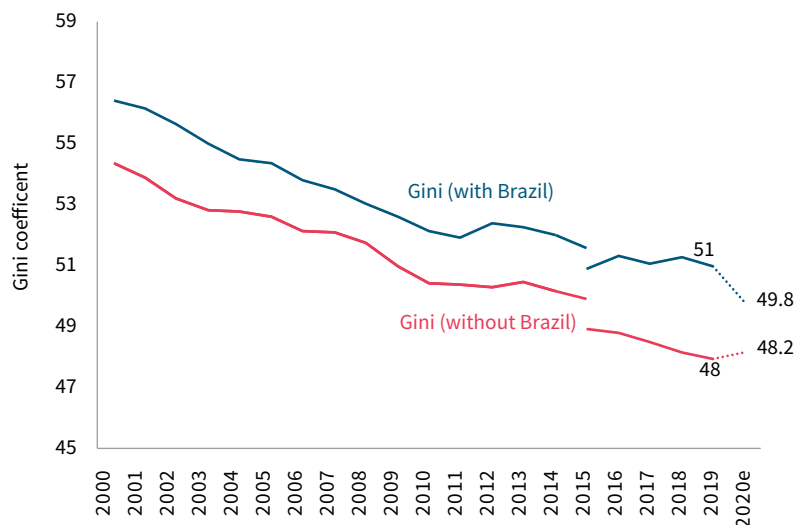
Source: Projections based on 2019 SEDLAC (CEDLAS-World Bank) microdata and macroeconomic projections of private consumption per capita, job losses, and remittances from the MTI and POV GPs. The current projections shown are based on a macro-microsimulation model that assumes 12 months of unemployment. See Diaz-Bonilla, Moreno, Sanchez (forthcoming) and Annex 5.
Note: The LAC aggregate includes projections for Haiti based on its 2012 household survey. The Gini coefficient is a measure between 0 and 1; the Gini index is equal to the Gini coefficient scale between 0 and 100.

FIGURE 4.7

Job loss by sector (2020)
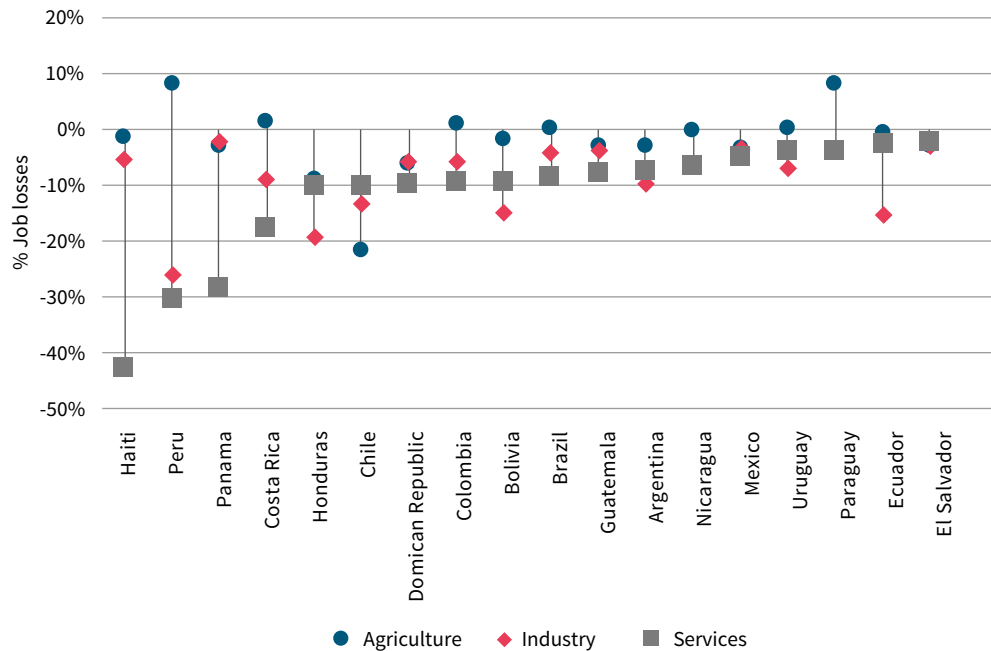
Source: World Bank MTI and POV GPs.

**Workers in the industry and agriculture sectors will also be affected, though to a lesser extent.** In Honduras, job losses in industry are projected to be higher than losses in services (19.2 and 10.2 percent, respectively), as the country was recently struck by two hurricanes that damaged many factories. In El Salvador and Paraguay, job losses in the industrial sector will be as high as the loss of employment in services. Agriculture—the sector with the most informal workers and poor in LAC—is the least affected by the crisis. Agriculture job losses in most countries are expected to account for between 1 and 9 percent of total job losses (with Chile facing an even larger decline), yet other LAC countries, in particular Peru and Paraguay, are actually expected to increase employment in this sector (8.2 and 8.3 percent, respectively) (Figure 4.7).

High levels of remittances in some countries also saw dramatic drop-offs, affecting poor, near-poor, and even middle-class households. The expected decrease in remittances implies a reduction in household nonlabor income and therefore an increase in poverty. As covered in Section 3, remittances as a share of household income range from almost zero in Uruguay to 2.2 percent in El Salvador, even though they can represent almost 21 percent of GDP in a country like El Salvador. Similarly, in both El Salvador and Honduras, around 6 percent of households receive remittances (the largest in the region, represented by the size of the bubble in Figure 4.8), but remittances can represent almost 30 percent of income for that small share of households who receive them. The 2020 crises resulted in large declines in remittances in most

F I G U R E   4 . 8

Projected declines in remittances across LAC countries
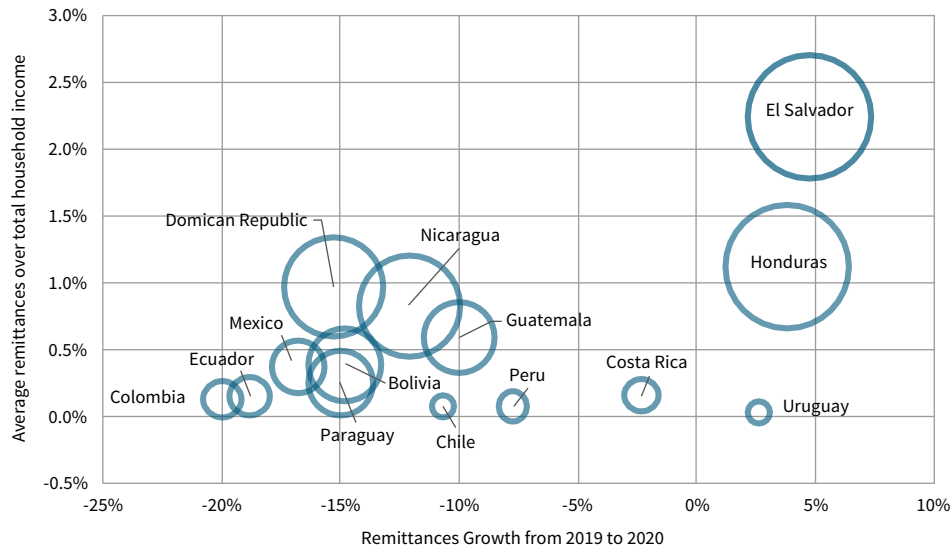
Source: Average remittances over total household income and share of households receiving remittances (size of the bubble) from SEDLAC (CEDLAS-World Bank) and remittance growth projection from the MTI GP.

countries, with some exceptions (Figure 4.8).[31] Colombia and Ecuador faced the highest declines (20 and 19 percent, respectively), but this likely had small effects, because only 1 percent of households in these countries receive remittances (although for that 1 percent, the impact was quite negative). The negative impacts on the Dominican Republic, Nicaragua, and Guatemala were more pronounced: remittances declined between 10 and 15 percent, represent from 0.6 to 1 percent of total household income, and are received by 2.2 to 4 percent of households. Interestingly, in Honduras and El Salvador, where remittances are received by the highest percentage of households, remittances experienced positive annualized growth in 2020 of 3.8 and 4.8 percent, respectively. This growth was lower than previous years, being affected by the sharp drop-off

experienced between March and May, but shows the resilience of migrants from these countries when it comes to helping their families back home.

The COVID-19 crisis is characterized by a high degree of uncertainty as to its impact and duration. As discussed in Section 1, governments throughout the LAC region have implemented various mitigation measures to protect their most vulnerable populations. Cash transfers and unemployment insurance are projected to offset some of the short-term negative welfare impacts of the global economic slowdown. Nonetheless, the recovery in 2021 onward will depend on vaccine rollouts, the continuance of 2020 COVID-19 government policies, and the overall global economic recovery. The region entered the pandemic already

31 The remittance data reflects projections as of the end of 2020. More recent data is emerging that suggests remittances declined less than projected and may have even increased in several countries beyond Honduras and El Salvador. This newer information will be incorporated into the next round of the poverty projections.

struggling through a period of stagnant growth and poverty reduction, and will now have to face the negative impacts from the loss of schooling and work experience, as well as high levels of debt, all of which could slow its recovery.

However, the region's 'new' poor are better suited to recover from the crisis. Individuals whose income declined to less than $5.50 a day (2011 PPP) in 2020 due to the COVID-19 pandemic have on average higher education levels and more access to basic services relative to the 'old' poor. Via income and employ-

ment losses, the crisis pushed down many households who had been near poor or middle class. In the medium term, as the region begins to grow again, those with higher education levels are best placed to benefit from any future recovery in jobs and opportunities (Table 4.2). Households who were already poor, and have now lost further human or physical capital accumulation, will have the hardest time recovering from this crisis, and inequality across multiple dimensions is likely to get worse. As the region recovers, the most excluded will need more of a focus than ever before.

Tᴀʙʟᴇ 4.2

Profile of the 'new poor' ($5.50 2011 PPP) and 'lost middle class' (2020 and 2019)

	2020		2019	
	New Poor	**Lost Middle Class**	**Poor**	**Middle Class**
Access to Services				
Electricity	95.2	99.4	91.0	99.6
Internet (at home)	29.4	50.1	29.2	63.6
Internet usage	65.2	71.6	50.2	72.9
Mobile Phone	93.8	94.7	83.4	93.6
Mobile Phone (individual)	63.1	83.3	52.7	87.6
No Sanitation	19.9	10.2	37.6	11.8
No Water	4.1	1.3	10.3	0.9
Refrigerator	68.6	89.9	66	94.2
Education				
Average Years of Education	6.8	8.3	5.2	9.4
Never Attended	13.5	8.4	17.3	7.1
Incomplete Primary	27.1	21.1	38.4	19.9
Complete Primary	11.3	10.4	10.8	8
Incomplete Secondary	23.5	20.5	20.1	13.8
Complete Secondary	13.5	20.6	10.3	21.6
Incomplete Tertiary	5.1	9.8	2.2	11.6
Complete Tertiary	6.1	9.3	1	18.1
Informality				
Informal Workers	45.9	43.7	89.0	38.0
Sector				
Agriculture	4.3	7.6	40.4	6.3
Industry	26.3	30.5	21.6	26.5
Services	69.4	61.9	38.0	67.2
Type of employment				
Employer	5.5	3.8	4.9	5.0
Not salaried	2.3	2.1	11.2	1.9
Salaried worker	71.4	69.7	36.9	68.2
Self-employed	18.3	20.4	31	20.3
Unemployed	2.4	4.0	15.9	4.6

Source: Projections based on 2019 SEDLAC (CEDLAS-World Bank) microdata and macroeconomic projections of private consumption per capita, job losses, and remittances from the MTI and POV GPs. The current projections shown are based on a macro-microsimulation model that assumes 12 months of unemployment. See Diaz-Bonilla, Moreno, Sanchez (forthcoming) and Annex 5.

Note: The LAC aggregate includes projections for Haiti based on its 2012 household survey. Estimates for 2020 are reported with mitigation measures. Informality refers to workers ages 15–64 who do not receive a pension. For Panama, estimates are limited to workers receiving an *aguinaldo* (salary bonus). In Argentina, Ecuador, Panama, and Mexico self-employed workers with complete tertiary education are considered to in the formal sector.

SECTION 5.

FINAL REMARKS

The pandemic has hit Latin America and the Caribbean hard. Throughout the LAC region, governments have implemented a variety of stringent policies to confront the COVID-19 crisis, including restrictions on public gatherings, public transport, and school and workplace closures. Nonetheless, daily reported cases and deaths continue to rise, even as they fall across developed economies. Steep declines in economic activity are expected in the LAC region, with an estimated drop of 6.7 percent in GDP and 3.2 in per capita household income for 2020, making it the most profound recession in the region's history.

The COVID-19 crisis is expected to reverse many of the social gains that took decades to materialize in Latin America, particularly the shift to becoming a majority middle-class region. In 2018, for the first time in the region's history, millions of Latin Americans reached middle-class status, making the middle class the region's largest socioeconomic group. Poverty and income inequality also declined considerably, though with differences across countries. However, the drastic fall in economic activity caused by the 2020 global pandemic will negatively impact living standards and well-being across the region. Poverty projections suggest the number of poor in LAC increased in all countries with the exception of Brazil, where the government's generous emergency transfer program resulted instead in a large poverty decline. This led to a marginal decline in poverty in the LAC region as a whole, from 22 percent in 2019 to 21.8 percent in 2020, representing almost 400 thousand fewer poor. Had no mitigation measures been implemented, the region may have instead reached 28 million new poor in 2020. Alternatively, simply excluding Brazil would result in an increase of 13.7 million new poor in the rest of LAC. Likewise, the pandemic resulted in a net loss of 4.7 million people from the middle class. Without mitigation measures, in particular without Brazil's emergency transfers, pro-

jections suggest the COVID-19 crisis could have resulted in more than 20 million people losing middle-class status. Even though mitigation measures helped limit the negative impacts in the short term, without a fast and inclusive economic recovery and similar levels of mitigation measures, poverty may rise again.

Inequalities throughout the region have been a challenge to confront the crisis. Access to basic services such as electricity, adequate water, sanitation, and even the internet has become more essential under lockdown measures. However, less than 1 in 4 poor households have adequate sanitation, 9 percent do not have access to electricity, and only 25 percent use the internet at home. Furthermore, 9 out of 10 workers living on less than $5.50 a day (2011 PPP) are in the informal sector, and nearly a third are self-employed. These vulnerabilities add to the difficulty of overcoming the income and health shocks tied to the COVID-19 pandemic. Unfortunately, those who were worst off to begin with will likely be the most affected.

Governments must continue to target policies to prevent contagion and support the most vulnerable populations, while striving to protect livelihoods. As health systems are essential to confront the crisis, resources should continue to be earmarked to increase access to and improve the quality of affordable health care. Even though general lockdowns are the most effective way to prevent mass contagion, they come at the expense of increases in unemployment, the general loss of income, and increases in poverty. Thus, well-targeted temporary income transfers provide vulnerable groups with some income security during containment periods. Although informality is linked most closely to poverty, it is still the case that one-third of middle-class workers are considered informal. Hence, policies that could be used to mitigate shocks like COVID-19 involving payrolls and unemployment insurance, for example, would not reach this group. In

addition, these households could be more subject to shocks, even though, for the moment, their incomes are high enough to reach middle-class status. In addition, social protection programs may be re-assessed to incorporate new beneficiaries or adjust their reach. For instance, poor households often rely on school feeding programs for their kids; thus school closures may lead to a decline in food intake among these children.

As lockdown measures phase out, governments should address preexisting inequities. Given the high degree of uncertainty as to the impact and duration of the COVID-19 crisis, especially if a second wave hits the region, LAC countries must broaden access to essential services among vulnerable populations. Access to electricity and the internet have marked the difference between privileged individuals who can telework and homeschool and those who cannot continue to work or attend school due to a lack of connectivity. Moreover, adequate water and sanitation are necessary to reduce the risk of infection of COVID-19.

The recovery in 2021 onward may also depend on the vaccine rollouts. Latin American and Caribbean countries face important challenges in this regard and to date only Chile has reported significant prog-

ress. Chile has administered more than 42 doses per 100 people (more than the United States—40 per 100— and the United Kingdom—47 per 100). In contrast, other LAC countries lag significantly, with only 1 to 6 doses administered per 100 people.[32] Across the region, governments are having problems securing vaccines to cover all their population and implementing efficient and effective systems to distribute and apply them.

Nonetheless, stay-at-home orders and social distancing have accelerated the region's digital transformation, a silver lining from the crisis. As the economy shut down, businesses were forced to reinvent their services to continue operating. A significant boost in ecommerce and eservices has been evident throughout the region. Several supermarkets and restaurants have shifted to delivery services either through their online platforms or WhatsApp and Instagram. Similarly, the finance sector has opted to increase their online services to minimize traffic in their physical branches. Even governments have been forced to switch to digital channels to continue working. It is unlikely businesses will abandon these measures once the pandemic ends. Thus, countries should continue to invest in digital infrastructure to boost these changes further and enact legislation to expand the digital economy.

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32   Data from Our World in Data, https://ourworldindata.org/covid-vaccinations. Accessed on 05/13/2021

Annex 1. Reported COVID-19 Cases and Government Response Index, by Country

F I G U R E A . 1 . 1

Reported COVID-19 cases and Government Response Index

Costa Rica

Dominican Republic

Guatemala

Honduras

Nicaragua

Panama

El Salvador

Haiti

Paraguay

Uruguay

Argentina

Bolivia

Chile

Colombia

Ecuador

Peru

Mexico

Brazil
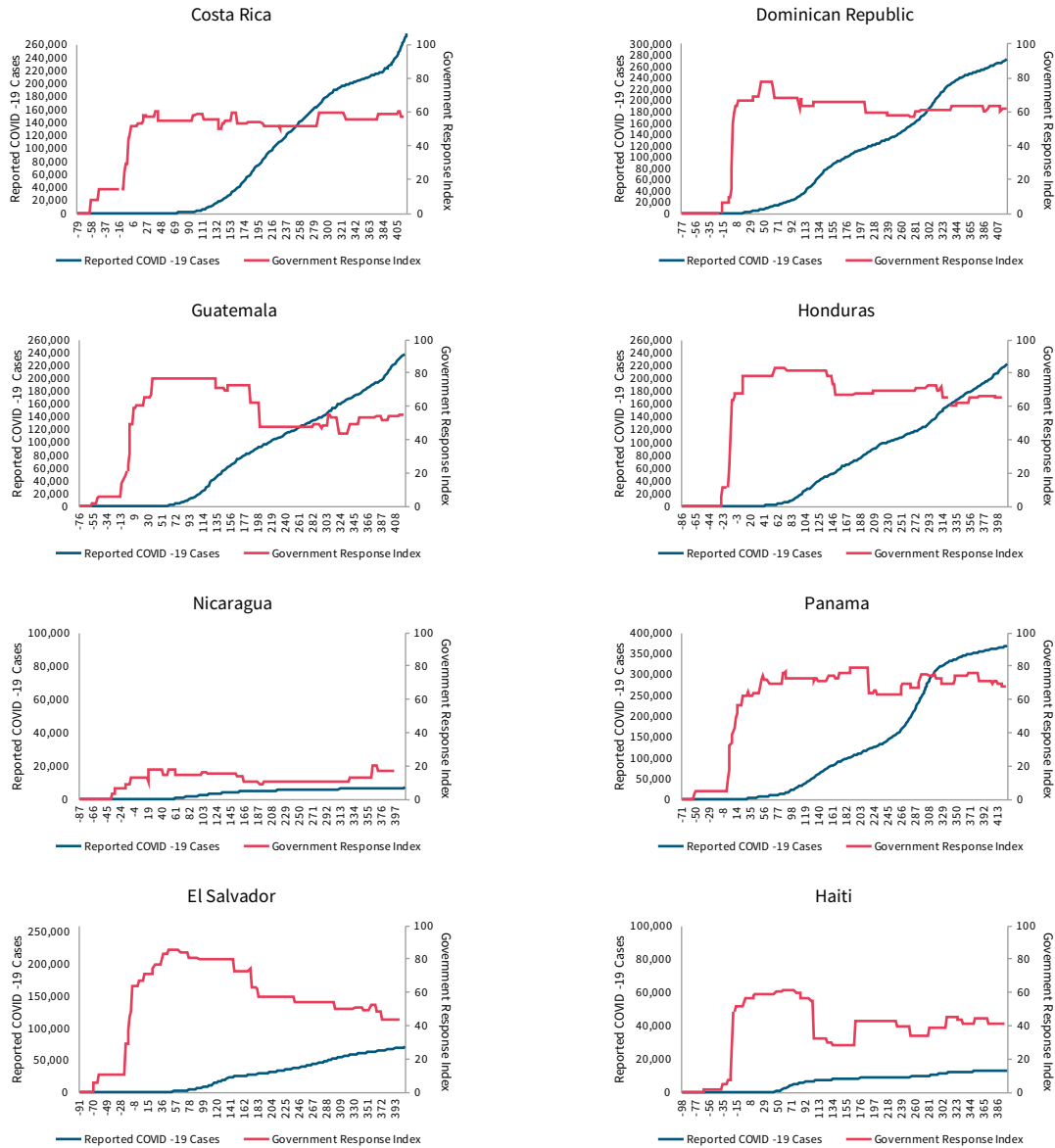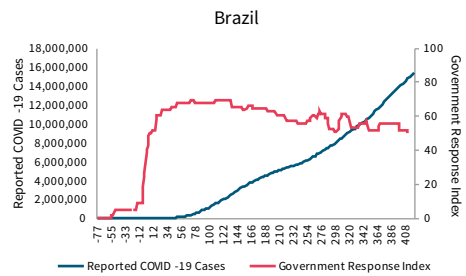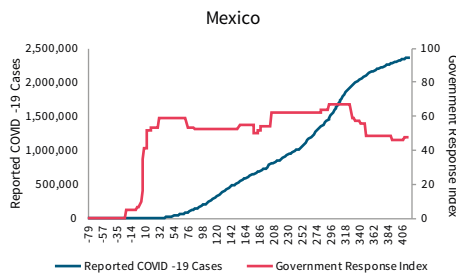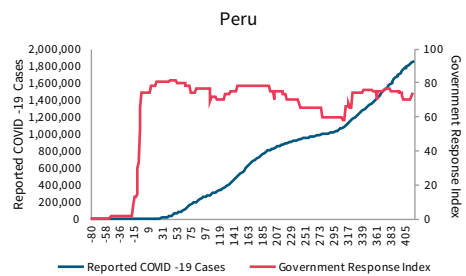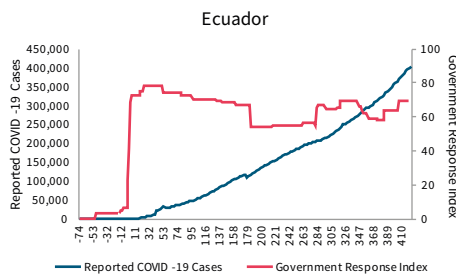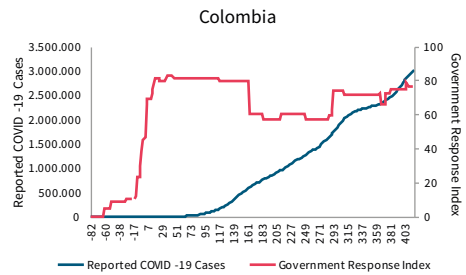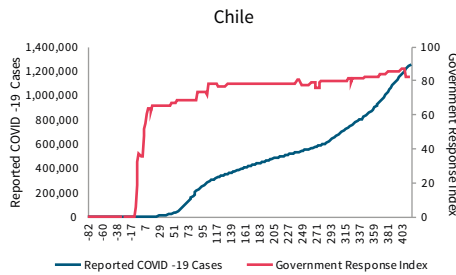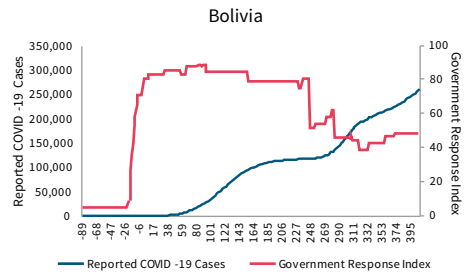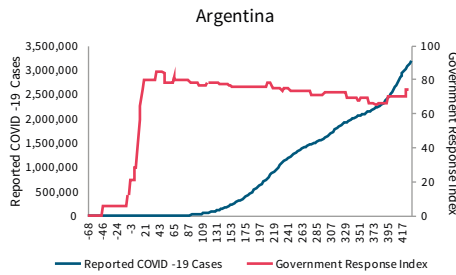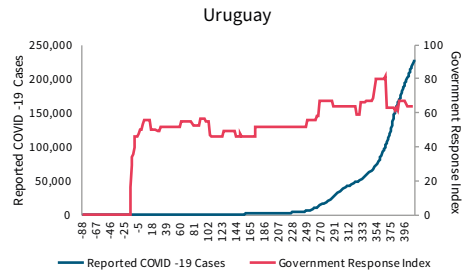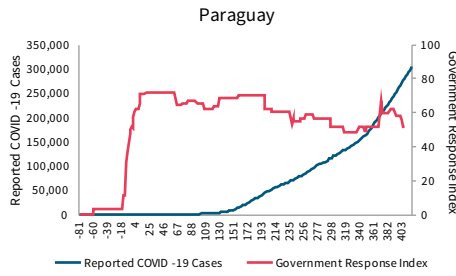
Source: Hale et al. 2020.
Note: Data as of May 13, 2021.

Annex 2. Household Surveys from SEDLAC and LABLAC Harmonization

Sources included in the Socio-Economic Database for Latin America and the Caribbean (SEDLAC)

Country	Name of survey	Acronym	Year (2000s)	Coverage
Argentina	Encuesta Permanente de Hogares—2nd Semester	EPHC	2003–2019	Urban
Bolivia	Encuesta de Hogares	EH	2005–2019	National
Brazil	Pesquisa Nacional por Amostra de Domicilios	PNAD	2001–2011	National
	Pesquisa Nacional por Amostra de Domicilios—Contínua	PNAD-C	2012–2019	National
Chile	Encuesta de Caracterización Socioeconómica Nacional	CASEN	2006–2017	National
Colombia	Gran Encuesta Integrada de Hogares	GEIH	2008–2019	National
Costa Rica	Encuesta Nacional de Hogares	ENAHO	2010–2019	National
Dominican Republic	Encuesta Nacional de Fuerza de Trabajo	ENFT	2005–2016	National
	Encuesta Continua Nacional de Fuerza de Trabajo Q03	ECNFT	2017–2019	National
Ecuador	Encuesta de Empleo, Desempleo y Subempleo	ENEMDU	2007–2019	National
El Salvador	Encuesta de Hogares de Propósitos Múltiples	EHPM	2000–2019	National
Guatemala	Encuesta Nacional de Condiciones de Vida	ENCOVI	2000–2014	National
Haiti	Enquête sur les Conditions de Vie des Ménages Après le Séisme	ECVMAS	2012	National
Honduras	Encuesta Permanente de Hogares de Propósitos Múltiples	EPHPM	2014–2019	National
Mexico	Encuesta Nacional de Ingresos y Gastos de los Hogares	ENIGH	2000–2014	National
	Encuesta Nacional de Ingresos y Gastos de los Hogares – Nueva Serie	ENIGH NS	2016, 2018	Nacional
Nicaragua	Encuesta Nacional de Hogares sobre Medición de Niveles de Vida	EMNV	2005–2014	National
Panama	Encuesta de Hogares	EH	2008–2019	National
Paraguay	Encuesta Permanente de Hogares	EPH	2002–2019	National
Peru	Encuesta Nacional de Hogares	ENAHO	2004–2019	National
Uruguay	Encuesta Continua de Hogares	ECH	2006–2019	National

Annex 3. SEDLAC Survey Availability and Comparability

The SEDLAC (CEDLAS and the World Bank) project is a harmonized database that seeks to mitigate differences in country-specific survey design and thus formulate comparable indicators between LAC countries. However, some countries have made significant methodological changes to their survey designs at certain points in time, generating breaks in comparability between series. The graph below shows the availability and comparability of the SEDLAC surveys that comprise the LAC-18. Within each country, only series marked with the same color may be compared over time.

Legend: G = green, Y = yellow, B = blue (dark), blank = white (not available)

Country	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Argentina				G	G	G	G	G	G	G	G	G	G	G	G		G	G	G	G
Bolivia	Y	Y	Y			G	G	G	G	G		G	G	G	G	G	G	G	G	G
Brazil		Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	G	G	G	G	G	G	G	G	G
Chile	Y			Y			G			G		G		G		G		G		
Colombia		Y	Y	Y	Y	Y			G	G	G	G	G	G	G	G	G	G	G	G
Costa Rica	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	G	G	G	G	G	G	G	G	G	G
Dominican Republic	B	B	B	B	B	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	G	G	G
Ecuador				Y	Y	Y	Y	G	G	G	G	G	G	G	G	G	G	G	G	G
Guatemala	G				B		G								G					
Honduras		Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	G	G	G	G	G	G
Haiti													G							
Mexico	Y		Y		Y	Y			Y		Y		Y		Y		G		G	
Nicaragua		Y				G				G					G					
Panama	Y	Y	Y	Y	Y	Y	Y	Y	G	G	G	G	G	G	G	G	G	G	G	G
Peru	Y	Y	Y	Y	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G
Paraguay		Y	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G
Salvador	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G
Uruguay	Y	Y	Y	Y	Y	Y	G	G	G	G	G	G	G	G	G	G	G	G	G	G

Annex 4. Methodological Changes in the Surveys and Projections

National statistics offices sometimes introduce improvements to their household surveys. The aim could be to better capture income, expand the representativity of the survey, or provide other important inputs. When the methodological changes are significant, they can result in breaks in the comparability of a country's poverty series over time (see Annex 3). In the case of Brazil and Mexico, given the size of their populations, their methodological changes can also affect the overall estimates of poverty and inequality at the LAC aggregate level. The LAC aggregate used for poverty, inequality, and the middle class is based on 18 countries in the region for which microdata are available at the national level (i.e., "LAC-18") in recent years. This annex provides a brief overview of the recent methodological changes undertaken in Mexico and Brazil and how the LAC-18 aggregate used in this report has been created. In particular, the important methodological changes in Mexico's official 2016 household survey have created a break in the poverty series large enough that a decision was made to also break the LAC-18 aggregate series into two series: 2000–2015 and 2015–2019 (see Figure 1.4). The overlap for 2015 is created so that the reader can get a sense of the difference in the two LAC series. The alternative would have been to maintain a comparable series for 2000–2019 using projections for Mexico based on its 2014 household survey. However, the importance of projecting the poverty impact of COVID-19 in the region requires using the latest available and most accurate microdata for the region, which was the updated poverty series for LAC-18 for 2015–2019.

Brazil

The Instituto Brasileiro de Geografia e Estadística (IBGE) has traditionally administered the Pesquisa Nacional por Amostra de Domicílios (PNAD), a household survey used to estimate income and poverty rates. Since 2012, Brazil's IBGE has also been conducting a new survey called the PNAD-Continua (PNAD-C). It incorporates improvements in methodology and survey collection, including improved income questions and larger samples. From 2012 to 2015, IBGE conducted the two surveys in parallel, and beginning in 2016 the traditional PNAD was discontinued. The PNAD-C currently covers the period 2012–2019. The PNAD-C also replaced the PME, which provided regular information on the labor market. The main changes between PNAD and PNAD-C include

1. **Timing and representativity**: PNAD was conducted once per year using September as a reference month. PNAD-C is conducted throughout the year and is representative at the quarterly and monthly level for a subset of indicators, particularly those related to employment.

2. **Sample design**: Overall, PNAD-C expanded the sample size to include more areas beyond major metropolitan areas and increased coverage in rural areas, yielding a larger number of observations.

3. **Labor income and employment**: The new survey incorporates some changes in employment and labor income measurement following recent ILO recommendations. The differences from PNAD include (1) only individuals 14 or older are included in the labor questions (the age of inclusion in the PNAD was 10); (2) production for own consumption is no longer considered employment; (3) labor income is excluded if an individual worked less than 1 hour during the reference week, excluding temporary leave from work (as they are no longer considered employed); (4) for employers and the self-employed, the PNAD-C asks about the "retirada," which is the take-home income from the busi-

ness, while the PNAD had the same phrasing for wage workers and employers/self-employed.

For more information, see *Notas Metodologia PNAD e PNAD-C* (IBGE 2014).

Another important issue that arose was related to *household implicit rent*. The 2012–2015 PNAD-C did not include the variables necessary for rent imputation. While the PNAD-C is an improvement over the PNAD in terms of survey methodology, the 2012–2015 surveys did not collect data on dwelling characteristics, home ownership status, or housing rent amount. These are the variables that are used for the SEDLAC rent imputation model used to increase comparability in LAC's household surveys. Therefore, in order to harmonize the data, the LAC Stats team and the World Bank Brazil Poverty team developed and tested a model that imputes expected rent throughout the income distribution. This was done separately for the PNAD-C for 2012–2015. The result was a more comparable harmonized PNAD-C series for 2012–2019.

Mexico

In Mexico, official poverty estimates are produced and released to the public every two years by CONEVAL (Consejo Nacional de Evaluación de la Política de Desarrollo Social) based on data from the household survey MCS-ENIGH (Módulo de Condiciones Socioeconómicas Encuesta Nacional de Ingreso y Gasto de los Hogares), which is generated by INEGI (Instituto Nacional de Estadística y Geografía). The main differences of the 2016 survey compared to previous years are:

1. **Bigger Sample**: a larger sample size to allow urban/rural disaggregation at the state level;

2. **Expansion of the survey**: both income and expenditures were collected for all households; and

3. **Field operation improvements**: in particular, better training for interviewers and an automated system to monitor data collection.

The revised methodology that was applied in the 2016 and 2018 ENIGHs is an improvement to the household surveys that aims to better capture income. However, the values for income produced since 2016 are not directly comparable with the historical series (2014 and earlier), and in fact result in quite a large difference in Mexico's poverty series. The relatively large importance of Mexico in the LAC aggregate, combined with the large differences in poverty between the series, led the team to decide to break the LAC series to indicate that results are not comparable until a correction method is implemented.

We implemented different robustness exercises to evaluate the sensitivity of the regional aggregate to each decision. After careful consideration, the team decided to use actual data rather than extrapolations for Mexico for 2016 and 2018, given the less realistic picture of poverty in Mexico with the extrapolations. This is in contrast with the situation in Brazil, where the new series (2012–2019) is not so different from the 2011 poverty rate as to have warranted a break in the LAC series in that year.

Haiti

Haiti has traditionally been excluded from the LAC regional aggregate due to the lack of up-to-date microdata for poverty measurement. Currently, the latest available living conditions survey is the 2012 Enquête sur les Conditions de Vie des Ménages après le Séisme (ECVMAS—the Post-Earthquake Household Living Conditions Survey). However, Haiti is an important country due to the size of its poor population and the fact that it is one of the few Caribbean countries with available harmonized income data. The LAC-18 aggregate therefore includes the 2012 household survey, projected to 2019 using a distributionally neutral projection of household per-capita income. Including Haiti thus provides a more precise number of poor people in LAC, be-

cause Haiti is the poorest country in the region and has 10 million inhabitants.
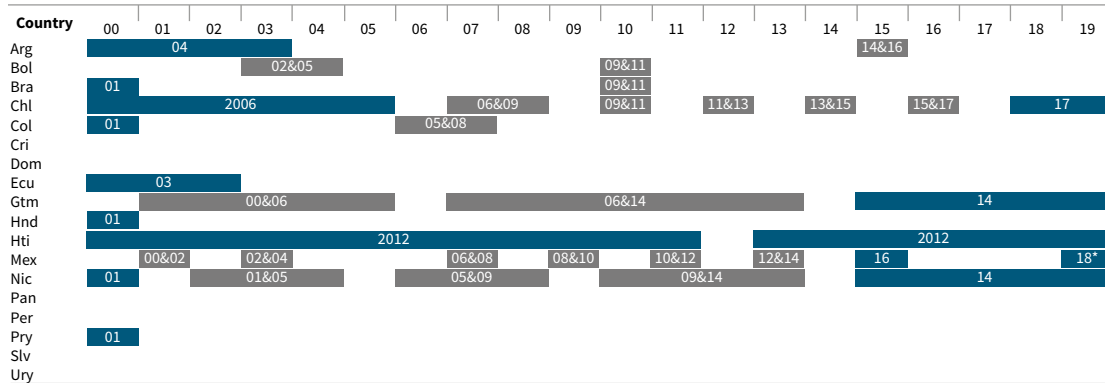
Unavailable or nonexistent microdata

Survey microdata to measure poverty are not available across all the years for all countries. Therefore, any LAC aggregate that uses only available microdata will have a compositional problem that will affect the comparability of survey estimates. This problem arises when changes in LAC poverty numbers do not result from changes in the welfare of any country in the region, but from the fact that the set of countries with data available is not the same between one year and another. To circumvent that problem, we interpolate and extrapolate country-specific estimates when microdata are not available. Table A.4.1 shows where microdata have been interpolated or extrapolated across the 18 countries in LAC for the 2000–2019 period.

The final LAC-18 series is split into two. The first series covers the period 2000–2015 and since there are no microdata for Mexico in 2015 it is estimated as an extrapolation of the 2014 ENIGH. The second LAC-18 series is for the 2015–2019 period, where data for Mexico in 2015 is instead extrapolated backwards using the new 2016 ENIGH. For all other countries the actual microdata are used, except for those cases where no microdata exist and thus interpolations or extrapolations using existing microdata must be applied as shown in Table A.4.1.

T A B L E A . 4 . 1 .

Microdata inputs for the LAC aggregate

Country	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19
Arg			04													14&16				
Bol			02&05							09&11										
Bra	01									09&11										
Chl			2006					06&09		09&11			11&13		13&15		15&17	17		
Col	01						05&08													
Cri																				
Dom																				
Ecu		03																		
Gtm			00&06							06&14							14			
Hnd	01																			
Hti								2012									2012			
Mex		00&02		02&04				06&08		08&10		10&12		12&14		16				18*
Nic	01			01&05				05&09				09&14					14			
Pan																				
Per																				
Pry	01																			
Slv																				
Ury																				

Note: White areas are country-year pairs with available survey microdata that was included in the regional aggregate. Gray areas represent country-year pairs for which we created microdata using an interpolation method of the years indicated in the cell. Blue cells are country-pair years where we created microdata by applying an extrapolation of the household income distribution using a neutral distribution algorithm that applies the real growth rate in per-capita consumption.
* The algorithm to produce Mexico's 2019 extrapolation is nondistributionally neutral and implemented by the World Bank's Poverty Group Practice Poverty Economist for the country.

Annex 5. The Macro-Microsimulation Model

To be able to model both the poverty and distributional impacts of the 2020 global crisis caused by the COVID-19 pandemic, the team chose to implement a macro-microsimulation model. To capture the impact of such a large negative shock on inequality, poverty, and on the size of the middle class required going beyond neutral distribution methodologies. This methodology applies country-specific macroeconomic projections to country-specific behavioral models built on household survey microdata that were harmonized as part of the Socio-Economic Database for Latin America and the Caribbean (SEDLAC) project. Although many inputs are country specific, the model applies the same methodology across all countries in order to estimate poverty and distributional impacts in a consistent manner for LAC as a whole. In addition, this class of models aims to maintain consistency between the macro- and micro-projections and therefore tends to focus on annual impacts rather than short-run impacts. The microsimulations are based on a household income generation model (Bourguignon and Ferreira 2005). For the macro side, rather than use a computable general equilibrium (CGE) model for each country per the macro-microsimulation models of Bourguignon, Bussolo, and Pereira da Silva (2008) and Ferreira et al. (2008), the macro model here uses a variety of macroeconomic projections as determined by the World Bank POV GP's Poverty Economist for each country. Some countries apply a CGE model, others use simpler sectoral macroeconomic projections to estimate job losses, while others are able to apply actual job-loss data from household surveys conducted in the field. This annex presents the macro-microsimulation model.

5.1 MACRO-MICROSIMULATION MODEL: INPUTS

This model requires five main inputs. Country-specific harmonized household-survey microdata for each country in the Latin America and Caribbean region are based on the SEDLAC database. The model is applied to the 18 countries in the Latin America and Caribbean region with recently available household surveys. Projected annual growth rates in private consumption per capita from national expenditure accounts are provided by the World Bank Macro, Trade, and Institutions Global Practice (MTI GP) for each country. Where possible, the model uses sectoral job losses and job hires provided by the World Bank Poverty and Equity Global Practice (POV GP), based on country estimates undertaken by the corresponding Poverty Economist. When these data are not available, sectoral GDP growth projections in agriculture, industry, and services provided by the MTI GP are used to estimate projected sectoral job losses using a GDP to employment elasticity. Projected changes in remittances by country are also provided by the MTI GP. The final input is a set of population projections for 2019 and 2020 based on the World Development Indicators projections database. When projections incorporate mitigation measures, this additional input is applied, based on information provided by the POV GP Poverty Economists.

5.2 MACRO-MICROSIMULATION MODEL: METHODOLOGY

This approach takes the 2019 microdata for the 18 SEDLAC countries mentioned above as a starting point. The methodology then incorporates three main channels

of transmission of the 2020 shock: through job losses, labor income changes, and nonlabor (remittance) income changes. For the simulations that incorporate mitigation measures, a fourth channel of transmission is applied that incorporates cash transfers to eligible households.

Job losses/gains per sector provided by the POV GP or estimated using sectoral GDP growth projections and a sectoral GDP to employment elasticity are imposed on the household survey data. A probit model, applied to each of the three sectors and by formal and informal workers, provides a probability of employment in each sector for each person in each household survey, based on a set of characteristics (sex, age, education level, urban/rural, dependency rate, dummy for member working in the public sector, and a dummy for remittances). Workers are ranked by the probability of employment, and those with the lowest employment probability are simulated to lose their jobs until total job loss matches the macroprojections for job loss by sector. For job gains, new workers are chosen among the unemployed according to the probability of being employed in that sector until total job gains match the macroprojections by sector.

For job losses, the chosen worker (by probability of employment based on the probit model) is simulated to lose 100% of his or her labor income. In the case of job gains, a new labor income is estimated via a traditional Mincer equation, in which the logarithmic of income is regressed on sex, age, education level, urban/rural, dependency rate, and a dummy if the household has income from remittances. Workers who are employed in public administration, utilities, health, or extraterritorial agencies are protected from job losses or income changes. For the remaining workers (not in protected sectors and who have not lost their jobs), their labor incomes are adjusted up or down by the overall change in private consumption per capita of their specific country.

Projected changes in remittances by country are also included in the microsimulations. The percentage change in remittances at the national level is applied as a direct percentage change in the remittance income of any household who receives this income in the household survey.

Lastly, coverage of emergency social transfers is simulated based on potential recipients' eligibility criteria, as determined by each country. Estimates are limited to cash-transfer mitigation measures that were measurable in household surveys. These are provided by the World Bank POV GP's Poverty Economists. In-kind transfers were not included. Coverage may be underestimated in the simulation results, given the assumptions and data restrictions.

Annex 6. Growth and Distribution Decomposition

The decomposition of poverty changes on growth and income distribution was proposed by Datt and Ravallion (1992). The idea is to separate the effects on poverty according to the changes that occurred in income between two periods: **(1) the income growth component** is the change in poverty due to a change in the mean income in the absence of changes in income distribution, and **(2) the distribution component** is the change in poverty due to changes in the Lorenz curve while keeping the mean income constant.

Mathematically, let $P_t (\mu_t, L_t)$ be the poverty rate in time $t = \{1,2\}$ that depends on the mean income μ_t and the Lorenz curve L_t. By taking $t = 1$ as the period of reference, the decomposition of the change in the poverty rate from period 2 to period 1 in its growth and redistribution components is

$$P_2 - P_1 = \Delta P = [\, P(\mu_2, L_1) - P(\mu_1, L_1)\,]$$
$$+ [\, P(\mu_1, L_2) - P(\mu_1, L_1)] + R\,(r = 1)$$

According to Datt and Ravallion (1992), "The **growth component** $[\, P(\mu_2, L_1) - P(\mu_1, L_1)\,]$ of a change in the poverty rate is defined as the change in poverty due to a change in the mean while holding the Lorenz curve constant at some reference level L_r. The **redistribution component** $[\, P(\mu_1, L_2) - P(\mu_1, L_1)\,]$ is the change in poverty due to a change in the Lorenz curve while keeping the mean income constant at the reference level μ_r" (277).

The residual component $R\,(\,r = 1)$ exists because the poverty index is not additively separable between mean income growth and income distribution. In other words, the mean income growth is endogenous to the Lorenz curve. A way to eliminate the residual component of the poverty change is to decompose the change in poverty by changing the point of reference and averaging its components.[33] In this case, the second decomposition will be anchored to period 2 ($r = 2$):

$$P_2 - P_1 = \Delta P = [\, P(\mu_2, L_2) - P(\mu_1, L_2)\,]$$
$$+ [\, P(\mu_2, L_2) - P(\mu_2, L_1)\,] + R\,(r = 2)$$

Thus, by construction

$$R\,(r = 1) = [\, P(\mu_2, L_1) - P(\mu_1, L_1)\,]$$
$$- [\, P(\mu_2, L_2) - P(\mu_1, L_2)\,]$$
$$= [\, P(\mu_1, L_2) - P(\mu_1, L_1)\,]$$
$$- [\, P(\mu_2, L_2) - P(\mu_2, L_1)\,]$$
$$= - R\,(r = 2)$$

and the whole equation becomes:

$$\overline{P_2 - P_1} = \overline{\Delta P} = \frac{[\, P(\mu_2, L_2) - P(\mu_1, L_2)\,] + [\, P(\mu_2, L_1) - P(\mu_1, L_1)]}{2}$$

$$+ \frac{[\, P(\mu_2, L_2) - P(\mu_1, L_2)\,] + [\, P(\mu_2, L_1) - P(\mu_1, L_1)]}{2}$$

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33 This is known as the Shapley value of components, which is used to correct for path dependency.

Annex 7. Shapley Decomposition by Components of a Welfare Measure

The Shapley decomposition by components of a welfare measure was developed by Azevedo, Nguyen, and Sanfelice (2012) based on Barros et al. (2006). This methodology estimates the relative effect of changes in different income sources (i.e., labor income, nonlabor income, and transfers) on poverty and inequality changes during a specific period.

Mathematically, in order to decompose the changes in poverty and inequality by each of the income components, the per-capita income must be expressed as a function of its components. Barros et al. (2006) define income per capita as the sum of each individual's income divided by the number of household members n. The individual's income y_i^l can be split into labor income y_i^{nl} and nonlabor income. Nonlabor income includes per-capita levels of pensions, capital, transfers (both public and private), and imputed rent, among other factors.

Departing from the methodology used in previous PLBs, here we use this decomposition to adjust for demographic transition while separating labor income by returns and employment level among the men and women of the household. Specifically, labor income is only earned by members of the household who are employed, n_0. These employed n_0 are also a function of the number of members in the household who are of working age n_A. Based on these two conditions, the per-capita labor income of the household $\frac{1}{n}\Sigma_{i=1}^{n} y_i^l$ can be split into three components: per-worker labor income ($\Sigma_{i \in o}^{n_o} \frac{y_i^l}{n_o}$), the employment rate of the household ($\frac{n_o}{n_A}$), and working age rate ($\frac{n_A}{n}$). In addition, labor income can be split into female and male labor income: ($\Sigma_{i \in F}^{n_oF} \frac{y_i^l}{n_oF}$) and ($\Sigma_{i \in M}^{n_oM} \frac{y_i^l}{n_oM}$). Note that other income g_i includes nonlabor income and labor income of non-working-age adults.

Therefore, income per capita can be written as

$$Y_{pc} = \frac{1}{n}\Sigma_{i=1}^{n} y_i = \frac{n_A}{n}\left(\frac{n_oF}{n_A}\left(\Sigma_{i \in F}^{n_oF}\left(\frac{y_i^L}{n_oF}\right)\right)\right.$$
$$\left. + \frac{n_oM}{n_A}\left(\Sigma_{i \in M}^{n_oM}\left(\frac{y_i^L}{n_oM}\right)\right)\right) + \frac{1}{n}\Sigma_i^{n} g_i \qquad (1)$$

Per-capita household income is a function δ of each of the j components, in this case $j = 4$.

$$Y_{pc} = \delta\left(\frac{n_A}{n}, \frac{n_o}{n_A}, \frac{y_i^l}{n_o}, \frac{y_i^{nl}}{n}\right) \qquad (2)$$

Note that any poverty or inequality measure I is a function θ that depends on the income distribution across households. Defining $F(Y_{pc})$ as the cumulative distribution function of per-capita income and replacing equation (2), it concluded that any poverty or inequality measure is a function of the income components:

$$I = \theta\left(F\left(\delta\left(\frac{n_A}{n}, \frac{n_o}{n_A}, \frac{y_i^l}{n_o}, \frac{y_i^{nl}}{n}\right)\right)\right) \qquad (3)$$

Based on equation (3), the change in the indicator is expressed over a period t and $t-1$ as a result of changes in the value of its components $\Delta I_{t,t-1} = I^t - I^{t-1}$. Using the method of Barros et al., the distribution of income is simulated by changing each of these i components, one at time, to calculate their contribution to the observed changes in poverty or inequality.

Using information from all components in each period, the participation of component j is estimated in the change of the analyzed indicator between $t-1$ and t. This can be done by constructing a counterfactual distribution for period t by substituting each income component's observed level in ($t-1$) for its value in (t). A counterfactual indicator for period t is then computed, based on the previous counterfactual distribution. The difference between the counterfactual and the observed value of the analyzed indicator is the effect of component j on the indicator's change.

In the absence of panel data, Azevedo, Nguyen, and Sanfelice (2012) use the rank preservation principle to transpose the distribution from one period to another. This means that the distribution in each period is ranked using per-capita income. Thus, the first observation period ($t-1$) will be linked with the first observation in the period (t). The difference between the observed indicator value and the counterfactual indicator is the effect $\sigma_{\left(\frac{n_o}{n_A}\right)}$ of the occupied rate on the change of the analyzed indicator. This is described in the next equation (where the hat represents the counterfactual indicator in period t):

$$\sigma_{\left(\frac{n_o}{n_A}\right)} = \hat{I} - I = \theta \left(F \left(\delta \left(\frac{n_A}{n}, \frac{n_o}{n_A}, \frac{y_i^l}{n_o}, \frac{y_i^{nl}}{n} \right) \right) \right)$$
$$- \theta \left(F \left(\delta \left(\frac{n_A}{n}, \frac{n_o}{n_A}, \frac{y_i^l}{n_o}, \frac{y_i^{nl}}{n} \right) \right) \right) \qquad (4)$$

The sum of the marginal effects of each component, however, does not give us the total change from ($t-1$) to (t), because the decomposition suffers from path dependence: the order in which each component is changed matters. Azevedo, Nguyen, and Sanfelice (2012) solve this problem using the Shapley value, which computes all possible $j!$ ways to decompose the indicator. Then, the weighted average of these j effects is computed, which is the total effect of component j on the indicator's observed change.

Annex 8. Poverty and Middle Class Estimates, with and without Mitigation Measures, by Country (2020)

Poverty Estimates ($5.50 per day, 2011 PPP)

Country	2019	2020 Without mitigation measures	2020 With mitigation measures
Argentina	14.4	18.5–22.9	16–20.2
Bolivia	19.9	27	25.5
Brazil	19.6	20.8–22.9	10.9–13
Chile	3.3–3.4	6.1–8.4	3.3–3.4
Colombia	29.4	34.6–39.6	30.9–34.7
Costa Rica	10.6	14.7–17.3	12.9–13.0
Dominican Republic	12.4	15.9–19.8	11.9–14.2
Ecuador	25.4	29.5–31.9	29.4–31.9
El Salvador	22.3	25.8–29.7	23.3–26.8
Guatemala	43.3	47.2–53.9	43.9–49.3
Haiti	77.6–83	79–87.5	79–87.5
Honduras	49	55.9	55.5
Mexico	20.7	24.9	24.8
Nicaragua	35.5	38.8	38.8
Panama	12.1	20.1–21.1	13.4–14.5
Paraguay	15.4	16.2–17.8	15–16.5
Peru	20.6	30.4–31.8	26.6–28.1
Uruguay	3.2	4.0–5.1	3.5–3.9
LAC	22	26.5	21.8

Source: Projections based on 2019 SEDLAC (CEDLAS-World Bank) microdata and macroeconomic projections of private consumption per capita, job losses, and remittances from the MTI GP and the POV GP. The current projections shown are based on a macro-micro simulation model that assumes 12 months of unemployment. See Diaz-Bonilla, Moreno, and Sanchez (forthcoming). When two projections are shown, the second is based on the POV GP projections as published in the specific country's Macro Poverty Outlook (April 2021 version).
Note: Haiti's estimates show both the consumption-based and income-based poverty projections using 2012 microdata. Estimates are limited to cash-transfer mitigation measures that were measurable in household surveys. In-kind transfers were not included.

## Middle Class Estimates ($13 - $70 per day, 2011 PPP)

Country	2019	2020 Without mitigation measures	2020 With mitigation measures
Argentina	51.1	41.4-46.6	42.6- 47.8
Bolivia	36.5	30.1	30.9
Brazil	44.6	41.9-42.8	47.7
Chile	62.8-63.3	50.3-56.4	53.3-59.4
Colombia	30.5	23.8-26.9	24-27
Costa Rica	50.4	43.8-45.7	47.4-48
Dominican Republic	42.4	34.1-38.9	38.8-42.9
Ecuador	33.3	30.4	30.4
El Salvador	29.0	23.8-25.6	25.3-27.3
Guatemala	17.5	13.9-16	15.1-17
Haiti	4.6	3.6	3.6
Honduras	17.8	14.2	14.2
Mexico	30.6	27.5	27.6
Nicaragua	20.8	19	19
Panama	56.9	44.6-45.2	50.5-51.3
Paraguay	43.8	40.1-41.7	40.6-42.3
Peru	36.7	25.8-26.6	27.2-28
Uruguay	68.3	63.1-66.4	64.6-67.1
LAC	38	34.7	37.3

Source: Projections based on 2019 SEDLAC (CEDLAS-World Bank) microdata and macroeconomic projections of private consumption per capita, job losses, and remittances from the MTI GP and the POV GP. The current projections shown are based on a macro-micro simulation model that assumes 12 months of unemployment. See Diaz-Bonilla, Moreno, and Sanchez (forthcoming). When two projections are shown, the second is based on the POV GP projections as published in the specific country's Macro Poverty Outlook (April 2021 version).
Note: (a) Haiti's estimates show both the consumption-based and income-based poverty projections using 2012 micro-data. (b) Estimates are limited to cash-transfer mitigation measures that were measurable in household surveys. In-kind transfers were not included.

Annex 9. Population Covered by Mitigation Measures, by Percentile
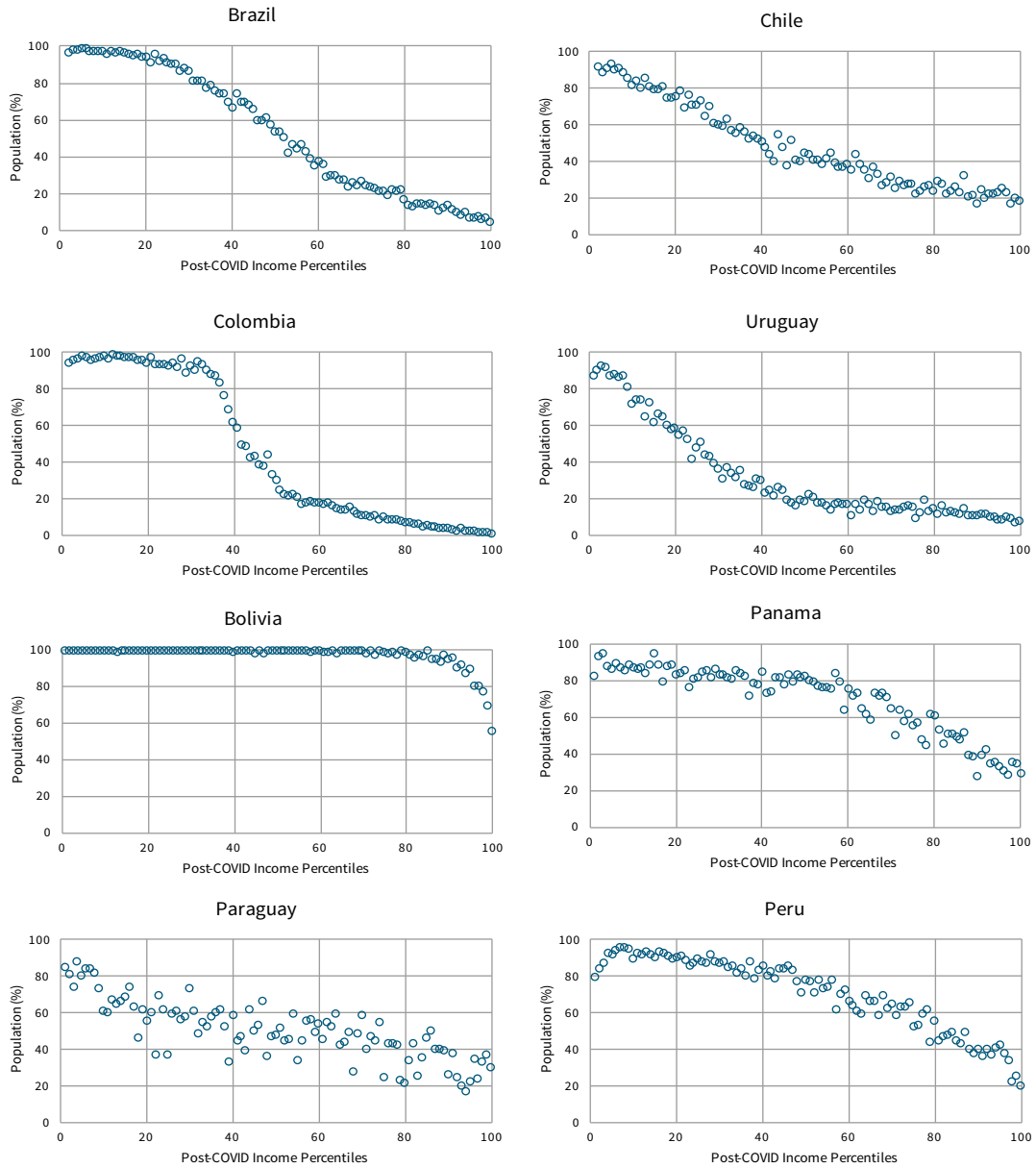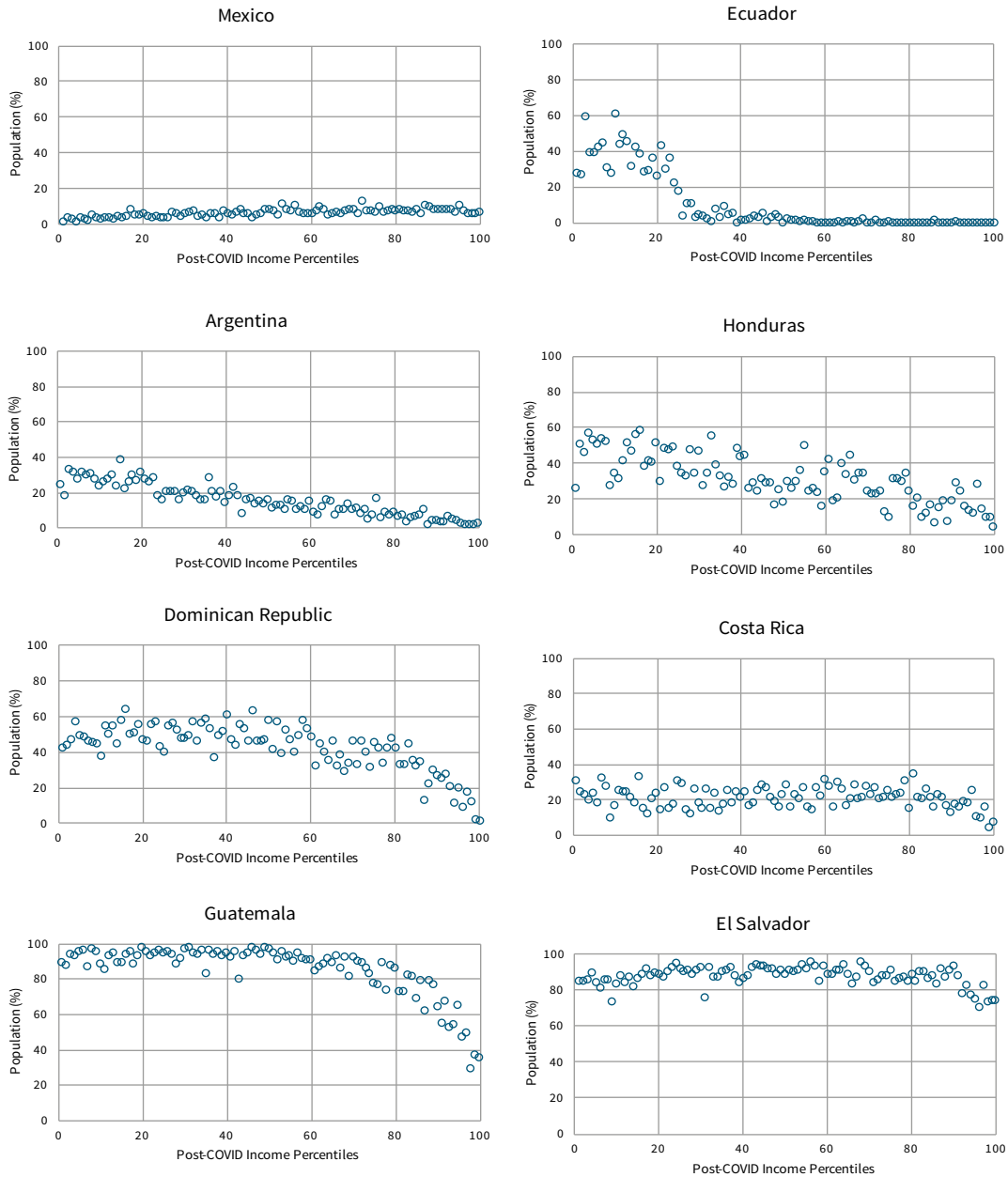
Brazil

Chile

Colombia

Uruguay

Bolivia

Panama

Paraguay

Peru

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