THE INEQUALITY CRISIS

Latin America and the Caribbean at the Crossroads

IDB

Edited by Matías Busso and Julián Messina

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PREFACE

The societies of Latin America and the Caribbean had been practicing social distancing long before the coronavirus pandemic moved in to test their resilience and expose their vulnerabilities. This is the social distancing caused by extreme inequality in the region, which saps citizens' faith in the common good and widens the gap between rich and poor.

In terms of income, Latin America and the Caribbean is one of the most unequal regions in the world. The richest tenth of the population captures 22 times more of the national income than the bottom tenth. The richest 1 percent takes in 21 percent of the income of the entire economy—double the average in the industrialized world. Moreover, stark income gaps represent only one of several forms of inequality that undermine social cohesion and the sense of belonging to something greater than oneself. Sex, race and ethnicity, like income, are powerful determinants of access to healthcare, education, employment and the legal system.

Inequalities start early in life and widen during childhood and adolescence, with the result that children from different backgrounds have unequal opportunities to grow and develop. The poor and lower-middle classes live in different neighborhoods, attend different schools, and visit different health clinics. They are much more likely than the wealthy to be victims of violent crime and far more exposed to the destructive effects of climate change—while also less able to cope with the consequences of both.

In education, children from wealthier families tend to be better prepared for school than those from poor families. When beginning school, children from high socioeconomic backgrounds perform substantially better than their poorer peers in socioemotional, cognitive, and linguistic development. These disparities widen over time. By the time young people reach the labor market, their effects become glaringly apparent: The better-prepared have first pick of the high-quality jobs in the region's relatively small formal sector, while the less-prepared, who are disproportionately from poorer backgrounds, are likely to spend the rest of their lives in informal jobs. Formal employment brings access to safety nets, such as contributory pensions and, in some countries, unemployment insurance.

By contrast, most workers in the bottom 40 percent of the income distribution have informal jobs that carry no safety net at all.

Horizontal inequalities are also very large. Pay gaps between men and women in the region have narrowed in the past few decades, but women still earn on average 13 percent less than men. Moreover, they are less likely to be found in higher-paying jobs and socially prestigious occupations. Indigenous peoples and Afro-descendants, too, remain at a disadvantage. Few world regions are more multiethnic and multicultural than Latin America and the Caribbean. Afro-descendants make up about 25 percent of the population and indigenous people, 8 percent. But across the region, both groups are far more likely to be poor.

In healthcare, the region has made notable progress in broadening access, especially through the expansion of primary care services in peri-urban and rural areas. Yet, socioeconomic gaps in access to healthcare remain large: Between 2010 and 2015, the under-five mortality rate of children of better-educated mothers was half that of the children of the least-educated.

Against this backdrop of structural inequalities, the COVID-19 crisis has unfolded with unprecedented speed and distributional impact. Immediately after the pandemic hit the region, most governments put in place strict lockdown measures that prevented people from working outside the home. These measures have disproportionately affected low-income households. A month into the lockdown, about 65 percent of households in the bottom quintile of the income distribution had experienced at least one job loss among family members. In the top quintile, the share was 22 percent.

Governments in Latin America and the Caribbean are eight times less effective in reducing inequality through taxes and government spending than are more developed countries. The redistribution policies of the region's countries reduce inequality by less than 5 percent, whereas the industrialized world does so by 38 percent. The inability to redistribute can be summarized in a few words: pensions, social spending, and failed fiscal policy.

Because of the prevalence of informal employment in Latin America and the Caribbean, millions of people are left without *pensions*.

Noncontributory pension schemes have expanded in the region over the past two decades in an effort to reach the most vulnerable, but parity with the pensions offered by formal employment remains a distant goal.

Levels of *social spending* in the region are low. Much of what is spent takes the form of poorly targeted price subsidies (e.g., for energy) that do not provide meaningful assistance to the poorest. Direct income subsidies targeting the poor and lower-middle classes would provide more effective redistribution for each dollar spent.

Tax-based redistribution has failed because of the limited capacity of governments to control the high levels of tax avoidance and evasion that prevail in the region.

Moderate levels of inequality are not harmful and may even be beneficial, for example, in stimulating initiative. But when inequality is too great, discouragement, distrust, and cynicism set in, slowly eroding social bonds. Ultimately, no one benefits when belief in the common good is replaced by the view that social life is a matter of "every man for himself." Inequality shapes the perception of fairness in a society. As inequality dipped in the region between 2000 and 2012—the period of the commodity boom—the fraction of the population perceiving the distribution of income to be fair grew to a still-modest 25 percent. Seven years later, that share had slipped to 15 percent.

Once the coronavirus pandemic subsides, the region will remain exposed and vulnerable to economic crises, natural disasters, and climate change. Building resilience to those challenges will require vast stores of energy and goodwill, and they are more likely to be achieved in a society where everyone enjoys opportunities and families have a modicum of insurance against unexpected circumstances. That more equal society, in turn, will require a transformation of public policy to expand opportunities for all.

The chapters in this volume point the way.

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OVERVIEW:
Fractured Societies

by Matías Busso and Julián Messina

During the last quarter of 2019, protests broke out in major Latin American cities. Chileans, Colombians, and Ecuadorans took to the streets of their respective capitals to demand, among other things, equal treatment, better opportunities for all, and a more level playing field. The protests did not appear out of nowhere. They were the eruption of a smoldering volcano of social unrest that had lain largely dormant during the first decade of the twenty-first century, the golden decade of the commodity boom and social progress. The volcano stirred, however, with the stagnation that began in 2012—and, in synchrony with slipping economic indicators, street riots and strikes have trended up since then. To cite just one such indicator, the share of Latin Americans reporting that they did not have enough money for housing grew by almost 20 points between 2012 and 2019, reaching an alarming 40 percent.[1]

The social unrest stalled with the arrival of the COVID-19 pandemic. As this report goes to press, the region is in the midst of an unprecedented

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[1] Gallup World Poll, accessed at https://ga.gallup.com during the third week of June 2020.

health crisis whose human and economic costs, already large, rise by the day. As governments tend to the urgent needs of their health systems, the pandemic is uncovering deeply rooted—endemic—weaknesses of Latin American societies. The poor and vulnerable bear the brunt of the pandemic's costs, but the crisis is also revealing the interdependence of social groups. Building a society that is resilient as a whole requires economic policies that protect the most vulnerable against the worst of negative shocks.

This book has four parts. The first (Chapters 2–5) focuses on incomes, discussing long-run trends in personal, functional, horizontal, and regional inequality. It also analyzes the dynamics of inequality during past economic crises, leading to a discussion of what is happening during the COVID-19 crisis and what may happen in the years to come. The book's second part (Chapters 6–9) examines inequality beyond income. It looks at the inequalities faced by people in health, education, exposure to crime, access to justice, and labor markets. The third part (Chapters 10–11) turns to an analysis of vulnerability, looking, in particular, at the higher levels of vulnerability of low-income households in two contexts: their greater exposure to weather shocks related to climate change, and their more limited ability to cope with those shocks. The last part of the book (Chapters 12–14) discusses the limited degree of redistribution that the region has been able to achieve through fiscal policy, offering possible explanations of why, from the perspective of political economy, that redistribution has been limited. The book concludes with a discussion of why all this matters, showing that inequality erodes citizens' trust in one another and in institutions. High inequality fractures society, rending its fabric.

Land of Inequalities

Income inequality in Latin America and the Caribbean is very high compared with the rest of the world. Chapter 2 presents a snapshot of its current levels. The richest 10 percent of the population earns 22 times more than those in the bottom 10 percent, making the region's so-called Kuznets ratio of the distance between rich and poor more than double the average in developed countries. The average Gini coefficient in the

region is 0.46, compared to 0.32 across developed countries. These statistics, obtained using household surveys that typically miss the very top of the income distribution, hide another important fact. In the region, on average, the richest 1 percent take in 21 percent of the income of the entire economy, while the top 10 percent collects more than half of pre-tax national income. In the case of the developed countries, the top 1 percent garners on average 10 percent of total pre-tax national income, and the top 10 percent about a third.

These startling levels of inequality stand after two decades of reductions in inequality. The early 2000s marked the beginning of a period of remarkable decline in inequality in most Latin American and Caribbean countries. From 1990 to 2002, inequality in the region was stable, with the average Gini coefficient hovering around 0.53 and the top 10 percent of the population taking in 45 times that of the bottom 10 percent. From 2002 to 2018 inequality declined at an average annual rate of 0.4 Gini points, while the Kuznets ratio fell at an average annual rate of 1.3 points. These declines were not driven by reductions in the share of income accruing to the top 1 percent. Instead, people below were moving up the income ladder. Poverty fell, on average, from 42.3 percent in 2002 to 23.1 percent in 2018, as vast swaths of the population moved into the middle class.

This decline in income inequality was due, for the most part, to a decline in wage inequality. Chapter 8 provides evidence of the two forces at play. First, the expansion of education in previous decades meant that high-school and college premiums fell across the region. Second, a boost in internal demand fueled by the commodity boom also favored the least-skilled workers. In other words, the inequality decline occurred while all incomes grew—but the income of the poor and vulnerable grew much faster. This was particularly the case among net commodity exporters in South America. During the golden era of the commodity boom, between 2003 and 2013, real annual wage growth among workers at the bottom of the distribution was a stunning 6 percent in South America, compared with 3 percent growth for workers at the top. When the commodity bonanza stalled, wage growth stagnated in South America across the board; from 2013 to 2018 the wage distribution continued to compress, but at a much slower rate. In Mexico and Central America, where most countries are net

commodity importers, the pattern was reversed: mild reductions in wage inequality between 2003 and 2013, and stronger declines thereafter.

Inequality is an important determinant of the perceptions of fairness in a society. On average over the past two decades, only one in five Latin Americans has considered the income distribution in his or her country fair. And, as inequality moves, so do perceptions. As inequality declined between 2000 and 2013, a growing fraction of the population perceived the distribution of income to be fairer, reaching almost 25 percent by 2013. This fraction, however, declined with the economic slowdown between 2013 and 2019. Today only 15 percent of the population considers the distribution of income to be fair.

Chapter 4 studies the geography of inequality—within and across states, and in neighborhoods, cities, and provinces. In general, regional income differences are larger in richer countries than in poorer ones. In Argentina, average wages in Tierra del Fuego, for example, are about three times higher than in Santiago del Estero, while in El Salvador regional wage gaps are much lower: Wages in the capital city, San Salvador, are only 40 percent higher than in Ahuachapán, the region with the lowest average wages. Large disparities in wages across regions are a common outcome of the development process. At the early stages of development, regions across the country tend to be similarly poor. But as the country's economy grows, some regions emerge as development poles, becoming more productive, paying higher wages, and attracting a more educated population.

Despite the influence of cross-regional differences, it is segregation across urban neighborhoods that accounts for the largest share of individual income inequality. Consider for a moment Latin America as a single hypothetical entity. The decomposition analysis presented in Chapter 4 shows that cross-country differences account for only about 8 percent of the overall inequality across its households, with subnational regional borders adding another 7 percent. The vast majority of the income difference across households, therefore, takes place within rather than across national and subnational borders. An in-depth analysis for Brazil offers some additional intriguing facts. Macro-regions and

federative units play a very small role in the overall level of inequality in the country. Even city borders have a relatively minor role, explaining just 2 percent of Brazilians' overall wage differences. Poor and rich individuals are found in rich cities, and in poor ones as well. It is difference across neighborhoods within those cities that accounts for the greatest share of the wage differential. In other words, segregation across neighborhoods explains about 9 percent of overall wage differences among Brazilians. The part of the city you live in tells us more about inequality than do overall income differences across Latin America and the Caribbean.

Horizontal inequalities are differences in opportunities and outcomes across groups having a common defined (or constructed) identity— usually related to cultural origin, gender, ethnicity, or religion. These inequities are often difficult to overcome because they are rooted in history and social norms. Chapter 5 looks at three dimensions of horizontal inequalities: sex, race, and ethnicity.

Women work more for less pay. Pay gaps between men and women in the region have narrowed in the past few decades but are still present, with women earning 87 cents for every dollar earned by men. And women tend to be underrepresented in higher paying and more prestigious occupations: Only a third of the top-paying jobs in business, law, health, computer science, government, and science are held by women. Women are even more underrepresented in top positions at publicly listed companies: They make up less than 10 percent of board members and top executives, and only one in every 20 chief executive officers in the region is a woman.

Women are usually viewed as better suited than men to meet family needs and are thus expected to forgo income opportunities to care for others. These differences are deeply rooted in social norms. More than 40 percent of Latin Americans believe that preschool children suffer when their mother works, and half think that being a housewife is just as fulfilling as paid work. In fact, women put in three times more hours each week than men to unpaid work in the home and end up working almost 18 hours more per week than men. Differences between men and women show up outside the labor market as well. One example is in education. As women in the region progress into tertiary education, they tend to shy away from traditionally male-dominated fields such as science, technology, engineering, and math.

Latin America and the Caribbean is one of the most multi-ethnic and multicultural regions in the world. The share of indigenous populations is around 8 percent, and the total number of indigenous groups is estimated at between 772 and 826. Afro-descendants represent a quarter of the total population, but in countries such as Brazil, the Dominican Republic, and Venezuela they are the majority. Indigenous peoples and Afro-descendants remain at a disadvantage both in terms of their economic well-being and their access to opportunities. On average across the countries of the region, 43 percent of the indigenous population and 25 percent of Afro-descendants are poor. Wage gaps relative to the rest of the population remain quite high. Adjusting for education, Afro-descendants earn wages that are on average 17 percent lower than the rest of the population, while the adjusted wage gap for indigenous people is 27 percent.

Low Resilience to Shocks: Before and After the COVID-19 Pandemic

Against this backdrop of structural inequalities, the COVID-19 crisis unfolded with unprecedented speed and distributional impact. Chapter 3 analyzes the effect of past crises on labor markets in the region. It demonstrates that when gross domestic product (GDP) has dropped by 5 percent or more, the decline in real wages has usually been large: 10 percent on average but, in some cases, as high as 20 percent. Unemployment has risen, as well, and the number of formal jobs declined. As a result, poverty has typically increased by 3–5 percentage points, even after government relief efforts are taken into account. The effects on inequality have been ambiguous, however, because even though people at the bottom of the income distribution faced job and wage losses, the effect was even greater for those in the middle.

The COVID-19 crisis has some particularities that will render it particularly regressive in the short and long term alike. Immediately after the pandemic hit the region, most governments put in place strict lockdown measures that prevented people from working outside the home. These measures have disproportionately affected low-income

households. About 65 percent of the households in the bottom 20 percent of the income distribution had experienced at least one job loss among family members one month into the lockdown. Within the top 20 percent, the percentage of job losses was about 22 percent. These job losses translate directly into income losses. The ability to telework and retain a job during the lockdown was very unevenly distributed.

Beyond short-term impacts, there is ample evidence that economic crises have long-lasting effects on human capital accumulation through children's nutrition, health, and education. The effect of these shocks is greater among low-income households, thereby worsening inequality even decades after the crisis. It is difficult to estimate the magnitude of the learning losses from school closures associated with the COVID-19 crisis, but Chapter 3 discusses two important implications. First, students may become disengaged and even drop out of school altogether. Second, even among those students who stay in school, learning losses are likely to be substantial. There is evidence from studies of teachers' strikes that long interruptions in education adversely affect the grades of students in math, reading, and writing. Later in life, affected students earn lower wages and face a higher probability of unemployment. If anything, the results from these studies are likely to underpredict the long-run impacts of the COVID-19 crisis on human capital and inequality.

The COVID-19 crisis has made explicit the need to increase the resilience of Latin American and Caribbean societies. Once the pandemic subsides, if further action is not taken, the region will remain exposed and vulnerable to future shocks, including economic crises, natural disasters, and other negative events related to climate change. As discussed in Chapter 10, the impacts of climate change are expected to push more than 100 million people across the world into poverty by 2030. Climate change and natural disasters exacerbate inequality for three reasons. First, poor countries, regions, and people are generally more exposed to the effects of climate change and natural disasters. Second, when shocks hit, poorer countries, regions, and people suffer greater losses in proportion to wealth. For instance, in 1998, Hurricane Mitch wiped out 18 percent of the assets of households in the poorest quintile in Honduras, compared with 3 percent for the highest quintile. Third, poorer countries, regions, and people possess fewer resources and less capacity to recover from the

impacts of climate shocks. One important reason for this is that poorer households have lower savings and less access to credit for recovery.

As described in Chapter 11, only 4 of 10 people in the region report being able to come up with resources to cover an emergency. These levels of resilience are even lower in the case of the poorest quintile of households: only one in five in the bottom quintile reports being able to overcome the financial needs of an emergency. (In OECD countries, 50 percent of lower-income households have some savings to cover emergencies.) Low resilience is also explained by low levels of access to finance. More than 90 percent of people in OECD countries have a bank account, compared with just 40 percent in Latin America and the Caribbean. The rate is even lower for those at the low end of the income range. Why do Latin Americans save so little in the formal financial sector? Many factors are at play. Mistrust in financial institutions is a reason commonly offered for not opening a bank account. Formal saving instruments often do not suit the needs of lower-income people and may be too costly. More than one-third of the poorest households in the region cite the distance to the bank as a reason for not opening accounts. Mismatches between saving and investment products offered by banks and borrowers' needs may deter saving. Some financial products, for instance, may not be suitable for informal workers without a steady income.

Making the region more resilient to shocks will require achieving a more equal society in which everyone has similar opportunities in life, and where families have some insurance against unexpected negative events. This will require a transformation of public policy to level the playing field and offer opportunities for all. While some steps in the right direction have been taken, the road will likely be long and winding.

Why Is Inequality So High?

Why is inequality so high in Latin America? Why did the region's democratic transitions not deliver on the promise of better opportunity for all? These are complex questions, of course, and no single answer fits all countries. However, some regional patterns appear in every country though with different degrees of intensity. Children born into families

from low socioeconomic backgrounds generally lack opportunities. As they become adults, these children access the labor market with considerable skill gaps that translate into important lifetime income differences. Governments do little to reverse these trends. Where social programs exist at all, spending is generally low, and the programs often have substantial targeting problems. Tax collection is heavily biased towards indirect taxation (for example, value-added taxes), which is more regressive than taxes on income or profits. As such, Latin America does little in the way of redistribution. Moreover, the quality of the public services (such as education, safety, healthcare, and public transportation) is low, generating a vicious circle that feeds the intergenerational transmission of inequality.

Inequalities start early in life—even before birth. They become exacerbated during childhood and adolescence, with the result that children from different backgrounds have unequal opportunities to grow and develop. The lack of opportunities open to children from low- and middle-income households during these crucial years translates into income gaps when those children become adults and a high persistence of income inequality across generations. Unequal opportunities owing to family background are found in every country in the world, but in Latin America the opportunity gap between rich and poor children is larger than elsewhere. And Latin Americans are aware of the problem. One-third of Latin American households believe that their children do not have opportunities to grow and learn every day, in contrast to just 14 percent of households in the OECD countries.[2]

A healthy start in life has positive long-term effects in terms of educational attainment and wages. Chapter 6 shows that the region has made tremendous progress in antenatal care through the expansion of primary care services to rural and peri-urban areas. During the early 1990s the gap between low- and high-income families in common antenatal practices, such as for doctor's visits, urine, and blood samples during pregnancy, was large. With the expansion in health coverage to informal households through noncontributory systems this gap has fallen rapidly in recent decades. In parallel, overall under-5 mortality fell dramatically, as did the gap in child

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[2] Gallup World Poll, accessed at https://ga.gallup.com during the third week of June 2020.

mortality between rich and poor. Yet, children born before 1990, who had less access to health services for themselves and their mothers, are today in the labor market and suffering the consequences of the unequal access to healthcare they had during their childhood. Moreover, socioeconomic gaps in access to healthcare are still large: Between 2010 and 2015, the under-5 mortality rates of children of better-educated mothers were half those of the children of the least-educated.

Chapter 6 also illustrates that new challenges are emerging for health systems in the region. As life expectancy at birth increased from 60 years in the 1970s to 75 in 2019, a new set diseases grew in importance. Infectious, maternal, and neonatal diseases were the leading causes of low life expectancy before the 1990s. Today, noncommunicable diseases such as obesity, diabetes, hypertension, and high cholesterol are more prevalent, especially among the poor and less educated. This has implications for income inequality as well, as safety nets against income shocks are virtually nonexistent in the region.

Children from wealthier families tend to be better prepared for school than those from poor families. Chapter 7 shows that, when beginning school, children from high socioeconomic backgrounds perform substantially better than their low socioeconomic peers in socioemotional, cognitive, and language development. These gaps do not close during the school years. By third grade, a child from the bottom 20 percent of the income distribution trails a child from the top 20 percent by the equivalent of 1.5 school years. By the time the children are 15 the gap is even wider, representing more than two years of the normal progression of a typical student. And these gaps do not even consider the poorest children, many of whom, by age 15, are no longer in school. The gap in secondary enrollment between the top and bottom quintiles is 17 percentage points.

These accumulated skill gaps are exacerbated by a labor market that is characterized by high informality of employment and high variability in the quality of potential employers. Chapter 8 shows that human capital is a critical determinant of success in the labor market, whether measured by higher wages or by access to better jobs with attached fringe benefits such as pensions, health insurance, and (in

some countries) safety nets against the risk of unemployment. Workers with different skills end up working for different firms, and productivity differentials across firms are high by international standards, even within narrowly defined sectors. Because firms share rents with their workers, the matching of high-ability workers with high-ability firms exacerbates wage differences across skill levels. Moreover, corrective measures that try to compress the wage structure (such as minimum wage requirements) have a limited impact because of the prevalence of informal employment and noncompliance with the requirement.

Chapter 12 shows a crucial difference between Latin America and a group of OECD-EU countries: the intensity of income redistribution. Through taxes and government expenditures, Latin America reduces inequality by less than 5 percent—the OECD-EU reduces it by 38 percent. Thus, Latin American governments are 8 times less effective than their OECD and EU counterparts in reducing inequality. This inability to redistribute hinges on three factors.

The first factor is pensions, which are a major redistributive tool in rich countries. Dominated by pay-as-you-go systems, the average reduction of inequality attributable to pensions is 24 percent in the OECD-EU. In Latin America and the Caribbean, by contrast, formal pension systems are highly regressive because a significant fraction of workers who transit in and out of formal employment contribute while formally employed, but not enough to obtain a formal pension upon retirement. The result is that millions of Latin Americans are left without a pension. To protect the most vulnerable, a noncontributory pension scheme has expanded in the region over the past two decades, partially compensating for the regressive nature of the contributory system in formal employment settings.

The second factor behind inefficient redistribution is social spending—which is insufficient and often ineffective. OECD-EU countries devote about 28 percent of GDP to social spending, while Latin America spends half of that. And this is despite substantial increases in spending during the 2000s, from about 10 percent of GDP in the mid-1990s to 15 percent in the mid-2010s. Many of the expenditures that fall under the umbrella of social spending do not reach the poor and vulnerable. About three-quarters of energy subsidies, for example, go to the richest 60 percent of

the population. Similar "leakages" are observed in tax provisions having a social purpose, such as exemptions for spending on food, drugs, and housing. Moving from price subsidies to direct income subsidies targeting the poor and lower-middle classes would provide much more effective redistribution per dollar spent.

The third factor is tax evasion. Across the region, tax-based redistribution has fallen short because of high levels of tax avoidance and evasion, or, to put it another way, limited capacity in government to curtail avoidance and to detect and punish evasion.

A Fractured Social Contract

Insufficient redistribution and unequal opportunity are the main features of what might be termed a fractured social contract in Latin America. A social contract is an implicit agreement among the members of a society to define mutual rights and responsibilities. How much each group obtains from the government and how much it gives is a basic part of the social fabric. In Latin America this social contract is fractured, with segments of the society segregated geographically and enjoying services of different quantity and quality. This fractured social contract has become more inclusive and cohesive in recent decades, but the agenda is unfinished, and some recent trends are worrisome. Several chapters in the book illustrate this segmentation.

In analyzing the evolution of health systems, Chapter 6 illustrates how the region has gradually extended coverage, although access and quality remain segmented. Systems initially only covered formal workers. Then, extensions to include family members were introduced. In recent decades, expansion has focused on extending coverage to informal workers. Some countries moved to single-payer systems. Others created a second, noncontributory, pillar. But because gaps in quality and in the type of services offered in contributory and noncontributory schemes remain, the socioeconomic gap in health treatment remains. Even in single-payer systems, a private insurance arm has emerged to spare wealthier citizens long waiting times and poor quality of services. In Brazil, for example, around 25 percent of the population has voluntary

private health insurance. Alternatively, households purchase private healthcare directly, without insurance, leading to high out-of-pocket payments. Such segmentation need not occur. Costa Rica moved to a single-payer system in the 1970s, and the percentage of the population with private health insurance is negligible.

Segmentation is even more apparent in education than in healthcare. The region has embarked on a rapid expansion in access to education for the less favored. As shown in Chapter 7, primary education is nearly universal today, and secondary enrollment is growing rapidly. Yet socioeconomic gaps in secondary and tertiary enrollment remain large, and achievement levels in public schools, as measured by international standardized tests, are relatively low. In an attempt to provide a better education for their children, the rich and middle classes are rapidly deserting public schools. More than 40 percent of secondary enrollments are in private schools, compared with about 10 percent in OECD countries and middle-income countries in other regions. This private/public cleavage has led to an extreme segmentation. On average, a student from the top 20 percent of socioeconomic status enrolled in secondary education is 6 times more likely to share experiences with students from the top socioeconomic status than a student from the bottom 20 percent of socioeconomic status. In the OECD, the average on the same indicator is three times. In Chile and Peru, the ratio is close to ten. The implication is that students from poorer backgrounds essentially never interact with those from the upper-middle class.

The sharp separation between rich and poor in the type and quality of services received extends to all spheres of society. In the labor market, Chapter 8 shows that formal workers have access to safety nets that include severance payments, contributory pensions, and, in some countries, unemployment benefits. Although imperfect and with much room for improvement, these are useful buffers against income shocks. By contrast, most workers and their families in the two lowest income quintiles have informal jobs, without access to any safety net. Regarding security, Chapter 9 illustrates that the top 20 percent have access to better public security services. Based on public perceptions, high- and middle-income groups report faster police response to burglary calls. Moreover, these groups supplement public policing with private services, purchasing alarms and cameras or hiring private security guards.

The fractured social contract is in fragile equilibrium. The rich and the upper-middle class enjoy the benefits of formal employment in terms of access to healthcare, pensions, severance payments, and unemployment benefits. They exert no pressure to improve the quality of public education, infrastructure, and security because private solutions are found. The poor and lower middle classes live in different neighborhoods, attend different schools, visit different health clinics, and make do with recently introduced noncontributory pension and health schemes that are less generous but a welcome innovation. As Chapter 13 illustrates, the younger democracies of the region have shown some preference for redistribution, but not at the levels one might expect in view of their institutional capacity. With the exception of Argentina and Brazil, taxation is low, and so is social spending. The chapter presents several constraints operating in democracies throughout the region that may act as a constraint for the adoption of broader policies to reduce inequality. Among those constraints are biased popular perceptions of income distribution, relatively low demand for pro-poor policies, an institutional bias against redistribution, and vote buying.

Chapter 14 closes the report with an important consequence of high inequality. The fractured social contract results in a less cohesive society in which a generalized lack of trust in government coexists with a high level of inequality. The equilibrium is fragile because societies are interconnected. As shown in Chapter 9, despite the efforts of the upper-middle classes to protect themselves from crime by relying on private security services, they report a higher incidence of nonviolent crime than the poor. This is in sharp contrast with both the OECD countries and other developing regions, where crime is both lower overall and concentrated in the poorest segments of the population. Isolation has its limits.

The COVID-19 crisis has put some of these interactions into sharp relief. Stay-at-home and shelter-in-place policies are effective only if people can meet basic needs without getting out of the house. The virtual absence of safety nets among informal households limits the ability of governments to credibly enforce quarantines. Emergency measures such as those discussed in Chapter 3 were put in place precisely to provide a basic income for vulnerable populations. Such measures could be the start to repairing the social fabric of Latin America.

2.

INCOME INEQUALITY:
A Snapshot

by Matías Busso and Julián Messina

Income inequality in Latin America and the Caribbean has concerned academics, intellectuals, multilateral organizations, and policy makers alike since at least the mid-twentieth century. Although the region has made enormous strides on a number of social and economic fronts, the goal of reducing income inequality has proven elusive for many countries. Although rates of inequality plummeted during the commodity boom (particularly between 2003 and 2013), the decline slowed in recent years and inequality remains intractably high. Exacerbated by the spread of the COVID-19 pandemic, recent trends will likely worsen the preexisting structural problem.

This chapter provides a snapshot of personal income distribution in the countries of Latin America and the Caribbean and its recent evolution.[1] What emerges is a portrait of a region where inequality is more extreme

[1] Personal income distribution refers to how income is distributed in the economy regardless of its source.

than almost anywhere else in the world. Chapter 3 will delve into recent developments, analyzing first how COVID-19 is affecting the livelihoods of Latin Americans and, second, how inequality might evolve as the crisis unfolds.

The availability of relatively good data for the past 30 years allows researchers to identify three distinct periods. The 1990s saw high and stagnant inequality, followed by a decade of significant declines in inequality in the first decade of the twenty-first century (2000–10), which then tapered off between 2010 and 2020. Between 2002 and 2012 income inequality fell almost everywhere in Latin America and the Caribbean, propelled by economic growth that reduced wage inequality and allowed for the expansion of government transfers (e.g., conditional and unconditional cash transfer programs and noncontributory pensions). After 2012, however, these improvements stalled. The chapter will zoom in on different parts of income distribution to reveal how, even as poverty declined over the past twenty years and many people moved into the middle class, the top 1 percent of earners in the region continued to receive far greater shares of total income than their counterparts in developed countries. It is therefore not surprising that vast majorities in the region perceive the distribution of income as unfair.

Against this backdrop, the COVID-19 pandemic struck everywhere— the region, of course, and the global economy as well. The historic pandemic has created public health and economic crises that highlight the interdependency of people and societies, exposing the vulnerabilities to which everyone is subject when so many cannot achieve a minimum standard of living. The economic crisis triggered by the pandemic will likely worsen the distribution of income in Latin America and the Caribbean. Tackling structural factors behind persistent income inequality is now more important than ever.

2.1.

A REGION MARKED BY EXTREME INEQUALITY

Income inequality has long been extreme in Latin America and the Caribbean. Simon Kuznets (1955) famously recognized the relationship between income inequality and economic development and, in a seminal paper, addressed the soaring levels of inequality in the region vis-à-vis more developed countries. Seventy years later, despite the region's growing improvements in health, education, transfers to the poor, and more, income inequality remains far greater here than in any other economic area, perhaps with the exception of sub-Saharan Africa (Alvaredo and Gasparini, 2013).

Income inequality in the region is severe, compared not only with the developed countries belonging to the Organisation for Economic Co-operation and Development (OECD) but also with countries at levels of development similar to those found in Latin America and the Caribbean. Two sets of statistics, represented in Figure 2.1, summarize the main features of income distribution (after taxes and transfers). First, there is the so-called Kuznets ratio, defined in this case as the ratio between the income earned by the top and the bottom 10 percent of the population. This measure is intuitive: the larger the share of total income earned by the richest decile with respect to the bottom (poorest) decile of the distribution, the more inequality. This measure misses, however, what occurs in other parts of income distribution. For this reason, the figure also shows the Gini coefficient, which measures the inequality of the entire distribution of income in an economy—with a lower value reflecting a more equal distribution.[2] These statistics were based on the latest available data for each country.

[2] For a comprehensive discussion of different measures of inequality, related concepts, and applications to Latin America, see Cicowiez, Gasparini, and Sosa Escudero (2013).

FIGURE 2.1 High Income Inequality in the Region

Distribution of statistics across countries
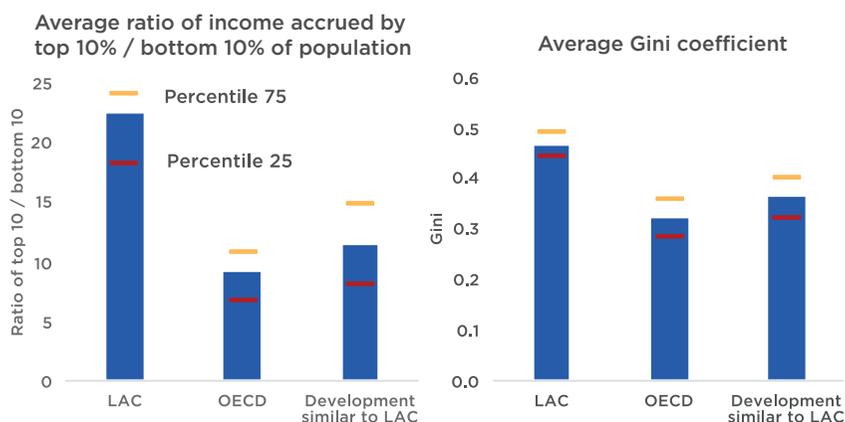
Source: Authors' calculations based on World Development Indicators and the Socio-Economic Database for Latin America and the Caribbean (SEDLAC), housed at the Centro de Estudios Distributivos, Laborales y Sociales (CEDLAS), Universidad Nacional de La Plata, Argentina.

Note: This figure is based on the latest available data, which for most countries is 2017. LAC refers to Latin America and the Caribbean and includes Argentina, Bolivia, Brazil, Chile, Colombia, Costa Rica, Dominican Republic, Ecuador, El Salvador, Guatemala, Honduras, Mexico, Nicaragua, Panama, Paraguay, Peru, and Uruguay. The OECD group includes Australia, Austria, Belgium, Canada, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Iceland, Ireland, Israel, Italy, Japan, Korea, Latvia, Lithuania, Luxembourg, Netherlands, Norway, Portugal, Slovakia, Slovenia, Spain, Sweden, Switzerland, United Kingdom, and United States. The group at a level of development similar to LAC's includes Albania, Algeria, Bulgaria, Hungary, Indonesia, Malaysia, Morocco, Philippines, Poland, Serbia, Thailand, Tunisia, and Turkey.

In the average country of Latin America and the Caribbean, the richest 10 percent of the population earns 22 times the income earned by the bottom 10 percent, while the average Gini coefficient is 0.46. There is some heterogeneity across the region, with Brazil, Honduras, and Panama among the most unequal and El Salvador, Uruguay, and Argentina among the most equal. Nicaragua and the Dominican Republic are close to the middle of the regional distribution of inequality. Notably, countries in the region with the lowest income equality show more inequality than the most unequal countries in developed economies. Even more striking, those levels are also higher than the most unequal country in regions with similar levels of economic development, as measured by their GDP per capita.

The region was not always as disproportionately unequal as it is today, nor was it always one of the most unequal in the world. Milanovic, Lindert, and Williamson (2011) collected information on what they called

the "ancient inequality" database for 28 places over two millennia. The sample includes data for Brazil, Chile, Mexico, Peru, and Central America. Using these historical data, they assume that elites were able to extract as much as they could given the prevailing income levels. This allows them to build a statistical series that provides an upper bound to what inequality could have been in those preindustrial economies of Latin America. Williamson (2015) finds two interesting results based on these historical data. First, "that most Latin American societies have today a much higher Gini than they had 150–200 years ago." Second, compared with the rest of the world, inequality in the region was not high in the decades after independence. It became high only relative to those countries that became developed economies following World War I, when the latter implemented policies that promoted egalitarian societies. In other words, the set of countries that are today developed reduced inequality through changes in public policy and institutions, a process that Latin America skipped altogether. Chapter 13 explores some reasons for this historic lapse in redistributive policies.

What about incomes at the top? The statistics tend to underestimate income inequality (as represented in Figure 2.1). It is standard in the literature to obtain income information from household surveys, which are known for excluding the top of the income distribution. Szekely and Hilgert (1999) recognized this problem early on for the region. Data from tax returns is one way to redress this problem. The World Inequality Database (2017) aims to do exactly this, by collecting information on incomes reported by the richest 1 percent of the distribution over time and for many countries.

The concentration of income at the top of the distribution is much greater in Latin America than elsewhere.[3] The share of pre-tax national income of the top 1 percent, top 10 percent, and bottom 50 percent of income earners in shown in Figure 2.2 for the same three groups of countries (with data from the latest available year). In Latin America and the Caribbean, on average, the richest 1 percent takes in 21 percent, while the top 10 percent commands more than half of pre-tax national income.

[3] It should be noted, however, that differences in data quality and methods invite caution regarding cross-country comparisons of top income shares.

Notwithstanding the small sample of Latin American countries for which data is available, these numbers are staggering and form a pattern not evident in many other regions of the world. In the OECD countries and those at a level of development similar to that of the Latin American sample, the top 1 percent takes in, on average, 10 and 12 percent of total pre-tax national income, respectively.

FIGURE 2.2 Pre-Tax Income Shares

Average across countries
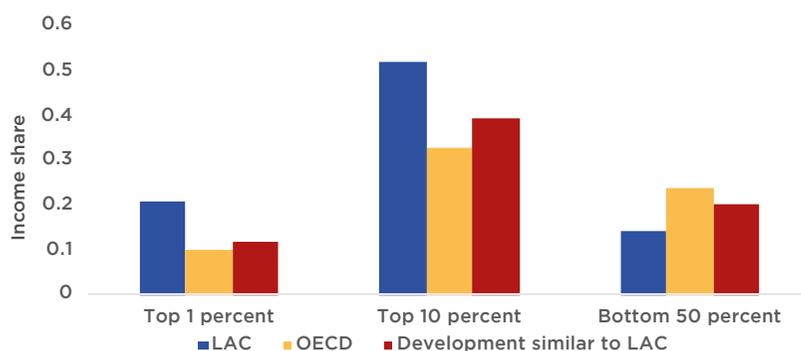
Source: Authors' calculations based on World Inequality Database, 2020.

Note: Most recent available data was used in all cases. LAC refers to Latin America and the Caribbean and includes Argentina, Brazil, Chile, Colombia, and Uruguay. The OECD group includes data for Australia, Austria, Belgium, Canada, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Japan, Korea, Latvia, Lithuania, Luxembourg, Netherlands, New Zealand, Norway, Portugal, Slovakia, Slovenia, Spain, Sweden, Switzerland, United Kingdom, and United States. The countries at a level of development similar to LAC's are Albania, Algeria, Bulgaria, Hungary, Indonesia, Morocco, Poland, Serbia, Thailand, Tunisia, and Turkey. Data availability changes depending on the share (1 percent, 10 percent, or 50 percent), so some of these countries may not be included in the averages shown above.

The high and persistent levels of income inequality in the region over most of the twentieth century have been accompanied by low intergenerational mobility. One measure of intergenerational mobility is the relationship between parents' socioeconomic status and that of their adult children. High mobility across generations may mitigate extreme inequality (Friedman, 1962; Krugman, 1992), as mobility is seen as integral to the equality of opportunity. Average intergenerational educational "persistence" (Figure 2.3) is measured by the correlation between the years of education of parents and those of their children (born in the 1980s). A high correlation coefficient means that children who rank high in their cohort in years of education tend to have parents who rank high

in years of schooling. A value closer to zero signifies no relation between parents' and children's education.[4] The region's average country has a correlation of 0.44, higher than in the OECD countries, where the most-mobile countries show a coefficient of 0.19. There is, however, some heterogeneity. The least-mobile countries (such as Honduras and Guatemala) show correlation coefficients above 0.5, while more-mobile ones (such as Argentina and the Dominican Republic) have coefficients below 0.35. It is also the case that intergenerational correlations of education in the region are not much different from those observed in countries at a similar development level. Looking at older cohorts of children, Torche (2020) reports that this level of persistence has been fairly constant over time. This is despite the recent, rapid increase in educational attainment in the region (see Chapter 7).

FIGURE 2.3 Average Relative Intergenerational Educational Persistence

Correlation coefficient of children's and parents' years of schooling
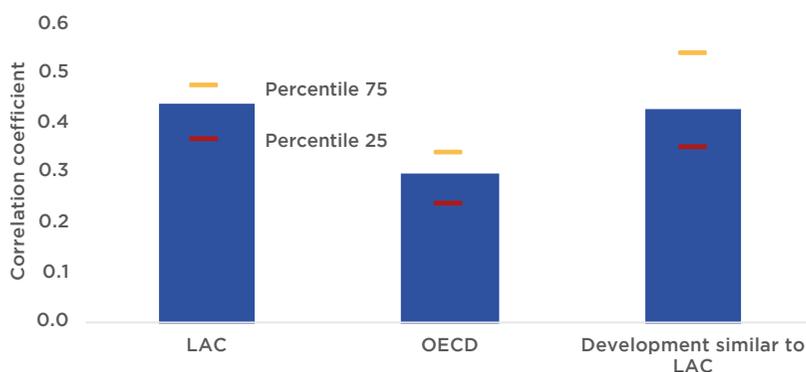
Source: Author's calculations based on the Global Database on Intergenerational Mobility.

Note: This figure shows the correlation of children's education with that of their parents using the 1980 cohort. Higher values indicate greater intergenerational persistence and, hence, lower mobility. The LAC countries included are Argentina, Bolivia, Brazil, Chile, Colombia, Costa Rica, Dominican Republic, Ecuador, El Salvador, Guatemala, Honduras, Mexico, Nicaragua, Panama, Paraguay, Peru, Uruguay. The OECD sample consists of Australia, Austria, Belgium, Canada, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Iceland, Ireland, Israel, Italy, Japan, Korea, Latvia, Lithuania, Netherlands, Norway, Portugal, Slovakia, Slovenia, Spain, Sweden, Switzerland, United Kingdom, and United States. The nations similar in development to the LAC sample are Albania, Bulgaria, Hungary, Indonesia, Malaysia, Morocco, Philippines, Poland, Serbia, Thailand, Tunisia, and Turkey.

[4] Intergenerational educational mobility is related to intergenerational income mobility, but the concepts are not the same. A number of factors mediate between the level of schooling a person has and their income. Changes in any of those factors will affect the relation between education and income mobility. For instance, returns to schooling may change owing to changes in the supply and demand for skills, or in the quality of education.

2.2.

THE RECENT DECLINES IN INCOME INEQUALITY

The early 2000s marked the beginning of a period of shrinking inequality in most Latin American and Caribbean countries (López-Calva and Lustig, 2010). Figure 2.4 shows the evolution of the Gini coefficient and the Kuznets 90/10 ratio after 1990, averaged across 17 countries in the region. There are three distinct periods. From 1990 to 2002, inequality in the region was stable, with the average Gini hovering around 0.53 and the top 10 percent of the population earning 45 times what was earned by the bottom 10 percent. After several economic crises in the 1990s, especially in Argentina, Brazil, Ecuador, Mexico, and Uruguay, the twenty-first century saw the emergence of favorable external conditions, which, coupled with structural reforms in many countries, brought macroeconomic stability. From 2002 to 2012, inequality declined on average at an annual rate of 0.6 Gini points, and the difference in the Kuznets ratio declined on average at an annual rate of 1.68 points. During the third phase, the reduction in inequality continued, but more slowly. Between 2012 and 2018 the Gini dropped at an annual rate of 0.2 Gini points, while the income ratio declined at an annual rate of 0.62 points. Compared with events in the OECD and in other countries at development levels similar to those of Latin America and the Caribbean, the decline in measures of inequality observed in the region was remarkable. Yet, convergence was not achieved.

Average across countries
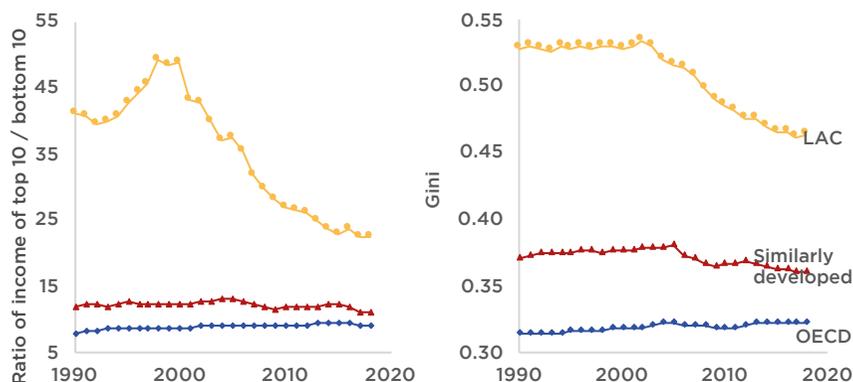
Source: SEDLAC and World Bank for LAC countries. World Development Indicators for OECD and countries similar to LAC.

Note: The countries in the LAC sample are Argentina, Bolivia, Brazil, Chile, Colombia, Costa Rica, Dominican Republic, Ecuador, El Salvador, Honduras, Mexico, Nicaragua, Panama, Paraguay, Peru, Uruguay, and Venezuela. The OECD countries are Australia, Austria, Belgium, Canada, Czech Republic, Denmark, Estonia, France, Germany, Greece, Iceland, Ireland, Israel, Italy, Japan, Latvia, Lithuania, Luxembourg, Netherlands, New Zealand, Norway, Portugal, Spain, Finland, Slovenia, Sweden, Switzerland, United Kingdom, and United States. The countries developed similarly to LAC are Albania, Algeria, Bulgaria, Hungary, Indonesia, Malaysia, Morocco, Philippines, Poland, Serbia, Thailand, Turkey, and Tunisia.

Inequality declined throughout the region, but at different paces in different places. Figure 2.5 shows the changes in the Gini coefficient in every country over three time periods. Almost everywhere the largest drops in inequality occurred in the first decade of the twenty-first century (2002–12). After 2012, some countries saw declines in the Gini coefficient (e.g., Bolivia, El Salvador, Panama), others experienced stagnation (e.g., Argentina, Chile, Ecuador, Peru), and inequality increased in still others (e.g., Brazil and Paraguay).

Overall, the reduction in inequality was larger in the Andean region. Between 2002 and 2018 the Gini dropped 10 points. During this period, inequality also fell sharply in the Southern Cone (7 points) and in Central America (almost 6 points). The reduction in wage inequality was the main driver of these changes (Messina and Silva, 2018; Chapter 8 of this volume). Playing major roles in the narrowing of wage inequality were expanded access to education and a subsequent decline in the skill premium; changes associated with the commodity boom that resulted in an increase in demand for unskilled workers; and institutional factors such as increases in minimum wages (De la Torre, Messina, and Silva,

2017; Messina and Silva, 2019). The implementation of several social transfer programs also eased inequalities in the region (Gasparini, Cruces, and Tornarolli, 2008; Lustig et al., 2016).

FIGURE 2.5 Evolution of the Gini by country, 2002–18
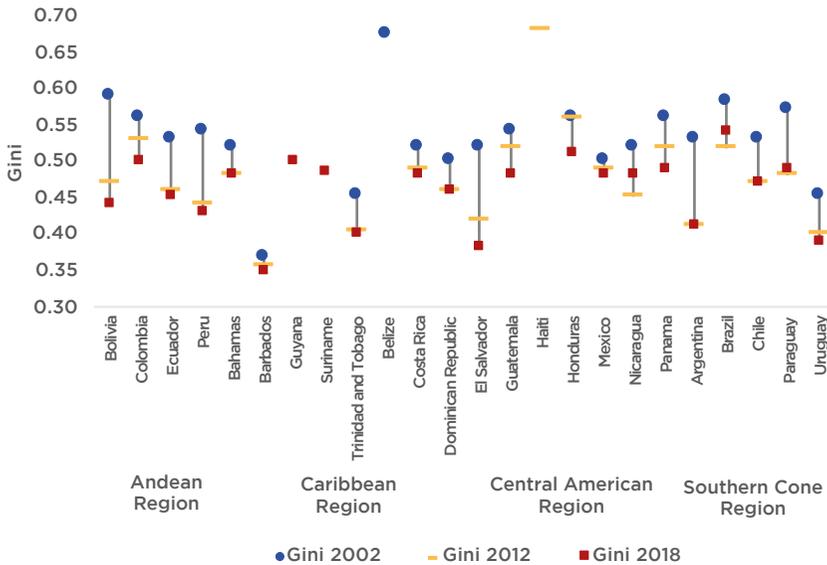
Sources: SEDLAC and World Bank and authors' calculations based on IDB data from "Harmonized Household Surveys from Latin America and the Caribbean."

2.3.

DECLINE IN INCOME INEQUALITY, LABOR MARKETS, AND REDISTRIBUTION

Inequality improved between 2002 and 2012, driven mostly by changes in the labor market and higher wages. But it was also eased

through government transfers of wealth. The relative strength of these factors can be quantified by analyzing income per capita across four components. Two relate to the labor market—first, the household share of adults employed in the labor market and, second, labor income earned per household occupant. The third component is the household's nonlabor income, typically pensions and government transfers, such as conditional or unconditional transfers to low-income households. Demographic change is the fourth component: the number of household members. Each component's contribution to the reduction in inequality (as measured by the Gini coefficient) was identified by simulating counterfactual income distributions obtained by changing one of the four components, one at a time, while the others were kept constant.[5]

For the sake of simplicity, Figure 2.6 drops the demographic-change component, since its contribution to changes in inequality was minimal in the region, and normalizes the contributions of the other three to sum to 100 percent of the decline in the Gini coefficient. The first column presents the average contribution of each factor across the region. About 75 percent of the drop in the Gini coefficient is explained by improvements in the labor market for those households at the bottom of the wage distribution. The most important change in the labor market was a compression of wages, as shown by labor income per employed household member. The factors behind such massive reductions in wage inequality are discussed in Chapter 8. Changes in labor supply led by a higher labor market participation of women also played a role in the reduction of inequality, but proved secondary compared to changes in the wage structure. Governments bolstered these changes in the labor market with redistributive efforts, which increased nonlabor income. This explains about 25 percent of the reduction in the Gini coefficient.

[5] The methodology follows Azevedo, Nguyen, and Sanfelice (2012).

Decomposition of Changes in Income Inequality in Latin America, 2003–18
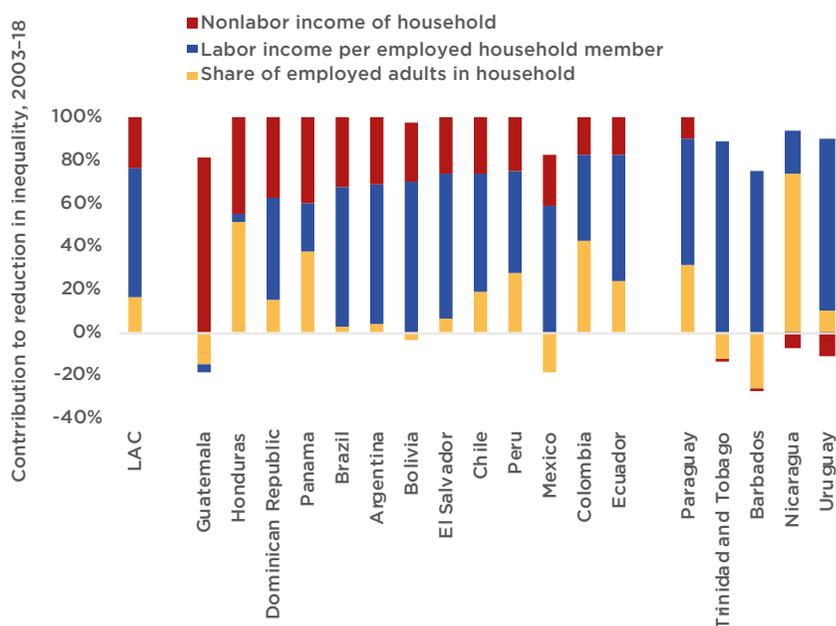
Source: Authors' calculations based on IDB data from "Harmonized Household Surveys from Latin America and the Caribbean" for 2003 and 2017, except for Brazil (2016), Barbados (2004 and 2016), Mexico (2004 and 2018), Nicaragua (2005 and 2014), and Trinidad and Tobago (2015).

In addition to these aggregate findings for the region, two distinctive sets of countries emerged. In the first set, redistributive policies explain much of the decline in inequality in, for example, Guatemala, Panama, Honduras, and the Dominican Republic. Interestingly, Guatemala and Honduras saw reductions during the slowdown, 2003–18, while inequality hardly budged during the commodity boom. Most of the easing in inequality in the other countries emerged from an improved labor market, usually in the form of higher wages for low-income households.

Government transfers alleviated a great deal of inequality, explaining between a quarter to a third of the observed declines. Two policy innovations are responsible: first, the dramatic expansion, early in the twenty-first century, of conditional and unconditional cash-transfer

programs. By 2008 these programs had expanded throughout the region (Fiszbein et al., 2009). Implemented as a way to tackle poverty, these programs were designed to increase consumption while diminishing the opportunity cost of investments in children's health and education (Schady and Araujo, 2008; Macours, Schady, and Vakis, 2012). The second policy innovation was the creation or expansion of noncontributory health and pension programs that targeted informal workers. This greatly expanded coverage and lowered poverty rates, especially among the elderly (Levy and Schady, 2013).

2.4.

WHO BENEFITED FROM THE DECLINE IN INEQUALITY?

Inequality declines were not driven by reductions in the share of income accruing to the top 1 percent. Instead, ordinary people were moving up the income ladder. They can be classified by income level. Those considered poor have daily incomes lower than $5.5 per day (in 2011 constant dollars, purchasing power parity adjusted). The middle class comprises two sets of people: those close to the poverty line and therefore more at risk, during downturns, of reverting to poverty (the so-called vulnerable population), and the established middle class. Figure 2.7 shows the share in each category. There was a sizable decline in the share of people below the poverty line, a trend accompanied by sharp increases among the vulnerable and the middle class. A fourth panel shows the share of pre-tax income captured by the top 1 percent of the distribution, which stayed constant or, if anything, increased slightly.

FIGURE 2.7 Changes in Income Distributions
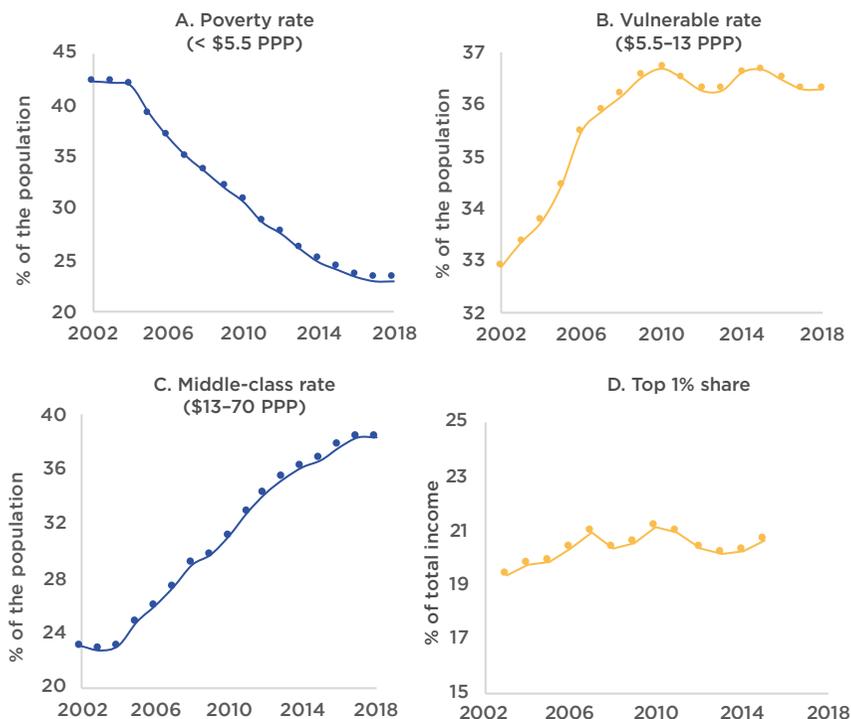
Source: Author's calculations based on data from SEDLAC and the World Bank and from the World Inequality Database.

Note: To construct the simple average across Latin American and Caribbean countries for panels A, B, and C, the following countries were included: Argentina, Bolivia, Brazil, Chile, Colombia, Costa Rica, Dominican Republic, Ecuador, El Salvador, Guatemala, Honduras, Mexico, Nicaragua, Panama, Paraguay, Peru, and Uruguay. For the top 1 percent share: Argentina, Brazil, Chile, Colombia, and Uruguay.

Poverty fell, on average, from 42.3 percent in 2002 to 27.7 percent in 2012. In 2018 it decreased to 23.1 percent. This drop was ubiquitous, although Bolivia and Ecuador saw particularly remarkable declines from 2002 to 2018 (34.9 and 29.4 percentage points, respectively). In Honduras and the Dominican Republic, the declines were more modest, at 9 and 10 percentage points, respectively. As poverty rates fell, the share of individuals moving into the middle-class categories grew. The share of vulnerable individuals increased from 2002 to 2010 and then stabilized at 36.4 percent. As these changes in the bottom and middle parts of the income distribution were occurring, the share of income earned by the top 1 percent remained almost constant at approximately 20 percent.

Reductions in income inequality brought about by declines in poverty are somewhat fragile. A big share of the population not strictly poor in 2018 could easily become poor in the event of a negative economic shock like the one triggered by the COVID-19 pandemic. If history is any guide, any standard economic crisis in the region would trigger the return of extreme poverty, unemployment, and informal work. The more severe and enduring the crisis, the greater the escalations in poverty. This is discussed in depth in Chapter 3.

2.5.

OTHER DIMENSIONS OF INCOME INEQUALITY

One important force that has opposed the tide of the labor market towards less inequality is the decline in the labor share—that is, the proportion of national income paid to workers in the form of wages and labor benefits. So far, this chapter has discussed personal income distribution (i.e., how income is distributed in the economy regardless of its source). An alternative is the so-called functional approach— which looks at how income is distributed across land, labor, capital, and firm organization. A great deal of evidence suggests that the labor share is declining all over the world (IMF, 2017; Autor et al., 2017).[6] Following Karabarbounis and Neiman (2013), Figure 2.8 shows the average labor shares for seven Latin American countries and a set of fifty-nine countries for which sufficient time-series data on the

[6] Some economists have argued that part of the decline in the labor share is due to poor measurement. Bridgman (2014) argues that the U.S. labor share has not fallen as much once items that do not add to capital, depreciation, and production taxes are netted out. Rognlie (2015) also shows that the net capital share has risen more modestly than the gross capital share in the United States. Koh, Santaeulalia-Llopis, and Zheng (2016) argue that the capitalization of intellectual property products can completely explain the decline in the U.S. labor share.

labor share are available. From the early 1990s to the 2010, the labor share declined in five of the seven countries of Latin America for which data are available. The decline was notable compared with the larger sample of countries.

Using panel data of more than one hundred countries over the 1960–2000 period, Harrison (2005) shows that in less-developed countries the labor share fell on average by 0.1 percentage points per year prior to 1993, and by 0.3 thereafter. Rodriguez and Jayadev (2010) find a similar decline, documenting a drop that they explain by falling intrasector labor shares, as opposed to reallocation of economic activity towards sectors with lower labor shares. Joy, Rodriguez, and Ruprah (2018) document a decline in the labor share using data for twenty Latin American and Caribbean countries.

FIGURE 2.8 Average Labor Share in the Region and in the World, 1975–2010
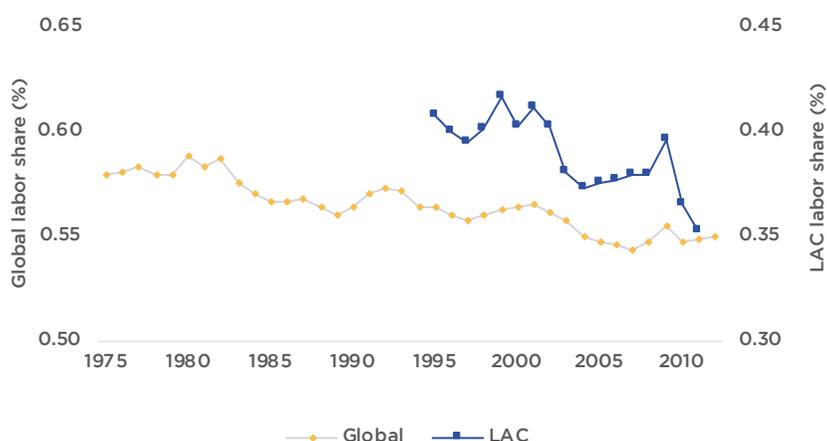
Source: Author's calculations based on Karabarbounis and Neiman (2013).

Note: The figure plots the year's fixed effects of an ordinary least square regression of the total labor share on country fixed effects (to account for sample entry and exit), weighted by the current GDP in U.S. dollars. For the sample of countries with more than 15 years of data, regressions are estimated separately for 59 countries (global) and for seven Latin American (LAC) countries (Argentina, Bolivia, Brazil, Colombia, Costa Rica, Mexico, and Peru). Fixed effects are then normalized to 1975 for the global series and to 1995 for the LAC series.

The decline in labor share has several possible explanations. These include technical change (Karabarbounis and Neiman, 2013) and automation (Acemoglu and Restrepo, 2018), which substitute labor for

capital. Another explanation is economic integration, where the lower-skill and labor-intensive stages of production are moved to cheaper locations (Elsby, Hobijn, and Şahin, 2015). The decline could also be explained by increasing markups owing to concentration (Autor et al., 2020). Another explanation is the decline of labor unions (Fichtenbaum, 2011). The literature just cited is mostly focused on developed countries. Little has been done to investigate the onset of these economic phenomena in Latin America and the Caribbean or the implications for the labor share in the region's economies. But the literature proposes one final explanation, one that may be especially relevant for Latin America and the Caribbean. This explanation is that the supposed decline in the labor share is an artifact of mismeasurement. It is a challenge to measure the evolution of the labor share in economies marked by self-employment; this challenge lies in separating the income of the self-employed into its primary sources: labor, capital, and land (Gollin, 2002). More research is needed on ways to measure labor share in countries with high levels of self-employment. With better ways to measure labor share, researchers might isolate the reasons behind the labor share evolution in the region and get a better grasp of the relation between the personal and functional approaches to income distribution.

2.6.

PERCEPTIONS OF UNFAIRNESS

Despite the recent easing in income inequality in the region, many people perceive the income distribution to be unfair. Every year, in a large sample of Latin American countries, people are asked, "How fair do you think the income distribution is in (your country)?" In 2001, those who responded "fair" or "very fair" (see Figure 2.9) made up only 10 percent

of the sample. But as income inequality declined in the region, a larger fraction came to perceive the distribution of income as fair, reaching almost 25 percent in 2013. Once the decline in inequality slowed after 2013, perceptions of fairness began to fall again. Reyes and Gasparini (2017) explore Latin Americans' perceptions of distributive justice during the 2000s and find that unfairness perceptions are correlated with relative measures of income inequality, such as the Gini coefficient. Chapter 14 will further explore the importance for social cohesion of people's perceptions of the fairness of the distribution of income.

The region in 2020 lives with extreme income inequality, and almost 85 percent of respondents say they consider this unfair. These perceptions are likely informed not only by their relative position in the income distribution but also by their daily experience. Regardless of income, unequal opportunities based on race or gender, unequal access to health services, unequal access to good schools, unequal treatment before the law, and unequal dignity in the way people are treated in a society will also shape perceptions. The chapters that follow will document these inequities in quality of life, explore policy options to address those inequities (evaluating the trade-offs), look at pertinent political economy constraints, and investigate the implications of inaction.

FIGURE 2.9 Is the Distribution of Income Fair?

Country average for Latin America and the Caribbean, in percentages
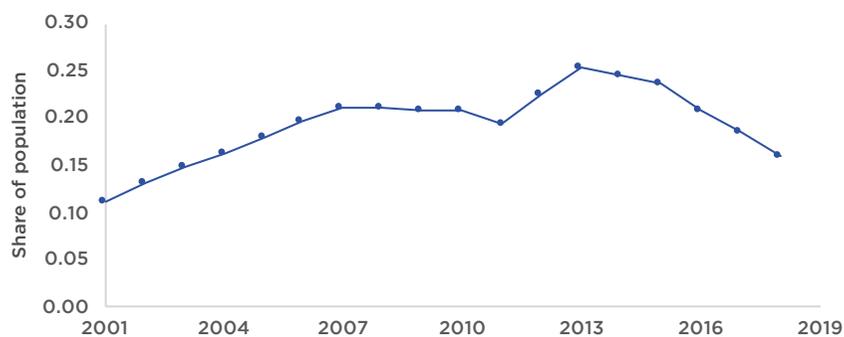
Source: Authors' calculations based on Latinobarometro.

Note: Linear interpolation of the data was used to have a balanced panel of countries from 2001 to 2018. Country sample: Argentina, Bolivia, Brazil, Chile, Colombia, Costa Rica, Dominican Republic, Ecuador, El Salvador, Guatemala, Honduras, Mexico, Nicaragua, Panama, Paraguay, Peru, Uruguay, and Venezuela.

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3.

INEQUALITY IN TIMES OF CRISIS: Lessons for COVID-19

by Matías Busso and Julián Messina

Latin America and the Caribbean has experienced a great many recessions, from the debt crises of the early 1980s, to hyperinflation in several countries, and balance-of-payments and banking crises in the second half of the 1990s. Most of these events raised poverty and unemployment. The COVID-19 pandemic is different. First, it is global; second, its intertwined public health and economic components are mutually reinforcing.

Unprecedented as the COVID-19 pandemic is, it does share features with previous crises. First, all upheavals have a sectoral component, the epicenter of which varies. Currency crises, for example, affect more directly tradable, as opposed to nontradable, sectors, whereas the COVID-19 pandemic affects those that depend on human proximity. Still, eventually all negative sectoral shocks spread to the rest of the economy by depressing aggregate demand. Second, most crises are accompanied by uncertainty as to their resolution. In some previous instances, uncertainty surrounded the central bank's ability to sustain

the exchange rate or to act as a lender of last resort. In today's crisis, the uncertainty comes from the epidemic itself and its future dynamics. Therefore, resolution of the crisis rests on epidemiological and medical advances that yield viable therapies or vaccines and on public health measures—namely, the sustainability and effectiveness of quarantines and social distancing measures.

Because the well-being of Latin American families, especially those at the bottom 90 percent of the distribution, rises and falls with developments in the labor market, this chapter will view previous crises and the COVID-19 pandemic from a labor market perspective. This implies that other important mechanisms to weather the crisis, such as the role of remittances and other forms of informal financial assistance, will be left out of the analysis. Past crises have typically increased unemployment and reduced real wages. Workers moved into informality and women who had not been working looked for jobs to compensate for household income losses. These labor market adjustments aggravated poverty. Their impact on inequality, however, is ambiguous. All economic crises have touched the most vulnerable, and no group has been able to dodge the pain altogether, but those in the middle of the skill distribution have tended to be hit the hardest. Even those with high education levels have suffered the negative consequences of the shock.

We argue here that the COVID-19 pandemic will affect the most vulnerable disproportionately. This is partly because lockdown measures have physically barred people from working outside their homes, and low-income households are less adapted to telework. Emergency measures have only partly compensated for lost incomes. As the crisis unfolds, the negative supply shock induced by social distancing policies will recede, leaving behind a depressed level of aggregate demand. Because demand will remain particularly weak in those sectors that require high personal proximity, at least until a viable cure or vaccine is made widely available, and because those sectors are intensive in low-skilled labor, the regressive effects of the pandemic will be long-lasting. The chapter concludes by reviewing the long-term distributional implications of crises and drawing some broad lessons for policy reform.

3.1.

LABOR MARKET ADJUSTMENTS AND DISTRIBUTIONAL IMPACTS OF PREVIOUS CRISES IN LATIN AMERICA AND THE CARIBBEAN

Economic crises typically deliver a negative shock to labor demand, increasing poverty levels by altering quantities of labor and wages in the labor market. Fallon and Lucas (2002) found that inequality grew after the crises of the 1980s because of adjustments in the labor market. To understand the effect of these events on labor market outcomes and distributional statistics, we conducted an exercise based on past recessions and economic crises in Latin America and the Caribbean.

The events were identified as follows. First, recessions were identified as deviations in the trend of a constant GDP series using a Hodrick-Prescott filter, similar to the strategy used by Camacho and Palmieri (2019). The exercise identified 129 recessions occurring between 1972 and 2018 in 22 countries of the region. The duration of the crisis (in years) and the severity (the maximum drop in GDP per capita between peak and trough) were computed. Second, the greatest socioeconomic cost of each recession was measured by identifying the maximum levels of each variable (poverty, unemployment, Gini) during the recession and then computing the change between that value and the value observed in the year immediately prior to the beginning of the recession.

In describing the labor market at its trough, the observed changes in self-employment, formality, and labor force participation were computed from the pre-crisis year to the crisis year in which

unemployment was worst. Note that this analysis indiscriminately mixes different kinds of recessions. This has the advantage of allowing us to consider temporary recessions not caused by fundamental variables of the economy (as is the case with the current crisis) alongside crises caused by macroeconomic imbalances or "sudden stops" (which could happen during the COVID-19 recession in some economies of the region having high debt-to-GDP ratios). One limitation of the analysis, however, is that the endogenous responses of governments, firms, and workers to the recession affect its impact on labor variables. Those responses in turn depend on the nature of the recession. For this reason, we offer our analysis as merely descriptive.

Figure 3.1 shows how workers and families are affected in the wake of different types of economic crisis; it shows the total change observed from the year before the crisis through the peak, or the maximum of each variable. On average, wages have declined by 2 to 10 percent depending on the severity of the crisis, while unemployment has risen (1 to 3 percentage points) and formal jobs have declined. Poverty increases (1 to 3 percentage points). It does so despite the growth in labor supply, especially from women who enter the labor market to compensate for losses of household income (i.e., the so-called added-worker effect). The potential risk associated with the responses of these variables to the crisis—captured in part by the 95 percent confidence intervals—is large.[1] In the worst-case scenarios, wages drop 21 percentage points and poverty jumps 5 percentage points.

Inequality responds erratically during crises, however. Depending on the nature and duration of the crisis, income can move in different directions and proportions at different parts of the income distribution (Camacho and Palmieri, 2019; Atkinson and Morelli, 2011). For the reasons discussed below, however, the current crisis can be expected to have particularly regressive effects.

[1] The confidence intervals are wide in many cases because the number of observations varies for each type of crisis. Mild economic recessions are common (66) in our sample, while fewer are classified as severe (25).

FIGURE 3.1 Average Maximum Deterioration of Labor Market Outcomes during Recessions in Latin America and the Caribbean

By severity of the recession measured by the magnitude of decline in annualized real GDP per capita
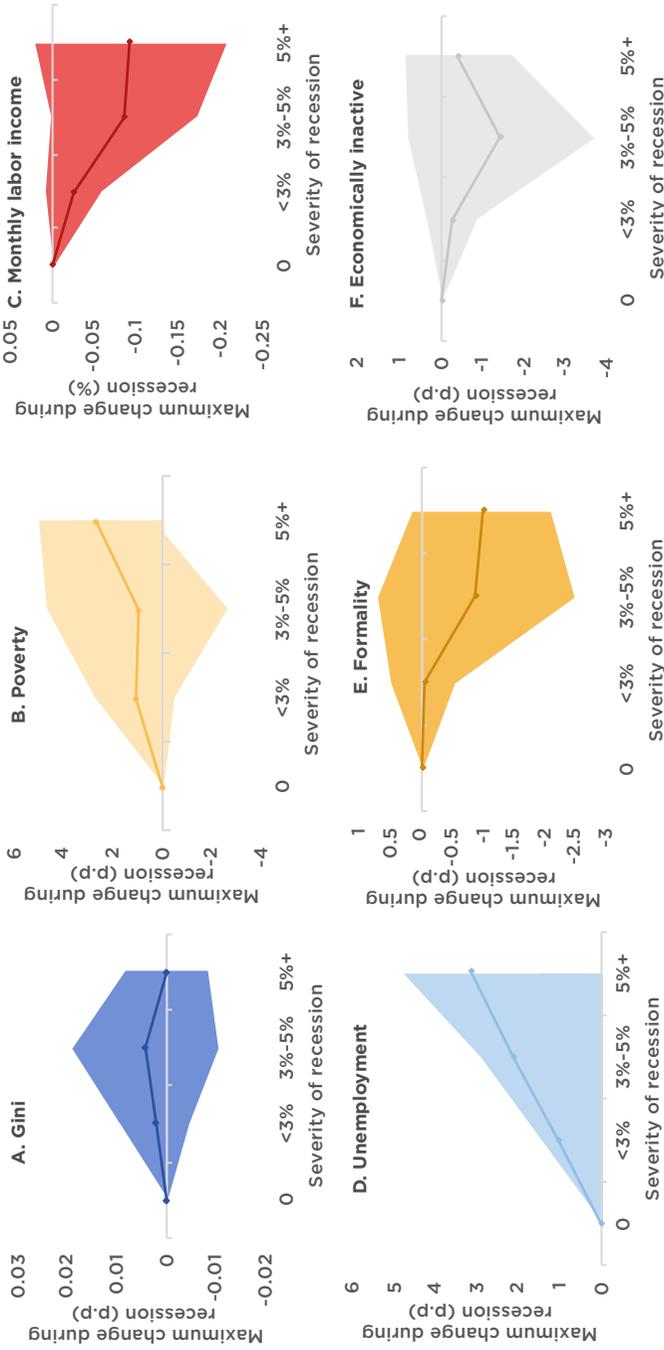
Source: Authors' calculations based on data from SIMS, World Development Indicators (World Bank), and the Socio-Economic Database for Latin America and the Caribbean (SEDLAC), housed at the Centro de Estudios Distributivos, Laborales y Sociales (CEDLAS), Universidad Nacional de La Plata, Argentina.

Note: Sample of countries includes Argentina, Bahamas, Barbados, Belize, Bolivia, Brazil, Chile, Colombia, Costa Rica, Dominican Republic, Ecuador, El Salvador, Guatemala, Guyana, Honduras, Jamaica, Mexico, Nicaragua, Panama, Paraguay, Peru, and Uruguay.

Crises have an unambiguous impact on inequality because they tend to hit some individuals harder than others. Table 3.1 shows which parts of the population have shouldered most of the burden of past recessions (see panels A and B, showing the average maximum total change in the main variables by education level and gender). Four results are worth highlighting. First, no group is immune to an economic crisis. All tend to experience poverty surges and deterioration of their labor market outcomes. Second, in absolute terms the group with secondary education has tended to suffer more unemployment and to slide into informality at a higher rate. These findings resemble those of Habib et al. (2010), whose microsimulations in Bangladesh, Mexico, and the Philippines looked at the effect of the financial crisis of 2008 on poverty and inequality. They show particularly adverse effects for the middle part of the distribution (and in Mexico the bottom as well), with people falling below the poverty line. Third, the group with higher levels of education experiences the largest relative losses in labor market outcomes, as captured by the percentage change (shown in curly brackets). Fourth, more women enter the labor force than men as a result of an economic crisis.

In previous crises, how long did it take for labor market variables to return to their precrisis values? Focusing on the region's most severe economic crises from 1990 to the present, the unemployment rate, for example, took an average of nine years to return to its precrisis value. Poverty and formality took approximately four and six years, respectively. History suggests that the COVID-19 pandemic will likely erode recent improvements in the labor market and worsen poverty and inequality for many years to come.

TABLE 3.1 Average Maximum Deterioration in Labor Market Outcomes during Recessions in Latin America and the Caribbean

By education and gender

	AVERAGE TOTAL CHANGE DURING CRISIS					
	Poverty	Self-employed	Unemployment	Formality	Economically inactive	Log of monthly real labor income
	P.P.	P.P.	P.P.	P.P.	P.P.	%
	{%}	{%}	{%}	{%}	{%}	
TOTAL	1.64	0.23	1.37	-0.36	-0.48	-4.19
	{8.35}	{1.34}	{20.59}	{-0.90}	{-0.84}	
BY EDUCATION LEVEL						
Low (0–8 years of education)	1.90	0.35	1.19	-0.52	-0.15	-5.03
	{7.51}	{1.22}	{20.41}	{-2.45}	{-0.33}	
Medium (9–13 years of education)	2.52	0.78	1.54	-1.66	-0.01	-5.82
	{17.17}	{4.24}	{20.71}	{-3.83}	{0.37}	
High (14+ years of education)	2.03	0.28	1.12	-0.18	-0.26	-5.43
	{44.97}	{5.57}	{26.66}	{-0.03}	{-0.64}	
BY GENDER						
Women	1.63	0.23	1.68	-0.53	-1.12	-3.88
	{8.32}	{0.99}	{23.90}	{-1.53}	{-1.81}	
Men	1.65	0.13	1.24	-0.46	-0.07	-5.08
	{8.44}	{2.93}	{20.61}	{-1.12}	{0.15}	

Source: Authors' calculations using data from SIMS, WDI, and SEDLAS.

Note: The average percentage change with respect to the base level is shown in brackets. For Poverty and Unemployment, the average total change is calculated as the average between crises of the maximum change between t–1 (the year before the onset of the crisis) and the year in which the variable was at its peak during the crisis. For all other variables, the change is calculated with respect to the year in which unemployment was at its peak. The sample of countries consists of Argentina, Bahamas, Barbados, Belize, Bolivia, Brazil, Chile, Colombia, Costa Rica, Dominican Republic, Ecuador, El Salvador, Guatemala, Guyana, Honduras, Jamaica, Mexico, Nicaragua, Panama, Paraguay, Peru, Uruguay. Owing to variations in data availability, the sample may differ with respect to education level and gender; some countries may not be included in the averages shown.

3.2.

DISTRIBUTIONAL IMPACTS OF THE COVID-19 PANDEMIC

3.2.1 Before the crisis: inequality, informality, and low productivity

Latin America entered the pandemic with three severe structural problems: high informality, high inequality, and low productivity. Table 3.2 provides an overview of the situation just before the pandemic. Despite reductions in poverty and inequality over the past two decades (see Chapter 2), levels of inequality and vulnerability remain high in the region. Inequality in 2018 was at levels surpassed only by sub-Saharan Africa. Moderate poverty still affects one out of four families, and more than a third of the non-poor remain vulnerable to poverty. Informality in Latin America and the Caribbean affects one out of every two workers. Unemployment is perhaps the only variable that stood at moderate levels before the crisis; few people in the region had to spend long periods seeking employment. In terms of aggregate productivity, the situation is also underwhelming. Over the past 20 years, despite having enjoyed much higher average growth than in previous decades, the productivity gap with respect to the developed countries has continued to widen (Levy and Schady, 2013; Restuccia and Rogerson, 2013; OECD/CAF, 2019).

Understanding the underlying forces behind these three structural problems is beyond the scope of this chapter, but it is important to note that the three elements interact and make the region particularly vulnerable to negative economic shocks. A key

aspect through which the three interact is the fragmentation of social protection systems. Formal salaried workers enjoy benefits (e.g., health and unemployment insurance, pension rights) under what we call the "contributory regime." These regimes are financed through payroll taxes, which in countries such as Argentina or Brazil can amount to as much as 47 percent of the average cost of hiring a formal worker (Alaimo et al., 2017). The coverage of the contributory regime is generally low, varying from 13 percent in Paraguay to 75 percent in Chile. To address the lack of coverage among informal workers, many countries of the region developed a second, noncontributory pillar in recent years, which is financed through general taxation. Noncontributory health insurance and pension systems are becoming more and more common in the region. Lack of protection against labor-income risk remains the biggest gap of these noncontributory pillars.

Fragmented support between these two systems misallocates resources (thereby lowering aggregate productivity; Busso, Fazio, and Levy, 2012), discourages formality by driving wedges between contributions and benefits (Levy, 2008), increases inequality (Messina and Silva, 2019; see Chapter 8 as well), and leaves a major portion of the workforce exposed to negative shocks. The last of these will make it particularly difficult to devise adequate policy responses to the pandemic.

TABLE 3.2 The Labor Market in Latin America and the Caribbean

	LATEST AVAILABLE DATA					CHANGE BETWEEN 2012 AND LATEST AVAILABLE DATA					
	Gini	Poverty	Self-employed	Informal employees	Unemployment	Gini	Poverty	Self-employed	Informal employees	Unemployment	Circa
Argentina	0.41	13.95	21.26	25.03	9.06	0.00	4.83	3.22	-1.40	1.81	2018
Bolivia	0.44	26.06	44.43	20.19	3.18	-0.03	-4.36	8.45	-3.16	1.17	2018
Brazil	0.53	17.86	25.33	15.00	12.20	0.01	-4.47	4.70	-1.66	5.99	2018
Chile	0.46	7.55	21.52	13.57	7.86	-0.01	-0.99	2.13	0.69	0.82	2017
Colombia	0.50	31.73	43.59	17.29	9.45	-0.03	-5.33	0.64	-2.25	-0.73	2018
Costa Rica	0.48	15.23	15.79	18.99	8.25	0.00	-2.30	-2.99	-2.41	0.43	2018
Dominican Republic	0.46	20.50	39.13	12.49	5.72	0.00	-17.14	-2.65	-3.07	-1.25	2017
Ecuador	0.45	28.48	34.08	21.99	2.93	-0.01	-4.22	1.33	-2.31	-0.20	2018
El Salvador	0.38	31.38	27.32	30.55	2.11	-0.04	-12.61	-1.87	-0.16	-0.16	2018
Guatemala	0.48	57.43	29.36	41.63	2.92	-0.02	-1.91	-4.20	2.16	-1.62	2018
Honduras	0.50	55.96	13.75		2.97	-0.06	-6.20	-1.07		-1.30	2018
Mexico	0.48	27.67	29.80	46.88	4.40	0.00	-11.79	-0.52	2.24	0.05	2018
Nicaragua	0.46	50.56	27.18	31.58	5.47	0.01	-1.42	3.13	-0.15	1.16	2014
Panama	0.50	17.19	39.44		3.70	-0.02	-4.15	3.38		0.13	2017
Paraguay	0.49	22.72	29.56	34.16	5.61	0.01	-7.78	-5.37	1.20	0.77	2018
Peru	0.43	22.17	27.21	23.60	3.90	-0.01	-4.44	-0.99	-0.30	0.25	2018
Uruguay	0.39	6.81	23.87	8.74	8.33	0.00	-2.21	2.58	-1.59	1.87	2018
LAC	0.46	26.66	28.98	24.11	5.77	-0.01	-5.09	0.58	-0.81	0.54	-

Source: Authors' calculations based on SEDLAC, downloaded in April 2020.

Note: The poverty statistics show the percentage of people below the monetary poverty line of $5.5 per day (in 2011 PPP dollars). The self-employed category is the percentage of self-employed workers in relation to the total number of employed people. The category of informal employees shows the percentage of salaried workers without a pension, as a share of all employed people.

3.2.2 Short-run distributional effects of the COVID-19 disruptions

Previous crises have had strong negative effects on the most vulnerable. But they have also hit people in the upper-middle class, with ambiguous effects on inequality. Pandemics, however, seem to unambiguously increase inequality. Using country-level data from most countries in the world, Furceri et al. (2020) study the impact of previous pandemics over the past two decades. They find that these episodes have led to persistent increases in the Gini coefficient (of up to 1.75 percent five years after the event), raised the income shares of higher-income deciles, and reduced employment among low-skilled workers.

The present pandemic shares features with previous events, but it is unique in ways that particularly harm the poor and vulnerable. With the current crisis, it is important to distinguish two time horizons: first, the short- and medium-term effects of the lockdown, the social distancing measures, and the ensuing recession; and, second, the long-term effects that await once the pandemic runs its course.

During the first months of pandemic, as COVID-19 was first spreading, governments in the region took extreme but necessary measures to contain the coronavirus, prioritizing in almost all cases some form of social isolation or distancing (Hale et al., 2020). Many firms experienced an immediate, sharp drop in demand. Others did not. Only workers engaged in "essential activities" could leave the home. The alternative, working from home, has depended on the nature of the job, the employer's information technology, and the worker's connectivity at home.

Most jobs performed by low-skilled workers require personal proximity or are unsuited for teleworking. Mongey, Pilossoph, and Weinberg (2020) classify occupations according to whether or not they can be performed from home and whether they require personal proximity; they then analyze who fills these occupations. Workers in occupations most likely to be affected by social distancing measures, those with a low score in the work-from-home index, and those with a high score in the personal-

proximity scale (such as retail, construction, and restaurants), are more likely to be performed by economically vulnerable workers: workers with fewer years of education, limited healthcare options, and wages towards the bottom of the income distribution. Delaporte and Peña (2020) reach even starker conclusions for Latin America. Less than 10 percent of workers who are at the bottom 40 percent of the population had the capacity to telework.

Survey results from the first months of the lockdown confirm this prediction, showing that low-wage workers have been severely affected by the lockdown (Bottan, Hoffmann, and Vera-Cossío, 2020). Figure 3.2 shows the incidence of job losses affecting at least one family member and the percentage of families with at least one member teleworking by quintiles of the precrisis household income distribution. Loss of employment by at least one member in the household affects a staggering 70 percent in the first income quintile, more than tripling the level of about 20 percent observed in the richest income quintile. The distributional incidence of job losses is almost an inversion of the picture presented by household teleworking. In the first two income quintiles, around 33 percent of the households had at least one member teleworking, compared with some 65 percent among high-income households.

Assisting vulnerable households during the lockdown is a complex matter because of the region's fractured system of social insurance. Formal workers may have some access to unemployment insurance, although coverage is low (Alaimo et al., 2016). Informal workers, on the other hand, have no safety nets, live hand to mouth, and have limited savings (see Chapter 11). Existing transfer programs typically focus on the poor and not on those vulnerable to poverty, and even among the poor they have important coverage limitations (Robles, Rubio, and Stampini, 2019). Blackman et al. (2020) calculate that even if their coverage were extended by 50 percent, some 5 to 37 percent of the poorest households would not receive any transfers, depending on the country. Governments aggressively introduced extraordinary measures when the pandemic hit, but coverage remains limited in significant parts of the distribution (see Box 3.1).

FIGURE 3.2 Job Losses and Teleworking during the COVID-19 Lockdown in Latin America, by Household Income Quintiles, 2020
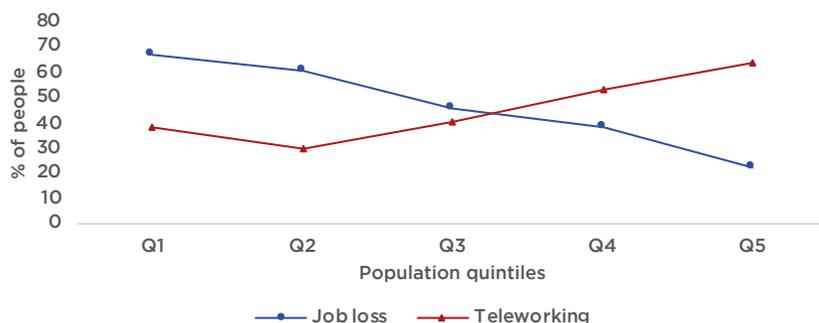
Source: Authors' calculations based on the "Harmonized Household Surveys of Latin America and the Caribbean" for 2018 (except for Chile, 2017) and results of the "IDB Coronavirus Impact Survey" and preliminary results from Bottan, Hoffmann, and Vera-Cossío (2020).

BOX 3.1 Government Assistance Programs during the COVID-19 Lockdown

Government measures to curb the contagion of COVID-19 included, in almost all instances, some form of social isolation or distancing. Figure 3.2 shows that these measures translated into an immediate loss of jobs affecting all segments of the region's population, but in particular workers in the bottom quintiles. In an attempt to prevent a humanitarian crisis, governments put in place extraordinary measures to sustain the livelihoods of the most vulnerable. How well have governments done in targeting those most in need? How effective have government programs been in replacing lost income?

To assess the incidence and generosity of the emergency measures, Busso et al. (2020) documented and coded all transfer policies implemented by governments in the region to compensate individuals for the loss of income. They mapped the eligibility conditions for the COVID-19 emergency transfers onto the latest available household survey for each country (typically 2018). The labor income of potential beneficiaries was then updated to reflect 2020 prices, making it possible to compare typical labor incomes with the amounts proposed by each program. From this, indicators of potential coverage of the

programs and their replacement rate across different segments of the population were constructed. That is, the authors computed an upper bound of coverage for people across the income distribution and an upper bound of the share of lost income compensated by these transfers. This box summarizes the main findings.

Emergency transfers have relatively good coverage among the poorest households, reaching more than 75 percent of the poorest tercile in the population in most countries (Figure B3.1.1). The first tercile is almost exclusively composed of self-employed and informal workers, with no access to income or savings other than what they derived from their work. There is substantial variation across countries, however. Coverage in Chile and Ecuador reaches approximately half of the households in the first tercile, whereas in Brazil and Peru it is almost universal.

FIGURE B3.1.1 Percentage of Targeted Households, by per Capita Monetary Labor Income, Terciles 1 and 2
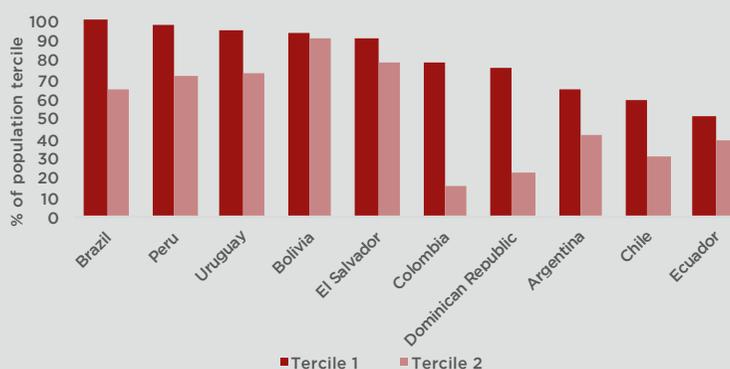
Source: Authors' calculations based on Busso et al. (2020).

Coverage is lower in the second tercile, showing some degree of targeting of the emergency programs and the fact that many transfers build on preexisting programs that target the structurally poor. Informal and self-employed workers with income that boosts them above the poverty line are more difficult to identify. This may be more problematic in some countries than in others. In Chile the coverage is low, but most households in the second tercile of the population are

middle class and have some members in the formal sector who may have access to other programs and safety nets. By way of contrast, in Colombia, Ecuador, and Dominican Republic, potential coverage rates in the second tercile are below 40 percent. But a sizable part of that population comprises vulnerable households with no members in the formal sector; they are at serious risk of falling into poverty.

How generous are these transfers? Figure B3.1.2 shows the weight of the COVID-19 cash transfers as a proportion of the monthly monetary labor income for targeted households in terciles 1 and 2. The replacement rate for the most vulnerable households (those in the first tercile) is generally high, but there are exceptions. In El Salvador, Brazil, Chile, Peru, and Bolivia, the median replacement rate is 50 percent or more of the regular labor income. Colombia and Argentina are intermediate cases, with median replacement rates in the first tercile at a little over 40 percent. The replacement rate is lowest in the Dominican Republic and Uruguay (34 and 12 percent, respectively).

With some noteworthy exceptions, the potential replacement rates are much lower among households in the second tercile. On one end of the distribution, the transfer exceeds 50 percent of the regular labor earnings for the median beneficiary household in El Salvador and Brazil. On the other end, transfers represent less than 15 percent of the prior and potentially forgone labor earnings of the median household in Bolivia, Colombia, the Dominican Republic, Ecuador, Peru, and Uruguay.

FIGURE B3.1.2 Emergency Cash Transfers as Share of Monthly Monetary Labor Income for Targeted Households in Terciles 1 and 2

Source: Authors' calculations based on Busso et al. (2020).

Predicting the depth and duration of the recession after the lockdowns is difficult. The economic uncertainty common to every recession is intertwined in this case with the uncertainty surrounding the disease itself. ECLAC (2020) reports that the containment measures will generate the worst economic contraction in the history of the region, "with a projected –5.3 drop." Nuguer and Powell (2020) build different scenarios showing GDP contractions ranging from 1.8 to 5.5. percent. Governments have introduced a battery of measures in an attempt to minimize the negative economic consequences of the pandemic (Stein et al., 2020). Part of the uncertainty hinges on how effective these policies will be. But most of it relates to the pandemic itself. The restoration of a fully functioning economy will have to wait for an effective treatment or a vaccine.

The lockdown produced a negative supply shock which had unprecedented and instantaneous effects on economic activity; these will ripple through the economy and eventually recede as governments reopen parts of the economy (Acemoglu et al., 2020). During this recovery phase, the supply shock will turn into a demand shock characterized by high uncertainty. The uncertainty associated with the economic costs of the lockdown is related to the uncertain health consequences of any return to normalcy and the possibility of successive waves of lockdowns when the contagion returns in successive waves. The behavior of labor and social indicators during previous crises, outlined in Section 3.1, provides us with a range of potential responses to the current pandemic. But the health dimension of the current crisis has additional economic implications. Economic sectors where physical contact or proximity is commonplace (e.g., restaurants, hotels, tourism, many personal services), and which are intensive in low-skilled labor, will not work at full capacity until a satisfactory cure or vaccine becomes available. The excess supply of unskilled workers from these sectors will dampen low-skill wages across the board. The regressive effects of this crisis, therefore, will persist beyond the lockdown period.

3.2.3 COVID-19 and the scarring effects of crisis

Beyond the short- and medium-term impact of economic cataclysms, ample evidence from the literature suggests that recessions and economic crises have long-lasting ripple effects on human capital accumulation. Because the effect is greater on low-income households, whose members are less resilient to economic shocks, those effects typically worsen inequality even after the initial impacts on the labor market have dissipated.

Economic shocks have direct effects on children's nutrition and health and, through the accumulation of human capital, on their labor market earnings as adults; the evidence from various types of shocks is fairly consistent. Agüero and Valdivia (2010) find that recessions in Peru increased child mortality and, for those who survived, increased the probability of stunting. Paxson and Schady (2005) show that between 1987 and 1990 in Peru, a profound recession with a real GDP decline of 30 percent increased infant mortality by 2.5 percentage points (caused by a sharp decline in both public and private health spending). However, the effect of recessions seems to be nonlinear. Baird, Friedman, and Schady (2011) find that, in a sample of fifty-nine developing countries, mild recessions have essentially no effect on infant mortality rates, while severe and prolonged crises have very sizable effects. Moreover, they show that a 1 percent decline in per capita GDP increases the mortality of boys by approximately 0.27 per thousand children born and that of girls by 0.53 per thousand. The differential negative effect on girls is observed in every region of the developing world, including Latin America and the Caribbean.

Children's health outcomes are also adversely affected by other types of shocks. Cogneau and Jedwab (2012) study the effects of commodity price shocks in Côte d'Ivoire. They find that children of cocoa producers who suffered a negative price shock were adversely impacted both in physical stature and incidence of illness. Alderman, Hoddinott, and Kinsey (2006) investigate the effects of civil war and drought by looking at a sample of preschoolers with low height for their age in rural Zimbabwe. They find that low height-for-age preschool children

experience negative impacts as young adults: they are shorter, begin school at older ages, and complete fewer grades. The authors calculate that these losses of stature, schooling, and potential work experience may result in lifetime earnings losses of around 14 percent.

Negative economic shocks can directly affect children's education, especially among those in secondary school who may have to choose between staying in school or taking a job to help the family. In this case, however, the effect of recessions is ambiguous because of an income effect and a substitution effect. On the one hand, recessions reduce the opportunity cost of attending school (Atkin, 2016; Aparicio-Fenoll, 2016).[2] McKenzie (2003) finds that after the 1994–95 Mexican crisis, increased school attendance was accompanied by a drop in the labor force participation of youth from the same age group. Ferreira and Schady (2009) find that, for a larger sample of Latin American countries, childhood education is countercyclical. On the other hand, because recessions reduce family income and wealth, schooling suffers. Families can no longer afford fees for higher education or they need younger members of the household to work. Stuart (2019) estimates the impact of the United States' 1980–82 recession. Using a difference-in-difference estimator that compares younger to older cohorts and counties with more vs. less-severe recession, Stuart finds that a 10 percent decrease in real income in the county of residence during childhood leads to a 9.8 percent decrease in the probability of graduating from college (and an 8.7 percent increase in the probability of living below the poverty line as adults).

With respect to schooling, however, the current COVID-19 crisis differs from previous macroeconomic predicaments. With the pandemic, schools closed to mitigate the spread of the virus. These closures have two important implications. First, students may become disengaged and even drop out altogether (Archambault et al., 2009). This is particularly problematic among secondary school students in the region, where the

[2] Recessions also reduce the opportunity cost of attending higher education (Cascio and Narayan, 2015; Charles, Hurst, and Notowidigdo, 2018). The potential positive effects, however, on the probability of attending a higher-education institution can be unequally distributed if low-income students are credit constrained, which seems to be the case in the region (Solis, 2017).

dropout rate is already high (Busso et al., 2017). Second, even for those students who stay in school, their learning losses will likely be substantial. Several studies compare the learning of students who were exposed to long school closures (triggered by teacher strikes) with that of similar students who were not so exposed. Long strikes adversely affect the students' grades in math, reading, and writing (Baker, 2013). The long-run impacts on students are significant, involving fewer years of schooling, later graduation, and a higher probability of being unemployed or not studying compared with peers who did not live through teacher strikes (Belot and Webbink, 2010). Additionally, the evidence suggests that students who underwent long strikes earn lower wages when they enter the labor market. Jaume and Willén (2019) find that people in Argentina who were exposed to an eighty-eight-day teacher strike during primary school had 3 percent lower annual labor market earnings, as well as a decline in hourly wages. In the absence of mitigation measures, school closures and online learning will exacerbate the negative distributional costs of the crisis because low-income students have fewer resources to study from home (see Chapter 7).

Beyond health and schooling, the shocks have detrimental effects on people who must change jobs or enter the labor market during recessions. Beaudry and DiNardo (1991) and Carneiro, Guimarães, and Portugal (2012) find that entry wages are negatively associated with the unemployment rate. Oreopoulos, von Wachter, and Heisz (2012) study the effects of graduating and entering the labor market during a recession. They find that recessions negatively affect the wages of new graduates, although with much heterogeneity. Some graduates suffer declines in earnings for up to 10 years; they begin working for lower-paying employers until they manage to find better firms. Others experience permanent effects.

The experience of previous crises and the peculiarities of the COVID-19 pandemic and its economic disruptions narrow the range of policy options for mitigating the scarring effect on the current cohort of children. First, in order to prevent increases in child mortality and negative effects on children's health outcomes, governments should reallocate resources towards health spending beyond those that are necessary to deal with the epidemic. Second, it is important to establish

mechanisms to prevent dropping out—for example, by keeping students engaged with schools—and to attract back to school those who have recently dropped out. Third, as discussed in Chapter 7, students in low-income households are likely to suffer disproportionate learning losses. Effective interventions are needed to reduce those learning gaps (e.g., Álvarez, Berlinski, and Busso, 2019).

3.3.

BETTER POLICIES FOR A STRONGER AND MORE INCLUSIVE RECOVERY

The COVID-19 pandemic has highlighted some of the structural deficiencies of Latin American labor markets. Because high rates of informality translate into extreme income insecurity, protecting informal workers during a recession is complicated. The need for an integrated social protection system calls for reforms based on two pillars.[3]

The first pillar of reforms will consist of measures to ease the discontinuity in nonlabor costs between formal and informal hires. This goal has long been on the region's policy agenda. Today it is essential. The duality of Latin American labor markets—marked by stark differences in nonwage costs for formal vs. informal workers—becomes a much greater barrier during recoveries. This will be acutely evident in the current crisis because of the uncertainty around the course of the pandemic. When uncertainty is high, dismissals become more likely. This makes recruitment of formal employees particularly costly, which in turn

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[3] For a broader discussion of policy recommendations for Latin America and the Caribbean during and after the COVID-19 crisis, see Izquierdo et al. (2020).

slows the recovery. New employment contracts with reduced payroll contributions and firing costs are needed to promote the recovery of formal employment.

The second pillar of reforms will need to address the weak safety nets of the region. Where unemployment insurance systems are in place, they need to be expanded and reinforced; where they are nonexistent, they need to be established. The informal workforce needs social insurance. The fragmentation of social assistance and insufficient social insurance leave many workers exposed to adverse health and labor market shocks, as evidenced by the need for ad hoc emergency measures during the COVID-19 crisis. Countries have experimented with different schemes to integrate and better articulate their social protection systems with varying degrees of success (Winkler, Ruppert Bulmer, and Mote, 2017). While the optimal system is probably not out there yet, this is no excuse for inaction. The need is too great to ignore.

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4.

REGIONAL DISPARITIES AND URBAN SEGREGATION

Juan Pablo Chauvin and Julián Messina[1]

All countries, developed or underdeveloped, have rich and poor regions. And both types of regions have cities and rural settlements that are themselves characterized by stark differences in income and access to services. Within cities one can observe substantial variations in income, wages, access, and quality of services across neighborhoods and households. This chapter provides a snapshot of the geography of inequality, highlighting subnational differences in Latin American countries.

The chapter first characterizes income and wage gaps across major regions of eleven Latin American countries. Average earnings in the country's richest region can be up to three times higher than in the poorest. A decomposition analysis shows, however, that regional disparities account for only 4 percent of the overall wage inequality in this group of countries, compared with almost 10 percent stemming from cross-country

disparities. Most of the wage inequality is explained by intraregional differences. The chapter then looks at spatial inequality at smaller geographic scales, focusing on the region's largest country. In Brazil, less than 1 percent of total wage inequality is explained by differences among large regions and states, and an additional 2 percent by differences across cities. By way of contrast, differences across neighborhoods account for 9 percent. To shed light on these results, the latter part of this chapter explores recent academic research on possible causes, consequences, and alternative policy responses to spatial inequality within cities.

4.1.

INCOME DIFFERENCES ACROSS REGIONS IN LATIN AMERICA

Economic inequality within countries (across regions, cities, and neighborhoods) is a component of overall inequality that has attracted the attention of both policy makers and academics in recent years. Spatial inequality is a concern not only because it contributes to aggregate inequality, but also because it can have negative effects on aggregate efficiency (Kanbur and Venables, 2005), and because it tends to align with political and ethnic tensions, exacerbating social conflict (Kanbur, Venables, and Wan, 2006; Lessmann, 2016; Austin, Glaeser, and Summers, 2018).

The role spatial differences play in current overall inequality varies across countries, and they may also have a major role in the evolution of inequality over time (Kanbur, Venables, and Wan, 2006). Mobility across generations is also shaped by geography. Researchers using confidential tax and social security data in the United States have found that there is substantive variation in intergenerational mobility across localities. The probability of a person born in the bottom quintile of the

national income distribution reaching the top quintile as an adult is just over 4 percent in some urban areas, and almost 13 percent in others. Among the most prominent characteristics of low-mobility areas is residential segregation by income (Chetty et al., 2014). Causal estimates show that each additional year of living in a higher-opportunity county leads to a 0.5 percent higher income in adulthood. These effects weaken in counties with more income inequality and worse schools, and the negative effects of high residential segregation are noticeably stronger for boys than for girls (Chetty and Hendren, 2018b).[2] Similar studies of the geographic dimension of intergenerational mobility in low- and middle-income countries are still scarce. The few that exist show, however, that, even though economic mobility appears to be improving with each new generation (Wong, 2019), stark differences across locations remain (Vélez-Grajales, Stabridis Arana, and Minor Campa, 2018; Asher, Novosad, and Rafkin, 2020).

Most countries in Latin America and the Caribbean feature extreme income disparities across regions. These cross-regional disparities are similar when measured at the household level (through household income per capita) or when using average wages (Figure 4.1). The interregional gaps are in general larger in richer countries (e.g., those in South America) than in poorer countries (e.g., those in Central America). For example, in Argentina, average wages in Tierra del Fuego are about three times higher than in Santiago del Estero. Meanwhile, interregional wage inequality in El Salvador is much lower. Wages in the capital city, San Salvador, are only 40 percent higher than in Ahuachapán, the region with the lowest average wages. Panama, the richest country in Central America, is the exception to the geographical pattern. While the average wage in Panama City is comparable to the one observed in Montevideo (Uruguay), average wages in the poor region of Kuna Yala are only slightly higher than in Chiapas, the poorest region in Mexico. Note that these differences may not directly translate into differences in purchasing power, because local prices may vary, as will be discussed below. Notwithstanding this caveat, cross-regional differences are substantial.

[2] Mogstad et al. (2020) have recently questioned the accuracy of this and related studies, arguing that the rankings of counties and neighborhoods according to economic opportunities are based on estimates subject to random fluctuations. Once the uncertainty derived from these random fluctuations is accounted for, the authors argue, it becomes difficult to precisely identify the places offering high and low levels of economic opportunity.

FIGURE 4.1 Subnational Disparities in Income and Wages in Latin America, circa 2018

Panel A. Household income per capita (constant US$ 2011 PPP)

FIGURE 4.1 Subnational Disparities in Income and Wages in Latin America, circa 2018 (*continued*)

Panel B. Average wages (constant US$ 2011 PPP)
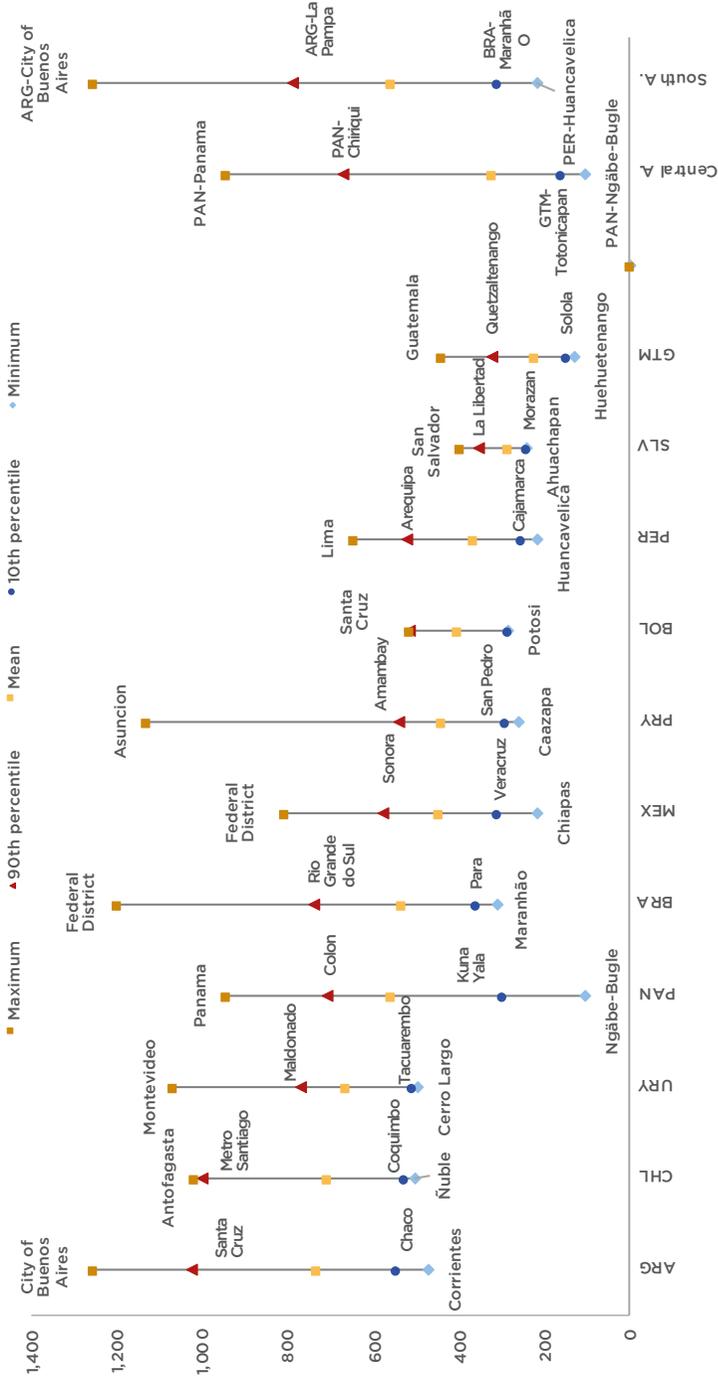
Large disparities in wages across regions of high- and upper-middle-income countries are a common outcome of the development process (Barrios and Strobl, 2009; Desmet and Henderson, 2015; Lessmann and Seidel, 2017). At the early stages of development, regions across the country tend to be similarly poor. But as the country's economy grows, some regions emerge as development poles, establishing stronger connections with international markets, becoming more productive, paying higher wages, and attracting a more educated population (Lessmann, 2014). Regional development differences—in particular between more and less urbanized areas—typically lead to internal migration (Moretti, 2011). This is important in Latin America, where the share of lifetime internal migrants in the population is around 50 percent higher than in other developing countries (Lucas, 2016). Migrants tend to experience sizable welfare improvements. In Colombia, for example, rural-urban migrants increased their average yearly consumption by 26 percent (Arteaga and Ibáñez, 2018). The inflow of migrants, in turn, lifts the demand for housing and other local goods, increasing costs of living and requiring firms to pay even higher wages to attract and retain workers (Glaeser and Gottlieb, 2009).

Because richer countries can provide more extensive public goods, they do not necessarily display greater interregional inequality in all domains. In fact, the opposite pattern may emerge from regional inequality in basic human needs. Figure 4.2 depicts one such indicator: access to a safe sewage system at home, either connected to the network or a home septic tank. High-income countries in the region have near-universal access to this basic service, and interregional disparities are low. By contrast, more than 50 percent of households in many regions of Bolivia, Peru, Guatemala, Panama, Paraguay, and El Salvador have no access to safe sewage. In regions that host the capital cities the access is nearly universal; Paraguay and El Salvador are exceptions.

FIGURE 4.2 Safe Sewage: Subnational Disparities in Access
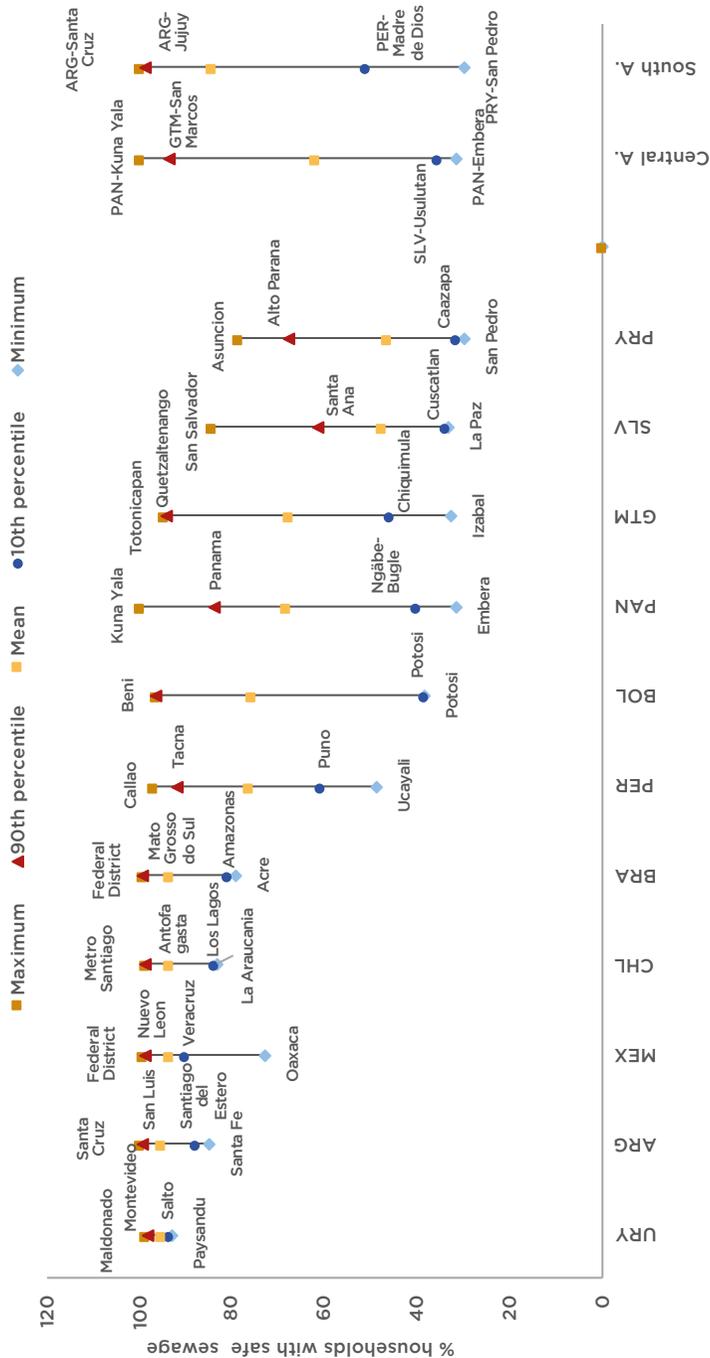
■ Maximum   ▲ 90th percentile   ■ Mean   ● 10th percentile   ◆ Minimum

% households with safe sewage

4.2.

THE IMPORTANCE OF SUBNATIONAL BORDERS FOR INEQUALITY

Notwithstanding substantive differences across regions, regional borders play a limited role in the overall differences in income per capita across households and differences in wages across workers. Within-region inequality dwarfs cross-regional averages in household income per capita and wages. This general result holds for very centralized countries and more decentralized state structures (e.g., federal countries). To reach this conclusion, this section pools information from household surveys for eleven countries in the region representing 75 percent of the Latin American population. It uses the Theil index—a popular measure of inequality that, in contrast with other inequality measures, can be decomposed additively into inequality across and within groups—to break down the overall level of inequality in this Pan-American region into differences across countries, differences across regions within countries, and differences across households within those regions. The analysis extends the work of Acemoglu and Dell (2010) to a larger number of countries and updates it to more recent years, obtaining similar conclusions.

Inequality in income per capita across households of eleven Latin American countries, as measured by the Gini coefficient, is 0.51. The corresponding Theil index is 0.53 for income per capita, and 0.46 for wages. This, however, hides substantial disparity in the levels of inequality among the members of this hypothetical conglomerate. Focusing on wages to illustrate this heterogeneity, the country with the highest measure of wage inequality is Panama, with a Theil index of 0.62. Argentina, the least unequal country in terms of wages, has a Theil index of 0.24. Descending to the subnational level yields a similar picture. Take Peru, for example: the Theil index at the country level in 2018 is 0.50,

while the most unequal region (Loreto) has a Theil index of 0.75, and Ica, the least unequal region, has a level of wage inequality of 0.22.

About 8 percent of the inequality in household income per capita in Latin America and the Caribbean is explained by differences in average income across countries (Figure 4.3). The cross-country component in differences across wages is somewhat larger, at 10 percent. The effect of national boundaries on inequality across Latin American and Caribbean countries is far less than that seen in larger and more heterogeneous groups of countries. Lakner and Milanovic (2016) estimate that between 73 and 77 percent of the global household income inequality across 120 countries in 2008 was due to cross-country differences in average income. Despite substantial differences across countries, the region is relatively homogeneous when compared on a global scale. Moreover, the level of income across its countries is converging faster than in the rest of the world, and, on average, income levels across regions within countries are also converging, if at a slower pace (Chauvin and Messina, 2020).

FIGURE 4.3 Decomposition of the Theil Index of Wage and Household Income per Capita in Latin America, across Countries and Regions, circa 2018
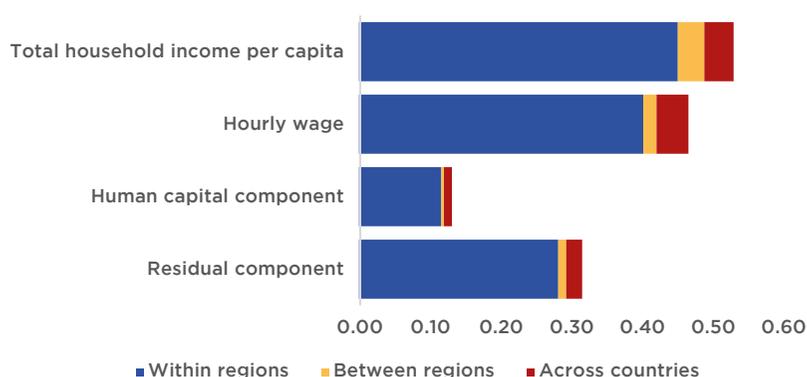
Source: Authors' calculations using the "Harmonized Household Surveys from Latin America and the Caribbean" database. All data comes from 2018 household surveys except for Brazil (2016), Chile (2017), Guatemala (2014), and Paraguay (2017).

Note: Countries included have surveys that are representative at the subnational level: Argentina, Bolivia, Brazil, Chile, Guatemala, Mexico, Panama, Peru, Paraguay, El Salvador, and Uruguay. Hourly wage sample includes employees or self-employed aged 16-65 working less than 80 hours a week and with an hourly wage greater than zero. Real hourly wages and income per capita are in 2011 prices using US$ PPP 2011 exchange rates. Estimates are population weighted. See footnote 3 in the text for details of the decomposition of hourly wages into a human capital component and a residual.

Cross-regional income disparities play a similar role to cross-country differences in the generation of inequality across households. Regions explain about 7 percent of the inequality across households that remains after purging income differences from their countries of residence, and about 4 percent of the differences in wages. Thus, although country and regional borders play a nonnegligible role as determinants of household income and wage inequality, the heterogeneity within regions is the dominant factor behind Latin American inequality.

Differences in wages across countries and regions may be related to differences in education, a key determinant of productivity (Acemoglu and Dell, 2010; Gennaioli et al., 2012). And levels of education vary greatly across Latin American countries. About 23 percent of the working-age population (16–65) in Argentina holds a university degree, compared with 4 percent in Honduras and 6 percent in El Salvador. Years of schooling across states and provinces show much less variation. In Santiago del Estero, the region of Argentina with the lowest average wages, the share of university-educated workers is close to the national average, at 22.6 percent.

Differences in education and experience explain about a quarter of the wage inequality observed across indices for Latin American workers. The Theil index in Latin America, predicted by differences in education and experience levels (and their corresponding labor market returns), is 0.11, compared with an overall wage inequality of 0.46.[3] Although inequalities in education and experience are large, the implication is that most intraregional wage inequality is not explained by measured human capital. The residual wage inequality (that is, inequality not accounted for by education and experience) may be driven by many factors, including unobserved skills, frictions in local labor markets at levels more disaggregated than the region, and measurement error.

[3] The decomposition proceeds as follows. First, the logarithm of hourly wage is regressed against the interaction of education categories and a quartic in potential experience. The education categories are as follows: zero to four years of schooling; four to eight years; some secondary school (eight to eleven years); secondary school graduate (twelve years); and tertiary education (more than twelve years). The human capital component in Figure 4.3 uses the projection of the estimated coefficients to construct a measure of predicted (log) hourly wages, which is then used to construct the Theil index of predicted labor income and decompose it into between country, between region, and within region components. The residual component treats in an analogous way the residuals of the regression.

Digging deeper into the geography of inequality requires more granular data to analyze the role of cities and neighborhoods in the generation of inequality. Brazil, the largest country in Latin America, provides an excellent context for this exercise. Figure 4.4 replicates the decomposition from Figure 4.3 using Brazilian census data. In order to allow for comparisons between nominal and real wage measures, it uses monthly, instead of hourly, wages.[4]

Brazil had, in 2010, one of the largest overall levels of inequality in monthly wages in Latin America, at 0.4 as captured by the Theil index. Consistent with the analysis above, less than 1 percent of this is explained by differences across Brazil's five macroregions, or by differences across its twenty-seven federative units (twenty-six states and the Federal District of Brasilia).

FIGURE 4.4 Geographic Decomposition of Monthly Wage Inequality in Brazil, 2010
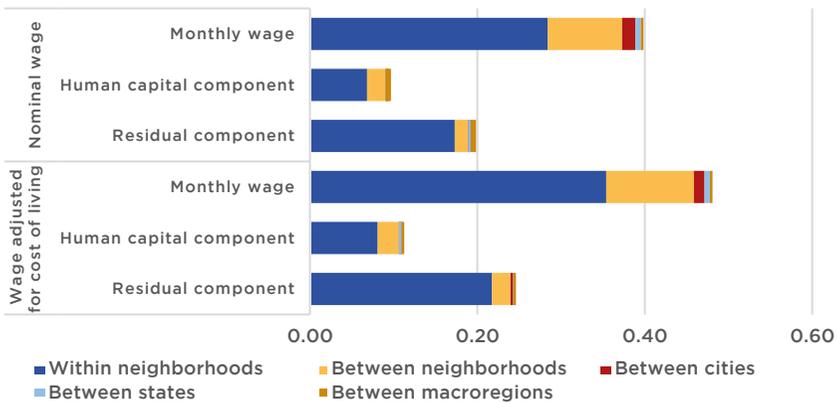
Source: Authors' calculations using microdata from the population census in Brazil.

Note: Labor income is defined as the monthly wage in the main occupation. To adjust monthly wages for the local cost of living and obtain a measure of the real wage, the logarithm of the average housing rent in the city, multiplied by 0.3 (the typical share of housing rents in the total income of renters), is subtracted from the logarithm of the individual monthly wage. In both the nominal and the rent-adjusted wage measures the top bar reports the labor income inequality of individuals between 16 and 65 years of age. The next two bars report the human capital and residual labor income inequality after accounting for years of schooling and potential experience, respectively. The decomposition follows the same procedure as in Figure 4.3.

[4] The measure of real wages employed in this section (described in the note below Figure 4.4) relies on housing rents data, which is measured monthly. In contrast with measures based on wages per hour worked, monthly-wage inequality reflects both differences in wages per unit of work, and differences in the number of hours worked. Performing the same decomposition using hourly wages yields very similar results, but the overall inequality is larger than inequality in monthly wage (Theil index of 0.56 vs. 0.4), suggesting that low-wage workers partly compensate for their disadvantage by working more hours.

Spatial inequality within states is noticeably more pronounced. Differences across cities account for around 2 percent of the overall inequality, and differences across neighborhoods for 9 percent.[5] In other words, differences across urban neighborhoods in Brazil are more important than differences across countries in Latin America and the Caribbean, in terms of their contribution to overall inequality.

As before, the decomposition differentiates between labor income components that can be explained by observable differences in human capital (such as educational attainment and experience), and residual components. The total inequality of human-capital-related earnings in Brazil is only a quarter of the overall income inequality. The residual component, which reflects aspects of wage inequality that remain poorly understood, is quantitatively far more important. In this dimension, however, geography appears to play a relatively smaller role, with almost 90 percent of total inequality attributable to inequality within city neighborhoods.

Cities that are larger and pay higher wages also tend to be more expensive. What are the implications of these differences in local costs of living for overall inequality and its geographic dimension? To answer these questions, the bottom panel of Figure 4.4. shows the same decomposition with a measure of individual real wages, obtained by adjusting the nominal wage by local costs of living, as captured by the city's average housing rent estimated in the Brazilian 2010 census.

Because a large fraction of the Latin American poor live in expensive cities, incorporating local costs of living in the analysis yields a picture of higher inequality and more pronounced economic segregation within urban areas. Inequality increases considerably relative to the nominal

[5] This analysis uses census tracts to define neighborhoods for large urban areas. This definition is relatively coarse. The 2010 census divided Brazil into 10,160 census tracts, with an average population of 18,700. Most small cities had only one census tract and do not contribute to the "between census tracts" component of the decomposition. In contrast, larger cities (those encompassing two or more municipalities in a commuting zone) had, on average, 130 census tracts. At the top of the distribution, the commuting zone of São Paulo had 631 census tracts, each with an average population of just over 31,000.

wage once differences in housing rents are considered, reaching a Theil index of 0.48. This reflects the fact that the low-income population's housing costs represent a larger share of their income. The geographic levels at which inequality is concentrated also change. The relative contributions of macro regions, states, and cities shrink further, implying that wage advantages are counterweighted by rent disadvantages across locations (Chauvin et al., 2017). Meanwhile, the relative contribution of the "between neighborhoods" component increases to 11 percent, reflecting within-city segregation of low-wage individuals for whom rents represent a relatively heavier burden.

4.3.

LESSONS FROM RECENT RESEARCH ON SPATIAL INEQUALITY WITHIN CITIES

Low-income families in urban Latin America tend to live at the city periphery, distant from areas with high job concentrations.[6] Recent research on Brazilian cities, for instance, shows that average household income declines with distance from the city center, in sharp contrast with the United States, where high-income families disproportionately locate in the suburbs (Brueckner, Mation, and Nadalin, 2019). These location patterns can be both a consequence and a cause of labor income inequality. On the one hand, workers value shorter commutes, leading to higher demand, and therefore higher prices, for housing located near

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[6] There are various notable exceptions to this pattern. The region has some well-known informal neighborhoods—such as Villa 31 in Buenos Aires, and favela Rocinha in Rio de Janeiro—which are centrally located. A promising area of future research is to investigate to what extent greater accessibility to formal jobs translates into better labor market outcomes for residents of these settlements relative to residents of more remote informal neighborhoods.

job centers (Duranton and Puga, 2015). Cash-constrained households are thus priced out of the most desirable locations (Atuesta et al., 2018). On the other hand, living farther away from jobs implies additional costs for job seekers and workers, curtailing economic opportunities for residents of poorly connected neighborhoods.

The idea that physical distance from jobs adversely affects labor market outcomes is often referred to as the "spatial mismatch" theory, originally advanced in the 1960s as a possible explanation for the lagging economic outcomes of African American workers in U.S. cities (Kain, 1968). The theory has since then been applied to other social groups. Recent evidence from Latin America and the United States is consistent with this premise. Libertun de Duren (2018b) finds that public housing residents in cities in Brazil, Colombia, and Mexico report spending twice as much money and three times more time commuting than those living in central locations. Marinescu and Rathelot (2018) document that workers are less likely to apply for jobs that are more than ten miles away from their postal code. Andersson et al. (2018) use matched employer-employee data to show that, following mass-layoff events, workers with better job accessibility had shorter spans of joblessness. Phillips (2020) uses fictitious resumés to show that low-wage employers discriminate against workers with home addresses far from the job location.[7]

In Latin America, the evidence suggests that distance to job centers plays a role in sustaining the region's high levels of labor informality. In the context of Mexico City, Suárez, Murata, and Delgado Campos (2016) show that low-income populations living in the outer urban rings are less likely to commute to the central business district—where formal jobs are disproportionately concentrated—and more likely to be employed in informal jobs. Atuesta et al. (2018) note that workers living in neighborhoods with high informality rates appear less willing to pay for road access to formal employment subcenters. The connection between segregation and informality in the Brazilian context is further explored in Box 4.1. Box 4.2 shows that segregation can also speed the spread of infectious diseases such as COVID-19.

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[7] An ongoing IDB study (Zanoni, Acevedo, and Hernández, 2020) explores labor market discrimination faced by residents of Buenos Aires's villas (informal urban settlements).

BOX 4.1 Segregation and Informality in Cities

The decomposition in Figure 4.4 shows that differences across neighborhoods account for an important fraction of overall wage inequality. Barufi and Haddad (2017), in turn, highlight the connection between urban wage inequality and segregation, documenting a strong positive correlation between wages and physical proximity to jobs. But they find no correlation between accessibility and unemployment. This points to labor informality as a key income-generating solution for spatially secluded households in Brazil, in line with what the literature reviewed in this chapter has found in other Latin American countries.

Figure B4.1.1 illustrates the connection between segregation and informality using data from the 2010 census. For each percentile in the distribution of hourly labor income, it shows the average daily commuting time reported by workers employed in formal and informal jobs, respectively. The contrast is striking. While lower-wage formal workers tend to commute more than higher-wage workers, among informal workers the relationship goes in the other direction and is much more pronounced. The figure also shows the informality rate by wage-income percentile, making it clear that among low-income workers, those in the informal sector with smaller commutes are the majority.

Because in most Brazilian cities formal jobs are disproportionally concentrated in central places and poor informal settlements on the outskirts of cities (Brueckner, Mation, and Nadalin, 2019), this figure reflects the fact that many low-income individuals end up taking low-paying informal jobs, which are typically more dispersed across the city and therefore more accessible. Smaller commutes at higher income levels, in turn, likely reflect the fact that wage-rich workers can afford housing at locations with better access to formal jobs.

FIGURE B4.1.1 Commuting Time and Informality by Labor-Income Level in Brazil, 2010
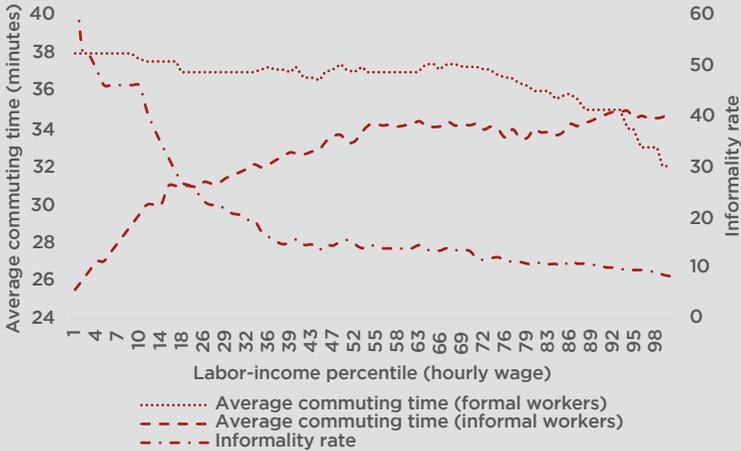
Source: Authors' calculations using microdata from the population census in Brazil.

Note: The graph depicts the average commute time of workers employed in the formal and informal sectors, along with the informality rates of each hourly wage percentile at the city level. The sample is composed of employed working-age individuals in 2010. Average commute time is estimated based on midpoints of the time intervals available in the census. Informal workers are defined as those without a signed working card, excluding the self-employed.

Residential segregation by income within cities has a gender dimension as well, with detrimental effects disproportionately affecting women. Relative to men, women are more likely to participate in the labor force (and obtain higher earnings) when they have shorter commutes. Black, Kolesnikova, and Taylor (2014) show that, across U.S. cities, the labor force participation of married women declines when commute times increase. These patterns are likely related to women's unequal share of household responsibilities. Gimenez-Nadal and Molina (2016), using survey data from the Netherlands, show that added childcare responsibilities affect the commuting behavior of women, but not of men.

In addition to the effect of urban segregation on current inequality, recent research has shown that it can also play a major role in future inequality. Some of the most compelling evidence on the effect of neighborhood characteristics on economic and social mobility has come from experiments performed in the context of social housing programs in the United States.

The best known is "Moving to Opportunities" (MTO), a large-scale program covering five cities in the mid-1990s. MTO gave housing vouchers to randomly selected families so they could move from housing projects to higher-income neighborhoods. Early studies of MTO found few effects on short-run economic outcomes, though sizable positive effects on mental and physical health and subjective well-being (Katz, Kling, and Liebman, 2001; Kling, Liebman, and Katz, 2007; Ludwig et al., 2013).

More recent studies, however, have found strong long-term positive effects on university enrollment, earnings, and single-parenthood rates among individuals who were children when they changed neighborhoods. These benefits depend, however, on when individuals were exposed to the neighborhoods with more opportunities: children who moved at younger ages experience stronger effects (Chetty, Hendren, and Katz, 2016; Chetty and Hendren, 2018a). Similar positive effects have been found among young adults displaced from poor to more prosperous neighborhoods as children following public housing demolitions in Chicago (Chyn, 2018), and among winners of public housing lotteries in the Netherlands who moved from low- and middle-income neighborhoods to high-income neighborhoods (Van Dijk, 2019). Studies on intergenerational mobility among those who are raised in impoverished or informal settlements in Latin America are still scarce. More research could help us understand whether these areas act as opportunity ladders or as poverty traps for the descendants of the original settlers.

BOX 4.2 Informal Settlements, Commuting, and the Impact of COVID-19

Brazil was the first country in Latin America to report a confirmed case of COVID-19 in February of 2020. At the time of writing, the country had become the epicenter of the pandemic in the region, ranking second in the world in the number of confirmed cases—close to 900,000 cases—and more than 45,000 deaths (Roser et al., 2020). These figures came from all over the national territory, with more than 3,740 cities reporting at least one case, and 520

cities reporting a hundred cases or more. Furthermore, there was widespread consensus that the reports severely underrepresented the true number of people infected with COVID-19, with some estimates indicating that the real values were around seven times higher (Ribeiro and Bernardes, 2020); their trend suggested that the situation was only going to get worse over subsequent weeks.

Notwithstanding the still-uncertain quality of data on COVID-19 deaths and cases (Avery et al., 2020), early evidence suggests that spatial disparities within cities played a role in the rapid expansion of the virus in Brazil. To show this, Figure B4.2.1. presents the results of a set of linear regressions exploring the connection of local inequality, segregation, and lengthy displacement with the impact of COVID-19.

Figure B4.2.1 City Characteristics and the Impact of the COVID-19 Pandemic in Brazil
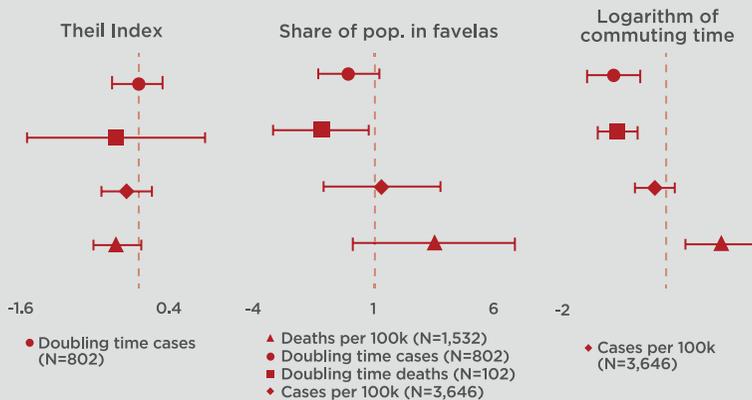
Source: Authors' calculations using city-level variables constructed from various sources.

Note: Dots represent coefficients of separate city-level, population-weighted regressions, each corresponding to a COVID-19 outcome as a dependent variable, one key explanatory variable of interest (noted in the subgraphs' titles), and controls. The number of observations available for each outcome is noted in the legend in parentheses. Lines represent 95 percent confidence intervals using robust standard errors clustered at the state level. The Theil index of hourly wage is the same used in the main text of the analysis, and along with the other two regressors of interest—the share of the population living in favelas (*aglomerados subnormais*) and the average daily commuting time in minutes—is calculated from the microdata of the 2010 population census. The data on confirmed cases and deaths from COVID-19 comes from the states' health secretaries and was compiled by the open data platform Brasil.io. The doubling time of cases is the number of days between reporting the 25th case and the 50th case, while the doubling time of deaths is calculated between the 10th and the 20th deaths, due to data availability. All regressions include the same set of city-level controls constructed from census microdata and include the projected population in 2019, projected population density in the same year, average household income, and distance to Brasília (all in logs), along with an intermediation index that measures the share of all the national land and water intercity links that pass through the city (IBGE, 2016b), the share of secondary school graduates in the adult population, the shares of ten distinct age groups in the estimated total population, and fixed-effects for the country's five macroregions.

Overall, city wage inequality, as measured by the Theil index, does not appear to have, per se, a statistically significant connection with the local impact of the pandemic, after netting out other differences across cities like local population and density, income per capita, education levels, remoteness, and connectivity to other cities. This contrasts with measures related to spatial disparities. The disease appears to have spread faster, taking less time to double the number of detected infections and deaths, in cities that are more segregated, as measured by the share of the population living in favelas, and in cities where people had on average longer commutes. Residential segregation and lengthy displacement within the city are also connected with the cumulative local impact of COVID-19. The total number of deaths attributed to the disease (normalized by the size of the local population) increases with these variables.

These results resonate with the concerns of various analysts who think socioeconomic disparities in Latin American cities may have made the poor more vulnerable to the pandemic. The low-income households are crowded into informal settlements, which may have facilitated the spread of infections (Burki, 2020). Moreover, disadvantaged locations also have high levels of informality and dependency on day-to-day income, limiting the ability of individual workers to abide by social distancing guidelines, as the mobility evidence from cell-phone data has clearly shown (Bustelo et al., 2020). At the same time, the fact that the poor in Brazil and other countries in the region tend to live far from job centers (see Box 4.1) exposed them to riskier interactions on their way to work—including crowded public transportation—in the early days of the outbreak.

As the pandemic drives increasing levels of inequality (Bottan, Hoffmann, and Vera-Cossío, 2020), low-opportunity cities and neighborhoods will have even less to offer their residents. The research discussed in this chapter suggests that this may in turn curtail the socioeconomic mobility of generations to come, unless carefully targeted, evidence-based policies are put in place to counteract the unforgiving repercussions of spatial inequality.

The fact that many people choose not to move out of low-opportunity areas is puzzling. International labor mobility is constrained by migration policy, but people are not legally constrained from moving across and within cities. Furthermore, even though high-opportunity areas are on average more expensive, cities do have neighborhoods that both are affordable for poor families and offer favorable conditions for socioeconomic mobility (Chetty and Hendren, 2018b). One possibility is that families opt for staying in their current areas of residence because they provide proximity to family or social connections. The importance of the village and family/friend connections as insurance in cases of income and health shocks in developing countries has been widely studied (Townsend, 1994; Fafchamps and Lund, 2003; De Weerdt and Dercon, 2006). In a region with poorly developed safety nets, these social connections may be crucial. Evidence emerging from the COVID-19 pandemic suggests this kind of support is important in the region (Bottan, Hoffmann, and Vera-Cossío, 2020).

Alternatively, it may be that families who would prefer to live in higher-opportunity neighborhoods face information, financial, or other constraints that prevent them from moving there. A recent experimental study in the United States provides the strongest evidence that constraints to mobility are important (Bergman et al., 2019). From a pool of families that applied to a housing voucher program in Seattle, some were randomly assigned to a treatment group that received (in addition to the monthly rental assistance for all program participants) assistance with the rental process in high-opportunity neighborhoods. This assistance increased the share of families choosing high-opportunity neighborhoods from 15 percent in the control group to 53 percent in the treatment group. One year later, families that had moved to better areas were more likely to renew their lease and expressed higher satisfaction with their new neighborhoods.

4.4.

URBAN SPATIAL INEQUALITY AND PUBLIC POLICY

Policy makers in developing countries have long been concerned with the unequal distribution of living standards within their cities, especially with respect to housing deficits[8] and access to economic opportunities. As a response, they have deployed a number of policies, including affordable housing, land subsidies, residential land development, subsidizing or incentivizing credit, promoting property rights to informal housing dwellers, improving neighborhood infrastructure, assisting with individual property improvements, and providing mobility and accessibility infrastructure (Bouillon, 2012).

Most of these interventions are "place-based" policies, in that they target geographic areas (regions, cities, or neighborhoods) rather than groups of people. Economists have traditionally been skeptical about this approach, concerned that artificial incentives for workers and firms to relocate may reduce aggregate productivity even as they generate local gains (Glaeser and Gottlieb, 2008). Another concern is that, as these policies create local opportunities, they might also attract workers from other nearby locales, driving up housing prices, slowing wage growth, and generating benefits for landlords and migrants but not for local residents (Kline and Moretti, 2014a).

A more favorable, if still cautious, view of place-based policies has recently taken hold. Rigorous studies of interventions in the United States—such as the Empowerment Zones Program (Busso, Gregory, and Kline, 2013) and the Tennessee Valley Authority (Kline and Moretti,

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[8] Housing deficits encompass both low-income households living in informal housing and those living in formal but precarious housing, either overcrowded or lacking access to basic services such as water and electricity.

2014b)—show that targeting economically depressed areas can be effective while having negligible negative side effects. Furthermore, new evidence suggests that spatially targeted interventions, even if they do not lead to increases in the local wage, can reduce local joblessness, which is linked to political division and social unrest (Austin, Glaeser, and Summers, 2018).

Many government policies to combat within-city spatial disparities have proved effective at improving living conditions in the beneficiary population, at least in the short run. One example is land titling. Around the world, including in most countries in Latin America (Fernandes, 2011), governments have put in place programs geared at providing property rights to informal housing dwellers, with the idea that they could improve access to credit and private investment (De Soto, 1990), and free up resources otherwise devoted to informally enforcing de facto property rights (Field, 2007). Such programs have been linked to higher investment in properties and more years of schooling for children in Argentina (Galiani and Schargrodsky, 2010) and to increases in adult labor supply in Peru (Field, 2007).

Slum-upgrading programs have also produced short-run improvements across a range of health outcomes and self-reported measures of well-being (Galiani et al., 2017). But they have also led to unintended consequences over the long run. Harari and Wong (2019) find that Indonesia's 1980s Kampung Improvement Program (KIP), which produced positive effects over the short and medium terms, had worsened economic conditions in beneficiary neighborhoods by 2015 relative to areas that did not benefit from the program. Slum improvements incentivized residents who would otherwise have left the neighborhood to stay. In the long run, this led to lower land values, fewer tall buildings, more crowding, and higher rates of informality. In Latin America, Libertun de Duren and Osorio Rivas (2020) find similar results for Favela-Bairro, a large program that improved infrastructure in a number of favelas in Brazil. Although the living standards of residents improved in the short run, ten years later the improvements had either faded or evaporated altogether, falling victim to inadequate infrastructure maintenance or vandalism related to nearby drug cartel activity.

Improving living conditions for the population and their access to economic opportunity are two related but distinct policy goals. Progress on one does not necessarily bring progress on the other. Social housing projects, for instance, help to alleviate the housing deficit for low-income households (Rojas and Medellin, 2011). But most housing is built on the urban periphery because, to be economically feasible, housing projects depend on the availability of large quantities of cheap land (Libertun de Duren, 2018a). Locating these projects farther away from job centers can impair the labor market outcomes of the people living in these complexes, as recent evidence from housing programs in a number of countries suggests (Barnhardt, Field, and Pande, 2017; Picarelli, 2019).[9] In Latin America, Da Mata and Mation (2019) studied the housing lotteries of the program Minha Casa Minha Vida in Brazil; they found adverse causal effects on formal employment among lottery winners. Alternative policy interventions to promote relocation to centrally located housing, such as support for renting or leasing, can circumvent this issue (IDB, 2016). But the demand for affordable housing with good access to formal jobs continues to outweigh the supply.

Urban transportation projects, in contrast, tend to be consistently associated with improvements in access to formal jobs and labor market outcomes among low-income urban dwellers. For example, Boisjoly, Moreno-Monroy, and El-Geneidy (2017) show that having better access to jobs through public transport is correlated with a lower likelihood of informal employment in São Paulo. Zárate (2019) finds consistent results in Mexico City, where the construction of new subway lines lowered informality rates in the areas surrounding new stations. Martinez et al. (2019) find, in the context of the Lima metropolitan area, that investments in bus rapid transit and elevated light rail led to large positive effects on employment and earnings among women, albeit not among men.

Recent research shows, however, that despite their value for beneficiaries, urban transportation projects do not necessarily reduce

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[9] An exception is the work of Franklin (2019), who studies a large-scale program in Ethiopia, in which housing lottery winners were sold subsidized apartments on the outskirts of the city and given the opportunity to move in or rent them. Nearly half of the winners chose to leave centrally located slum housing, moved to the better-quality but less accessible units, and did not experience negative effects on their labor supply and earnings.

income inequality among city dwellers. In a comprehensive study of the effects of TransMilenio, Bogotá's bus rapid transit system, Tsivanidis (2019) finds that the system produced slightly greater benefits for individuals with secondary-school or higher education relative to those with less schooling and lower incomes. While low-income riders used the system more intensively, the positive effects of their improved access to work were dampened because larger labor supply slowed their wage growth. In addition, housing demand and prices increased at locations with improved accessibility, pushing cash-constrained households towards more affordable but poorly connected neighborhoods. Tsivanidis estimates that the benefits to low-income families would have been significantly larger if zoning in locations that benefited from TransMilenio allowed for more housing development. This suggests that effective responses to spatial economic inequalities in cities require the joint design of transit and land use policies.

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5.

MORE THAN MONEY: Gaps in Gender, Race, and Ethnicity

by Verónica Frisancho and Diego Vera-Cossío

Inequality is commonly understood in terms of the economic living conditions of individuals or households. In fact, vertical inequality, which refers to inequality among individuals or households, has been at the center of policy reform in the region, attracting major investments in poverty-alleviation strategies. Horizontal inequalities are defined as those present across groups with a common, defined (or constructed) identity. Horizontal inequality is based not on inherent individual traits, effort, or skills, yet it unjustly determines access to economic resources and opportunities.

Horizontal inequalities—stemming from cultural origin, gender, ethnicity, or religion—are hard to overcome. Deeply rooted in history and social norms, they are intertwined with, and often reinforced by, income inequality. Poverty-reduction policies that target vertical inequalities can reduce horizontal inequalities. But by themselves they are unable to close existing gaps based on group identity. Beyond pay gaps and occupational segregation, women struggle with their life-

work balance, while gender-biased social norms limit their agency and even expose them to harassment and violence.[1] Ethnic minority groups face discrimination that limits not only their access to jobs but also to education, health, housing, and political representation. At a time of pandemic and upheaval in the region, when citizens demand more than action on grave income disparities, it is urgent to analyze both the consequences and causes of horizontal inequalities, evaluate current policy efforts against them, and propose alternative and complementary lines of action.

5.1.

GENDER DISPARITIES

Over the past century, women in Latin America and the Caribbean have achieved remarkable progress in terms of their economic, social, and political participation. In the mid-twentieth century, women in the region were just starting to exercise their right to vote, while only one in five took part in labor market activities. By 2014, the region had four women presidents—in Costa Rica, Argentina, Brazil, and Chile—and labor force participation rates of around 65 percent (Marchionni et al., 2019).

Despite the progress achieved, the region is still far from reaching gender parity and equality of opportunities. Women in the region struggle with explicit and implicit barriers that permeate their private and public spheres of action, limiting the achievement of their full potential. Out of thirty-five countries in the region, only Barbados and Trinidad and Tobago currently have democratically elected women as their heads of state, which reflects women's limited participation in politics and public office. On average, female leaders in the region hold only a third of the seats in parliament and under a quarter of the ministerial

[1] We define *agency* as the capacity of individuals to act independently and to make their own free choices.

cabinet positions. The situation is worse at the local level, where the introduction of gender quotas has been less common: only 15.5 percent of the elected mayors in the region are women (ECLAC, 2019). Equal representation is not only a democratic governance issue, but it can also foster policymaking that may further advance the gender parity agenda. The evidence shows that local leaders who are women privilege public spending that better reflects women's preferences (Chattopadhyay and Duflo, 2004), leading to better health and educational outcomes (Clots-Figueras, 2012; Bhalotra and Clots-Figueras, 2014) and lower corruption levels (Brollo and Troiano, 2016).

Women still lag behind men in terms of their economic activity, as the latter record labor force participation rates close to 80 percent. The labor force participation rates for women are heterogeneous across the region, ranging from 50 percent in Guatemala to 80 percent in Peru and Uruguay (Marchionni et al., 2019). Women tend to be relatively underrepresented in higher paying and more prestigious occupations: they hold only a third of top-paying jobs in business, law, health, computer science, government, and science in the region. Women are also underrepresented in top positions at publicly listed companies in the region. An average of 8.5 percent of board members are women. Among company executives, only 9.2 percent are women, while only 4.2 percent of company CEOs across the region are women (Flabbi, Piras, and Abrahams, 2017).[2] Gender pay gaps in the region have narrowed but are still present, with women earning 87 cents for every $1 earned by men (Bando, 2019). Evidence from eighteen countries in the region suggests that, even though the gap has contracted over time, the unexplained component (i.e., not attributable to observable characteristics) still fluctuates between 20 percent and 30 percent of female wages, with larger unexplained gaps at the bottom of the earnings distribution (Hoyos and Ñopo, 2010).

[2] A recent study relies on a comprehensive sample of listed firms in twenty countries over the period 2001–10 and shows that underrepresentation of women on boards is even more worrisome in firms in STEM sectors (Adams and Kirchmaier, 2016).
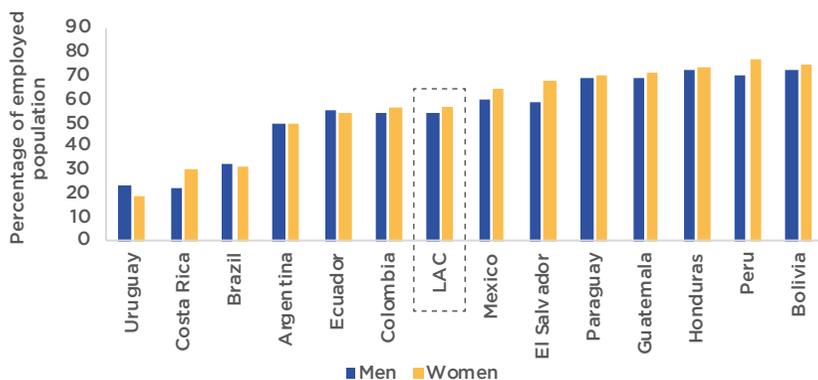
Source: Authors' calculations based on data processed using the "The Labor Markets and Social Security Information System" (SIMS-IDB, last accessed June 2020).

Note: Percentage of informal workers compared with the employed population in urban areas for 2018. Informality is measured as workers who do not contribute to social security.

In search of labor flexibility in response to constraints they face in reentering the labor market after spells of inactivity, women in the region gravitate relatively more than men towards self-employment and other informal jobs. This is particularly evident in countries with larger informal sectors such as Mexico, El Salvador, Peru, and Bolivia, but it also holds in countries with low levels of informality such as Costa Rica (see Figure 5.1). Informality is associated with low earnings and job insecurity and makes workers more vulnerable to economic fluctuations. The lack of benefits and pensions under informal employment further increases vulnerability. Moreover, women-led businesses tend to have higher failure rates and lower profits. A 2010 regional study (Ellis et al., 2011) found that in Peru, Ecuador, and El Salvador, women entrepreneurs are more likely to see their businesses fail when compared to those owned by men. Female-led businesses also employ fewer workers than male-led ones and seem to be less profitable and less productive. Recent evidence documents that gender differences in the returns to capital partly reflect women's constrained choices in this sector. Female microentrepreneurs face pressure from their partners and other family members who either try to seize their capital (Jakiela and Ozier, 2016) or divert it to other businesses within the household, which are owned by men (Bernhardt et al., 2019).

Across the region, women are usually viewed as better suited than men to meeting family needs and are thus expected to forgo earnings and professional development to care for others. Maternity, childcare, and caring for older relatives are common reasons for women to exit the labor market or temporarily interrupt their participation. Indeed, Figure 5.2 shows that women dedicate three times the number of hours per week to unpaid work activities than men, and this pattern is homogenous across countries in the region. Considering both paid jobs and household chores, women in the region end up working almost 18 more hours per week than men (Bando, Berlinski, and Martinez Carrasco, 2019). And this may only be a lower bound: survey data on perceptions of the division of labor at home show that men overestimate their contribution to household chores and childcare relative to women's reports of their partner's contribution (Pew Research Center, 2015). This unequal distribution of unpaid work paired with the relatively more precarious conditions of female jobs has probably worsened during the stay-at-home orders that almost all countries in the region implemented during the COVID-19 pandemic (see Box 5.1).

FIGURE 5.2 Average Number of Hours per Week Spent on Paid Jobs and Unpaid Domestic Care, by Gender
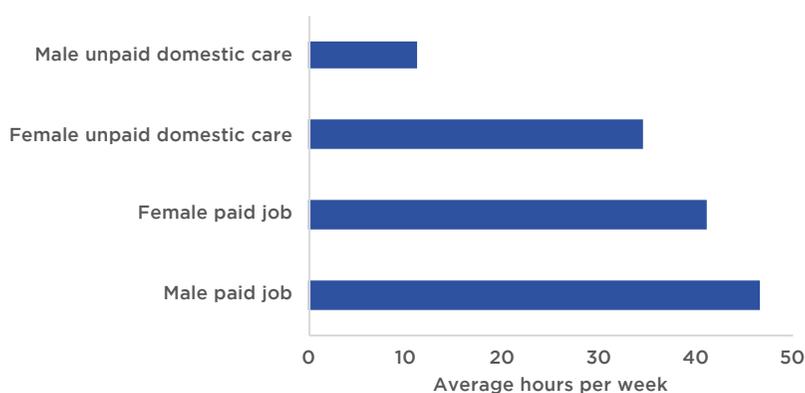
Source: Bando, Berlinski, and Martinez Carrasco (2019).

Note: Unweighted regional average of the number of hours in a week spent on paid job and unpaid domestic care by gender.

Gendered stereotypes may also perpetuate gaps in aspirations, biasing early investments in skills. According to the 2018 PISA results, by age fifteen, gendered differences in mathematics and science performance are modest (Schleicher, 2019).[3] Yet as women progress into tertiary education, they tend to avoid traditionally male-dominated fields like science, technology, engineering, and math (STEM). Figure 5.3 shows that even though women account for 60 percent of the tertiary-level graduates in the region, they represent only a third of the graduates in STEM majors. Although the percentage of women graduating from tertiary schooling is similar across countries, the share of women who graduate from STEM programs varies. Worldwide data from UNESCO, and comparisons across income groups, suggests that the gender gap in STEM increases with national income, especially for degrees in engineering, manufacturing and construction, and in information and communication technologies. Why this is so is an important research question that remains to be explored within the region.

Early biases in career choices reinforce the inequalities observed in the labor market, as STEM occupations tend to have the highest wages and the greatest concentration of men (Bustelo, Suaya, and Viollaz, 2019). In fact, the ongoing and fast technological change characterized by a steadily growing demand for STEM graduates may exacerbate these gender differentials in occupations and wages. Interestingly, the region fares much like OECD countries in this respect (see highlighted sets of bars in Figure 5.3), suggesting that even more advanced and modern economies that have actively fostered gender equality in STEM fields still struggle to nudge women into choosing more competitive but lucrative majors.[4]

[3] Evidence from Ecuador suggests that gender performance gaps in math appear as early as kindergarten but that these disappear when focusing on children of university-educated mothers (Carneiro, Cruz-Aguayo, and Schady, 2017).

[4] Richer economies have implemented inclusive educational programs such as the United Kingdom's Athena project, Advance in the United States, or Belgium's Great Experiment (Castillo, Grazzi, and Tacsir, 2014).

FIGURE 5.3 Percentage of Women Graduating from Tertiary Programs

Percentage of women graduates
■ Tertiary   ■ Tertiary in STEM programs
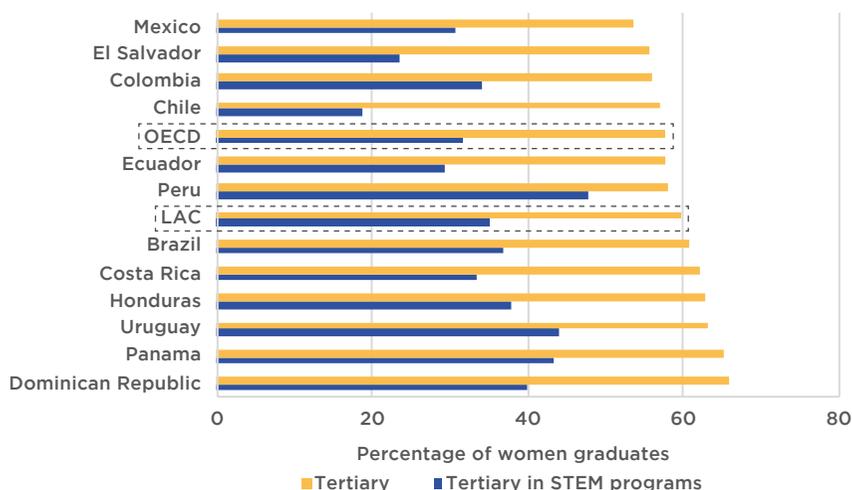
Source: Authors' calculations based on 2017 data from the UNESCO Institute for Statistics.
Note: In the case of Honduras, 2018 data is used, while data for Ecuador and Panama is from 2016.

Women also face systematic harassment and abuse. Intimate partner violence (IPV) is rampant in the region, with one in three women aged fifteen to forty-nine having been subject to physical or sexual violence committed by a partner (Bott et al., 2019). The measures adopted to control the expansion of the COVID-19 pandemic have exposed many women to increased violence at home as they are forced to lock down with their aggressors, as described in Box 1. Intimate partner violence permeates women's everyday lives and is present in every socioeconomic group. Even though self-reported survey data shows a mild negative wealth gradient (see Figure 5.4), one should keep in mind that higher-income women may be relatively more likely to misreport due to stigma concerns (Agüero and Frisancho, 2017). The region is home to a painful pattern of femicide. According to the ECLAC (2019), an average of ten women are murdered each day across the region. In fact, among the top twenty-five countries worldwide with the highest femicide rates, thirteen are in Latin America and the Caribbean (Alvazzi del Frate, 2011). The region also has high rates of child marriage: on average, 23 percent of women between the ages of twenty and twenty-four were already married or in a union by age eighteen. This pattern is accentuated in Brazil, the Dominican Republic, Nicaragua, and Honduras, where over a third of young women

marry as children. Child marriage has long-lasting effects on girls' lives, perpetuating and reproducing gender imbalances. But it remains invisible and shows little if any improvement in the region (Greene, 2019). It is also linked to teen pregnancy, which is highly prevalent in the region. With seventy-nine live births per thousand among women aged fifteen to nineteen, the region has the second-highest regional prevalence rate, surpassed only by Africa (Loaiza and Liang, 2013).

FIGURE 5.4 Physical and/or Sexual Intimate Partner Violence, by Wealth Quintile
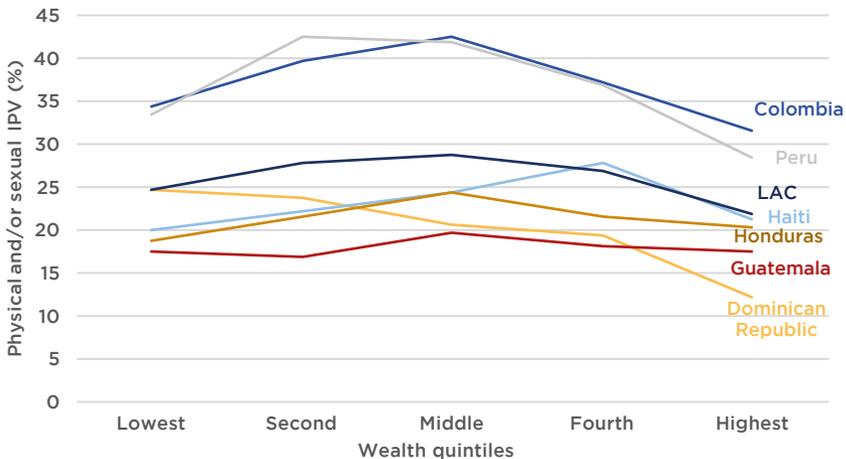
Source: Authors' calculations based on data processed using the STATCompiler from the Demographic and Health Survey Program (last accessed June 2020).

Note: Percentage of women who ever experienced physical and/or sexual intimate partner violence (IPV). The figure includes six countries for which wealth quintiles were available.

Closing the existing gender gaps is not only a matter of justice and equality. Gender disparities generate costly distortions in human capital investments and the allocation of talent across economic activities: in 2014, gender inequality in the region imposed a cost of $6.7 trillion (Wodon and de la Brière, 2018). For instance, policies that foster the participation of women in the labor force by making childcare available are estimated to lead to gains of 4.0–6.5 percentage points of GDP per capita (Bustelo et al., 2019).

BOX 5.1 Gender Gaps in the Time of COVID-19

The COVID-19 pandemic has hit households in multiple dimensions, exposing, and probably intensifying, all types of inequalities. A May 2020 release of unemployment-insurance claims in the United States[5] suggests that, at least in developed countries, the pandemic is disproportionally affecting the labor-market outcomes of women as they tend to be overrepresented in the hardest-hit sectors such as services, education, leisure, and tourism. On the upside, the confinement may bring the opportunity to erode preexisting social norms related to unpaid household labor as men may collaborate more in housework (Alon et al., 2020a). It will be crucial to understand the importance of these opposing forces in developing countries, where gender gaps are likely to be deeper.

FIGURE B5.1.1 Average Percentage of Working-Age Respondents Who Lost Their Job or Closed Their Business during the Month Prior to the Survey, by Gender
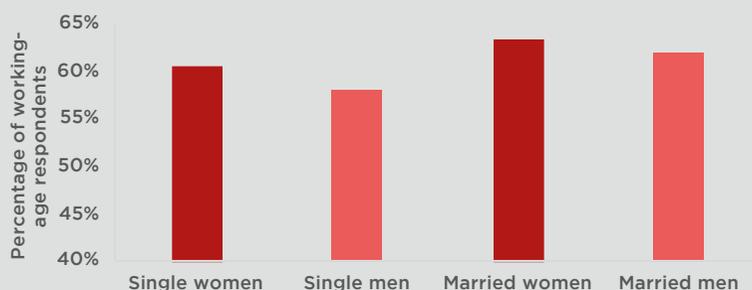
Source: Authors' calculations based on data from IDB-Cornell coronavirus survey.

Note: Regional average of the percentage of working-age respondents (18–64) who reported that at least one family member had lost a job or closed a business at the request of local authorities or due to lack of demand in the month prior to the survey. The average is based on the seventeen countries included in the survey, excluding Chile.

[5] See https://www.bls.gov/charts/employment-situation/civilian-unemployment-rate.htm.

Results from the IDB-Cornell online coronavirus survey, conducted during the onset of the pandemic and the lockdowns mandated in the region (April 2020), provide some insights into the labor market adjustments experienced in the region. Figure B5.1.1 shows that, compared to their male counterparts, single female respondents were more likely to report that at least one adult in their household lost her source of income. A similar result emerges from a comparison of married men and women, but the gap seems to be smaller.

These labor market outcomes reflect not only market adjustments but may also emerge from intrahousehold choices to cope with the shock. During the lockdown, the load of housework, childcare, and care for elders increases, and women may be expected to shoulder most of this increase due to their perceived role as central caregivers. Indeed, a recent survey in the United Kingdom suggests that, relative to fathers, mothers were more likely to lose their jobs since the lockdowns began, but they have also taken on the largest share of the additional time required for household chores and childcare (IFS, 2020). The picture is even gloomier in the region, where the prepandemic distribution of time allocated to household chores was even more unequal (see Figure B5.1.2) and labor market structures disproportionately placed women in part-time and informal jobs. Data from the IDB-Cornell coronavirus survey shows a clear pattern of specialization in unpaid household work among women during the lockdown. For instance, while two-thirds of female respondents declare they are exclusively in charge of cleaning and cooking chores, less than a quarter of men say they are in an equivalent situation (see Figure B5.1.2). Women also bear most of the increased burden of childcare activities: almost 60 percent of female respondents declare themselves to be exclusively responsible for home-schooling the children, while only 14 percent of men say the same.

FIGURE B5.1.2 Average Share of Respondents Who Are Exclusively Responsible for Household Unpaid Work during Lockdowns, by Gender

Percentage of respondents exclusively responsible for a task during lockdown
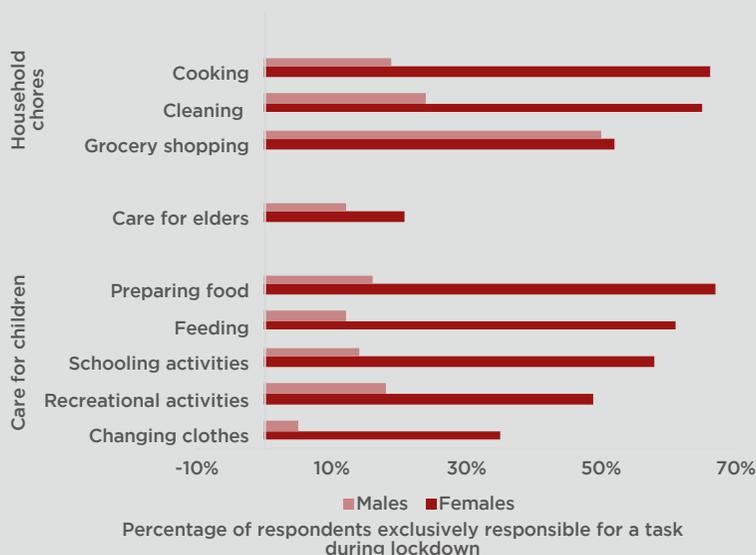
Source: Authors' calculations based on data from IDB-Cornell coronavirus survey.

Note: For female and male respondents separately, the average share of respondents who declared themselves to be exclusively responsible for each household chore is reported.

The results in Figure B5.1.2 suggest that the pandemic does not seem to induce men to participate more in household chores. Quite the opposite: the unequal distribution of these tasks seems to worsen, further jeopardizing gender equality in the region. Causal evidence documenting whether the pandemic or other economic crises can strengthen or weaken gender-biased social norms is crucial in the design of recovery policies. For instance, in the coming phases of economies' reopening, women will be at a disadvantage if childcare services and schools remain closed, as they will be less likely to return to the labor force. Recent model-based studies suggest that working women may be more likely to lose their jobs due to closures of childcare centers and schools (Alon et al., 2020a; Alon et al., 2020b; Torrejón Pérez et al., 2020). In working on the recovery agenda, we need to put forward studies based on newly available data to document the causal link between childcare and school closures during the crisis.

Women also face increased vulnerability to emotional, physical, and sexual abuse during lockdowns. On one hand, their lost income may reduce their bargaining power at home. On the other hand, the surge in interpersonal contact among partners and family members, the forced isolation of potential victims at home, and the added stress and anxiety derived directly from the health crisis and income losses all contribute to exacerbating intrahousehold conflict and domestic violence. Furthermore, women now have less access to support and resources to report and escape their victim status during lockdowns.

Several governments in the region have recorded large increases in the number of calls to abuse helplines, hand in hand with a simultaneous reduction in the number of formal complaints. There is still scarce reliable data to understand what is happening behind closed doors during the pandemic. Measuring the prevalence of domestic violence is usually a difficult task, prone to multiple misreporting issues. During a lockdown, accurate reporting becomes even more challenging due to the sudden abridgment of privacy at home. Nevertheless, the recent online IDB-Cornell coronavirus survey tried to measure changes in levels of conflict and domestic violence during the pandemic. On average, 15 percent of female respondents perceived an increase in domestic violence during the week preceding the interview, relative to regular (nonlockdown) times. This increase is consistent with results documenting an increase in perceived intimate partner violence in rural Uganda, Argentina, and Peru (Mahmud and Riley, 2020; Gibbons, Murphy, and Rossi, 2020; Agüero, 2020). Figure B5.1.3 further shows that increased conflict and violence at home is unequal by income level, with lower-income women being more likely to report worsening conditions during the health crisis.

FIGURE B5.1.3 Percentage of Women Reporting Increased Conflict and Violence at Home
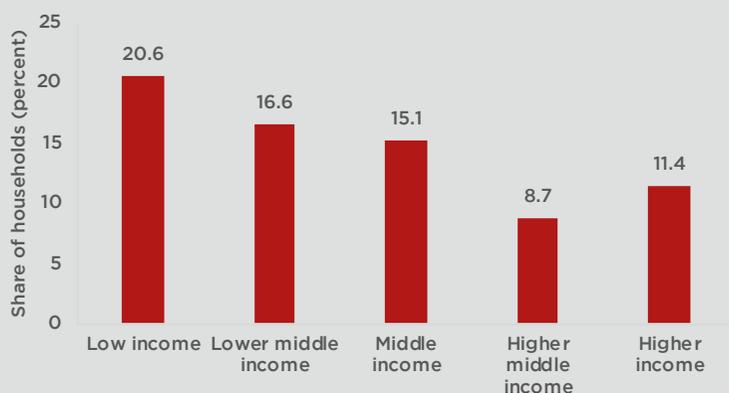
Source: Authors' calculations based on data from IDB-Cornell coronavirus survey.

Note: Share of women who reported that conflict and violence in their household had increased relative to prepandemic times.

A recent study for Argentina allows us to better understand the way in which violence manifests during the crisis. Perez-Vincent and Carreras (2020) exploit variation in the timing of the lockdown policies and show that the confinement led to a substitution of physical violence for psychological violence. Recent studies in the United States suggest that the pandemic has given rise to bouts of domestic violence in families with no history of intrahousehold violence (Leslie and Riley, 2020), suggesting that the pandemic has a heavy psychological footprint. Recovery policies in the region should also include this important topic in the agenda.

Countries in the region cannot afford to lose ground in the gender equality agenda. Governments should place emphasis on continuing to push forward policies aimed at closing the gap more than ever. We cannot afford to waste years of progress.

5.2.

GENDER GAPS AND SOCIAL NORMS

"What is now called the nature of women is an eminently artificial thing—the result of forced repression in some directions, unnatural stimulation in others."

—John Stuart Mill, *The Subjection of Women*

To further narrow gender gaps, it is important to understand how the forces that drive them have changed over time. While discrimination is present to varying degrees, depending on the market, other factors sustain and add to these disparities.

On one hand, the literature has identified how women and men differ across perceived socioemotional traits and psychological attributes. Even though the evidence is not conclusive on whether these differences are inherent or society-induced (Shurchkov and Eckel, 2018), these differences influence educational and occupational choices. Women have been found to be less competitive and less overconfident (Buser, Niederle, and Oosterbeek, 2014). Women are more risk-averse (Reuben, Wiswall, and Zafar, 2015), more sensitive to grades (Rask and Tiefenthaler, 2008), and less confident than men in subjects like math (Bordalo et al., 2019). Evidence from U.S. secondary schools shows that the exposure to high-achieving boys in the classroom hurts girls' academic performance and reduces their probability of completing a bachelor's degree, while the presence of high-achieving girls increases degree completion among less-able girls (Cools, Fernández, and Patacchini, 2019). A similar pattern is found in China by Mouganie and Wang (2020), who show that exposure to girls with high performance levels in math increases the probability that girls choose a science track during secondary school, while the

presence of more high-performing boys in the classroom reduces this probability. Surprisingly, in both studies, young men seem unaffected by gendered peer effects in terms of bachelor completion or track choice.

On the other hand, gender-specific trade-offs related to motherhood impose a penalty in the labor market. In general, data from the International Labour Organization shows that women with children under the age of five have the lowest labor force participation rates (48 percent) when compared with women without children (54 percent) and men with (88 percent) or without (78 percent) children. These spells of time out of the labor market due to motherhood have long-lasting effects on women's chances of reinsertion, wages, and likelihood of advancing in their careers. A recent study of Chile identifies that motherhood imposes a penalty on wages of around 10–15 percent (Berniell et al., 2019). Even in countries with generous and comprehensive parental leave policies such as Denmark, the arrival of a child imposes a 20 percent wage gap on women relative to men (Kleven, Landais, and Egholt Søgaard, 2019).

As countries develop and gender parity improves regarding access to opportunities, the remaining gender gaps become even harder to close. In developed economies, gender gaps have less to do with blatant discrimination and more to do with women's own (constrained) decisions. While explicit discrimination can be regulated away, social norms persist in influencing people's preferences and, thus, their choices. Even in OECD countries, fathers are less likely to take paid parental leave than mothers: men account for under a third of the paid parental leave days taken (Adema, Clarke, and Thevenon, 2016). Similar patterns are observed in the labor market. After Norway imposed a 40 percent gender quota on the board of publicly listed companies, representation of women employees improved, although only at the top of the earnings distribution. Unfortunately, this policy had no long-lasting effect on women's major choices (Bertrand et al., 2017).

Social norms influence perceptions and stereotypes that directly and indirectly affect women's access to opportunities. Unequal gender

norms are sticky and persist even as countries develop.[6] For instance, the perception of women as the main caregivers is reflected in Table 5.1, which shows that 43 percent of the population in the region believe preschool children suffer with a working mother, and 50 percent think that being a housewife is "just as fulfilling" as paid work. But the level of support for women in traditional roles is almost as high in OECD countries, while it is even higher in the United States (see panel B).

TABLE 5.1 Social Norms in the Region Compared with Those in More Advanced Economies

	LEVEL OF AGREEMENT WITH THE STATEMENT			
	Agree strongly	Agree	Disagree	Strongly disagree
PANEL A. A PRESCHOOL CHILD SUFFERS WITH A WORKING MOTHER				
LAC	12.6	29.9	41.6	12.8
OECD	6.9	24.5	47.5	17.4
US	3.7	21.2	58	16.2
PANEL B. BEING A HOUSEWIFE IS JUST AS FULFILLING AS HAVING A PAID JOB				
LAC	17.7	32.6	31	13.7
OECD	15.7	34.2	31.2	8.4
US	24	50.5	20.2	4

Source: Authors' calculations based on data from the World Value Survey Database, Wave 6, 2010–14.
Note: LAC here includes Argentina, Brazil, Chile, Colombia, Ecuador, Haiti, Mexico, Peru, Trinidad and Tobago, and Uruguay. OECD here includes Estonia, Germany, Netherlands, Poland, Slovenia, and Sweden.

Social norms and stereotypes are used to justify and even normalize gender-based violence and the harassment of women. Among women aged fifteen to forty-nine, ever married or in a domestic union, a shockingly high percentage agree that a husband/partner is justified in beating his wife/partner, especially in Ecuador (38.2 percent), Haiti

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[6] Fernandez (2013) proposes a model of intergenerational learning through which societies update their beliefs about the payoff of working as female labor force participation (FLFP) increases over time. This endogenous process of cultural change is thus expected to slow down as an economy reaches high levels of FLFP rates: stagnated growth leads to smaller changes in beliefs about the consequences of women's work.

(28.5 percent), and Paraguay (22.9 percent). Support for wife-beating is particularly justified if the wife is suspected of being unfaithful, goes out without telling her partner, or neglects children or housework (Bott et al., 2012). Women's assigned roles, such as obedience to their husband and serving as the main caregiver in the household, are shaped by gender-biased social norms that limit women's freedom of choice and action. A recent report using data from the World Values Survey looks at a variety of topics including politics, economics, education, intimate partner violence, and reproductive rights. It shows that, on average, 88 percent of men and 86 percent of women in the region have at least one clear bias against gender equality.[7]

5.3.

THE WAY FORWARD: LINES OF ACTION IN GENDER-PARITY POLICIES

Gender-parity policies in the region have mainly focused on two lines of action. First, governments have attempted to relax constraints on women by reducing the cost of caregiving. The region has been particularly effective in increasing the provision of public childcare, either through community-based models or institutional ones (Araujo, Lopez-Boo, and Puyana, 2013). Yet coverage gaps in public provision persist, and the limited evidence available shows that full-time daycare in the region is of poor quality and does not contribute to child development (Berlinski and Schady, 2015).

[7] Authors' own estimation based on the Gender Social Norms Index (GSNI) reported by the United Nations Development Programme (UNDP, 2020). LAC countries included are: Brazil, Chile, Colombia, Ecuador, Haiti, Mexico, Peru, Trinidad and Tobago, and Uruguay.

There is also a long way to go on access to adequate parental leave. On one hand, the length of maternity leaves and corresponding cash benefits are still insufficient. Almost three-quarters of the countries in the region do not comply with the fourteen weeks' maternity leave recommended by the International Labour Organization, and 81 percent of them provide either an unpaid or underpaid leave. On the other hand, paternity leaves are token leaves of absence, ranging from two days in Argentina to fifteen in Paraguay and Ecuador. Reforms here seem absent from the policy agenda. It is also of paramount importance to consider the size of the informal sector in the region, which limits the reach of parental leaves and related policies in the region. On average, only 14 percent of the employed population in the first income quintile in the region works in the formal sector, and although this figure increases along the income distribution, it is only at the fourth and fifth quintiles that formal employees represent at least 50 percent of the workforce.

Second, the region has introduced affirmative-action laws, especially in the political arena. Indeed, the region has led the way in the use of quotas to narrow the gender gap in parliament. Virtually all countries have quotas for women, and a handful—Bolivia, Mexico, Costa Rica, and Argentina—have effectively reached or approached gender parity. Scarce evidence (mostly from India) suggests that political quotas weaken implicit gender discrimination among men by changing the stereotypes of the role of women in the public and private spheres (Beaman et al., 2009).

Despite the progress achieved to date, closing the existing and persistent gender gaps calls for a new generation of policies that will help shape the underlying informal institutions ruling different markets in the region. For instance, even as gender parity is approached in parliaments, sexism, harassment, and even violence inflicted on female representatives persist. Data from thirty-nine countries in five regions of the world reveals that 65 percent of women parliamentarians have been subject to sexist remarks, mostly

made on parliamentary premises by their colleagues who are men, and over a third have experienced physical or sexual harassment (Inter-Parliamentary Union, 2016).

Social norms are hard to change. Going forward, the region needs to work on two fronts to reshape them. On one hand, governments should continue to put forward policies that influence the status quo and propose a new normal. Quotas for women at different levels of the government and in managerial positions should continue to be introduced and enforced, but these quotas need to be paired with enforcement as well as complaint mechanisms and penalties for noncompliance. Governments need to be vigilant not only about potential backlash but also about prevention through training and awareness efforts in firms and public entities implementing affirmative action policies.

Moreover, efforts to promote fair parental leave policies and flexible work arrangements will have a stronger impact when they target workers in the informal sector. Increasing informal sector workers' benefits becomes urgent, as they are among the most vulnerable women in the labor force. Furthermore, focusing only on the formal sector may generate perverse incentives among firms to hire informal workers with lower opportunity costs to avoid the additional labor costs of parental leaves. This is particularly likely in countries where paternity leaves are stigmatized or undervalued. Nevertheless, such policies should be undertaken with care so as not to perpetuate existing gender biases. Governments in the region should seek to increase the length of paternity leaves while making sure that these benefits are not transferable to the mother. Imposing a minimum number of mandatory leave days on fathers may help to reduce the stigma for men taking up this benefit.

A third line of action should focus on expanding the windows of aspiration for women regarding their role in society. Most of this work will pay off in the medium and long term, but it guarantees sustainable change. Several studies show that female teachers can have a decisive role in the

performance of girls in the classroom and the choice of STEM majors (Lim and Meer, 2017; Antecol, Eren, and Ozbeklik, 2015; among others). Recent experimental evidence at the tertiary level shows that exposure to female role models in introductory economics classes increases the enrollment of women in further economics classes and leads to an almost twofold increase in their likelihood of majoring in economics (Porter and Serra, 2020). Fostering equal participation in politics can also contribute to raise aspirations and educational achievement among girls through a role-model effect (Beaman et al., 2012).

A key component of the social norms agenda is to start early, shaping the preferences and values of boys and girls when unconscious attitudes are malleable. Evidence on the effectiveness of programs focusing on changing gender paradigms is both limited and mixed, but discussions about gender and masculinity seem to influence boys' attitudes (Barker, Ricardo, and Nascimento, 2007). Peru, for example, has promoted initiatives to introduce a gendered approach in the national school curricula but is struggling to implement them, as several traditional forces oppose reforms. To move forward, it will be important to maintain an open dialogue with the conservative sectors of society that sometimes fail to grasp the welfare-enhancing properties of such reforms. It is also key to engage men and boys in pursuing gender equality in the region.

Another item on the agenda includes the need to address the regional backlash and anti–"gender ideology" crusades.[8] Progress on parity can be achieved and sustained only with a narrative that advances the gender-parity agenda in an inclusive and nonantagonistic manner.

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[8] "Gender ideology" is a term coined by conservative sectors of society in the region, equating policies and reforms designed to benefit women and LGBTI populations with the imposition of beliefs that threaten conservative religious values. For a recent article on the topic, see https://www.opensocietyfoundations.org/voices/gender-ideology-fiction-could-do-real-harm. See also Philips (2001).

5.4.

DISPARITIES AMONG AFRO-DESCENDANTS AND INDIGENOUS PEOPLES

Latin America and the Caribbean is one of the most multiethnic and multicultural regions in the world. Even across countries, the degree of diversity varies considerably: every nation has a unique cultural mix and palette of identities. According to recent ECLAC and World Bank estimates, the share of indigenous populations in the region is around 8 percent, and the total number of indigenous groups is estimated at between 772 and 826.[9] Afro-descendants represent a quarter of the total population of the region, but in countries such as Brazil, the Dominican Republic, and Venezuela they account for most of the population.

Despite variations in the trajectory of inclusion of different ethnic groups into modern national identities, indigenous peoples and Afro-descendants remain at a disadvantage both in terms of their economic well-being and their access to opportunities. In general, 43 percent of the indigenous population and 25 percent of Afro-descendants in the region are poor (Freire et al., 2018; World Bank, 2015). Except for rare cases, such as Afro-descendants in Panama, poverty rates among Afro-descendants and indigenous peoples are much higher than rates among the rest of the population in virtually in all countries. Access to public services, such as sewage and piped water is also precarious among these minorities. On average, nonindigenous groups have 1.6 and 1.3 times better access to sanitation and piped water than indigenous peoples, respectively (World Bank, 2015).

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[9] For a comparison across different sources, see Davis-Castro (2020). Also see ECLAC (2014) and World Bank (2015).

The region displays limited progress in terms of the economic well-being of indigenous peoples and Afro-descendants. Over the past two decades, the region has been able to reduce the gap of completed years of schooling between nonindigenous and indigenous from an average of three to two years (Duryea and Robles, 2017). However, wage gaps relative to the rest of the population remain quite high, more so among indigenous populations (see Figure 5.5). Despite some heterogeneity, between 2003 and 2017 virtually all countries modestly narrowed the gap corresponding to Afro-descendants, but they have not been able to prevent further deterioration of the wage gap among indigenous populations.

An important aspect to consider is the geographic segregation that each of these groups faces when targeting policies to advance them. Although more than 80 percent of Afro-descendants in the region live in cities, most of them are relegated to poor neighborhoods and slums. Despite traditional paradigms linking indigenous peoples to the rural areas, their reality is today quite different, as nearly half of them live in marginalized urban areas.

The history of how the region's ethnic diversity was inherited from colonial times has played an important role in perpetuating social and economic inequalities. Formal and informal institutions set up since the arrival of the European colonizers exploited and relegated these groups, with long-term consequences on their living conditions and access to opportunities (Dell, 2010). The place of Afro-descendants and indigenous peoples' at the bottom of the social pyramid dates to colonial times and is perpetuated through present-day discrimination and exclusion patterns in several markets. For instance, a set of audit studies exposes labor discrimination against ethnic minorities in urban Peru: given the same level of credentials, the callback rate for job interviews among whites is 19 percent higher than for Afro-Peruvians and 54 percent higher than among Quechuas (Galarza and Yamada, 2017; Galarza and Yamada, 2019). Evidence from Brazil exploring differences in skin color across twins from the same family also exposes racial discrimination in education. Nonwhite twins have 0.3 less years of schooling, and this effect is particularly salient for adolescent boys, who face a negative premium of almost a year of schooling (Marteleto and Dondero, 2016).

Figure 5.5 Monthly Wage Gaps among Afro-Descendants and Indigenous Populations
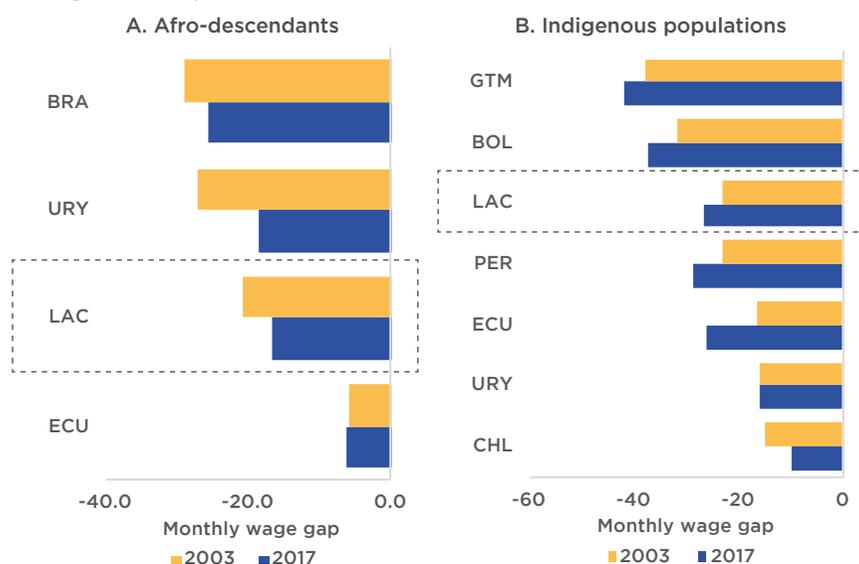
A. Afro-descendants

B. Indigenous populations

Source: Authors' calculations based on IDB data from "Harmonized Household Surveys from Latin America and the Caribbean."

Note: The analysis includes the survey rounds between 2003 and 2017, except for Peru (2004) and Uruguay (2006).

As a response to the tension between the need to prepare younger generations for the modern world while helping to preserve their identity and traditions, virtually all countries have bet on intercultural bilingual education (IBE) programs. The scant evidence on the impact of IBE suggests that the model narrows the achievement gap between indigenous and nonindigenous students (Parker, Rubalcava, and Teruel, 2005; Hynsjo and Damon, 2016). IBE faces enormous challenges, however, due to the lack of qualified teachers and lack of a transition strategy once students are out of school. More research is needed to validate the effectiveness of this approach, particularly experimental evidence.

Several countries in the region have tried to address ethnic disparities through affirmative action policies intended to favor minorities across several dimensions. Six countries in the region have enacted laws to reserve political seats in the national and local legislatures as a means

to extend the political participation of indigenous peoples (World Bank, 2015). Brazil is the pioneer in this regard, and it leads the region in the use of reserved seats both in public-sector employment and admissions to secondary school and/or university. But Colombia, Ecuador, Honduras, and Uruguay have also implemented quotas in their educational systems. The effectiveness of affirmative action policies is hard to evaluate due to the limited availability of counterfactuals, but the Brazilian experience in the education arena suggests that these policies can narrow gaps without introducing distortions. A recent study shows that the introduction of bonus points to public school students in the university admissions process was effective in promoting applicants from disadvantaged backgrounds: 10 percent of admitted applicants would not have been accepted in the absence of the policy. Moreover, accepting Afro-descendent, multiethnic, or indigenous applicants left the academic quality of the entrant pool unaffected (Estevan, Gall, and Morin, 2019).

Minority quotas should continue to be fostered in the region, both to directly advance disadvantaged groups and to change the perceptions and stereotypes held by more privileged groups. Although there is limited evidence on the effect of minority quotas on policy outcomes and aspirations among younger generations in the reference groups, literature on the subject of gender (see previous section) suggests that this could be a powerful policy tool that has not yet been fully advanced in the region. Promoting the participation of different ethnic and minority groups in the process of policymaking, both through political quotas as well as through decentralized participatory schemes, is an important step to incorporate the different realities, needs, and preferences of diverse racial and ethnic groups in the region.

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6.

HEALTH INEQUALITY:
A Tale of Expansion and Fragmentation

by Samuel Berlinski, Jéssica Gagete-Miranda, and Marcos Vera-Hernández

The third of the Sustainable Development Goals adopted by the United Nations in 2015 states that countries should work towards ensuring healthy lives and well-being *for all at all ages regardless of gender, religion, ethnicity, socioeconomic status, and more.*[1] Over the past fifty years, the region has worked towards this goal by reducing child mortality and improving life expectancy while closing the gap in health outcomes across socioeconomic groups.

Despite these gains, the region is still far from the health outcomes of people living in the countries of the Organisation for Economic Co-operation and Development (OECD). Meanwhile, its burden of disease is starting to look more like that of OECD. In 1990 three of the top five reasons for lost healthy years of life in the region stemmed from communicable, maternal, neonatal, and nutritional diseases, none of which were among the top five in 2017. Furthermore,

[1] https://sdgs.un.org/#goal_section.

socioeconomic gradients are evident in the incidence of risk factors for noncommunicable diseases (NCDs) like hypertension, high cholesterol, and obesity.

Countries in the region have shown a decisive commitment towards providing access to health services. The move towards expanding insurance coverage to informal workers has led to positive health outcomes in many countries. However, many health systems in the region are still fragmented and provide inadequate access to services for the poor, who are sometimes forced to rely on large out-of-pocket expenditures to make up for long waiting times and low-quality care.

New challenges are arising for the region. Recent increases in the incidence of communicable diseases like dengue and COVID-19 and an aging population vulnerable to NCDs, such as cardiovascular diseases and cancers, are stretching the resources of already underfunded health systems even further.

6.1.

THE HEALTH SYSTEM

Health outcomes are affected by genetic factors, environmental factors (e.g., housing conditions and pollution), health-related behavior (e.g., diet, physical activity, and sleep), and healthcare use (e.g., preventive and curative care). Latin American and Caribbean countries have shown a decisive commitment to widen access to health services and guarantee the right to health in their constitutions and legal documents (Wagstaff et al., 2015). Furthermore, effective health coverage (as can

be measured by household surveys) improved between 1990 and 2012 in all Latin American countries but one (Wagstaff et al., 2015).[2]

Health expenditures in the region are, however, still low compared with OECD countries and the standards set by the World Health Organization (WHO). The median expenditure in the region has not changed much over the past twenty years and is about 6.64 percent of GDP (see Figure 6.1),[3] much lower than the median 8.97 percent of OECD country expenditure. Government health expenditure corresponds on average to 67.9 percent of the total expenditure, which leaves only three out of fifteen countries with data beyond the 6 percent level recommended by WHO.

FIGURE 6.1 Health Expenditure as a Percentage of GDP
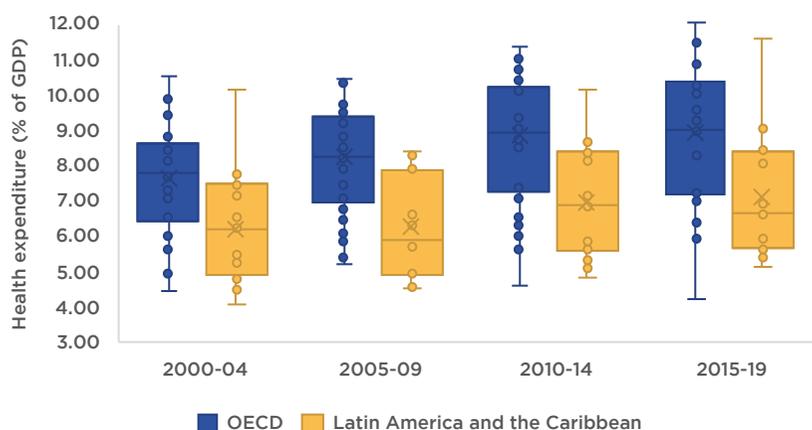
Source: World Development Indicators.

Note: The box-plot graphs show the median across the countries (bar in the middle of the box), first and third quantile (bottom and top of the box), as well as minimum and maximum values (outliers have been excluded). Each box-plot shows the mean of current health expenditure as a percentage of GDP for the considered window of time.

[2] Wagstaff et al. (2015) use 112 household surveys from 1990 to 2013 for all twenty Latin American countries and build an index of effective health coverage that summarizes indicators of preventive care (antenatal care, children's immunization, and screenings for cervical and breast cancer), treatment (whether a baby was delivered by a skilled birth attendant, whether a child with diarrhea received the appropriate treatment, whether a child with acute respiratory infection received appropriate treatment, and whether a respondent was admitted to the hospital in the preceding year), and financial protection (catastrophic health expenditure, and impoverishing spending on healthcare services).

[3] Data from the World Development Indicators, which report on Argentina, Belize, Bolivia, Brazil, Chile, Colombia, Ecuador, El Salvador, Guatemala, Haiti, Honduras, Jamaica, Mexico, Peru, and Uruguay. Our OECD statistics exclude Chile and Mexico.

Although out-of-pocket expenditures[4] have been falling over the past twenty years, they are still high—a pattern that suggests inadequate default coverage, itself a huge financial risk for households. Out-of-pocket expenses in the region are a big part of health expenditures, at around 28.62 percent for the median country, far more than the 17.25 percent for OECD countries (see Figure 6.2).

What determines a country's level and distribution of health expenditure? The choices made by individuals, health providers, and policy makers are all influenced by the design of the health system. The health sector is among the most regulated by governments worldwide. There are two major nonexclusive rationales for such public intervention: (1) equity, everybody should have access to healthcare according to need not means, (2) efficiency, individuals would not obtain the optimal amount of healthcare in the absence of government intervention because of important market failures. Those market failures range from the externalities inherent in communicable diseases to asymmetric information between healthcare providers, insurers, and individuals.

FIGURE 6.2 Out-of-Pocket Spending as a Percentage of Current Health Expenditures
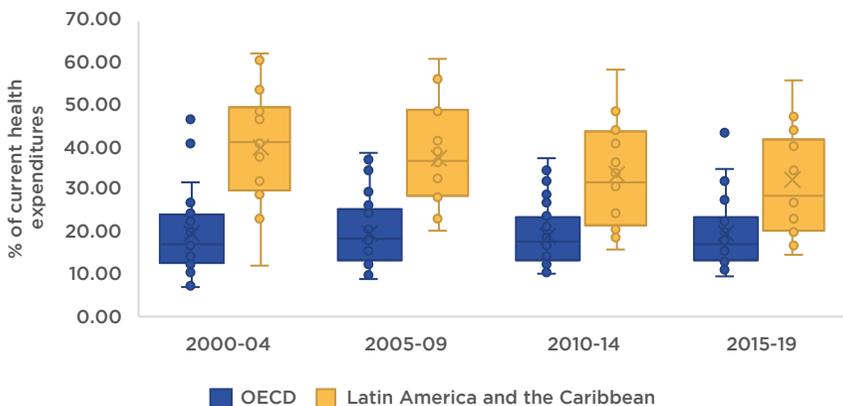
Source: World Development Indicators.

Note: The box-plot graphs show the median across the countries (bar in the middle of the box), first and third quantile (bottom and top of the box), as well as minimum and maximum values (outliers have been excluded). Each box-plot shows the mean of out-of-pocket expenditure as a percentage of current health expenditure for the considered window of time.

[4] Out-of-pocket payments are spending on health directly out of pocket by households.

A fundamental part of a health system is the mechanism at play to reduce or eliminate the financial risk due to ill health. The occurrence of ill health is, to a large extent, random and could lead to welfare-reducing consumption fluctuations in the absence of suitable insurance to cover the healthcare costs. Indeed, the most expensive healthcare treatments would lead to impoverishment, especially for those less well off.

6.2.

THE EVOLUTION OF HEALTH SYSTEMS, HEALTH OUTCOMES, AND SOCIOECONOMIC GRADIENTS IN THE REGION

The origins of the region's health sector produced a fragmented system that gave access to health coverage to those in formal employment (and their dependents) but with inadequate financial protection for healthcare expenses for those outside formal employment.

Cotlear et al. (2015) describe the development of health coverage in the region in four phases. In the first phase, prior to the existence of national-level health institutions, countries focused on the prevention and control of epidemics. Hospitals evolved from being managed by religious orders to being autonomous philanthropic institutions controlled by local elites.

The second phase, which in many countries started between the late 1920s and the 1940s, was characterized by the constitution of a national ministry in charge of public health together with the creation of social security funds.

In the tradition of the Bismarck system, these funds were strongly linked to formal employment contracts. Indeed, workers from different occupations (blue collar, white collar, civil servants) and different sectors would each have their own social security fund. These funds created their own network of healthcare providers for the exclusive use of their enrollees.

In parallel, the newly created ministries of health evolved to provide treatment for the population not covered by social security funds. Such care was perceived, however, as public assistance, not an acquired right (Terris, 1978). The expectation was that formal employment would grow over time and that sickness funds would absorb the uncovered population during this transition.

The segmentation of health coverage by formal employment status originated during this second phase in the region. This meant that individuals with the same health needs but different employment status had different levels of health coverage. More affluent individuals who had formal jobs got better insurance coverage and healthcare treatment than informal workers.

The third phase consolidated the segmentation of health coverage according to formal employment status: on one hand, the social security funds of different industries and sectors merged and expanded coverage to workers' dependents; on the other hand, the ministries of public health evolved to become ministries of health.

The new ministries expanded primary-care services to underserved populations with emphasis on maternal and child health services (including vaccination and oral rehydration therapy). This expansion of primary-care services took place during the 1970s, 1980s, and 1990s depending on the country (Cotlear et al., 2015).

As primary-care services expanded, the region saw under-5 mortality fall dramatically. Data from the World Development Indicators

shows the median rate[5] plunging from 122 per 1,000 live births in the early 1970s to 14 by 2019 (see Figure 6.3). This dive in mortality rates probably stems from a number of factors, including improved economic conditions, medical technology, and expanded maternal and child health services.

FIGURE 6.3 Under-5 Mortality Rate, per 1,000 Live Births
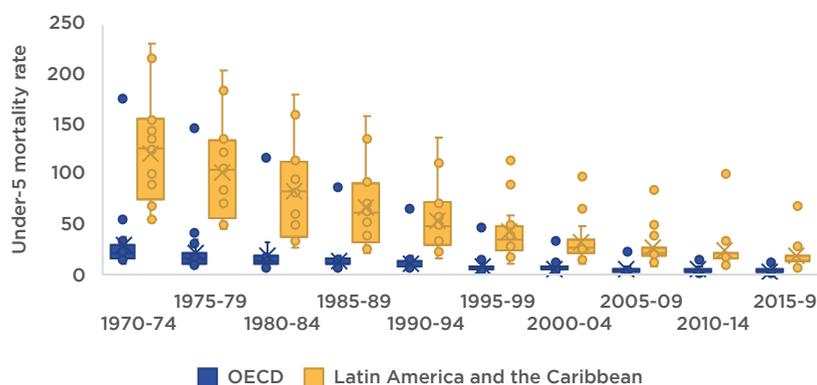
Source: World Development Indicators.

Note: The box-plot graphs show the median across the countries (bar in the middle of the box), first and third quantile (bottom and top of the box), as well as minimum and maximum values (outliers have been excluded). Each box-plot shows the mean of under-5 mortality for the considered window of time.

The improvement in under-5 mortality rates was accompanied by decreased variability across the countries of the region as well. Despite these marked improvements, infant mortality is still much higher compared with OECD standards, while variability across OECD countries is much smaller despite stark income differences among the countries. All these factors suggest it is still possible for Latin American and Caribbean countries to improve early-in-life health outcomes for their people.

Microdata going back to the 1980s from the Demographic and Health Surveys (DHS) for Bolivia, Colombia, the Dominican Republic, and Peru, shows mortality rates dropping for the under-5 age group (consistent with Figure 6.3). The data also shows a plummeting mortality gap for

[5] Number of deaths under age 5 per 1,000 live births.

children of more educated mothers (secondary education or more) vs. the less educated (primary education or less), with the exception of Colombia (see Figure 6.4).[6, 7]

FIGURE 6.4 Under-5 Mortality (Ratio of Mothers with Secondary Education or More to Mothers with Primary Education or Less)
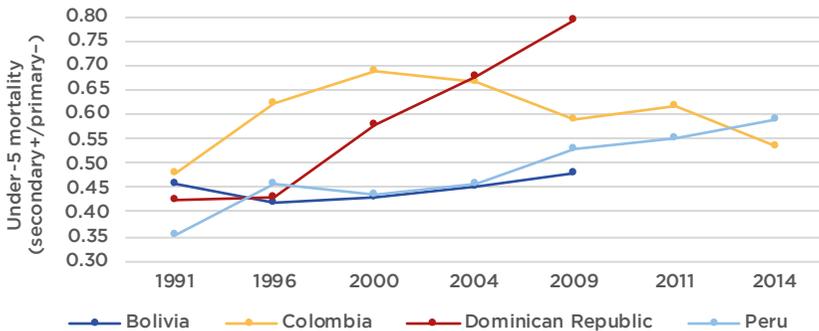
Source: Demographic Health Survey.

Note: For each year and country, the figure shows the under-5 mortality ratio of children from mothers with secondary education or more divided by the under-5 mortality ratio of children from mothers with primary education or less.

The third phase had an important pro-poor component because much of the expansion in primary-care services targeted rural and periurban areas, which were typically less affluent (Cotlear et al., 2015). Consistent with this policy, inequality in antenatal care, or ANC (i.e., at least four professionally assisted antenatal care visits and urine and blood samples taken during pregnancy) fell markedly (see Figure 6.5). Of the four countries analyzed, the ones achieving greater equality in these indicators are the Dominican Republic and Colombia, which also have relatively high GDP per capita among the four.

[6] The decrease in under-5 mortality might reflect the improvement in access to healthcare, which allows premature babies to be born instead of being miscarried. A fraction of such babies might, however, end up dying, which increases the mortality rate. See Berlinski and Schady (2015) for a discussion.

[7] Although it is customary to use the concentration index to measure inequality in health and healthcare, we use the ratio among education groups because several of the surveys that we use later in the chapter lack the required information to compute the concentration index (Wagstaff, Van Doorslaer, and Paci, 1989; Wagstaff, Paci, and Van Doorslaer, 1991; Van Doorslaer et al., 1997; Wagstaff and Van Doorslaer, 2000; Wagstaff, Van Doorslaer, and Watanabe, 2003; Gwatkin et al., 2003; O'Donnell, Van Doorslaer, and Wagstaff, 2006; O'Donnell et al., 2007; O'Donnell et al., 2008). The lack of panel data also constrains the analysis (Jones and López Nicolás, 2004; Bago d'Uva, Jones, and Van Doorslaer, 2009).

FIGURE 6.5 Antenatal Care Inputs (Secondary+/Primary–)

A. Skilled ANC

B. 4+ ANC visits

C. Quality ANC

Bolivia   Colombia   Dominican republic   Peru
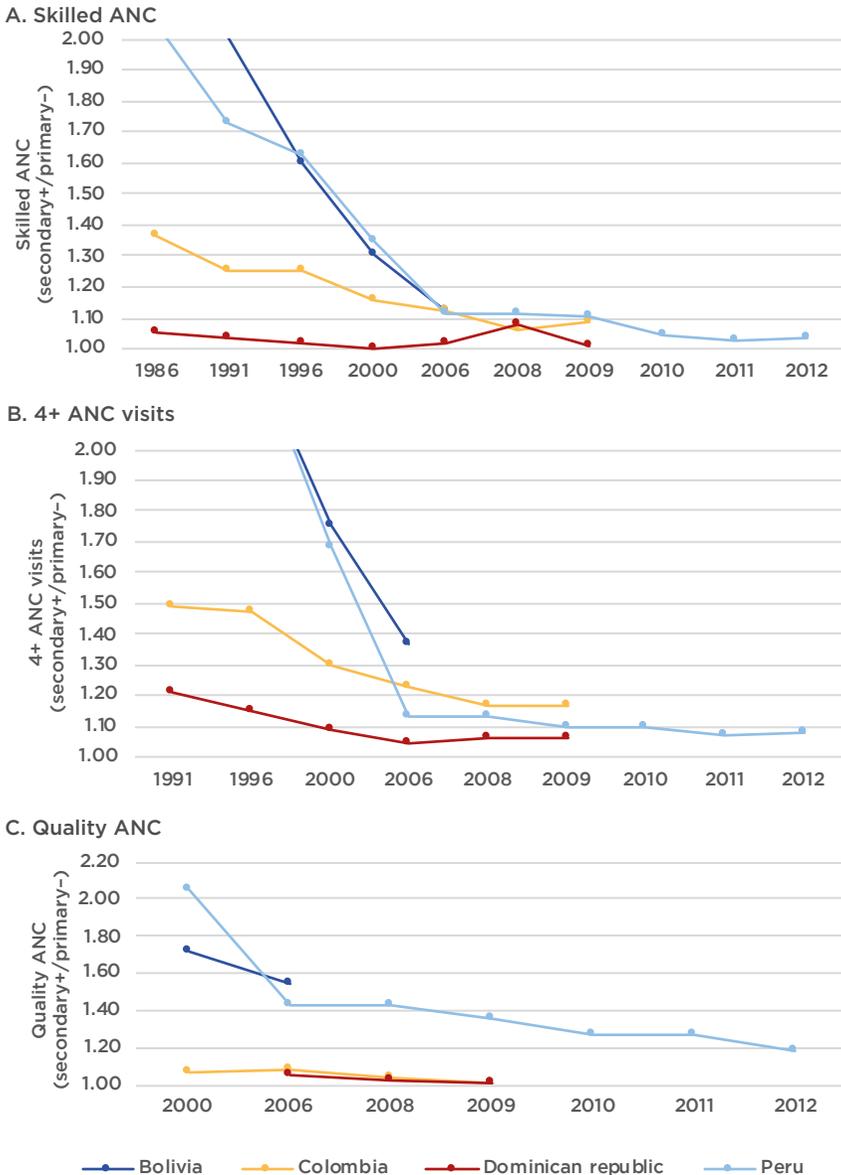
Source: Demographic Health Survey.

Note: For each year and country, the figure shows ANC inputs for children of mothers with secondary education or more divided by ANC inputs for children from mothers with primary education or less; skilled ANC: ANC performed by doctor or nurse; four+ ANC visits: four or more ANC visits during pregnancy; quality ANC: blood and urine tests performed during ANC.

Countries in the region have not only improved under-5 mortality, median life expectancy at birth increased from 60 years of age in the 1970s to 75 circa 2019; in addition, inequality in health outcomes across countries in the region fell substantially. Not surprisingly, the increase in life expectancy has been accompanied by a dramatic change in the burden of disease (see Figure 6.6). In the 1990s infectious diseases and maternal and neonatal disease were the region's leading causes for years of healthy life lost. In 2017, the burden of disease in the region was led by cardiovascular diseases, neoplasms, diabetes, and chronic kidney disease.

FIGURE 6.6 Disability Adjusted Life Years per 100,000 in the Region

	1990 RANK	2017 RANK		
Maternal and neonatal	1	9	▼	8
Cardiovascular diseases	2	1	▲	1
Respiratory infections and TB	3	12	▼	9
Enteric infections	4	20	▼	16
Other noncommunicable	5	8	▼	3
Neoplasms	6	2	▲	4
Unintentional injury	7	11	▼	4
Self-harm and violence	8	4	▲	4
Transport injuries	9	13	▼	4
Mental disorders	10	6	▲	4
Nutritional deficiencies	11	19	▼	8
Neurological disorders	12	7	▲	5
Musculoskeletal disorders	13	5	▲	8
Digestive diseases	14	10	▲	4
Diabetes and CKD	15	3	▲	12
Chronic respiratory	16	14	▲	2
Other infectious diseases	17	22	▼	5
Sense organ diseases	18	15	▲	3
Skin diseases	19	17	▲	2
Substance use	20	16	▲	4
HIV/AIDS and STIs	21	18	▲	3
NTDs and malaria	22	21	▲	1

Source: Institute for Health Metrics and Evaluation.

Note: The figure shows the ranking of causes of disability adjusted life years (DALYs) lost, both in 1990 and 2017. The triangles show the direction of the changes in the ranking of the disease between 1990 and 2017.

Obesity, diabetes, hypertension, and high cholesterol are the four main metabolic factors that increase the risk of NCDs.[8] Data for Argentina (2018), Brazil (2013), Ecuador (2018), Guyana (2016), Mexico (2018), Peru (2018), and Uruguay (2013), and that uses both reported medical diagnosis and biomarkers taken during interviews to measure the incidence of disease, reveals the depth of the health risks in the region (see Table 6.1).

Among the population aged twenty or more, the prevalence of obesity, hypertension, and high cholesterol was more than 30 percent in most countries—a staggering figure. It is even above 40 percent for some metabolic risk factors and countries. The prevalence of diabetes is smaller, between 9 and 18 percent. Comorbidities are also prevalent. For those countries with data on the four risk factors, between 2.3 and 9.8 percent of the adult population suffer from two or more of them.

TABLE 6.1 Prevalence of Risk Factors, in Percentages

	ARGENTINA	BRAZIL	ECUADOR	GUYANA	MEXICO	PERU	URUGUAY
Obesity	32.89%	21.58%	24.73%	26.52%	36.86%	26.32%	25.71%
Hypertension	48.32%	35.25%		33.26%	30.59%	24.75%	37.01%
Diabetes	8.94%			14.02%	18.20%		8.11%
High cholesterol	36.98%			45.45%	41.08%		39.38%
% of people with 2 or more	9.85%			3.71%	5.43%		2.34%
% of people with 3 or more	0.43%			0.52%	0.33%		0.13%

Source: Argentina—Encuesta Nacional de Factores de Riesgo (2018); Brazil—Pesquisa Nacional de Saúde (2013); Ecuador—Encuesta Nacional de Salud y Nutrición (2018); Guyana—Steps survey of noncommunicable diseases and risk factors (2016); Mexico—Encuesta Nacional de Salud y Nutrición (2018); Peru—Encuesta Demográfica y de Salud Familiar (2018); Uruguay—Steps survey of noncommunicable diseases and risk factors (2013).

Note: (i) Obesity: body mass index ≥ 30; (ii) hypertension: systolic ≥ 140 or diastolic ≥ 90 or taking medicine to control hypertension; (iii) diabetes: glucose ≥ 126 or taking medicine to control diabetes; (iv) high cholesterol: level of cholesterol ≥ 200 or taking medicine to control for high cholesterol.

[8] https://www.who.int/news-room/fact-sheets/detail/noncommunicable-diseases.

Risk factors are unequally distributed if their prevalence differs by socioeconomic status once controlled for age and gender differences. In Argentina and Uruguay, the prevalence of some of these key metabolic risk factors is 5 to 8 percentage points higher for individuals with only primary education or less than among more educated ones (see Table 6.2).

In Brazil, obesity is equally distributed (as in Ecuador), but hypertension is more prevalent among individuals who are less educated. The results are more mixed for Mexico, where the prevalence of diabetes is 7 percentage points higher among the less educated; for high cholesterol, however, the inequality is inverted.

Other cases in which the prevalence of risk factors is lower among the less educated are obesity in Peru and Guyana, as well as hypertension in Peru, and high cholesterol in Argentina. Overall, it is fair to say that there is substantial heterogeneity in the inequality of metabolic risk factors across countries and specific risk factors, but that higher prevalence among the less educated is not uncommon.

The change in the epidemiological profile with an increase in the burden of NCDs in adulthood highlights the need for prevention, timely diagnosis, and adequate management of the NCDs through medical treatment and life habit changes. Moreover, chronic diseases expose households to major financial risks, as their treatment and monitoring typically last until death and can lead to health complications requiring costly episodes of care.[9]

Extending healthcare to reach older adults, who are more likely to suffer from NCDs, will be challenging. The third phase focused on maternal and child health. Other services provided by the hospitals operated by ministries of health came with significant fees and limited coverage (Cotlear et al., 2015).

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[9] For instance, diabetes can lead to amputations, revascularization, and intensive-care stays, especially if it has not been properly managed.

TABLE 6.2 Educational Gap in the Prevalence of Risk Factors

		ARGENTINA	BRAZIL	ECUADOR	GUYANA	MEXICO	PERU	URUGUAY
Obesity	**PS or less**	0.08***	0.00	-0.00	-0.04**	-0.01	-0.12***	0.05**
		(0.01)	(0.00)	(0.00)	(0.02)	(0.01)	(0.01)	(0.03)
	Observations	15,848	54,805	86,094	2,510	13,069	16,509	2,042
Hypertension	**PS or less**	0.05**	0.05***		-0.01	0.02	-0.05***	0.08***
		(0.02)	(0.01)		(0.03)	(0.01)	(0.01)	(0.03)
	Observations	5,080	55,212		1,117	15,050	16,505	2,050
Diabetes	**PS or less**	0.06***			-0.01	0.07***		-0.00
		(0.01)			(0.03)	(0.01)		(0.02)
	Observations	5,025			849	13,098		1,251
High cholesterol	**PS or less**	-0.04*			-0.06	-0.07***		-0.06
		(0.02)			(0.04)	(0.02)		(0.04)
	Observations	4,769			848	13,099		1,242
% of people with 2 or more	**PS or less**	0.06***			-0.06	-0.00		0.08**
		(0.02)			(0.04)	(0.02)		(0.04)
	Observations	4,612			845	8,802		1,213
% of people with 3 or more	**PS or less**	0.03*			0.03	0.03**		0.01
		(0.02)			(0.03)	(0.01)		(0.03)
	Observations	4,612			845	8,802		1,213

Sources: Argentina—Encuesta Nacional de Factores de Riesgo (2018); Brazil—Pesquisa Nacional de Saúde (2013); Ecuador—Encuesta Nacional de Salud y Nutrición (2018); Guyana—Steps survey of noncommunicable diseases and risk factors (2016); Mexico—Encuesta Nacional de Salud y Nutrición (2018); Peru—Encuesta Demográfica y de Salud Familiar (2018); Uruguay—Steps survey of noncommunicable diseases and risk factors (2013).

Note: (i) All regressions control for age, age squared, and age cubic fully interacted with a gender dummy; (ii) "PS or less" is a binary variable that takes values equal to 1 if the educational level is completed primary or less, and zero for higher levels of education; (iii) robust standard errors in parentheses; (iv) *** $p<0.01$, ** $p<0.05$, * $p<0.1$; (v) Obesity: body mass index ≥ 30; (vi) Hypertension: systolic ≥ 140 or diastolic ≥ 90 or taking medicine to control hypertension; (vii) diabetes: glucose ≥ 126 or taking medicine to control diabetes; (viii) high cholesterol: level of cholesterol ≥ 200 or taking medicine to control for high cholesterol.

Not surprisingly, the fourth phase of health systems development in Latin America and the Caribbean is characterized by the need to reduce inequities in access, and by providing better financial protection against healthcare expenses (Cotlear et al., 2015).

Countries followed various healthcare strategies, in some cases combined, that fall into three categories: (1) single insurer, (2) choice of insurer, and (3) strengthened funding and explicit benefits for informal workers. They all attempt to improve equity by either unifying the social security and ministry of health systems, or by decreasing the difference in benefits between the two.

Costa Rica adopted the single-insurer route in the 1970s; Brazil followed in the late 1980s. The link between public health coverage and labor market status disappeared, and the budgets for social security and the ministry of health were merged into a single fund. A unified system meant that the segmentation of benefits for formal and informal workers disappeared. In order to guarantee an equitable outcome, however, the system must allocate resources equitably between rich and poor areas and those that are urban and rural.

If the quality of the unified single-payer system is not good enough (e.g., long waiting lists and restricted choice of care providers), private health insurance that covers higher-quality treatment for some sector of the population is likely to emerge. Inequities in the system might emerge. In Brazil, for example, where access to specialists means long wait times and healthcare quality in the public sector is heterogenous, around 25 percent of the population have voluntary private health insurance (Dmytraczenko and Almeida, 2015; Castro et al., 2019). Alternatively, households can purchase private healthcare directly without being covered by insurance. But this leads to high out-of-pocket payments (see Wagstaff, Eozenou, and Smitz, 2019).

It is not necessarily the case, however, that voluntary private health insurance coexists in all countries with a unified single-payer system. In Costa Rica, for example, the percentage of the population with

voluntary private health insurance was negligible in 2012 (Slon, 2017). The emergence of voluntary private health insurance in some systems and not others might stem from funding levels in the public single-payer system, as well as the population's willingness to pay for higher-quality care.

During the 1990s, seven countries in the region (Argentina, Bolivia, Chile, Colombia, Nicaragua, Peru, and Uruguay) embarked on reforms that gave individuals a limited choice of insurers, although in some cases choice was restricted to workers in the formal sector (Cotlear et al., 2015). These reforms assumed that competition could foster efficiency, raise quality, and cut costs.

Competition among insurers, however, can also lead to "risk selection," that is, to strategies designed to attract the most profitable enrollees.[10] This, of course, introduces an element of inequity, where quality of healthcare might depend on the insurer with which an individual is enrolled. Notably, the percentage of the population with voluntary private health insurance in Argentina, Colombia, and Peru is much smaller than in Brazil. The disparity indicates that people are more satisfied with the multiple-insurer system (admittedly, other factors might be in play, such as differences in income levels and the distribution, regulation, and availability of healthcare providers).

During the 2000s, a number of countries in the region improved healthcare coverage for informal workers by expanding the treatments available to them and making explicit the healthcare benefits to which the entire population was entitled (Cotlear et al., 2015).

Chile and Colombia advanced towards equalizing the benefit packages to which formal and informal workers are entitled. In 2004, Chile introduced explicit guarantees so that the benefits package was the same, regardless

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[10] Glazer and McGuire (2000) show theoretically that even in the case of open enrollment, insurers can distort the quality of the services that they offer to attract profitable patients (see Geruso, Layton, and Prinz [2019] for evidence from the United States). And this occurs even if insurers are reimbursed the expected cost of their enrollees (conventional risk adjustment). In Colombia, the compliance with clinical care guidelines for diabetes care varies between 0 and 27 percent across insurers of the contributory scheme (Buitrago, Ruiz, and Rincón [2018]), which is consistent with insurers distorting quality across services to attract different pools of patients.

of how the individual was insured—publicly or privately.[11] Following a law passed in 2012 and a series of legal decisions recognizing the need to provide subsidized enrollees with the same benefits as contributing enrollees, Colombia has strengthened its subsidized scheme for informal workers and is advancing towards equalizing benefits for enrollees in subsidized and contributory schemes.[12]

In 2006, Uruguay started an ambitious process to incorporate children, spouses, and retired individuals into contributory insurance, culminating in 2016. The number of covered individuals grew from 750,000 to 2,500,000.

Argentina, Peru, and Mexico had less ambitious integration schemes, although all three have made significant advances by creating plans—Plan Nacer and Plan Sumar in Argentina, Seguro Integral de Salud in Peru, and Seguro Popular in Mexico—that covered individuals not enrolled in contributory systems. They also expanded available services and provided their enrollees with explicit benefits packages (see Dmytraczenko and Almeida [2015] for a more comprehensive description of the reforms).

The expansion of insurance schemes for informal workers has led to positive results in many countries:

- The Subsidiado scheme in Colombia decreased the prevalence of low birth weight (Camacho and Conover, 2013), improved child health, curative healthcare visits in adults, and reduced the level and variability of inpatient expenditure (Miller, Pinto, and Vera-Hernández, 2013).

- The Seguro Integral de Salud in Peru increased curative healthcare services (Bernal, Carpio, and Klein, 2017).

- The Seguro Popular in Mexico reduced catastrophic expenditures (King et al., 2009) and infant mortality (Pfutze, 2014; Conti and Ginja, 2017).

[11] The Chilean health system was more integrated than the systems elsewhere in the region (except perhaps for Costa Rica) even before the unified benefit guarantee was implemented.

[12] In Colombia, the subsidized scheme is partly funded by inputs from the contributory scheme, although these have been reduced since 2016.

- The expansion of primary-care services in Brazil led to reductions in maternal, fetal, neonatal, and postneonatal mortality (Bhalotra, Rocha, and Soares, 2019).

- By contrast, the expansion of social health insurance to enrollees' dependents in Uruguay had a negligible effect on perinatal health and healthcare among adolescent mothers and their newborns, at least in the short term (Balsa and Triunfo, 2018).

Despite better access to healthcare seen in phase four, there remain serious flaws in the management of metabolic risk factors, which greatly increase the risk of NCDs. The prevalence of untreated or undiagnosed metabolic risk factors is high (see Table 6.3). For instance, among those suffering from hypertension, between 40 and 60 percent are not taking medication to manage blood pressure.

TABLE 6.3 Lack of Medical Treatment or Diagnosis, in Percentages

	ARGENTINA	BRAZIL	GUYANA	MEXICO	PERU	URUGUAY
Hypertension	63.87%	46.89%	42.51%	44.11%	60.19%	58.19%
Diabetes	26.46%		20.89%	33.46%		32.98%
High cholesterol	72.73%		30.38%	67.02%		39.38%

Sources: Argentina—Encuesta Nacional de Factores de Riesgo (2018); Brazil—Pesquisa Nacional de Saúde (2013); Ecuador—Encuesta Nacional de Salud y Nutrición (2018); Guyana—Steps survey of noncommunicable diseases and risk factors (2016); Mexico—Encuesta Nacional de Salud y Nutrición (2018); Peru—Encuesta Demográfica y de Salud Familiar (2018); Uruguay—Steps survey of noncommunicable diseases and risk factors (2013).

Note: (i) The table presents the prevalence of individuals either not treated or undiagnosed among those who have the disease; (ii) hypertension: systolic ≥ 140 or diastolic ≥ 90 or taking medicine to control hypertension; (iii) diabetes: glucose ≥ 126 or taking medicine to control diabetes; (iv) high cholesterol: level of cholesterol ≥ 200 or taking medicine to control for high cholesterol.

The treatment or diagnosis of metabolic risk factors displays enormous socioeconomic inequities (see Table 6.4). For instance, the prevalence of untreated diabetes among the less educated is higher by 7 percentage points than among the more highly educated in Mexico; the disparity is 13 percentage points in Argentina and 25 percentage points in Uruguay. Although there is some good news (i.e., treatment inequities for hypertension are low in Argentina, Guyana, and Uruguay), the data displays a worryingly consistent pattern where the less educated have a higher prevalence of untreated risk factors.

TABLE 6.4 Educational Gaps in the Lack of Medical Treatment or Diagnosis

		ARGENTINA	BRAZIL	GUYANA	MEXICO	PERU	URUGUAY
Hypertension	**PS or less**	0.02	0.04***	-0.08	0.09***	0.08***	0.01
		(0.03)	(0.01)	(0.07)	(0.02)	(0.03)	(0.04)
	Observations	2,505	18,334	392	4,728	3,554	845
Diabetes	**PS or less**	0.13**		-0.11	0.07**		0.25**
		(0.06)		(0.08)	(0.03)		(0.11)
	Observations	525		137	2,207		119
High cholesterol	**PS or less**	0.08**		-0.11*	0.01		-0.05
		(0.03)		(0.06)	(0.03)		(0.06)
	Observations	1,730		408	5,233		530

Sources: Argentina—Encuesta Nacional de Factores de Riesgo (2018); Brazil—Pesquisa Nacional de Saúde (2013); Ecuador—Encuesta Nacional de Salud y Nutrición (2018); Guyana—Steps survey of noncommunicable diseases and risk factors (2016); Mexico—Encuesta Nacional de Salud y Nutrición (2018); Peru—Encuesta Demográfica y de Salud Familiar (2018); Uruguay—Steps survey of noncommunicable diseases and risk factors (2013).

Note: (i) All regressions control for age, age squared, and age cubic fully interacted with a gender dummy; (ii) "PS or less" is a binary variable that takes values equal to one if the educational level is completed primary or less, and zero for higher levels of education; (iii) robust standard errors in parentheses; (iv) *** $p<0.01$, ** $p<0.05$, * $p<0.1$; (v) obesity: body mass index ≥ 30; (vi) hypertension: systolic ≥ 140 or diastolic ≥ 90 or taking medicine to control hypertension; (vii) diabetes: glucose ≥ 126 or taking medicine to control diabetes; (viii) high cholesterol: level of cholesterol ≥ 200 or taking medicine to control for high cholesterol.

Better detection and treatment of metabolic risk factors are required. Lack of treatment harms the health of the population and strains the health system itself. For example, according to administrative data from the Colombian contributory system, better diabetes monitoring would save an average of $430 per patient each year (Buitrago, Ruiz, and Rincón, 2018).[13]

Improving the detection and treatment of metabolic risk factors can be challenging in most health systems of the region with different coverage schemes for formal and informal workers. In such health

[13] It has been estimated that if ambulatory care were timely, adequate, and accessible, an average of 9.6 million fewer hospitalizations would be seen each year in the region, representing an annual cost equivalent to 2.4 percent of public health expenditures (Guanais, Gómez-Suárez, and Pinzón, 2012).

systems, losing formal jobs and transitioning to informal jobs might mean changing healthcare providers and losing benefits (Guerra et al., 2018), which might disrupt access to diagnosis and continuity of care, especially in the absence of a unified electronic medical record system for all healthcare providers of the country.

The increasing prevalence of NCDs has also led to a special focus on how to incentivize the provision of preventive care. For example, in systems with multiple insurers, some of them might receive a fixed lump sum per individual (adjusted by risk), which might prompt insurers to push more preventive care to reduce future costs, especially when individuals tend to stay with the same insurer for long periods.[14]

TABLE 6.5 Cancer Screening, in Percentages

	ARGENTINA	BRAZIL	ECUADOR	GUYANA	MEXICO	PERU	URUGUAY
Mammography	76.93	78.64	20.13	4.96	16.56	52.89	42.09
PAP	82.97	72.45	19.93	10.80	30.04	50.78	77.11
Prostate cancer		38.78		7.23	8.24		
Colon cancer	32.96			13.5			25.46

Sources: Argentina—Encuesta Nacional de Factores de Riesgo (2018); Brazil—Pesquisa Nacional de Saúde (2013); Ecuador—Encuesta Nacional de Salud y Nutrición (2018); Guyana—Steps survey of noncommunicable diseases and risk factors (2016); Mexico—Encuesta Nacional de Salud y Nutrición (2018); Peru—Encuesta Demográfica y de Salud Familiar (2018); Uruguay—Steps survey of noncommunicable diseases and risk factors (2013).

In Colombia, Miller, Pinto, and Vera-Hernández (2013) find major improvements in preventive care consistent with this argument. Bernal, Carpio, and Klein (2017) do not find improvements in preventive care, in Peru which is not surprising, since the Seguro Integral de Salud had no embedded incentives to promote it. More worryingly, Mexico's Seguro Popular caused preventive care to decline (Spenkuch, 2012).

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[14] In several countries of the region, municipal authorities are responsible for some aspects of preventive care. It is theoretically possible to design a payment system that rewards insurers for providing their enrollees with preventive care, even when they have switched to another insurer.

TABLE 6.6 Educational Gap in Cancer Screening

		ARGENTINA	BRAZIL	ECUADOR	GUYANA	MEXICO	PERU	URUGUAY
Mammography	**PS or less**	-0.11***	-0.10***	-0.11***	-0.00	-0.07***	-0.09	-0.11***
		(0.03)	(0.01)	(0.01)	(0.02)	(0.02)	(0.08)	(0.03)
	Observations	1,764	12,674	33,624	688	9,866	591	1,440
PAP	**PS or less**	-0.14***	-0.11***	-0.02***	-0.08***	-0.03*	-0.07*	-0.12***
		(0.03)	(0.01)	(0.00)	(0.03)	(0.02)	(0.04)	(0.03)
	Observations	2,650	33,083	96,113	688	9,866	1,395	1,440
Prostate cancer	**PS or less**		-0.16***		-0.02	-0.08***		
			(0.01)		(0.03)	(0.02)		
	Observations		13,625		434	7,476		
Colon cancer		-0.15***			-0.07***			-0.11***
		(0.03)			(0.02)			(0.02)
		2,174			1,107			2,268

Sources: Argentina—Encuesta Nacional de Factores de Riesgo (2018); Brazil—Pesquisa Nacional de Saúde (2013); Ecuador—Encuesta Nacional de Salud y Nutrición (2018); Guyana—Steps survey of noncommunicable diseases and risk factors (2016); Mexico—Encuesta Nacional de Salud y Nutrición (2018); Peru—Encuesta Demográfica y de Salud Familiar (2018); Uruguay—Steps survey of noncommunicable diseases and risk factors (2013).

Note: (i) All regressions control for age, age squared, and age cubic fully interacted with a gender dummy; (ii) "PS or less" is a binary variable that takes values equal to one if the educational level completed is primary or less, and zero for higher levels of education; (iii) robust standard errors in parentheses; (iv) *** $p<0.01$, ** $p<0.05$, * $p<0.1$.

For the six countries with recent data, take-up rates for cervical (Pap tests) and breast cancer screenings are much higher than for colon and prostate cancer screening (see Table 6.5). In some countries, coverage rates of Pap tests and mammography are above 70 percent, while in others, they are far lower. This may reflect timeframe differences in the reference periods for the available data. For instance, Mexico's survey questions cover only the previous twelve months.

Across almost all indicators in nearly every country in the region, individuals with secondary and more education are likelier to have been tested than individuals with primary education or less (see Table 6.6). These differences are likely to reflect differences in access to preventive care services, which in turn might depend on individuals' health insurance coverage, as well as their motivation.

6.3.

THE CHALLENGES AHEAD

Despite the growing importance of NCDs, maternal and child healthcare in the region need to improve. As Figure 6.1 indicated, under-5 mortality is still well above OECD levels (see also Box 6.1 on neonatal and postneonatal health outcomes). There is still a marked inequality in the region in under-5 mortality by socioeconomic status: between 2010 and 2015, the under-5 mortality rate of children from more educated mothers was between 50 percent and 60 percent of the least-educated ones (see Figure 6.4). At current levels of government expenditure, providing better maternal and child health outcomes will be a challenge while also addressing the need to prevent and treat NCDs.

Stepping up preventive-care efforts will be crucial to the early diagnosis and better management of NCDs. Because lifestyle changes can reduce serious risk factors like obesity, hypertension, and diabetes, several countries in the region have begun to increase taxes on tobacco products and implement other policies to reduce smoking; Chile and Mexico have taxed sugary beverages.[15] As health coverage improves, individuals might demand less preventive care (ex-ante moral hazard). The design of the health system must counteract this with preventive-care incentives (implicit or explicit) to insurers, healthcare providers, and/or individuals. It can be challenging to policy makers to budget-proof such incentives that pay off only over the long term.

Communicable diseases like dengue and COVID-19 raise a whole new set of challenges for health systems. Health systems need to

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[15] Chile has altered its food product labeling to reduce the consumption of unhealthy foods (Scapini Sánchez and Vergara Silva, 2018; Araya et al., 2019).

be more resilient in the face of future outbreaks of communicable diseases. Despite the shift in morbidity to noncommunicable disease, the burden imposed by communicable diseases has not disappeared, as diseases like COVID-19 that spread rapidly can quickly cripple healthcare capacity.

Dengue, for example, increased from 59 cases per 100,000 in 2007 to 103 cases per 100,000 in 2017; Brazil saw a 14 percent growth in cases in that time period and in 2017 had by far the most cases in the region (280,950).[16] There has been a recrudescence of other diseases—like yellow fever and measles—thought to have been long eradicated.[17] New mosquito-borne diseases like Zika have emerged, with the poor particularly affected (De Maio, 2011). COVID-19 will likewise fall most heavily on the poor, both because of their risk factors and because prolonged quarantine will be so hard to sustain economically (see Box 6.2).

Finally, this discussion has highlighted the ways in which the health of informal workers and their families can improve with access to health insurance. Policy makers are concerned, however, that equalizing the packages to which informal and formal workers have access may lead to more informality (an unintended consequence), possibly weakening the sustainability of the system. Indeed, there is evidence that Seguro Popular in Mexico and the subsidized scheme in Colombia increased informality in the labor market (see Bosch and Campos-Vazquez, 2014; Camacho, Conover, and Hoyos, 2014). Policy makers need to consider simultaneously the design of the health system, welfare, and taxation to find the optimal trade-off, including health systems financed by general taxes with or without regulated insurance premia (Yazbeck et al., 2020).

[16] Data come from the Institute for Health Metrics and Evaluation: https://vizhub.healthdata.org/gbd-compare/#.

[17] http://www.cidrap.umn.edu/news-perspective/2018/02/south-america-records-most-yellow-fever-cases-decades, https://gheli.harvard.edu/news/measles-makes-comeback-latin-america.

BOX 6.1 Neonatal and Postneonatal Mortality

The infant mortality rate can be decomposed into neonatal mortality (mortality in the first 28 days of life) and postneonatal mortality (the infant mortality rate minus the neonatal mortality rate). It is interesting to consider them separately because neonatal mortality is mostly affected by antenatal, birth delivery, and postnatal care, while postneonatal mortality is linked to environmental factors and parental behavior.

Interestingly, these two rates behaved differently in the period considered (see Figure B.6.1.1). While neonatal mortality steadily decreased during the period, the decrease in postneonatal mortality between 2010–14 and 2015–19 was more tenuous. Moreover, although the inequality in neonatal mortality between countries also steadily decreased during the entire period, the inequality in postneonatal mortality in 2015–19 remained similar to that of 2005–09.

FIGURE B6.1.1 Neonatal and Postneonatal Mortality, per 1,000 Live Births

Overall, it would seem that there has been more progress (both in level and inequality across countries) in neonatal mortality than in post-neonatal mortality, suggesting that improvements in access to effective medical care have not been matched by improvements in general environmental and socioeconomic conditions that may influence postneonatal mortality.

BOX 6.2 COVID-19 and the Health of the Poor

On May 15, 2020, there were 450,000 confirmed cases of COVID-19 in Latin America and the Caribbean, and more than 25,000 related deaths. In the absence of a cure or a vaccine for the virus, countries have resorted to lockdowns and physical distancing to reduce the rate of infections and avoid overwhelming national health systems.

Worryingly, there is a high prevalence in the region of major risk factors for severe COVID-19. Cardiovascular diseases, cancers, and diabetes are among the leading causes of years of healthy life lost, and a growing number of adults are obese, a major risk factor for noncommunicable diseases.

A study of more than five thousand patients hospitalized in the New York City area showed that the most common comorbidities of COVID-19 were hypertension, obesity, and diabetes (Richardson et al., 2020). A systematic review of the literature (Yang et al., 2020) suggests that these risk factors are more prevalent for severe patients compared with nonsevere patients.

Using data from the Global Burden of Disease Study, Clark et al. (2020) estimate that 137 million people in Latin America and the Caribbean (or 21 percent of its population) have at least one factor placing them at higher risk of severe COVID-19. The prevalence of one or more conditions was approximately 48 percent for those 50 and older and 74 percent for those 70 and older.

The size of the at-risk population poses a serious challenge as governments seek to ease lockdown restrictions and produce a vaccine and distribute it when it becomes available. A further reason for concern is that COVID-19 is likely to place a greater health burden on the poor than on the rich.

First, the incidence of risk factors such as diabetes, hypertension, and obesity are in general higher among the less educated (see Table 6.2). Moreover, poor individuals are also more likely to have comorbidities, which are known to increase the risk of severe COVID-19 (Yang et al., 2020). They are also more likely to be informal workers, with inferior access to health services and coverage from health insurance.

Second, many people in the region are unaware that they have a risk factor. For example, in Argentina 33 percent of adults with high blood pressure think their blood pressure is not an issue (see

Table B6.2.1). Furthermore, less-educated people are less likely to be aware of underlying health issues (see Table B6.2.2).

TABLE B6.2.1 Prevalence of Risk Factors in the Health-Unaware Population, in Percentages

	ARGENTINA	BRAZIL	GUYANA	MEXICO	PERU	URUGUAY
Hypertension	33.68	19.27	19.50	15.82	16.60	23.10
Diabetes	2.54		5.82	6.68		3.90
High cholesterol	27.06		48.34	30.55		28.01

Sources: Argentina—Encuesta Nacional de Factores de Riesgo (2018); Brazil—Pesquisa Nacional de Saúde (2013); Ecuador—Encuesta Nacional de Salud y Nutrición (2018); Guyana—Steps survey of noncommunicable diseases and risk factors (2016); Mexico—Encuesta Nacional de Salud y Nutrición (2018); Peru—Encuesta Demográfica y de Salud Familiar (2018); Uruguay—Steps survey of noncommunicable diseases and risk factors (2013).

Note: (i) The table presents the prevalence of each disease among individuals who answered in the survey that they do not have the disease; (ii) hypertension: systolic ≥ 140 or diastolic ≥ 90 or taking medicine to control hypertension; (iii) diabetes: glucose ≥ 126 or taking medicine to control diabetes; (iv) high cholesterol: level of cholesterol ≥ 200 or taking medicine to control for high cholesterol.

TABLE B6.2.2 Educational Gap in the Prevalence of Risk Factors in the Unaware Population

		ARGENTINA	BRAZIL	GUYANA	MEXICO	PERU	URUGUAY
Hypertension	PS or less	0.06**	0.04***	0.00	0.03**	-0.02*	0.11***
		(0.03)	(0.01)	(0.04)	(0.01)	(0.01)	(0.04)
	Observations	3,150	41,993	606	11,700	14,525	1,356
Diabetes	PS or less	0.03***		-0.03	0.04***		0.04
		(0.01)		(0.03)	(0.01)		(0.03)
	Observations	4,358		356	11,429		731
High cholesterol	PS or less	0.01		0.02	-0.06***		-0.04
		(0.03)		(0.11)	(0.02)		(0.05)
	Observations	3,500		145	10,640		561

Sources: Argentina—Encuesta Nacional de Factores de Riesgo (2018); Brazil—Pesquisa Nacional de Saúde (2013); Ecuador—Encuesta Nacional de Salud y Nutrición (2018); Guyana—Steps survey of noncommunicable diseases and risk factors (2016); Mexico—Encuesta Nacional de Salud y Nutrición (2018); Peru—Encuesta Demográfica y de Salud Familiar (2018); Uruguay—Steps survey of noncommunicable diseases and risk factors (2013).

Note: (i) All regressions control for age, age^2, age^3, gender, and an interaction between age^3 and gender; (ii) "PS or less" is a binary variable that takes values equal to 1 if the educational level is completed primary or less, and zero for higher levels of education; (iii) robust standard errors in parentheses; (iv) *** $p<0.01$, ** $p<0.05$, * $p<0.1$.

As we move from universal to targeted lockdowns, bear in mind that people who are unaware of their underlying risk may fail to take preventive measures. This is most important if we take into account that the income of the poorest in the region depends on activities not amenable to working from home, so they also face the greatest financial strain arising from quarantine policies and are therefore likely more eager to return to work.

Third, the disease might spread faster within and among poorer households, which may find it harder to quarantine due to poor housing conditions and inability to self-isolate. These factors may increase the transmission of the disease in slums, as is already seemingly the case throughout the region.

Finally, an important related issue to consider is how underlying conditions that affect the severity of COVID-19 are managed during the pandemic. Clark et al. (2020), for example, provide a mixed view of the disease's impact on individuals with HIV who are being treated with antiretroviral therapy (ART). The pandemic is disproportionately exposing the poor to economic hardship, which may force households into the dire decision of spending limited financial resources on food rather than medicine. In this environment, governments must consider providing free medicine to those who are poor and have underlying chronic conditions.

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7.

EDUCATION IN LATIN AMERICA AND THE CARIBBEAN: Segregated and Unequal

by Julián Cristia and Xiomara Pulido

Education shapes lives. The quantity and quality of education a person receives will affect her productivity, income, and well-being. Consequently, education can become the great equalizer. And this fact of education-as-equalizer is key for a region like Latin America and the Caribbean, characterized as it is by extreme inequality across multiple dimensions. Educational systems can also, however, replicate and even intensify existing inequalities. That is, if schools are marked by stark differences in effectiveness, and if rich parents send their children to the best schools, then the educational system may magnify the inequalities already present in society. Ultimately, how educational systems affect inequality will depend on government policies and private decisions.

This chapter takes a deep dive into recent data to assess the extent and characteristics of inequality in education in the region. In doing so, it arrives at four sets of empirical findings.

First, socioeconomic disparities in enrollment increase at each level of schooling. Primary enrollment shows none, and secondary enrollment shows some. Tertiary enrollment, by contrast, is marked by a steep gradient of socioeconomic disparity that has only increased over the past few years. The average gap in tertiary enrollment between students in the top quintile and those in the two bottom quintiles increased from 40 to 51 percentage points between 1998 and 2014 (Arias, Elacqua, and González, 2017).

Second, socioeconomic gaps in academic achievement occur along the life cycle. A high-income adolescent is about two years ahead of a low-income one, according to 2018 data from the Organisation for Economic Co-operation and Development and its Programme for International Student Assessment (PISA) (OECD, 2019). These data also suggest, however, that the gaps have shrunk over the past decade for seven of the eight countries in the region that participated in PISA 2009 and again in 2018. Moreover, and perhaps surprisingly, the average learning gap in the region now resembles the average gap for OECD countries.

Third, schools in the region are highly segregated by socioeconomic status. High-income students and low-income students in the region attend different schools. While not an unusual pattern as a general matter—rich families everywhere can send their children to elite schools—the social segregation in Latin America and the Caribbean schools is unmatched worldwide. To explore this issue, we used data from PISA 2018 and computed the percentage of high-income classmates for the average high-income student and divided it by the percentage of high-income classmates for the average low-income

student.[1] This ratio has a value of 1.7 for Norway and 2.9 for the United States, suggesting social segregation in schools there. These levels of school social segregation pale, however, in comparison with the average value for the region, which stands at 6.5. Moreover, according to this measure of school social segregation, the top five countries in the world are all in Latin America and the Caribbean (Chile, Costa Rica, Mexico, Panama, and Peru). And this pattern of extreme segregation by socioeconomic status is linked to high levels of private school enrollment among the region's high-income students as compared with the rest of the world.

Fourth, the rich-poor gaps also appear in educational inputs. High-income individuals spend about twenty-five times more on the education of their children than low-income parents. Additionally, parents with complete secondary education invest more hours per week in activities related to developing their children's skills. Material inputs are another dimension showing dramatic differences across socioeconomic status. The proportion of students at the bottom quintile who have access to a computer for schoolwork (and who have home internet access) is considerably lower than the proportion of top-quintile students with access to these resources.

These results suggest that schools in the region have not only extreme educational inequality but also extreme levels of social segregation. Moreover, the severe educational inequality documented is expected to worsen with the COVID-19 pandemic because of the substantial socioeconomic gaps in parental inputs. Against this challenging background, it seems imperative for the region to redirect public resources to low-income students. Otherwise, the crisis will generate even graver inequalities in educational outcomes, with intensifying consequences for years to come.

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[1] "High-income" students in this chapter are those in the top quintile of socioeconomic status; "low-income" are those in the bottom quintile.

7.1.

ASSESSING THE GAPS IN EDUCATIONAL OUTCOMES

Acquiring education pays off. Each additional year of education has been associated with an increase in earnings of about 8 percent for primary education, 5 percent for secondary education, and 16 percent for tertiary education (Montenegro and Patrinos, 2014). Hence, when analyzing inequality in educational outcomes, a sensible starting point is to look at differences in education coverage, which ultimately will determine differences in completed years of education.

As shown in Figure 7.1, coverage in primary education is virtually universal in the region. This is a great achievement and cannot be understated: virtually all children ages six to twelve attend primary or pre-primary education. The situation is not so rosy, however, for secondary education. Only 60 percent of low-income adolescents ages twelve to eighteen attend secondary schools, compared to 80 percent of high-income adolescents. Moreover, the coverage income gradient is even steeper for tertiary education, rising from less than 20 percent for low-income youth ages eighteen to twenty-four to 60 percent for high-income youth. This is especially unfortunate because, as mentioned, the average returns to tertiary education in the region are considerably higher than the average returns across other levels of education. That is, at the very level where education supplies the greatest returns is where the coverage for low-income individuals drops markedly.

FIGURE 7.1 Enrollment Rates by Socioeconomic Status
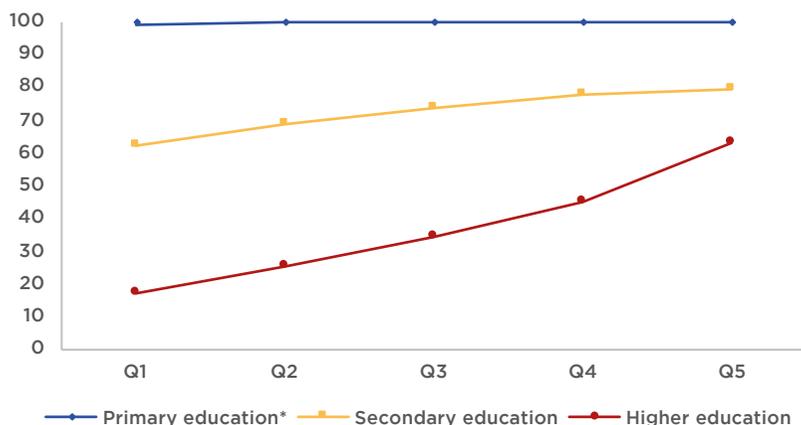
Source: Authors' calculation based on IDB "Harmonized Household Surveys from Latin America and the Caribbean" database.

Note: *Primary education includes students attending pre-primary. Unweighted average for Latin America and the Caribbean. Calculated using 2018 household surveys for Argentina, Brazil, Chile, Colombia, Costa Rica, Dominican Republic, Panama, Peru, Mexico, and Uruguay. The enrollment rate for primary education was calculated as the share of individuals between six and twelve years with complete or incomplete primary education or attending pre-primary. The enrollment rate for secondary education was computed as the share of individuals between twelve and eighteen years old with complete or incomplete secondary. Finally, the enrollment rate of higher education was computed as the share of individuals between eighteen and twenty-four years old with incomplete or complete higher/tertiary education (college). Household income per capita quintiles was calculated at the household level.

Though differences in education coverage are important, ultimately one of the central goals of education is skills development. Individuals with strong skills can lead productive lives and are better prepared to make positive contributions to society. But how different are skills levels across children of different socioeconomic backgrounds and when do the skills gaps emerge? As Figure 7.2 shows, skills gaps emerge early in life in the region. During early childhood, children from high socioeconomic backgrounds outperform their low socioeconomic peers by important margins as measured for socioemotional, cognitive, and language development (Busso and Hincapié, 2017). Children in third grade show large differences in math and reading skills, comparable to gains made by a typical student in about 1.5 years. During adolescence, these skills gaps, now measured in math, language, and science academic achievement, are even larger and represent more than two years of a typical student's normal progression.

FIGURE 7.2 Learning Gaps by Socioeconomic Status

Difference in "learning points" of top and bottom quintiles over the life cycle
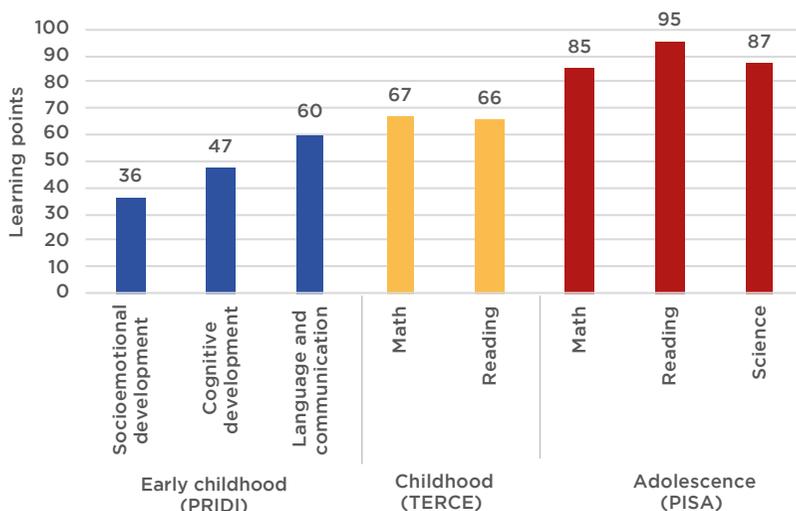
Sources: Busso and Hincapié (2017) based on Regional Project on Child Development Indicators—IDB; Third Regional Comparative and Explanatory Study (TERCE) for third grade; and PISA 2015.

Note: One learning point corresponds to 0.01 standard deviation. The surveys calculate the socioeconomic status of the child using household data on assets and dwelling characteristics. The gap refers to the difference between the top and bottom quintiles.

These results show that students arriving at primary school have substantive skills gaps that increase over time, during primary and secondary schooling. Because skills are developed cumulatively, these findings highlight the need for investing early in life to ensure an adequate start in the skills-development process. This includes providing guidance to parents to promote effective parenting practices as well as providing access to high-quality daycare, preschool, nutritious food, and healthcare (Berlinski and Schady, 2015). Moreover, ample evidence suggests that early-childhood public programs targeting low-income children generate the largest development gains (Cunha et al., 2006). This makes intuitive sense. In the absence of public intervention, high-income children receive adequate supports because their parents can provide them. But for low-income children, public provision of adequate services makes all the difference. Low-income parents tend to lack information about effective parenting; they also lack the resources to adequately support their children's education.

The results suggest the need to strengthen support for low-income students during primary and secondary education. As mentioned, the gaps are large, and they increase as children grow. But how much heterogeneity is there across countries in the region regarding these learning gaps? And how do the learning gaps fare in comparison with those seen in more developed countries? To answer these questions, we use data from PISA 2018 and compute the gaps in reading achievement between fifteen-year-old students in the top and bottom income quintiles. Figure 7.3 indicates that there is not much heterogeneity across the region in this dimension. Moreover, and potentially unexpectedly, average learning gaps for the region are similar to those found in OECD countries. This finding should be interpreted with caution because it is methodologically challenging to compare learning gaps across countries with different levels of learning outcomes. Additionally, the learning gradients for the region may be underestimated as PISA tests only students in school, and hence, the low-income students who have dropped out (and who are expected to perform worse than those low-income students attending school) are not included in the calculations.

FIGURE 7.3 Reading Achievement Gaps in PISA, 2018

Differences in reading learning outcomes of students in top and bottom quintiles, by country
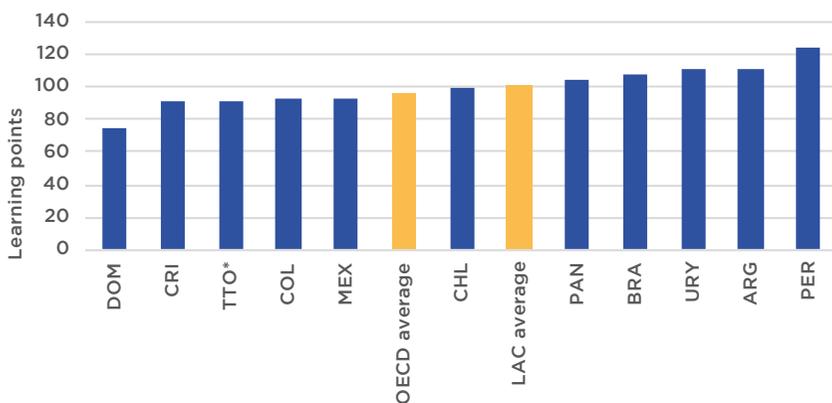
Source: Authors' calculation based on PISA 2015 and 2018.

Note: PISA calculates the socioeconomic status of the child using the parents' highest level of education, parents' highest occupational status, and home possessions. OECD average does not include LAC countries.

* PISA 2015 data.

Still, these learning gaps are large and will translate into different labor market outcomes between low- and high-income children. Consequently, in normal times it would have been imperative to focus policy efforts in the region on narrowing the learning gaps across socioeconomic groups. But the need to prioritize public investments for these students becomes even more pressing as the region faces the COVID-19 crisis, as the brunt of the adverse effects on schooling is expected to fall on low-income students and the emerging middle class vulnerable to negative shocks (see Box 7.1).

BOX 7.1 COVID-19 and Its Potential Effects on Human Capital

In the first semester of 2020, schools were closed in Latin America. Around 154 million children between the ages of five and eighteen were at home instead of in school. There is a good reason for this: schools are the perfect place for viruses to spread. Students are typically in close contact with one another, packed into classrooms, playing in recess, and many times also eating side by side. Additionally, schools in the region have poor access to essential services like water and sewerage (Duarte, Gargiulo, and Moreno, 2011). This lack of infrastructure makes it challenging to follow the WHO recommendations on handwashing and physical distancing to prevent the spread of the disease. Although most children do not seem to suffer severe symptoms when contracting COVID-19, they can still transmit the virus to the adults in their households (Dong et al., forthcoming). There is indeed evidence that closing schools in the middle of flu-like epidemics can reduce the peak infections rate by almost 40 percent (Ferguson et al., 2006).

There are, however, costs associated with closing schools. Many parents rely on schools to have their children fed and taken care of while they work. Beyond these important services that schools offer, there is a critical cost to the pandemic: the learning

losses caused by school closures. How can we quantify how much learning could be lost during the current pandemic? Two sets of studies are informative. First, the so-called summer-loss literature measures how much each student knows about math or reading at the end of the school year and again, after two and a half months, at the beginning of the following academic year. The difference in test scores is typically zero or negative and is known as the "summer loss." We can translate this into how much children learn in terms of standard deviations. Figure B7.1.1 summarizes the summer-loss effect depending on students' socioeconomic status. On average, over all studies and all grades, children from low socioeconomic backgrounds lose about 0.05 standard deviations over the summer, or the equivalent of one month of learning (Hill et al., 2008). Children of low-income families seem to lose both math and reading skills compared with children of high-income families. When compounded over time these differential summer losses can explain part of the learning gaps observed between these two groups in adulthood.

The second set of relevant studies examines the effect of teacher strikes (Belot and Webbink, 2010; Baker, 2013; Jaume and Willén, 2019). These papers look at the learning of students exposed to teacher strikes, particularly long ones, versus similar students who were not. The results of this literature are aligned with the ones observed in the summer-loss literature. Long strikes negatively affect academic achievement of students in math and language. These learning losses have long-run impacts on students, materializing in fewer years of schooling, later graduation, and ultimately, worse labor-market outcomes. In particular a study in Argentina documented that students exposed to an eighty-eight-day teacher strike during primary school had their earnings reduced by 3 percent in adulthood.

The conclusion of this literature is clear: children suffer learning losses when they are out of school. Naturally, many school districts in the region are trying to help teachers, students, and families to

foster students' learning while they are at home with an array of strategies, from virtual classes, homework assignments, phone-call lessons, and dissemination of educational content by TV, radio, and internet. Many of these initiatives require complementary inputs: both material inputs like books and computers but also time and support that parents provide. But access to school-related inputs is unequally distributed across the region. Figure B7.1.2 shows the average share of households in the region with access to school inputs at home. There are vast differences in access to these resources across students of different socioeconomic levels. These disparities in access to school inputs at home, by socioeconomic level, are fairly homogeneous across countries. Figure B7.1.3 compares the access to digital learning inputs in the region and in OECD countries for low- and high-income students. Computers for schoolwork at home and home internet access allow students to continue their education. Unfortunately, there are large gaps in access to these inputs between low- and high-income students in our region. In contrast, these gaps are small for OECD countries.

The fact that low-income students show greater learning losses when they are out of school (compared to high-income students) could be explained in part by this differential access to school inputs at home. There is, however, an important difference between summers and the current school closures because of the pandemic. During summer, most schools are not expecting their students to continue taking classes and learning. As schools in the region promote learning at home, they should consider strategies to help low-income families better educate their children. For instance, using the TV or the radio to distribute school content and lessons to keep students engaged is one possible successful strategy, one that is a tradition in the region (Jamison et al., 1981; Navarro-Sola, 2019). Besides, countries should start planning now for learning-remediation options in the aftermath of the COVID-19 crisis. And there exists evidence in the region on potential programs to implement in this area (Álvarez Marinelli, Berlinski, and Busso, 2020).

FIGURE B7.1.1 Changes in Test Scores between End of School Year and Beginning of Following School Year, by Socioeconomic Status (SES)

Summer-loss effect for a sample of U.S. students (in standard deviations)

READING

■ Low SES   ■ High SES

	GENERAL	1ST GRADE	2ND GRADE	3RD GRADE	4TH GRADE
Low SES	-0.19	-0.08	-0.04	0.05	0.04
High SES	0.16	0.34	0.19	0.25	0.19

MATH

■ Low SES   ■ High SES

	1ST GRADE	2ND GRADE	3RD GRADE	4TH GRADE
Low SES	-0.13	-0.13	-0.03	0.10
High SES	0.20	0.08	0.05	0.12
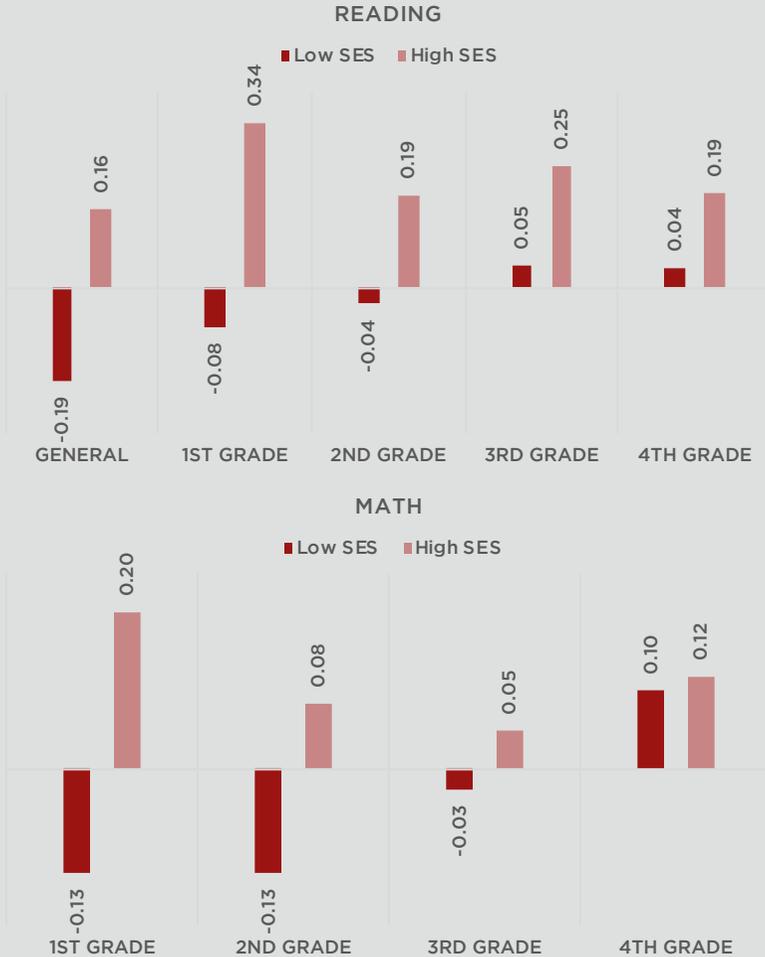
Sources: Alexander, Entwisle, and Olson (2001) and Cooper et al. (1996).

Note: The general effect comes from Cooper et al. (1996) and is the difference between the average fall and spring grade-level equivalent scores. It expresses the change in achievement scores relative to U.S. norms. For the general effect, middle-income students are included as high SES. Results for grade levels come from Alexander, Entwisle, and Olson (2001). To report the effect in standard deviations, the summer gains per grade and SES are divided by the pooled spring exam standard deviation.

FIGURE B7.1.2 Possession of Basic School Inputs at Home, by Family Socioeconomic Status and Country

Average share of households having inputs at home

Quintile 1 Quintile 5

	ARG	BRA	CHL	COL	CRI	DOM	MEX	PAN	PER	URY
Quintile 1	0.49	0.58	0.68	0.45	0.57	0.51	0.43	0.48	0.43	0.60
Quintile 5	0.86	0.91	0.94	0.91	0.90	0.87	0.87	0.92	0.89	0.93
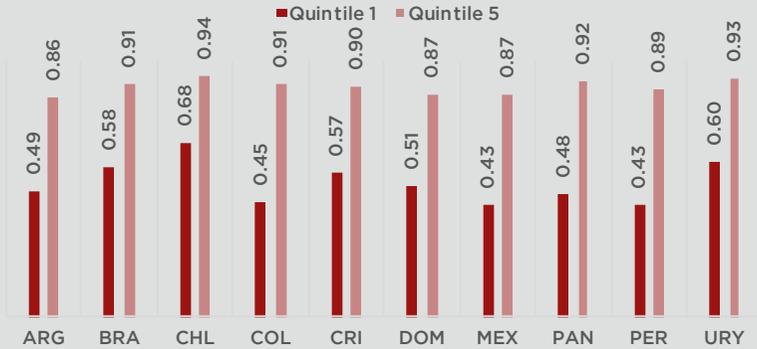
Source: Based on PISA 2018.

Note: The basic inputs average is the mean of six inputs: desk, room of their own, quiet place to study, computer for schoolwork, link to internet, and books to help with schoolwork. Averages for LAC include the following countries: Argentina, Brazil, Chile, Colombia, Costa Rica, Dominican Republic, Mexico, Panama, Peru, and Uruguay. PISA calculates the socioeconomic status of the child using the parents' highest level of education, parents' highest occupational status, and home possessions.

FIGURE B7.1.3 Home Access to Digital Inputs by Family Socioeconomic Status

Average share of households in LAC and OECD countries with access to digital inputs at home

Quintile 1 Quintile 5

COMPUTER FOR SCHOOL WORK: OECD Q1 0.80, Q5 0.98; LAC Q1 0.29, Q5 0.94

LINK TO INTERNET: OECD Q1 0.93, Q5 1.00; LAC Q1 0.45, Q5 0.98
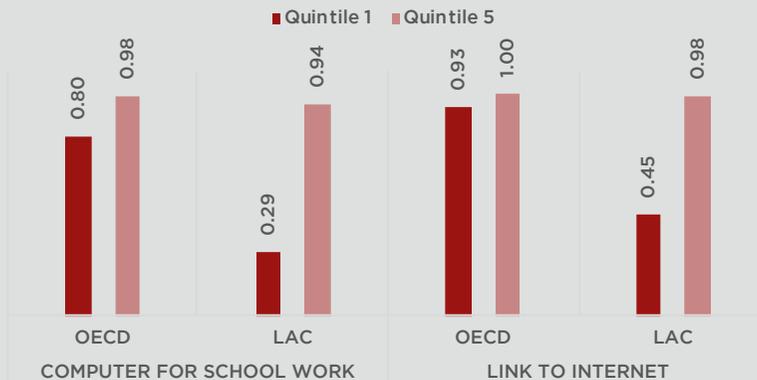
Source: PISA 2018.

Note: Averages for LAC include the following countries: Argentina, Brazil, Chile, Colombia, Costa Rica, Dominican Republic, Mexico, Panama, Peru, and Uruguay. PISA calculates the socioeconomic status of the child using the parents' highest level of education, parents' highest occupational status, and home possessions.

Schools provide not only skills but also friends and contacts. That is, the networks developed during the school years can play an important role during adulthood (Marmaros and Sacerdote, 2002; Verhaeghe, Van der Bracht, and Van de Putte, 2015; Zimmerman, 2019). These friendships and contacts can provide a person with many important things in life— including the social support so critical for well-being (Clark et al., 2019). In fact, the countries of Latin America and the Caribbean are typically outliers in cross-country comparisons of subjective well-being: people report being much happier than one would expect given their economic resources (Beytía, 2016). One explanation for this paradox is the strength of their social connections.

But beyond this critical role played by friendship, fellow students can shape economic opportunities in other ways. There is evidence that friendships developed during adolescence generate sizable wage increases during adulthood (Lleras-Muney et al., 2020). Consequently, schools could affect adult outcomes not only through the development of skills but also through the networks that the schools help to generate. A low-income individual with many high-income classmates may have more professional opportunities in adulthood. And whether low- and high-income individuals are segregated or mixed can affect not only their economic opportunities but also other dimensions. Low-income and high-income individuals who have attended school together and interacted with people from various backgrounds may have a broader understanding of the realities other people face and may be more willing to embrace inclusive perspectives when they act. In fact, there is evidence showing that school integration in the United States produced shifts in the affected students' political views (Billings, Chyn, and Haggag, 2020). Also, integration policies in India made the wealthier students more prosocial, generous, and egalitarian because of their contact with poorer classmates (Rao, 2019). These are important developments because we know that high-income students go on to take leadership positions in government, commerce, media, or civil society.

In Latin America and the Caribbean, are children from different socioeconomic backgrounds attending the same schools and getting to know one another? Or are they segregated by socioeconomic status?

To explore this question, we looked at each country in the region that participated in PISA 2018 (see Figure 7.4). We divided the percentage of high-income classmates that a high-income student has by the percentage of high-income classmates a low-income student has. This ratio should equal one if students are randomly assigned to schools, that is, if the likelihood of having high-income classmates does not depend on income levels. We present results for countries in our region and also include the average for comparison countries, defined as those with a GDP per capita in the same range as those in Latin America and the Caribbean, and for OECD countries.[2]

FIGURE 7.4 A Measure of School Social Segregation: How Likely Are Students to Have Classmates of Higher Socioeconomic Status?

Percentage of high-income classmates of high-income students divided by the percentage of high-income classmates of low-income students
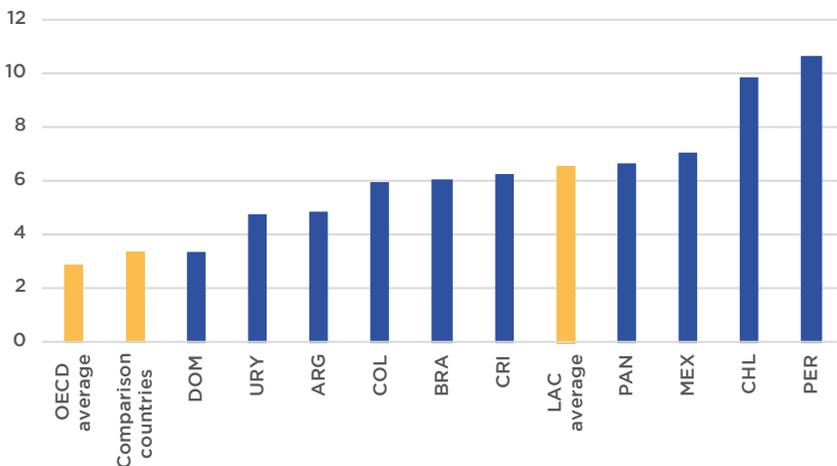
Source: Authors' calculation based on PISA 2018.

Note: The figure expresses the ratio of the percentage of top-quintile classmates a top-quintile student has, to the percentage of top-quintile classmates a bottom-quintile student has. PISA calculates the socioeconomic status of the child using the parents' highest level of education, parents' highest occupational status, and home possessions.

[2] Comparison countries have a GDP per capita between $12,800 and $31,080 (PPP, constant 2017) and include Albania, Belarus, Bosnia and Herzegovina, Bulgaria, Croatia, Georgia, Kazakhstan, Lebanon, Malaysia, Montenegro, North Macedonia, Romania, Russian Federation, Serbia, and Thailand.

We see that the average value for OECD countries is 2.8, and 3.3 for comparison countries, suggesting a degree of social segregation in these groups of countries. The ratios for the ten Latin American countries participating in PISA 2018 are, however, strikingly large.[3] With the lowest value in the region for this indicator (3.4), the Dominican Republic nevertheless has a value higher than the average for the OECD and the comparison countries. And the other nine Latin American countries are in the top thirteen positions of this indicator. In particular, Chile with a value of 9.8 and Peru with 10.6 soar above these rankings.[4] These results suggest that the countries of the region are unique in their levels of social segregation at the school level. An analysis of the components of the region's extreme school segregation suggests that segregating students by private and public schools plays an important role though there are also important levels of segregation both within private and public schools (Vázquez, 2012).[5]

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[3] We also calculated ratios of the percentage of low-income classmates that a low-income individual has divided by the percentage of low-income classmates that a high-income individual has. Again, countries in the region tend to rank high compared to other countries in the world. The results are more extreme, however, when computing ratios considering the high-income classmates that high-income and low-income students have (presented in Figure 7.4). This suggests that school social segregation is stronger at the top of the socioeconomic distribution compared to the bottom of the distribution. In other words, high-income individuals are more isolated from the rest of the population compared to low-income individuals.

[4] The finding that the region has extreme levels of school social segregation also emerges from analyses that use other indicators to measure this concept and from data derived from other PISA rounds (Vázquez, 2012; Chmielewski and Savage, 2015; Gutiérrez, Jerrim, and Torres, 2020). Moreover, measures of school social segregation computed using data from PISA yield similar results to measures constructed using school census data for the case of Chile, providing further evidence of the robustness of the main conclusions presented (Valenzuela, Bellei, and Ríos, 2014).

[5] There are methodologies for decomposing social segregation into three dimensions: (i) public vs. private schools, (ii) within public schools, and (iii) within private schools. An analysis of PISA 2009 decomposes school social segregation in these three components and indicates that the region stands out in terms of social segregation by type of school (Vázquez, 2012). In fact, countries in the region hold the top eight places in this first category. Still, the region also ranks high in social segregation in the other two categories (within private and within public schools). Four countries in the region are among the top ten countries in private-school social segregation, and three countries are among the top ten countries in public-school segregation. Even though the public-private component plays an important role in the region, on average it represents only 30 percent of the overall social segregation seen in schools.

7.2.

TRENDS IN EDUCATIONAL OUTCOME GAPS

How have the gaps in education changed over time? For example, how has the socioeconomic gap in tertiary enrollment evolved over the past two decades? Data from household surveys indicate that, although enrollment rates have increased for both low- and high-income individuals, the socioeconomic gaps have widened markedly. In particular, the disparities in tertiary gross-enrollment rates between top-quintile individuals and those in the first and second quintiles have risen for Brazil, Chile, Costa Rica, Honduras, and Peru, and they have dropped for Argentina (Busso et al., 2017). These results highlight the fact that the tertiary-enrollment growth seen in the region has been fueled primarily by high-income students.

This is bad news for income inequality in the future, considering the generous economic returns traditionally seen for tertiary-level educations. This increase in the supply of tertiary graduates seems to have been a factor, however, in the diminishing returns for tertiary education seen in the region over the past two decades (Busso et al., 2017). The dwindling returns could be good news for income inequality given that individuals possessing tertiary educations have high-income socioeconomic backgrounds. Consequently, broader coverage of tertiary education seems to have countervailing effects on expected future income inequality. Another explanation for the documented diminishing returns of tertiary education points to the role of the large entry of underregulated private providers. Under this scenario, low-income individuals could be suffering the consequences of expanded coverage because they may enroll in low-quality institutions at higher rates (González-Velosa et al., 2015).

Another relevant recent educational trend has been the emphasis placed by governments on improving learning outcomes in basic education. This

emphasis has materialized in an increase in public spending per student, which may benefit more low-income students considering that they attend public schools at a higher rate compared to high-income students. But have these efforts coincided with shrinking learning gaps across socioeconomic groups? The data suggests that this was the case. In particular, Figure 7.5 shows the differences in reading learning outcomes between students from the top and bottom quartiles participating in PISA 2009 and 2018. The learning gaps have narrowed considerably in Argentina, Panama, Peru, Trinidad and Tobago, and Uruguay; Chile, Colombia, and Mexico have experienced more modest reductions (only Brazil has seen the gap widen).[6] In comparison with the OECD, in 2009 the socioeconomic learning gaps were larger in these Latin American and Caribbean countries, but by 2018 the average difference between the regions almost vanished. The gap in learning points remains high, however, and, as mentioned above, learning gradients in the region may be underestimated because low-achieving students in the lower income quintile tend to drop out from school (and hence, from the sample included in PISA) at higher rates.

FIGURE 7.5 The Evolution of Reading Gaps in PISA, 2009 and 2018

Differences in reading test scores between students in top and bottom quartiles, by country
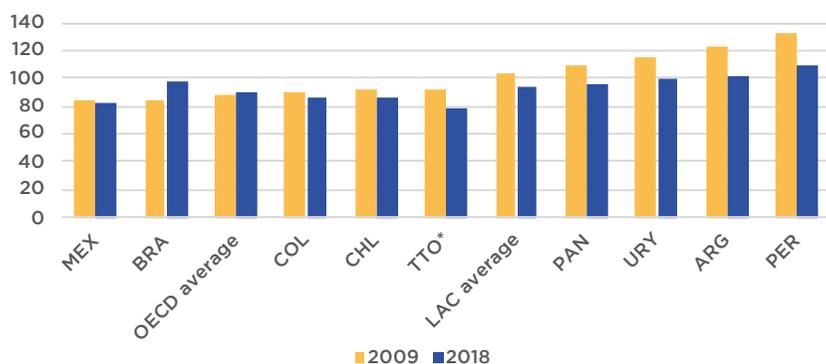
Source: Authors' calculation based on PISA 2009, 2015, and 2018.

Note: PISA calculates a child's socioeconomic status using the parents' highest level of education, parents' highest occupational status, and home possessions. OECD average does not include LAC countries.

* PISA 2009 and 2015 data.

[6] The reductions of the learning gaps could stem from improvements in the performance of low-income students or from a deterioration in the performance of high-income students. An analysis of the eight countries participating in both 2009 and 2018 PISA assessments suggests that both factors may have played a role. On average, low-income students improved eight points, whereas high-income students decreased by two. Six countries showed improvements among their low-income students, while five countries saw decreased performance among their high-income students.

We next explore trends in social segregation in schools over the past decade. To that end, we examine the evolution of the indicator for social segregation (described above) between 2009 and 2018. That is, we compute the average percentage of high-income classmates that a high-income student has, divided by the average percentage of high-income classmates that a low-income student has. The average value for the region has seen modest rises, but there have been important changes in some countries: Argentina and Panama have enjoyed drops in this indicator, while Chile and Peru saw significant hikes.

7.3.

ASSESSING THE GAPS IN EDUCATIONAL INPUTS

Behind the learning gaps across socioeconomic groups lie gaps in educational inputs. To start with, compared with low-income households, high-income families spend massive amounts of money on the education of their children. In particular, an analysis of expenditure patterns in eleven countries in the region documented that high-income families spend twenty-five times more than low-income ones in the education of their children ages six to twenty-three (Busso and Hincapié, 2017). The gaps in spending for children younger than six are also large: high-income families spend about twenty times more than bottom-quintile families.

Covering tuition costs in private schools and universities make up a substantial share of educational investments that families make. This is not surprising, as low-income families typically cannot cover the tuition for private schools and will send their children to public schools that are free of charge. But how does Latin America and the Caribbean compare with other regions in the private enrollment of its high-income students?

Figure 7.6 answers this question by plotting the fraction of high-income adolescents enrolled in a private school at the country level. The results are clear: the enrollment rate of high-income students in private schools in Latin America and the Caribbean is much higher than the average for OECD countries and countries with similar per capita incomes. Among the top fourteen countries with the highest enrollment rate, nine are from the region. This heavy reliance among high-income families on private education is one factor behind the high levels of social segregation in schools documented earlier.

FIGURE 7.6 Percentage of Students in the Top Quintile Who Attend Private Schools, by Country
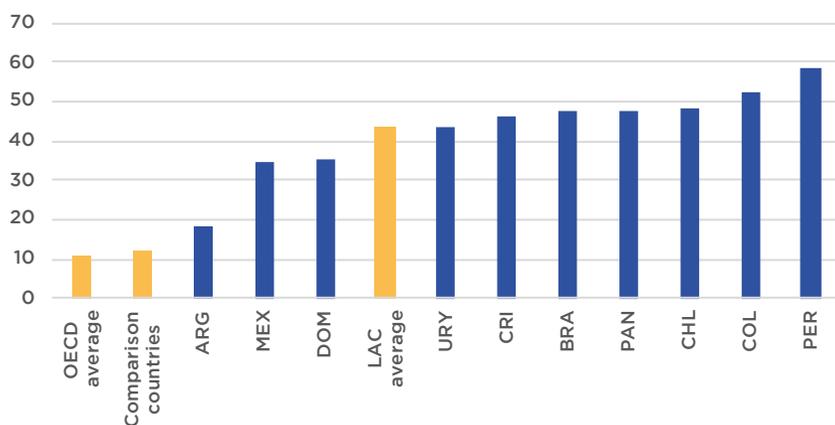
Source: Authors' calculation based on PISA 2018.

Note: PISA calculates the socioeconomic status of the child using the parents' highest level of education, parents' highest occupational status, and home possessions. Comparison countries are Albania, Bulgaria, Bosnia and Herzegovina, Belarus, Georgia, Croatia, Kazakhstan, Lebanon, North Macedonia, Montenegro, Malaysia, Romania, Russian Federation, Serbia, and Thailand. Government-funded schools are not included as private schools.

These differences in investments are also present, though much muted, in terms of nonmonetary investments. In particular, families with mothers who have completed secondary education spend twice as many weekly hours in activities directly related to their children's skills development, compared with families with mothers who did not complete primary education (Busso et al., 2017).[7] It is important to recognize that these

[7] Countries included in the analysis are Argentina, Colombia, Ecuador, Mexico, Peru, and Uruguay.

statistics on monetary and nonmonetary educational expenses do not paint the full picture of private investments in children because many other factors, such as nutrition, health, and housing, can affect children's development. Still, they do suggest striking differences in educational investments made by families, investments that may help to explain the socioeconomic learning gaps documented previously.

Do public investments compensate for inequities in private educational investments? To answer this question, we would like to know how public spending per student varies for children across the socioeconomic landscape. These data are not available, however, for most countries. Still, it is possible to analyze how public spending per student varies across high- and low-income regions within countries. Figure 7.7 shows that geographic funding progressivity varies across the region (Bertoni et al., 2017). In Argentina and Brazil, spending per student is much greater in high-income regions (compared with low-income regions), while spending is similar across regions in Colombia and slightly favors low-income regions in Chile and Peru.

FIGURE 7.7 Public Spending per Student in High- and Low-Income Regions of Selected Latin American Countries

2015 U.S. dollars PPP
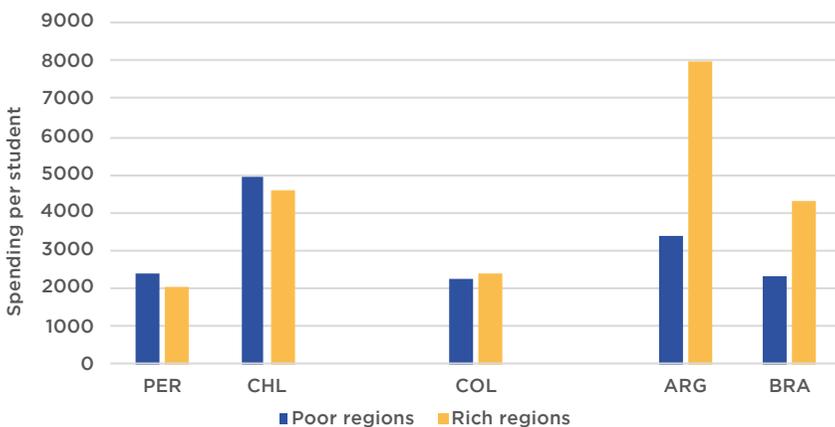
Source: Bertoni et al. (2017).

Note: The poor regions are those in the bottom quintile of the human development index (HDI), while rich regions are those in the top quintile.

Finally, we use data from PISA 2018 to explore differences in a few observable educational inputs across students from different backgrounds. Results indicate that a higher fraction of low-income students in the region have teachers without master's degrees compared with high-income students, though the average difference is small (5 percentage points). Moreover, low-income students are more likely to be taught by a teacher with less than five years of experience, though again the difference is just 6 percentage points.[8] The dimension where we do find larger gaps is educational materials. In particular, there is a difference of 30 percentage points in the fraction of principals who report insufficient educational materials for low-income students compared with high-income students.

7.4.

CONCLUSION

The region is characterized by extreme inequality across a number of socioeconomic dimensions, and this inequality is also documented in terms of educational indicators. There are large socioeconomic gaps in secondary and tertiary enrollment, academic achievement, and educational investments. But even more appalling is that these gaps are expected to widen as the COVID-19 pandemic breaks across the region. We know the effects will be disproportionally felt by low-income families. Moreover, the educational process is characterized not only by stark inequalities, but also by extreme levels of social segregation across schools.

What can be done? Because the patterns laid out above arise from entrenched social and economic forces, it will be a complex matter to address them solely through educational policies. Still, such policies can do much to

[8] Bertoni et al. (2018) document that a larger share of disadvantaged students in Chile, Colombia, and Peru are taught by uncertified teachers and also by novice teachers.

improve the status quo. In particular, public action could tackle three main policy challenges: first, reducing dropout rates among low-income students; second, increasing their academic achievement; and third, decreasing social segregation in the schools. To curtail dropout rates, countries could introduce conditional cash transfer programs to boost secondary-school enrollment and graduation (Duryea, Frisancho, and Hincapié, 2017; Vivalt, 2019). In turn, scholarships and student loans could reduce tertiary drop-out rates (Solis, 2017; Arias, Elacqua, and González, 2017).

To reduce academic achievement gaps, a key initiative would implement funding formulas to ensure that schools catering to low-income students have the resources they need. Moreover, monetary and nonmonetary incentives can be established to attract effective teachers to prioritized schools. Additionally, instruction in these schools can be supported through programs that use technology in a structured way and provide coaching to teachers (Cristia, 2017). Regarding social segregation, governments could introduce centralized school-assignment mechanisms, putting in place specific features designed to promote the integration of students from across the socioeconomic spectrum.

Implementing these policies will not be an easy feat. Financial constraints will be especially acute in the wake of COVID-19, and the political and economic constraints will be fearsome as well. To tackle the financial constraints, governments should make a concerted effort to target programs and policies so they primarily support low-income individuals. Moreover, given tight fiscal budgets, the region needs a renewed focus on prioritizing the best and most cost-effective policies, relying on rigorous evidence to guide policy action (Busso and Cristia, 2017). Perhaps the most formidable challenge consists of the political economic constraints around redirecting resources to low-income populations. Broad support for these reforms will be elusive and require a healthy conversation on the role of educational systems in actively reducing inequality and segregation. In these discussions, it will be important to highlight that many educational interventions produce a larger effect per dollar spent when they target low-income students. Consequently, resources that target disadvantaged populations will make sense not only from an equity perspective but also from an efficiency perspective.

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8.

THE TRANSFORMATIONAL ROLE OF LABOR MARKETS

by Matías Busso, Julián Messina, and Joana Silva

Wages were central to reducing inequality of household income in the region over the past two decades.[1] The role of wages is particularly noteworthy in view of the expansion of social protection programs during the period, which targeted the less favored. The diffusion of conditional cash transfers and noncontributory pensions had a significant bearing on poverty alleviation (Fiszbein and Schady, 2009; Ocampo and Gómez-Arteaga, 2017). Their impact on inequality, however, was more limited.[2] That developments in the labor market have been so central is perhaps not so surprising, however, considering that 73 percent of total household income in the region is obtained through work. What happens in the labor market is fundamental to the well-being of Latin American and Caribbean families.

[1] See Chapter 2 and the analysis in López-Calva and Lustig (2010) and Azevedo, Inchaust, and Sanfelice (2013).

[2] The limited impact on inequality is likely due to the size and targeting of existing programs. Despite the recent expansion, social protection programs remain small in Latin America and the Caribbean and, with varying degrees across countries, present insufficient coverage of the poor and important leakages. See the discussion in Chapter 12 in this report and in Robles, Rubio, and Stampini (2019).

Reductions in wage inequality in Latin America and the Caribbean over the past twenty years were driven by two main forces: (i) the expansion of education and the consequent decrease in returns on skills, and (ii) a boost in internal demand fueled by the region's commodity boom, which favored the least-skilled workers (Messina and Silva, 2018). In some countries, hikes in the minimum wage and greater formalization played a supporting role in reducing inequality. Polarizing forces that are boosting wage inequality in developed countries—such as skill-biased technical change and the substitution of machines for routine work— remain weak in the region, offering no countervailing resistance to the above-mentioned mechanisms (Messina and Silva, forthcoming).

Despite the compression of the wage structure over recent decades, the labor market is still driving much of the region's inequality. More than 50 percent of the workers in Latin America and the Caribbean are part of the informal economy, meaning they have no access to contributory pensions, health insurance, or a safety net to protect them from income losses in the event of unemployment. Even if wage inequality fell in the region, it would remain much higher than in developed countries. Unequal access to quality education, high and persistent productivity differentials across firms, weak unionization, inadequate coverage for the vulnerable, and noncompliance with minimum-wage laws—all these factors appear to explain the region's high levels of wage inequality.

8.1.

THE RECENT EVOLUTION OF WAGE INEQUALITY IN LATIN AMERICA

Starting in 2002, wage inequality fell in every Latin American and Caribbean country where trends can be consistently measured, except

for Costa Rica (Figure 8.1).[3] Between 2003 and 2013, it declined by an annual average of 0.85 percent, or, in terms of the Gini coefficient, from 0.44 to 0.40. The decline was much stronger if we evaluate the gap between the relatively rich and poor. The ratio of percentiles 90 and 10 in the wage distribution declined by an annual rate of 2 percent. When commodity prices decelerated, so did economic growth. But wage inequality continued its descent at similar regional rates. Between 2012 and 2017, the Gini coefficient declined by 1 percent, and the 90/10 interpercentile range by 2 percent.

FIGURE 8.1 The Evolution of Wage Inequality in Latin America, 2003–17

Annual percentage change in indicator
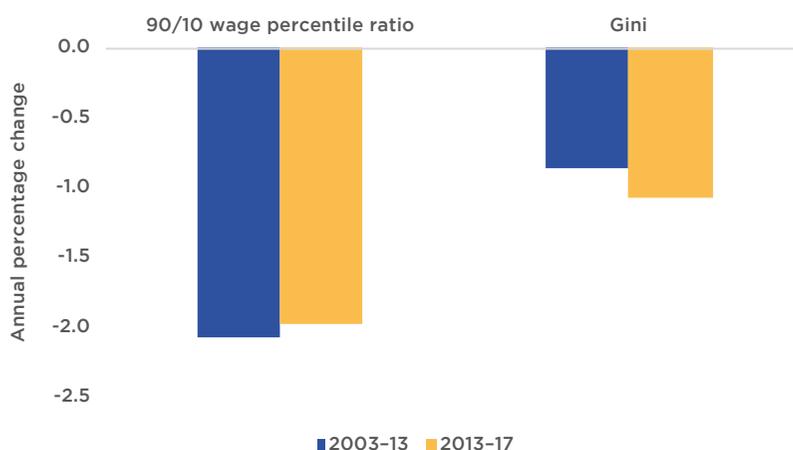
Source: Authors' calculations based on data from the Socio-Economic Database for Latin America and the Caribbean (SEDLAC), maintained by the World Bank and the Center for Distributive, Labor and Social Studies (CEDLAS) at the Universidad Nacional de La Plata.

Note: The regional aggregates are unweighted averages of each inequality measure (Gini coefficient) and the ratio of the 90th and 10th wage percentiles for thirteen countries (Argentina, Bolivia, Brazil, Chile, Costa Rica, Honduras, Mexico, Nicaragua, Panama, Paraguay, Peru, El Salvador, and Uruguay). To analyze the same set of countries every year, interpolation was applied if country data were not available for a given year. Wages are defined as real hourly income (using 2005 purchasing power parity conversion rates) in the worker's principal occupation. The sample was restricted to individuals eighteen to sixty-five years of age who were employees or self-employed. The 1st and 99th percentiles of the country-year wage distributions were trimmed. South America includes Argentina, Bolivia, Brazil, Chile, Paraguay, Peru, and Uruguay; Mexico and Central America includes Costa Rica, El Salvador, Honduras, Mexico, Nicaragua, and Panama.

[3] Wage inequality calculations in the first section of this chapter build on and update the estimates in Messina and Silva (forthcoming). They use household data for sixteen countries harmonized by SEDLAC. The earnings measure used is hourly earnings in the worker's principal job. The sample includes all men and women aged 16 to 65 who are employees or self-employed. Unpaid family workers and employers are excluded. All statistics are obtained using sampling weights.

The consistency of trends during the commodity boom and afterward hides an important subregional dimension. During the commodity boom, wage inequality declined more markedly in the net-commodity-exporter countries of South America than in the net-commodity-importers or commodity-trade-neutral countries of Central America and Mexico (Figure 8.2). Between 2003 and 2013, the Gini (p90/p10) in South America declined by an annual 1.2 (3.1) percent, compared with 0.3 (0.2) percent in Central America and Mexico. During the deceleration phase, the pattern reversed, at least with regard to the interpercentile ratio. Between 2013 and 2017, the gap between high-pay (p90) and low-pay (p10) workers shrank at an accelerated annual rate of 2 percent in Central America and Mexico, and, with the drop in commodity prices, virtually stagnated (–0.2 percent) in South American countries. Using the Gini, inequality declined in Central America and Mexico more rapidly from 2013 to 2017 than in the preceding decade. But it showed a similar annual pace of reduction in South America. This illustrates the importance of using more than one summary measure of inequality. Every measure highlights a different dimension of inequality, and trends may differ significantly according to the measure used.

FIGURE 8.2 The Evolution of Wage Inequality in Latin America: Subregional Averages, 2003–17

Annual percentage change
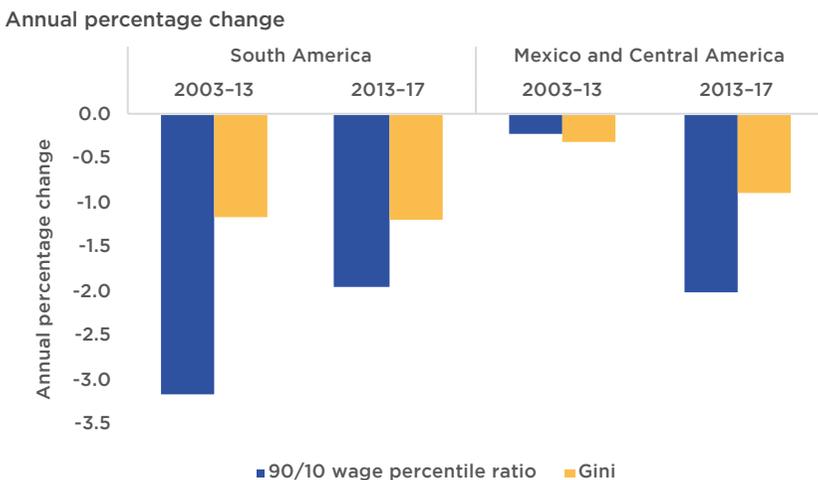
Source: Authors' calculations based on data from SEDLAC.
Note: See note below Figure 8.1.

The reduction of wage inequality was driven by much stronger wage growth among low-wage workers (Figure 8.3). During the commodity boom, the growth of wages at the bottom percentile in South American countries doubled the growth of wages in the top percentile—on average, 6 percent annually compared with 3 percent. In Central America and Mexico, the pattern was similar, but growth rates were much more modest at both ends. During the stagnation phase (2013–17) the wage growth was higher in Central America and Mexico, but the incidence across the distribution continued to favor the poor: wages at the bottom grew at an annual rate of 3.2 percent in the 10th percentile, against 1.9 percent in the 90th.

FIGURE 8.3 Annual Wage Growth by Percentile in Latin America, 2003–17

Annual percentage change
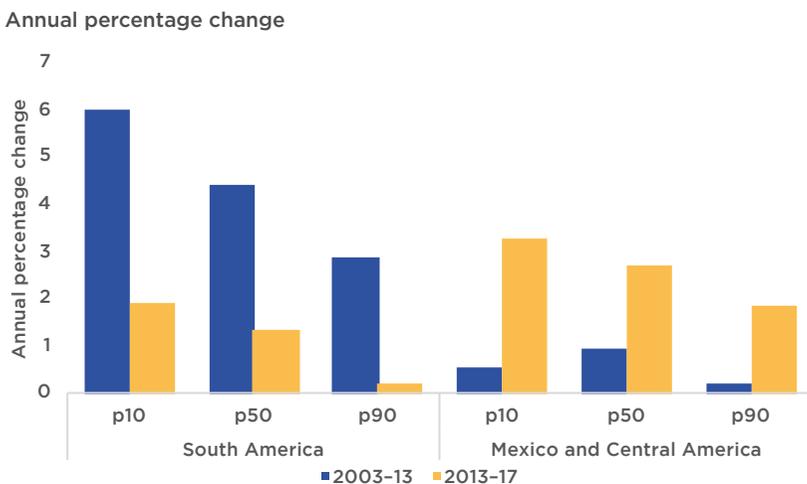
Source: Authors' calculations based on data from SEDLAC.
Note: See note below Figure 8.1.

8.2.

WHY DID INEQUALITY FALL?

8.2.1 Changes in skill premiums and labor supply

As a region, Latin America and the Caribbean has made a tremendous effort to expand education to all segments of the population. Between 1990 and 2010, years of schooling in the population increased by 50 percent, from six to nine (Busso et al., 2017). Changes in labor supply greatly compressed the wage structure through the decrease of the schooling premium during the first decade of the twenty-first century, when the relative demand for low-skilled workers increased (Fernández and Messina, 2018; Acosta et al., 2019). But schooling was not the only dimension of human capital with a declining premium. During the first decade of the twenty-first century, the returns on labor market experience fell, too.

Premiums to secondary and tertiary education fell throughout the region. The composition-adjusted secondary-school premium declined faster during the golden decade than during the stagnation phase (Figure 8.4).[4] Consistent with supply-side forces, this pattern was particularly strong in countries that had been lagging in educational attainment, thereby expanding the share of workers with a high-school degree (Messina and Silva, 2018). During the stagnation, the decline in the tertiary premium accelerated, which suggests that the drop in relative demand for university-educated workers identified in the first decade of the twenty-first century (Fernández and Messina, 2018; Acosta et al., 2019) may have accelerated during the slowdown.

[4] The composition adjustment remains constant as the skill-demographic composition of the groups changes over time, thus isolating changes in the premiums. To adjust for changes in composition, mean (predicted) log real wages are computed for 40 skill-demographic groups defined by five education categories, four potential experience cells, and gender. The figures for growth of wages of broader groups shown in Figure 8.4 are weighted averages of the subgroups that compose each cell, where the weights are the average employment level of each subgroup in the period.

FIGURE 8.4 Growth of Composition-Adjusted Schooling Premiums in Latin America, 2003–17

Annual percentage change
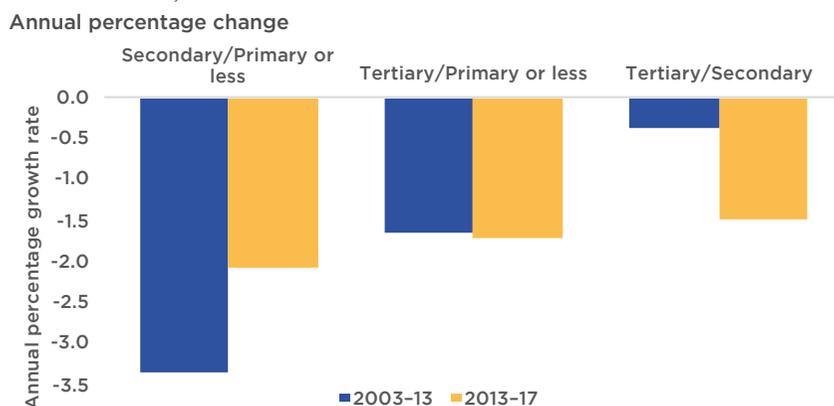
Source: Authors' calculations based on data from SEDLAC.

Note: Composition-adjusted wage gaps are constructed in three steps. First, mean (predicted) log hourly wages adjusted by real purchasing power parity are computed for forty skill-demographic cells resulting from the interaction of five education categories (primary education completed or less, secondary-school dropouts, secondary-school graduates, tertiary dropouts, and tertiary graduates or more), four potential experience categories defined in ten-year intervals (0–9, 10–19, 20–29, and 30 or more), and gender. Second, the wages of broader education groups are reconstructed using fixed-weighted averages of the cell means that compose each group, where the weights are the average employment share of each cell in the period. Third, the wage gaps are constructed by differentiating the predicted log hourly wages across groups.

As for the experience premium, a continuous decline is seen during the first two decades of the twenty-first century (Figure 8.5). Fernández and Messina (2018) find that an aging population explains only part of the decline. Among unskilled workers, it explains about half of the secular decline in Argentina, Brazil, and Chile. Among university-educated workers, the average age of working-age individuals is slowly declining, as recent cohorts are receiving more education. Changes in labor supply therefore explain only about a third of the reduced experience premium among tertiary graduates. The decline of the experience premium, especially among university-educated workers, may also reflect skill obsolescence. Workers obtain general, occupation-, and sector-specific skills through their work lives. If technological change depreciates some of those skills—for example, because of the arrival of computers in the workplace—more experienced workers are likelier to see their skills depreciate. Skills obsolescence is consistent with the faster decline of the experience premium observed among mature workers (those with more than 30 years of labor market experience) in the region. Focusing on tertiary graduates, Messina and Silva (2018) find trends consistent with skills obsolescence in Argentina, Brazil, and Mexico.

FIGURE 8.5 Growth of Composition-Adjusted Experience Premiums in Latin America, 2003–17

Annual percentage change
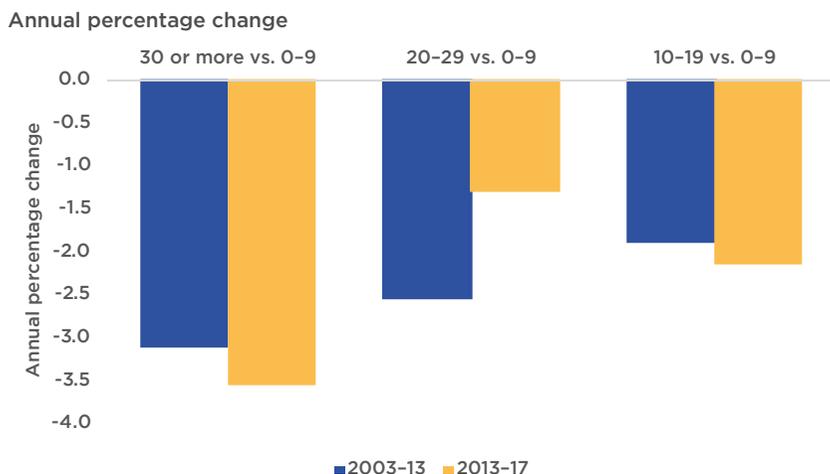
Source: Authors' calculations based on data from SEDLAC.

Note: Potential experience is defined as age minus years of education minus 6. Thirty or more vs. 0–9 refers to the premium for workers with more than 30 years of experience vs. those with 0 to 9 years of experience. For additional details on the construction of the composition-adjustment premiums, see note to Figure 8.4.

8.2.2 The rapid increase in minimum wages

During the golden era, many governments in the region increased minimum wages in an attempt to facilitate a more inclusive growth process. In most countries the growth of the real minimum wage outpaced median wages (Figure 8.6). It may be misleading, however, to assume that higher minimum wages were the main factor behind the rapid growth of wages at the bottom of the distribution discussed in Figure 8.3—and this for at least two reasons. First, there is considerable noncompliance with the minimum wage in the region; many workers are paid below the minimum (Messina and Silva, 2018). Second, wage inequality plunged in Paraguay and Peru, where minimum wages fell with respect to the median wage. Credible counterfactuals are needed to establish the causal effect of the minimum wage.

The increases of the minimum wage during the first decades of the twenty-first century contributed to the decline in wage inequality, according to several studies that build counterfactual exercises. Maurizio and Vázquez (2016) find equalizing effects of the minimum wage in Argentina, Brazil,

Uruguay, and to a lesser extent Chile. Focusing on the formal sector in Brazil, Engbom and Moser (2017) show that the effect of the minimum wage on inequality may be large, especially considering spillovers to workers receiving more than the minimum wage. Ferreira, Firpo, and Messina (2017) conclude that about 20 percent of the overall inequality reduction in Brazil during the period 2002–2012 may be attributed to the minimum wage.

FIGURE 8.6 Ratios of Monthly Average Minimum Wage to Median Wage in Latin America, 2003 and 2017
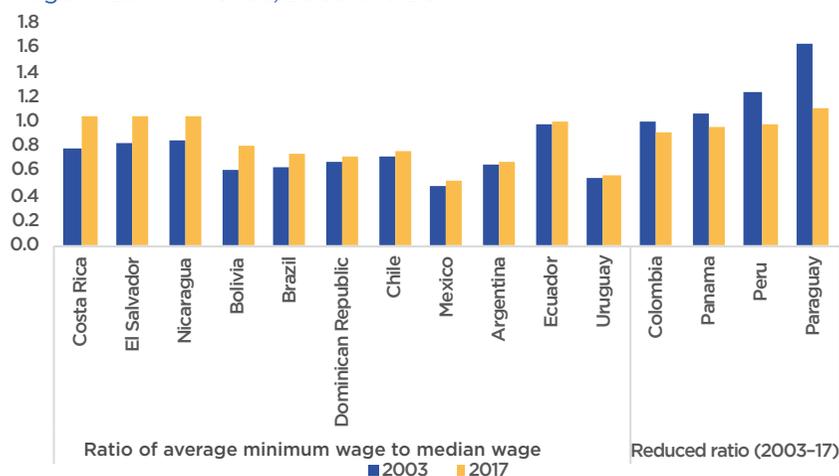
Source: Authors' calculations based on IDB's "Harmonized Household Surveys from Latin America and the Caribbean." Data is for 2003 and 2017 for all countries, except Costa Rica (2002), Mexico and Peru (2004), Nicaragua and El Salvador (2005), Colombia and Uruguay (2006), Nicaragua (2014), Brazil (2016), and Mexico (2018).

8.2.3 Growth and the commodity boom

Countries that are net commodity exporters in South America enjoyed stronger growth and much more rapid declines in inequality during the golden era than did Mexico and Central America. These trends suggest that the commodity boom may have had a crucial role in the reduction of inequality. But the attempts to link the two phenomena have focused on Brazil, leaving the broader picture unclear. In Brazil, high commodity prices led to wage gains in commodity-rich regions (Costa, Garred, and Pessoa, 2016) and sectors (Adão, 2015). Because winning sectors and regions in Brazil featured lower average wages at baseline, this resulted in lower interregional and intersector inequality. But Costa, Garred, and Pessoa (2016) found limited impacts on the observed reductions of inequality within regions,

by far the largest factor in the overall inequality decline. Similarly, Adão (2015) estimates that the commodity boom can explain at most 10 percent of the observed inequality reduction in Brazil. These papers miss important channels, however, such as the wealth effects of the commodity boom. Benguria, Saffie, and Urzúa (2018) incorporated this dimension in a model where the commodity boom triggers two types of workers' reallocation: from manufacturing to services and from exporting to nonexporting firms within manufacturing. In the two cases, reallocation triggers a reduction of the skill premium, with potentially important equalizing effects. See Messina and Silva (forthcoming) for an in-depth examination.

8.2.4 The tepid pace of technical change

As much as wage inequality fell because of the factors analyzed above, it also fell because some major forces that explain increasing inequality in other regions, such as skill-biased technical change, are not yet strong in Latin America and the Caribbean. Technical change is a major force behind increasing wage inequality in developed countries. Because of technical change, skill-intensive, high-paying occupations are in high demand, at the expense of jobs in the middle of the skill distribution (see Autor, Katz, and Kearney [2008] for the United States and Goos, Manning, and Salomons [2009] for Europe). This occurs because of the task content required of these occupations. Most skill-intensive occupations are not easily replaced by machines or computers because they require abstract problem solving and creativity, all features that are not easily coded into software. Instead, traditionally well-paid occupations such as office clerks, metal and machinery workers, machine operators, and assemblers are seeing how a significant share of their duties can either be mechanized or coded so as to be performed with simple software. As the demand for such mid-skilled occupations has fallen, so have their relative wages.

The pace of technical change in Latin America is slow. Busso et al. (2017) analyze changes in employment in Brazil, Chile, Mexico, and Peru. They find evidence consistent with polarization only in Chile. This seems to be driven by three combined factors. First, firms have few incentives to introduce new technologies because of low labor costs. Second, robotization and technology require capital investments, which are difficult to make in a region with shallow credit markets and little savings (Cavallo et al., 2016).

Third, sizable resources are misallocated towards small and unproductive firms (Busso, Madrigal, and Pagés, 2013) that are technological laggards. New technologies arrive in Latin America, but their diffusion is slow.

8.3.

OTHER DIMENSIONS OF LABOR MARKET INEQUALITY: INFORMAL WORK AND ACCESS TO SOCIAL SECURITY

The labor market in Latin America is the source of significant inequality in the fringe benefits workers receive. In most countries, health insurance, contributory pensions, and automatic stabilizers such as unemployment benefits are linked to having a formal job. Even among formal employees, it is often the case that contribution densities are too low to provide access to a pension and a stable safety net (Bosch et al., 2018). Informal workers have no access at all to these benefits. They can be divided into two groups. The first is employees whose employers do not pay social security for them. The second is own-account workers who do not pay social security. Such working arrangements may be illegal, depending on each country's legislation.

Almost one in every two workers in Latin America and the Caribbean is informal (Figure 8.7). And this even after two decades of strong progress towards formalization, which brought about a reduction in informality of 6 percentage points (Messina and Silva, forthcoming). About 25 percent of working adults are employees without access to health insurance or a pension, and some 24 percent are self-employed without a tertiary degree. Of course, there is tremendous heterogeneity across countries. In the Bahamas, Chile, Costa Rica, and Uruguay, less than a third of all workers are informal. In Bolivia, Nicaragua, Peru, and Paraguay, more than two-thirds are.

FIGURE 8.7 Informal Work in Latin America, circa 2017
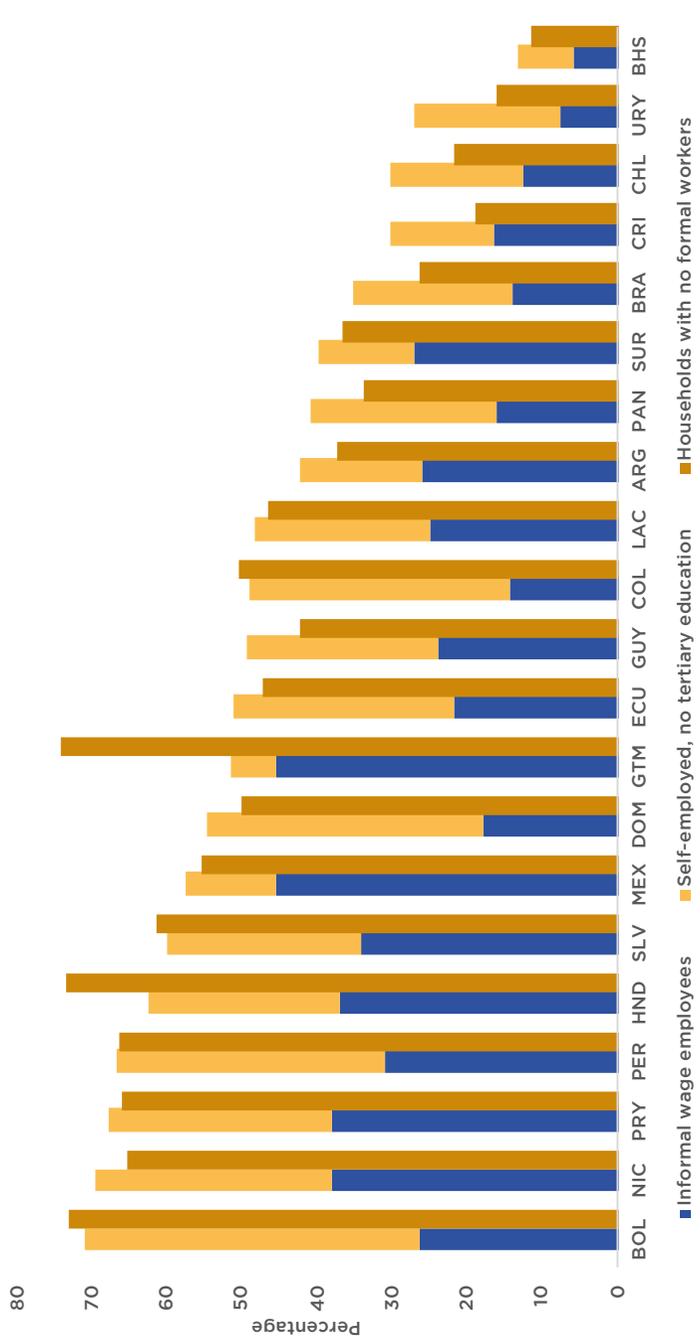
Source: Authors' calculations based on IDB's "Harmonized Household Surveys from Latin America and the Caribbean." Data is for 2017 for all countries, except Bahamas (2014), Brazil (2016), Guatemala (2014), Mexico (2018), and Nicaragua (2014).

Because of informality and assortative mating, many households lack any access to contributory health insurance and pensions. People chose to marry people similar to themselves, in terms of levels of education, ethnic background and other characteristics, including their propensity for informal work. If primary earners in the household were formal, and second or third earners were informal, the household would still have some form of automatic stabilizer to weather a short-term health or employment shock. This is typically not the case. Forty-six percent of households in Latin America have no member in the formal sector (Figure 8.8). In poorer countries, such as Bolivia, El Salvador, Honduras, and Nicaragua, this share exceeds 60 percent. But even in upper-middle-income countries like Paraguay and Peru, two-thirds of households are informal.

Informal households are concentrated at the bottom of the income distribution. Most depend on daily wages, have no access to safety nets, and have nonexistent or limited savings (see Chapter 11), making them particularly vulnerable to economic shocks such as the COVID-19 crisis (see Chapter 3). The share of households without any formal workers is typically twice or even three times larger in the lowest household-income quintile than in the highest one (Figure 8.8). In more than 95 percent of households in the first quintile, every member is either working informally or not working at all.

FIGURE 8.8 The Distributional Burden of Informality in Latin America, circa 2017
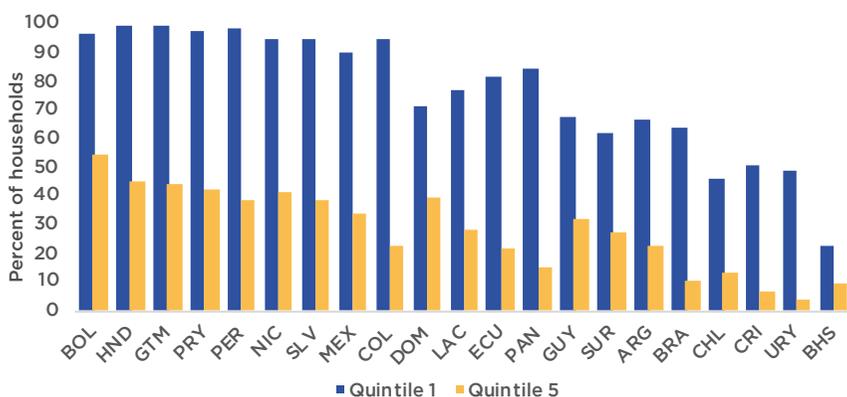
Source: Authors' calculations based on IDB's "Harmonized Household Surveys from Latin America and the Caribbean." Data is for 2017 for all countries, except Bahamas (2014), Brazil (2016), Guatemala (2014), Mexico (2018), and Nicaragua (2014).

8.4.

AN UNFINISHED AGENDA: WAGE INEQUALITY REMAINS HIGH IN THE REGION

Despite the sharp compression of the wage structure of past decades, wage inequality remains high in the region. The average Gini coefficient of wages and salaries in the region is 0.40, six points above the United States, and fourteen points above the average of high-income countries (Figure 8.9). Differences are even larger if we compute inequality of labor income across all workers (including the self-employed). Argentina is the regional outlier, followed by Uruguay, but both countries have much higher levels of inequality than the average for the member countries of the Organisation for Economic Co-operation and Development, and higher than the United States.

Several factors may be behind Latin America's extreme wage inequality. Its economic mechanisms have not been pinned down in the literature, but several candidates have emerged.

Unequal human capital investments and opportunities. The region has traditionally offered extremely unequal opportunities to high- and low-income individuals. Unequal endowments of human capital related to health and education are a prime factor in unequal pay. Malnutrition used to be prevalent among poor children, which is known to have long-term consequences for human capital accumulation (Almond, Currie, and Duque, 2018). Although the region greatly expanded access to health services (see Chapter 6) and education (see Chapter 7) in the past few decades, the gap in the quality of schooling received by low- and high-income families has remained high (Busso et al., 2017; see Chapter 7). And the intergenerational mobility of education continues to be among the lowest in the world (Ferreira et al., 2012).
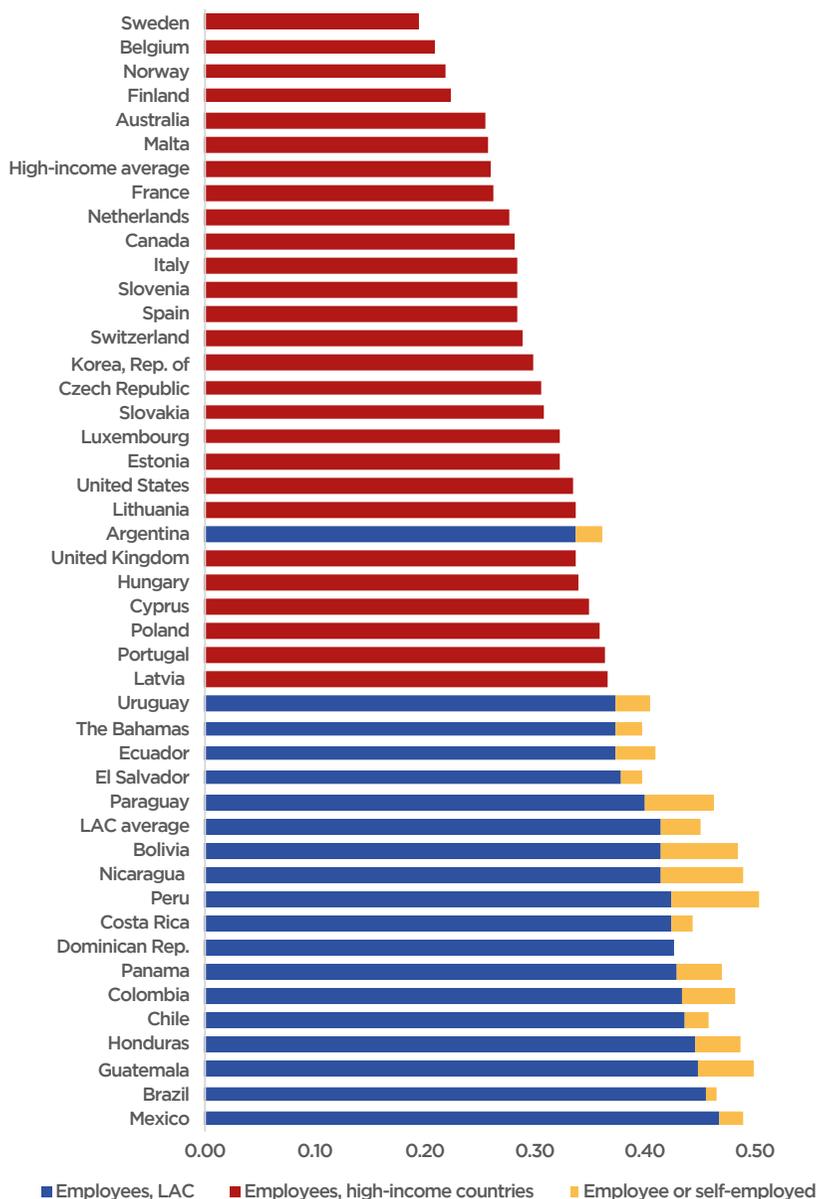
Sources: Gini coefficient for high-income countries obtained from ILO Global Wage Report 2018. Gini coefficient for LAC countries calculated from 2017 Harmonized Household Surveys from Latin America and the Caribbean, except for The Bahamas (2014), Brazil (2016), Mexico (2018), and Nicaragua (2014).

Misallocation and high pay differentials across firms. Productivity differentials across firms in Latin America are high even within narrowly defined sectors (Busso, Madrigal, and Pagés, 2013). This phenomenon arises out of distortions present in the sector's production and in the factor markets that similar firms face. These distortions are in turn generated by size-dependent policies (Guner, Ventura, and Xu, 2008), imperfections in the credit market (Midrigan and Xu, 2014), or labor regulations (Busso, Fazio, and Levy, 2012). Productivity differentials across comparable firms in the region show up as excessive numbers of small, unproductive businesses that capture a larger share of resources in the economy than they would capture if resource allocations were optimal.

This misallocation of resources has two important implications for inequality. First, it affects the allocation of talent in the economy, reducing the skill premium and providing fewer incentives for human capital accumulation (Lopez and Torres Coronado, 2019; Bobba, Flabbi, and Levy, 2017). Second, because firms share rents with their workers (Card et al., 2018), higher or lower productivity translates into higher or lower wages (Carlsson, Messina, and Skans, 2016). In line with this hypothesis, movements in wage inequality go hand in hand with movements in interfirm wage differentials in several countries (Messina and Silva, forthcoming). In Brazil, interfirm wage differentials increased between 1986 and 1995, when inequality was on the rise (Helpman et al., 2017), and dropped in recent decades, when inequality fell (Alvarez et al., 2018). Alvarez et al. (2018) show, however, that in the manufacturing sector the productivity distribution became more dispersed when interfirm inequality was falling, which presents a puzzle. A possible explanation is that other forces—e.g., the hike in the minimum wage or weakened bargaining power for workers as observed in the United States (Stansbury and Summers, 2020)—may have limited the pass-through from productivity to wages in the past few decades. This remains an area that would benefit from more research.

Fragmented unionization with little representation among low-pay workers. The international evidence shows that unions have had an important role in the compression of the wage structure. Unions decrease wage inequality because the union wage premium is much

greater for low-skilled workers (Card, Lemieux, and Riddel, 2003). In the United Kingdom and the United States, the drop in union membership has been one of the factors leading to the rise of inequality (DiNardo, Fortin, and Lemieux, 1996; Gosling and Machin, 1995). In Germany, deunionization accounts for up to a third of the inequality increase of the 1990s (Dustmann, Ludsteck, and Schonberg, 2009).

Things are different in Latin America. Union power is heterogeneous across countries, but typically stronger in the Southern Cone than in Central America and the Caribbean (Kugler, 2019). Unionization in Latin America is typically more prevalent among public sector employees; in the private sector, it is often more widespread among those at the top of the wage distribution. Public sector workers receive a wage premium with respect to private sector employees with similar skills (Izquierdo, Pessino, and Vuletin, 2018). It follows that if unions succeed in propping up wages, they may increase rather than reduce wage inequality, because unionized workers are at the top of the distribution (Kuhn and Márquez, 2005). Evidence from Brazil is in line with this hypothesis, suggesting that lower union density led to declines in inequality (Abrache 1999; Menezes-Filho et al., 2005). Although the effect of unions on inequality is relatively understudied, it is probably the case that unionization is not contributing to major reductions of inequality in the region.

Minimum wages, compliance, and informality. Available evidence shows that the minimum wage plays a role in compressing the region's wage structures (Kugler, 2019). Moreover, the evidence reviewed above suggests that increases in the minimum wage during the first decade of the twenty-first century contributed to the decline in inequality. But their role is limited by potential effects on informality and noncompliance. When the minimum wage is too high with respect to the underlying productivity of the economy, it may push workers into the informal sector (Cunningham, 2007). Informality increased with hikes in the minimum wage in Honduras (Gindling and Terrell, 2009), Costa Rica (Gindling and Terrell, 2007), and Colombia (Maloney and Nuñez, 2004). But this relationship is not mechanical, depending as it does on the level of the minimum wage and on prevailing macroeconomic conditions. Minimum-wage increases led to no major changes in informality in

Mexico (Bell, 1997) and Brazil (Lemos, 2009). During the commodity boom, many countries hiked the minimum wage while informality was falling (Messina and Silva, 2018).

Compliance with minimum wage laws is often spotty (Messina and Silva, 2018). Many workers are paid below minimum wage, sometimes legally (e.g., through dependent-employment relationships disguised as contractual/outsourced work), sometimes illegally. Even if some of the minimum wage increases in the covered sector translate into higher wages in the uncovered sector (the so-called lighthouse effect), imperfect enforcement limits the ability of minimum wages to curb wage inequality. The higher the minimum wage with respect to the underlying productivity distribution, the stronger the incentives for noncompliance (Lotti, Messina and Nunziata, 2020). But noncompliance is also linked to insufficient enforcement and inadequate supervision by the labor ministries. Evidence from a policy reform in Costa Rica suggests this link is important. The government of Costa Rica introduced a campaign in 2010 to boost compliance with the minimum wage. This had strong equalizing effects, with higher wages for women, the young, and low-skilled workers (Gindling, Mossaad, and Trejos, 2015).

Further reductions in wage inequality will come from learning the lessons of the first decade of the twenty-first century, while addressing the deficiencies outlined above. A policy agenda based on three imperatives is needed. The first is to continue to build on the skills needed for the future by expanding access to quality schooling for less-favored families. The second is to address the duality of Latin American labor markets, an effort that will require a relaxation of the job-protection measures and labor taxes that apply to formal jobs and implementation of more-progressive forms of taxation (e.g., personal income taxes) to expand protections for all workers against the risks of unemployment. The third imperative is better enforcement, and better reframing, of existing regulations and institutions, including minimum wages and collective bargaining.

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9.

CRIME AND JUSTICE IN AN UNEQUAL SOCIETY

by Patricio Domínguez[1]

In the late 1990s a set of cross-country studies came out showing a strong positive relationship between inequality and violent crime (Bourguignon, 1999; Fajnzylber, Lederman, and Loayza, 1998, 2002; and Londoño and Guerrero, 2000). Latin American countries played a salient role in these studies because their levels of inequality and violent crime were so high. More recent data shows this pattern persisting, even at subnational levels (Buonanno and Vargas, 2019).

This chapter studies some of the links between inequality and crime. It starts by examining how the risk of victimization and exposure to violent incidents are distributed across income groups.[2] We shall see that low-income groups are disproportionately exposed to homicide, the violent crime most relevant in these studies. Furthermore, inequality and crime play a role in increasing exposure to violence over the course of a lifetime.

[2] Although domestic violence is an important dimension of criminal behavior it is excluded from this analysis since it is covered in Chapter 5.

Recent empirical studies suggest that exposure to crime may exacerbate disparities across income groups, with lifelong consequences. Finally, this chapter discusses the roles of security and justice in the region, with emphasis on the ability of the rich to supplement their own security by investing in private services. A key finding is that crime imposes enormous costs on society by perpetuating the levels of extreme inequality we observe in Latin America and the Caribbean.

9.1.

DISPARATE CONSEQUENCES OF CRIMINAL ACTIVITY

Low-income groups suffer disproportionately from the direct consequences of homicide, the costliest category of crime. Figure 9.1 shows a negative relationship between per capita income and homicide rates in Santiago. A similar pattern has been found in cities with much higher crime rates, such as Rio de Janeiro (Ferraz and Ottoni, 2013). This result is consistent with a pattern found in the United States, where high-income districts have lower homicide rates than low- and middle-income neighborhoods.

The recent escalation of violence in Mexico reinforces this notion that criminal activity is not equally distributed across income groups. During a period when the number of drug-related homicides grew from ten thousand murdered in the 2000–06 period to fifty thousand between 2006 and 2011 (Ríos, 2013), low-income localities suffered a greater proportion of the increase. Ajzenman, Galiani, and Seira (2015) show that, relative to rich neighborhoods, poorer localities saw between 100 to 400 more homicides per 100,000 population. They also show that the increase in the homicide rate follows an inverse monotonic relationship with the local socioeconomic level.

FIGURE 9.1 Exposure to Murder by Municipality per Capita Income, Santiago, Chile
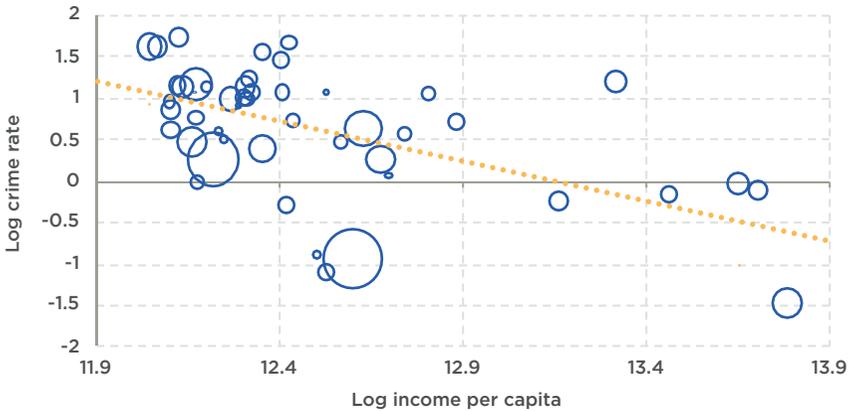
Source: Author's elaboration using data from Carabineros de Chile and CASEN, 2013.

Note: This figure plots the log of the annual number of homicides per 100,000 inhabitants and log of municipality per capita income in Santiago Metropolitan Area during the 2010–17 period. Area between the points and dashed line are weighted by municipality population size.

The regressive incidence of violent crime can exacerbate preexisting inequalities in income and wealth. For example, the spike of violence in Mexico had no effect on average housing prices, but it reduced housing prices in poor neighborhoods and boosted prices in safer and richer municipalities (Ajzenman, Galiani, and Seira, 2015). This major loss in wealth is borne entirely by low-income families.

A slightly different story depicts the distribution of property crime in the region. Here it is important to consider that the cost and consequences of criminal activity vary substantially by type of crime.[3] Broad comparisons using household survey data show that in most Latin American countries, people from high- and middle-income groups report higher victimization rates (see Figure 9.2). This pattern differs from that seen in countries like the United States, where both property and violent crimes are much higher in cities with a higher proportion of poor residents (Lofstrom and Raphael, 2016a).

[3] Although evaluating the costs of crimes presents a series of challenges, the literature has attempted to quantify them using different methods (Domínguez and Raphael, 2015). Based on people's willingness to reduce the risk of victimization, researchers have been able to identify estimates in the range of (2015) $12.3 million for homicide, $312,000 for rape/sexual assault, $305,000 for robbery, and $92,000 for serious assault (Domínguez and Raphael, 2015; Cohen et al., 2004). An estimation of the cost of crime in Latin America also shows that most of the burden in criminal activity is due to homicide (Jaitman, 2017).

Cross-country comparisons based on household surveys are limited for a number of reasons. First, respondents are asked about a specific set of crimes, which differ from country to country. Rather than differences in crimes across countries, however, we should focus on crime victims across income groups within each country. For that reason, Figure 9.2 restricts the comparison to a subset of crimes common to the region. In addition, we should notice that homicides and other violent crimes are excluded from the analysis simply because respondents are not usually asked about them on these surveys. With these caveats in mind, see Figure 9.2, which confirms a finding reported by Gaviria and Pagés (2002).

FIGURE 9.2 Victimization Pattern by Education Level in Five Countries

Percentage of victims by group
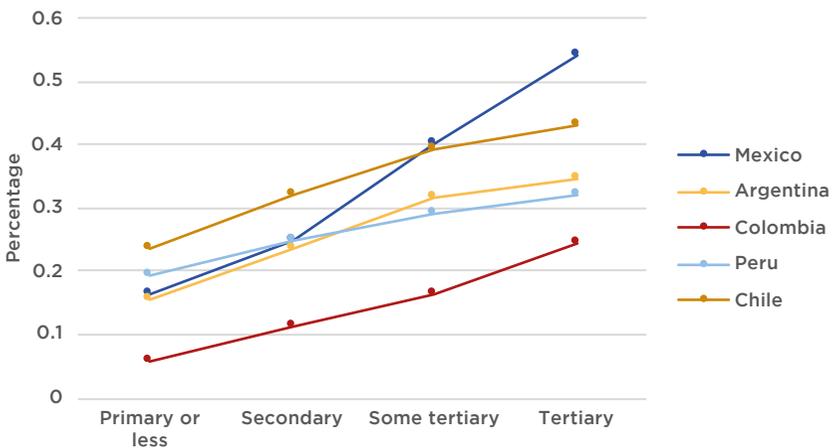
Source: Author's elaboration using harmonized database of victimization surveys.

We need more research in this area, especially to determine why this Latin American pattern differs from those seen in other regions. Interestingly, in Chile and Peru most of the disparities in crime across income groups relate to motor vehicle thefts. Of course, high-income groups own more cars.

Overall, socioeconomic groups differ substantially in terms of the type of criminal activity they are exposed to.

Disparate investment in human capital is a major source of persistent income inequality, with long-term consequences (Durlauf, 1996). In the region, several scholars have documented the detrimental effects that exposure to crime has on human capital investment across all stages of the life cycle.[4] This suggests an important channel through which exposure to crime intensifies disparities across income groups.

In utero exposure to violent incidents has important consequences for key predictors of human development. Birth weight relates to health over the life cycle (Almond, Chay, and Lee, 2005) and is strongly associated with socioeconomic outcomes (Black, Devereux, and Salvanes, 2007; Behrman and Rosenzweig, 2004). An important group of studies has found a strong link between exposure to violence and low birth weight. Although they consider incidents that differ in nature and intensity, all of them show similar results. For example, Colombia has seen extended outbreaks of violence during the landmine explosions between 1998 and 2003 (Camacho, 2008), and the massacres and terrorist attacks from 1999 to 2007 (Duque, 2016). Other examples are the recent escalation of homicides in Mexico (Brown, 2018) and in Fortaleza, Brazil (Koppensteiner and Manacorda, 2016), with significant social and human effects. In all these cases, scholars have found major reductions in birth weight for children exposed to local violence during the first trimester of their gestation.

In addition, most of the research in the region linking exposure to violence to poor predictors of human development finds that detrimental effects are concentrated among children from low-income groups. Duque (2019), Brown (2018), and Koppensteiner and Manacorda (2016) found greater effects among less-educated mothers.[5] Koppensteiner and Manacorda (2016) interpret this heterogenous response as income

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[4] An interesting conceptual framework regarding possible channels through which violence affects human capital investment is provided by Barrera and Ibañez (2004).

[5] Torche and Villarreal (2014) find that exposure to homicide during the first trimester of gestation increases infant birth weight which they attribute to an increase in mother's health enhancing behaviors (use of prenatal care) as a result of exposure to violence. In particular, they find an increase in the likelihood of obtaining prenatal care during the first trimester-especially concentrated among low-income families. Two issues are identified by Brown (2018): potential endogenous migration, and endogenous changes in fertility due to the lack of family control variables.

playing a buffer role that can alleviate the adverse consequences of exposure to violence.

In utero exposure is one thing, but early-childhood exposure to violence is also damaging and has persistent effects over a lifetime.[6] In Colombia, Duque (2019) analyzes school achievement and school performance of students in the early 1980s who were exposed to higher homicide rates in early childhood. She finds that students from places with higher homicide rates were likelier to drop out of school, while those who did complete secondary school had lower test scores.

The literature on the contemporaneous effects of school-age exposure to violence also points to major losses in human capital development. For example, Monteiro and Rocha (2017) find that drug battles in Rio de Janeiro's urban settlements, called favelas, reduce math test scores among students in schools near the boundaries of the favelas. They also document that gunfights affect important school provisions: absentee teachers, principal turnover, and temporary school closings are all more frequent in violence-prone neighborhoods. These findings relate to Koppensteiner and Menezes (2019), on violence and school performance, using high-frequency data from São Paulo. They show that each additional homicide in the school vicinity reduces test scores in math and language. They find that violence also increases absenteeism and dropout rates.[7] Again, evidence shows that the effects are pronounced among students from relatively low-income families. These findings coincide with evidence regarding the effects of civil conflict (Rodriguez and Sanchez, 2012). For example, for school-age cohorts exposed to Colombia's La Violencia in the 1940s and 1950s, scholars have found major decreases in schooling (Fergusson, Ibáñez, and Riaño, forthcoming).

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[6] Interestingly, this pattern of persistence damage is also observed in the case of Peru for those people that were exposed to the *Sendero Luminoso* violence. Leon (2012) shows that exposure to violence during early childhood is translated to permanent losses as adults in terms of lower educational achievement. Among those who were exposed during the first three years, Galdo (2013) also finds lower wages.

[7] Michaelsen and Salardi (2020) show that the Mexican drug war affected educational performance, whereas Caudillo and Torche (2014) find that exposure to local violence increases a student's probability of failing a grade in elementary school. Similarly, Brown and Velásquez (2017) show several detrimental effects among Mexicans exposed to violence such as lower educational achievement, and lower probability of completing mandatory school years.

Exposure to violence also affects the decisions that people make. Inequality obviously plays a fundamental role in this regard by altering the opportunity costs across income groups (see Box 9.1).[8] The proliferation of gangs, especially in Central America, is another relevant factor. Sviatschi (2019) shows that exposure to criminals—mostly deportees from the United States—during childhood decreases educational attainment.[9] In a similar vein, Kalsi (2018) shows that gang exposure reduces schooling among children, but more through extortion schemes rather than directly joining a gang.

9.2.

PROVISION OF SECURITY

The provision of security allays the risk of victimization and exposure to crime and violence across income groups.[10] Security is a type of good that reduces the probability of victimization. It can be provided by private or public agents. In theory, public provision of security has an advantage over private in that public officials can be held accountable for diverting crime from one place to another. This kind of accountability is even more likely with centralized police forces. But when there is little information on how police officers or other public resources are

[8] Traditional models in the economics of crime follow Becker's (1968) initial approach regarding potential offenders' choice, where the opportunity cost of engaging in criminal behavior plays a crucial role. This approach has come under scrutiny for its ability to explain more complex violent behavior and crime.

[9] Implicit in Sviatschi (2019) is a concern that we see the complex dimensions of the relationship between crime and inequality, that it encompasses global and intergenerational inequality. She finds evidence that deportations, by increasing gang violence, also increase child migration to the United States.

[10] Agents can also adopt other precautionary measures, such as avoiding activities that could possibly expose them to a higher risk of victimization. The endogenous relationship between a victim's behavior and risk of victimization is well documented in the theoretical literature. One of the pioneering works in this area is Cook (1979). For an empirical application of how victims and offenders mutually affect the overall level of crime, see Domínguez (2020).

allocated, accountability is hindered and sometimes stifled altogether. Information on how police forces (and other public resources) are allocated is still scarce in most of the region.

Survey respondents say police reaction time differs a great deal across income groups (see Figure 9.3). In most countries, respondents from high- and middle-income groups report faster police reaction time to a burglary called in.

Private agents are an alternative to public provision of security. But given the scope of action of these initiatives, relying on private security has important distributional consequences. On the one hand, it may reduce the likelihood of victimization within a protected residence or neighborhood. But to the extent that crime is displaced to other areas, this policy choice could create a criminal spillover effect that could disproportionately affect unprotected groups, which are precisely those with less ability to invest in security.

Figure 9.4 shows that in Latin America, high- and middle-income groups invest much more in private security.

FIGURE 9.3 How Long Would It Take the Police to Arrive at Your House after a Burglary?

Percentage of respondents reporting "more than an hour," circa 2016
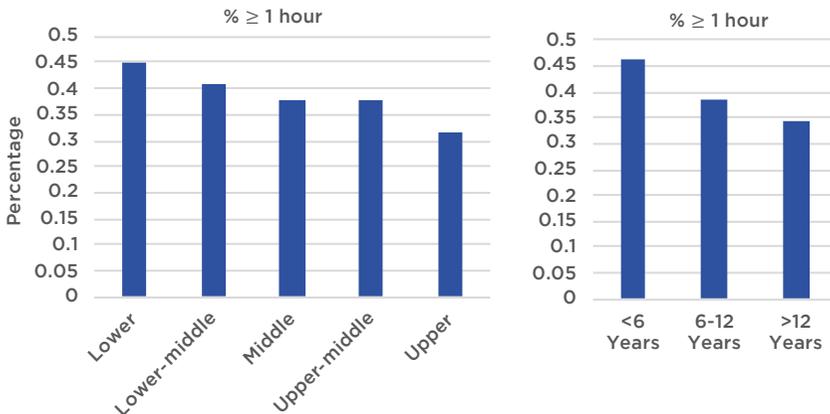
Source: Author's elaboration using harmonized database of LAPOP surveys.

Note: Percentages correspond to unweighted averages for each group category. Countries in the sample are Costa Rica, Panama, Uruguay, and Brazil in 2014; Nicaragua and Ecuador in 2016; and Mexico, Guatemala, El Salvador, Honduras, Colombia, Peru, and Paraguay in 2018.

FIGURE 9.4 Private Security Equipment by Education Level in Several Countries

Percentage of households that reported having an alarm or CCTV system at home
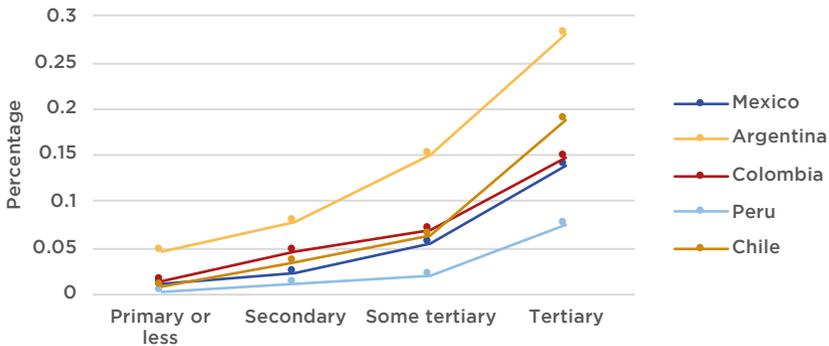
Source: Author's elaboration using harmonized database of victimization surveys.

One caveat regarding Figure 9.4 is that disparities in private provision of security can reflect disparate risk levels for victimization. This can be especially true if property crime drives purchase decisions regarding security. In any case, a greater ability to pay for private security can diminish crime exposure, especially in a changing crime environment.

Di Tella, Galiani, and Schargrodsky (2010) studied disparities in crime exposure and precautionary actions across income groups during a crime wave in Argentina. During the 1990s, total victimization went up 24 percentage points, but, relative to the rest of the population, the increase was 1.5 times larger among the poor. Di Tella, Galiani, and Schargrodsky (2010) also found that street crime, a type of crime where adaptative responses are difficult for victims, increased homogenously across income groups. This contrasts with the evolution in home burglaries during the same period: for the rich, they declined, but rose among the poor. The evolution across types of crime is important because it can reflect adaptative responses across income groups. For example, steep rises in alarm acquisition is an observable adaptation to home burglary, among high-income groups, during the same period of analysis. Although this example may not fully represent the dynamics of crime in other settings, it highlights how private protection activities can induce negative externalities across groups, an especially relevant finding given the stark disparities in this dimension across the region.

9.3.

UNEQUAL ACCESS TO JUSTICE

A final dimension of interest between inequality and crime has to do with access to justice. Criminal justice systems represent one of the most important crime-control tools available in democratic regimes. Its main purpose is the provision of justice, which can be threatened by an unequal distribution of opportunities and power across different socioeconomic groups.

Ideally, we would compare indicators regarding access to justice as experienced by different socioeconomic groups across the region. But access to this data is not publicly available in most countries in the region. An alternative is to analyze country-level data and assess, relative to more advanced economies, how the countries of the region provide basic guarantees to the most disadvantaged groups.

Based on the World Justice Rule of Law Index, and compared with western European countries, most Latin American countries perform poorly on fundamental rights.[11] A relevant aspect is a government's ability to provide access and afford civil justice to all individuals. This is particularly relevant given the levels of poverty and inequality in the region. Figure 9.5 shows that, except for Uruguay and Chile, most countries in the region struggle to provide equal access to justice for their most disadvantaged groups.

Another concern regarding access to justice is the presence of discrimination. Criminal justice systems across the world deploy sophisticated schemes to ensure equal treatment under the law, but in practice this principle can be violated through a diverse set of channels (see Box 9.2).

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[11] Every year the World Justice Project releases its Rule of Law Index, which assesses the extent to which countries or territories adhere to the rule of law in practice (WJP Rule of Law Index, 2020).

FIGURE 9.5 Access to Civil Justice

Index of accessibility and affordability of civil courts in countries of the region compared with average for selection of European countries, Canada, and United States
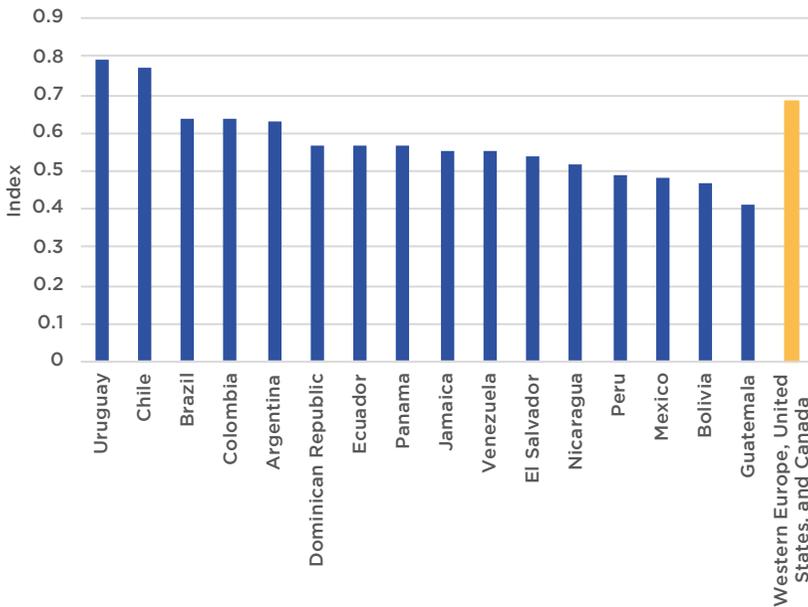
Source: WJP Rule of Law Index (2018).

Note: Index measures the accessibility and affordability of civil courts, including whether people are aware of available resources; can access and afford legal advice and representation; and can access the court system without incurring unreasonable fees, encountering unreasonable procedural hurdles, or experiencing physical or linguistic barriers. Higher values represent higher chances to afford civil justice. The bar on the right represents the unweighted average of a group of European countries, Canada, and the United States.

Figure 9.6 shows that most countries in the region perform far worse than an average western European country on providing impartial justice to members of different groups.

FIGURE 9.6 Equal Treatment and Absence of Discrimination

Index of impartiality of police and criminal courts in countries of the region compared with average for selection of European countries, Canada, and United States
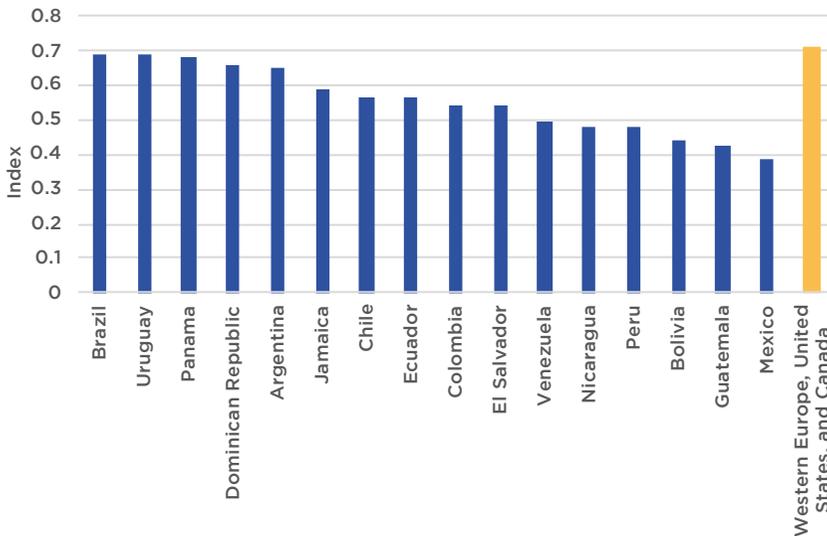
Source: WJP Rule of Law Index (2018).

Notes: Index measures whether the police and criminal judges are impartial and whether they discriminate in practice based on socioeconomic status, gender, ethnicity, religion, national origin, sexual orientation, or gender identity. Higher index values represent higher adherence to the full range of rights. The bar on the right represents the unweighted average of a group of European countries, Canada, and the United States.

9.4.

KNOWLEDGE GAPS

Any robust agenda on crime reduction must acknowledge its connection with inequality of opportunities, income, and wealth. This is particularly salient in the case of Latin America and the Caribbean, which has among the highest levels of violent crime in the world. Inequality and crime have an intertwined and complex relationship.

Among the lessons to be drawn from this chapter is that policies that reduce crime and inequality can be mutually beneficial. Policies that reduce inequality can also have the effect of reducing crime and subsequently promote a more equal society. Thus, in addition to the traditional set of policies that aim to prevent crime from occurring in the first place, a promising policy area is one focused on ameliorating the consequences of criminal activity. Low-income groups suffer disproportionately from violent crime. They are also less prepared to cope with the adverse and lifelong consequences of criminal activity.

Another key area concerns policies that aim to enhance accountability in the criminal justice system. In Latin America and the Caribbean, we know little about the actual performance of the criminal justice institutions and other law enforcement agencies such as the police. Relative to other areas of development, such as education and health, the amount of information on crime control and the administration of justice is limited. More and better data are critical. Policy makers in this area usually are forced to confront the relative importance of values like public safety, fairness, and due process. More and better data on policy assessments for each of these areas is a prerequisite for reducing both inequality and crime in the region.

BOX 9.1 Inequality of Opportunity and Criminal Behavior

Among the many initial studies on motivations that link inequality and crime (Bourguignon, 1999; Fajnzylber, Lederman, and Loayza, 1998; and Londoño and Guerrero, 2000), Becker's rational model plays an important role by positing that lack of opportunities in the formal/legal market affect the likelihood of engaging in criminal activities. This can be especially important in the context of the crisis induced by the COVID-19 pandemic and the demand for reducing prison populations (see Box 9.3). Lack of opportunities and lack of access to labor markets may explain the magnitude of crimes observed in the region.

This theory has recently found empirical support in Brazil and Mexico, specifically regarding the effect of changes in economic conditions on criminal activity. Dix-Carneiro, Soares, and Ulyssea (2018) study the Brazilian trade liberalization and find that regions with specialized industries that were exposed to larger tariff reductions saw their labor market deteriorate (employment and earnings) and their crime rates increase. More important, they document that the subsequent improvement in crime rates coincided with a recovery in employment rates, suggesting a close relationship between crime rates and employment. A similar point has been made by Dell, Feigenberg, and Teshima (2019) in Mexico. They find that manufacturing job losses induced by competition with China increased cocaine trafficking and violence.

In the case of Colombia, Khanna et al. (2019a) find a similar relationship at the individual level. Looking at massive layoffs as a measure of exogenous shocks in employment, they observe an increase in the probability of arrest, which they use as a proxy for criminal involvement. Then, by exploring heterogeneity by type of sector, they find that the increase in arrest after job losses was smaller among "booming sector" workers (e.g., in sectors with more opportunities for legitimate reemployment). In a related paper, Khanna et al. (2019b) show similar findings regarding the link between informality and criminal activity. In a way, these studies connect with Carvalho and Soares (2016), who show that low socioeconomic status is an important predictor of gang membership in Brazil.

Another strong link between violence and economic shocks is described by Dube and Vargas (2013). Although in this case the authors look at the relationship between price commodities and civil conflict, the results provide insights into the effect of economic conditions on levels of violence in general. For example, they find that a fall in the price of coffee increased violence in municipalities with coffee-dependent economies. In contrast, a rise in oil prices increased crime, suggesting a different relationship based on the type of commodity that dominates the economy.

In that sense, government assistance programs can play a role in preventing individuals from participating in criminal activities. A salient case is the expansion of the Bolsa Família program in Brazil. Chioda, De Mello, and Soares (2016) find that crime plummeted in school neighborhoods after the program was introduced. Chioda and his coauthors also provide evidence that the "increased household income" mechanism has driven these improvements, as opposed to the incapacitation effect associated with higher school-attendance rates, as shown by Berthelon and Kruger (2011) in the case of an expanded school day in Chile.

Finally, in Peru, Sviatschi (2019) provides novel evidence regarding exposure to illegal activities during childhood and subsequent chances of criminal involvement. She exploits a change in coca production exposure induced by a swift change in the supply, and compares incarceration rates across cohorts differentially affected by the shock. She also finds an important heterogenous response with relevant policy implications: children with a higher chance of being exposed to conditional cash transfers had a lower probability of incarceration due to a drug-related crime as an adult. It is hard to underestimate the policy implications of this finding for the region. Not only are specific criminal activities curtailed, but cohorts are also kept from getting involved in these activities during their lifetimes.

BOX 9.2 Discrimination in the Criminal Justice System: The Case of Chile's Mapuches

Discrimination against a particular group can harm the social legitimacy of the justice system. This is a longstanding concern, presenting serious empirical challenges. It is nevertheless an area of active research in economics with applications in multiple domains, such as police behavior on speeding tickets (Goncalves and Mello, 2017), use of force (Fryer, 2019), motor vehicle searches (Knowles,

Persico, and Todd, 2001; Anwar and Fang, 2006; Antonovics and Knight, 2009), sentencing and incarceration (Abrams, Bertrand, and Mullainathan, 2012; Anwar, Bayer, and Hjalmarsson, 2012; Rehavi and Starr, 2014), and pretrial decisions (Arnold, Dobbie, and Yang, 2018; Pierson, Corbett-Davies, and Goel, 2017). Unfortunately, most of the recent papers are focused on the United States and the OECD countries, and have scarcely analyzed the context of the Latin American criminal justice system.

An exception is Grau and Vergara (2020), who analyze the possible bias against Mapuche defendants on pretrial detention in Chile. The Mapuche people are the largest indigenous group in Chile (comprising 13 percent of the population according to national census data). Grau and Vergara (2020) provide an innovative test for so-called taste-based discrimination that identifies marginal individuals based on their characteristics and predicted pretrial misconduct score. These are individuals for whom it is not clear—based on their characteristics and predicted misconduct score before the trial—whether they should remain detained or released during pretrial.

Usually twenty-four hours after detention, a judge decides whether a defendant will be detained or released. Judges consider a combination of factors, including public safety, failure to appear in court, and whether detention facilitates investigation of a criminal case. Judges decide to release or detain a defendant in a hearing that lasts on average around fifteen minutes. Evidence of discrimination during the detention hearings can be particularly worrisome considering the downstream consequences on various dimensions such as probability of conviction (Heaton, Mayson, and Stevenson, 2017; Lerman, Domínguez, and Green, 2018; Dobbie, Goldin, and Yang, 2018; Leslie and Pope, 2017), future crimes, earnings, and employment (Dobbie, Goldin, and Yang, 2018; Grau, Marivil, and Rivera, 2019).

Based on defendants' last names, the authors identify a 7.5 percent Mapuche population among a sample of defendants

between 2008 and 2017. By performing a variety of tests, they find strong evidence of taste-based discrimination against Mapuche defendants. In particular, they report that marginal Mapuche defendants are between 4 and 13 percentage points less likely to engage in misconduct during the pretrial period. This means that under equivalent circumstances, and relative to the average non-Mapuche population, judges are more likely to detain Mapuche defendants.

BOX 9.3 Ideas to Safely Reduce Prison Populations during the Pandemic

The situation in Latin American prisons during the COVID-19 crisis is dramatic and evolving rapidly. The rights and health of more than 1.2 million inmates in the region are at stake and need to become a priority. Some countries have implemented general pardons for nonviolent inmates, limited pretrial detentions, or modified visitation rights. Most countries, however, have yet to take action. Some argue that the release of inmates will pose a threat to the public. Others believe that, if done properly, former inmates will become productive members of society. The debate is torn between wanting to keep the public safe and respecting inmates' rights. To shed some light on this issue, let's take a closer look at specific examples of prisoner release from the literature on the economics of crime.

Prison Population and Public Safety

When considering any relief measures for prisoners, it is crucial to keep in mind that prison populations are not homogeneous. In practice, the level of risk to which the public is exposed depends on the group of prisoners that would benefit from such measures. Recent examples from Italy and California provide important insights into this issue. In 2006, Italy passed a collective pardon that

authorized the immediate release of a third of its prison population (Buonanno and Raphael, 2013). The pardon was granted on the condition that prisoners who relapsed would have to serve their remaining sentences (Drago, Galbiati, and Vertova, 2009). In practice, people convicted of serious offenses, such as organized crime, terrorism, kidnapping, and some sexual crimes, were not eligible for pardon. Nonetheless, a large group of individuals were freed. Crime increased sharply as a result, and after only twenty months, Italy's prison population returned to the same level of pre-pardon overcrowding.

Meanwhile, California passed a series of reforms between 2011 and 2014 that produced different results. Their purpose was to depopulate state prisons and county jails by easing the terms for drug offenses and other nonviolent crimes (Lofstrom and Raphael, 2016b; Domínguez, Lofstrom, and Raphael, 2019). Collectively, these measures reduced California's prison population by more than a quarter. Unlike Italy, California identified beneficiaries in a selective fashion and gradually defined new sentencing regimes. As a result, and as shown by a series of studies, violent crime did not increase, and there was only a small rise in some specific property crimes. In practice, this led to a permanent reduction in the prison population, which yielded public savings that, by fairly conservative estimates, exceeded the potential social costs for public safety.

While these cases from Italy and California provide important clues, the current lockdown and strict social distancing policies create a unique context that makes it hard to predict how former inmates may behave upon their release. There is evidence, however, connecting recidivism and labor market conditions that cannot be overlooked.

Recidivism and Local Labor Market Conditions

Several factors influence the likelihood that former inmates will return to prison. One robust finding in the literature is that they

face significant barriers to employment (Pager, 2003). More recently, studies have shown that detrimental labor market effects can be directly attributed to pretrial detention in countries like the United States and Chile (Dobbie, Goldin, and Yang, 2018; Grau, Marivil, and Rivera, 2019). These findings are especially worrisome in the context of the pandemic. Unemployment rates around the world have gone up drastically. In the United States alone a total of 30 million people have filed for jobless claims within the past five weeks. That is a historic high. These numbers suggest that local labor conditions in the United States are worsening quickly, and Latin American countries are not immune to this phenomenon.

It is safe to assume that the general public believes inmates want nothing else than to be freed. Recent events in Chile challenge this assumption, however, as more than one hundred inmates opted out of early release, citing job security in their prison. This further supports a body of research that has shown that reintegration of former inmates and parolees into the labor market largely depends on the labor market conditions at the moment of release (Raphael and Weiman, 2007). Schnepel (2018) analyzes a database of 1.7 million offenders in California and finds that increases in job opportunities in the construction and manufacturing sectors at the time of release are associated with major reductions in recidivism. Yang (2017) finds similar results in forty-three U.S. states where prisoners who are released to counties with more low-skilled employment and higher than average low-skilled wages are much less likely to relapse. These findings provide valuable insights into the extent to which current labor market conditions within specific sectors affect the likelihood of recidivism.

In Colombia, two related studies have shown a strong link between unemployment and probability of arrest. Khanna et al. (2019a) exploit variations in opportunities for reemployment and find that the increase in arrests after job displacement is smaller among sectors with more opportunities. Khanna et al. (2019b) show that a policy that drove people into informality had unintended negative consequences on crime. This set of findings is extremely

relevant, especially for Latin America. Informality is a feature of Latin American labor markets, and access to opportunities for former convicts tends to be restricted to low-skill and informal sectors. Given that several countries are currently evaluating laws that would release inmates, governments need to make sure that labor restrictions are limited and that mechanisms and incentives are in place to facilitate their reintegration into society.

Insights from a Policy Experiment in Uruguay

An important question, given the current high unemployment rate, concerns access to social benefits. Many countries provide financial resources to former inmates the day of their release as a way to ease their way back into society. This concept is known as a gratuity. In Uruguay, the government decided to raise this gratuity from UR$30 to UR$100 in 2010. This simple, low-cost intervention built on an existing policy lowered first-day recidivism from 0.587 crimes per release to zero crimes per release.

Munyo and Rossi (2015) evaluated the Uruguayan gratuity program. They found that the gratuity meant that former convicts were less cash-constrained on their first day out. The reality is that they have limited opportunities to generate income. Yet this simple yet effective intervention provided former convicts with extra resources so they wouldn't stray from the path of virtue on their first day of freedom. The scale of the program is small, but it is a good example of a policy alternative that respects inmates' rights and ensures public safety.

Although the crisis brought on by the COVID-19 pandemic is unprecedented, we should not overlook the important insights that are well documented in the literature. The decisions and actions of policy makers in the coming weeks will likely shape criminal justice policy in Latin America for the coming years.

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10.

CLIMATE CHANGE AND NATURAL DISASTERS: Unequal Exposure, Impacts, and Ability to Cope

by Bridget Hoffmann

Climate change is expected to push more than 100 million of the world's people into poverty by 2030 (Hallegatte et al., 2016). It brings changes in temperature and water availability, increases the intensity and frequency of natural disasters and food crises, and extends the risks of water-borne and vector-borne diseases, among many other impacts (IPCC, forthcoming). The International Panel on Climate Change predicts that global temperature will rise significantly, with the average annual temperature in Latin America and the Caribbean projected to increase between 1º and 4º Celsius by 2080–99 depending on the emissions

scenario.[1] The rate at which the sea level is rising accelerated from 1.7 mm per year between 1901 and 2010 to 3.2 mm per year in 1993–2010 (IPCC, 2013). Together, rising temperatures and sea levels are expected to increase the severity of hydrometeorological natural disasters such as droughts, storms, and floods. To design policies that foster inclusive growth, it is important to understand the bidirectional links between natural disasters, climate change, and inequality.

Climate change and natural disasters exacerbate inequality for three reasons. First, in many cases, poorer countries, regions, and people are more exposed to climate change and natural disasters. Second, they suffer greater losses in proportion to wealth when climate shocks hit. Third, they have fewer resources with which to recover from climate shocks. The negative effects of climate events fall disproportionately on poor households, exacerbating inequality by pushing them into poverty. They are then in a worse starting position when the next climate shock hits. Breaking the negative feedback loop of climate shocks and inequality is crucial to achieving a more equitable society.

Unless climate effects are taken into account, efforts to reduce inequality through development policies that increase industrialization and changes in land and energy use may inadvertently accelerate climate change and increase natural hazards. This implies that development policies need to be consistent with climate stabilization goals and disaster risk management objectives and that policies to slow climate change and manage disaster risks need to be designed to reduce inequality.

This chapter explores the magnitudes of the effects of climate change on inequality and poverty and the mechanisms behind those effects. Although the broad links between climate change and inequality are already clear, there is a pressing need for additional research that

[1] Author's original calculations using data from the World Bank Group Climate Change Knowledge Portal.

provides specific and actionable evidence on the effects of climate change on inequality in Latin America and the Caribbean. Because the region has the highest inequality in the world (Amarante, Galván, and Mancero, 2016), understanding how climate change exacerbates inequality is especially important.

10.1.

UNEQUAL EXPOSURE TO CLIMATE HAZARDS

The poor are often, but not always, more exposed than the non-poor to natural hazards and climate change. Globally they are at least twice as exposed to natural disasters than the non-poor (Kim, 2012). Looking across fifty-two countries, Park et al. (2015) find that poorer households tend to be located in hotter locations. But differential exposure to natural hazards and climate change is due not only to geography. Comparing across countries, poorer countries have greater flood risk because they have invested substantially less in flood protection (Scussolini et al., 2016).

Exposure to hazards is also unequal across Latin America and the Caribbean and could exacerbate inequality across the region. Baez and Mason (2008) find that within the region, Central and Southern Peru and Western Bolivia, which are regions of high poverty, are the most vulnerable to heavy rainfall and flooding. Within Latin America, GDP per capita is strongly negatively correlated with baseline temperature, with poorer countries more exposed to high temperatures (Figure 10.1).

FIGURE 10.1 GDP per Capita and Baseline Temperatures in Latin American Countries
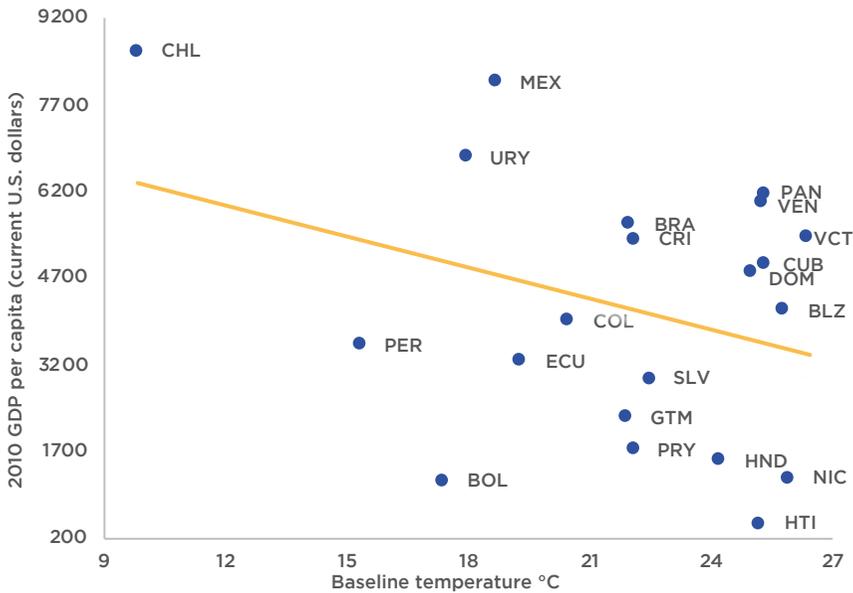
Source: Author's original calculations based on Burke, Hsiang, and Edward (2015).

Income and wealth are also related to exposure to natural disasters and climate change within a country or city. The choice of where to live largely determines people's exposure to natural disasters, and in many cases the poor are concentrated in disaster-prone areas. In Latin America and the Caribbean, lower-income residents often reside on the periphery of cities in areas with higher exposure to natural disasters. In São Paulo, for example, more than 5 percent of slum areas are highly or very highly exposed to landslide events, and 20 percent of slums and informal urbanized centers are located in floodplains (World Bank, 2012). This pattern is not unique to São Paulo, however. Inhabitants of self-built informal housing areas on the steeper, elevated slopes of northern La Paz are most exposed to landslide hazards (O'Hare and Rivas, 2005). Similarly, in urban areas of Colombia, Peru, and Bolivia, poor people have more exposure to river floods (Hallegatte et al., 2016).

Within countries, there is also inequality in exposure to high temperature across locations and occupations. Poorer households tend to be located in areas with higher temperature (Park et al., 2015). As one example, Brazilian states with lower income per capita in 2010 have higher baseline temperatures, implying that they are more exposed to the effects of high temperature (Figure 10.2). Rising temperatures and heat waves reduce productivity and increase the likelihood of heat stress for workers in outdoor occupations such as agriculture, livestock, street vending, and construction. Workers in these occupations are likely to be lower-income informal workers, without the protection of health and safety regulations or access to social protection programs (Saget, Vogt-Schilb, and Trang, 2020).

FIGURE 10.2 GDP per Capita and Baseline Temperatures in Brazilian States

Thousands of 2010 Brazilian reals
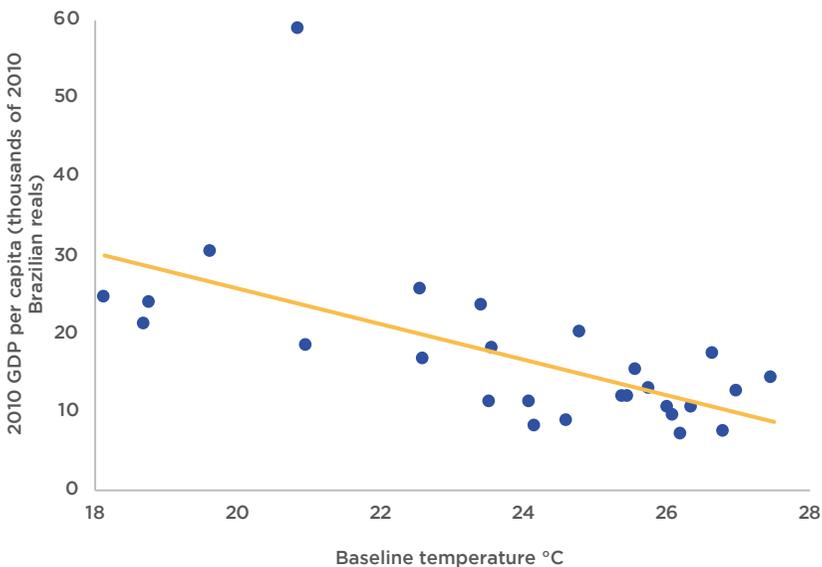
Although the poor are often more exposed than the non-poor to natural hazards and climate shocks, this is not always the case (Felsenstein and Lichter, 2014). Exposure across wealth distributions is determined by many location-specific factors, producing varying patterns of exposure across countries and cities.

Compounding their greater physical exposure to hazards, the poor are often more exposed economically as well. They are more likely to work in occupations exposed to high temperatures (Park et al., 2015). Especially in rural areas, poor people are highly dependent on agricultural yields and natural resources as primary income sources. The poor's unequal exposure to natural disasters and climate change is further compounded by disproportionate effects of climate shocks, leading to a clear concentration of effects among the poor.

10.2.

IMPACTS DISPROPORTIONATELY AFFECT THE POOR

Natural disasters and climate shocks have a significant impact on economic outcomes. Natural disasters, including hurricanes, drought, and floods, which are expected to increase in severity due to climate change, decrease growth in the short term and are a significant driver of poverty (Cavallo and Noy, 2011; Karim and Noy, 2016). A case study in Bolivia found that the incidence of poverty in Trinidad rose by 12 percent in the wake of the 2006 floods (Pérez de Rada and Fernandez, 2009). Temperature is one channel through which climate change affects

economic growth. Between 1970 and 2006, a 1º Celsius increase in the average annual temperature was estimated to decrease economic output by 2.5 percent in Central America and the Caribbean (Hsiang, 2010). Rising sea levels also threaten economic outcomes. Many Caribbean islands depend on their coasts as drivers of economic growth and are especially vulnerable to rising sea levels owing to their low elevation, flat terrain, and porous limestone bedrock (Strauss and Kulp, 2018; World Bank, 2013).

Climate change and natural disasters are expected to increase inequality across countries. Income differences across countries imply that countries with different income levels but the same exposure to hydrometeorological hazards will experience different outcomes. Although direct monetary damages are typically higher in richer countries because more wealth is exposed to natural hazards, poorer countries suffer greater losses relative to income. Figure 10.3 shows that total damages due to severe tropical cyclones increase with GDP per capita, whereas damages as a multiple of GDP per capita decrease. These relationships are seen globally and also within Latin America and the Caribbean. Greater income allows richer countries to afford better preparedness and intersectoral and interregional transfers to mitigate the economic impact of natural disasters (Auffet, 2003). But inequality also affects disaster prevention efforts through a political economy channel. More unequal countries struggle to resolve the collective action problem of implementing measures to prevent and mitigate damage from natural disasters (Anbarci, Escaleras, and Register, 2005).

FIGURE 10.3 The Relationship between GDP per Capita and Severe Tropical Cyclone Total Damages and Damages as a Multiple of GDP per Capita
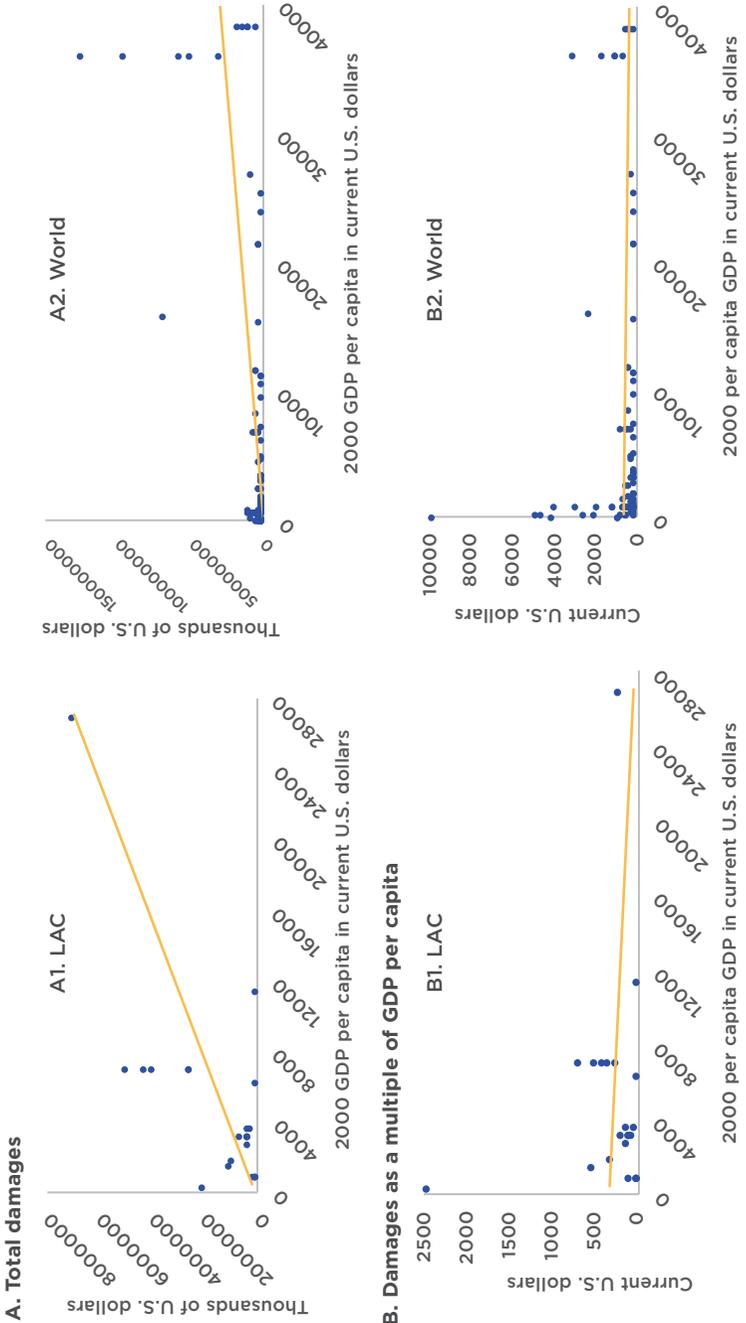
A. Total damages

A1. LAC

Thousands of U.S. dollars

2000 GDP per capita in current U.S. dollars

A2. World

Thousands of U.S. dollars

2000 GDP per capita in current U.S. dollars

B. Damages as a multiple of GDP per capita

B1. LAC

Current U.S. dollars

2000 per capita GDP in current U.S. dollars

B2. World

Current U.S. dollars

2000 per capita GDP in current U.S. dollars

The impact of rising temperatures will also differ across countries, with cooler countries expected to experience greater economic growth, and hotter countries expected to experience less economic growth (Burke, Hsiang, and Edward, 2015; Diffenbaugh and Burke, 2019). Because most richer countries have cooler baseline climates, in general, they will benefit from an additional degree of temperature, whereas poorer countries will be harmed (Diffenbaugh and Burke, 2019; Acevedo et al., 2018). Globally, it is estimated that the ratio of GDP per capita between the top and bottom deciles of countries over the period 1960–2010 is 25 percent larger than it would have been without global warming (Diffenbaugh and Burke, 2019). Looking forward, climate change is projected to exacerbate inequality across Latin America. By 2100, the ratio of GDP per capita between the richest and poorest countries is projected to reach 28, compared with a ratio of only 3 without accounting for rising temperatures.[2]

FIGURE 10.4 Asset Losses and Costs Due to Hurricane Mitch by Wealth Quintile

Assets lost (% of pre-disaster assets)   Costs (% of median household expenditures)
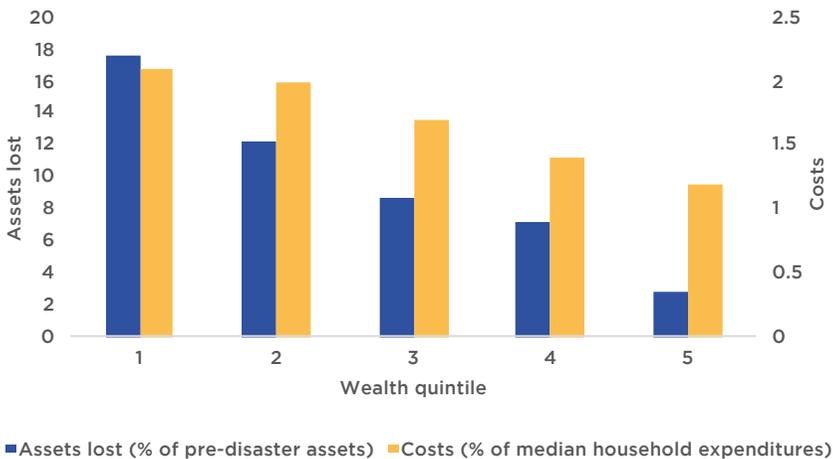
Source: Author's original calculations based on Morris et al. (2002).
Note: Lost assets are shown as a percentage of predisaster assets. Costs include medical expenses, reconstruction of homes, reconstruction of family businesses, and remittances sent.

[2] Author's original calculation based on Burke, Hsiang, and Edward (2015).

Further, impacts from climate change and natural disasters are likely to exacerbate inequality within countries and cities. Evidence from Bangladesh, India, and Honduras indicates that poor people lose two to three times more than non-poor people when a flood or storm strikes (Hallegatte and Rozenberg, 2017). In 1998, Hurricane Mitch wiped out 18 percent of assets for households in the poorest quintile in Honduras, compared with 3 percent of assets for the highest quintile (Morris et al., 2002). Asset losses as a share of predisaster assets and costs as a share of median household expenditure decreased monotonically with wealth (Figure 10.4). The impact of disasters on consumption is also disproportionately large for poor households (Rentschler, 2013).

Two studies of the medium- and longer-term effects of disasters find that the effects continue to be unequal (Carter et al., 2007; Glave, Fort, and Rosemberg, 2008). Understanding the long-term impact of disasters and climate shocks is particularly important, yet empirical evidence is limited. Given the patterns observed among the short-term impacts of disasters and climate shocks, however, the long-term impacts can also be expected to be unequal. Further research would be valuable for policy makers.

Natural disasters and climate shocks affect economic outcomes through many different channels. Climate shocks decrease labor supply and reduce the productivity of labor (Graff Zivin and Neidell, 2014; Cachon, Gallino, and Olivares, 2012). In addition, natural disasters and climate shocks decrease human capital by lowering educational outcomes and causing adverse effects on health, both of which are likely to lower productivity in the future (Graff Zivin, Hsiang, and Neidell, 2018; Caruso and Miller, 2014). Natural disasters and climate shocks also affect the stock of capital (Acevedo et al., 2018). Natural disasters destroy physical capital, and temperature shocks can reduce net investment owing to the need to finance consumption smoothing, a lower productivity of capital, or an increase in the cost of financing capital (Fankhauser and Tol, 2005; Hallegatte et al., 2016; Hallegatte and Rozenberg, 2017).

10.3.

THE POOR ARE LEAST ABLE TO COPE WITH NEGATIVE IMPACTS

In addition to their greater exposure to climate shocks and their proportionally greater losses when climate shocks hit, the poor have the least capacity to cope with and recover from these effects.

In general, poorer countries are less well positioned to recover from climate shocks. Rich countries with large, diversified economies can absorb climate shocks in one region by making intersectoral or interregional transfers. Poor countries also tend to have less-well-funded health systems. Residents of poorer countries have less access to healthcare and face greater out-of-pocket expenses than do residents of high-income countries (Watts et al., 2015).

Within countries, the poor are also in a worse position to cope with climate shocks. They have less access to financial resources, both because their social networks have fewer resources and because financial inclusion is unequal. The poor have less access to formal savings, credit, and insurance products (see Chapter 11).

Savings can be key to smoothing consumption after large, temporary income shocks. The poor are more likely to save in-kind, for example in building materials or livestock, which are more vulnerable to climate shocks than cash savings in formal financial institutions. Even among assets of the same type, the wealth of the poor is characterized by greater exposure. As one example, the homes of the poor are less resistant to damage from climate shocks than the newer, larger buildings owned by the non-poor. The poor are also less likely to have financial or social insurance against damages (Rodriguez-Oreggia et al., 2013).

The importance of credit to recovery was documented in the case of the 1995 earthquake in Kobe, Japan. Households that held a large stock of collateralizable assets and were not credit constrained before the disaster were able to borrow to smooth their consumption, allowing them to maintain their consumption levels. In contrast, households that were credit constrained experienced drops in consumption (Sawada and Shimizutani, 2008). Faced with binding credit constraints, the poor may smooth drops in consumption in response to climate shocks by selling productive assets, thereby jeopardizing their ability to regain their prior income and wealth levels (Fafchamps, Udry, and Czukas, 1998). As one example, Peruvian farmers' response to higher temperatures during the growing season depends on wealth (Aragón, Oteiza, and Rud, 2019). Households that own livestock sell their livestock to make up for lower agricultural production. Households that do not own livestock cope with the temperature shock by expanding their farming operations into fallow land and increasing child labor. This strategy increases short-term production at the expense of long-term outcomes and is likely to increase inequality, even among individuals in the same community who are primarily engaged in the same economic activities.

Disaster insurance would provide a means of consumption smoothing in the aftermath of climate shocks. But the poor are unlikely to have such insurance owing to high transaction costs relative to their portfolio and to institutional issues such as low levels of trust (Kunreuther, Pauly, and McMorrow, 2013).

In addition to unequal financial access, the poor have less capacity to cope with the economic effects of climate shocks because they are more vulnerable to health shocks. The poor are less likely to have access to water and sanitation services and possess fewer resources to spend on preventive care, often resulting in poorer baseline health (see Chapter 6). Compounding these problems, the poor also have less access to healthcare. This implies that they may suffer more serious health consequences following a climate shock and that the economic costs of those consequences are particularly devastating. Additional health expenses, income lost to illness, and increased time

spent caring for other family members can further strain the budgets of the poor.

Remittances (private transfers of money from migrant workers) are another dimension along which the poor are disadvantaged. In the wake of climate shocks, remittances remain steady or increase (Bettin and Zazzaro, 2018). They can help to smooth consumption and kick-start recovery in the aftermath of climate shocks. But well-off households tend to receive more remittances. In Jamaica, households that smooth dips in consumption after tropical storms using savings and remittances are more likely to live in better-built housing (Henry, Spencer, and Strobl, 2020).

With already tight budgets, the poor have little opportunity to use budget modifications to finance necessary consumption. Wealthier households can decrease spending on luxury goods and delay consumption, but these coping mechanisms are less available to poor households, especially those near subsistence levels. Increases in food prices in the aftermath of a climate shock weigh disproportionately on poor households' budgets, leaving fewer resources to spend on recovery. As an example, Ecuadorians in the poorest quintile spend 42 percent of their income on food, compared with 27 percent in the top quintile (Vogt-Schilb et al., 2019).

Poor households face difficult choices. Reducing food consumption in the short term can jeopardize the health of household members. The need to bring in income can lead to less educational attainment or the sale of productive assets. These trade-offs endanger the long-term prospects of poor households.

10.4.

POLICIES ON CLIMATE CHANGE AND DISASTER RISK MANAGEMENT NEED TO BE ALIGNED WITH GOALS FOR REDUCING INEQUALITY

Inequality needs to be factored into policies on climate change and the management of the risks of natural disasters. A first step in reducing the unequal effects of climate shocks is to improve social safety nets and implement inclusive development policies that improve the poor's access to financial resources, healthcare, and infrastructure services.

But natural disasters will still occur, and governments should be ready to assist households with recovery. Because the effects of disasters are concentrated among those least able to cope with them, it is important to ensure that aid and relief efforts are well targeted to the most vulnerable. Climate shocks can be devastating for poor households, and their subsequent efforts to smooth consumption can lower educational outcomes, endanger health, and force the sale of productive assets, thus hindering their ability to climb out of poverty. For those reasons, immediate assistance is critical. Using existing social transfer programs to make climate-shock-related cash transfers to the most vulnerable households would allow governments to quickly distribute aid to the most vulnerable households in locations struck by climate shocks (Hallegatte and Rozenberg, 2017). In the weeks or months that follow, those same programs could be expanded to make transfers to additional households that risk falling into poverty. The COVID-19 pandemic has demonstrated the capacity of governments to expand the coverage of cash transfer programs in response to systemic shocks in a relative short timeframe.

Inequality also needs to be factored into investment decisions related to adaptation to climate change. Modifying decision-making processes for such investments and enhancing the participation of the poor in these processes is essential. Using standard cost-benefit analysis to direct adaptation investments can favor the rich at the expense of the poor. Because the rich have more wealth and the poor are more likely to live in more marginalized and harder-to-protect areas, implementing adaptation projects only in areas where the avoided losses exceed the costs will exclude poorer areas (Hallegatte et al., 2016).

Unmitigated climate change will result in astronomical negative effects for both overall economic growth and inequality. Therefore, countries need policies that will simultaneously mitigate climate change and reduce inequality. Removing fossil-fuel subsidies and raising environmental taxes are often considered a crucial part of decarbonization strategies. But unless poor households are compensated for increased food and fuel prices, such policies would exacerbate inequality in most countries in the region (Feng et al., 2020). One solution is to distribute revenues from environmental taxes or subsidy removal to low-income households in the form of cash transfers or in-kind transfers of essential goods (Schaffitzel et al., 2020). Brazil, the Dominican Republic, and Mexico have already successfully used cash transfer programs to compensate the poor for price increases caused by the removal of subsidies (Di Bella et al., 2015; Vagliasindi, 2012). Although the fiscal revenue generated by removing fuel subsidies and raising environmental taxes is sufficient to fully compensate low-income households for the price increases they face as a result, recent events have demonstrated that planning, communication, and stakeholder engagement are key to the acceptance of such compensatory policies (Vogt-Schilb et al., 2019).

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11.

WHEN FINANCIAL INCLUSION PROVES NONINCLUSIVE

by Verónica Frisancho and Diego Vera-Cossío

Lower-income households in developing countries tend to be more exposed to negative economic shocks (Alderman and Paxson, 1994). When they do face an emergency, it is extremely hard for them to cover the associated expenses. Six out of ten people in Latin America and the Caribbean report they lack the resources to cover an emergency. These levels of resilience are low relative to those found in Organisation for Economic Co-operation and Development (OECD) countries and even lower in the case of the poorest quintile of households in Latin America and the Caribbean; only two out of ten report being able to meet the financial needs of an emergency.[1]

The recent public health and economic crisis did not make things easier for the poor. Data from the IDB-Cornell coronavirus survey (Bottan, Hoffmann,

[1] The share of people in the World Bank FinDex survey reporting that it would be possible for them to come up with resources to cover emergencies is 0.43 in Latin America and the Caribbean, and 0.73 in OECD countries (excluding Chile). For a deeper analysis of the exposure of poorer households to weather, natural disasters, and pollution, see Chapter 10.

and Vera-Cossío, 2020) suggests that only three of ten households in Latin America and the Caribbean reported being able to cover an emergency expense during the midst of the pandemic. Among respondents in the lowest-income households in the sample, only one out of ten reported that their family would be able to cover an emergency expense equivalent to one-half the national monthly minimum wage. Although the loss of livelihoods and income during the crisis can explain this reduction in resilience (see Chapter 3, and Bottan, Hoffmann, and Vera-Cossío, 2020), the pandemic might have also placed a heavy toll on household savings.

Low resilience in the region coincides with frictions in financial markets related to limited access to finance. According to the World Bank's FinDex survey, more than 90 percent of residents of OECD countries have a bank account, compared with only 40 percent in Latin America and the Caribbean. This rate drops even further at lower incomes. The situation poses an important challenge for the financial sector and policy makers in the region: expanding the access and usage of formal financial products. As discussed in Box 11.1, however, the COVID-19 crisis also created an opportunity to expand the coverage of financial services in the region.

This chapter discusses the progress made in financial markets in Latin America and the Caribbean, as well as the challenges that remain. Particular attention is paid to gaps in our knowledge of the barriers to more-inclusive financial systems, the role of technological innovations in bridging those gaps, and policies that aim to reduce disparities in financial markets.

11.1.

PROGRESS AND CHALLENGE

Data from FinDex 2017 shows that there also are important disparities in access to finance by level of income in the region. Only 5 percent of the poorest quintile of households borrow from formal lenders, while 18

percent of the richest quintile obtain credit. Likewise, 35 percent of the poorest quintile have a bank account, while 68 percent of the top quintile have one. These disparities are quite sizable compared with those in OECD countries, where households in the top and bottom quintiles have similar access to formal loans and bank accounts.

Several governments in the region have tried to increase access to financial services to underserved households by linking payments from social assistance programs to individual bank accounts, but there is still a long way to go. Most countries in Latin America and the Caribbean currently target cash-transfer programs at lower-income people and high-poverty areas. Some countries, such as Mexico or Peru, use these programs to expand access to formal financial products by disbursing transfers through no-fee bank accounts; other countries, such as Bolivia and El Salvador, lag. Moving towards social assistance programs that are linked to financial products may help. Still, leveling the field will entail overcoming other barriers in financial markets, discussed below.

Three important barriers could explain the unequal improvements in financial inclusion. First, the lack of competition among banks and traditional financial institutions may lead to high markups that deter the usage of formal financial services among lower-income people. A series of IDB research papers shows that bank markups are indeed high in Colombia (Tamayo, Gomez-Gonzalez, and Valencia, 2019) and Mexico (Cañon, Cortes, and Guerrero, 2019) and that increased competition can lower rates, particularly in the case of small firms in Brazil (Ornelas, da Silva, and Van Doornik, 2020) and Chile (Hansen and Urbina, 2018). When it comes to deposits, fees and high minimum-deposit requirements may limit the access of lower-income customers to high-yield savings products.[2]

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[2] According to FinDex data, 50 percent of people in Latin America and the Caribbean report not opening a bank account because it is too expensive to do so.

A. Changes in access to financial institutions across countries in the region
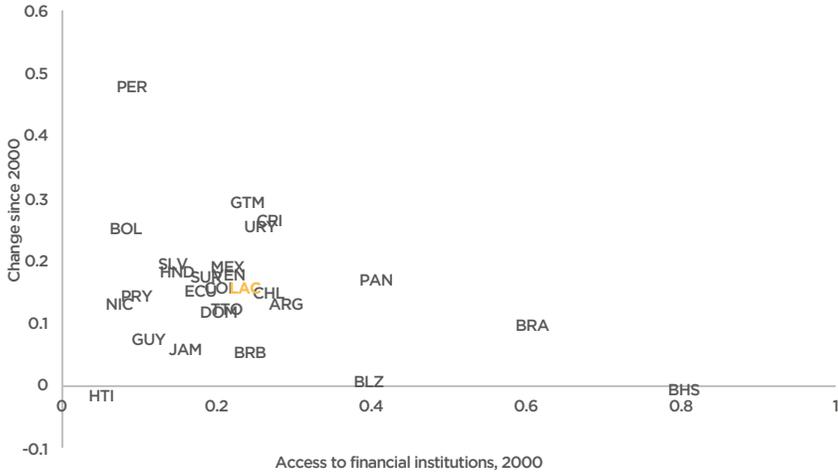
B. Changes in the number of branches and ATMs in subnational regions in Peru and Bolivia (normalized by country)
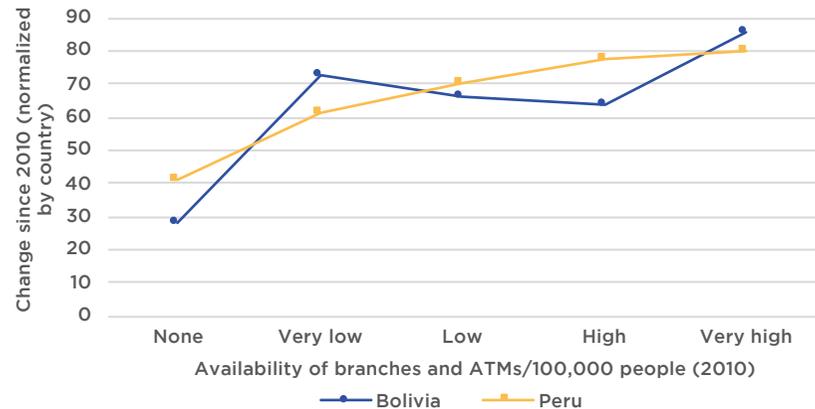
Sources: Authors' calculations. Figure 11.1.A is based on the Financial Development dataset collected by the IMF. Figure11.1.B uses data from Superintendencia de Banca, Seguros y AFPs in Peru, and Autoridad de Supervisión del Sistema Financiero in Bolivia.

Note: Figure 11.1.A plots percentage changes in the Index of Access to Financial Institutions from 2000 to 2017 on the vertical axis, and baseline (2000) levels of the index on the horizontal axis. The index is based on information on the number of bank branches, ATMs, and other points of access in each country. Figure 11.1.B plots normalized changes in the number of points of access (branches, ATMs) per 100,000 people in each district (in the case of Peru) or municipality (in the case of Bolivia) between 2010 and 2018 on the vertical axis. The largest change (by country) is indexed to 100, while the smallest is indexed to 1. The horizontal axis captures categories of access per 100,000 people in 2010. Categories are constructed based on quartiles of 2010 branch availability (per 100,000 people) among districts (Peru) and municipalities (Bolivia) with at least one branch in 2010.

Financial institutions are not the only ones to blame. A second constraint on further inclusion relates to the nature of the business, as it is risky and costly to deliver financial services to poorer households. Lower-income households rely on economic activities that are more vulnerable to economic shocks. In addition, high levels of informality in the region make it hard for lenders to identify borrowers with the ability to generate the cash flows needed to repay loans. High operating and screening costs thus tend to serve only higher-income individuals who have steady jobs and sizable assets. In fact, banks tend to compete for the same subset of borrowers. IDB studies by Frisancho (2012) and Arráiz et al. (2019) show that when information about the creditworthiness of clients collected by a given financial institution becomes public, other financial institutions tend to poach creditworthy clients. If financial institutions must invest in screening borrowers but they are unable to fully capture the benefits of such investments, then it is not surprising that they opt to compete for existing borrowers as opposed to investing to expand their customer base.

Third, even if there is access to financial services, uptake rates of formal financial services remain low, especially among the most underprivileged populations. Among bank account holders in Latin America and the Caribbean, only 70 percent report making deposits as opposed to 93 percent of account holders from OECD countries. Lack of trust in financial institutions, lack of knowledge about financial products, behavioral biases, and a mismatch between financial products and the needs of lower-income households may explain the low uptake levels.

11.2.

CREDIT: A TALE OF TWO MARKETS

One well-documented puzzle in the literature regards returns to capital in developing countries. There is experimental evidence around

large returns associated with relaxing the liquidity constraints of small and medium enterprises. But when capital is delivered through credit markets, as opposed to government grants, such large returns appear to be absent.[3] One potential explanation is that different frictions in credit markets may prevent financial institutions from lending to poor but highly productive entrepreneurs.

Survey data on poor and lower-middle income households in Brazil, Mexico, and Peru shows that in most cases, households tend to borrow from relatively informal sources like pawn shops and money lenders (see Figure 11.2). This pattern is seen across income groups. The poorest of the poor in Mexico and Peru tend to borrow from both formal nonbank lenders such as microfinance institutions (MFIs) or informal lenders. Also, the type of lenders from which a household can borrow varies with income. Although MFIs may provide an alternative to informal lenders, MFIs still lack the scale to keep costs low, and they can expand access to financial services only at a high price (Banerjee and Duflo, 2010). Thus, the income-based segmentation in credit markets translates into regressive pricing schemes, as the lenders that serve the poor charge higher interest rates to remain sustainable.[4]

Although differences in bank types may explain differences in interest rates, borrower attributes are also important. Table 11.1 illustrates this issue by reporting correlates of average interest rates related to loans given by different lenders in Bolivian municipalities and municipality poverty rates as a proxy for borrowers' characteristics—measured as the percentage of the population living with unmet basic needs (UBN). Column 1 shows a positive correlation between poverty and average interest rates after controlling for loan type.[5] A 1 percent increase in the municipality-level poverty rate is associated with a 6 basis-point increase in the average interest rate offered in each municipality.

[3] See McKenzie and Woodruff (2008) for evidence regarding high returns to capital in Mexico, and Angelucci, Karlan, and Zinman (2015) regarding the nontransformative effects of high-interest loans.

[4] See Campion, Ekka, and Wenner (2010) for a comparison of interest rates across lenders in Latin America and the Caribbean.

[5] Concretely, the econometric specifications control for whether the average interest rates correspond to small and medium enterprise, microcredit, consumption, or mortgage loans.

The positive correlation between interest rates and poverty could be explained by lenders with different costs and technologies operating in different regions—i.e., large commercial banks serving cities as opposed to MFIs serving rural areas—but also by differences in borrower types and the costs of monitoring and screening them that vary across the localities where the same lender operates. Around 60 percent of the interest rate–poverty gradient is explained by different types of lenders serving different municipalities. Relative to Column (1), the correlation between interest rates and poverty drops after controlling for lender fixed effects (see column [2]). Even among loans given by the same lenders, however, those lent in poorer municipalities remain more expensive than those in better-off municipalities. These differences are neither explained by underlying differences in the share of nonperforming loans, nor by municipality population size (see Columns [3] and [4], respectively). Even after (roughly) controlling for risk levels, interest rates in poorer municipalities remain higher, suggesting that the higher costs of serving the poor lead to spatial/geographical inequalities.

FIGURE 11.2 Access to Loans among Lower- and Lower-Middle Income Households, by Type of Lender and Income Quintile
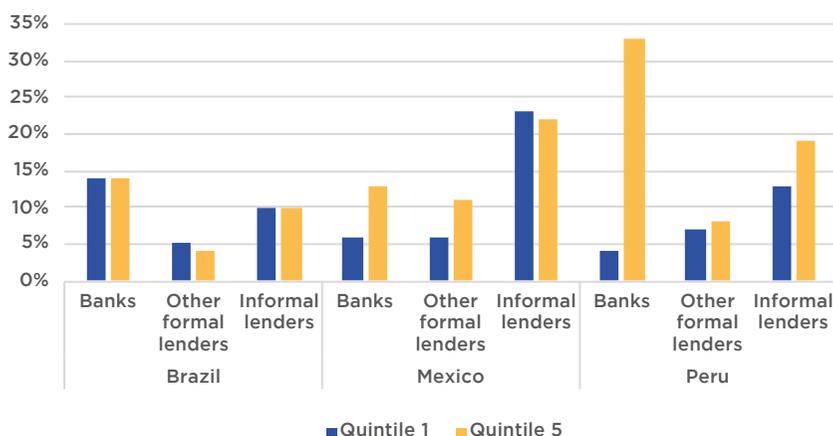
Source: Authors' calculations.

Note: The survey includes data on a representative sample of urban households with daily per capita income of less than $10 in Brazil, Mexico, and Peru. Data was collected by IDB between 2014 and 2015. Income quintiles correspond to the distribution of household income in the sample and thus are not representative of the overall population in each country.

TABLE 11.1 Positive Correlation between Poverty and Average Interest Rates in Bolivian Municipalities

DEPENDENT VARIABLE: AVERAGE INTEREST RATES (MUNICIPALITY LEVEL)				
	(1)	(2)	(3)	(4)
Municipality poverty rate (% UBN)	0.058***	0.024***	0.024***	0.019***
	(0.005)	(0.003)	(0.003)	(0.003)
Controls for lender fixed effects	No	Yes	Yes	Yes
Controls for share of nonperforming loans	No	No	Yes	Yes
Controls for population (2012)	No	No	No	Yes

Source: Authors' calculations. Data regarding poverty was obtained from Unidad de Análisis de Política Económica (UDAPE). Data regarding loans was obtained from Autoridad de Supervisión del Sistema Financiero (ASFI).

Note: The table reports regression estimates of the correlation between average interest rates associated with loans made in each municipality (dependent variable) and the municipality-level rate of people living with unmet basic needs, measured using 2012 census data. Column (1) reports correlations after controlling for type of loan (e.g., business, consumer, mortgage), the economic sector associated with the borrower's main occupation, and quarter fixed effects. Column (2) includes lender fixed effects (61 lenders). Column (3) controls for the nonperforming share of the portfolio by loan type, sector, lender, and municipality. Column (4) adds 2012 population as a control. The sample includes quarterly information from 2012 to 2018 related to lenders regulated by ASFI. Operations from Banco de Desarrollo Productivo, a state-owned development bank, are excluded. The total number of observations was 329,477. Standard errors are clustered at the municipality level. ***, **, and * denote significance at the 1%, 5%, and 10% levels.

11.3.

THE PROMISE OF FINTECH AND DIGITAL PAYMENT SYSTEMS

The availability of new financial technologies (FinTech) and digital payment systems (DPS) promise to level the playing field in terms of financial inclusion. First, geographical barriers could be minimized by the availability of branchless financial services. For instance, mobile money

may ease the flow of remittances both between urban and rural areas but also across countries, and thus increase household resilience towards shocks. Evidence from Kenya and Rwanda shows that the availability of mobile money allows households to rely on remittances from other regions to cope with emergencies. In turn, by increasing the efficiency of the allocation of consumption and labor among users, mobile money led to decreases in poverty in Kenya (Suri and Jack, 2016).

Second, the adoption of digital payment systems has the potential to improve borrower screening, particularly among workers in the informal sector. To illustrate this point, think of the case of street vendors adopting digital payment platforms. In the absence of such technology, there is virtually no data regarding the cash flows of informal businesses, which is crucial to obtain loans from traditional financial institutions. With the adoption of digital payment systems, each transaction of the street vendor generates information about business cash flow. One well-documented example is the case of M-Shwari in Kenya, a digital lender that screens borrowers based on scoring models that exploit the digital footprint of mobile-money transactions and cell-phone use. Bharadwaj, Jack, and Suri (2019) show that access to such technology expands access to credit without crowding out borrowing from other lenders.

The promise of FinTech and DPS is encouraging, but trends in the region may differ from those observed in other high-adoption regions such as Africa or China. Latin America and the Caribbean has higher levels of state capacity and more solid regulatory frameworks, which may prevent the unregulated expansion of FinTech. Also, while the number of FinTech startups in the region grew from 703 in 2017 to 1,166 in 2018 (IDB, IDB Invest, Finnovista, 2018), it is unclear if such growth can translate into financial inclusion for the most vulnerable people. The growing number of startups in the region relates mostly to innovative financial services for the rich and is associated with wealth management, financial management, or innovative ways to increase equity in large firms. Only 42 percent of these new FinTech startups address digital

payment systems and lending, the very areas that are able to increase the financial inclusion of lower-income people.

From a consumer perspective, the usage of FinTech services is low in the region. One example is the case of mobile money. Figure 11.3.A shows that, relative to countries with similar or lower levels of GDP per capita (to the left of the vertical dashed line), the usage of mobile money in the region is low. Most countries exhibit usage rates well below the worldwide average (horizontal dashed line).

Access to mobile devices does not seem to explain the lack of adoption of mobile money. While the rates of ownership of mobile devices in the region tend to be close to the world average (Figure 11.3.B), the share of individuals that use mobile payment systems is rather low. Only two out of twenty Latin American countries for which data was available report mobile-money usage rates higher than the world average. This pattern is even sharper when we focus on those with the lowest income in each country. Although the mobile-phone ownership rate among the region's poorest quintile of households is 70 percent, only 3 percent of the poorest Latin Americans use mobile payments for their transactions. Even though the poorest 20 percent of households in the rest of the world have similar ownership rates (75 percent), they are more than three times as likely to use mobile payments (11 percent) than their Latin American counterparts. These minimal levels of usage of mobile payments coincide with minimal data usage relative to other regions. For example, in China, people use on average 9.8 gigabytes of data on their phones per month while Latin American users consume only 4.7 gigabytes (GSMA, 2020). Compared with other regions of the world, the region's level of data usage surpasses only that of countries in sub-Saharan Africa.

FIGURE 11.3 Mobile Payment Systems in the Region and Worldwide

A. Per capita GDP and the use of mobile payment systems (share)
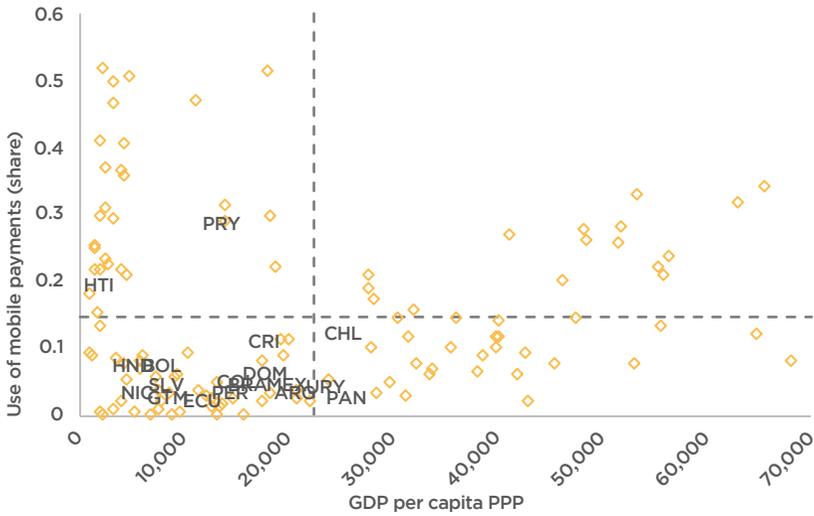
B. Mobile-phone ownership and the use of mobile payment systems (share)
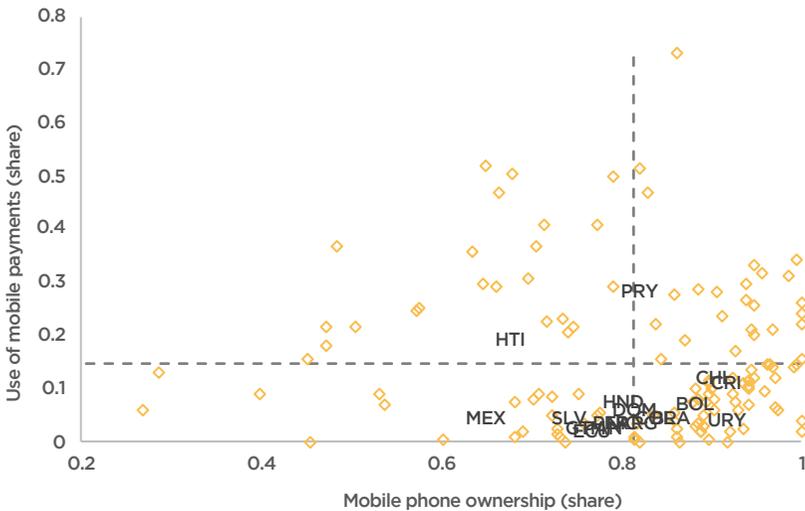
Source: Authors' calculations using data from FinDex 2017 dataset.

Note: The figure reports country-level rates of usage of mobile payments (vertical axis) and mobile-phone ownership rates (horizontal axis) for 144 countries. Usage of mobile payments includes the reception and remission of payments for goods, services, and labor as well as flows of remittances. Data on GDP per capita was obtained from the World Bank's World Development Indicators. Dashed vertical and horizontal lines represent means of the variables in each axis. LAC countries are depicted with black markers, non-LAC countries are depicted with orange markers.

Given that access to mobile phones is relatively high in Latin America and the Caribbean, why is usage of these promising financial innovations so low in the region? Part of it is related with connectivity costs (Mas, 2017). Even if access to the internet or a mobile phone is available, the costs of using data are high. A study of seven Latin American countries and Puerto Rico (GSMA, 2017) shows that lack of affordability is one of the two most important reasons for not using the internet; in Argentina it is the most frequently cited barrier. These connectivity costs add up alongside other banking fees that also deter the usage of financial products (see Figure 11.5). Given that the new post-pandemic environment may entail a higher demand for digital services, it is crucial to produce causal evidence on the effects of changes in costs of data usage and adoption of digital financial services.

Even if connectivity costs were low, the regulatory context may slow down the adoption process. As FinTech companies grow, the challenge of designing regulations that promote the expansion of services but also protect customers is important. Latin America and the Caribbean lags behind other regions with higher-growth FinTech companies, but has the opportunity to learn from experience. In China, many digital payment platforms have sprouted up, increasing the availability of data to develop new screening technologies. As FinTech lending companies were able to benefit from greater access to information, digital usurers— lenders providing digital loans at very high interest rates—also emerged, raising the risk of over-indebtedness among the most vulnerable groups. Finding a middle ground would allow the region to capitalize on the benefits of new financial technologies while minimizing the risks associated with their adoption.

A first step towards setting up an inclusive but fair regulatory framework in Latin America and the Caribbean may entail a coordinated regional agenda. Countries face the same challenges, and FinTech firms tend to expand across the region. Within each country, it is important to encourage financial regulators to create divisions that specialize in FinTech: while there are similarities in the type of products that FinTech firms offer relative to those offered by traditional financial institutions, there are important differences in how they obtain funding, how they

deliver financial products, and the type of consumer information that they have access to. The latter issue is particularly important in Latin America and the Caribbean. According to GSMA (2017), the most important barrier to the usage of mobile data in the region relates to data security. In a region with low levels of trust in financial institutions (see Figure 11.5 and the discussion in the next section), security concerns can limit the demand for digital financial innovations. Users may not adopt new technologies if they do not trust that their financial resources and data will be responsibly handled. A move towards clearer rules would give users more certainty about the trustworthiness of new technologies and operators.

Given the challenges the region faces, important knowledge gaps need to be tackled before making the case for a policy agenda that fosters an expansion of FinTech. First, evidence needs to be supplied on how new financial technologies affect the well-being of households and businesses. For example, there is evidence about how the digital footprints of Latin American households could be used to create credit scores for the unbanked (Björkegren and Grissen, 2019), and how digital financial services could reduce transaction costs and increase financial inclusion (Bachas et al., 2018). Still, the effectiveness of digital financial technologies on resilience, investment, business growth, consumption, and the allocation of labor has yet to be backed by rigorous research. Second, evidence that policies can reduce connectivity costs for access to financial services is lacking and long overdue. Third, digital financial technologies should be tested against other strategies to expand access to financial services among underprivileged populations. Recent studies on innovations in the screening process such as short questionnaires for potential clients (Azevedo et al., 2020) or psychometrics (Arráiz, Bruhn, and Stucchi, 2017) seem hopeful about the inclusive expansion of credit access. Finally, a systematic review of how the banking industry would respond to changes in the regulatory framework of FinTech companies could offer important policy lessons. A better understanding of all these issues would help make the case for a policy agenda to foster the expansion of FinTech.

11.4.

SAVINGS

Precautionary savings for emergencies are rare, and retirement savings are low in the region. In Figure 11.4 we see that only 15 percent of households in the lowest quintile of the income distribution (within each country) report using savings to cover emergency expenses. In contrast, 25 percent of the wealthiest households in Latin America and the Caribbean report using savings to cover emergency expenses. These patterns suggest that income inequality translates into unequal resilience to emergencies. This situation may be more dramatic after the COVID-19 pandemic as several households may have depleted their already minimal savings.

Figure 11.4 also shows that the overall levels of precautionary savings in Latin America and the Caribbean are substantially lower than those of OECD countries. Even the share of OECD households in the bottom quintile of the income distribution who report relying on savings to cover emergency expenses is by far larger than that of the wealthiest quintile of households in Latin America and the Caribbean. Among lower-income households in OECD countries, 50 percent of them rely on savings to cover emergencies. This rate is twice as high as that corresponding to the wealthiest Latin Americans. These patterns are even more dramatic in the case of retirement savings. Less than 5 percent of the poorest households in the region save for retirement, while 20 percent of the wealthiest households have retirement savings. Again, even the wealthiest households in Latin America and the Caribbean have lower levels of retirement savings than the poorest households of OECD countries. These are worrisome patterns, as the poorer households are precisely those most likely to face emergencies and be excluded from contributory pension systems (see Chapter 12).

It takes more than expanded access to formal savings accounts to boost savings. Dupas et al. (2018) analyze the impacts of expanding

access to basic bank accounts in Uganda, Malawi, and Chile. In the Chilean case, only 17 percent of the individuals with increased access to no-fee bank accounts opened one within a few months, and only 3 percent made five or more deposits over a two-year period. Similarly, it took a law requiring mandatory contributions to increase the participation of independent workers in the Chilean pension system.[6] In 2013, the year after the mandate was introduced, the number of independent workers contributing to retirement accounts increased by 28 percent, relative to the preceding year.[7] One implication is that there are important demand-side constraints to saving in Latin America and the Caribbean.

FIGURE 11.4 Share of People with Emergency and Retirement Savings, by Income Quintile and Region
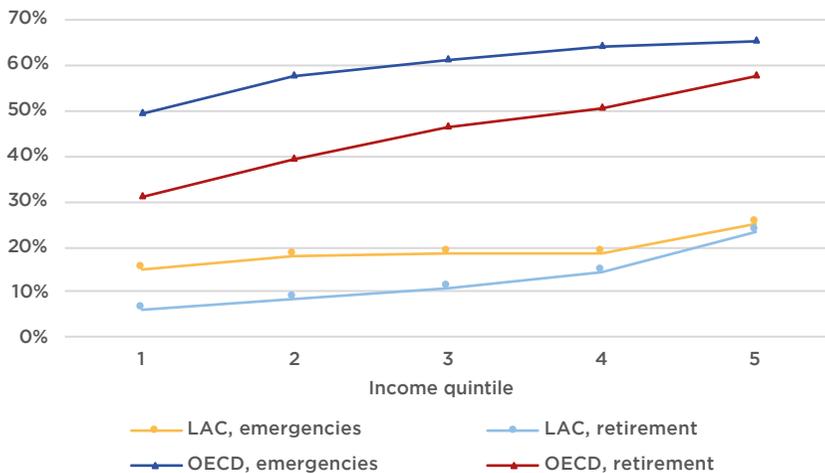
Source: Authors' calculations using FinDex dataset.

Note: The figure plots shares corresponding to each quintile of income of the number of households that reported that they would use savings to cover expenses related to emergencies, and the share of households that reported formally saving for retirement.

[6] Starting in 2012, a law imposed the mandate on Chilean independent workers to contribute a share of their income to their personal retirement accounts.

[7] Based on data from http://www.spensiones.cl/inf_estadistica/aficot/trimestral/2019/12/02A.html.

Savings decisions are personal decisions that are influenced by psychological traits and behavioral biases such as present bias or limited attention (Della Vigna, 2019; Frisancho, 2016). An IDB study (Frisancho and Karver, 2016) shows that about 40 percent of the urban population in Brazil, Mexico, and Peru have present-biased preferences. Given that present-biased preferences will reward immediate consumption over savings, policies that are able to mitigate the effects of these biases are important. Chetty et al. (2014) analyze automated contributions into retirement accounts as the default for Denmark and find that such policy changes led to increases in savings above and beyond those related to altered incentives such as tax exemptions. Similar policies are the norm in Latin America in the case of contributions to retirement accounts, but rigorous assessments of their effectiveness are still pending. At a smaller scale, there is evidence that peer support helps to attenuate present bias and increase savings. Kast, Meier, and Pomeranz (2018) find that by relying on publicly available savings goals and regular meetings among peers, the savings of Chilean entrepreneurs rose substantially.

Issues of limited attention are also important. The study in Chile also shows that an alternative intervention that simply sent feedback text messages led to similar outcomes. Thus, policies that aim to reduce limited attention can also increase savings. Experimental evidence from Bolivia, the Philippines, and Peru shows that sending text messages with reminders to save increased savings in accounts of the sender bank (Karlan et al., 2016). Likewise, experimental evidence from Colombia shows that savings reminders have persistent effects on low-income youths' savings (Rodríguez and Saavedra, 2019). It remains unclear, however, if these interventions crowd out other savings or indeed increase total savings. If the latter is true, then using reminders at scale could lead to economy-wide increases in savings.

Beyond psychological traits or behavioral biases, formal savings instruments often do not suit the needs of lower-income people and can be unappealing to them. For instance, administrative fees or minimum deposit amounts may deter formal saving. Figure 11.5 shows that 56 percent of the poorest quintile in Latin America and the Caribbean report not saving because it is too expensive to do so. In Nepal and

Kenya, subsidies to reduce the costs of opening bank accounts have encouraged lower-income people to open formal bank accounts (Prina, 2015; Dupas et al., 2018). While some countries, such as Argentina, Bolivia, and Panama, have eliminated fees associated with opening and keeping basic savings accounts, whether such policies increase savings is yet to be backed by research.

Even with no-fee savings accounts or low-interest loans, there might be other barriers to using formal financial services. One of them is distance, with over a third of the poorest households in the region reporting distance as a reason for not opening accounts (see Figure 11.5). As we learned from Figure 11.1.B, most efforts to increase bank branches are concentrated in already served locations. One potential way to reduce distance is through technology. As suggested by evidence from Mexico (Bachas et al., 2018), the simple provision of debit cards reduced the distance required for accessing basic financial services from 4 kilometers to 1.

Mismatch between borrower needs and the savings and investment products offered by banks may also deter savings. Some financial products may not be suitable for informal workers without a steady income, or for savers with different risk preferences. In the case of retirement savings plans, Chile, Colombia, Mexico, and Peru are expanding the number of investment plans that workers can pay into for retirement. In principle, more options better suit the needs of workers, but the effectiveness of these types of policies in increasing savings still needs to be rigorously tested.

Taking advantage of more suitable instruments requires some level of trust in financial institutions (Bachas et al., 2019) and of financial literacy (Miller et al., 2014; Kaiser and Menkhoff, 2017). In a region where mistrust in financial institutions inhibits people from opening bank accounts (see Figure 11.5), financial literacy programs focused on lower-income households can be powerful tools to increase trust. Galiani, Gertler, and Navajas (2020) find that savings increased due to a financial-trust workshop provided to a subsample of parents of beneficiary children of the Peruvian conditional cash transfer (CCT) program, Juntos—a nationwide program targeting lower-income households with school-

age children. A similar result is found in the case of a financial education program serving rural clients of for-profit financial institutions in Peru (Boyd and Díez-Amigo, 2017). Likewise, Bosch et al. (2018) provide experimental evidence that a financial literacy program in Chilean secondary schools increased trust in the pension fund system.

FIGURE 11.5 Reasons for Not Opening a Bank Account, by Income Quintile
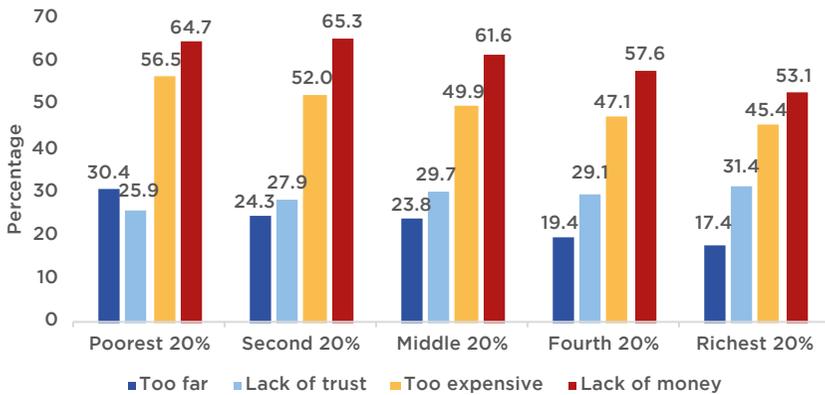
Source: Authors' calculations using FinDex dataset.

Financial literacy programs for lower-income adults seem challenging to implement at scale; with their busy lives and pressing needs, these adults may struggle to find time to acquire and process information. Experimental evidence from a recent IDB study shows that the effectiveness of a social media campaign to increase the retirement savings of current workers in Mexico was limited (Bosch et al., 2018). Moreover, if the objective is to boost long-term savings, it may be too late to focus on adults. Building habits and changing psychological traits require time, and, as is the case with other dimensions of human capital (Berlinski and Schady, 2015), interventions to build financial literacy might be more effective if implemented earlier on (Kaiser and Menkhoff, 2017). A recent review of financial literacy programs for youth

finds that they are quite effective at increasing financial knowledge, and sometimes psychological traits such as self-control (Frisancho, 2019). In addition, a focus on youth can also lead to important spillovers for adults. In Peru, Frisancho (2018) unravels evidence of spillover effects of a financial literacy program for school-age children on their parents and teachers. Teachers in treated schools not only increased their financial knowledge because of the program but were also more likely to save in formal institutions. Overall, the earlier the better. Financial literacy programs for youth are likely to provide financial knowledge earlier in life, can be implemented at scale as part of school curricula, and can lead to desirable second-order effects on adults.

It is particularly challenging to foster savings behaviors among the poor because of their limited and unpredictable sources of income. Indeed, Figure 11.5 also shows that among the poorest households in Latin America and the Caribbean, lack of money is cited as the main reason for not opening a bank account. Cash-assistance programs targeted at lower-income households may, however, be able to boost savings even among cash-constrained groups. For instance, evidence from Mexico's CCT program shows that when cash-transfer recipients (who already had a bank account) are provided with debit cards, they increased their overall savings (Bachas et al., 2019). Promoting interlinkages between the financial system and social assistance programs has the potential to relax important savings constraints. Assistance payments made in response to the COVID-19 pandemic may therefore contribute to greater financial inclusion (Box 11.1).

BOX 11.1 The COVID-19 Pandemic and the Big Push towards Financial Inclusion

The expansion of digital financial products from debit cards to mobile wallets faces important coordination problems. Customers may only want to adopt financial technologies if vendors or other

customers adopt them as well and if financial institutions invest in improving their service networks. At the same time, financial institutions will only invest in expanding their network of services if there is a broad customer base. This tension often translates into a situation of low investments in and low adoption of technology. Beyond connectivity costs and regulation issues discussed in this chapter, expanding the use of financial services entails solving a complicated coordination problem, which can be favorably solved with a big push to both sides of the market (Murphy, Schleifer, and Vishny, 1989). Despite its devastating effects, the coronavirus pandemic might have generated the scenario for a big push towards financial inclusion and the adoption of new financial technologies in some countries in the region.

During the crisis, several governments either relied on preexisting social programs to provide cash aid to the needy or implemented new cash-aid programs. Cash-aid programs are no strangers to the region, but governments faced the new challenge of delivering resources while keeping citizens at home. One potential solution was to rely on debit cards for disbursing the transfers, allowing beneficiaries to cash out government aid without agglomerating at bank branches. However, the most vulnerable households also tend to have substantially lower levels of debit card ownership relative to those that managed to keep their jobs or businesses afloat (see Figure B11.1.1.). Unsurprisingly, data from the IDB-Cornell coronavirus survey shows that beneficiaries of preexisting social programs who do not have debit cards are less supportive of new cash-transfer programs to cope with the pandemic (63 percent), relative to social-programs beneficiaries who own a debit card (79 percent).[1]

[1] On a scale of 1 to 5 (totally disagree to totally agree), respondents were asked about their agreement with a hypothetical cash transfer to cope with the pandemic. See Chapter 13 for an in-depth discussion of other determinants of citizen demand for pro-poor policies.

FIGURE B11.1.1 Lower Rates of Debit Card Ownership among Beneficiaries of Social Programs Who Lost Their Livelihoods during the COVID-19 Pandemic (April 2020)
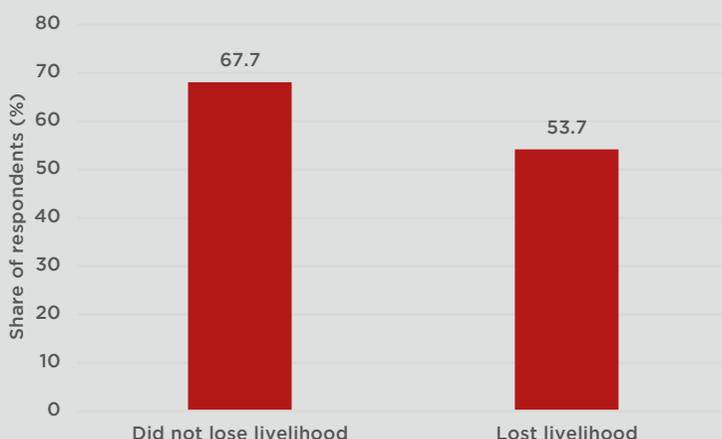
Source: Authors' calculation based on the IDB-Cornell coronavirus survey.

Note: We identified households that lost their livelihoods by focusing on respondents that reported that at least one person in their household lost a job or closed a small business during the month preceding the survey. The sample includes 21,898 observations from 17 countries in LAC related to beneficiaries of either pre-pandemic social programs or new social programs.

The pandemic has thus increased governments' incentives to aggressively expand access to financial technologies, while raising customers' expected returns from adopting formal financial services. Some governments have taken up the opportunity to innovate. For instance, the government of Colombia decided to provide beneficiaries with the option to be automatically enrolled into mobile wallet platforms and bank accounts so that they could receive and spend the benefits of the new Ingreso Solidario program. In Panama, resources from the Bono Panamá Solidario were disbursed through electronic vouchers, and identification (ID) cards were turned into debit cards to allow beneficiaries to safely cash out their resources.

Most of the COVID-19 cash aid programs are only transitory, but they may have long-lasting effects. There is evidence of other

crises leading to long-term impacts in the adoption of digital payment systems. For instance, after the 2016 demonetization episode in India in which over 80 percent of cash was withdrawn from the market, there was an increase in the use of digital payments that persisted even after cash was reintroduced in the economy (Aggarwal, Kulkarni, and Ritadhi, 2020). The COVID-19 pandemic could have given the region a big push towards a widespread adoption of financial services and digital payment systems, but rigorous research is needed to document the success, challenges, and unintended consequences of one of the largest financial inclusion episodes for many countries. Research related to implementation, customer protection issues, data security issues, and implications for the industrial organization of the FinTech industry will provide invaluable inputs for policy makers in Latin America and the Caribbean.

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12.

LIMITED REDISTRIBUTION THROUGH FISCAL POLICIES

By Alejandro Izquierdo and Carola Pessino[1]

    During the commodity boom, the countries of Latin America and the Caribbean boosted government expenditures, backed in part by increased taxation. It had been hoped that this spending would decrease inequality in the region. Some countries did not spend that much in social areas, so the muted impact was not a surprise. But other countries did increase social spending substantially, yet the quality of that spending left much to be desired, leading to several issues: transfer allocation leakages, pension systems that work mostly for formal workers, in-kind transfers in health and education which are not as pro-poor as they could be, and subnational governments which have scarce resources and little ability to provide quality services for the poor. Despite the region's comparable market-income Gini coefficients, it differs a great deal from the countries of the Organisation of Economic Co-operation and Development (OECD) and

[1] This chapter uses inputs from the IDB's 2018 flagship publication, Better Spending for Better Lives: How Latin America and the Caribbean Can Do More with Less, edited by A. Izquierdo, C. Pessino, and G. Vuletin.

the European Union (EU) when considering the impact of government intervention through spending and taxation in reducing inequality. While Latin America and the Caribbean interventions reduce inequality by 4.7 percent, the OECD-EU reduces it by 38 percent, meaning that Latin American governments are eight times less effective than their European counterparts in reducing inequality.

The region needs to rethink its redistributive policies, targeting the poorest portions of the population, particularly for services provided by the government. The poor have few options other than the public sector. On the expenditure side, leakage issues could be resolved through better targeting, switching from pricing to income policies, and changing expenditures so that savings from inefficiency reductions are assigned to social spending, distributing resources to schools and hospitals with horizontal and vertical equity in mind. Establishing expenditure-quality agencies to work out these issues will be key. Taxation policies should be changed to focus on income and property taxes; tax evasion also warrants attention. Finally, the region needs to explore ways to improve human development transfers based on outcomes, a key fiscal tool to reduce territorial inequality.

12.1.

THE STARTING POINT

Riding the commodity boom of the first decade of the twenty-first century, government primary expenditure increased on average by more than 8 percent of GDP in the group comprising the seven largest Latin American economies, and by more than 5 percent of GDP on average for the region as a whole.

FIGURE 12.1 Primary Government Expenditure Over the Past Two Decades in Latin America (percentage of GDP)
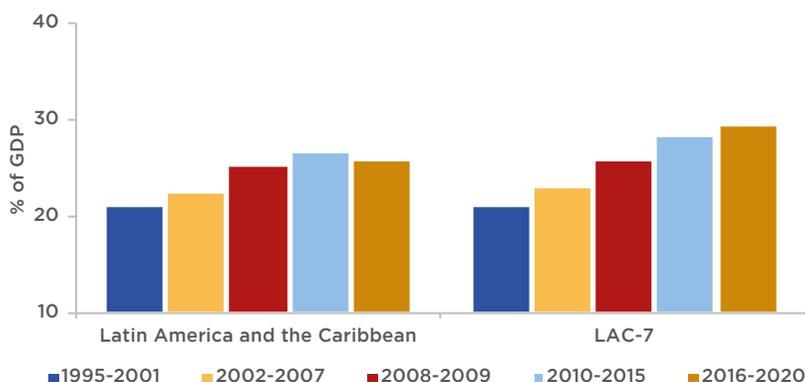
Source: IDB, 2018.
Note: LAC-7 includes Argentina, Brazil, Chile, Colombia, Mexico, Peru, and Venezuela.

But despite these large increases in government expenditure, Latin American governments do not fare so well in redistributing income. In most cases, it is apparent that growth was more important than redistribution in reducing poverty rates and inequality, a surprising fact given the size of expenditure increases in the region. Take, for example, the case of Argentina, which saw increases in primary expenditure exceeding 17 percent of GDP, much of which took place during the commodity boom dating back to 2003. Using data for 2003, 2006, and 2009, it is possible to track changes in the impact of government intervention through direct taxes and expenditure in changing income distribution. This is done by assessing the extent to which observed declines in disposable-income Gini coefficients and poverty-headcount ratios were due, primarily, to a reduction in market income inequality, or to an increase in the size and progressivity of social spending. The impact, or incidence, of government intervention can be estimated by computing the Gini coefficient at market income (i.e., income before government intervention) and contrasting it with the Gini coefficient using disposable income—i.e., income after government intervention. Between 2003 and 2009, both market income and disposable-income

Gini coefficients, as well as poverty-headcount ratios, plummeted.[2] But only 12 percent of the decline in the Gini coefficient for disposable income can be attributed to changes in the redistribution component, and the remaining 88 percent is due to the growth component.

During this period, GDP growth averaged 6 percent, and consolidated public expenditure increased by 10 percentage points of GDP. If we divide the 2003–09 period into two subperiods, however, two patterns emerge. Between 2003 and 2006, the change in disposable-income Gini is due entirely to the decline in market-income Gini. In contrast, between 2006 and 2009, more than 40 percent of the decline in disposable-income Gini is accounted for by the redistribution component. This is in large part due to the sharp rise in beneficiaries of the pension moratorium. But even in this period, growth continues to be more important, despite the 10 percentage points increase in government spending. By 2009, Argentina's Gini coefficient after government intervention was reduced by 8.2 percent (from a Gini of 0.487 to 0.447 for disposable income between 2006 and 2009), of which only 3.3 percentage points was due to redistribution.

This implies that each additional point of GDP increase in government expenditure allowed only for a 0.33 percent reduction in inequality. This inefficient outcome attests to the substantial problems facing government expenditure and its ability to redistribute even with large increases in government spending (Lustig and Pessino, 2014). Latin America as a whole has encountered a similar pattern for poverty, such that between 2003 and 2007, about 73 percent of poverty reduction stemmed from economic growth, while this number falls to 56 percent between 2007 and 2012, when redistribution and larger government expenditure played a bigger role (World Bank, 2014). This does not mean that efforts to reduce inequality through government policies have been meaningless. These were particularly important after the slowdown in economic activity following the Great Recession and the

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[2] The poverty-headcount ratio is the percentage of the population living below the national poverty line.

fall in commodity prices. More could have been achieved, however, given the sheer magnitude of public expenditure increases in the region.

The inefficiency of government intervention in obtaining redistribution results shows not only when comparing the effect of expenditure increases across time, but also when comparing the region with its peers. Comparisons of countries in Latin America and the Caribbean with OECD and European Union (EU) countries, known for their redistributive abilities, are illuminating.

A first lesson is that although Latin America and the Caribbean, as a region, is not much different from OECD and EU regarding market-income inequality, major differences emerge once one considers government intervention through direct taxes and expenditure. As a matter of fact, the market-income Gini average in Latin America is 0.515, while that of advanced OECD-EU countries is 0.488, meaning that inequality in the region is only 5.3 percent higher than in the OECD-EU sample. Despite similar starting market-income Gini coefficients for both groups, however, there is a large reduction in the Gini coefficient measuring inequality for OECD-EU countries before and after government intervention—about a 38 percent decrease (from a market Gini of 0.47 to 0.29). This does not hold for Latin American countries, for which this reduction is only 4.7 percent from a market Gini of 0.51 to 0.48 . This means that Latin American governments are eight times less effective at reducing inequality than their OECD and EU counterparts (see Figure 12.2).

FIGURE 12.2 Differences in Income Inequality Pre- and Post-Taxes and Government Cash Transfers in Latin America and the Caribbean, OECD, and European Union, circa 2012
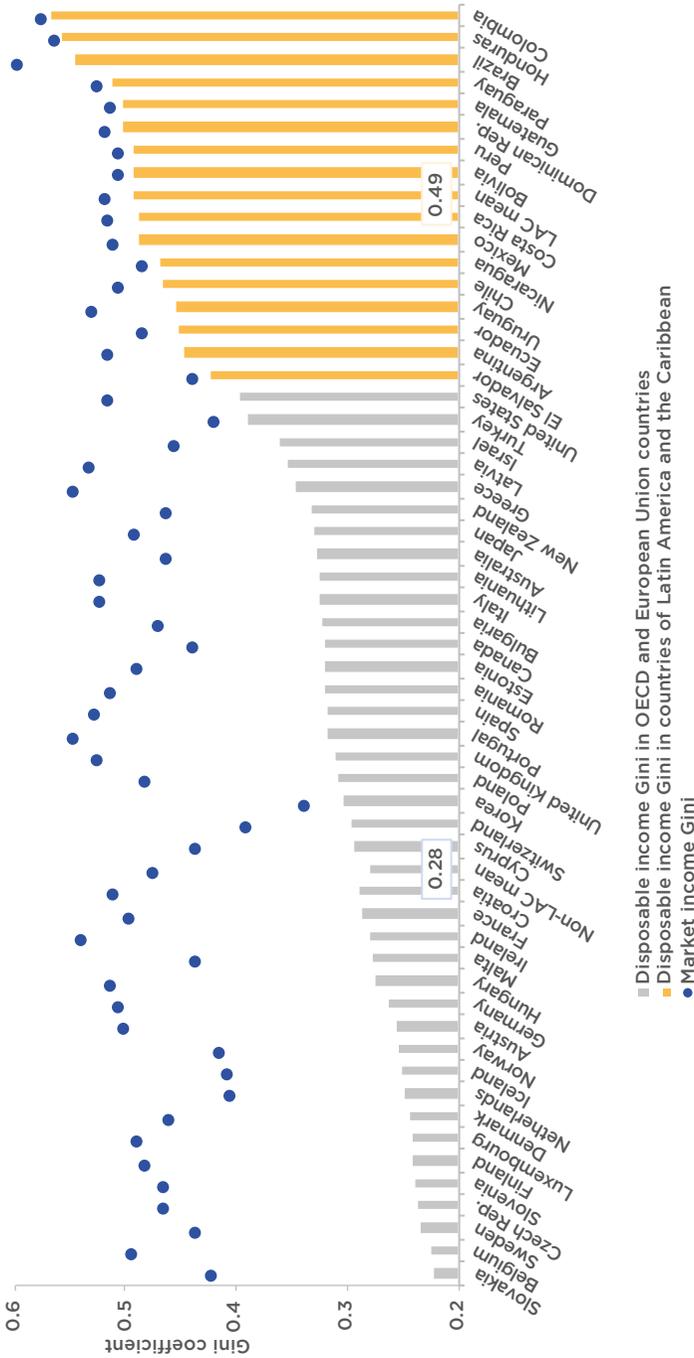
■ Disposable income Gini in OECD and European Union countries
■ Disposable income Gini in countries of Latin America and the Caribbean
● Market income Gini

Note: Redistribution is defined as the difference between market income and disposable income inequality, expressed as a percentage of market income inequality.

Source: IDB, 2018.

12.2.

THE PRIMARY FACTORS BEHIND THESE RESULTS: TAXATION AND EXPENDITURE

A government's ability to effect redistribution depends on both taxation and expenditure policies. Experience from developed country governments suggests that roughly one-third of incidence stems from taxation policies, while two-thirds proceed from expenditure policies.[3] The fact that in developing countries direct tax collection is much lower and informality and tax evasion higher suggests that the impact of expenditure policies is even greater than taxation for this type of economy, and that such policies are typically the main tool at hand for redistribution.

12.2.1 Taxation

This does not mean that taxation policies should not be considered and improved. Although it is true that income taxes in Latin America are progressive (Corbacho, Fretes, and Lora, 2013; Lustig, Pessino, and Scott, 2014) even their redistributive impact is minimal because direct taxes are a small part of total revenues and as a proportion of GDP (IDB-OECD, 2016). Overall, taxes on income, profits, and capital gains account for 27 percent of the revenue in Latin America and the Caribbean, while they account for 34 percent in the OECD. Despite the region's taxes being lower than they are in the OECD, Latin America and the Caribbean

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[3] Across OECD countries, on average, around 72 percent of inequality reduction is achieved through cash transfers, and 28 percent through direct taxation (OECD, 2016).

has experienced a substantial improvement from 1990, when these taxes accounted for only 19.7 percent of revenue. Meanwhile, taxes on goods and services (including the VAT) account for 50 percent of total tax collection in Latin America and the Caribbean; this figure is 32.4 percent in the OECD (Figure 12.3).

FIGURE 12.3 Tax Structure (as percentage of total tax revenue) in Latin America and the Caribbean and in OECD countries, 2017
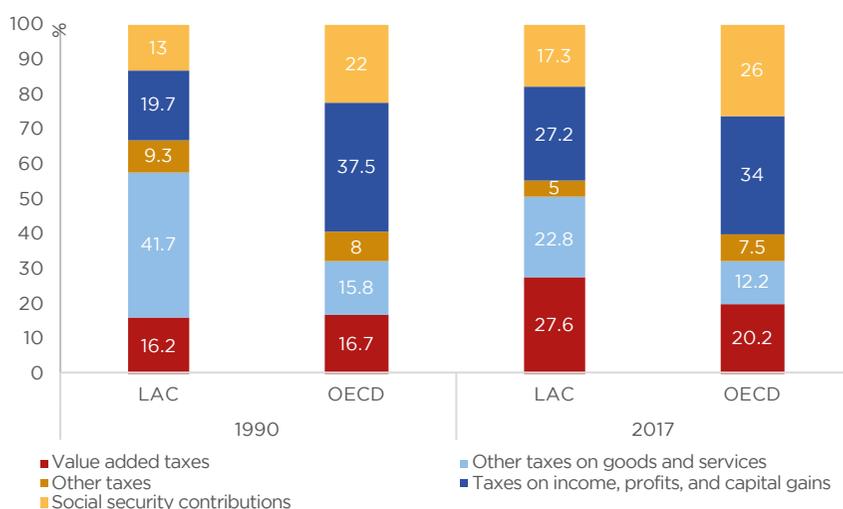
Revenue from personal income tax (PIT) averages about 2.2 percent of GDP in Latin America and the Caribbean countries, whereas in OECD countries it accounts for approximately 8.3 percent of GDP. In Latin America, the rate actually paid by individuals belonging to the wealthiest 10 percent of the population averages only 5.4 percent, compared with 20 percent in the European Union, and in terms of incidence, the Gini coefficient is decreased by just 2 percent in the region, which contrasts with a reduction of over 10 percent in the EU, given the contribution of the highest decile to income taxation (ECLAC, 2016).

Some countries in Latin America have made efforts through tax reform to make taxation more redistributive, aiming at raising tax collection

through more direct taxation. In 2013, Mexico's opposing political parties agreed to overhaul the tax code without raising the value-added tax. They forged a grand bargain—the Pacto por México—that increased taxes on high incomes, reduced subsidies on fuel, increased taxes on sugary beverages, and created a 10 percent tax on capital gains and dividends. These reforms were helpful in raising revenue and reducing budget gaps. But Mexico's approach yielded much more than that: it was also highly progressive. It was paid for largely by Mexico's wealthier households, and it allowed the government to invest more in infrastructure and other programs and services that benefited lower-income Mexicans. Tax reform helped increase the redistributive effect of the tax and transfer system, although it remains low compared to OECD countries (OECD, 2017). High rates of tax evasion, especially in direct taxes, impair the redistributive power of taxation, particularly because tax evasion tends to increase inequality. Mexico also decreased subsidies on fuel, and increased taxes on alcoholic and sugary beverages. Since these "sin" taxes are allegedly paid in higher proportions by the poor, a tax on them is usually considered to be regressive. But one of the determinants of the optimal tax rate turns out to be the price elasticity of demand for these products. If demand is sensitive to price changes, as is the case for the poor, then a tax would alter behavior, benefiting poorer people's health. Those gains in principle could offset the regressive effects (Allcott, Lockwood, and Taubinsky, 2019).

In addition to income inequality, wealth inequality—what has been accumulated, as opposed to what is earned—reflects differences in savings, inheritances, and bequests. Taxation of wealth is receiving a lot of attention in the United States and more recently in Latin America, especially in view of the COVID-19 pandemic. Recent proposals for the introduction of wealth taxes to diminish inequality by taxing the ultrarich has generated controversy in the United States.[4] One rationale for the tax has been that the ultrarich can sidestep some burden of the income tax by planning well and taking advantage of loopholes. Another rationale rests on the fact that wealth is so unevenly distributed—much more so than income—and that this wealth inequality has increased enormously

[4] Piketty's (2014) influential book proposed a global progressive wealth tax. In 2019, Senator Elizabeth Warren proposed an "ultra-rich tax," which would impose a 2 percent tax rate on households' net wealth above $50 million; and 3 percent above $1 billion.

over the past few years.[5] A special tax is therefore warranted to diminish this important and, for some, obscene inequality that consolidates opportunity and power (Piketty, 2019). While Saez and Zucman (2019) have argued that the United States could raise about 1 percent of GDP from such a tax, Summers and Sarin (2019) suggest that, considering the likely effects of tax planning (avoidance) and tax evasion, no more than 0.4 percent of GDP could be raised. In fact, perhaps because of the low revenue obtained, whereas in 1990 twelve member nations of the OECD had net wealth taxes, by 2018, just three member countries (Norway, Spain, and Switzerland) still imposed an annual net wealth tax. Argentina is one of the few Latin American countries imposing a wealth tax at the national level (providing a generous exemption for real estate assets) and a property tax at the subnational level. The top tax rate was increased recently from 0.75 percent to 1.25 percent (although the previous administration promised to decrease the burden of this tax) and collection has been low, fluctuating from 0.1 to 0.3 percent of GDP. In fact, tax loopholes, exemptions, and high rates of tax evasion diminish the redistributive power of taxation. As observed earlier, tax evasion tends to increase inequality, since the rich tend to evade much more.[6]

A typical type of wealth taxation is the real estate property tax. In contrast to wealth taxes that are typically net worth taxes, property taxes do not subtract the balance on a mortgage from the value of the asset when computing the tax liability. A property tax applied directly on estimated value is common practice in many countries in Latin America and has the additional advantage of being levied on the least-mobile asset, hence making the asset much more difficult to hide and the tax much harder to avoid. But Latin America collected less than 0.4 percent of GDP from such taxes in the 2000s and beyond. This is half of what is collected in other developing countries, and a sixth of what is collected in the OECD (Corbacho, Fretes, and Lora, 2013).

[5] The share of wealth owned by the top 0.1 percent richest American has doubled, from less than 10 percent in 1980 to almost 20 percent today. In OECD countries, the average share of wealth held by the top 10 percent of households is 50 percent, which exceeds by far the average share of income, 24 percent, held by the top 10 percent.

[6] While, in theory, it is expected that the rich have better means and incentives to avoid taxes, recent research with better administrative data for developed countries has shown that the rich and ultrarich in fact do tend to evade much more (see, for example, Johns and Slemrod, 2010 and Alstadsæter, Johannesen, and Zucman, 2017).

So there is space to triple or quadruple taxes on property, which is relatively easy to tax. Property taxes are more pro-growth than wealth taxes. One reason for the comparatively modest rate of property tax collection is that property taxation is typically imposed by subnational governments, which usually have less capacity and fewer incentives to pursue this source of tax revenue, since they receive transfers from the central government and can excuse themselves from raising taxes to locals.

In short, direct-tax collection remains low in Latin America in part due to exemptions but also because of tax evasion. There is no need to raise personal income tax rates. They are already high and, on paper, highly progressive. There is room, however, to reduce overall regressiveness and enhance fairness in the region's tax systems by reducing evasion and eliminating loopholes that favor high-income households. The key to enforcing income and wealth taxes is information reporting by third parties. With stronger tax administrations in the region, aided by recent international tax measures to report income from tax havens, and the increasing prevalence of arrangements whereby countries can exchange information for tax purposes, income tax evasion can be decreased, reducing inequality. Moreover, it also makes sense to increase tax rates on wealth in countries in Latin America that have a low wealth tax or none at all. More research and data on wealth and taxation are needed to further understand these issues in the region.

In the case of indirect taxes, VAT is the most important in the region, with a share of about 28 percent on total taxation. Of course, there are enormous variations in total tax collection in the region that translates into wide differences in redistribution capacity: while in 2018 total tax collection was 29.9 percent of GDP in Argentina and 33.6 percent in Brazil, it was 16.8 percent in Peru, and 11.8 percent in Guatemala. In highly informal and unequal countries, VAT is more easily collected, and in sizable amounts. It is also growth friendly, since it does not tax savings, but is considered mostly regressive. VAT can be considered either progressive or regressive depending on how its incidence is estimated. When the measurement is based on income, analyses usually conclude that VAT is regressive, but when using consumption—a better proxy for permanent income-VAT can become neutral or progressive.

Moreover, the increase in the Gini coefficient generated by introduction of the VAT tends to be higher in countries with a smaller informal sector, suggesting that informality could contribute to reducing the regressiveness of the VAT (Lustig, Pessino, and Scott, 2014; Lustig, 2018; IMF, 2016). Higher informality, however, tends to decrease the redistributive capacity of public spending and to deter productivity gains and growth as discussed below. Nonetheless, it is important to note that since many social expenditures that reduce inequality are financed with revenues produced by the VAT, a surprising effect, known as "Lambert's conundrum," can occur. This effect arises when a net fiscal system[7] with a regressive tax is more equalizing than without the tax. Indeed, the fact that the VAT is regressive but equalizing was detected in both Chile and Brazil (Lustig, 2018).

In fact, one possibility advocated in the literature is to enact a broad-based consumption tax or VAT that can be made progressive through reduced rates and exemptions that are widely used to mitigate the VAT's regressive effect but are poorly targeted as distributional devices. Countries have generally considered it desirable to alleviate the tax burden on goods and services that constitute a large share of expenditure in the poorest households (e.g., basic food). Countries also often decide not to tax medicine, health services, and housing at high rates. However, at best, rich households receive roughly as much benefit, in absolute value, from a uniform reduced rate as do poor households. At worst, rich households benefit vastly more than poor households. In fact, Izquierdo, Pessino, and Vuletin (2018) show that VAT exemptions in Latin America and the Caribbean accrue more than 70 percent to the nonpoor (see Table 12.1 below), an inefficient way to transfer resources. Hence, other ways of making the VAT more progressive are urgently needed, and several proposals have been made.

Rebates and cash transfers to the poor are far better ways to make the VAT progressive. Hall and Rabushka (1983) advocated what was

7 Net fiscal system refers to the joint work of taxes and transfers on inequality in the sense that taxes might add to inequality, but if they finance redistributive spending, which reduces inequality, the net effect may be a reduction in inequality. Hence, the net fiscal system could be redistributive when taken as a whole.

essentially a twist on a value-added tax that segregates by wage income and allows for greater progressivity. Some variants of these progressive consumption taxes have an exclusion for low-income households, while others achieve progressivity by providing a large lump-sum transfer (as in a universal basic income), as suggested by Correia (2010), who estimates that her proposed plan would result in both higher growth and greater income equality than prevails under the current tax system. For example, in Canada low-income taxpayers may claim a refundable VAT credit. Studies of this regime concluded that the tax credit is a more effective tool for improving the progressivity of consumption taxes than the zero-rating of basic groceries (Godbout and St-Cerny, 2011). Likewise, Barreix, Bès, and Roca (2010) proposed what they call a personalized VAT for Latin America. Recently, Colombia enacted and is now implementing a tax reform that compensates poor households for VAT expenses to make the tax more progressive. While this compensated or personalized VAT is more progressive in theory than any of its other variants, a necessary condition for its implementation is the availability of a fairly good digital system to target beneficiaries accurately, a condition not met yet by most countries in the region that will be discussed shortly in the spending section. Specifically, countries in the region suffer from endemic informality, and many of the informal workers do not pay VAT; hence, although their compensation may reduce inequality, this does not eliminate the VAT's regressiveness.

12.2.2 Expenditure

On the expenditure side, the size of social spending is the first factor in explaining its redistributive power. While OECD-EU countries devote about 28 percent of GDP to social spending, Latin America spends half that amount, despite major increases in social spending—from about 10 percent of GDP in the mid-1990s to 15 percent in the second decade of the twenty-first century. This lower level of social spending explains in many cases the inability to redistribute more. Such is the case of Guatemala, where social spending is only 7 percent of GDP. Figure 12.4 shows how social spending correlates to redistribution. The countries marked by hefty social spending levels and sizable redistributions

are mostly members of the OECD-EU. The other group, marked by low social spending levels and little redistribution, comprise mostly developing economies. There is a third group, however. These are Latin American countries that spend relatively large amounts on social policies, but achieve less than expected redistribution. This is true of Argentina, Brazil, Costa Rica, and Uruguay, whose spending resembles the average spending of the OECD-EU group. Yet they are still not as effective as their European counterparts in reducing inequality. They do reduce it more than the low-spending Latin American group, by about 9 percent—vs. 3 percent for the low-spending group—yet this is far below the 38 percent reduction observed in the OECD-EU group.

If it is not just a matter of relatively low spending amounts, then what other factors affect the low redistributional impact of public spending? The most likely factors are leakages in cash transfers, noncontributory pensions, energy subsidies, and tax expenditures. All these components of social expenditure are in principle designed to reach the poor. Cash transfer programs are typically designed to break the poverty cycle by giving cash, most of the time conditioned on investing in the human capital of poor children. Noncontributory pensions, at least in their original versions, were initially implemented to deal with the aged and poor population, who were in the informal labor sector. Energy subsidies have typically been justified as a tool for bringing electricity services to the poor. Several tax expenditures, like lower VAT rates on food and drugs, have been supported as a way to lower prices of these essential items in the purchase baskets of the poor.

Evidence suggests, however, that a substantial share of these expenditures ends up in the hands of those who are not poor. Consider the case of cash transfers and noncontributory pensions, which constitute about 68 percent of social expenditure. An analysis of household surveys suggests that more than 43 percent of these expenditures goes to those who are not poor. Targeting issues appear to be responsible (see Table 12.1). It could be argued that some of these policies should include not only the poor but also the vulnerable. Repeating this analysis by targeting the bottom two quintiles of the population does not substantially change leakages, however. In this

iteration, 32 percent of cash transfers and noncontributory pensions still goes to the top three quintiles of the population, pointing once again to targeting issues.
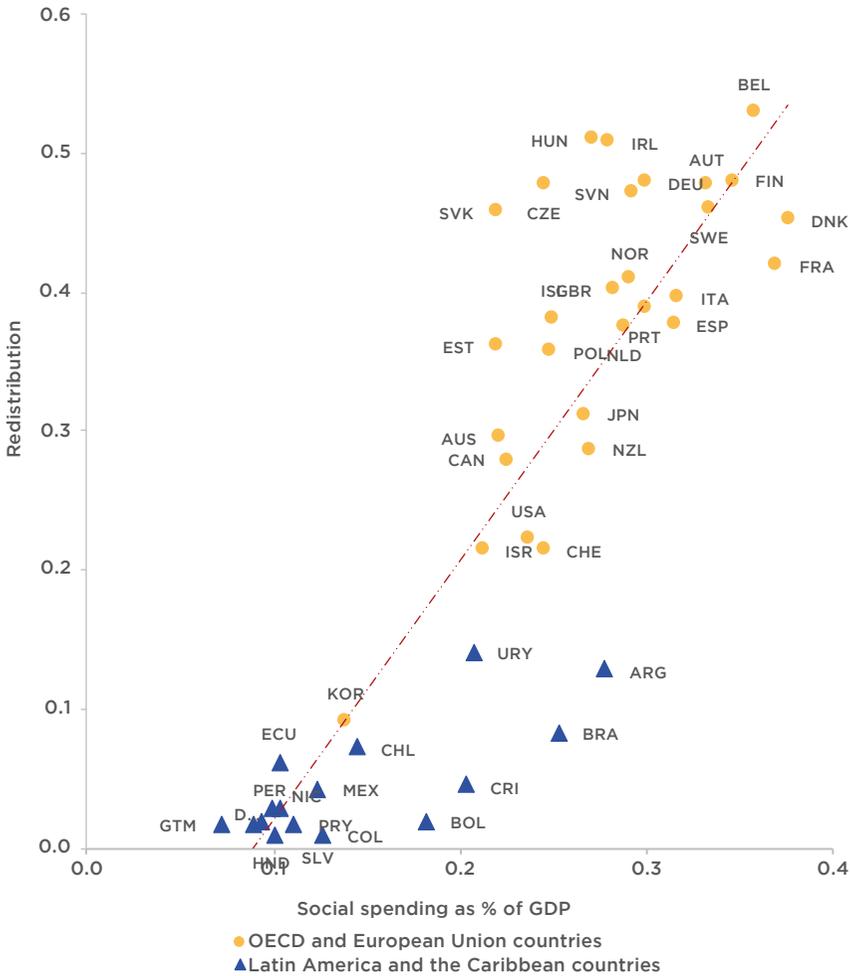
Source: IDB, 2018.

Note: Redistribution is defined as the difference between market income and disposable income inequality, expressed as a percentage of market income inequality.

Things get worse when it comes to energy subsidies, where leakages to the non-poor are above 81 percent (and they are above 77 percent when leakages are defined as subsidies going to the third, fourth, and fifth quintile of the population). But tax expenditures with a social purpose—which are mainly tax reductions on food, drugs and housing aimed in principle at helping the poor—are the worst: in Latin America, 84 percent of these tax expenditures do not reach the poor and go instead to the more well-off (leakages drop to 72 percent when they are defined as tax expenditures going to the third decile and up).

It is important to highlight that the latest social protests, which accelerated in the second part of 2019, stemmed from the perception of inequality in the allocation, or in the decrease or cessation, of the benefits of transfers, subsidies, or public services in general for the poor, but also for the vulnerable. A recent ongoing study (Izquierdo et al., 2020) showed that energy subsidies in the Triangle countries of Central America (El Salvador, Guatemala, and Honduras) saw leakages of 44 percent to the non-poor; 16 percentage points leaked to the vulnerable and the rest to the middle class and rich. Protests in fact centered around the vulnerable middle class, not the poor, who were largely protected by social tariffs. The COVID-19 crisis will likely tip many in the middle class into the vulnerable group, so it is important to consider compensating the vulnerable when making the transition out of these inefficient regimes.

TABLE 12.1 Leakages on Cash Transfers and Noncontributory Pensions, Energy Subsidies, and Tax Expenditure in Latin America, 2015

| | CASH TRANSFERS AND NONCONTRIBUTORY PENSIONS | | | | ENERGY SUBSIDIES | | | | TAX EXPENDITURES ON FOOD, DRUGS, AND HOUSING | | | |
| | Leakages to non-poor | | Leakages to richer 60 percent | | Leakages to non-poor | | Leakages to richer 60 percent | | Leakages to non-poor | | Leakages to richer 60 percent | |
	Percent of GDP	Percent of expenditure	Percent of GDP	Percent of expenditure	Percent of GDP	Percent of expenditure	Percent of GDP	Percent of expenditure	Percent of GDP	Percent of expenditure	Percent of GDP	Percent of expenditure
Argentina	1.9	38.5	1.8	35.8	2.3	90.9	1.9	76.8	0.4	85.0	0.3	67.7
Belize	0.4	38.5	0.4	38.5	-	-	-	-	-	-	-	-
Bolivia	0.9	50.4	0.9	50.4	1.6	81.1	1.5	78.5	-	-	-	-
Brazil	0.6	50.0	0.3	23.9	0.5	90.0	0.4	75.4	0.6	89.3	0.4	64.6
Chile	0.8	62.7	0.5	38.0	-	-	0.0	-	0.2	96.8	0.1	87.0
Colombia	0.6	43.7	0.4	30.2	0.2	71.8	0.2	60.4	1.1	91.1	0.9	79.8
Costa Rica	0.4	41.8	0.2	23.9	-	-	-	-	1.5	89.1	1.2	74.8
El Salvador	0.5	39.1	0.3	23.9	1.1	74.9	1.0	66.8	0.1	78.2	0.1	60.0
Guatemala	0.1	29.0	0.2	44.1	0.1	65.4	0.2	85.1	0.5	63.2	0.6	67.7
Honduras	0.1	7.4	0.1	20.1	0.0	70.5	0.0	91.9	-	-	-	-
Jamaica	0.3	62.4	0.2	32.5	-	-	-	-	0.5	89.1	0.3	61.0
Mexico	0.3	33.2	0.3	32.3	0.5	80.2	0.5	82.2	0.7	61.8	0.8	72.8
Nicaragua	0.2	57.6	0.2	66.6	0.1	74.7	0.1	62.3	2.0	84.0	1.8	77.3
Panama	0.3	36.6	0.2	18.7	0.5	95.8	0.4	85.9	0.7	84.2	0.6	73.4
Paraguay	0.9	54.8	0.5	29.8	0.1	83.6	0.1	77.9	0.2	83.3	0.2	83.0
Peru	0.1	32.9	0.0	10.0	0.1	95.0	0.1	86.0	0.1	89.3	0.1	74.1
Dominican Rep.	0.2	41.1	0.2	41.1	0.8	77.1	0.7	74.2	1.9	84.7	1.5	69.6
Uruguay	1.1	61.5	0.3	16.8	0.3	91.8	0.2	82.0	0.9	93.5	0.7	70.0
Average	0.5	43.4	0.4	32.0	0.6	81.6	0.5	77.5	0.7	84.2	0.7	72.2

Sources: IDB, 2018; FIEL and IDB, 2017.

So far the leakage analysis has focused on providing social expenditures to groups that in principle should not qualify. This could be called a type I, or "inclusion" error. There is a type II, or exclusion error, however, for the population that should be targeted for the different components of social expenditure yet receives no corresponding transfer. In other words, effective reductions in poverty and inequality through transfers depends on the size of the transfer, the poor population covered, and the transfer amounts leaked to the non-poor. As noted before, expenditure policy has a key challenge: guaranteeing that subsidies and transfers reach the poorest segments of the population.

These errors can be computed both for cash transfers and noncontributory pensions. About 39 percent of conditional cash transfer (CCT) beneficiaries and 48.6 percent of non-contributory pension (NCP) beneficiaries are non-poor. However, paradoxically, and according to 2013 data, coverage—i.e., the share of the extreme poor who are beneficiaries of CCTs and NCPs—is only 46.9 percent and 12.8 percent, respectively (Figure 12.5). Since NCPs are targeted to elderly persons who supposedly do not receive a contributory pension, coverage in that more specific population group is about 53 percent. It must be noted that in some countries there is a high coverage of the extreme poor. Such is the case of Uruguay (89.4 percent), Ecuador (72.7 percent), and Bolivia, Brazil and Guatemala (about 60 percent).

Although they do not represent a large share of GDP, the resources used for CCTs and NCPs would be sufficient to cover the entire poor population, or at least the extreme poor, if retargeting were possible. In fact, the number of beneficiaries from these programs exceeds the number of extreme poor by an average of almost 2.5 times (148 percent) (Robles, Rubio, and Stampini, 2015). Thus, substantial gains from leak prevention could be devoted to the poor who are eligible for these subsidies, and yet do not receive them, without increasing total social spending and perhaps even generating savings.

FIGURE 12.5 Leakage and Coverage of CCTs and NCPs in Latin America and the Caribbean, circa 2013

A. Leakages: Percentage of benefits going to poor and non-poor
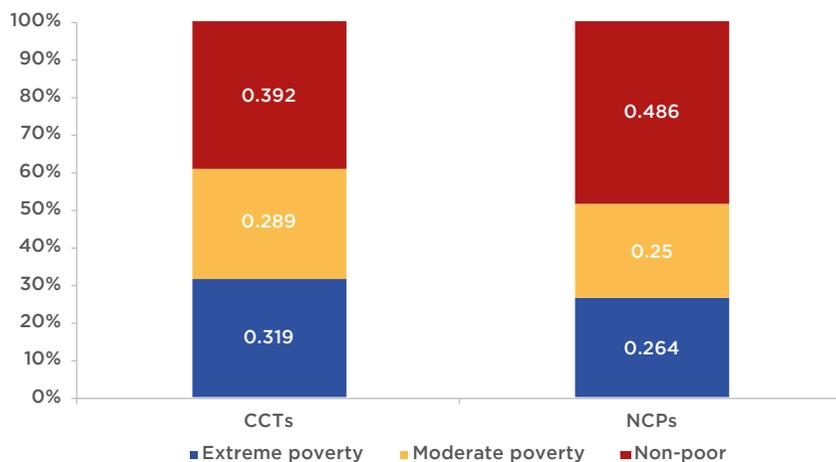
B. Coverage: Percentage of poor who are beneficiaries of CCTs and NCPs
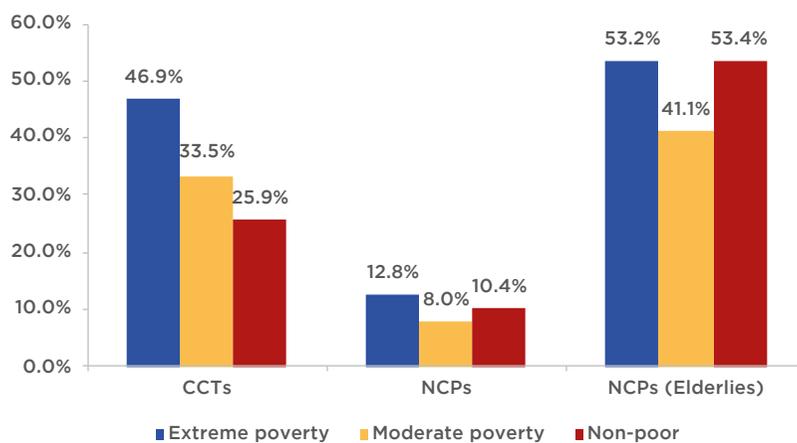
Source: Authors' elaboration based on Robles, Rubio, and Stampini (2015).

One important explanation for inefficient targeting is that several countries in the region use means-tested or geographic targeting systems, which provide an estimate of per capita income or consumption based on demographic characteristics and ownership of assets, but account for only 50 percent to 60 percent of the observed variability in living standards (Robles, Rubio, and Stampini, 2015). The integrated information systems implemented in Argentina in 1997 and in Brazil in 2001, based on up-to-date administrative data, could serve as perfectible systems to improve targeting elsewhere in the region (Pessino and Fenochietto, 2007; Azevedo, Bouillon, and Irarrázaval, 2011). In fact, the use of administrative identity data, complemented with social, income, wealth, and consumption data, is one of the few accurate ways to identify informal workers (Pessino, 2017), who are the most difficult to target. In fact, identifying and transferring relief income to informal workers has been, and still is, one of the region's biggest fiscal and social challenges in managing the COVID-19 pandemic.

A third important component regarding the inability of governments to redistribute is the rampant level of informality in the region, particularly when it comes to pension systems. A large fraction of the poor is engaged in informal work. They cannot contribute to formal pension systems. There is little room for redistribution to the poor through formal pensions. For example, in El Salvador and Guatemala, the two richest quintiles receive about 80 percent of total pension income, while the two poorest deciles receive about 10 percent. As a matter of fact, there is a negligible difference between the Gini coefficient using market income and the one using market income-plus-pensions in the region as a whole, whereas that difference is quite stark in the OECD-EU group, where inequality is reduced by 24 percent.[8] Behind these results for the region lies the fact that contributory pension systems and energy subsidies, which account

[8] There is substantial controversy as to whether pensions should be considered a government transfer or not. If a pension system were independent and fully financed by returns from fund investments, then payments made to pensioners should be considered as income. However, most countries are running pension-system deficits that are largely covered by governments using income from tax collection, making this type of income increasingly look like a government transfer. Lustig (2017) shows that the redistributive effect of advanced vis-a-vis Latin American countries is six times larger if pensions are considered a transfer, and still large but only four times larger if pensions are considered part of market income.

for about 75 percent of redistributive expenditure,[9] are pro-rich. Most of these benefits are not directed to the poor. The remaining 25 percent, composed mostly of conditional cash transfers and noncontributory pensions, is pro-poor, but has major leakages.

Moreover, while increasing the amount of transfers to the informal sector has reduced poverty, noncontributory programs distort behaviors at the micro level, for example individuals deciding whether to take formal or informal jobs. Policies can affect behavior. Ignorance about behavioral effects can produce overestimates of how these programs work on poverty, as the levels of market income observed in the data are lower than they would have been in the absence of the program. For Argentina and Uruguay, taking behavioral changes into account, we see overestimates of approximately 20 percent in the effect of conditional cash-transfer programs on poverty (Alaimo et al., 2020).

FIGURE 12.6 Differences in Income Inequality, Pre- and Post-Pensions, and Government Cash and In-Kind Transfers in Health and Education
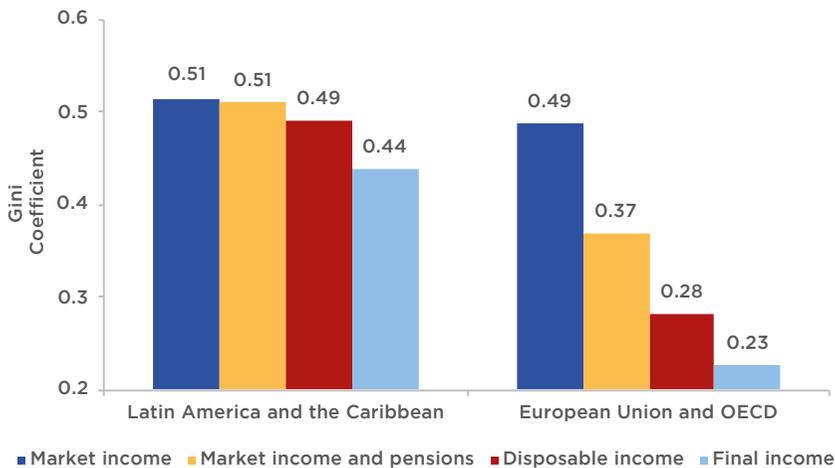
Source: IDB, 2018.

Note: Redistribution is defined as the difference between market income and disposable income inequality, expressed as a percentage of market income inequality.

[9] Redistributive spending includes conditional cash transfers, pensions, and energy subsidies, but it does not include social spending in kind, such as education and health spending.

The last component affecting redistribution, typically with long-run effects, is expenditure on education and health. Chapters 6 and 7 discuss inequality in health and education outcomes, such as coverage and quality of service. Here, instead, the focus will be on the incidence of public expenditure in health and education, or in-kind benefits, on inequality.

In Latin America and the Caribbean, about half of all social spending goes to universal educational programs and contributory and noncontributory health systems. On average, education spending accounts for 4.5 percent of GDP (it is 5.3 percent in the OECD), and health spending represents about 3.8 percent of GDP (6.5 percent in the OECD), with stark differences among countries. Given the size of these expenditures, their effects on redistribution could be substantial, particularly when they are measured at cost. Figure 12.6 shows Gini coefficients for disposable income (i.e., after government intervention through cash operations) as well as for final income once in-kind transfers in health and education are included. For countries in the region, the Gini coefficient drops five points (from 0.49 to 0.44), a decline in absolute terms like that seen for the OECD-EU group (from 0.28 to 0.23). In terms of percentages of inequality reduction, however, the region has cut inequality by 10 percent, while the OECD-EU does so by 20 percent. Although these expenditures on health and education do reduce inequality in the region, once again, they widen the gap with the OECD-EU group. It must nevertheless be acknowledged that given the size of these expenditures (measured at cost), their impact on inequality reduction is large—even larger than that produced by government cash transfers.

Measuring in-kind transfers at cost may be deceptive, however, given that the quality of the services provided is not taken into account. Even though increased expenditure suggests improvements in access to those services, service provision could be subpar. Here, the cost of service provision could differ from the value assigned to it by the service recipient. For example, low-quality public services may make the rich and middle class opt for private services, leaving the low-quality public services to the poor. This situation may be of little value for the poor.

Measuring income inequality could improve with the use of quality-adjusted in-kind transfers.

Another factor to consider for redistribution via education and health services is the impact that each type of expenditure delivers to the target populations. That is, do the targeted populations receive the service? In education, proper targeting can be assessed by identifying whether each type of educational spending (pre-primary, primary, secondary, and tertiary) reaches the poor or the rich. This can be measured by estimating concentration coefficients for each type of education.[10] Figure 12.7 shows concentration coefficients for a set of Latin American countries at each of the abovementioned educational levels. Spending on pre-primary and primary education is shown clearly to be pro-poor and equalizing in all Latin American countries, while spending on secondary education is pro-poor in most (nine) of the countries considered (but slightly pro-rich in Honduras, El Salvador, and Mexico). Spending on tertiary education is pro-rich in all Latin American countries since it primarily benefits the middle- and upper-income populations. A similar exercise can be carried out for health expenditure, although in this case the data does not permit detailed analysis of the health expenditure areas. Using total health expenditures, health spending in most countries is only moderately pro-poor for eight countries in the sample, and slightly pro-rich for the remaining three (El Salvador, Peru, and Guatemala; see Figure 12.8). Thus, more focus should be given to targeting populations for distributive reasons, particularly in the provision of services provided by the government, whose main target should be the poorest portion of the population, which typically has no other options but those offered by the public sector.

[10] A concentration coefficient provides a summary measure of the magnitude of pro-richness or pro-poorness of a transfer. Sometimes called a quasi-Gini coefficient, the concentration coefficient measures the distribution of the transfer ranked by some income variable. In the present case, they are mostly ranked by market income and range from -1 to +1. If the concentration coefficient is positive, the transfer or benefits increase with income (pro-rich). If the concentration coefficient is negative, the transfer decreases with income (pro-poor), benefiting proportionally more poor than rich individuals. A concentration coefficient will be zero if all income units receive the same absolute amount of transfers.

FIGURE 12.7 Pro-Poor and Pro-Rich Spending on Education by Level, Ordered by Market Income, circa 2012
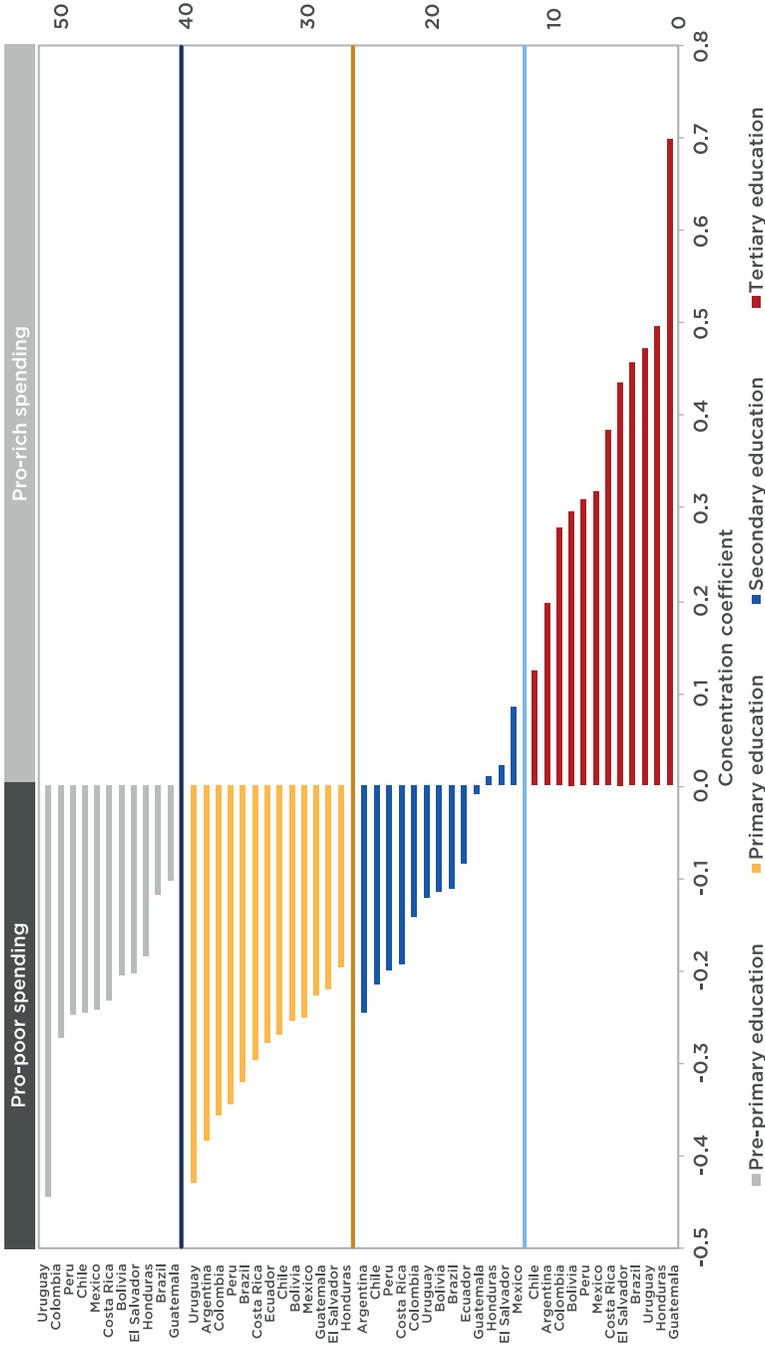
Source: IDB, 2018.

FIGURE 12.8 Pro-Poor and Pro-Rich Spending in Health (concentration coefficients), circa 2012

	Pro-poor		Pro-rich

Dom. Rep.	-0.26
Argentina	-0.23
Ecuador	-0.13
Brazil	-0.12
Uruguay	-0.10
Chile	-0.10
Bolivia	-0.04
Honduras	-0.03
Nicaragua	0.03
Mexico	0.04
El Salvador	0.12
Peru	0.18
Guatemala	0.28

Concentration coefficient
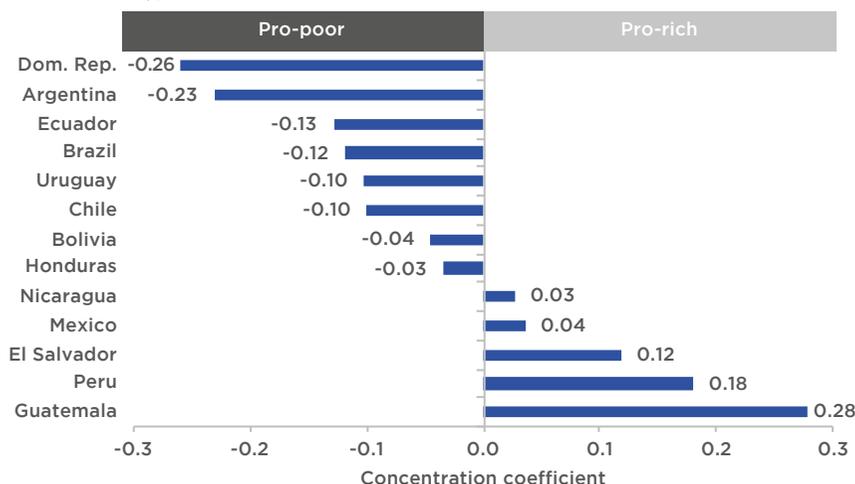
Source: IDB, 2018.

12.3.

A THIRD FACTOR: GEOGRAPHIC INEQUALITY

Social and economic disparities among territories are also a critical factor in explaining inequality in Latin America and the Caribbean. To address these, the authors in Chapter 4 propose a number of microeconomic policies. Others argue that decentralized service provision may allocate resources with greater efficiency while improving equity. These policies will be hard to implement, however. States and municipalities have varying amounts of resources per capita, and their ability to provide quality services also differs. Of the fiscal policy instruments available, regional in-kind transfers in education and health

will have the greatest impact on per capita income inequality (at least in terms of access, but not necessarily outcomes). This is because subnational governments execute more than half of all spending in health and education (Figure 12.9). The unequal provision of these services must be taken seriously: for example, the completion of primary education averages 31 percent for the subnational territories but can rise as high as 67 percent. So inequality assessments should investigate subnational government spending and its effect on income inequality.

Given the disparities in resources and service provision, intergovernmental transfers might be worth considering. While Latin American countries use such transfers with some equalization features, they do not base them on fiscal capacity or on assessments of the amounts needed to alleviate inequality across territories. In advanced countries, such transfers help to assure similar levels and quality of public services for citizens across different subnational territories. In Latin America, decentralization is typically carried out by redistributing resources, but without taking into account each state's capacity to deliver quality services. Thus, better institutions, expanded local revenues, and equalization transfers from the central government might help reduce these inequalities.

FIGURE 12.9 Composition of Social Spending by Central and Subnational Governments in Latin America and the Caribbean, circa 2015
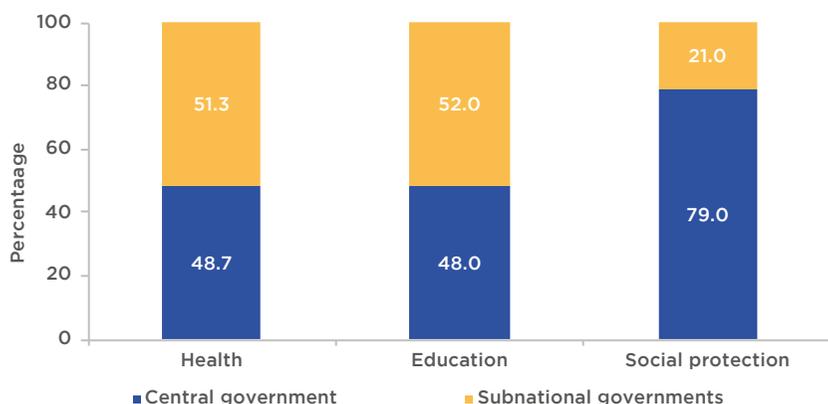
Source: IDB, 2018.

Note: Latin America here includes Argentina, Bolivia, Brazil, Colombia, Guatemala, Mexico, and Peru.

12.4.

WHAT ARE THE RIGHT POLICIES FOR REDISTRIBUTION?

Given all these problems, which are the right policies? On the tax side, the region should increase the share of direct taxes. There are constraints, however, on achieving direct-tax collection shares in total taxation such as those of the OECD, given the region's income distributions and informality. But curtailing tax evasion on the income tax and improving the collection of property taxes are promising directions if governments in the region want to realize the redistributive power of direct taxes. On the efficiency side, however, indirect taxes, especially the VAT, tend to be regressive. Although informality can decrease the regressiveness of this tax, it is not an effective way of achieving equality. Hence, a more progressive VAT would deepen its redistributive capacity, since the share of VAT in total tax collection is large in the region. Last but not least, less informality, curtailed tax evasion, and fewer exemptions favoring the rich could decrease tax rates while preserving tax collection levels. Taken together, these would ease the burden on the few complying taxpayers and strengthen horizontal equity in taxation.

On the expenditure side, leakage issues must be solved with better targeting, accomplished in most cases by switching from price policies to income policies. For example, energy subsidies administered by lowering the price of energy—usually benefiting large swaths of the population— should be replaced with subsidies that provide additional income only to a targeted group. Something similar could be done with tax expenditures, shifting the subsidy mechanism from tax-rate reduction, which benefits everybody, to income subsidies that compensate for tax-rate increases that affect the poor. Financial technologies make it is easy to transfer

funds via debit cards, or other means, only to those in need. This manner of transfers, however, raises another key issue, which is knowing who the poor are and where they live. Substantial resources need to be invested in government information systems that consolidate several databases (property, pensions, taxes, etc.), allowing for accurate distinctions between those who should benefit, and those who should not.[11]

Informality and equitable access to pension systems are other key issues. Policies that work in this respect include reducing financing of pension systems through labor taxes and increasing financing from general taxes, thus lowering distortions in labor market decisions between formal and informal participation. Providing incentives to go formal through income-tax exemptions, such as the earned income tax credit for working people with low income, has also helped reduce informality.

A few countries with minimal social expenditures should consider increasing them. This does not mean their total expenditures need to increase. But they could tackle inefficiencies. Public expenditures are riddled with inefficiencies in most countries in the region—averaging 4.4 percent of regional GDP (see Izquierdo, Pessino, and Vuletin, 2018). An effort must therefore be made in changing expenditure composition by assigning savings from inefficiency reductions to increases in social spending. Having said this, we realize that for a few countries with levels of taxation well below their levels of development—such as Guatemala, which collects about 11 percent of its GDP—increases in taxes to expand social programs could be considered. However, this will be a feasible option to the extent that governments can convince their electorate that this additional social spending will be carried out efficiently and without major leakages.

Regarding in-kind transfers in education and health, it will be key to ensure that resources are distributed to schools and hospitals, making

[11] For example, see Argentina's Sistema de Identificación Nacional Tributario y Social (SINTyS), created in 1998, which connects the numerous income, social, and property databases that exist in the country's national, provincial, and municipal governments, so that the information is not fragmented, disjointed, and inconsistent.

sure that both horizontal and vertical equity is met, meaning that schools with the same proportions of poor children receive similar amounts of resources per capita, and that schools with proportionally more poor children receive more resources per capita than those with less poor children. (For more details, see Chapter 7 of this report and Chapter 6 of IDB's DIA 2018, "Better Spending for Better Lives: How Latin America Can Do More with Less").

Moreover, important strides must be made to increase the quality of service provision in education and health. This is where territorial equity kicks in: federal governments should consider making use of equalization transfers that will tend to narrow the gaps in per capita resources available to states for education and health services. Yet it doesn't stop there, because of the vast disparities across states in their ability to provide quality services. Two additional strategies are needed. First, the proper incentive strategy must be put in place to ensure that states remain keen on increasing quality. This can be done by following the example set by Canada, which issues additional human development transfers based on outcomes to reward provinces and territories that make quality improvements and punish those that fail to do so. Second, it is important to set up technology transfer mechanisms that give states the know-how they need to manage their education and health services. Otherwise, increased transfers may go to waste, without effective changes in service provision, particularly so for the poor.

At a more aggregate level, regarding fiscal institutions, governments need to be able to monitor and act on the abovementioned inefficiencies. This is done only sparingly and in a decentralized fashion. For this reason, it is key that governments start setting up expenditure quality agencies that keep track of the quality of spending, including leakages and inefficient budget allocations. These agencies must be able to evaluate programs, ex-ante and ex-post, in order to make decisions about changes to be made, both in program design and in budget allocation. While it may be daunting to enforce this procedure in all spending programs, this can be done incrementally, and changes in allocation could start, at least, with new resources.

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13.

ALLEVIATING INEQUALITY THROUGH THE DEMOCRATIC PROCESS

By Razvan Vlaicu

In well-functioning democracies, economic inequality should to some extent be self-correcting through majority demand for redistributive taxation and spending. Democratic failures on both the demand and supply sides have, however, limited the extent of redistribution in Latin America and the Caribbean. Countries with stronger democracies have adopted more redistributive policies, even though post-tax inequality remains high in all the region's democracies. Electoral participation has risen in the more democratic countries, while economically motivated protests have increased in weakly institutionalized settings.

The countries of Latin America and the Caribbean have now experienced, with few exceptions, more than thirty years of economic policy making through democratically elected governments. The region is well endowed with natural and human resources, and most of its countries are classified as "middle income" by the United Nations.

Poverty and economic inequality persist, however, as noticeable characteristics of these societies. Governments have tackled these issues using fiscal, educational, and social policies. Yet, while public policies have led to demonstrable progress in reducing income inequality, by several measures the region remains one of the most, if not the most, unequal in the world. Recurrent protests fueled by economic grievances are a regular reminder of this reality. This raises the question of why the democratic process has not been more effective in alleviating inequality. This chapter presents several constraints operating in the region's democracies that may have hindered the adoption of broader inequality-reducing policies. These include biased popular perceptions of income distribution, limited demand for pro-poor policies, de jure institutional bias against redistribution, and vote buying.

The regional decline in inequality over the past two decades has occurred in the context of increased government spending on social protection, as well as increased political participation. Figure 13.1.A shows the time trends in inequality and social protection spending in the region. On average, inequality measured by the Gini index, as estimated by the World Bank, gradually came down from 53.3 in 2000 to 45.7 by 2018; by comparison, the Gini index in the member countries of the Organisation for Economic Co-operation and Development (OECD) was 33.2 as of 2018.[1] Government spending on social protection as a percentage of GDP steadily increased from 3.24 percent in 2000 to 4.09 percent by 2018, although it remains well below the OECD average (see Chapter 12). Two of the main drivers of this trend have been expanded coverage of conditional cash transfer programs and increased availability of noncontributory pensions. Figure 13.1.B shows that during the same period, voter turnout in parliamentary elections had an upward movement, increasing by about 4.5 percentage points on average, from 63.2 in 2000 to 67.5 in 2018. More striking is the increase in street protests over the past decade, from about one per year to more than six per year, on average per country. Given the progress in inequality and

[1] Based on the most recent data available from each country (no data is available for New Zealand). Of the thirty-seven member countries of the OECD, the three LAC countries of Chile, Mexico, and Colombia (which joined in April 2020) had the highest Gini readings in this group, namely 44.4, 45.4, and 50.4, respectively.

the accommodating response in government policy, this last trend may seem puzzling, suggesting complexities in addressing inequality through the democratic process.

FIGURE 13.1 Inequality Declines as Political Participation Increases in the Region

A. Economic trends
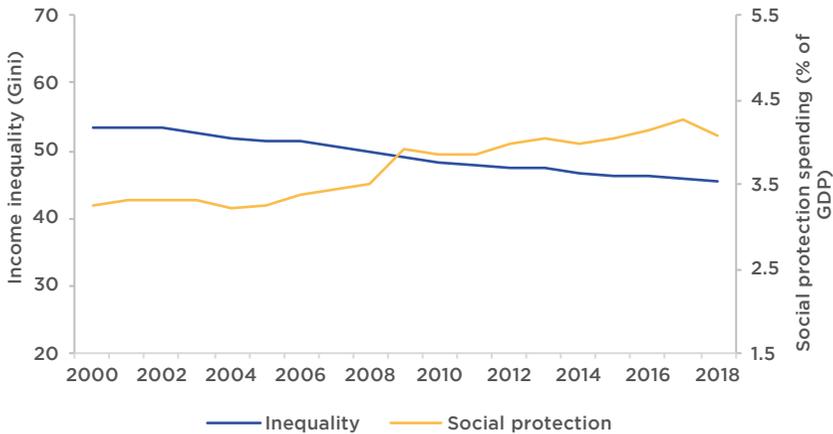
B. Political trends
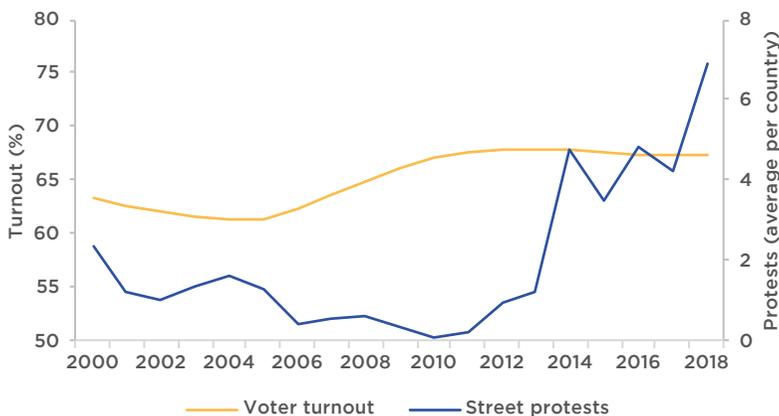
Sources: The Gini index is from the World Bank's World Development Indicators. Social protection spending is from the UN's Economic Commission for Latin America and the Caribbean. Voter turnout is for parliamentary elections and comes from the Institute for Democracy and Electoral Assistance. Street protests are the sum of general strikes and antigovernment demonstrations, which are from the CNTS Domestic Conflict dataset.

Note: The Gini series is the average for each year for a set of seventeen countries: ARG, BOL, BRA, CHL, COL, CRI, DOM, ECU, GTM, HND, MEX, NIC, PAN, PER, PRY, SLV, and URY. The social protection series also includes BHS, BRB, GUY, HTI, JAM, TTO, and VEN, but excludes PER. The turnout and protest series are based on the seventeen countries plus BLZ, GUY, HTI, JAM, TTO, and VEN.

To some extent, economic inequality is a natural consequence of the market-based system that governs the economies of most of the countries in the region. The distribution of assets and income depends on the unequal distribution of innate abilities and initial endowments, and on the market returns to the different types of human and physical capital, which can be largely unpredictable in a globalized economy. The market system operates, however, within a political system. The political system influences the outcomes of the market system directly through tax-and-transfer reallocations of income or by providing essential public goods such as public health and education, or indirectly through government regulation of market activities. How the political system shapes the market system depends on several key factors: a society's preferences over economic outcomes (democratic values), the distribution of de jure political power (democratic institutions), and the distribution of de facto political power (democratic engagement).

13.1.

DEMOCRACY AND INEQUALITY

At a fundamental level, the more democratic a country is the more effective it should be at alleviating the inequalities resulting from the market system. One would expect the democratic process—which by design is highly egalitarian and based on the principle of "one person, one vote"—to find ways to implement policies that reduce market inequalities. In other words, in a well-functioning democracy, inequality should to some extent be self-correcting. If inequality is too high, the income of the median voter has dropped well below the income of the average voter. The median voter would then support an income tax policy that would shift income from the top of the distribution to the bottom (Meltzer and Richard, 1981). Most political candidates should

have an incentive to represent the preferences of the median voter, as this would be a successful electoral strategy.

Regional data does provide some evidence supportive of this mechanism. Brown and Hunter (1999) found in a 1980–92 panel of Latin American countries that democracy was associated with higher social spending per capita. Lapp (2004) reports a statistical association between democratization and land reform in Latin America. Huber and Stephens (2012), using a set of Latin American countries, looked at the period 1970–2007 and measured democracy by the number of years the country has been democratic since 1945. They found that a longer history of democracy is associated with more welfare and social security spending, as well as education spending, and lower income inequality. Fujiwara (2015) studied a change in voting technology in Brazil from the 1990s that made it easier for illiterate people to vote, leading to a major de facto enfranchisement of the poor. His data shows that the reform led to a shift of government spending in a pro-poor direction, particularly in the area of health. Baland and Robinson (2008, 2012) examined the effects of switching from the open ballot to the secret ballot in Chile in 1958, finding that the reform increased the vote share of left-wing parties, which, they argue, is consistent with increased political support for redistributive policies. While the link between democracy and redistributive policies has appeared in data from other regions, the link between democracy and inequality has proven less robust in other panel data (Acemoglu et al., 2015).

Notwithstanding the evidence showing that democracy may reduce inequality through a greater emphasis on redistributive policies, in practice, several factors may conspire against this simple democratic mechanism of redistribution. Some come from the demand side. For example, although a large fraction of the region's electorate may favor economic equality, many voters still choose not to participate in the political process through voting or joining political parties (Lijphart, 1997). Other constraints come from the supply side. For example, the political process does not accurately represent the preferences of a majority of citizens because a minority is able to capture de facto

political power (Acemoglu and Robinson, 2008), or the country lacks the state capacity necessary to collect taxes or provide good-quality primary education for everyone (Besley and Persson, 2009).

13.2.

DEMAND-SIDE CONSTRAINTS

A well-known weakness of democratic governance is low voter turnout and limited political interest. Because of the widespread use of compulsory voting, turnout has remained relatively high in Latin America, although less so in the Caribbean. Turnout appears biased, however, in a way that is detrimental to the poor—namely, voting is less common among the less educated and less wealthy, as found by Carreras and Castaneda-Angarita (2014) in individual-level data from the 2010 wave of AmericasBarometer collected by LAPOP. This should weaken representation of their interests by elected policy makers. A related distortion in representation comes from biased popular perceptions of the income distribution. Cruces, Perez-Truglia, and Tetaz (2013) studied survey data from Argentina and found that about a third of their sampled individuals overestimated their position in the income distribution. Using a survey experiment, they showed that those with such a positive bias, when informed of their true lower ranking, tended to demand higher levels of redistribution. The COVID-19 pandemic brought to light another example of inequality of information: knowledge about virus symptoms, spread, and prevention is less accurate at the bottom of the income distribution (Box 13.1).

BOX 13.1 Unequal Information during the Pandemic

The COVID-19 global pandemic that began in March 2020 has brought into sharp relief inequalities of information in the general public. An IDB-Cornell online survey conducted in seventeen countries in Latin America and the Caribbean has found that basic knowledge about virus symptoms, spread, and prevention is less accurate at the bottom of the income distribution (Bottan, Hoffmann, and Vera-Cossío, 2020). The figure below shows the income gradient for knowledge of symptoms and spread. Also, lower-income respondents were less likely to have heard of "social distancing," a key public health strategy for preventing the spread of the disease. The information inequalities will likely filter through the political process and reflect themselves in public policies that are more favorable to those who have more economic resources and can articulate policy demands effectively.

FIGURE B13.1.1 Knowledge of Virus Symptoms and Spread by Income Level
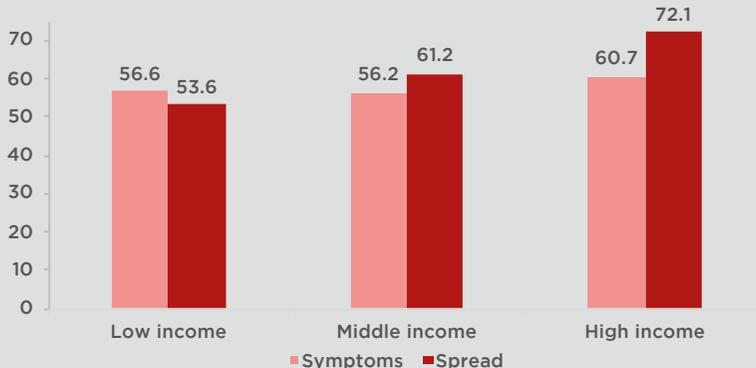
Political mobilization through street protests has been a key accountability mechanism, particularly for those at the lower end of the income distribution, to make their policy demands heard in political systems with weak responsiveness. During the crisis, this mode of political participation was effectively suppressed by fear of contagion and government-mandated lockdowns.

Other research has found evidence of weak demand for pro-poor policies—such as public spending on basic public services. Bursztyn (2016) studied survey data from Brazil, where respondents were given a choice between a candidate who supports higher spending on public education and another who supports higher spending on transfers. Poorer voters should be the ones benefiting more from public education, at least in the long term, yet they were less likely to support the candidate supporting public education. In a more recent survey of individual preferences for public spending from seven Latin American capital cities, Keefer, Scartascini, and Vlaicu (2020) find a similar pattern. In addition, they document that spending on pro-poor public goods, such as public education and security, is valued less among voters with low trust in political promises or high time-discounting rates. This link appears in country-level data as well: countries with average low trust and high discounting rates spend smaller fractions of their budgets on public investments.

Sometimes redistribution can increase, rather than reduce, inequality. For example, democratization empowers the middle class to raise taxes and redistribute to itself, an effect known as Director's law, named for economist Aaron Director (Stigler, 1970). If the middle class is relatively closer in income to the poor than to the rich, this can worsen existing income inequality. Acemoglu et al. (2015) find evidence for this phenomenon in a 1960–2010 panel of 110 countries, in which many of the switches to democracy come from the Latin American wave of democratization.

13.3.

SUPPLY-SIDE CONSTRAINTS

The democratic process can also be obstructed from performing its inequality-alleviating function by distortions coming from the supply side of public policies. An important channel is the possibility that elements of the elite can circumvent de jure institutions by making investments in de facto political power—e.g., through control of local law enforcement (Acemoglu and Robinson, 2008), or campaign contributions (Campante, 2011). In this scenario, the "effective" median voter is placed much higher in the income distribution than the actual median voter.

A related constraint arises when the institutional architecture of a new democracy is chosen by actors connected with the previous regime. The chosen de jure constitutional provisions restrict the scope of redistribution that occurs under democratization. For instance, Londregan (2000) argues that the constitution imposed by the Pinochet government in Chile was designed to constrain the extent of future redistribution. Ardanaz and Scartascini (2013) study a sample of more than fifty countries, including several from Latin America, between 1990 and 2007. They find that countries with historically more unequal distributions of wealth and income have higher levels of legislative malapportionment, which in turn are associated with smaller shares of personal income taxes in GDP. Sometimes the constraints are exogenous to the prior power structure. Campello (2011) argues that the economic threat of capital flight tied the hands of several Latin American governments from pursuing more vigorous, and therefore costlier in the short run, redistributive policies. Each of these factors would reduce the potential impact of democracy on inequality.

More recent research has suggested that vote buying, a prevalent phenomenon in many Latin American democracies, also prevents the

democratic process from fully internalizing latent popular demand for redistribution in high-inequality settings. Keefer and Vlaicu (2017) show that vote buying as an electoral strategy is more common in countries where campaign promises have low credibility, such as those Latin American democracies where political parties are weak. They demonstrate that vote buying has distributional consequences, as voters targeted by attempts at vote buying before the election may receive no government benefits after it. As poorer voters are more susceptible to vote buying, this type of redistribution crowds out redistribution through the legitimate policy-making process and becomes a substitute for the welfare state (Kitschelt, 2000).

13.4.

RECENT DATA PATTERNS

Regional data appear to indicate that stronger democracies have more pretax inequality on average, but not more post-tax inequality, compared to weaker democracies. Figure 13.2 plots the pretax (gross) Gini coefficient and the after tax (net) Gini coefficient against a democracy index (averaged for 2006–18) that summarizes the quality of each country's democratic process along five dimensions: civil liberties, political culture, political participation, functioning of government, and electoral process and pluralism. This yields a continuous index from 0 to 10, with higher values indicating stronger democracies. Three types of democracies can then be distinguished: hybrid (index between 4 and 6), flawed (index between 6 and 8), and full (index between 8 and 10).

A. Pretax inequality (gross Gini)
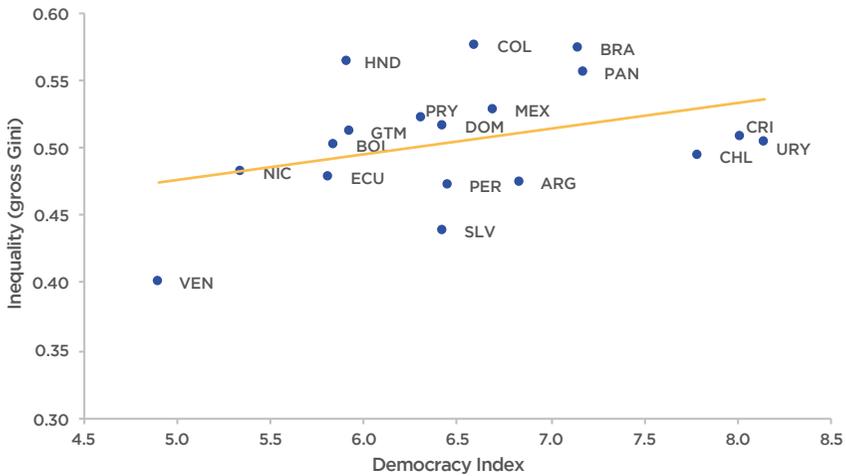
B. After tax inequality (net Gini)
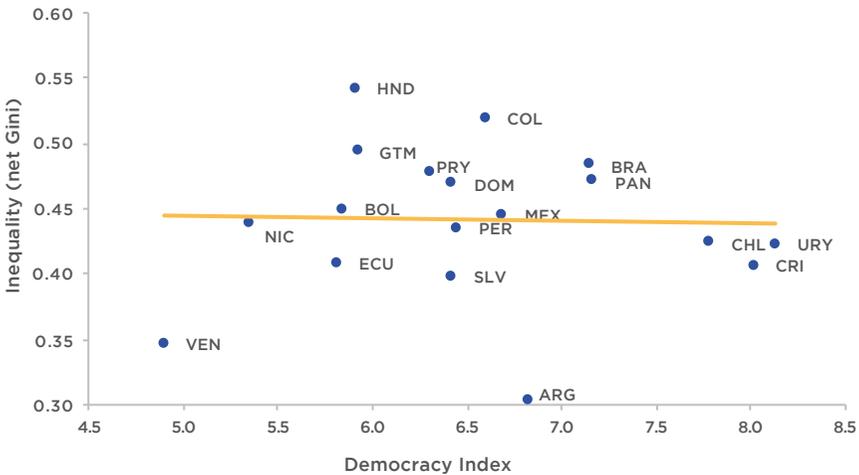
Sources: Pretax (gross) and after tax (net) Gini are from the Commitment to Equity Institute Data Center on Fiscal Redistribution. Democracy Index is from the Economist Intelligence Unit.

Note: Sample includes eighteen countries; codes shown in the figures. Gini coefficients are from the early 2010s. Democracy values are averaged for the period 2006–18.

Figure 13.2.A suggests that market-based incomes tend to be more unequal in the stronger democracies, such as Costa Rica or Uruguay, than in the weaker democracies, such as El Salvador and Venezuela. The correlation between pretax inequality and democracy is 0.361. Perhaps this is due to the more diversified economies and open-market policies of the former group. Comparing Figure 13.2.A to Figure 13.2.B, inequality levels after taxes drop in virtually every country, suggesting that fiscal policy has an equalizing effect across the board. On average, the Gini coefficient drops from 0.506 to 0.437, a decline of 13.6 percent.[2] The drop is not uniform, however, as more democratic countries experience more equalization than others. The result is that strength of democracy is no longer positively correlated with inequality. The correlation in the second figure is slightly negative, at –0.023.

This pattern suggests that stronger democracies are better at reducing inequality through the tax system. Figure 13.3 shows some evidence that this may be the case. Figure 13.3.A plots the degree of fiscal redistribution against the democracy index. Fiscal redistribution is the difference between the gross Gini and the net Gini that were shown in Figure 13.2. The plot reveals a strong positive association between redistribution and democracy: stronger democracies engage in more extensive redistribution. The correlation is 0.502.[3]

FIGURE 13.3 Stronger Democracies Practice Greater Redistribution

A. Redistribution
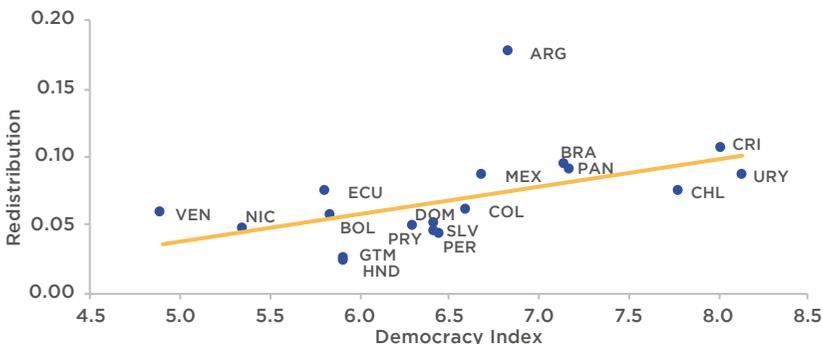
[2] As Izquierdo, Pessino, and Vuletin (2018) have documented, this is significantly lower than the figure for the OECD.

[3] A similar analysis using Gini data from the OECD reveals a correlation between redistribution and democracy of 0.325. The sample consists of all 36 member countries in 2018, where the Gini data is from the mid to late 2010s.

B. Social protection (% GDP)
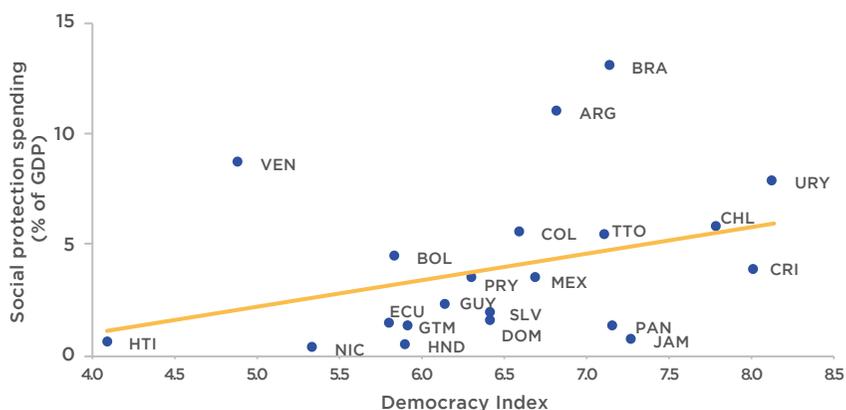
Sources: Redistribution is the difference between the gross and net Gini coefficients, which are from the Commitment to Equity Institute Data Center on Fiscal Redistribution. Social protection spending is from the Economic Commission for Latin America and the Caribbean. Democracy Index is from the Economist Intelligence Unit.

Note: Sample includes eighteen countries in panel A, twenty-one in panel B. Gini coefficients are from the early 2010s. Social protection values are as of 2018. Democracy values are averaged for the period 2006–18.

Consistent with this observation, stronger democracies also tend to spend a larger fraction of their GDP on social protection programs. Figure 13.3.B plots the most recent values of government spending on social protection as a percent of GDP, against the democracy index. The pattern of this data resembles the one in the redistribution plot: stronger democracies tend to allocate more fiscal resources to social protection. The correlation is 0.334. This may be partly due to the better state capacity of these democracies—e.g., their ability to collect taxes—or it may be due to the more effective channeling of popular demand through the democratic process, along the lines of the arguments made above.

We noted at the outset of this chapter the sudden rise, starting in 2014, in street protests (general strikes and antigovernment demonstrations) throughout the region (see Figure 13.1.B). Against the backdrop of steady expansions in government allocations to social protection, the trend raises the possibility that protests are an important mechanism through which the electorate's demands for more redistribution are met. The data, however, does not seem to support this conjecture.

Stronger democracies in the region appear to have higher voter turnout but fewer street protests on average. Figure 13.4 plots country-level averages of these variables for the period 2006–18. In Figure 13.4.A, voter turnout is positively associated with democracy; the correlation is 0.351. In Figure 13.4.B, street protests are negatively associated with democracy; the correlation is –0.240. As stronger democracies are more effective at reducing inequality (see Figure 13.2) and engage in more fiscal redistribution (see Figure 13.3), it appears that voter turnout is more plausible than street protests as the main mechanism for resolving inequality through the democratic process. As Machado, Scartascini, and Tommasi (2011) have found, protests are often a way to express voter demands in weakly institutionalized settings. There may be exceptions to this pattern, perhaps the cases of Brazil and Chile, both of which score relatively high on the democracy scale but have nevertheless witnessed a marked increase in economy-related protests in the past few years.

FIGURE 13.4 Stronger Democracies Have Higher Voter Turnout and Fewer Protests

A. Voter turnout (%)
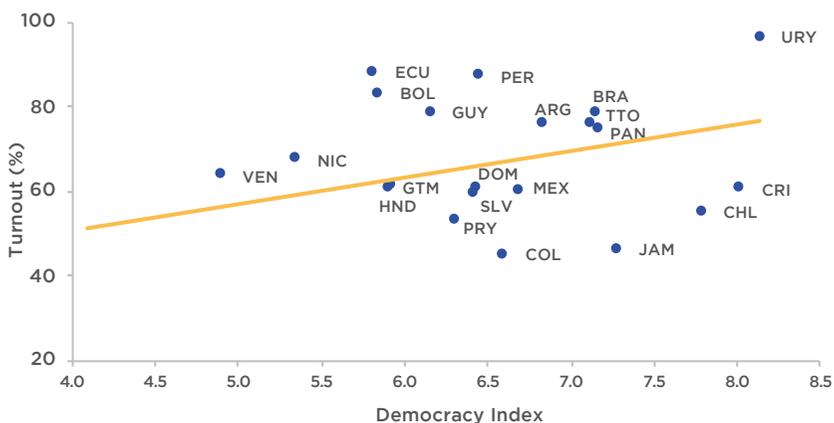
B. Street protests (per year)
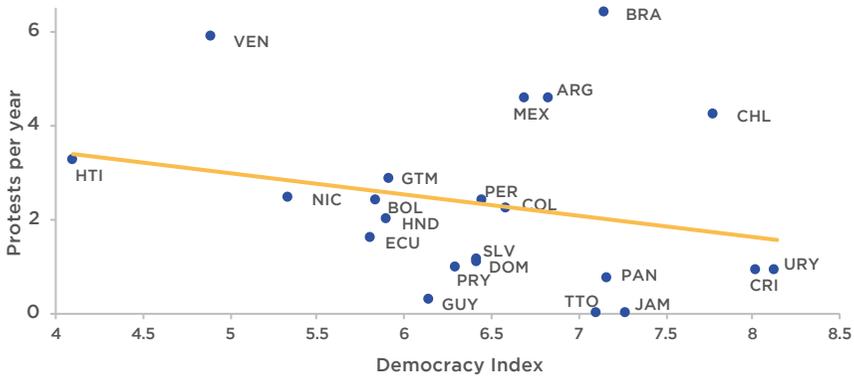
Sources: Voter turnout (as a percentage of the voting-age population) is from the Institute for Democracy and Electoral Assistance. Street protests are the sum of general strikes and antigovernment demonstrations, which are from the CNTS Domestic Conflict dataset. Democracy Index is from the Economist Intelligence Unit.

Note: Sample includes twenty-two countries from the region. Voter turnout, street protests, and democracy index are averaged for the period 2006 -18.

13.5.

OPEN QUESTIONS

While there is some evidence that stronger democracies in Latin America and the Caribbean are more effective at alleviating income inequality, when compared to other regions in the world, inequality remains high. Stronger democracies do appear to engage in more redistribution and social protection, particularly through conditional cash transfers and noncontributory pensions. Some of the constraints to further reducing inequality may come from the demand side—e.g., biases in voter turnout toward higher income and education, or lack of trust in the political process. Others may come from the supply side—e.g., de jure institutional constraints on redistribution, or vote buying strategies that supplant government provision of essential pro-poor public goods such as quality primary education and health services. More research is needed to identify which of these constraints operate in which contexts, and the appropriate policy reforms to overcome them. The data shown above supports the view that well-functioning democracies fare better overall in the extent of their redistribution.

It is also possible that current redistributive policies fall short because there are implementation failures in the targeting of transfers and public goods. To determine this, more granular data on fiscal outlays is needed, particularly at the local level. As several countries in Latin America and the Caribbean use a system of fiscal decentralization based on grants to localities from the central government, local accountability for the allocation of these transfers becomes a key issue. Yet, local politicians face little accountability for efficient spending because the cost of that spending, tax revenues, is not borne at the local level. This may lead to overspending and misallocations.[4]

A remaining puzzle is also the higher prevalence of pretax inequality in the region's more advanced democracies. The greater reliance on market-based economies seems to suggest an efficiency-equity trade-off. It is not clear, however, why this trade-off cannot be circumvented with smart regulatory policies that allow market competition to thrive while creating an equitable distribution of economic and social returns to the different factors of production.

Finally, it is important to understand how to overcome weak voter demand for public spending that favors the poor, a significant problem especially in low-trust environments. Voters at the low end of the income distribution do tend to vote less often and to be less engaged in the democratic process. Some have raised the possibility that poverty and inequality are democracy's main weaknesses (UNDP, 2005), with the less well off becoming more and more disengaged with the democratic process that is supposed to represent their interests. Inequality may lead to partisan polarization (Vlaicu, 2018), and political polarization can further increase inequality (Bonica et al., 2013). Overcoming this vicious circle raises a challenge for the region's relatively young democracies. A commitment to strengthening democratic institutions—in the government sector and civil society alike—should over time improve representational outcomes, including economic equity, in these societies.

[4] The IDB has dedicated one of its recent flagship reports to carefully measuring and discussing issues of fiscal misallocation; see Izquierdo, Pessino, and Vuletin (2018).

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14.

WHOM DO WE TRUST?
The Role of Inequality and Perceptions

by Joanna Valle Luna and Carlos Scartascini

High levels of trust, both interpersonal and in institutions, are fundamental for fostering inclusive growth. Trust affects growth directly. Firms will invest, hire more workers, and grow only if they trust that others will observe the law and the government will enforce it and not subject them to extrajudicial actions. The quality of public policies is also not independent of trust. If trust is low, individuals will not demand public goods but instead will engage in clientelist relationships with their representatives and politicians. Such conditions are not conducive to the development of institutions or to long-term social and economic welfare.

Trust is shaped by many factors, one of which is the distribution of income and wealth in a society, particularly when that distribution is not perceived as legitimate.[1] Broadly, as inequality rises, trust falls. Both actual and perceived inequality are affected not only by the distribution

[1] In this chapter we concentrate on wealth instead of income owing to data limitations. See Scartascini and Valle Luna (2020b) for a thorough discussion and methodological information. Wealth and income are very highly correlated.

of income and wealth, but also by access to public goods and government services. High inequality has serious negative consequences for society. In particular, as discussed at length in this chapter, it erodes social cohesion (Van de Werfhorst and Salverda, 2012; Paskov and Dewilde, 2012).

The COVID-19 pandemic is taking a tremendous toll in terms of the lives and livelihoods of millions of people across the globe. Beyond its direct effects, the economic consequences of social isolation, stay-at-home orders, and quarantines will be measured in the trillions of dollars. Moreover, the effects of the pandemic are distributed unequally. Informal employees, those who cannot work from home, and those who have been laid off are facing the brunt of the crisis. As a result, inequality is very likely to rise.

This chapter addresses the role of trust in the growth process, the effects of inequality and perceptions of inequality on trust, and ways to increase trust. These factors are even more pressing in the context of a pandemic, such as of COVID-19 (see Box 14.1), where reducing contagion is key to lowering fatalities and growth is essential to lift economies out of the pandemic-induced downturn. High levels of interpersonal trust make it possible to maintain low infection rates without severely restrictive measures.

14.1.

TRUST AND GROWTH IN LATIN AMERICA AND THE CARIBBEAN

Numerous studies have identified trust—in institutions and in other people—as a key factor in social and economic progress and democratic stability (Algan and Cahuc, 2014; Algan et al., 2017). Trust has been

associated with higher GDP per capita, higher productivity, higher levels of investment, and deeper credit markets, among others.[2] Trust affects the development of financial markets, the availability of venture capital, and foreign direct investment flows (Kiyotaki and Moore, 2001; Guiso, Sapienza, and Zingales, 2008; Bottazzi, Da Rin, and Hellmann, 2016). It also affects transaction costs and decision making within firms (Knack and Keefer, 1997; La Porta et al., 1997; Dasgupta and Sergaldin, 2000; Glaeser et al., 2000; Zak and Knack, 2001; Beugelsdijk, De Groot, and Van Schaik, 2004; Bloom et al., 2012; Algan and Cahuc, 2014).[3] It has also been associated with lower macroeconomic volatility (Sangnier, 2013).

Interpersonal (or generalized) trust, which is the focus of this chapter, has been falling steadily around the world. Over the past three decades, its worldwide levels have seen a steady decrease from an average of 39 percent in the 1981–85 period to 23 percent in 2010–14 (Figure 14.1). In Latin America and the Caribbean, trust is lower than in other regions of the world and is decreasing. According to the latest World Values Survey, interpersonal trust in the region was just one-quarter to one-third the levels found in Europe and Southeast Asia during the 2010–14 period. According to the Latinobarometer survey, which compiles information for 18 countries in the region for the years 1996–2018, the average interpersonal trust of citizens in Latin America and the Caribbean was about 19 percent. That is, only one in five Latin Americans believe that "most people can be trusted."

The World Values Survey calculates generalized trust from answers to the question, "Generally speaking, would you say that most people can be trusted, or that you need to be very careful in dealing with people?" Trust is equal to 1 if the respondent answers, "Most people can be trusted"; it is 0 otherwise. The trust variable was aggregated at the country level as a weighted average from individual observations, and after that, averaged in five-year brackets. The sample consists of ninety-seven countries, including thirteen in Latin America and the Caribbean (Argentina, Brazil, Chile, Colombia, the Dominican Republic, Ecuador, El Salvador, Guatemala, Mexico, Peru, Trinidad and Tobago, Uruguay, and Venezuela).

[2] For detailed analysis and data sources, see Scartascini and Valle Luna (2020a).

[3] See Keefer, Scartascini, and Vlaicu (2018) for a full exposition on the taxonomy of trust and additional examples of how trust affects decisions in markets and within firms.

FIGURE 14.1 Trust Has Been Falling Steadily around the World and in the Region
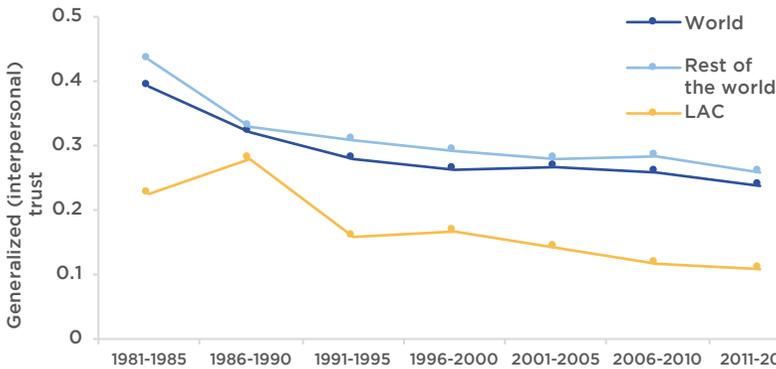
Source: Authors' calculations based on data from the six waves of the World Values Survey (1981–2014).

Note: Haiti was excluded from the sixth wave in this figure because it was the only country in the sample where data collection extended beyond the timeframe, until the year 2016.

14.2.

INEQUALITY AND TRUST

In addition to being the region with the lowest levels of interpersonal trust, Latin America is the most unequal region in the world.[4] Using the most common measurement of inequality at the national level, Figure 14.2 reveals a strong negative correlation between the Gini coefficient for inequality and a measure of generalized interpersonal trust. Latin American and Caribbean countries are, not surprisingly, concentrated in a quadrant where high levels of inequality meet the lowest levels of interpersonal trust among the sample. Similar results have been found by Rothstein and Uslaner (2005), and Barone and Mocetti (2015).[5]

[4] This chapter focuses on the impact of inequality on interpersonal trust, but inequality may reflect other deeply entrenched differences across groups (related to power and access to the state purse) that tend to be correlated with lower trust. Also, low-trust societies tend to organize in ways that may increase inequality in the long run. For example, public policy in low-trust societies tends to shy away from the production of long-term public goods (such as education) that are fundamental for moving individuals upward (Keefer, Scartascini, and Vlaicu, 2018).

[5] Steijn and Lancee (2011) argue that this negative correlation depends greatly on the country composition and the inclusion of non-Western countries in the regressions.

FIGURE 14.2 Relation between Trust and Inequality (country average)
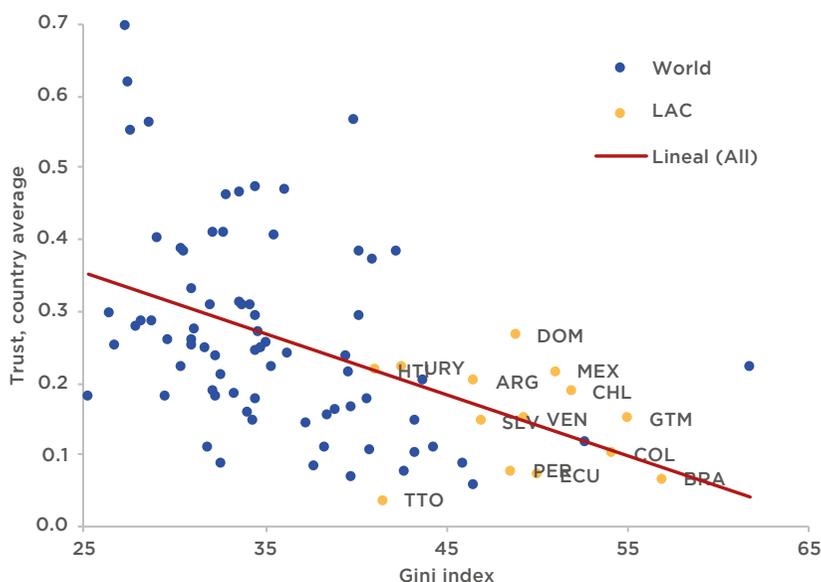
Source: Authors' calculations based on data from the World Values Survey and the World Bank's World Development Indicators.

Note: The trust data comes from the six waves of the World Values Survey (1981–2014). Gini index data comes from World Development Indicators (1981–2017). The total sample consists of 88 countries including Argentina, Brazil, Chile, Colombia, the Dominican Republic, Ecuador, El Salvador, Guatemala, Haiti, Mexico, Peru, Trinidad and Tobago, Uruguay, and Venezuela.

The general understanding, at least at a macro level, is that people living in unequal societies trust one another much less than do people in communities that are more equal (Jordahl, 2007). Less evident, however, are the mechanisms of this correlation between inequality and trust. Jordahl (2007) proposes four sets of mechanisms: (1) social ties, (2) inference from social relationships, (3) conflicts over resources, and (4) the opportunity cost of time.

In the first set, authors like Coleman (1990) and Fukuyama (1995) argue that people have a natural inclination to trust people perceived to be similar to them, and this includes characteristics such as income, wealth, and social class. Coffé and Geys (2006) argue that people with different socioeconomic backgrounds are less likely to have the same values and norms. There is evidence, too, that people are less willing to provide public goods when the fruits will benefit other ethnic groups

(Alesina, Baqir, and Easterly, 1999; Beach and Jones, 2017). In particular, co-ethnics are more willing to cooperate, and because they are more closely linked on social networks, they are better able to support cooperation (Habyarimana et al., 2007).

The second set of mechanisms, social relationships, focuses more on relative wealth—for instance, on how people's trust may be affected by their perception of their income with respect to others. Fischer and Torgler (2007) suggest that factors such as envy and concerns about one's position with respect to others distort perceptions of fairness and, in consequence, erode interpersonal trust and social capital. Most people have a high aversion to inequality; it arouses negative emotions, all the more so when another's higher status is seen to be undeserved (Clark and D'Ambrosio, 2015).

Third, in a world with limited resources, inequality may create conflict. The argument here is that inequality amplifies the incentives of people with fewer resources to engage in untrustworthy behavior. In consequence, individuals who command more resources are less prone to trust them. Another way to describe this effect is offered by Rothstein and Uslaner (2005), who argue that people living in unequal societies lack a sense of solidarity; under such conditions, trust becomes a zero-sum game between social classes. Meltzer and Richard's (1981) classic model of redistribution provides a good representation of this problem. In their model, greater inequality generates greater pressure for redistribution. As such, more unequal societies would naturally tend to enact higher taxes on the rich, causing conflict across classes. Yet inequality could also explain why redistribution sometimes does not occur, which increases disaffection even more. As Ardanaz and Scartascini (2011) indicate, during democratic transitions, high inequality may generate institutions that favor the status quo and increase the relative power of the wealthy in the decision-making process.

The fourth mediator of inequality and trust—the opportunity cost of time—refers to the fact that income inequality can affect trust through its differential effect on time allocation. The logic is that the opportunity cost of verifying transactions and people varies at different levels of income. Therefore, trust differs along with the income distribution, with trust being lower for lower-income individuals. Additionally, informal sanctions, which

can help maintain higher trust, are more relevant within groups bound by close ties (Zak and Knack, 2001). As such, higher inequality reduces the availability of these enforcement technologies, which reinforces the problem.

14.3.

PERCEPTIONS OF INEQUALITY AND TRUST

Evidence of the negative correlation between inequality and trust is strong at the country level (Figure 14.2). However, evidence of the effect of inequality on interpersonal trust at the individual level is not as conclusive. Some scholars seem to agree that the dissociation between personal income levels, inequality, and trust may arise from individuals tending to misperceive both the income and wealth distribution in their country and their own position in that distribution. As such, individuals tend to take clues from their environment and those around them to estimate their relative position (Bublitz, 2017; Cruces, Pérez-Truglia, and Tetaz, 2013; Karadja, Mollerstrom, and Seim, 2017; Norton and Ariely, 2011; Poppitz, 2018).[6] Biased perceptions tend to arise because individuals choose for comparison a reference group that is not necessarily representative of their income at the national level. Therefore, not only income and wealth levels, both absolute and relative, may affect people's perceptions of income inequality; other environmental factors are also relevant. Education, occupational prestige, family background, and employment status are all important predictors (Poppitz, 2018).

The most recent data for Latin America and the Caribbean yields a similar assessment. The data seems to indicate that wealth is not a very

[6] Biased estimations of distribution are common across the world. The average American underestimates wealth inequality (Norton and Ariely, 2011). In Argentina, a significant share of poorer people place themselves in higher ranks of the income distribution than is truly the case, while a significant share of richer people underestimate their income position (Cruces, Pérez-Truglia, and Tetaz, 2013). Similar phenomena have been found with overestimation in Brazil, and with underestimation in Sweden, Russia, Germany, and the United Kingdom (Karadja, Mollerstrom, and Seim, 2017; Bublitz, 2017)

strong predictor of trust, even if higher wealth seems to be correlated with higher levels of trust (Scartascini and Valle Luna, 2020b).[7] However, trust correlates much more strongly with people's perceptions—for example, of the fairness of the income distribution in their country and respondents' self-identification of social class.[8]

Figure 14.3.A provides information about trust levels by quintiles of wealth and for different degrees of perceived fairness of the income distribution. The horizontal axis indicates the wealth quintiles (1 to 5). The lines indicate the levels of trust for each quintile and each level of perception of the income distribution (left vertical axis). The bars identify the share of people who think that the distribution is fair or unfair (right vertical axis). Two interesting facts emerge. First, some people at every level of wealth distribution consider the distribution to be fair (or unfair). That is, those in the highest quintile and those in the lowest quintile do not differ much in believing the income distribution to be fair or unfair: about 80 percent of people in every quintile consider the distribution to be unfair. Second, interpersonal trust rises slightly across the wealth distribution, but it changes according to respondents' perceptions. That is, the lines representing perceptions of fairness are relatively constant across the quintiles, but there are differences between the lines. Those who consider the distribution to be very fair have greater trust (about 20 percentage points' worth) than those who consider it to be very unfair.

Figure 14.3.B uses an alternative measure of perception: self-assignment of socioeconomic class. This is a relevant measure because it provides insights into self-perception. Again, the horizontal axis shows the respondent's wealth quintile. Bars represent shares of people for each self-assigned socioeconomic class. The lines indicate once again the

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[7] For the analysis of individual-level characteristics and trust, we rely on the Latin American Public Opinion Project (LAPOP, https://www.vanderbilt.edu/lapop/) and Latinobarometer (http://www.latinobarometro.org/latContents.jsp). The latter uses a sample of 18 countries; the number of people surveyed in a given year is around 1,200 per country. The data extend from 1996 to 2018, with some gap years, for a total of 20 samplings. In the case of LAPOP, the data has 8 periods collected noncontinuously from 2004 to 2019; LAPOP samples 31 countries in the region.

[8] For a complete analysis, see Scartascini and Valle Luna (2020b). Other perceptions included in the analysis that produce basically the same results include respondents' assessments of whether they earn enough income and are able to save, their life satisfaction, their perceptions of social mobility, their perceptions of how beneficial or detrimental inequality is, and the government's responsibility to address income inequality.

levels of interpersonal trust by quintile and class. The pattern is similar to that of Panel A. Again, people who consider themselves to belong to a higher socioeconomic class have a relatively higher level of trust (see the lines for each level of wealth), but this time the lines are quite consistent across levels of wealth. In the highest quintile, for example, people who consider themselves as upper class have about two and a half times more trust than those who consider themselves to be in the lower class. It is also worth noting that very few people in the entire sample, regardless of their wealth quintile, consider themselves as part of the upper class (the darker bar increases only slightly with actual wealth).[9] This is important because it illustrates the wide gap between reality and perception. As such, it helps to explain the disconnect sometimes observed between changes in objective indicators and changes in personal perceptions.

To analyze all the potential factors that could affect trust, it is important to control for both perceptions and relative wealth, plus a set of control variables.[10] The results presented in Figure 14.4 reveal that the fairer one believes the income distribution to be, the more one tends to trust others. For example, Figure 14.4.A shows that interpersonal trust is about 20 percentage points higher for those who consider the distribution to be "very fair" compared with those who consider it to be very unfair. Individuals in the highest wealth quintile also have higher levels of trust than others. Similar results can be observed in Figure 14.4.B, which uses self-reported social class to classify perceptions of fairness. Those who identify with the upper two classes tend to show higher trust than those who assign themselves in the lower classes.

[9] The self-perception of being middle class grows with wealth, but does not drop at the higher quintile, while that of being lower class shrinks but is still large in the higher wealth quintiles of wealth. This implies that some people at the lower level of the distribution tend to slightly overestimate their position in the income distribution (thinking of themselves as belonging to a higher bracket of income or class than the one to which they actually belong), and a large share of people tend to underestimate their position. This type of bias was also found in an income survey conducted in the Greater Buenos Aires area (Cruces, Pérez-Truglia, and Tetaz, 2013) in which poorer households presented a consistent positive bias, while richer households in the distribution systematically underestimated their rank (negative bias).

[10] Some of these controls include age, education, race, religion, civil status, employment status and sector, language, parents' education, and country and survey-period fixed effects. The data comes from the 20 iterations of the Latinobarometer survey carried out between 1996 and 2018. The following 18 countries are included: Argentina, Bolivia, Brazil, Chile, Colombia, Costa Rica, the Dominican Republic, Ecuador, El Salvador, Guatemala, Honduras, Mexico, Nicaragua, Panama, Paraguay, Peru, Uruguay, and Venezuela. Depending on the data available for some of the perception variables, the number of survey periods used for each regression model may vary.

FIGURE 14.3 Individuals' Perceptions of Wealth May Be More Closely Correlated with Trust than with Wealth

A. By perceived fairness of income distribution
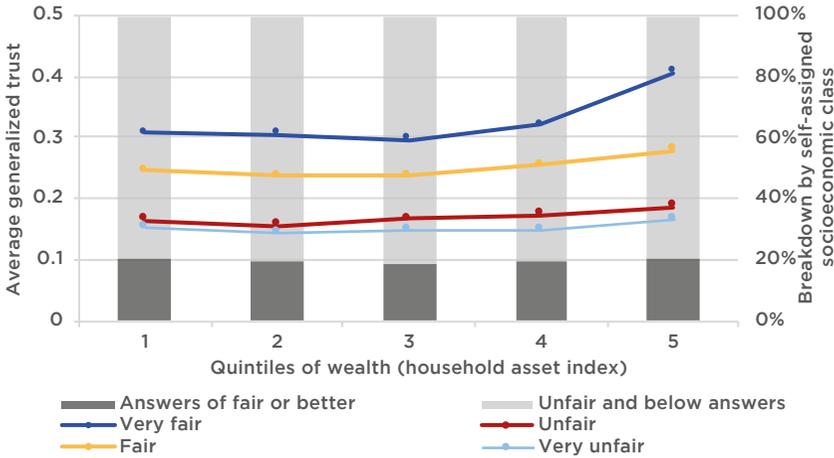
### B. By self-assigned social class
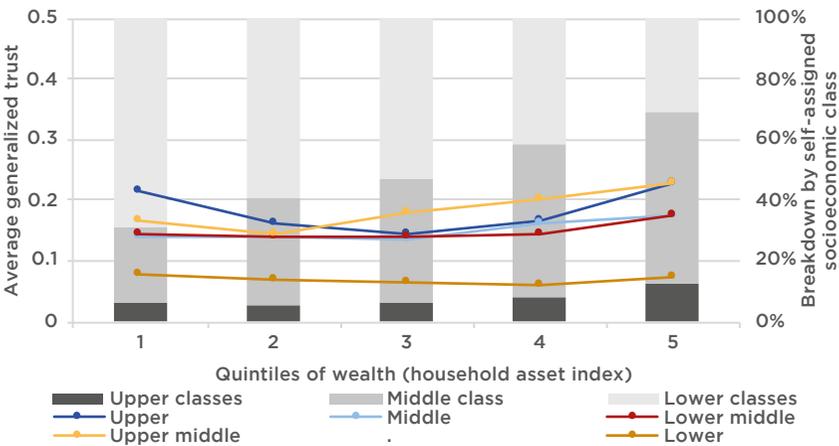
Source: Authors' calculations based on data from Latinobarometer.

Note: Generalized trust is calculated from answers to the question, "Generally speaking would you say that most people can be trusted, or that you need to be very careful in dealing with people?" Trust is equal to 1 if the respondent answers, "Most people can be trusted" and 0 otherwise. The trust scale extends from 0 to 1, but it is truncated here for better reading. The quintiles were created from the Household Asset Wealth Index (PCA) using a set of binary variables representing various household assets and characteristics. Those considered for this computation are televisions, refrigerators, landline telephones, mobile phones, vehicles, washing machines, hot water, sewage service, computers, and drinking water. The PCA was computed per country and per year. According to the score, each household was then assigned to one of five wealth quintiles as a proxy for household income. The variable related to the perceived fairness of income distribution comes from the question: How fair do you think income distribution is in your country? Social class is self-assigned by the respondent in response to the question: "People sometimes describe themselves as belonging to a social class. Would you describe yourself belonging to. . . ." For Panel A, the eleven years used in the sample fell between 1997 to 2018. For Panel B, the sample years are 2011, 2013, 2017, and 2018. Eighteen countries are included: Argentina, Bolivia, Brazil, Chile, Colombia, Costa Rica, the Dominican Republic, Ecuador, El Salvador, Guatemala, Honduras, Mexico, Nicaragua, Panama, Paraguay, Peru, Uruguay, and Venezuela.

FIGURE 14.4 Trust, Relative Wealth, and Socioeconomic Perceptions

Level of trust by wealth quintile and inequality perceptions

A. Perception of fairness of income distribution
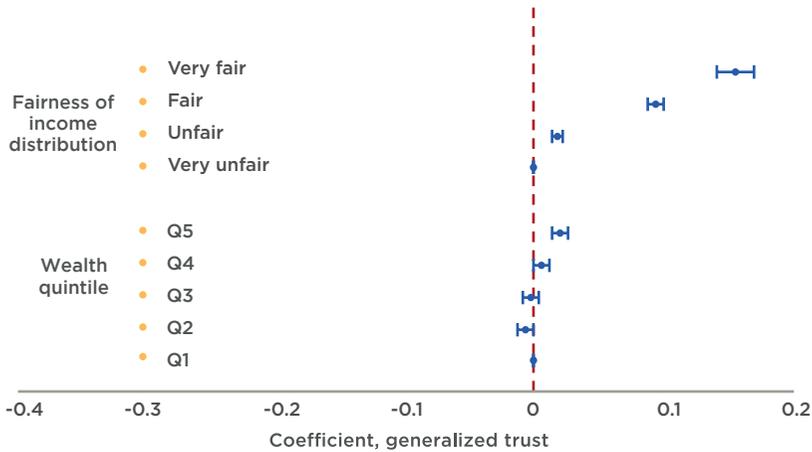
B. Self-assigned social class
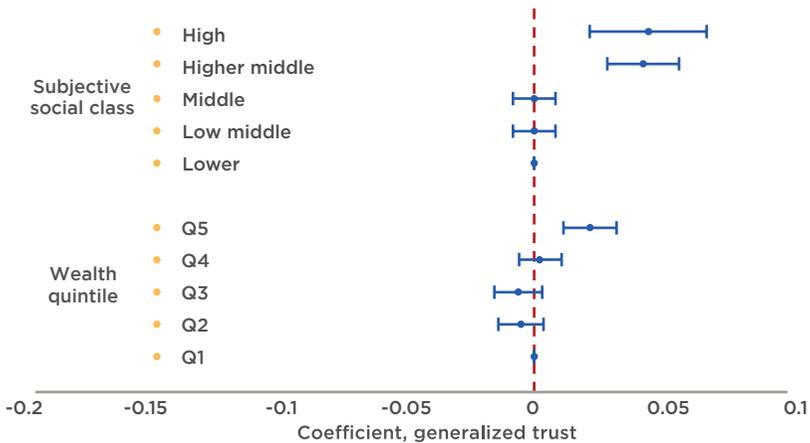
Source: Authors' calculations based on data from Latinobarometer.

Note: The dependent variable, generalized trust, is calculated from answers to the question "Generally speaking would you say that most people can be trusted, or that you need to be very careful in dealing with people?" Trust is equal to 1 if the respondent answers "Most people can be trusted," and 0 otherwise. The index of relative wealth is the Household Asset Index standardized by the median. Other covariates used as a control in the model are age group, gender, education, civil status, employment status, language, religion, race/ethnicity, and parents' education. Ordinary least squares regressions were used, with robust standard errors at a 90 percent confidence interval, as well as fixed effects for country and survey year fixed. Dots represent coefficients of linear regressions, and the lines are confidence intervals. The total sample for Panel A was 103,905 people across eighteen countries and seven years (2007, 2009, 2010, 2013, and 2016–2018); for Panel B, 45,220 people across eighteen countries and three years (2013, 2017, and 2018).

14.4.

HOW ARE PERCEPTIONS FORMED?

Given the apparent relevance of respondents' perceptions to their levels of trust, it makes sense to ask what determines those perceptions.[11] Figure 14.5 presents the results of a regression analysis undertaken to answer that question. It appears that wealth is not very significant in explaining perceptions about the fairness of the income distribution, as discussed earlier. Individual characteristics—notably, access to public goods—do seem to matter. Older and more-educated individuals tend to think that the income distribution is more unfair than do younger and less-educated individuals. Victims of crime and corruption also tend to have a worse view of the income distribution, as do those whose education and health services are unsatisfactory. Again, neighborhood characteristics and personal experiences tend to determine perceptions about inequality more than actual differences in relative wealth.

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[11] Following the literature, we perform regression analysis controlling for relative wealth, a set of individual characteristics—including age, gender, education, civil status, work conditions, race, religion, language and parents' education—and a set of neighborhood characteristics, such as crime victimization, corruption victimization, and satisfaction with the health and the education system. We also include country and survey wave fixed effects. For a complete analysis, see Scartascini and Valle Luna (2020b).

FIGURE 14.5 Determinants of Perceptions of Fairness of Income Distribution
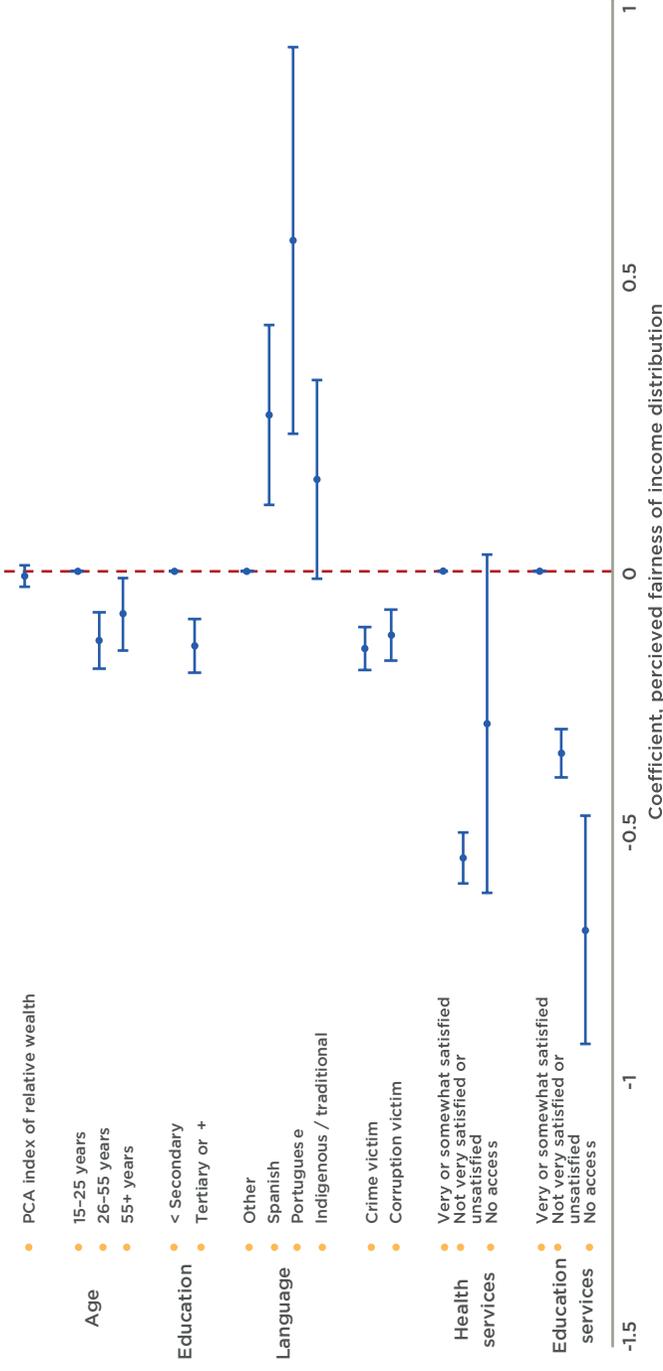
Source: Authors' calculations based on data from Latinobarometer.

Note: The dependent variable, the perceived fairness of the income distribution, comes from the question: "How fair do you think income distribution is in your country?" The scale of answers ranges across very unfair, unfair, fair, and very fair. An ordered logistic regression was used with robust standard errors, at a 90 percent confidence interval. Dots represent coefficients of regressions, and the lines are confidence intervals. The total sample consisted of 28,860 individuals in eighteen countries across the region, taken from the 2007 and 2016 surveys.

14.5.

HOW CAN TRUST BE INCREASED?

Reducing inequality can increase social cohesion. Inequality arouses negative emotions and tends to fray the social fabric. Interestingly, perceptions of inequality seem to be even more pervasive than actual inequalities. And changes in perceptions, sometimes fueled by misinformation, appear, at least in part, to underlie the large drop in trust that most countries are experiencing.[12] To some degree, negative perceptions could be remedied through more and better information. Only about a quarter of the people in the upper two quintiles (upper-middle and upper) of the income and wealth distribution recognize themselves as such (Scartascini and Valle Luna, 2020b). Therefore, publicizing the actual income distribution could make people set their views closer to reality. Of course, the information could backfire for people in other parts of the distribution. Hence, information is a double-edged sword. Experiments with salary transparency have had mixed results in terms of morale, trust, and turnover in the workplace (Mas, 2017).

Strategies that increase social capital through bridging (creating and maintaining social networks composed of heterogeneous groups) and bonding (creating and maintaining social networks within a homogenous group of people) could also work at the community level. By definition, bridging and bonding would increase inclusion and help build communities around common goals (Jaitman and Scartascini, 2017). This framework is already being embraced by governments and social initiatives around the world. Creating cross-national, cross-partisan, cross-ethnic, and cross-religious identities seems to have a positive effect, too. Events such as external threats or athletic victories

[12] Notions about "fake news" are a big problem as they feed on people's fears. Still, even facts can stir negative emotions and fuel misperceptions (Gingerich and Scartascini, 2018)

tend to bring societies together. But most such coalescing effects are short lived; ethnic and group identities tend to reassert themselves, reducing social cohesion across groups (Jaitman and Scartascini, 2017).

Improving the provision of public goods could also go a long way towards improving perceptions of inequality and raising levels of trust. Better education, better health services, improved local services, and lower crime are all ways to reduce perceptions of inequality. Here, managing expectations is paramount, since promising more than what can be achieved could be detrimental. At bottom, keeping promises and spreading accurate information about the promises kept may be the key to increasing trust (Alessandro et al., 2019).

Higher trust is a value in its own right. It generates the conditions for better public policies, particularly public goods that offer high long-term returns, such as education, health, and infrastructure (Keefer, Scartascini, and Vlaicu, 2018). Those same returns may naturally reduce inequality—setting in motion a virtuous circle. As such, pushing society slightly in the right direction could move it far along a path of higher trust, higher growth, and lower inequality.

BOX 14.1 Pandemics, Trust, and Government Policies

Countries differed markedly in their early response to the COVID-19 pandemic. Some quickly took restrictive measures, closing down their countries to foreign entry, restricting mobility, and enforcing those measures strictly. Others decided on a more lax approach. For example, by the time each country had accumulated 100 confirmed COVID-19 cases, the index of stringency of government restrictions reached 83 in Argentina (the scale goes from 0 to 100, 100 being the most restrictive), but remained much lower in neighboring Chile and Uruguay (45 and 68, respectively). Fewer restrictions meant lower economic costs (at least in the short term) but increased the risk of higher levels of contagion. The key, of course, is to find the level of restriction that

keeps both infections and economic suffering as low as possible. Which countries are best equipped to find the magic formula?

First, countries with high government capacity are well equipped to manage risks. Countries with better government capacity have a wider array of public policy options for dealing with external shocks (Scartascini and Tommasi, 2014.). Because they have robust public management tools, governments are able to avoid the inefficient costs of more drastic measures. In fact, it has been shown that states with lower bureaucratic capacity respond with more rudimentary policies than those with higher capacity (Becerra, Cavallo, and Scartascini, 2012; Palanza, Scartascini, and Tommasi, 2016). The latter have access to a broader array of policies for responding to shocks and are therefore able to mitigate the negative consequences with lower public spending and greater room to maneuver (Caruso, Scartascini, and Tommasi, 2015; Franco Chuaire, Scartascini, and Tommasi, 2017).

Second, countries characterized by high levels of interpersonal trust are also able to balance risks. In the case of COVID-19, risk is unequally distributed across the population. Some groups are better able than others to avoid infection and to cope with it if it does occur. Because low-risk individuals may be asymptomatic transmitters of the virus, the benefit of reducing their own risk of contracting it hinges on other people doing the same. Only when individuals trust that others will also properly follow guidelines on social distancing and preventive measures can societies maintain low infection rates without strict enforcement. The following figure shows the relationship for a large sample of countries between levels of interpersonal trust on the horizontal axis and the strictness of mobility restrictions imposed by governments when 100 cases of COVID-19 had been confirmed. The indexes correlate negatively—that is, the countries that imposed greater restrictions on mobility are also the ones characterized by lower levels of interpersonal trust.

FIGURE B14.1.1 Trust and COVID-19 Mobility Restrictions
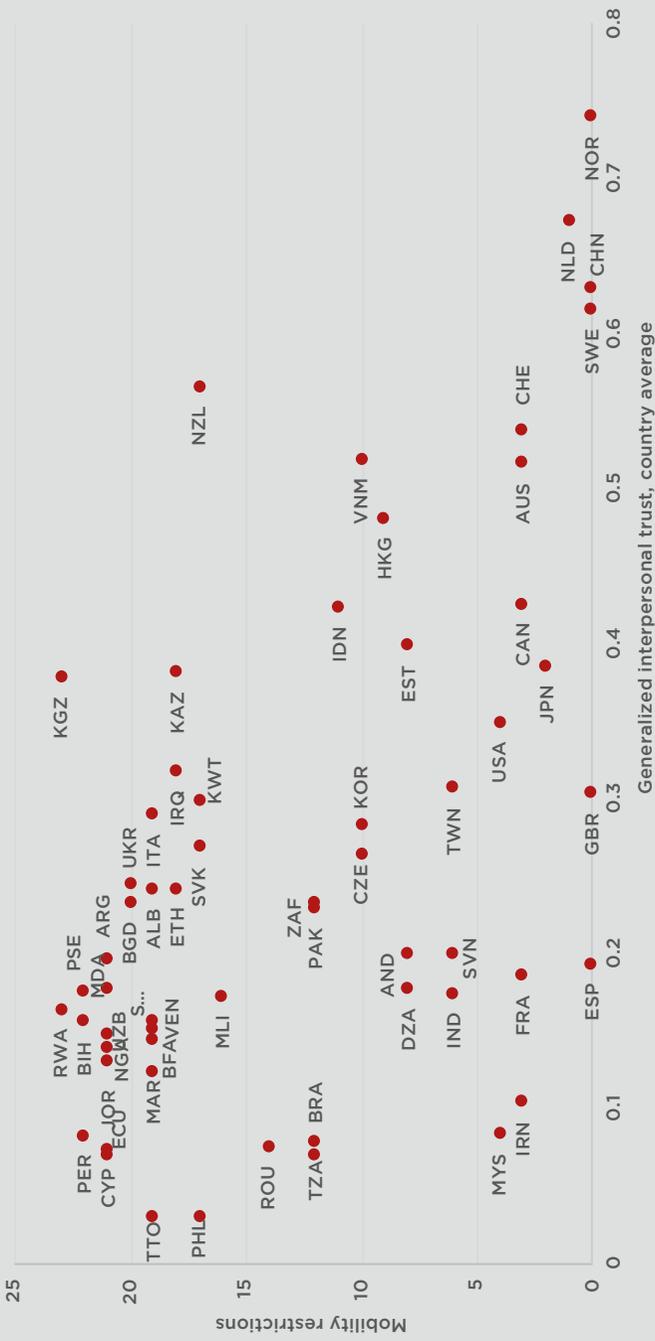
Source: Prepared by the authors based on data from the Oxford Coronavirus Government Response Tracker (vertical axis) and the World Values Survey (horizontal axis).

The evidence suggests that the range of policies governments have available to them varies both with their capacities and with levels of trust in the population. Because government capacity is the weak link in Latin America and the Caribbean, most of the region's countries have had to implement harsh restrictions, accompanied by significant enforcement efforts. Investment in government capacity will be fundamental following the pandemic. Governments should also take steps to increase citizens' trust and help consolidate social cohesion. Both help not only when battling pandemics that impose different levels of risk across the population but also for many other policy domains where individual behavior carries strong negative externalities, such as vaccinations, recycling, littering, and carbon emissions. In every case, a higher level of interpersonal trust would increase the effectiveness of any government-sponsored policy and would reduce enforcement costs. For countries in the region, where state capacity is low, increasing interpersonal trust should be a priority.[a]

[a] The source of the data is Oxford University's Government Response Tracker. The index takes into account whether countries closed schools, shops, public events, and public transportation; restricted travel; and imposed stay-at-home orders. See https://www.bsg.ox.ac.uk/research/research-projects/coronavirus-government-response-tracker.

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Inequality is stubbornly high in Latin America and the Caribbean. It manifests in many aspects of people's lives—from unequal degrees of opportunity and access to high-quality education, health services, or justice, to vast differences in the ability of families to cope when disaster strikes in the shape of a pandemic or climate change. This volume explores the underlying economic factors that account for these many inequalities and lays out what to expect in the wake of COVID-19. The picture that emerges is one of a fractured society where the day-to-day lives of the haves and have-nots are wholly disconnected. They work and live in different neighborhoods. Their children go to different schools. And their families visit different health clinics when they fall ill. The COVID-19 crisis has uncovered the endemic weaknesses of a fractured social contract in need of fundamental reform. This volume offers public policy suggestions that can help level the playing field and overcome this inequality crisis.

IDB