

Inclusion in Times of Covid-19



Coordinated by Victoria Nuguer and Andrew Powell

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Preface

Given the combination of slower growth and heightened social demands that burst into protests across several countries in the region in 2019, the 2020 Latin American and Caribbean Macroeconomic Report was originally conceived to focus on the nexus between macroeconomic developments and how they interact with inclusion. However, as the novel coronavirus broke out, those plans were changed, and a new report entitled *Policies to Fight the Pandemic* was drafted and published in late March 2020, focusing on how countries were addressing the challenges posed by Covid-19.

The health crisis and the measures taken to save lives have only made the underlying challenges of boosting inclusion and reducing poverty and inequality even more pressing. For that reason, we are now releasing the core material of the original report. There are many dimensions to inclusion and inequality, and this publication does not attempt to be comprehensive. In fact, the document at hand might be considered a first taste, as a report exploring further dimensions of inequality will follow later this year. Here the focus is on the links between inclusion and monetary, financial and fiscal policies on the one hand and three specific dimensions—regional inequality, the environment, and trust—on the other.

Moreover, each chapter does not attempt to be a comprehensive treatment of each dimension. Rather, the idea is to develop specific recommendations on selected aspects where there is new evidence or analysis on how to improve inclusion as the health crisis abates.

We hope that this publication will be a valuable complement to the 2020 Latin American and Caribbean Report, provide useful reflections on what needs to be done in different areas, and whet the appetite for future work on the general theme of how to reduce inequality in the region.

Eric Parrado

Chief Economist



Acknowledgments

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CHAPTER 1

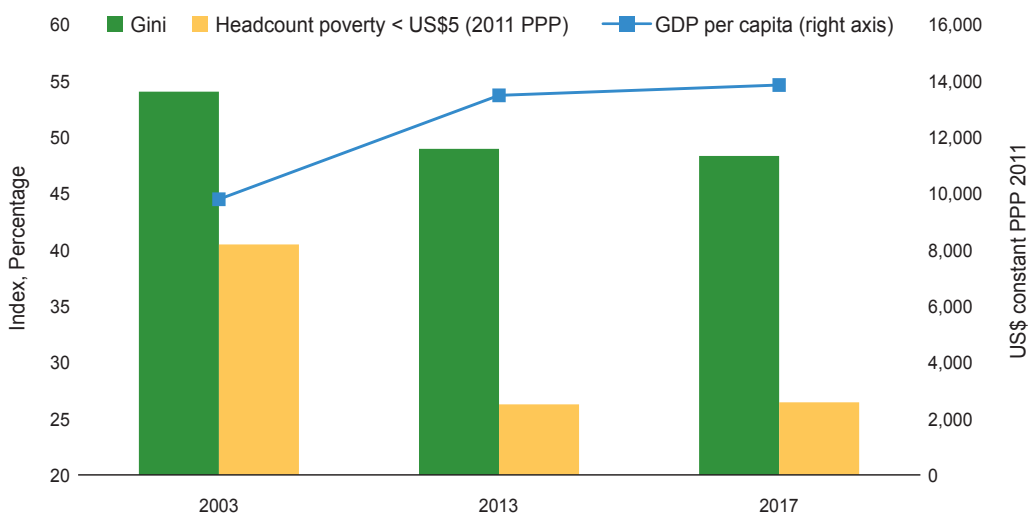
Progress Reversed by Covid-19

The 2020 Latin American and Caribbean Macroeconomic Report, Policies to Fight the Pandemic, focused on growth scenarios given the Covid-19 crisis and how countries can confront the pandemic deploying monetary, financial, and fiscal policies. The region will suffer steep falls in GDP this year and there remains considerable uncertainty regarding the depth of the recession and timing and speed of the recovery. Countries have been very active in attempting to ameliorate the worst of the crisis and are implementing a wide set of policy actions.

Unfortunately, historical evidence suggests that crises exacerbate both inequality and the numbers of people living in poverty. The 2020 Latin American and Caribbean Macroeconomic Report was originally conceived as a publication to explore the links between macroeconomics and selected dimensions of inequality and inclusion but was reframed at the onset of the Covid-19 pandemic. As the crisis evolves, the issues surrounding inequality and the perceived lack of opportunities for many citizens will become even more pressing. This publication draws on some of the original material developed for what would have been the 2020 Latin American and Caribbean Macroeconomic Report and considers how policies can be refocused to address these challenges going forward. This first chapter sets the scene.

On the back of the commodity boom, the region made significant strides in reducing poverty headcount ratios and inequality. However, Latin America and the Caribbean remains one of the most unequal regions of the world, and, even before Covid-19, there was already evidence that progress had stalled due to low growth in more recent years. While there are surely many different explanations, the wave of social protests that swept several countries in 2019 may have been related to a rising middle class that aspired to better public services and a more prosperous future, but felt increasingly frustrated given only meagre growth prospects. Moreover, fiscal positions had weakened before the Covid-19 crisis, given higher spending levels combined with lower revenues, particularly in the case of commodity exporters, due to a decline in prices, prompting many countries to implement adjustment programs.¹ Covid-19 has only exacerbated this dilemma. This first

¹ Please refer to Powell (2016) and previous editions of the Latin American and Caribbean Macroeconomic Report for a discussion of how countries responded to the global financial crisis with permanent rather than temporary increases in spending and Powell (2015) for a discussion of commodity price risks.

Figure 1.1 Growth, Inequality, and Poverty

Source: IDB staff calculations based on a set of harmonized household surveys from Latin America and the Caribbean and World Development Indicators, World Bank (WDI) data.

Note: Figure shows unweighted estimates for countries in Latin America and the Caribbean circa years 2003, 2013, and 2017.

chapter concludes with evidence of how the current crisis is impacting different income groups and how poorer households are surely suffering disproportionate effects.

Inclusive Growth: The Past and the Future

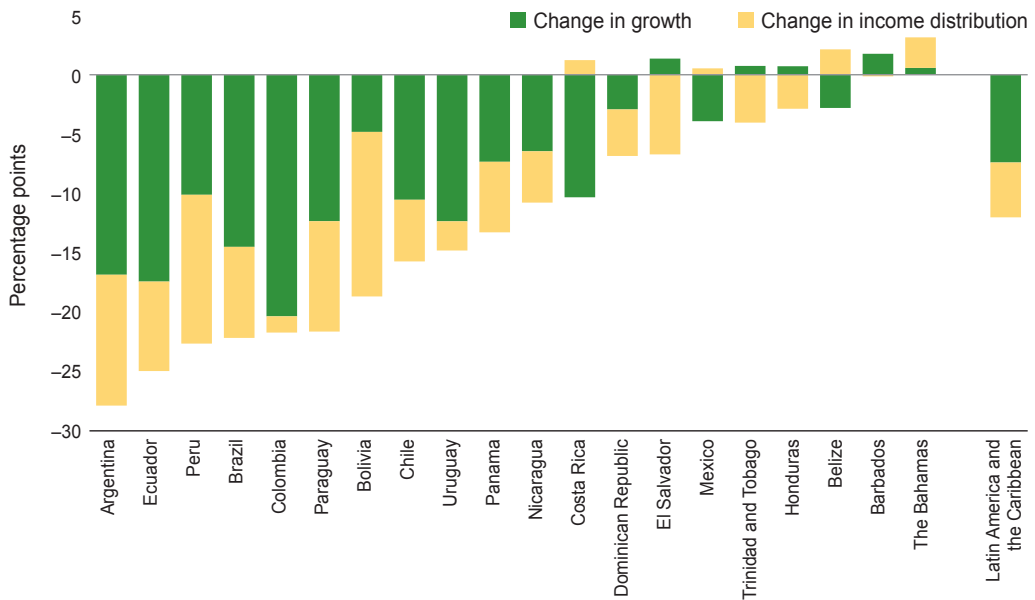
The current very worrying growth outlook comes after the decade-long commodity boom (2003–13) with increases in GDP per capita and reductions in inequality and poverty. Poverty headcount rates fell from almost 50% in 2003 to around 25% over the region and the Gini index (the most frequently used indicator of inequality) also fell, albeit from rather high levels (see Figure 1.1).² But from 2013 to 2017 this progress stalled.

The fall in poverty can be decomposed into two components: the fall due to higher growth and that due to a reduction in inequality.³ Higher growth is more important in most countries, and for the region as a whole it accounts for 60% of the decline in poverty (see Figure 1.2). Unfortunately, given the current outlook, poverty and inequality are surely back on the rise again as discussed further below.

Towards the end of 2019, protests broke out in several countries in Latin America and the Caribbean. The fact that poverty and inequality reduction had stalled may have been

² See López-Calva and Lustig (2010), Gasparini (2019), and Messina and Silva (2018). The definition of poverty employed here is moderate (less than US\$5 per day using 2011 PPP exchange rates) rather than extreme poverty.

³ The decomposition follows Datt and Ravallion (1992).

Figure 1.2 Explaining the Fall in Poverty (2003–13)

Source: IDB staff calculations.

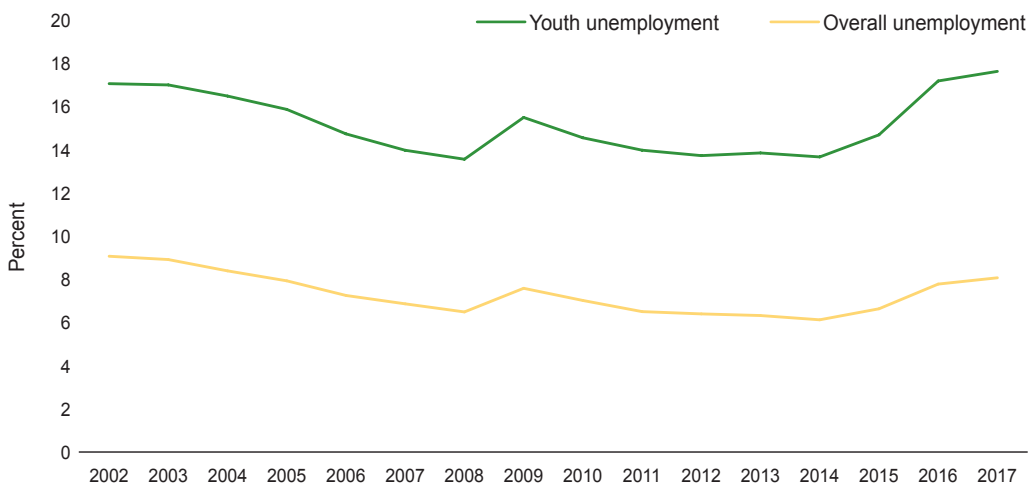
a factor behind this social discontent, but the relationship between protests and inequality is likely not a simple one. The social discontent was likely related to many dimensions. Moreover, demands may have been raised as the middle class had grown and the gap between aspirations and realistic expectations had widened.⁴ Unemployment also remained stubbornly high, particularly among the young, and ticked up as growth stalled (see Figure 1.3).

Moreover, there is recent evidence that the Covid-19 crisis will have a disproportionate impact on poorer households in Latin America and the Caribbean. A recent survey collected near-real-time data from 17 countries in Latin America and the Caribbean during April 2020. The survey attracted more than 200,000 respondents from different socioeconomic strata.⁵ Just five weeks after the first cases were registered more than 40% of respondents reported a job loss, and 30% of small businesses reported closures during the previous week. But most telling is how these statistics depend on the income category of the respondents. More than 70% of respondents who earned less than the minimum wage in their country indicated that either they or a household member had lost their job during April 2020,⁶ while this figure falls

⁴ The relation between subjective life satisfaction and objective indicators of well-being is not always a simple one and aspirations reflect future desires while those indicators may reflect general or average past trends (see Lora, 2008 for an extensive discussion).

⁵ See Bottan, Hoffmann, and Vera-Cossio (2020).

⁶ The survey randomizes the reference period of job losses and business closures across three options: past week, past two weeks, and the past month.

Figure 1.3 Unemployment in the Region

Source: IDB staff calculations based on World Development Indicators, World Bank (WDI) data and International Labor Organization definitions.

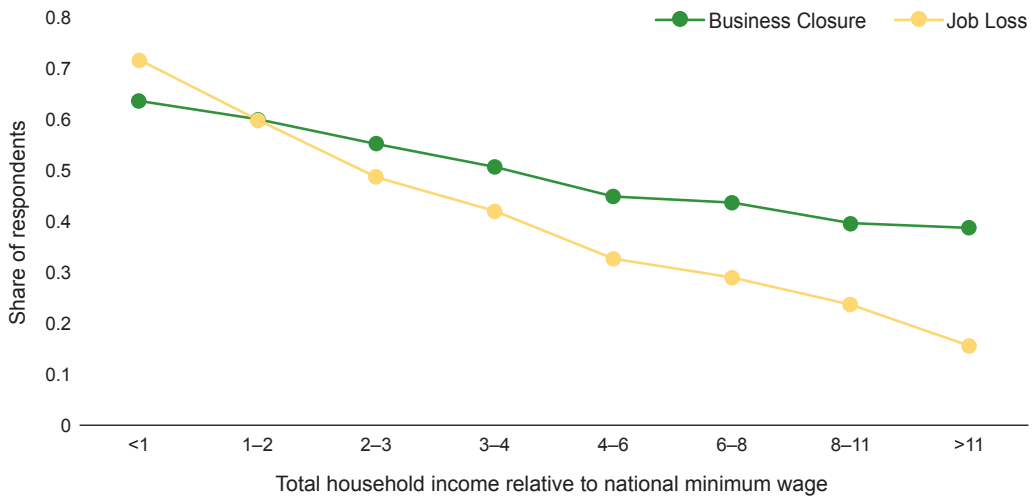
Note: Figure shows GDP weighted estimates for countries in Latin America and the Caribbean. Youth is defined as 15–24 years old.

to less than 20% for those who earned more than 11 times the minimum wage. In addition, more than 60% of small business owners who reported earning less than the minimum wage reported that their business had closed, while this figure was around 40% for those who reported earning more than 11 times the minimum wage (see Figure 1.4 for further details).

The main driver of the fall in inequality over the previous 20 years was a narrowing wage gap, with public policies and other factors playing a significant but lesser role. The evidence in Bottan, Hoffmann, and Vera-Cossio (2020) is worrisome as it indicates that this channel will likely push inequality higher going forward, undoing the gains reviewed above. Much depends on the duration of the crisis, the speed of the recovery, and how quickly job losses can be reverted. This, in turn, depends critically on the health emergency and how quickly countries can reduce cases.

Central banks and financial supervisory authorities have been very active during the Covid-19 crisis, as reviewed in Nuguer and Powell (2020). Chapter 2 focusses on how monetary policy and selected financial policies can address inequality. New results are presented on how countercyclical monetary policy and low inflation protect the poor and how financial education may promote financial inclusion. Direct interventions in credit markets are quite common in the region and mixed results are presented regarding directed credit policies in Bolivia.

Chapter 3 considers how fiscal frameworks impact inequality in the region. In advanced economies, tax and transfer policies have an enormous effect, as shown by a comparison of *ex-ante* or market indicators of inequality with measures that take into account taxes

Figure 1.4 Job Losses and Business Closures by Income Category

Source: Bottan, Hoffmann, and Vera-Cossio (2020).

Note: Observations have been reweighted to improve representativeness at the country level and corrected by country size and response rates.

and transfers. In Latin America and the Caribbean, fiscal frameworks are much less effective in this respect. Chapter 3 includes policy suggestions to rectify this situation and promote development more broadly. It is often argued that there is an inevitable tradeoff between efficiency and equity, but given the nature of tax and benefit systems today, there are some reforms that may hit the sweet spot of higher growth and reducing inequality.

There are many dimensions to inequality. One aspect that has not attracted a lot of analysis is the regional or spatial dimension. Chapter 4 analyzes regional inequality and finds that it is an important element of overall inequality, especially when controlling for the urban-rural divide. This suggests that fiscal transfers from richer to poorer regions may play an important role in the policy mix. Fiscal equalization transfers may therefore be a useful tool, as discussed in Chapter 3.

The Covid-19 crisis has focused attention on the importance of trust. High levels of trust are associated with individuals taking necessary precautions to avoid spreading the disease. This leads to lower infection rates and allows for much less restrictive policies, which in turn reduce negative economic impacts. Unfortunately, measures of trust in the region are low and have been declining. Chapter 5 considers the importance of trust between individuals, firms, and government and provides evidence that a lack of trust has significant costs for outcomes. The chapter also includes recommendations for policies that might help restore trust.

The Covid-19 crisis is having a disproportionate impact on the poor, who also find themselves more vulnerable to the impacts of climate change. Chapter 6 analyzes two

particular aspects of climate change—rising temperatures and the increased power and prevalence of storms and how they may increase inequality. The chapter’s analysis suggests that policies to mitigate and adapt to climate change are pro-poor. As the Covid-19 crisis evolves, it will become increasingly important to find policies to protect the poor from the risks of climate change.

Finally, Chapter 7 provides a set of conclusions and brings together the main recommendations of this report.

CHAPTER 2

Fighting Inequality with Monetary and Financial Policies

Countries are pursuing a set of monetary and financial policies to fight the consequences of the Covid-19 crisis in Latin America and the Caribbean. As reviewed in Nuguer and Powell (2020), these policies can have a significant impact but may raise risks. On the monetary side, lower policy interest rates and large liquidity injections may provide relief but may also sow the seeds for higher inflation down the road. Depending on local legislative frameworks, some central banks may take on credit exposures to the private sector, whether to banks, within private or public markets or elsewhere. Financial sectors may also come under strain as banks strive to keep credit lines open. If firms and families do not regain income sources rapidly, nonperforming loans may soar. While these policies are required to preserve the productive core of economies to enable a faster recovery, such risks will require careful monitoring going forward.

As argued in Chapter 1, the Covid-19 pandemic overall has exacerbated income inequalities. Higher-paid workers have been more likely to retain their sources of income and work from home. The service and construction sectors have been particularly hard hit. They employ many lower-income workers who often do not have much job security, even if they have formal contracts. Many informal and poorer workers lost their source of income.

It is then imperative to consider how different policies may address inequality and mitigate the impacts of the pandemic. In this chapter, the focus is on monetary and financial policies, how they have contributed to reducing inequality in the past and how they can continue promoting inclusion and greater equity. An additional issue impacting many dimensions in the region has been that of migration. This chapter includes a special box that discusses how migration is affecting monetary policy in the region.

Long-term Effects of Inflation on Inequality

In the three decades preceding the Covid-19 crisis, both inflation and inequality had declined. Lower inflation has been associated with a reduction in poverty and with an increase in the percentage of the population with higher income, especially a growing middle class (see Figure 2.1, Panel A). Thus, the Gini index improved, and unemployment declined in

tandem with inflation. In addition, the ratio between the richest 10th percentile and the poorest 90th percentile decreased with lower inflation.

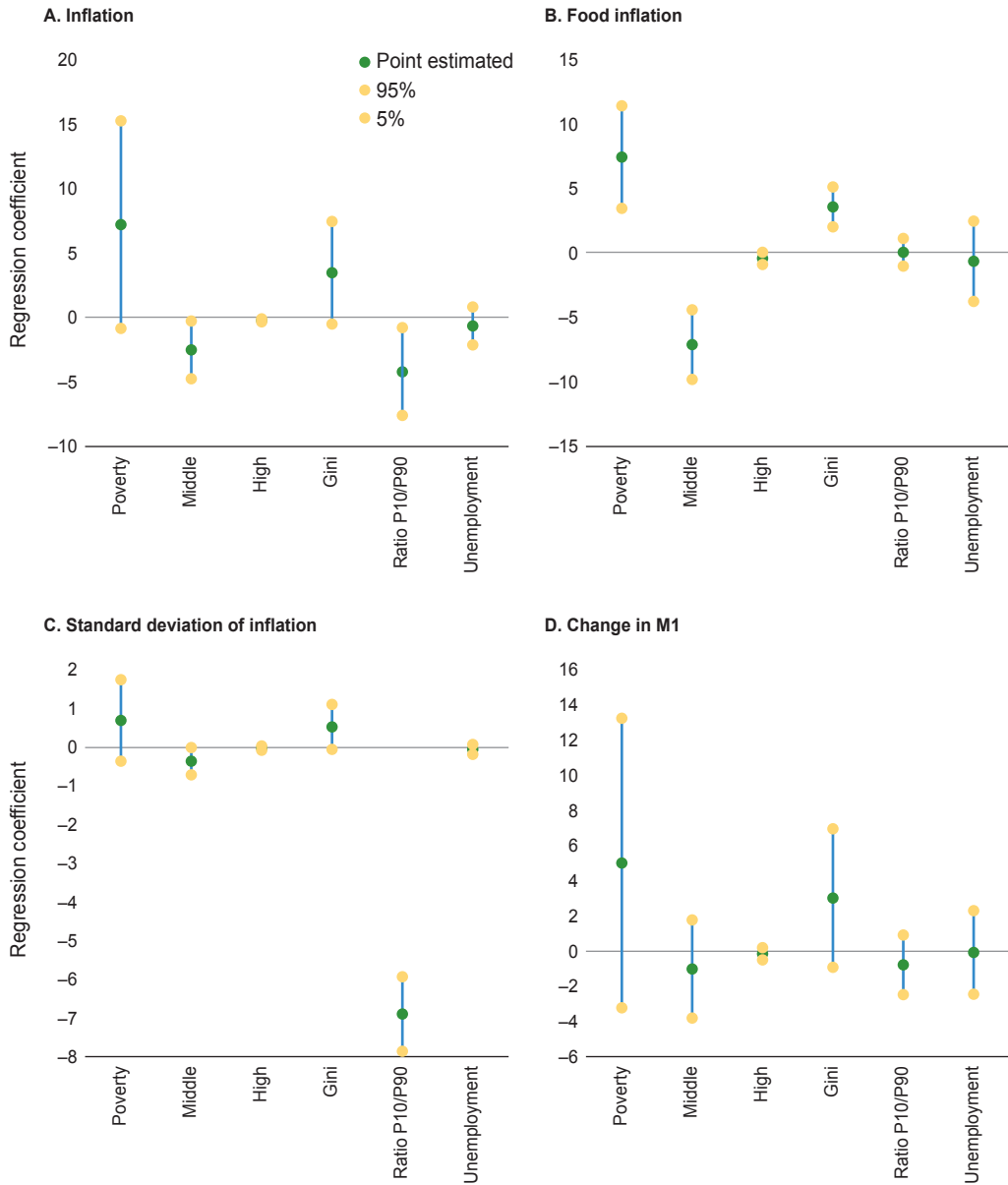
Various indicators confirm that declining inflation rates have helped reduce income inequality in the region, mainly because inflation hurts poor households more than wealthy ones. A 1% increase in inflation is associated with an increase of almost 7% in the fraction of low-income households, compared to a reduction of less than 1% in the fraction of high-income households. The positive link between inflation and the Gini coefficient reflects that discrepancy. Inflation places a disproportionate burden on poor households because they are largely hand-to-mouth consumers who lack access to financial assets to smooth consumption; wealthier households enjoy greater financial flexibility to deal with inflation. Additionally, real wages, which are the main source of income of the poor, vary more with inflation than financial income. Since lower inflation is also correlated with declining unemployment, GDP may also be growing and hence promoting growth with inclusiveness.

Figure 2.1, Panel B shows that these correlations between inflation and inequality are even more pronounced when the focus is on food inflation. A 1% increase in food inflation is reflected in an approximate 8% increase in the fraction of poor-income households. Less inflation volatility over the past decade also helped improve inequality measures (see Figure 2.1, Panel C). A 1 percentage point decline in such volatility reduces the fraction of poor-income households by nearly 1% and increases the fraction of high-income households by only 0.25%.

Another way of looking at the effect of inflation on different income measures is through the changes in M1, the stock of money in circulation. The results shown in Figure 2.1, Panel D are similar to the ones presented for inflation (Figures 2.1, Panels A and B). This set of regressions follows Ghossoub and Reed (2017), including country and year fixed effects.

Kehoe, Nicolini, and Sargent (2019) argue that the correlations between M1 and inflation in the region reflect the inability of governments to balance their budgets. In the past, governments raised expenditures without necessarily increasing revenues, leading to high and persistent deficits. At first, these deficits were financed through external and local debt issuance, but eventually further indebtedness became infeasible.

Given how hard it is to cut spending, governments tended to rely more on monetary financing. The typical response was to increase the monetary base, which explains the subsequent expansion of M1 and, consequently, higher inflation. The inflation-stabilization plans discussed in Box 2.1 show how governments fought this pervasive mechanism in the early 1990s. This is one of the risks that might emerge from the Covid-19 crisis, given the liquidity injections from central banks and the dangers of a post-crisis monetary overhang. Higher inflation may also become more attractive for countries with higher levels of debt in local currency. For countries with higher levels of debt in foreign currency, however, it may only prompt currency depreciation and a canceling effect from negative balance sheet effects.

Figure 2.1 Long-Run Effects of Inflation on Indicators of Inclusive Growth

Source: IDB staff calculations based on Haver Analytics dataset.

Notes: Effects were computed following the Ghossoub and Reed (2017) methodology. The regressions included the following countries: Argentina, Bahamas, Barbados, Belize, Bolivia, Brazil, Chile, Colombia, Costa Rica, Dominican Republic, Ecuador, El Salvador, Guatemala, Guyana, Haiti, Honduras, Jamaica, Mexico, Nicaragua, Panama, Paraguay, Peru, Suriname, Trinidad and Tobago, Uruguay, and Venezuela for the period 1990–2019. Alternative measures of inclusive growth are regressed on A (inflation), B (Food inflation), C (inflation volatility) and D (the change in M1). The dependent variables shown in these figures are lagged; the results are similar to include them contemporaneously. Poverty corresponds to the US\$1.9-per-day poverty line threshold, converted to a common currency by using the 2011 purchasing power parity (PPP) exchange rates. Middle corresponds to the fraction of middle-income households, defined as the percentage of the population with income between US\$12.4 and US\$62. High corresponds to the fraction of households with income above US\$62. Ratio P10/P90 is the ratio between the 10th and 90th income percentiles. Other controls included are the GDP growth rate, country and time fixed effects. Including nominal exchange rate as a robustness check did not affect the main results.

The literature also emphasizes the differences between the consumption baskets of poor and rich households. Consequently, inflation measures based on the aggregate price index differ from the changes in the prices of each basket. For example, Cravino, Lan, and Levchenko (2018) document that in the United States, the prices of goods consumed by high-income households are stickier and less volatile than those of goods consumed by middle-income households, while Kaplan and Schulhofer-Wohl (2017) focus on the cross-sectional dispersion in household inflation rates. This heterogeneity makes low-income households more directly affected by inflationary shocks. Another factor contributing to the regressivity of inflation is the relative inability of the poor, when compared to the rich, to substitute goods when prices rise (Jaravel, 2019, and Argente and Lee, forthcoming, demonstrate this pattern in the United States).

The difference between the basket of goods that poor and rich households consume also explains variations in the impact of a large exchange rate devaluation. The consumption basket of poorer households is heavier in tradable goods that have lower prices within their respective product categories. Sadly, these goods have a higher pass-through following a devaluation, meaning their relative prices increase when the exchange rate depreciates. Following the 1994 Mexican Peso devaluation, Cravino and Levchenko (2017) show that the cumulative inflation rate of the basket of goods of the poor was 20 percentage points higher than the one for the rich in the two years following the shock.

Short/Medium-term Effects of Monetary Policy on Growth and Inequality

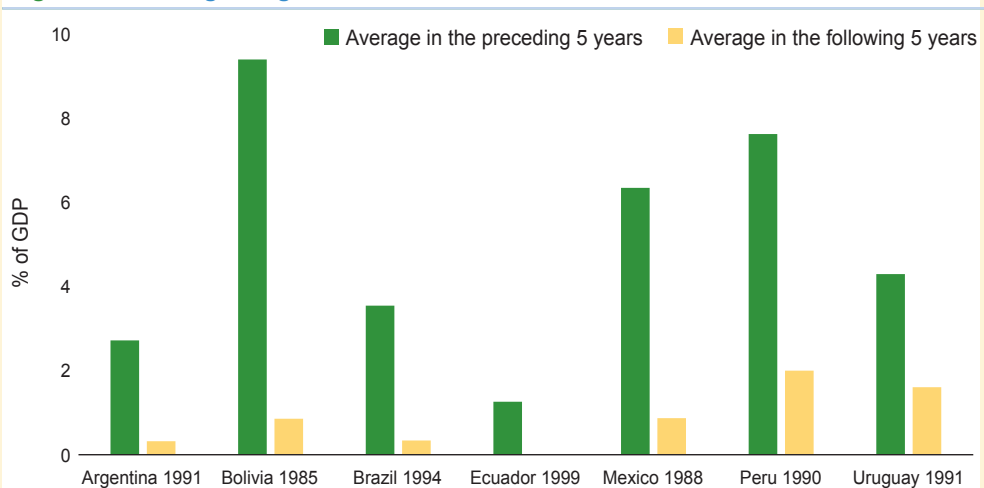
While in the long run, maintaining low and stable inflation is a necessary condition for promoting inclusive growth, in the short/medium run, monetary policy can have direct and indirect effects on social indicators. On the one hand, lower interest rates redistribute wealth from savers to borrowers, thereby altering the wealth distribution. On the other hand, interest rates and asset prices are inversely related, so that monetary policy tends to have the opposite effect on households with significant savings compared to households that are net borrowers. More indirectly, monetary policy induces demand changes that affect key relative prices while it helps stabilize the economy. Expansionary monetary policy boosts aggregate demand which in turn pushes wages and other prices up. This exercise is conceived in normal times and is likely less relevant during the current crisis. A policy to boost demand may go against the nonpharmaceutical measures taken by governments to try to control the spread of Covid-19. Thus, the lower interest rates in the current situation are to provide liquidity to the different agents and not to improve aggregate demand. Once nonpharmaceutical measures are phased out, the time to boost demand will come. In some countries the transmission mechanism of interest rates to demand is relatively weak or policy rates may be close to the zero-lower bound. In such cases, countries may also wish to adopt more direct monetary policy measures,

BOX 2.1**Inflation-Stabilization Plans in Latin America and the Caribbean**

In the end of the 1980s and early 1990s, many countries with high inflation in Latin America and the Caribbean implemented successful inflation-stabilization plans. Each country's experience suggests two necessary conditions to end high inflation. The first requisite is to reduce monetary financing of government deficits. Many economists now agree on this point, given the strong link between deficits and inflation (e.g., Bernanke, 2005 and Esquivel, Kehoe, and Nicolini, 2019). If governments run fiscal deficits and face constraints on debt financing, they may rely on printing money to generate seigniorage revenues. The higher growth rate of the monetary base fuels inflation rates.

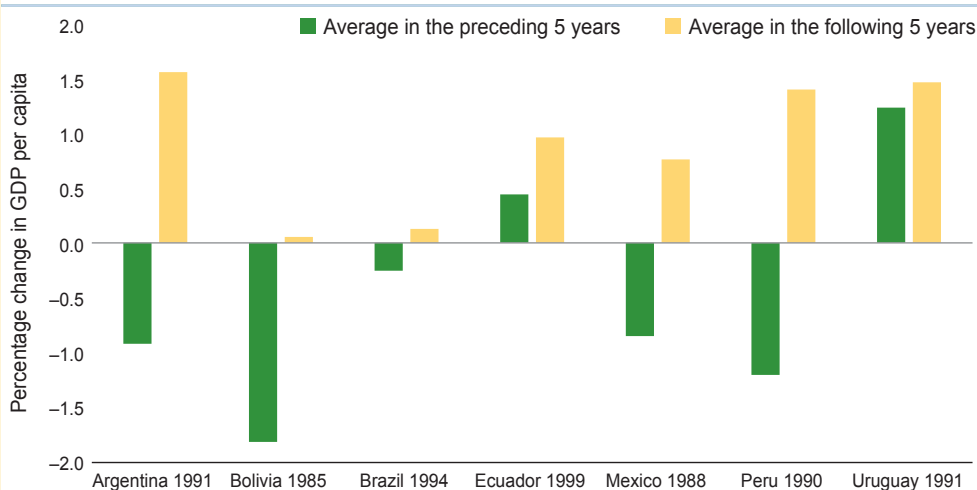
High-inflation regimes came to an end thanks to the reduction in monetary financing which, in turn, was possible only because of the fiscal policies that trimmed deficits. The second necessary condition is, then, a fiscal adjustment, which allows the government to operate in a regime of lower seigniorage revenues. Figure 2.1.1 shows the significant reduction in seigniorage revenues that resulted from stabilization plans in a set of countries in the region in the late 1980s and early 1990s. The fiscal adjustments focused mostly on raising tax revenues, but they also relied on cutting government expenditures and privatizations. In addition, they allowed for successful debt renegotiations, which in turn opened up extra fiscal space in government budgets.

Fiscal austerity measures usually generate concern among policymakers because they are believed to lower the growth rates of real GDP per capita. Interestingly, for the high-inflation episodes shown, growth rates were higher after the austerity measures were implemented (see Figure 2.1.2). An explanation for this post-austerity growth is two-fold: government debt was shrinking the space for private firms to finance themselves and, the possible ad-hoc measures that the government could implement to obtain extra resources (such as confiscation of private savings) added more uncertainty to the economy. A government fiscal adjustment solved both issues.

Figure 2.1.1 Seigniorage Revenues Decreased after Stabilization Plans

Source: IDB staff calculations based on data from Kehoe, Nicolini, and Sargent (2019).

(continued on next page)

BOX 2.1 (continued)**Figure 2.1.2 Annual Income after Stabilization Plans**

Source: IDB staff calculations based on data from Kehoe, Nicolini, and Sargent (2019).

Complementary measures included adopting monetary and fiscal policy rules as well as granting the monetary authority greater independence to avoid the temptation for future governments to use monetary financing. These measures were accompanied by banking reform.

Besides cutting seigniorage revenues to the government, the reduction in monetary financing also led to lower revenues in the banking system overall. That is due to the money multiplier that generates seigniorage-like revenues in the banking system, usually referred to as the *float*. In Brazil, for example, the decline in inflation was followed by a banking crisis and the government had to adopt policies to restructure both private and public banks through mergers and acquisitions (Ayres et al., 2019).

Finally, the adoption of new exchange rate regimes, also common across stabilization plans, does not seem to be a sufficient condition for their success. The Cruzado Plan in Brazil and the Austral Plan in Argentina are examples of plans that relied on fixed exchange rate regimes but did not solve the fiscal and inflation problems. Control over the exchange rate might not be a necessary condition either. The stabilization plans in the region included a wide range of exchange rate regimes (e.g., crawling pegs, currency boards, and dollarization) without signs of any impact on their efficacy, and in many cases the countries adopted floating exchange rate regimes in subsequent years without returning to a high-inflation regime. However, all successful stabilization plans in the region included some changes to the exchange rate regime.

such as changes in reserve or liquidity requirements or market intervention measures, including asset purchases.

For instance, in normal times, if lower interest rates increase the real wages of high-income households relatively more than low-income households, then monetary policy may widen income inequality. Overall, the net effect of these offsetting forces is

ambiguous and, thus, can only be determined empirically. Using statistical analysis¹ for the case of Brazil in the period 2000Q1–2018Q3, an unexpected reduction of 1% in the policy interest rate boosts GDP and real wage growth while reducing the unemployment rate (see Figures 2.2, Panels A, B, C, and D, respectively). The monetary policy rate has been on a long-term decline in the region, partly in response to the secular decrease in inflation. When output is below potential and inflation is low, using the policy interest rate as a stabilization tool can give a boost to inclusive growth.

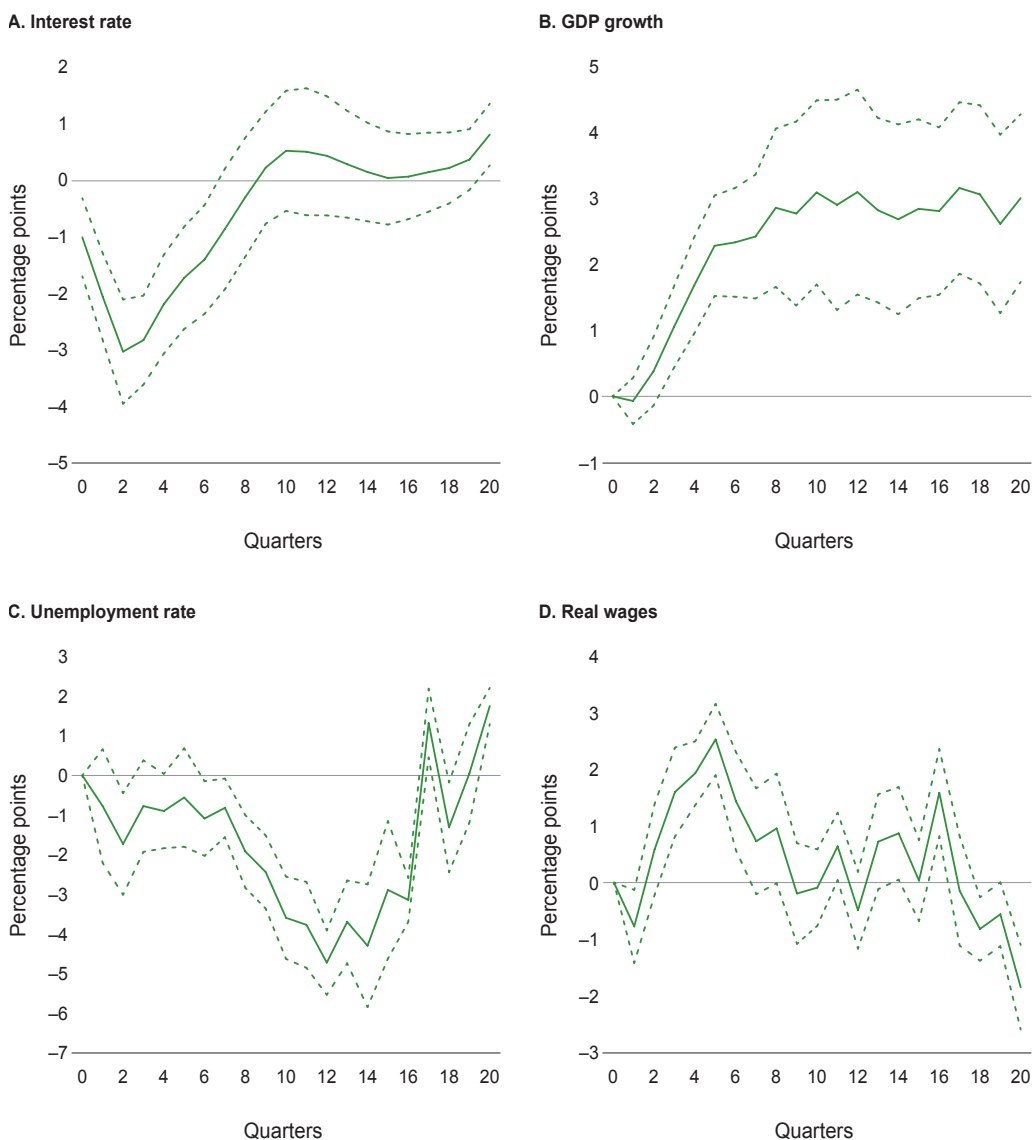
A time series for monetary policy shocks is identified using a theoretical model estimated for Brazil.² Expansionary monetary shocks raise output growth with a peak of 2 percentage points after 2 to 3 years in Brazil (Figure 2.2, Panel B). These results are broadly consistent with a large empirical literature studying the effects of monetary policy innovations on macro variables. Similarly, expansionary monetary policy helps reduce the unemployment rate in Brazil (given growth was well below potential), and increase the growth rate of real wages (Figure 2.2, Panels C and D). These results are consistent with those obtained by Coibion et al. (2012) for the United States. Even though there are no quarterly data to measure income inequality, it may decline with a monetary expansion, which would also be consistent with the results in Cravino, Lan, and Levchenko (2018). Lower unemployment and greater real wage growth should lift the income of poorer households. One caveat is that the informal sector is very large in the region. The literature shows that informality works as a buffer against negative shocks, acting in a countercyclical fashion, especially when it comes to the unemployment rate (Finkelstein Shapiro, 2018, and Powell, 2016). Additionally, inequality and informality will increase once the current Covid-19 crisis passes.

This analysis begs the question, what is the optimal inflation rate? Unfortunately, the answer is anything but straightforward. The literature emphasizes the trade-off between the incidence of zero lower bound episodes and the welfare cost of inflation.³ Schmitt-Grohé and Uribe (2010) argue that leading monetary models indicate that optimal inflation rates are very low and likely negative. In contrast, Andrade et al. (2018) conclude that optimal inflation targets are around 2% for the United States and 1.5% in the Euro area, as this then decreases the chances of hitting the zero lower bound. Their arguments favor higher optimal inflation rates for Latin America and the Caribbean, as shocks may be larger and more frequent and, therefore, demand a larger buffer to avoid zero lower bound episodes.

¹ The analysis employs local projection methods that estimate impulse-responses without specifying the underlying multivariate dynamic system (Jordà, 2005).

² The framework is similar to the dynamic stochastic general equilibrium model from Fernández, González, and Rodríguez (2018).

³ The phrase “zero lower bound” suggests that policy interest rates in general cannot be less than zero or that conventional monetary policy becomes ineffective at that point.

Figure 2.2 Impulse-Responses to a 1% Expansionary Monetary Policy Shock in Brazil

Source: IDB staff calculations.

Note: All figures are in percentage points at annual frequency. Monetary policy shocks are identified using a dynamic stochastic general equilibrium model estimated for the period 2000Q1:2018Q3 for Brazil. For each variable, impulse responses are obtained using local projections (see Jordà, 2005). The dashed lines represent the one standard confidence interval.

In the last few years, the emigration of Venezuelans to other countries in the region has been so significant that it has led the central banks of destination countries to alter pertinent economic data and estimates that feed into their monetary policy decisions (see Box 2.2). For example, the Central Bank of Chile in May 2019 increased its estimate

BOX 2.2**Migration and Monetary Policy^a**

It is estimated that more than 4.7 million people have left Venezuela as migrants, refugees, and asylum-seekers (numbers reported by destination countries). Colombia has received an estimated 1.6 million and several other countries have also received significant numbers of migrants (see Table 2.2.1). Migration of this magnitude may put pressure on health and education services in recipient countries and the sudden surge in the workforce may also impact local labor markets. This box focuses on the consequences for monetary policy, while Box 3.2 focuses on the consequences for fiscal policy.

Impacts vary across countries. Differences relate to the number of migrants, the skills they bring, and their resources. The characteristics of the destination country, such as the labor market structure, level of education of the local population, and growth prospects, also matter. Some central banks in the region have reacted to these developments due to expected effects on labor markets, consumption levels, and prices, and in the medium to long run, on potential output. At least three of the countries that have received the most migrants have taken concrete action in response to the shock.

In particular, the Central Bank of Chile (2019), revised its estimate of potential output, and hence, lowered its interest rate to achieve its inflation target in the medium run. Likewise, the Central Reserve Bank of Peru (2019) concluded that Venezuelan workers have contributed to reducing wage costs and prices in the service sector. Their spending on consumption goods added 0.33 percentage points to Peruvian GDP growth in the same year. In the case of Colombia, World Bank (2018) highlighted that the shock depressed the wages of less-qualified local workers, and reduced the employment rate. Nonetheless, it projects positive effects on medium- and long-term GDP.

Given the similarities in traditions, religion, and language, Venezuelan migrants are likely to adapt more easily to the labor market conditions in host countries of the region, compared to migrants during other episodes (e.g. migrants from the former Soviet Republics to Israel after the fall of the Berlin wall, or those displaced due to the Syrian conflict). In the medium term, the Venezuelan migration is likely to improve the economic performance of recipient countries.

Table 2.1.1 Venezuelan Refugees and Migrants

	Refugees and migrants	Percentage of total population
Argentina	145,000	0.32
Colombia	1,630,903	3.24
Chile	371,163	1.94
Ecuador	385,042	2.23
Peru	863,613	2.66
Total	4,769,498	

Source: Data come from the Interagency Group for Mixed Migration Flows – Regional Inter-Agency Coordination Platform for Refugees and Migrants from Venezuela, co-led by IOM and UNHCR, and IMF (2019).

Note: Total refugees and migrants correspond to the sum of total Venezuelan refugees, migrants, and asylum seekers reported by all host governments.

^a This box is based on a workshop that the Financial Stability and Development Network of the IDB organized in Washington, DC in October 2019 that brought together specialists on migration and senior officers of regional central banks.

of potential output, which impacted the decision to reduce the policy interest rate in the short run due to the resulting larger negative output gap.

Extending Finance for Inclusive Growth

The ongoing coronavirus crisis will likely put stress on some financial systems in the region. Banks reflect the underlying real economy and the large falls in GDP and asset prices may well provoke higher non-performing loans and reductions in the value of collateral. There has also been a rise in the demand for liquidity, and firms have turned to credit lines. Central banks and financial supervisors will wish to monitor the banking system and other financial institutions very carefully during this period.

The financial system can also be a vehicle for public policies that aim to assist firms and households. Many countries have announced programs that involve private banks as agents to extend credit backed by public guarantees and to act as a mechanism to deliver transfers to recipients. Such programs may be restricted given the low indices of financial inclusion in the region. However, extending them as part of the policy response to Covid-19 may also be an opportunity to boost the number of individuals that have some type of bank account and the number of firms that open an account and gain access to credit instruments.

As the crisis subsides, the financial system can also help in the recovery and to fight inequality. There are many ways in which access to finance can help improve the prospects of the poor. This is a very broad area which has been studied extensively. This section focuses on just two aspects, financial education for households and direct credit policies for firms. New work on financial education provides grounds for greater optimism that it will have positive impacts. Box 2.3 reviews the literature on financial education and provides evidence from a recent intervention with adolescents in Peru, pointing to long-lasting impacts on knowledge and behaviors with spillovers to adults. Financial education could start during the lockdowns and continue afterwards. Financial education can also help to improve saving rates in the region, which are very low.

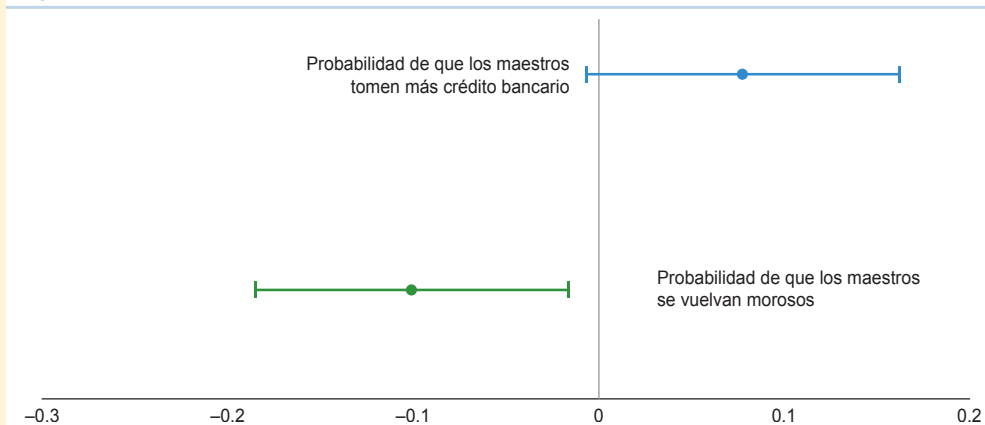
After the lockdowns are over, provision of credit to restart economic activity will be key. In the past, caps on interest rates and attempting to direct more credit to productive sectors have perhaps been the most popular interventions in the region to attempt to boost credit and reduce perceptions of a lack of competition. Interest-rate caps have been imposed in Chile, Ecuador, Nicaragua, and Paraguay at different points in time. However, this policy, as many others, might have unintended consequences, and the danger is that the supply of regulated credit is reduced, likely sending customers to informal and more expensive lenders. Brazil, Bolivia, and Ecuador have imposed lending quotas directing credit towards target sectors. The Bolivian experience is reviewed in Box 2.4. While these policies may reduce banks' mark-ups and unlock economic growth, they can be costly for

BOX 2.3**Financial Development and Financial Education**

Financial education can complement financial inclusion policies, bridging the gap between consumers and financial institutions. Recent evidence from rural Peru shows that lessons delivered by a for-profit financial institution increased familiarity and trust, particularly for the implementing institution.^a Previous analyses played down the impacts of financial education programs but more recent studies with larger samples and improved methodologies have found positive results.^b

Focusing on youth may provide yet stronger impacts. Younger people tend to be more enthusiastic to learn new skills to face more complex environments and to be more malleable than adults.

Figure 2.3.1 Effect of Financial Education on Financial Behavior



Source: IDB staff calculations based on estimates reported in Frisanchio (2019b).

Second, working with school-age youth reduces participation and attendance problems, which are pervasive issues among adults targeted through voluntary programs. School-based interventions can provide excellent take-up at low cost. A recent study considers evidence for youth programs around the world, uncovering large and robust impacts on financial skills under delivery models that incorporate a mandatory course requirement. Voluntary after-school programs yield meager effects.^c

A further study, a large-scale experiment in Peru, finds that financial education improves financial knowledge among high school students with long-lasting effects on behavior.^d Three years after the intervention, credit bureau data indicated that students who received financial education lessons displayed better payment performance on bills and loans. The program also had positive spillovers on the skills and behavior of teachers and parents. Teachers doubled the learning gains accrued by students and became more likely to save, particularly through formal channels. Two years after the intervention, teachers were more likely to borrow from banks and reduced their delinquency rates (Figure 2.3.1), while parents transitioned away from expensive sources of credit.

These knowledge and behavioral changes recorded among youth with spillovers to adults suggest that the cost-effectiveness estimates of school-based programs may be underestimated. The impacts on teachers' financial skills and behavior suggest that timing may also be important. Other work suggests that providing financial education at a teachable moment or when relevant

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BOX 2.3 *(continued)*

decisions are being taken may yield much higher returns.^e In conclusion, recent studies provide renewed optimism on the role of financial education and has opened the door to new research to find the best strategies for education to have significant impacts on the use of financial services.

^a Boyd and Diez-Amigo (2019).

^b The meta-analysis in Fernandes, Lynch, and Netemeyer (2014) suggested insignificant effects and veered academic and public opinion against financial education programs but Kaiser et al. (2019) finds large and significant effects—0.20 standard deviations on financial knowledge and 0.09 standard deviations on behavior.

^c Frisanco (2019a) finds an effect of 0.24 standard deviations on average.

^d See Frisanco (2019b) who finds an impact of 0.16 standard deviations.

^e See for example Kaiser and Menkhoff (2017).

banks and can trigger unintended consequences. For example, de Mello and Dutz (2012) suggest such policies may reduce the quality of financial services, as powerful groups can use them as a strategy to promote their own interests.

Evidence in Finkelstein Shapiro and Nuguer (2019) suggests a strong positive correlation between the low share of firms with access to credit across countries and the high costs of starting a business. Reducing the costs of starting a formal business leads to more hiring, a higher capital stock, higher wages, and increased income for business owners, making firms more resilient to external shocks and increasing aggregate productivity. Governments could also pursue this policy to stimulate the economy once lockdowns are lifted. The authors identify access to credit as the key explanation of their findings. The results imply that removing barriers that hinder financing for entrepreneurs and small business owners will generate inclusive growth through the same mechanism.

Conclusion

The region has made great strides in delivering low and stable inflation across a variety of monetary regimes. This remarkable achievement and the associated low policy interest rates helped boost inclusive growth and lower inequality before the pandemic. The previous context has given monetary policy some space in its fight against the economic fallout of Covid-19, as explained in Nuguer and Powell (2020).

In the medium run, changes in the policy rate as a stabilizing tool can have mixed effects on inequality indicators. However, the study of unemployment and wages in Brazil during normal times indicates that inequality declines when monetary policy is expansionary. When inflation is high, interest rates and unemployment both tend to be higher. Poorer households, who rely on wage income, tend to have more debt than savings and as inflation and interest rates rise, may be in danger of losing their jobs. Low inflation, then, benefits inclusive growth while high inflation and high interest rates appear to hurt

BOX 2.4**The Trade-offs of Directed Credit Policies**

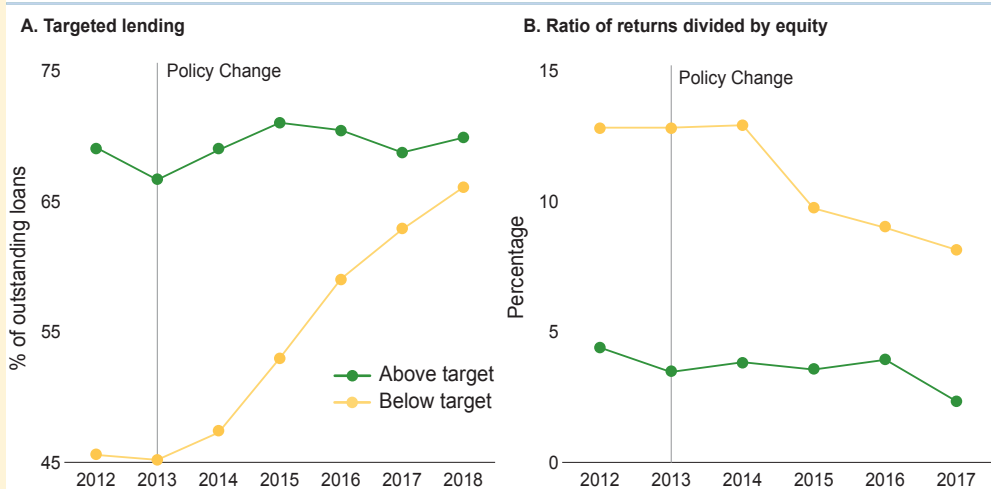
In December 2013 the Bolivian Government established lending quotas favoring loans to productive activities over consumption.^a With the new rules, the share of loans to the productive sector from banks that were previously below the target, increased substantially more relative to banks that were already compliant (see Figure 2.4.1, Panel A). Compliance was costly as the shift towards productive loans coincided with reductions in average annual interest rates and bank profitability. The return-over-equity ratio declined in the case of banks that were initially below the target, relative to those that were already compliers when the targets were set (see Figure 2.4.1, Panel B).

Directing credit to the productive sector can spur local growth. Overall lending increased more in Bolivian municipalities that were more exposed to the policy change^b—those with higher (above median) pre-policy presence of banks that were further away from meeting the lending targets. More credit stimulated local economic activity: The average income of working-age adults from more-exposed municipalities increased during the years following the policy change, relative to that of less-exposed municipalities (see Figure 2.4.2, Panel A). This increase could be explained by a direct effect due to business expansions and an indirect effect through expansions of local aggregate demand.

However, unintended consequences also affected other lenders in the financial system. Lending targets were not set for cooperatives and credit unions, and yet those operating in more-exposed municipalities experienced a decline in productive lending and market share, and an increase in risk, relative to cooperatives operating in less-exposed municipalities (see Figure 2.4.2, Panel B). Setting lending targets affected small financial institutions competing with larger banks that typically serve the most vulnerable segments of the population.

Directed credit programs can be a double-edged sword, and their discussion should consider unintended consequences for the whole financial system. They can unlock growth in the

Figure 2.4.1 Bank Compliance and Declines in Profitability after the Policy Change

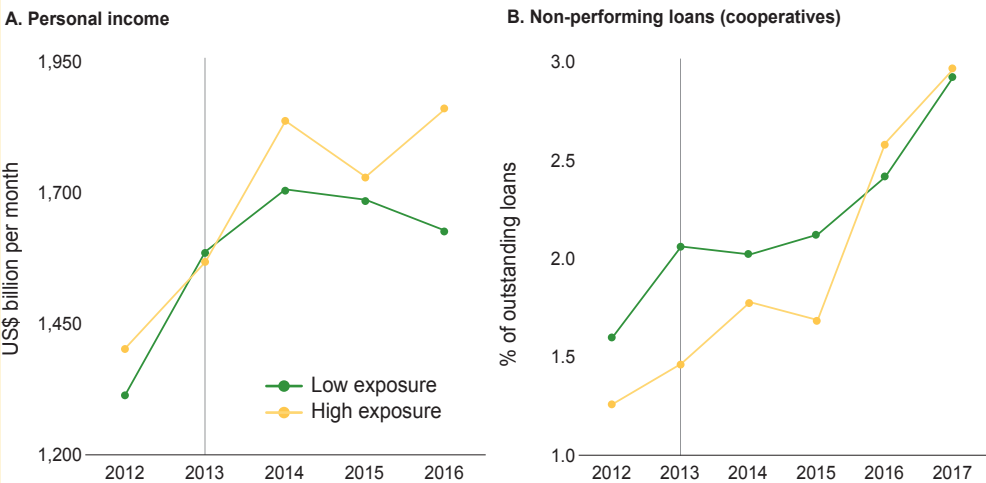


Source: IDB staff calculations based on data from Autoridad de Supervisión del Sistema Financiero, Bolivia.

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BOX 2.4 (continued)

Figure 2.4.2 Increases in Workers' Income and Nonperforming Loans of Cooperatives



Source: IDB staff calculations based on data from Instituto Nacional de Estadística and Autoridad de Supervisión del Sistema Financiero, Bolivia.

short run, but there is no free lunch: as returns decline it is unclear whether banks can sustainably comply with the targets. Moreover, while bank mark-ups can decline, the market shares of larger banks may increase.

^a The New Law of Financial Services in Bolivia enacted in 2013 introduced minimum lending targets to banks, SME banks, and financial institutions providing mortgage loans.
^b Roa, Villegas, and Garrón (2019) find that Bolivian banks faced physical constraints in complying with the policy requirements: they lent more in municipalities where they had more branches operating before the policy was announced.

the poor. Central banks have already reduced policy rates in response to the Covid-19 crisis, which may mitigate some impacts of the crisis on poorer households. The results indicate that countries should avoid greater inflation as it may further increase inequality.

Monetary policy tends to be more effective when central banks are more credible. Credibility allows central banks to hit their respective targets at lower cost. Highly credible central banks are in a better position to maintain lower interest rates for a particular level of inflation and can pursue more effective stabilization policies. Ensuring central banks are independent and that their institutional design allows for technical monetary policy decision-making free of political pressure tends to boost credibility. The twist suggested herein is that greater independence and credibility are beneficial, not only considering the traditional objectives of central banks, but also in promoting inclusive growth. Since low

and stable inflation benefits poorer families in particular and using anticyclical monetary policy as a stabilization tool also benefits poorer households the most, it is doubly important to ensure that central banks are given the instruments, powers, and independence to gain a high level of credibility.

When looking at the optimal inflation rate for Latin American and Caribbean countries, it is necessary to keep in mind that the region is still prone to external shocks. In this sense, countries that have implemented inflation targeting should continue to strengthen their regimes, enhancing credibility to be able to better defend their objectives in the face of unexpected developments. These shocks can be better managed with an independent central bank. Hence, the region needs to continue fostering the operational independence of monetary institutions.

Financial inclusion also remains quite limited and will likely suffer as a result of the current crisis. New technologies, including Fintech, have potential to boost inclusion and render financial systems more competitive. Authorities should balance ease of entry with financial stability in crafting regulations (see IDB/Finnovista 2018). Despite previous negative results, new evidence suggests financial education can help improve the use of financial services. Given high margins and weak competition, directed credit and interest rate caps could have positive impacts, but they may provoke unintended consequences. If used, such interventions should be calibrated carefully and subject to rigorous evaluations. These policies might help to reduce inequality once the Covid-19 crisis has passed.

CHAPTER 3

Fiscal Policies to Enhance Equitable Growth

The region has a set of steep fiscal challenges. As Covid-19 hit, many countries had been pursuing a fiscal adjustment in order to boost fiscal space and bring debt levels down. Relatively tight financing constraints and rising financing costs placed restrictions on the fiscal response to this new crisis (Nuguer and Powell, 2020). Still countries are responding with fiscal packages averaging almost 3% of GDP and debt levels are once again on the rise. As the crisis recedes, countries will wish to consider how to widen tax bases to boost revenues, and how to scale back temporary fiscal measures and improve efficiency. Moreover, as argued in Chapter 1, the crisis will leave the region with greater inequality. Tax and spending policies are perhaps the most important set of interventions that may address these concerns and yet the region's fiscal frameworks appear ineffective compared to other countries in this regard. This chapter focuses on how countries' fiscal frameworks can be better designed to stimulate development and improve equity in the region.

Fiscal Policy as a Development Tool

Despite the fall in poverty and income inequality over the past 15 years (see Chapter 1), Latin America and the Caribbean continues to be one of the most unequal regions in the world (Izquierdo, Pessino, and Vuletin, 2018; Lustig, 2018; Messina and Silva, 2018). Through its ability to determine taxes and the composition of spending, such as subsidies and social spending, fiscal policy can play an important role in achieving equity and reducing poverty. At the same time, the evidence suggests that the decline in poverty during the commodity boom can be attributed to economic growth rather than to fiscal policy per se.

Figure 3.1 illustrates the Gini coefficient before and after direct taxes and transfers for Latin American and Caribbean countries compared to continental European and other OECD countries. Countries in continental Europe have an average Gini of a little less than 0.5 while the average for Latin American and Caribbean countries is a little over 0.5 when the Gini coefficient is calculated using market income. But in Continental Europe, direct taxes and government transfers shift the Gini significantly such that the disposable

Income definitions used to calculate the Gini coefficient

- **Market (Pre-fiscal) income:** accounts for total factor income from market sources (e.g. wages, dividends, etc.) before taxes and transfers.
- **Disposable income:** equals market income plus direct government transfers (e.g. cash transfers) less direct taxes and social security contributions.
- **Consumable income:** represents disposable income plus indirect subsidies minus indirect taxes.
- **Final income:** includes consumable income plus the monetized value of in-kind transfers in education and health services at average government cost.

Source: Lustig, Pessino, and Scott (2014) and Lustig (2018).

income Gini coefficient is less than 0.3 —a change of about 42%. In sharp contrast, the market income Gini for countries in Latin America and the Caribbean is reduced by less than 5%. OECD countries that are not included in continental Europe, have a lower disposable income Gini and taxes and transfers also reduce that Gini significantly, by about 30%. The redistributive impact of fiscal policy through taxes and transfers is nine times less effective in the region than in the redistributive continental Europe, and six times less effective than in other OECD nations.

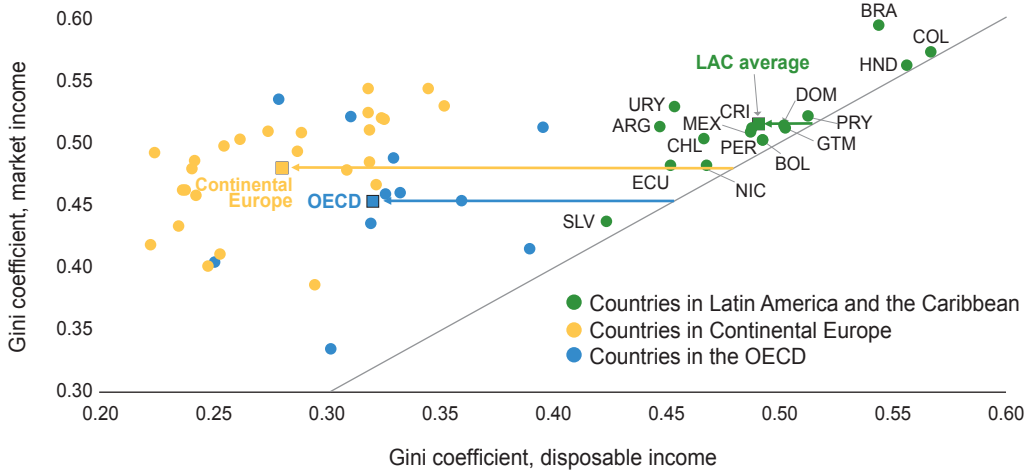
Tax revenues, particularly income tax revenues, remain relatively low in the region compared to GDP (Corbacho, Fretes Cibils, and Lora, 2013). Therefore, while different studies have found that income taxes can be highly progressive (e.g. Lustig, Pessino, and Scott, 2014), their redistributive impact is relatively small (OECD, 2016). Revenue from personal income tax (PIT) averages about 2% of GDP in Latin American and Caribbean countries, whereas in the OECD it accounts for approximately 9% of GDP. Moreover, average income tax pressure in the top tenth of the income distribution in Latin America is just 4.8%. In comparison, the top decile in the European Union pays more than four times as much in income tax (21.3%) (ECLAC, 2017). Clearly, more work must be done in the region to boost the role of direct taxes on income which would also help reduce inequality.

Value-added taxes (VAT) account for as much as 30% of total taxation on average in the region.¹ VAT is often found to be regressive, but when the measurement employs consumption rather than income—consumption is often considered a better proxy for permanent income—VAT is often found to be neutral or even progressive (Barreix, Roca, and Villela, 2006). Moreover, if a regressive tax is used to finance spending that is redistributive, then arguably both components should be taken into account.²

¹ There is considerable heterogeneity across countries.

² There are further surprising results when changes are contemplated in complex tax systems. For example, introducing a regressive tax can even make an existing system more equalizing. This is known as Lambert's conundrum. High levels of informality can also have impacts on the redistributive characteristics of tax and spending reforms (Lustig, Pessino, and Scott, 2014).

Figure 3.1 Income Inequality Differences before and after Direct Taxes and Government Transfers



Source: IDB staff calculations based on Pessino and Alaimo, 2018.

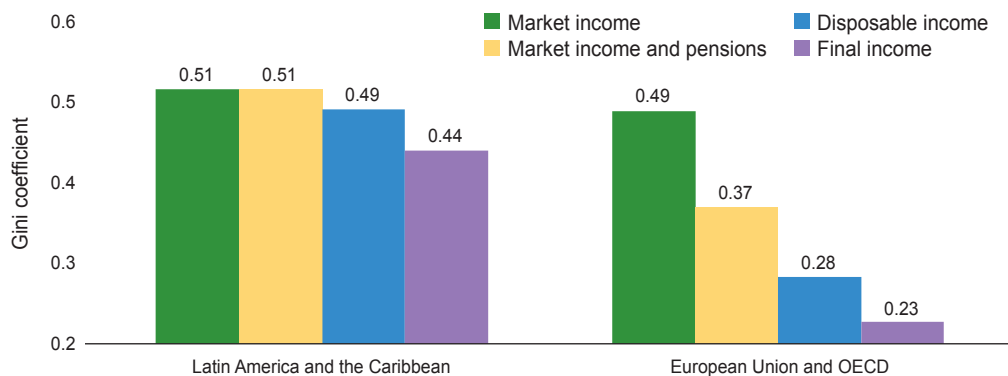
Note: OECD average excludes OECD members in Continental Europe. Data refers to circa 2012.

Still, public spending as a percentage of GDP also remains low in the region. Average social spending (including contributory pensions) in OECD countries is about 27% of GDP, compared to only 16% of GDP in Latin America and the Caribbean. The composition of social spending also matters for redistribution. Contributory pensions and direct transfers are significantly larger in OECD countries (8.8% and 4.4% of GDP, respectively) than in the region (3.3% and 1.6% of GDP). Expenditures in health and education are also higher in advanced countries (6.5% and 5.3% of GDP) than in Latin America (3.6% and 4.8% of GDP). However, when comparing countries with similar levels and composition of social spending in the two groups, countries in the region still perform worse in terms of their redistribution capacity (Pessino and Alaimo, 2018). This points to other explanatory factors such as the targeting or the efficiency of each dollar spent.³

Contributory pensions and subsidies represent about 75% of what is normally considered redistributive spending in the region, while noncontributory pensions and conditional cash transfers account for the remaining 25%. Unfortunately, contributory pensions tend to be pro-rich (they benefit the rich more than they benefit the poor), while noncontributory pensions and conditional cash transfers are pro-poor.

Another source of social spending comes from in-kind transfers in health and education, measured as the cost of providing households with access to public health and education services. In general, spending on pre-primary, primary, and secondary education is pro-poor

³ Tax expenditures are also high in the region and the evidence suggests that they are regressive in nature (Pecho Trigueros, 2014).

Figure 3.2 Differences in Income Inequality before and after Fiscal Interventions

Source: IDB staff calculations based on Pessino and Alaimo (2018).

in Latin American and Caribbean countries, while spending on tertiary education tends to be pro-rich since it primarily benefits middle- and high-income households. The results for health expenditure vary; in many countries it is pro-poor, but in others it is pro-rich. Figure 3.2 indicates that in-kind transfers have a significant effect on equity in the region, reducing the Gini coefficient for Latin American and Caribbean countries from 0.49 to 0.44. This decrease in income inequality is larger than the one achieved through direct taxes and transfers. In relative terms, however, it represents only a 10 percent reduction in Latin American and Caribbean countries, compared to a 20 percent decline in OECD countries.

However, progressivity might be the result of rich and middle-class individuals opting for private services, leaving the lower-quality educational and health public services to the poor. In fact, the observed progressivity is mainly due to “access” to health and education spending, but those gains are seriously undermined by inefficiencies in spending and the low quality of the services provided. Accounting for the relation between quality and income levels tells a different story, as the distribution of quality is mostly regressive. For example, while health access and outcomes are broadly similar across income groups in advanced countries, large disparities persist in the region. Indeed, outcomes such as the infant mortality rate are twice as high among the poor as the rich in the region and six times higher than in more advanced economies. Similar results hold for education, as there is more progressivity in access but the quality and outcomes of that access—measured for example by PISA results—continues to be fairly regressive.⁴

Another constraint is the low capacity for taxation and expenditures in subnational authorities: states, provinces, and municipalities. In low-income areas, the capacity to collect tax revenues tends to be poor and the lack of an equalizing component in central government transfers, compared to OECD countries, limits the capacity to decrease the

⁴ See Pessino and Alaimo, 2018.

unequal provision of public services, particularly in health and education. Even where regional transfers do exist, if spending capacity is limited, then there still may be severe constraints in redressing regional inequalities (see Box 3.1 and Chapter 4).

BOX 3.1

Improving Regional Fiscal Imbalances through Equalization Transfers

Regional inequality, discussed further in Chapter 4, has an important fiscal dimension. Subnational governments (SNGs) vary tremendously in their sources of revenue and their provision of public goods. Some SNGs enjoy natural resource royalties and relatively large tax bases; others are less fortunate. Ranking intermediate subnational governments by per capita tax collection, those in the top 10% collect eight times more per capita than those in the bottom 10% (Muñoz, Radics, and Bone, 2016). Ranking SNGs by revenues, the top quartile spend four times more per capita than the bottom quartile. Moreover, sparsely populated and more isolated regions that frequently have lower revenues also face higher costs to provide services.

The upshot is that poorer, more isolated regions have less access to public services and the quality of those services is lower.^a Disparities in service provision may provoke migration. Aside from the human and welfare costs, this can impact productivity, as more workers move to already successful areas where inputs may be more costly and leave underpopulated areas that may have inherent advantages to produce certain goods (Boadway, 2015). Large regional disparities can lead to political tensions and put social cohesion at risk (Spahn, 2007).

Given these considerations, the literature has defined a region's *fiscal gap* as the difference between *expenditure needs* (which reflect the cost of providing a standard bundle of public goods and services for the population) and *fiscal capacity*, or the potential revenue for the SNG. An *equalization transfer* is an instrument intended to reduce fiscal gaps. The objective is to enable each SNG to deliver a standard set of public goods and services, based on an average effort of own-revenue collection. Such transfers are not conditional on the actual revenue (or tax effort); they have clear funding sources and transparent allocation rules.

In OECD countries, around 50% of total transfers correspond to this type of instrument and the impacts on regional fiscal disparities are substantial (OECD, 2013). In Latin America and the Caribbean, significant subnational transfers tend to be very different in their design. A good example are tax-sharing systems, which frequently employ distributive criteria such as population size, regional GDP, and poverty. While these variables may indirectly approximate the components of the fiscal gap, their capacity to reduce subnational fiscal disparities is limited. Relative to the OECD, they reduce a little over a third of the initial per capita income disparities. And those initial disparities are roughly three times those in the OECD. Moreover, natural resources and other discretionary transfers in the region tend to increase rather than decrease subnational fiscal disparities. Thus, after-transfer-disparities remain substantial. In contrast, Muñoz, Pineda, and Radics (2017) estimate that equalization transfers could reduce subnational fiscal disparities by between one and two thirds in the region.

A system of equalization transfers needs careful design to avoid moral hazard concerns and would first have to overcome significant political hurdles to change current transfers. However, the adjustment would have at least three important advantages: (1) objective criteria to estimate transfers, (2) transparency and the development of subnational fiscal statistics; and (3) development of technical and institutional capacity.

^a See Martínez-Vázquez and Searle (2007).

An additional challenge strongly related to inclusion and inequality has been the extensive migration of people fleeing economic hardship and violence, particularly the migration from Venezuela to several countries in the region. To the extent that the skills of migrants can be harnessed, and they can be included in labor markets, there will be beneficial impacts on output, consumption and tax revenues. But ensuring migrants are included in the provision of public services such as health and education also implies fiscal costs. Box 3.2 discusses the case of Venezuelan migrants in Colombia and provides estimates of the impacts on wages, output and fiscal balances.

Conclusions

The region had been pursuing a significant fiscal adjustment when Covid-19 hit and disrupted these efforts. Given the fall in growth and revenues coupled with the rise in spending to mitigate this crisis, debt levels will grow significantly through 2020. The economic fallout is hitting poorer families the hardest, so demands for greater focus on reducing poverty and inequality will only grow stronger in the months ahead.

Fiscal tools offer tremendous opportunities to boost inclusive growth. Despite considerable heterogeneity in the region, several countries have very low tax revenues and spending levels. Assuming a satisfactory level of efficiency and the design of appropriate additional taxes and spending, increasing the tax base and boosting both revenues and spending can lead to greater redistribution without sacrificing private economic activity.

In those countries that already have a relatively high level of tax collection and spending, ample opportunities exist to improve efficiency and to target that spending more accurately to benefit the poor. Tax systems could also be made fairer and more progressive without affecting overall revenues. Value added taxes are good from the standpoint of revenue collection to finance pro-poor spending but may be regressive. Finding ways to rebate VAT paid by poorer households could make pro-poor spending financed by VAT pro-growth and pro-poor. Property taxes are relatively low in the region and should be highly progressive; thus, improving property valuations and relying more on these taxes than on regressive taxation or more distortionary taxation could also be advantageous.

Reforms to both taxation and spending need to be carefully evaluated and subtle issues are often at play. As detailed in Chapter 1, growth has been more important than redistribution as a driver of the decline in poverty. Many textbooks posit a tradeoff between growth and equity, although a body of theoretical work now suggests some reforms are likely to boost both. Increasing pure transfers may improve distribution but they may harm growth. Finding policies that boost growth, particularly by improving the incomes of poorer households, would be the sweet spot for fiscal policy reform. To the extent that such policies can be identified, the traditional tradeoff between growth

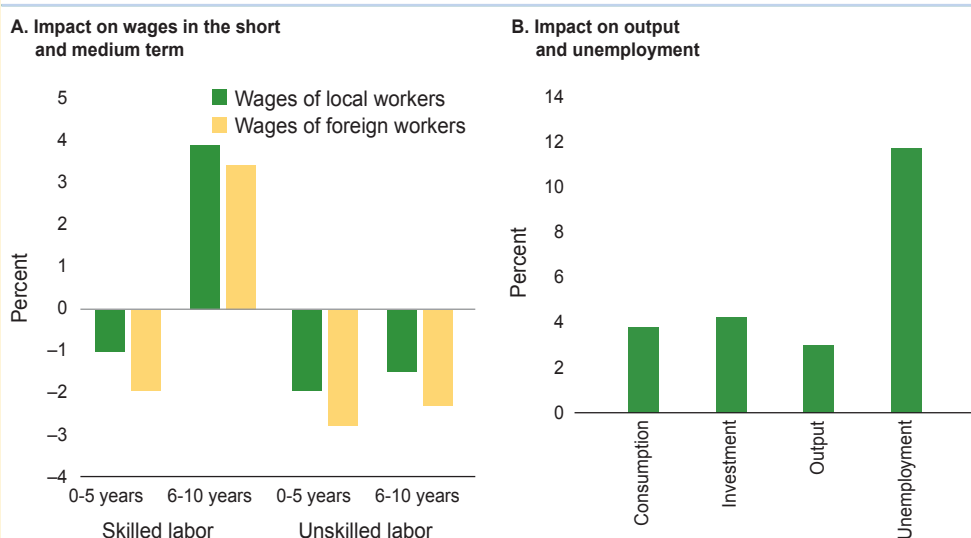
BOX 3.2**Do Migrants Bring Fiscal Dividends? The Case of Venezuelan Migration to Colombia**

The international migration flows experienced by the region in recent years have placed this phenomenon at the center of the macroeconomic policy debate. While the effects of these flows can vary from country to country, they bring several challenging fiscal consequences. Migration can have different impacts and the analysis of the unprecedented migrant flows in the region remains at an early stage.^a Migrants will likely boost output and tax revenues in receiving countries but also provoke higher required fiscal spending on social services.

These two aspects may have a major impact on the migration fiscal dividend, which is defined as the marginal impact on tax contributions and government expenditures resulting from the flow of migrants (see Storesletten, 2003). Although estimating the potential net increase in spending is relatively straightforward, the estimated impact on tax revenues is more difficult to calculate in economies in which a large portion of the labor force works in the informal sector.

In the specific case of the Venezuelan migration to Colombia, the economic shock generated by hosting about 1.6 million migrants in 2019 has had numerous effects.^b Valencia et al. (forthcoming) estimate that this inflow of workers could reduce real wages. However, a counterbalancing effect arises from the complementarity of unskilled labor and capital, which increases firms' economic activity. As a result, the absorption rate of skilled labor (for both locals and foreigners) accelerates as firms grow and open new vacancies. At the aggregate level, positive effects can be expected on consumption, investment, and, therefore, output (see Figure 3.2.1).

As for fiscal variables, revenues expand from indirect taxes by at least 2% of GDP per year during the first five years but the effect disappears in the medium term. However, there are mixed effects on direct tax revenue. On the one hand, the dynamics of the labor market reduce income tax

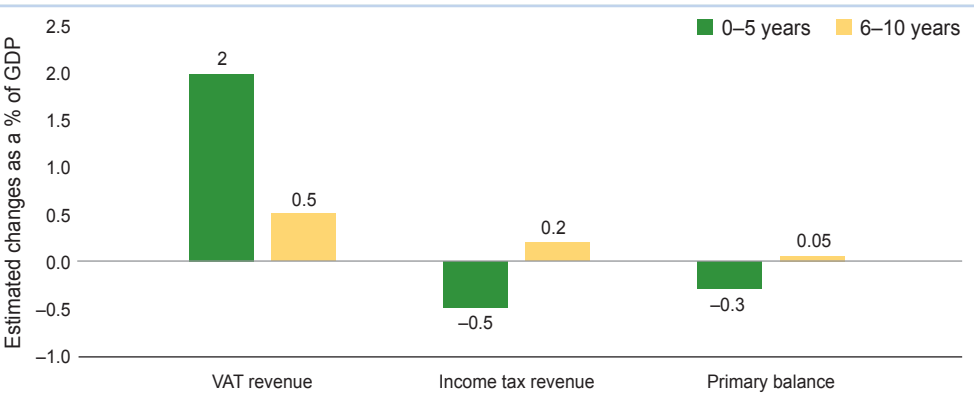
Figure 3.2.1 Estimated Impacts of Migration on Output and Labor Markets

Source: IDB staff calculations.

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BOX 3.2 (continued)

Figure 3.2.2 Estimated Impact of Migration on the Fiscal Accounts



Source: IDB staff calculations.

collection by 0.5% of GDP in the short term. On the other hand, greater economic activity boosts collections by about 0.2% of GDP per year in the medium term (see Figure 3.2.2).

Finally, the Colombian government estimates that spending could increase from 0.4% to 0.8% of GDP. The main areas where expenditure is expected to rise are education and health, which account for 0.4% of GDP each. Migration may increase both fiscal revenues and spending, and net impacts could go either way.^c In the case of Colombia, the estimates suggest higher spending in the short term but further growth in revenues and, therefore, a positive impact on fiscal balances in the medium term (see Figure 3.2.2).

^a The IDB has a vibrant research agenda in this area including a set of analyses with a greater focus on micro-economics.

^b The simulation includes an exogenous path of migrants with an estimated total of 3.6 million in 6–10 years.

^c BBVA Research also found positive net impacts to the fiscal accounts, see <https://www.bbvarsearch.com/publicaciones/inmigracion-venezolana-a-peru-caracteristicas-e-impactos-macroeconomicos/>.

and redistribution can be ameliorated. Two leading examples would be to increase the spending and the quality of infrastructure that benefits the poor and raise spending on education and skills.⁵

⁵ See Cavallo and Powell (2019) for estimates of the impacts of infrastructure spending on growth and distribution. See Berlinski and Schady (2015) on the payoffs to early childhood education and Busso et al. (2017) for more general arguments on the payoff to better education and skills.

CHAPTER 4

The Spatial Dimension of Inequality

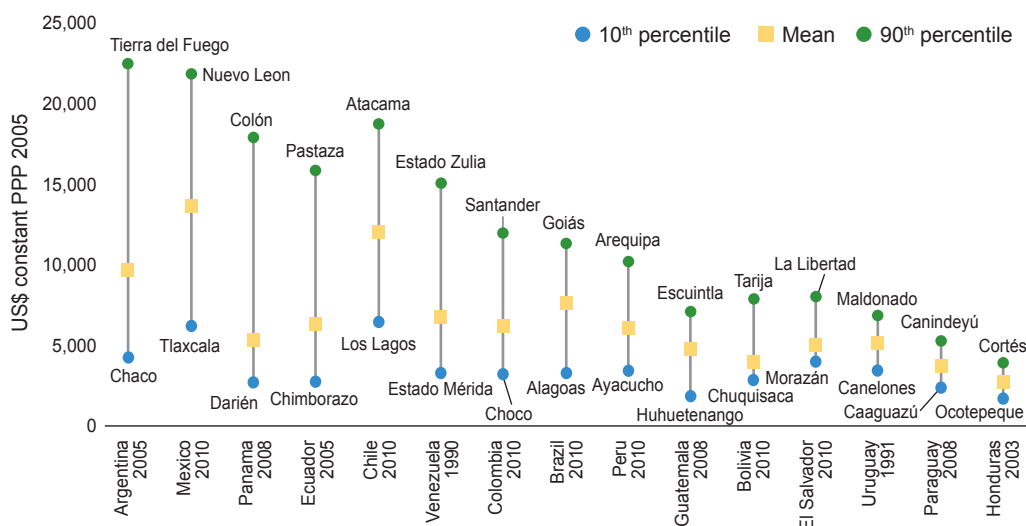
The Covid-19 pandemic is having devastating consequences for the livelihoods of people across Latin American and the Caribbean, in particular among the poor and vulnerable (Bottan, Hoffmann, and Vera-Cossio, 2020). The focus of this report is on how to boost inclusive growth—growth that at the same time reduces inequality. While this is always important, the current crisis has placed this issue at the top of the agenda. But inequality comes in many dimensions: in incomes, in wealth, in access to education and to other services. Little is known about inequality across regions within countries.¹ And yet this is critical to be able to craft effective policies to boost inclusive growth. If inequality across regions is unimportant, then policies to further equality likely should be nationally planned and administrated. If inequality has a regional dimension, then specific policies to assist poorer areas should be part of the policy mix and subregional authorities should likely develop specific policies for their own territories. This chapter discusses the measurement of regional inequality, whether regional inequality in Latin America and the Caribbean is exceptional, whether poorer regions are converging, and how regional inequality contributes to overall inequality.

GDP Differences across Subnational Regions

Frequently, national GDP per capita—the commercial value of all goods and services produced in a country in a given period, divided by the population—is employed as the measure of the standard of living. By this metric, inequality in Latin America and the Caribbean is very large indeed.² The ratio between the highest and the lowest GDP per capita (Panama

¹ Notable exceptions include Acemoglu and Dell (2010), Berdegúe and Modrego (2012) and Modrego and Berdegúe (2015), which study wage and income inequalities across regions and municipalities in selected Latin American countries. A series of reports by the Rimisp-Centro Latinoamericano para el Desarrollo (see RIMISP, 2016) discuss in detail a wide array of regional indicators across Latin American countries.

² The limitations of GDP per capita in capturing the economic well-being of a country's population are many and well-known. An important one is that the place where production occurs often differs from the place where the income generated is received. This has led multilateral institutions such as the World Bank and the European Union to employ Gross National Income (GNI) per capita—a measure of the income received by the population of a territory, regardless of where it was produced—to classify economies into income groupings and to define operational lending policies.

Figure 4.1 Regional Distribution of GDP Per Capita

Source: IDB staff calculations based on Gennaioli et al. (2014).

Notes: Dates indicate latest available data.

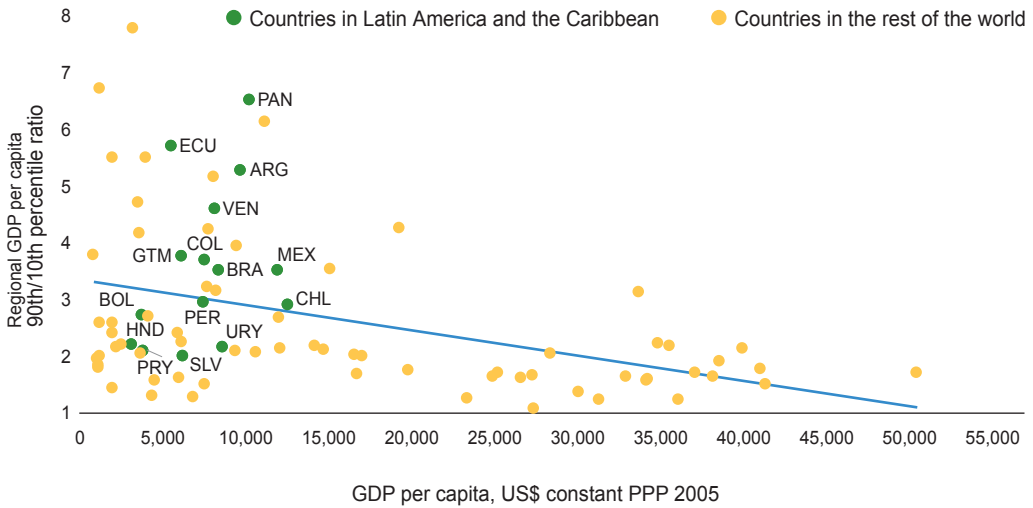
versus Haiti) is 13.3, and the ratio between countries at the 90th and the 10th percentiles of the distribution (Argentina and Nicaragua) was 3.7.³ But differences in GDP per capita across countries, large as they are, provide an incomplete representation of global spatial inequality. Production and income are not homogeneously distributed in any national geography, and differences between richer and poorer localities within a country may be substantial.

The differences between the highest and lowest GDP per capita regions in Latin America and the Caribbean can be of similar magnitude to differences across countries.⁴ The GDP per capita ratios are 16.4 between Campeche and Chiapas in Mexico, 8.6 between Antofagasta and Araucanía in Chile, 7.7 between Ciudad de Buenos Aires and Formosa in Argentina, and 4.4 between São Paulo and Maranhão in Brazil. In a sample of subnational regions from 15 Latin American and Caribbean countries, the ratio between the highest and lowest GDP per capita regions (Campeche in Mexico and Jutiapa in Guatemala) was a staggering 47.9.

A few of the extremely high GDP per capita regions have low population densities and a large presence of extractive industries (oil, natural gas, copper, and other minerals).

³ These calculations are based on World Development Indicators, World Bank (WDI) data. The sample of Latin America and the Caribbean includes all borrowing members of the IDB. Here, as in the rest of the chapter, GDP per capita is measured in current Purchasing Power Parity (PPP) U.S. dollars. The figures cited are for 2018.

⁴ Here, regions are the largest subnational administrative unit. Gross National Income figures are typically not available at the subnational level. Thus, existing statistics of within-country disparities in economic activity typically rely on regional GDP per-capita or on measures derived from census and household survey data. See, for instance, Gennaioli et al. (2013) and www.oecd.org/regional.

Figure 4.2 Relation Between National Income and Regional Disparities

Source: IDB staff calculations based on Gennaioli et al. (2014).

Because these regions tend to retain only a small share of the income associated with the production in their territories, GDP per capita is an inaccurate measure of living standards. But even excluding extreme observations from the sample, the gaps between the high GDP per capita and low GDP per capita regions remain large. Figure 4.1 depicts the distribution of regional GDP per capita gaps in each country, excluding observations below the 10th and above the 90th percentiles. The GDP per capita in Tierra del Fuego, the region closest to the 90th percentile in Argentina, was 5.2 times larger than that of Chaco, the one closest to the 10th percentile. Large 90th to 10th percentile ratios can also be observed in Mexico and Panama, and to a lesser extent, Chile, Ecuador, and Venezuela. The most spatially equal countries in the sample by this measure are Honduras, Paraguay, Uruguay, and El Salvador.

The large gaps between the high and low GDP per capita subnational regions in Latin America and the Caribbean, invites the question of whether spatial inequality in the region is exceptionally high. Figure 4.2 plots the relationship between the 90/10 percentile ratio of subnational GDP per capita and the country-level GDP per capita for a sample of 83 countries.⁵ On average, the 15 countries from Latin America and the Caribbean do not exhibit unusually high subnational disparities in GDP per capita given their income levels.⁶

⁵ Similar results are obtained using the 75th to 25th percentile ratio.

⁶ A linear regression of the 90th to 10th percentile ratio on the national GDP per capita among other controls confirms this statement more formally.

Are Regional Disparities Growing or Shrinking?

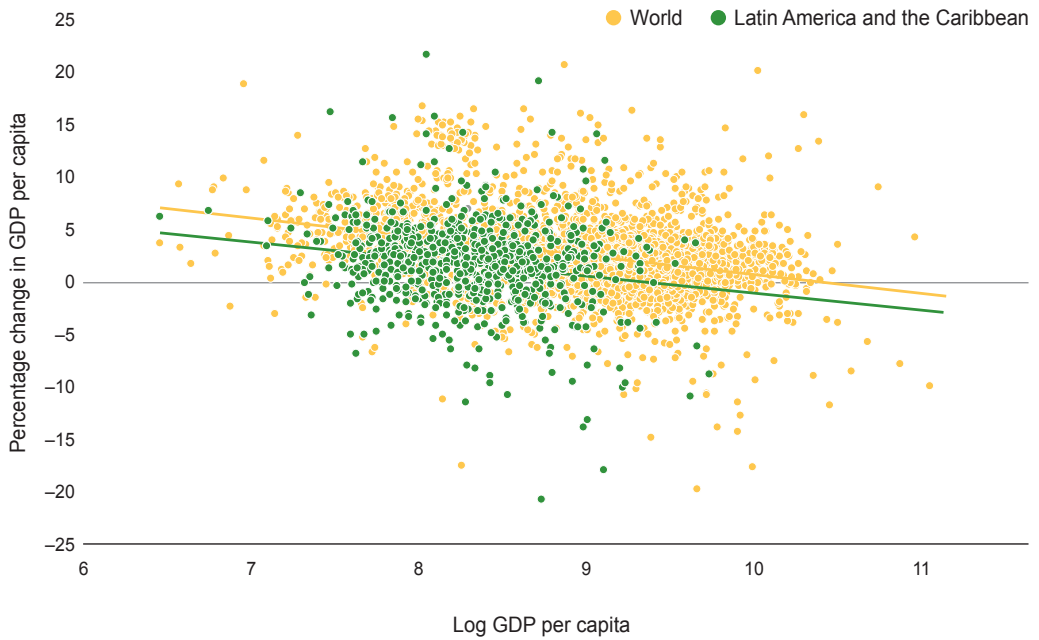
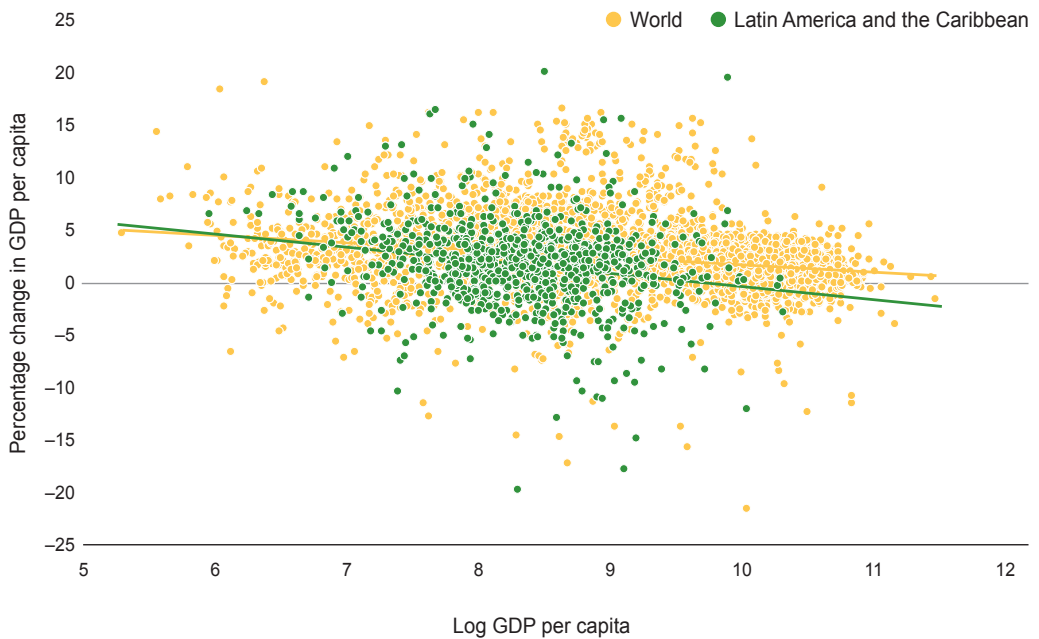
A long-standing theory of economic growth posits that low per capita income economies will tend to grow faster and catch up with richer economies, converging to similar income levels. This convergence prediction is expected to hold for economies with comparable economic fundamentals, such as human and physical capital. If this theory holds, subnational disparities in GDP per capita should shrink over time, at least among regions with similar fundamentals.

Subnational GDP per capita in Latin America and the Caribbean has converged over the last four decades. A standard regression test of the convergence hypothesis shows that, controlling for baseline characteristics such as average years of education, population, and oil and gas endowments in each region, low GDP per capita regions catch up with the frontier at a relatively slow rate of about 2% per year.⁷ This is very similar to the rate typically found across countries, and to the rate that Gennaioli et al. (2014) find in a larger sample of 1,528 regions from 83 countries.

Because not all regions share similar economic fundamentals does not necessarily mean that spatial inequality is shrinking in absolute terms. If spatial differences in human and physical capital endowments do not shrink, poor regions are unlikely to catch up with rich regions. The evidence in Figure 4.3, however, suggests that subnational regions in Latin America and the Caribbean have not only experienced “conditional convergence,” but also “absolute convergence” over the past few decades. Figure 4.3, Panel A shows the relationship between GDP per capita levels and growth across subnational regions in Latin America and the Caribbean after controlling for human capital, population, and other relevant variables. The negative relationship indicates convergence: poorer regions exhibit higher rates of growth. The rate of subnational conditional convergence in the region is almost identical to that of the world as a whole.

Figure 4.3, Panel B, in contrast, does not account for differences in economic fundamentals or national borders, and still finds a negative relationship. Interestingly, unconditional convergence among subnational regions in Latin America and the Caribbean is noticeably more pronounced than in the world as a whole. A linear regression model estimates that subnational economies in the region converge, in absolute terms, at a rate of 1.24% per year, whereas the estimate for regions in other countries is 0.6%. This difference is fundamentally explained by cross-country differences in GDP per capita. Latin American and Caribbean countries are much more similar in levels of economic activity

⁷ The test follows Gennaioli et al. (2014) and regresses annualized growth in GDP per capita of five-year periods on the beginning of the period (log) GDP per capita level and controls. The full set of controls includes log GDP per capita of the country, latitude, distance to coast, vulnerability to malaria, log of oil and gas production, log of population density, years of education, and an identifier for the region that hosts the capital of the country. It also includes country and year fixed effects.

Figure 4.3 The Convergence of Poorer Regions**A. Conditional convergence****B. Unconditional convergence**

Source: IDB staff calculations based on Gennaioli et al. (2014).

than the group of countries considered in the sample for the rest of the world. If one abstracts from cross-country differences in GDP per capita (using country fixed effects in the regression model), the rate of absolute subnational convergence is only slightly larger in Latin America and the Caribbean than in the world as a whole (1.56% vs. 1.35%). Relatively poor regions are catching up with the richer regions of their countries, but at a very slow rate. At this pace, it would take 27 years for a subnational region that starts with a GDP per capita of US\$5,000 to close only half of the gap with a region in the same country that has a GDP per capita of US\$10,000.⁸

Explaining Regional Differences: GDP per Capita vs. Household Income per Capita and Poverty

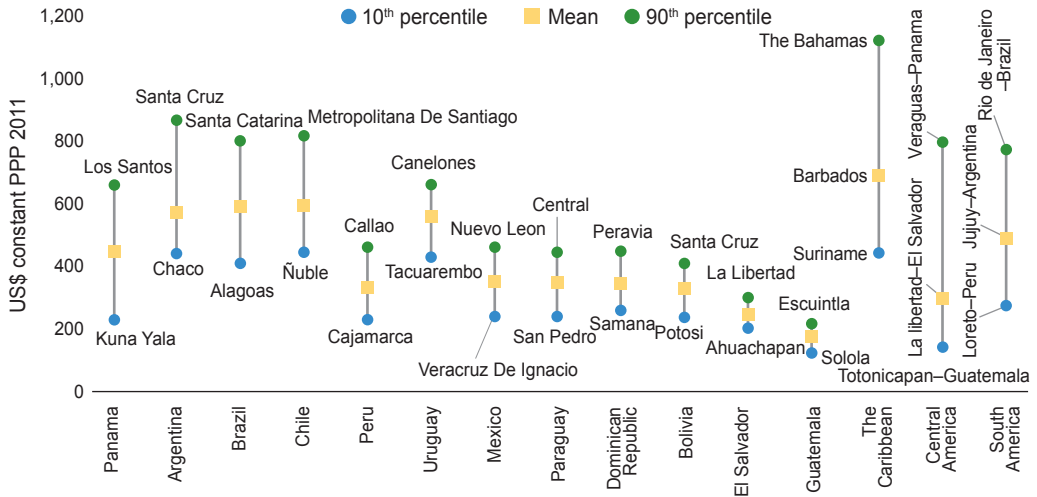
The fact that largely rural regions with high poverty levels, such as Campeche in Mexico and Sucumbíos in Ecuador, appear at the top of the distribution in their countries in terms of GDP per capita highlights the limitations of this measure in capturing differences in living standards at the subnational level. The measure accurately reflects the fact that these regions generate large incomes, as they represent large shares of their countries' oil and gas production. However, only a relatively small fraction of the income stays with the local populations. A more complete representation of the geography of inequality within countries, therefore, requires looking not only at spatial disparities in production, but also at direct measures of income.

Cross-regional rankings with GDP per capita and household incomes do not coincide, although they are correlated.⁹ This suggests that the two measures offer distinct and complementary information, and there is value in considering both together. While GDP per capita provides a better approximation of differences in economic activity across regions, household income per capita approximates better their relative levels of living standards. Note, however, that measuring household income is not exempt of shortcomings. First, top income households are underrepresented in the surveys. Second, while labor incomes are relatively well-captured in the surveys, capital incomes are not. Because top income households and capital owners are likely to be concentrated in a few regions (and in some cities within those regions), interregional inequality in household income per capita as measured in the surveys probably underrepresents the true underlying inequality.

On average, a household in São Paulo, the richest region in Brazil in terms of average household income, is 2.5 times richer than a household in Maranhão, the region with the lowest average household income. The ratio between the poorest and the richest

⁸ Moreover, climate change may slow economic convergence further (see Chapter 6).

⁹ The rank correlation between regional GDP per capita and regional household income per capita (all expressed in 2011 US\$ PPP) across the 201 regions for which data on the two variables are available is 0.56. The Pearson correlation coefficient is 0.36.

Figure 4.4 Regional Distribution of Household Income Per Capita

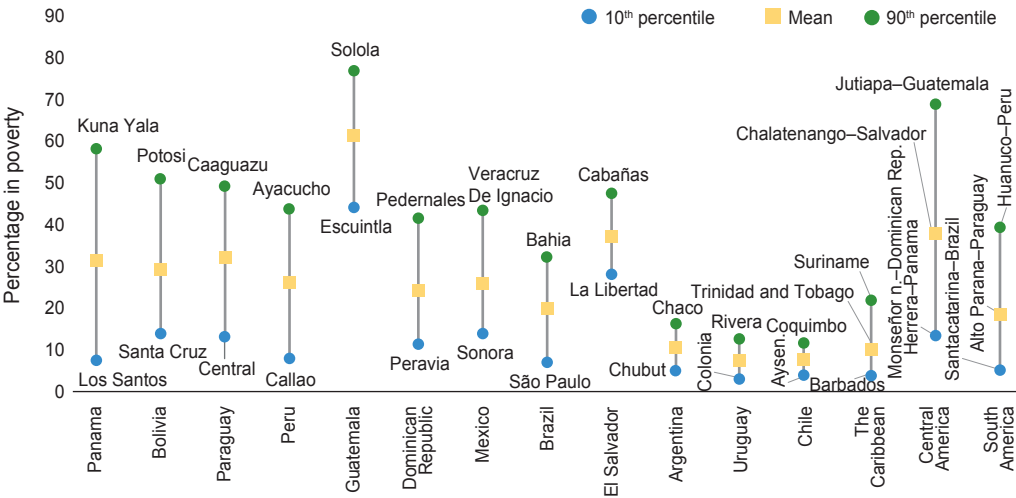
Source: IDB staff calculations based on a set of harmonized household surveys from Latin America and the Caribbean.

regions scales up to 4.4. Antofagasta, the richest region in Chile according to GDP per capita, ranks fourth when household income is considered. Moreover, this region is only 25% richer than the average Chilean region in terms of household income, while it is more than three times richer in terms of GDP per capita. The correspondence is in general higher at the bottom of the distribution. La Araucanía is the poorest region in Chile according to both indicators. The average household in La Araucanía has an income that is 75% of the household income in the average region, while the corresponding GDP per capita gap is 37%. Weak regional economic activity is highly correlated with low average household incomes and high levels of poverty.

Figure 4.4 shows household income per capita in the average region in each country, and the corresponding measure in the regions that are closest to the 10th and 90th percentiles in the distribution of average regional household per capita incomes. The metric is comparable to the one used to construct subnational GDP per capita disparities in Figure 4.1. The differences in dispersion are very apparent. Across subregions, regional disparities are larger in Central America than in South America.

Different factors may explain the smaller regional gap in household income than in economic activity. The richest regions are either capital cities or metropolitan regions, or regions rich in minerals, gas, oil, ores, and other natural resources. Extractive industries are capital intensive and their ownership tends to be highly concentrated. Moreover, the owners of the mines need not live in the producing regions (or countries). Part of the economic activity in capital cities and metropolitan areas is produced by commuters, who access the regions to work but return to their homes in the bordering regions. For

Figure 4.5 Regional Disparities in Household Poverty



Source: IDB staff calculations based on a set of harmonized household surveys from Latin America and the Caribbean.
Notes: Poverty defined at US\$5 PPP 2011.

instance, the 2015 Inter-census Survey of Mexico shows that almost 20% of the remunerated workers of the country (and over 40% of Mexico City) work in another municipality than their municipality of residence. This tends to artificially inflate the GDP per capita in the economic centers and reduce economic activity in the bordering regions.

Redistribution through transfers and taxes also play a role in compressing differences in household income across regions. However, as discussed in Chapter 3, these transfers did little to reduce inequality.

Regional differences in poverty tend to be larger among the poorest countries of Latin America (Figure 4.5).¹⁰ In Guatemala, the poverty rate in Alta Verapaz exceeds 80%, compared to about 25% in Guatemala City. By comparison, regional poverty rates in Chile fluctuate between 5% and 18%. Notably, even the richest countries in Latin America have regions with a large concentration of poor households. The poverty rate in Cerro Largo (Uruguay) exceeds the poverty level in Asunción (Paraguay), even though Paraguay has a much higher poverty rate than Uruguay.

How Important are Regional Disparities for Overall Inequality?

Country borders are important determinants of inequality. From 11% to 20% of the overall inequality across Latin American and Caribbean households is explained by differences

¹⁰ Moderate poverty is measured using a homogenous poverty line of US\$5 (PPP 2011).

Table 4.1 Decomposing Household Income Per Capita in Latin America. Circa 2017

	Theil Index							
	Overall	Between Country		Within Country		Between Region		Within Region
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Panel A: Considering countries								
Full Sample	0.501	0.089	(17.69)	0.413	(82.31)	—	—	—
Panel B: Considering regions								
Restricted Sample	0.464	0.052	(11.22)	0.412	(88.78)	0.029	(6.93)	0.383 (93.07)
Panel C: Considering regions and urban/rural divide								
Urban and Rural Sample	0.465	0.053	(11.44)	0.412	(88.56)	0.046	(11.21)	0.365 (88.79)

Note: The numbers in parentheses in columns (2) and (3) give the percentage of the overall inequality explained across and within countries. In columns (4) and (5), the number in parenthesis give the percentage of the within country inequality explained by differences across and within regions. Estimates are population weighted. Panel A considers the full sample of countries: Argentina, The Bahamas, Barbados, Bolivia, Brazil, Chile, Colombia, Costa Rica, Dominican Republic, Ecuador, El Salvador, Guatemala, Guyana, Honduras, Jamaica, Mexico, Nicaragua, Panama, Paraguay, Peru, Suriname, Trinidad and Tobago, Uruguay, and Venezuela. Panel B considers a restricted sample of those countries where surveys are representative at the subnational level consisting of Argentina, Bolivia, Brazil, Chile, Dominican Republic, El Salvador, Guatemala, Mexico, Panama, Paraguay, Peru, and Uruguay. Panel C divides the regions within the countries included in Panel B into urban and rural sections, such that there are more than 50 areas.

in average household income per capita across countries (Table 4.1).¹¹ This analysis employs an indicator of inequality known as the Theil index, which has the advantage that it can be decomposed into various constituent elements.¹² The overall Theil index for the region (putting together all of the national household surveys) is roughly 0.5; taking out the inequality across countries drops this measure to about 0.4 (a fall of 20%), depending on the precise sample used. Yet, the importance of national boundaries for inequality in the region is relatively small when compared to similar decompositions for the world as a whole. Lakner and Milanovic (2016) estimate that between 73% and 77% of the inequality registered across households from 120 countries in 2008 was due to cross-country differences in average income. In other words, while there are substantial differences across countries in the region, the disparities are even greater globally.

Putting aside disparities across countries allows the focus to shift to the role played by regional inequality. Inequality across regions plays an additionally important role in explaining the remaining within-country inequality, roughly a further 10%. This still leaves a considerable amount of inequality to be explained; in other words, individual heterogeneity within regions is very large (Table 4.1, Panel B).¹³

Subnational borders become even more relevant when differences across urban and rural areas are considered. Panel C of Table 4.1 repeats the decomposition in Panel

¹¹ The range depends on the sample of countries.

¹² This type of decomposition is not possible for the Gini coefficient.

¹³ The decomposition analysis updates and extends the work of Acemoglu and Dell (2010).

B, but differentiates rural and urban areas in each region, almost doubling the number of regions in the sample. The role of regions is, then, almost as large as country differences in determining overall inequality. Inequality across countries and across regions accounts for 22% of overall individual inequality.

Conclusions

Considerable recent attention has focused on measuring and addressing high inequality. As the Covid-19 crisis evolves, there is little doubt that there will be only greater focus on how to address the various dimensions of inequality. The role of regional inequality within countries has received relatively sparse attention. Regional averages of GDP per capita provide a first guide to disparities within countries but in some cases may give a distorted picture of the incomes of families. Household income per capita captures labor income well, but limitations in the surveys suggest that they may underestimate true underlying interregional disparities. Harnessing both sources of information allows policymakers to obtain a more complete picture.

Especially when the urban-rural divide is incorporated into the analysis, regional inequality is an important element of overall inequality in Latin America. Still, even after considering across-country and within-country inequality, using relatively large subnational administrative areas, the majority of individual household inequality is still unexplained. Finer representations that consider differences across cities and towns within regions would no doubt magnify the role of spatial differences. Understanding such variations requires more granular data.

As reviewed in Chapter 3, programs and fiscal equalization transfers that target poorer regions may play an important role in many countries to address inequality and to promote regional cohesion and should be part of the policy mix. Still, as within-regional inequality remains significant, they are not enough. Therefore, programs at the national or regional level (that may define how such transfers are actually used) that employ other indicators at the individual household level should also be carefully assessed.

CHAPTER 5

Trust to Advance Inclusive Growth

Trust facilitates transactions between individuals, firms, and governments.¹ Unfortunately, it has been on the decline in the world and in the region, increasing transaction costs, preventing resources from flowing to their most efficient use, and reducing economic activity. Mistrust between individuals, firms, and governments makes each party unwilling to rely on the assurances of the other. If governments mistrust individuals, during a pandemic they may not limit themselves to merely recommending certain behaviors but are likely to resort to severe legal restrictions on mobility. If individuals do not trust firms to have their best interests at heart, they will be skeptical of product quality, that their data are secure, and that banks will return their deposits. If firms mistrust individuals, they may be reticent to hire new workers and more likely to invest in precautionary measures to prevent theft. If individuals and firms mistrust government, then public policies may become less effective and restrict private investment. In the context of a pandemic, they may be less willing to share information that would help governments plan better and act more efficiently. Boosting levels of trust can help control contagious diseases and enhance growth, and it may help reduce inequality and make people feel more content. It would also reduce the cost of pandemics and allow to better invest and plan for future crises.

A Taxonomy of Trust

Economic development depends on cooperative behavior. The famous *problem of the commons* is repeated in many aspects of development.² And cooperative behavior depends on trust. There are many potential dimensions of trust and they surely interact.

¹ Trust is defined as the belief that people (firms, institutions) will not: (i) Make promises they know they cannot keep; (ii) Renege on promises that they can keep, and; (iii) Violate norms to take advantage of people who adhere to them.

² The original problem of the commons refers to how many sheep or cows are allowed to graze on common land. Too much grazing destroys the land so a cooperative solution is for every farmer to restrict the number of livestock grazing even though that might not be best for each individually.

Table 5.1 Taxonomy of Trust: Examples of the Effects of Distrust

		Distrust in:		
		Individuals	Businesses	Government/Institutions
Distrusted by:	Individuals	No collective action	Lower transactions	Lower participation / turnout
	Businesses	Less credit, smaller firms, higher investment on security	More integration, more family operated firms	Lower reliance on public goods, lower compliance with law and regulations, lower foreign direct investment (FDI)
	Government/Institutions	Higher cost of participation, higher penalties	Stricter regulations	Lack of international agreements and global public goods

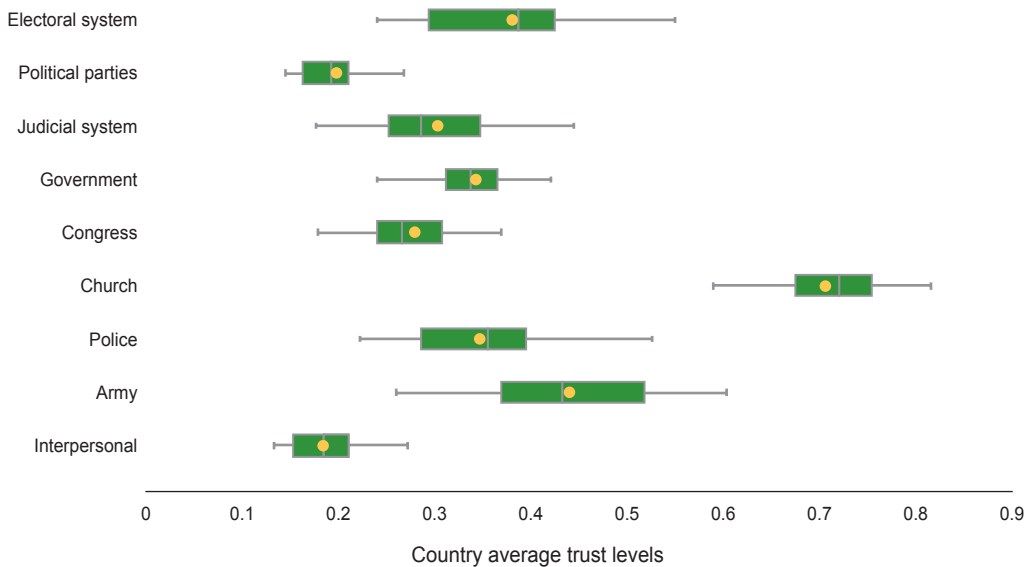
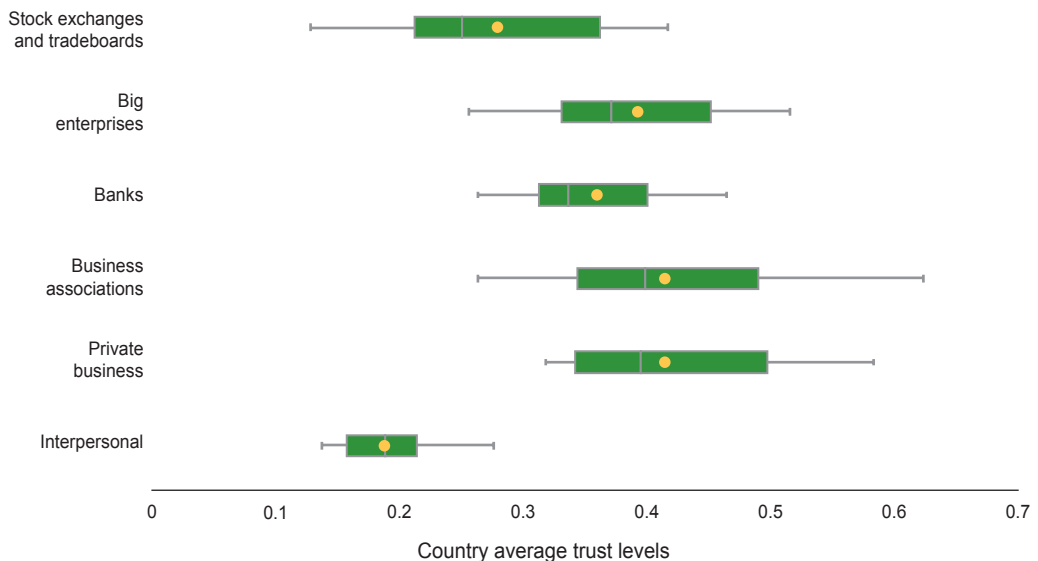
Source: IDB staff elaboration.

For example, government accountability depends on citizens' collective action. But cooperation requires trust. If there is little interpersonal trust, citizens may not act collectively to reward governments that perform well and punish those that do not. In turn, this may reduce citizens' trust in government. Individuals may then expect tax revenues to be harnessed for projects for private gain rather than for spending to benefit society as a whole. Many implications follow. Tax collection may suffer. The willingness to cooperate with government officials to improve compliance, for example by denouncing those that violate the rules, may fall. Participation in the political process may also falter with lower voter turnout and less enthusiasm for political activities. At the same time, if governments do not trust individuals or firms, they are likely to implement stricter regulations. In addition, a low trust environment will lead to less general satisfaction among individuals.

A simple taxonomy is detailed in Table 5.1, providing examples of mistrust between three types of agents in the economy: individuals, businesses, and governments/institutions.

Over the past three decades, the levels of interpersonal trust at the world level have declined from 39% in 1985 to 23% in 2014. In Latin America and the Caribbean, trust is lower than in other regions of the world and is also decreasing. According to the World Values Survey, in 2014 citizens' interpersonal trust in the region was 11%, whereas in Europe and Southeast Asia it was 44% and 32%, respectively. In other words, the fraction of individuals who believe that others will act opportunistically when given the chance, has risen around the world and is nowhere higher than in the Latin America and Caribbean region. Similarly, between 1996 and 2018, Latinobarometer surveyed 18 countries in the region and found that average interpersonal trust was about 19 percent, but with a wide variation.

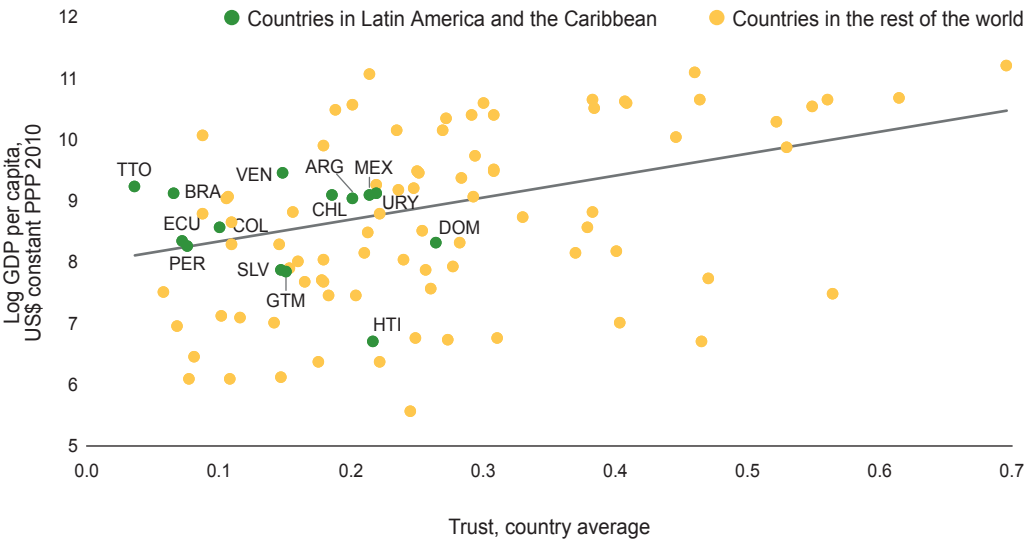
Trust in government and institutions is also low. On average, over the entire period, fewer than 4 in 10 Latin American and Caribbean citizens trust their government. All the institutions of democracy fare similarly, including congress, the judicial system, and political parties (see Figure 5.1, Panel A).

Figure 5.1 Trust Levels by Institutions and Business**A. By type of institution****B. By type of business**

Source: IDB staff calculations based on data from Latinobarometer Survey (1996–2018).

Note: The horizontal lines represent minimum and maximum values, the green boxes represent the 25th and 75th percentiles, the yellow dot represents the mean, and the gray vertical line is the median. Interpersonal Trust is calculated from the answers to the question: “Generally speaking would you say that you can trust most people, or that you can never be too careful in dealing with others?” Trust is equal to 1 if the respondent answers, “One can trust most people” and 0 otherwise. The variables related to trust on other institutions are computed from the question: “How much trust do you have in each of the following groups/institutions?” Trust is equal to 1 if the respondent answers, “A lot” or “Some”, and 0 when the answer is “A little” or “No trust.” The weighted average per country is computed from the individual level data. The sample includes 18 countries from the region: Argentina, Bolivia, Brazil, Chile, Colombia, Costa Rica, Dominican Republic, Ecuador, El Salvador, Guatemala, Honduras, Mexico, Nicaragua, Panama, Paraguay, Peru, Uruguay, and Venezuela.

Figure 5.2 Relation between Interpersonal Trust and Income



Source: IDB staff calculations based on data from the World Values Survey and World Development Indicators, The World Bank.

Note: The trust data come from the six waves of the World Values Survey (1981–2016). GDP per capita comes from World Bank Indicators (1981–2018). The total sample has 97 countries including Argentina, Brazil, Chile, Colombia, Dominican Republic, Ecuador, El Salvador, Guatemala, Haiti, Mexico, Peru, Trinidad and Tobago, Uruguay, and Venezuela.

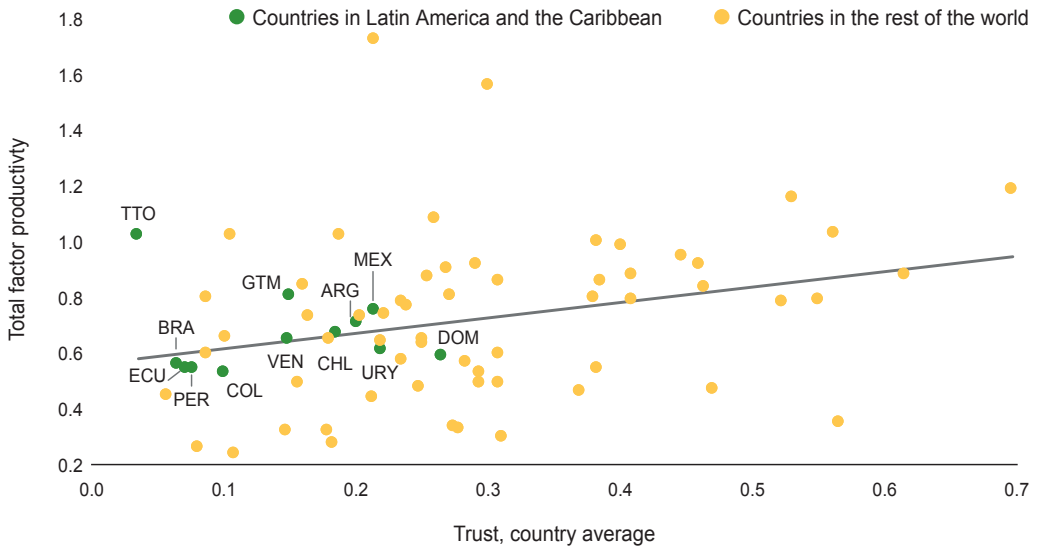
The correlation between interpersonal trust and trust in institutions, including political parties and politicians is high since the capacity for individuals to act collectively is essential for their ability to trust institutions. Political participation and thriving political parties can only exist in societies in which members trust each other and join in common ventures. Low trust in government and in congress goes hand in hand with low participation and low trust in political parties. Institutions, particularly governmental ones, can only be trusted when there are mechanisms to hold them accountable.

Trust in the private sector is associated with trust in government and institutions (Figure 5.1, Panel B). If people do not trust each other, they are unlikely to trust those who manage businesses, and even less likely to trust the government institutions charged with keeping businesses in check.

Trust and Inclusive Growth

Numerous studies have identified trust as a key factor in social and economic progress and democratic stability (Algan and Cahuc, 2014; Algan et al., 2017) and positive correlations

³ Data from the World Value Survey and other sources between 1981 and 2018. The result holds for GDP and GNI per capita.

Figure 5.3 Relation between Interpersonal Trust and Productivity

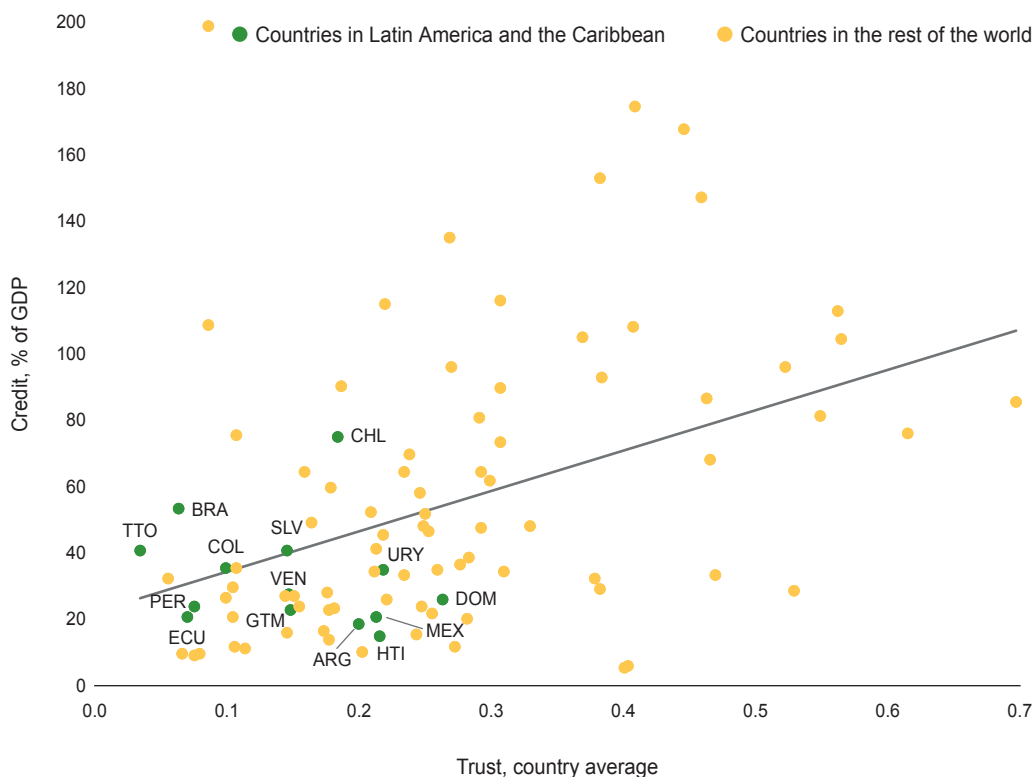
Source: IDB staff calculations based on data from the World Values Survey and Penn World Table 9.0.

Note: The trust data come from the six waves of the World Values Survey (1981–2016). Total factor productivity is an index for each country based on PPP exchange rates and normalized such that the United States is equal to 1.0. Data comes from Penn World Table 9.0 (1981–2014). The total sample has 72 countries including Argentina, Brazil, Chile, Colombia, Dominican Republic, Ecuador, Guatemala, Mexico, Peru, Trinidad and Tobago, Uruguay, and Venezuela.

are found between trust and income (Figure 5.2).³ In the United States, Dincer and Uslaner (2010) found that a 10 percentage point increase in trust is associated with a 0.5 percentage point increase in the GDP growth rate and a 1.3 percentage point increase in the growth rate of manufacturing employment over a five-year period. There is also a correlation between trust and productivity, a leading component of growth (see Figure 5.3).

Similar correlations are found for trust and investment. These findings are not surprising given that trust is critical for financial intermediation and financing in general, which involves transactions that frequently require inter-temporal exchange rather than immediate barter (see Figure 5.4). Trust accelerates economic growth in part by facilitating credit transactions (Kiyotaki and Moore, 2002). Guiso, Sapienza, and Zingales (2004) show that financial institutions in high trust areas lend more. Households and firms located in high trust areas are also more likely to obtain credit when they need it. Moreover, trust seems to work both ways, not only encouraging banks to lend, but also households to save. In high trust areas, households invest more in equity and use personal checks more frequently because they trust that their funds will not be expropriated. Aggregating to the level of countries, Calderón, Chong, and Galindo (2002) find that countries with a high level of trust tend to have larger financial sectors.

Trust also affects firms' sources of financing. If outside investors lack trust in firms' owners or managers, then firms will have to rely on retained earnings. If outside

Figure 5.4 Relation between Interpersonal Trust and Financing to Businesses

Source: IDB staff calculations based on data from the World Values Survey and from World Bank Indicators.

Note: The trust data come from the six waves of the World Values Survey (1981–2016). Domestic credit to private sector comes from World Development Indicators, The World Bank (1981–2018). The total sample has 94 countries including Argentina, Brazil, Chile, Colombia, Dominican Republic, Ecuador, El Salvador, Guatemala, Haiti, Mexico, Peru, Trinidad and Tobago, Uruguay, and Venezuela.

(minority) equity holders lack trust, then external finance will only be available from banks that have managed to establish a longer-term relationship. Trust affects investment decisions on the stock market (Guiso, Sapienza, and Zingales, 2008) and of venture capitalists (Bottazzi, Da Rin, and Hellmann, 2016). Trust is highest in countries with elevated R&D and explains more than a third (37%) of the dispersion of rates of expenditure on R&D across countries (Algan and Cahuc, 2014). Evidence from Knack and Keefer (1995) and a variety of subsequent research demonstrates that if entrepreneurs worry that the government will act opportunistically (e.g., changing regulations or even expropriation), they will invest and innovate less and growth will then slow.⁴

Moreover, citizens' distrust in government distorts their policy preferences, reducing support for public policies that promote growth and development. Development-promoting

⁴ Algan et al. (2017); Knack and Keefer (1997); La Porta et al. (1997a); Glaeser et al. (2000); Zak and Knack (2001); Beugelsdijk, de Groot, and van Schaik (2004); and Bloom, Sadun, and Van Reenen (2012).

policies, such as public good provision, are more difficult for citizens to evaluate and track since benefits are often intangible or hard to observe. This makes it easier for governments to act opportunistically by promising high levels of public good provision but in reality, delivering low levels. Instead, citizens with little trust in government are more likely to demand transfers, which contribute less to development but for which government compliance is easier to observe. The result is low public investment (including in infrastructure and human capital), special interest regulation (rent-seeking), and special tax regimes.

Education spending demonstrates this dynamic. Greater access to higher quality education is critical to redress high inequality and low social mobility. However, although education spending has risen significantly, it is still low in comparison to countries outside the region. These low levels seem to reflect citizen preferences. In a survey conducted by the IDB and LAPOP in the capital cities of 7 countries in Latin America, participants were asked whether they preferred increasing taxes to boost education spending, or lower taxes to allow households to spend more on private education. In general, respondents did not express significant enthusiasm for higher taxes to support education. Less trusting respondents' support for taxes and higher education spending is approximately six percentage points less than among those with higher trust. This example reveals the bias against policies that promise benefits in the future when trust is low (Keefer, Scartascini, and Vlaicu, 2018).

Determinants of Trust

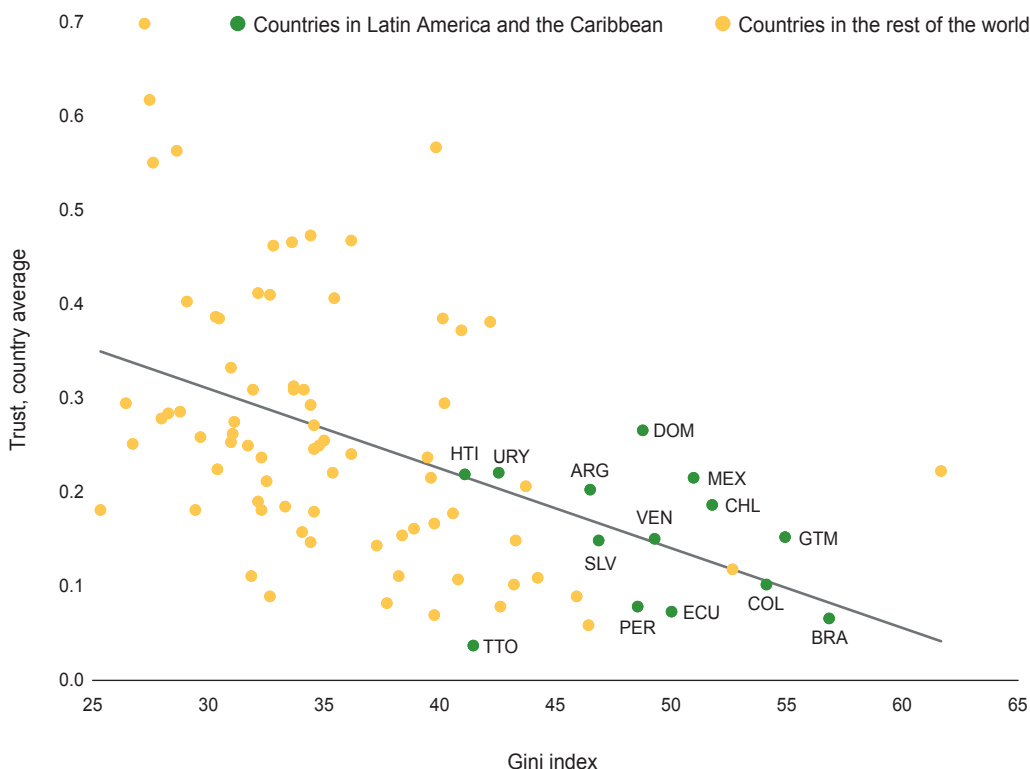
The literature⁵ has argued that actions that reduce “social distance” between citizens should increase trust,⁶ while historical events that promoted opportunistic behavior by citizens towards each other⁷ reduce trust.

Income inequality is an important metric of social distance and there is a strong negative correlation between the Gini coefficient at the national level and interpersonal trust (see Figure 5.5). All countries in the region are in the quadrant of relatively high inequality and low trust. One view is that the association between low trust and high inequality stems from an unequal distribution of power within a country; those at the top can use the coercive power of the state to benefit themselves at the expense of everyone else. Since this gives the powerful ample scope to engage in opportunistic behavior towards the less powerful, the latter are likely to have lower levels of trust. The evidence seems to indicate slightly higher levels of trust among those with higher income, but the differences are not very large. While the gaps in trust are notable, they are insufficient to account for regional differences. The most powerful, highest-income groups in Latin America and the Caribbean also indicate significantly less trust than the average respondent in other regions.

⁵ Easterly and Levine (1997), La Porta et al. (1997b), and Berggren and Jordahl (2006).

⁶ Bjørnskov (2007).

⁷ Nunn and Wantchekon (2011).

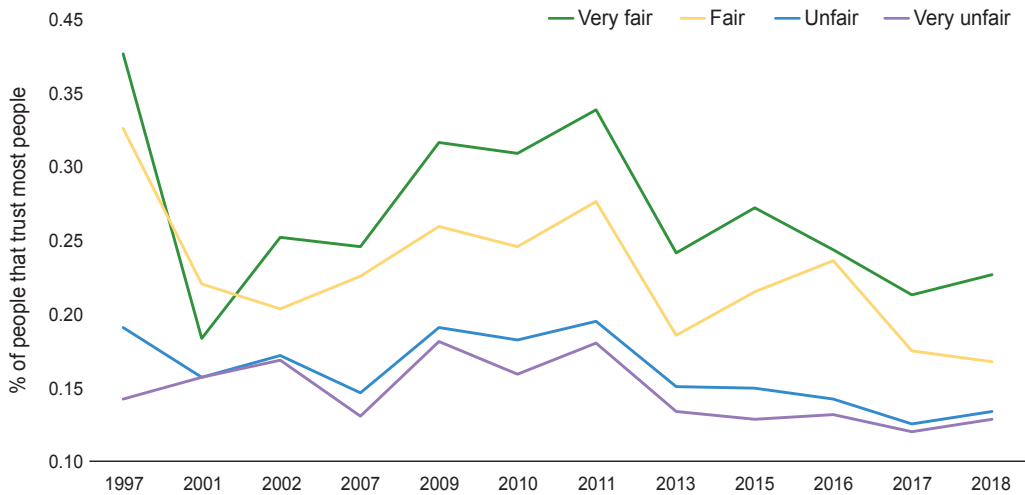
Figure 5.5 Relation between Interpersonal Trust and Inequality

Source: IDB staff calculations based on data from the World Values Survey and the World Development Indicators, The World Bank.

Note: The trust data come from the six waves of the World Values Survey (1981–2016). Gini Index data comes from World Development Indicators, The World Bank (1981–2017). The total sample has 88 countries including Argentina, Brazil, Chile, Colombia, Dominican Republic, Ecuador, El Salvador, Guatemala, Haiti, Mexico, Peru, Trinidad and Tobago, Uruguay, and Venezuela.

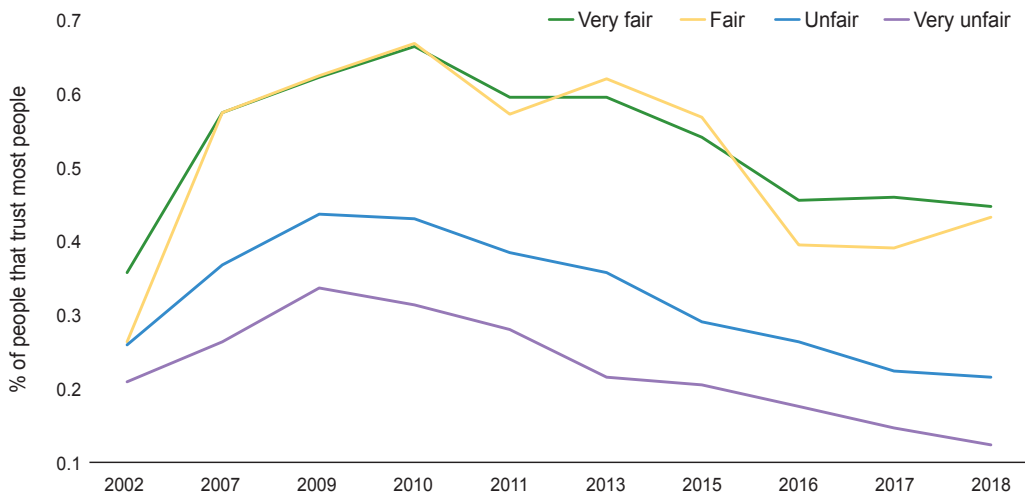
Population distributions by age, gender, and race are unlikely to account significantly for the differences in trust between Latin America and the Caribbean and other regions. They are, nevertheless, potentially relevant for understanding trust dynamics, given the different social pressures and experiences to which young and old, male and female, and racially distinct survey respondents might be exposed. Women are systematically less trusting than men in the region, and the younger the cohort, the lower is their level of trust. This is especially relevant when analyzing the social turbulence experienced by the region in 2019, where the participation of the young was especially strong.

Moreover, interpersonal trust appears to depend on the *perceptions* of the fairness of income redistribution. Figure 5.6 compares trust levels across groups that respond that income distribution is very fair to very unfair. The figure shows a persistent gap in trust between these two extremes. A similar result is found related to trust in government. Trust in government is halved for the group that considers income distribution to be unfair (see Figure 5.7).

Figure 5.6 Evolution of Interpersonal Trust by Perception of Fairness in Income Distribution

Source: IDB staff calculations based on Latinobarometer Survey.

Note: Interpersonal Trust is calculated from the answers to the question: "Generally speaking would you say that you can trust most people, or that you can never be too careful in dealing with others?" Trust is equal to 1 if the respondent answers, "One can trust most people" and 0 otherwise; and then averaged by year from the individual level data to obtain the proportion of the population that "trust most people." The different income distribution perception comes from the answers to the question: "How fair do you think is the distribution of income in (country)?" Options for answer include: (1) "Very fair," (2) "Fair," (3) "Unfair," and (4) "Very Unfair."

Figure 5.7 Evolution of Trust in Government by Perception of Fairness in Income Distribution

Source: IDB staff calculations based on Latinobarometer Survey.

Note: Trust in Government is calculated from the answers to the question: "Please look at this card and tell me how much trust you have..." in this case referring to the government. Trust is equal to 1 if the respondent answers, "A lot" or "Some" and 0 if the answer is "Little" or "None." The perception of the fairness come from the answers to the question: "How fair do you think is the distribution of income in...?", and answers are scored as follows: (1) "Very fair," (2) "Fair," (3) "Unfair," and (4) "Very Unfair."

Table 5.2 Selected Policy Responses

		Distrust in:		
		Individuals	Businesses	Government/Institutions
Distrusted by:	Individuals	Bonding and bridging initiatives. Social participation	Ratings by other individuals. Compliance with standards and regulations	Transparency on promises and results
	Businesses	Credit ratings	Reputation	Stable rules of the games
	Government/Institutions	Compliance with rules and regulations	Compliance with rules and regulations	Reducing barriers; mutual disarmament

Source: IDB staff elaboration.

Strategies to Increase Trust

To increase social cohesion and trust, societies need to encourage greater interaction among their members (Putnam, 2000). Table 5.2 details selected examples. One set of interventions along these lines consists of sports programs that try to create bridging and bonding across individuals by bringing together people with different backgrounds (Jaitman and Scartascini, 2017). Programs with similar motivations have been attempted in other areas, such as music and building of citizenship (Mateo Díaz and Rucci, 2019). Strategies to reduce the social distance between individuals and groups could also involve the provision of information that pushes back against unfortunate myths.

Regarding how businesses can increase trust, stability and reputation have always been at the forefront. In online commerce, firms have relied on ratings and consumer reviews. Government regulations and institutional arrangements also increase trust between actors in the private sector. Credit ratings allow borrowers to build reputations and businesses may then discriminate among individuals and create markets that might otherwise disappear. This creates incentives for individuals to keep good ratings. In some countries, public credit registries track the performance of both individuals and firms with respect to loan repayments and in some cases they include other data (from the judicial system or whether people pay utility bills on time) where good performance might also serve to boost trust. An effective legal system and efficient and impartial courts can enhance trust. If the perception is that untrustworthy behavior will be sanctioned, then individuals will think that others will act in a more trustworthy manner.

Citizen trust in government is a function of the basic organizing principles of a society. Mistrust in government emerges when politicians are not intrinsically motivated to act in the collective interests of citizens, and when citizens cannot restrain opportunistic behavior by politicians. Hence, any intervention or institutional innovation that restrains opportunistic behavior by politicians should also increase trust in government.

To date, there is little rigorous evidence on such interventions and much further work needs to be done. Information may be a key element to foster collective action.

For example, if citizens do not know what their governments are doing, they cannot come together to punish opportunistic government behavior. Information about the government's intentions and performance should allow citizens to update their beliefs about government reliability, responsiveness, and efficiency. Information may also allow citizens to evaluate governments' integrity, openness, and fairness (OECD, 2017). In fact, the disclosure of information on governments' intentions and performance, also known as transparency, has been found to increase citizens' knowledge and trust in institutions.⁸

Alessandro et al. (2019) exploits a series of commitments made by the mayor of the City of Buenos Aires at the start of his tenure. These commitments were clear and measurable goals across many government areas and based on citizens' priorities; they were public and their compliance was tracked weekly. The authors evaluate whether the provision/disclosure of information affects trust in government. Their results show that providing information increases the perception of how transparent the government is by about 8 percentage points (that is, providing information matters for people). More importantly, the authors show that complying with the commitments made and accounting for them, increases people's trust in the government significantly more than when the government cannot account for its performance. These results indicate that making a promise, providing information regarding performance relative to commitments, and demonstrating compliance may work to increase trust.

Conclusions

Trust between individuals, firms, and governments may have a significant impact on economic development and on how individuals and governments act during a pandemic. The low levels of trust in Latin America and the Caribbean are a significant impediment to improving public policies, innovation, investment, and growth. A lack of trust likely also impacts inequality and those living in low-trust environments appear to be less content. Low trust may even affect how political systems function and how much delegation individuals are willing to accept. A taxonomy of trust is a useful device to categorize the relevant dimensions and consider policy interventions that might help boost cooperative solutions in particular areas. Interventions to improve information show considerable promise. They tend to be of relatively low cost but may have significant impacts. In the case of governments, providing better information to citizens on intentions and outcomes seems an obvious route to improve trust in public institutions. The response to the Covid-19 pandemic, as has been the case with other disasters, will be an important watershed that

⁸ Downs (1957), Brennan and Lomasky (1997), Congleton (2001), Martinelli (2007), de Leon and Rizzi (2014); Grimmekhuijsen (2012); Alessandro et al. (2019).

will either see trust grow or fall. Much research remains to be done in this area, in particular to find ways to boost trust between individuals, to enhance trust in governments and other public actors, and to explore ways to improve trust between firms and investors and between firms and their customers.

CHAPTER 6

Implications of Climate Change and Natural Disasters

Climate change is bringing higher temperatures and more frequent and stronger hurricanes as waters warm. CO₂ emissions have recently decreased dramatically due to restrictions on mobility and economic activity put in place during the Covid-19 pandemic. However, absent any structural change in climate-related policies, emission levels are likely to rebound once restrictions are lifted. Therefore, climate change remains a serious threat to economic growth. Moreover, the pandemic has particularly affected the poor who are also the most vulnerable to climate change.

Evidence indicates that increases in temperature and natural disasters have macroeconomic consequences. As negative impacts are felt more acutely in poorer households, adaptation policies can help promote inclusive growth. However, to develop appropriate responses it is crucial to understand the channels by which these developments impact economic activity. This chapter focuses on the macroeconomic impacts of rising temperatures and natural disasters on the region.¹

Rising Temperatures

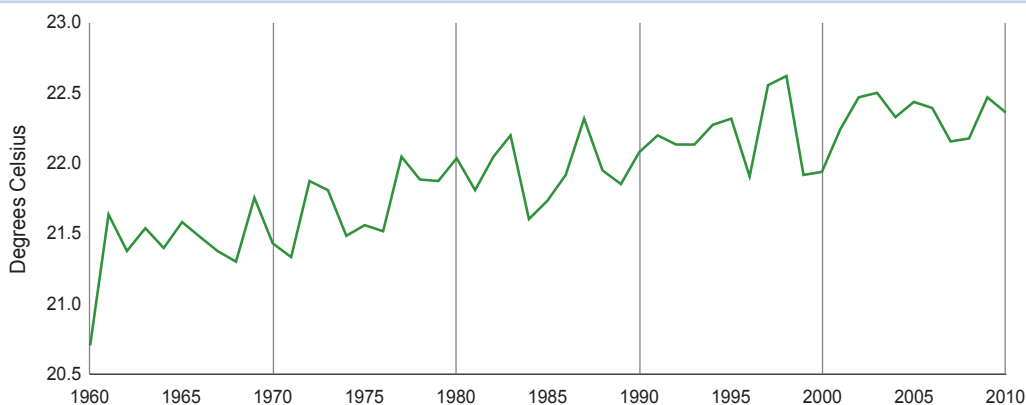
Over the next 50 to 100 years, the climate system will change dramatically. Temperature and precipitation patterns have already changed. Land and ocean temperatures have risen and heat waves are more frequent.² Over the past 50 years, the temperature in Latin America and the Caribbean has steadily trended upward, from 21.64° Celsius in 1961 to 22.36° Celsius in 2010 (see Figure 6.1).³ Although short-run weather may provoke fluctuations, the overall trend of rising temperatures is clear.

Despite some progress toward coordinated mitigation, all the projections of the International Panel on Climate Change (IPCC) indicate that the global temperature will rise significantly. The average annual temperature in Latin America and the Caribbean is projected to increase between 1° and 4° Celsius by 2080–2099 depending on the IPCC

¹ Climate change is having other impacts as well, notably the rise in sea levels, that are not discussed here.

² International Panel on Climate Change Report (2018).

³ IDB staff calculations using data from Burke, Hsiang, and Miguel (2015).

Figure 6.1 Annual Temperature for Latin America and the Caribbean

Source: IDB staff calculations based on Burke, Hsiang, and Miguel (2015).

emissions scenario.⁴ Rising temperatures and sea levels will likely increase the severity of hydrometeorological natural disasters: storms, floods, and droughts. With climate change threatening, it is time to prepare for what appears to be the inevitability of many more extreme weather events as the century unfolds.

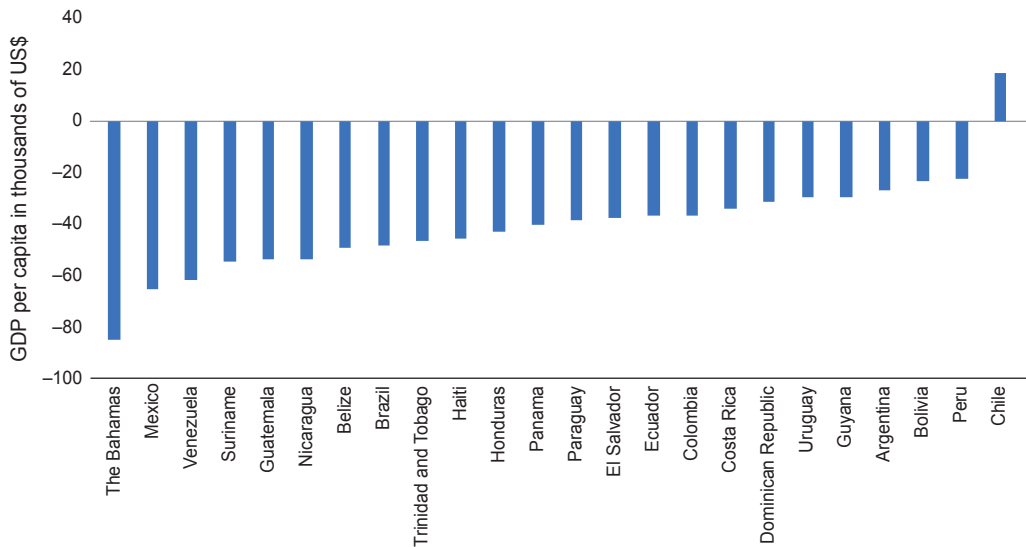
To prepare for the effects of rising temperatures, it is useful to understand the magnitude of the economic impact. But to formulate policies, it is critical to understand the channels through which temperature impacts the economy and which economic sectors and geographic regions are most vulnerable to the negative effects of climate change. This diagnostic will allow countries to develop policies that reduce the negative impacts.

Temperature Matters for Economic Growth

Temperature has a direct impact on economic growth. In Central America and the Caribbean, a 1° Celsius increase in the average annual temperature decreases economic output by an estimated 2.5% (Hsiang, 2010). Importantly, temperature affects the growth rate of GDP, not only the level of GDP. This distinction between growth effects and level effects is important because growth effects compound over time, resulting in much larger drops in GDP over time (Dell, Jones, and Olken, 2012; Colacito, Hoffmann, and Phan, 2019). Rising temperatures due to climate change are projected to substantially decrease GDP per capita in all Latin American and Caribbean countries except Chile by 2100 (see Figure 6.2).

The effect of rising temperature on economic growth is not the same for all; in general, cooler countries will benefit from a warmer climate and warmer countries will suffer (Burke,

⁴ IDB staff calculations using data from the World Bank Group Climate Change Knowledge Portal.

Figure 6.2 The Reduction in Projected 2100 Incomes Given Higher Temperatures

Source: IDB staff calculations based on Burke, Hsiang, and Miguel (2015).

Note: The reduction in projected GDP per capita in 2100 given estimated temperature rises.

Hsiang, and Miguel, 2015). Because many emerging economies have warmer climates at baseline, the negative economic impacts of rising temperature will be concentrated in emerging economies, exacerbating economic inequality across countries (Diffenbaugh and Burke, 2019 and Acevedo et al., 2018). It is estimated that the ratio of GDP per capita between the top decile and bottom decile of countries over the period 1960–2010 is 25% larger than it would have been without global warming (Diffenbaugh and Burke, 2019).

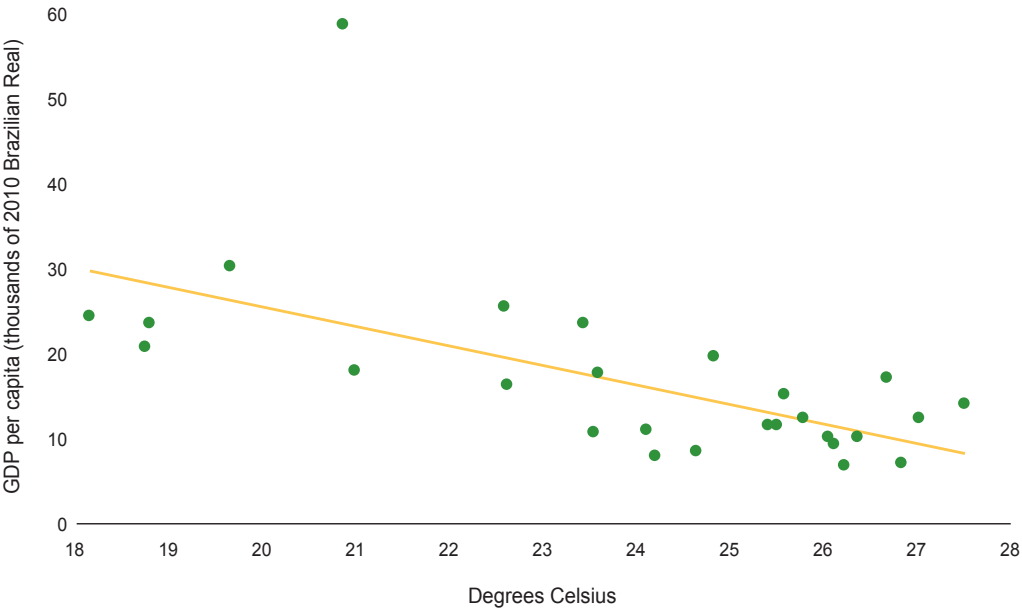
Rising temperatures negatively impact economic growth in a broad cross section of economic sectors, but impacts vary across countries and economic sectors.

To date, the rising summer temperatures in the United States have negatively impacted economic growth in agriculture, finance, services, retail, wholesale, and construction, indicating that reducing the reliance of the economy on agriculture is insufficient to avoid the negative impacts of higher temperatures (Colacito, Hoffmann, and Phan, 2019).

Similarly, in Central America and the Caribbean, the wholesale, retail, restaurant, and hotel sectors were the hardest hit by temperature, possibly due to the importance of labor productivity in these sectors (Hsiang, 2010). Intuitively, economic sectors that are naturally exposed to temperature as part of the production process suffer the most from rising temperatures. In the United States, the negative economic impact of a 1° Fahrenheit warmer summer was almost ten times larger in the agricultural sector than in the retail or wholesale sectors (Colacito, Hoffmann, and Phan, 2019).

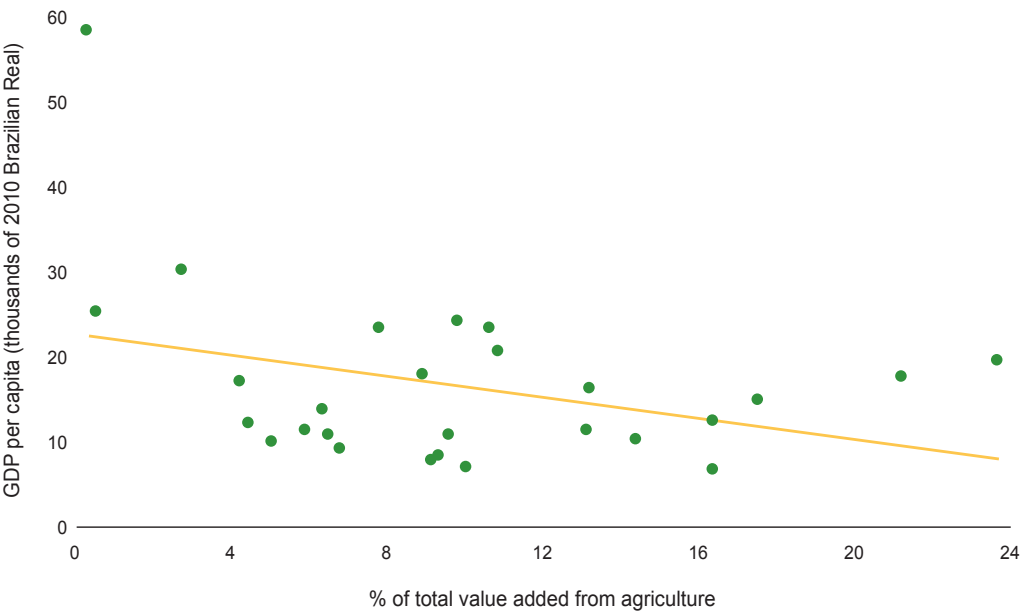
The impact of temperature on economic growth will also vary within countries. Regions with higher baseline temperatures and whose GDP is concentrated in more exposed

Figure 6.3 GDP Per Capita and Baseline Temperature of Brazilian States



Source: IDB staff calculations based on Matsuura and Willmott (2018) and the Brazilian Institute of Geography and Statistics (IBGE).

Figure 6.4 GDP Per Capita and Percentage of Total Value Added from Agriculture in Brazilian States



Source: IDB staff calculations based on the Brazilian Institute of Geography and Statistics (IBGE).

economic sectors will suffer graver consequences from a warmer climate. This can exacerbate within-country inequality. For instance, Brazilian states with lower income per capita in 2010 have higher baseline temperatures (see Figure 6.3) and agricultural value added accounts for a larger share of their GDP (see Figure 6.4). Together, these facts mean that lower-income states are likely to suffer the most from rising temperatures, worsening inequality across Brazilian states and likely reducing the rate of income convergence across subregions (see Chapter 4).

How Temperature Impacts Economic Growth

Temperature impacts the supply of critical inputs for firms, such as labor and capital, and the productivity of those inputs. Furthermore, extreme weather events can affect investment in both physical capital and education.

Higher temperatures quickly translate into fewer hours worked in firms even as they reduce the productivity of that labor (Graff Zivin and Neidell, 2014; Cachon, Gallino, and Olivares, 2012). In addition, higher temperature appears to decrease educational levels, which is likely to lower productivity in the future. For instance, temperature shocks on testing day decrease math performance (Graff Zivin, Hsiang, and Neidell, 2018). Persistently higher temperatures could also lower educational attainment and labor supply by reducing incomes and adversely impacting health; for example, temperature could result in lower birth weights, which take a toll on learning (Deschênes, Greenstone, and Guryan, 2009).

Temperature also affects the stock of capital. Temperature shocks could reduce investment through lower contemporaneous economic output, the sale of productive assets to smooth consumption, a decrease in the productivity of capital (for example, in the case of complementarities between labor and capital), or an increase in the cost of financing capital (Hallegatte et al., 2016; Fankhauser and Tol, 2005). Six years after a 1° Celsius temperature shock, investment is estimated to be 6 percent lower (Acevedo et al., 2018).

Natural Disasters Matter for Economic Growth

Developing countries represent 74% of the world's population but they suffer 93% of the mortality from natural disasters worldwide (Cavallo and Noy, 2011). The very occurrence of disasters is an economic event. They produce direct and indirect damages. Direct damages are the mortality and morbidity, the destruction of physical assets, and damages to raw materials and extractable natural resources. One critical (and largely exogenous) factor that determines the extent of direct damages is the intensity of the disaster. However, economic factors also play a role. The level of economic development and country size are two such factors. They tend to be positively correlated with the monetary cost of damages because in richer and larger countries, wealth is more exposed. However, the same factors tend to be negatively associated with mortality because richer and larger countries can usually afford

better preparedness, as illustrated by comparing the aftermath of the earthquakes in Chile and Haiti in 2010. Moreover, richer and larger countries tend to be more diversified and thus, are capable of engineering the intersectoral and interregional transfers required to reduce the economic impact of natural disasters. Large developed countries, for example, can more easily absorb output shocks from natural disasters originating in certain regions of the country (Auffret, 2003). In contrast, small-island states in the Caribbean are particularly vulnerable.⁵

Another factor is the political economy of disaster prevention. Inequality is an important determinant of prevention efforts: more unequal societies tend to spend fewer resources on prevention as they appear unable to resolve the collective action problem of implementing preventive and mitigating measures (Anbarci, Escaleras, and Register, 2005).⁶ This suggests that in more unequal countries, outside actors, such as multilateral development banks or other donors, play a potentially larger role in persuading local authorities to invest in mitigation and adaptation measures to protect poor and vulnerable populations. Interventions that help improve preparedness can reduce the number of people affected and the direct losses from natural disasters, especially among the most vulnerable groups.

Indirect damages refer to other economic outcomes following the disaster, including impacts on economic growth, poverty, and income inequality. At the macroeconomic level, indirect damages also include fiscal impacts because governments usually must spend a significant amount of unbudgeted resources to assist the affected, and on reconstruction (net of any aid received), while revenues may fall (see Box 6.1). At the household level, indirect damages include the loss of income resulting from the non-provision of goods and services, or from the destruction of previously used means of production (i.e., fisheries, forests, agriculture, among others). Low-income households are particularly vulnerable because they have fewer insurance mechanisms available to protect themselves.⁷ In particular, according to Hallegatte et al. (2017), poor people are exposed to risks more frequently, lose a greater share of their wealth when disasters hit, and have less access to financial resources to confront the emergency. The disproportionate impacts on the poor can be exacerbated if the relief and reconstruction efforts in the aftermath of disasters are not well targeted and, as a result, do not provide relief to the most vulnerable groups.

Natural disasters also increase poverty by reducing economic growth. The growth impacts can be quantified by examining the performance of the economy following natural disasters as measured by changes in aggregate output (GDP). Borensztein, Cavallo, and

⁵ Rasmussen (2004); Heger, Julca, and Paddison (2008); Coffman and Noy (2012).

⁶ In a similar vein, Besley and Burgess (2002) observe that flood impacts in India are negatively correlated with newspaper distribution; they attribute this effect to the fact that when circulation is higher, politicians are more accountable and the government is more active in both preventing and reducing the impacts of disasters. Eissensee and Strömberg (2007) reach similar conclusions regarding the response of U.S. disaster aid to media reports.

⁷ Rodríguez-Oreggia et al. (2013).

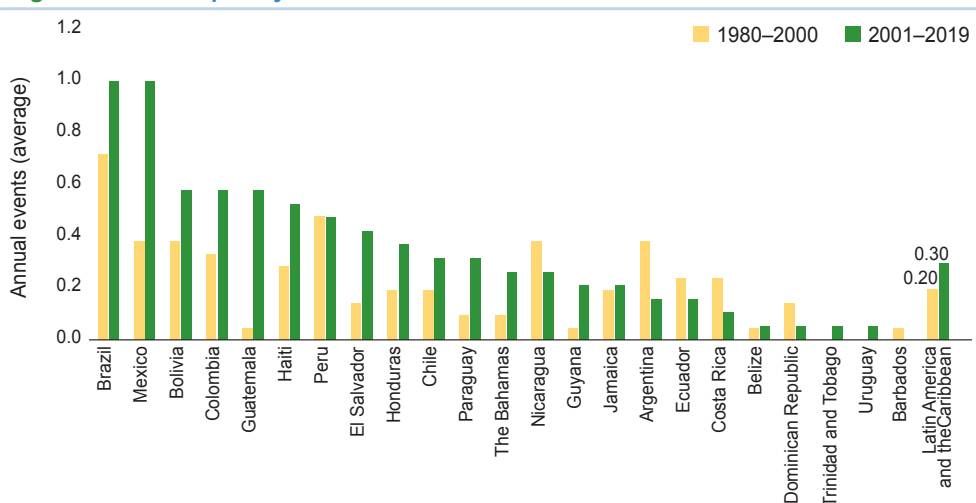
BOX 6.1**Fiscal Policy and Climate Change: The Impact of More Extreme Weather**

The magnitude, frequency, and duration of the fiscal impacts caused by natural disasters are highly relevant for public finances in the wake of climate change. Globally, 17 of the 18 warmest years ever recorded have occurred between 2001 and 2017 (Faust, 2018). This rise in the world's average temperature has coincided with a considerable increase in the annual frequency of climate-related natural disasters, from 222 in 1980 to more than 700 in 2016 (Munich RE, 2018).

Indeed, scientific evidence suggests that climate change is leading to an increase in the frequency and intensity of natural disasters (Mann et al., 2017; EASAC, 2018; Reidmiller et al., 2018). Consequently, the number of extreme weather events has grown in Latin America and the Caribbean and in the world (see Figure 6.1.1). The average annual occurrence of extreme weather events per country in the region increased by more than 50 percent, from one event every eight years (1980–2000) to one every five years (2001–2019) for countries that faced at least one extreme weather event in each of the two periods. However, there is significant heterogeneity. Large countries such as Brazil and Mexico may face a large number of events while small countries (such as the island nations in the Caribbean) may face a lower probability of an event; however, when they do occur in smaller countries they may well be national disasters.

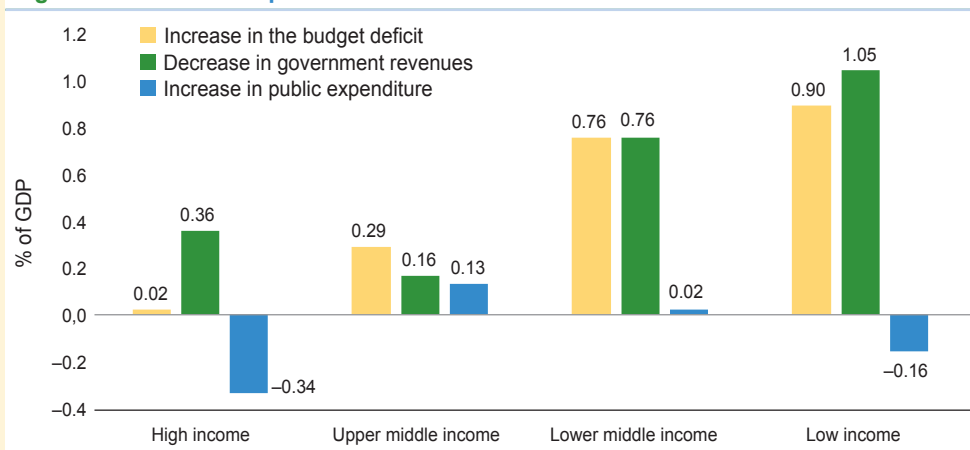
Extreme weather events tend to translate into lower government revenue as tax collection from the affected productive sectors declines. Likewise, they put pressure on public expenditure with the costs arising from the emergency response and the reconstruction process. These dynamics can weaken the government's fiscal accounts, increase public debt, and force the government to defer or abandon planned public investment. A danger is greater fiscal procyclicality, especially in countries that lack adequate disaster-insurance mechanisms.

The magnitude of the fiscal impact of more frequent extreme weather events can be substantial and can conspire against fiscal consolidation in the region. Alejos (2017) estimates that the occurrence of at least one extreme event in a given year is associated with an increase in the

Figure 6.1.1 Frequency of Extreme Weather Events

Source: IDB staff calculations based on data from EM-DAT and Alejos (2017).

(continued on next page)

BOX 6.1 (continued)**Figure 6.1.2 Fiscal Impact of the Occurrence of at Least One Extreme Weather Events**

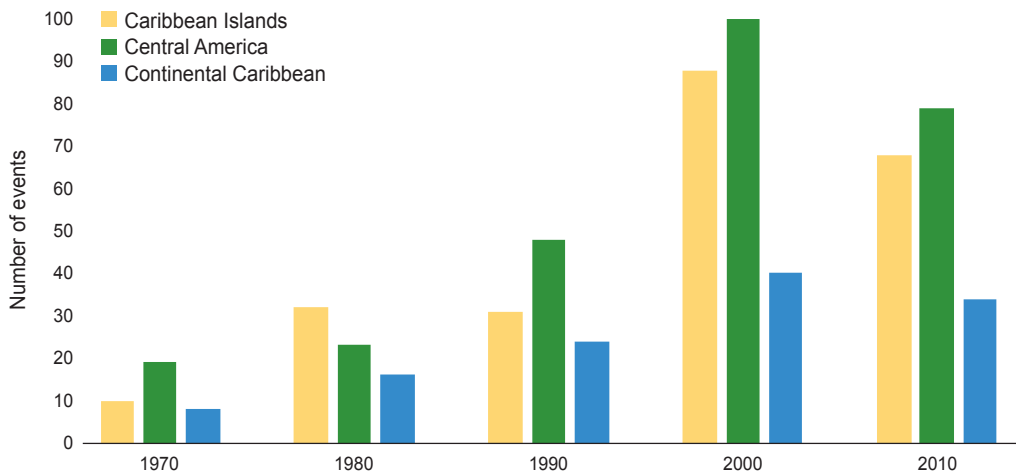
Source: IDB staff calculations based on data from Alejos (2017).

fiscal deficit of 0.8% of GDP for lower-middle income countries and of 0.9% of GDP for low-income countries (see Figure 6.1.2). Moreover, most of this negative effect on the budget balance comes from a decrease, on impact, of government revenues. For lower-middle income and low-income countries, this decline in revenues is equivalent to 0.8% and 1.1% of GDP, respectively. Contrarily, the contemporaneous effect on public expenditure is limited and for low-income countries, spending may decline due to credit constraints in the public sector.^a Combining these estimates with the occurrence rates for Latin America and the Caribbean, the average annual fiscal cost of extreme weather events in the region was between 0.2% and 0.3% of GDP for the 2001–19 period. This represents more than 10% of the average fiscal deficit (2.6%) in those years.

Climate change has increased the exposure of the region to extreme weather events and the potential fiscal impacts are large. Although in the past 20 years Latin American and Caribbean countries have implemented adaptation measures to reduce their vulnerability and improve their readiness, a series of challenges remain in order to confront the negative consequences of climate change, particularly in relation to the fiscal dimension. From an adaptation point of view, these challenges include developing financial strategies for using counter-cyclical fiscal policy following disasters, strengthening disaster-related insurance mechanisms,^b redirecting public investment towards climate-resilient infrastructure, and using methodologies to quantify climate- and disaster-related public expenditure. In terms of mitigation, the region has a pending agenda to further implement green taxation, an area in which countries such as Chile and Mexico have been pioneers. To the extent that governments implement policies to address these issues, they will be able to use their financial resources more effectively, reduce the negative impact on fiscal accounts, and contribute to global efforts to reduce greenhouse gas emissions that worsen climate change.

^a Despite these aggregate findings, there is evidence that the response of government spending to hurricanes is positive and can last for more than one fiscal cycle in the case of Caribbean countries (Ouattara and Strobl, 2013). Moreover, the estimates of Alejos (2017) only reflect the net effect on each of these fiscal variables. This means that budget reallocations, for example, are not accounted for as part of the estimated fiscal cost despite some evidence of their importance (see Benson and Clay, 2004).

^b In 2009, the IDB created a US\$600 million contingent credit facility. This facility finances loans of up to US\$100 million, with disbursements contingent on the occurrence of a natural disaster.

Figure 6.5 Incidence of Hydrological Natural Disasters in the Caribbean Basin

Source: IDB staff calculations based on EM-DAT database.

Note: Central America corresponds to Belize, Costa Rica, El Salvador, Guatemala, Honduras, Nicaragua, and Panama. Caribbean islands refers to The Bahamas, Barbados, Dominican Republic, Haiti, Jamaica, and Trinidad and Tobago. Continental Caribbean refers to Colombia and Venezuela. The sample is restricted to: (i) countries for which the necessary data to perform the exercise is available over the sample period; (ii) IDB borrower members.

Jeanne (2017) find that output drops the year of the disaster between 2 and 4 percentage points on average. Output growth rates fall in the year of the event between 2% and 4%, and the recovery after the disaster is not large enough to catch up with the pre-disaster trend. Overall, in the most severe natural disasters, GDP growth falls by 2–4% in the year of the disaster, and output generally does not catch up to the pre-disaster trend afterwards.

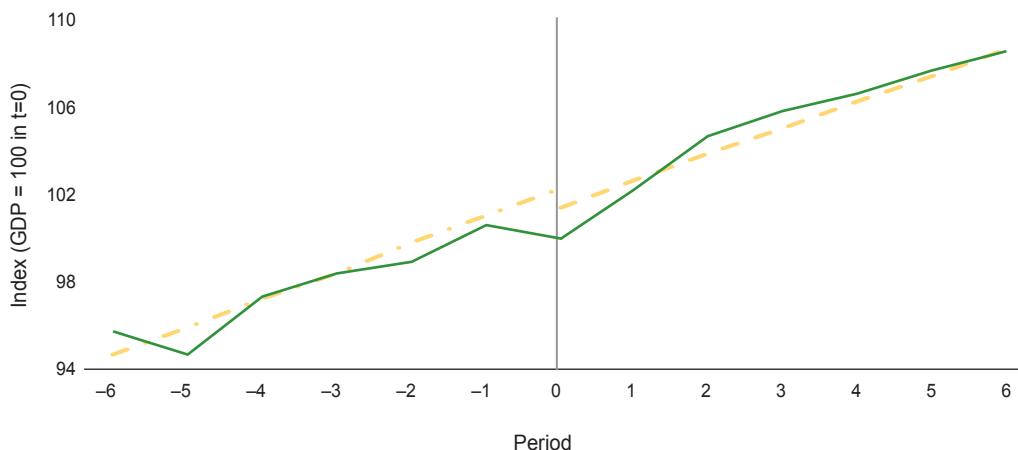
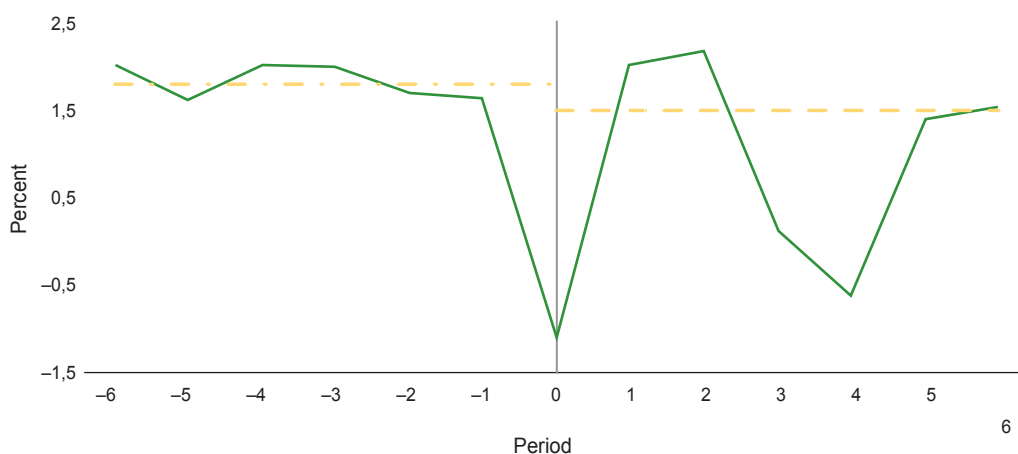
The Caribbean Basin: A Case Study in Hydrometeorological Disasters

The Caribbean Basin comprises the islands and the Central and South American countries with shores facing the Caribbean Sea. According to EM-DAT,⁸ the incidence of hydrometeorological natural disasters in this region has surged from 37 events in the 1970s to 181 between 2010 and 2018 (see Figure 6.5).

Figure 6.6, Panel A compares the average real GDP per capita for the top-30 disasters based on the mortality rate⁹ (i.e., the percentage of the population killed by the disaster

⁸ EM-DAT is a global database on natural and technological disasters, containing essential core data on the occurrence and effects of more than 21,000 disasters in the world, from 1900 to present. EM-DAT is maintained by the Centre for Research on the Epidemiology of Disasters (CRED) at the School of Public Health of the Université Catholique de Louvain located in Brussels, Belgium.

⁹ The criterion to identify the list of the 30 largest events can alternatively be done combining mortality rate, number of people affected, and damages (see Alejos, 2017). While the list of events differs depending on the criterion used, the results are very similar.

Figure 6.6 Economic Impacts of Natural Disasters in the Caribbean Basin**A. Real GDP per capita****B. Growth of real GDP per capita**

Source: IDB staff calculations based on Borensztein, Cavallo, and Jeanne (2017), EM-DAT, and World Development Indicators. Note: The figure shows the averages of the level of real GDP per capita (Panel A) and real GDP per capita annual growth rates (Panel B) across the 30 largest hydrometeorological natural disasters (based on mortality rates) in the Caribbean Basin in a 12-year window centered around the event. The pre- and post- event trends are also included in both panels. The effective sample size is reduced to 17 events considering overlapping episodes. In Panel A, the level of output per capita for every event is normalized to 100 in the year of the event ($t=0$) before taking averages across countries. In Panels A and B, the post disaster trends are not statistically different from the pre-disaster trends, suggesting that output losses are not recovered.

as a share of the previous year's population).¹⁰ The sample is restricted to countries in the Caribbean Basin and to events occurring between 1970 and 2018.¹¹ The level of output

¹⁰ The results of the exercise are largely robust to changing the window to six years around the events, and to using the list of top 50 or top 20 events rather than the top 30.

¹¹ The exercise follows the methodology of Borensztein, Cavallo, and Jeanne (2017). The events identified range from a mortality rate of 2,700 people killed per million inhabitants (a storm in Honduras, 1974) to 12 people killed per million inhabitants (a storm in Guatemala in 2010).

per capita is normalized to 100 in the year of the event ($t=0$) and averages are then taken across countries. At the time the disaster strikes, the trend in the level of real GDP drops by 2.2 percentage points.

In terms of growth rates in real GDP per capita, Figure 6.6, Panel B shows that GDP growth falls by 2.9 percent. The ensuing recovery is not large enough to catch up with the pre-disaster trend. In particular, the pre- and post-disaster growth averages are not statistically different (if anything, post-crisis growth is slower).

The negative impacts on economic activity do not affect all income groups uniformly. Low-income households suffer disproportionately from the impacts of disasters because they are more vulnerable, have fewer resources to spend on prevention, and are less able to cope with them if they occur.¹² As the income of poor households decreases by more than the income of rich households, income inequality also increases. Moreover, the recurrence of events may have negative and irreversible impacts on health and education, particularly on children. Hallegatte et al. (2017) estimate that if all disasters could be prevented, the number of people in extreme poverty would decline around 26 million in one year. Extrapolating those numbers to the Caribbean islands, 145,000 people could be lifted out of poverty in the region immediately.¹³ Given the magnitude of the estimated impacts on growth and poverty, building resilience is unequivocally a development policy.

Mitigation and Adaptation to Prepare for the Future

The first line of action to limit the negative impacts of climate change is mitigation. To avoid the catastrophic effects of climate change, countries around the world must reduce their carbon emissions as part of a coordinated strategy to mitigate climate change globally.

Assuming the world will eventually act as the situation becomes ever more dire, the longer the world waits to take decisive action, the higher will be the estimated costs associated with stranded assets in industries that are high emitters of carbon.¹⁴ As of today, some 10% of fossil fuel power plants in the region will need to be retired prematurely to achieve the 2° Celsius goal of the Paris Agreement (González-Mahecha et al., 2019). Building additional fossil fuel power plants would only increase the costs of stranded assets and the urgency and economic costs of the transition in the power sector.¹⁵

¹² For a recent survey on the impact of natural disasters on the poor, see Hallegatte et al. (2017).

¹³ The population in the Caribbean islands alone, including Haiti, Cuba, and the Dominican Republic, is equivalent to 0.56% of the total world population. The number of people that could be lifted out of poverty immediately reported here comes from an extrapolation of the World Bank report for the regional average. It does not consider the difference in poverty rates within the Caribbean region where poverty rates are concentrated in some of the countries/islands.

¹⁴ There are also important potential implications for financial stability (see Caldecott et al. 2016).

¹⁵ These issues will be discussed in more detail in the IDB's forthcoming Development in the America's flagship, *From Structures to Services: The Path to Better Infrastructure in Latin America and the Caribbean*.

The second line of action involves curtailing losses caused by climate change; this requires improved planning including adaptation measures. Governments need policies to help reduce the direct economic impact of rising temperatures. Poorer regions will likely experience larger economic losses since they often have higher baseline temperatures and depend more on highly exposed economic sectors such as agriculture. Similarly, poorer households will likely face greater economic shocks since they tend to work in the agricultural sector, spend a greater fraction of their income on necessities, and have less access to savings and credit to smooth the negative economic impacts of temperature shocks (Hallegatte et al., 2016; Hallegatte and Rozenberg, 2017; IMF, 2016).

For natural disasters, curtailing losses implies “shrinking the target” with policy interventions that can lessen the impact of disaster impacts; such policies include land use planning, strengthening building codes, and other engineering interventions to increase resilience. Some ex ante actions that can reduce losses in case of a disaster are costly and, therefore, governments must carefully evaluate the likely ex post impacts, and the probability of disasters occurring.

In the aftermath of natural disasters, governments must deal with the costs of humanitarian assistance and the eventual reconstruction of assets destroyed. Dealing with natural disasters can be costly for governments, especially in times of tight budget constraints. One source of financing that is usually available in the aftermath of disasters is foreign aid. Aid flows to countries the year a natural disaster occurs increase by 18% compared to the previous two years (Becerra, Cavallo, and Noy, 2014). However, that is equivalent to only 0.25% of GDP, and to less than 3% of total estimated damages caused by the same events. In addition, the aid pledged by donors when the crisis is at its peak is usually higher than the amount of foreign aid that is effectively disbursed, especially if donors perceive that the aid may not be spent according to the priorities set.

If foreign aid is not large enough to help developing countries deal with the costs imposed by natural disasters, what else can countries do? Some alternative financing tools available to developing countries include reserve funds (which imply saving ex ante to build up a reserve as Chile was able to do in the 2000s), contingency credit lines (for example, the IDB’s Contingent Credit Facility for Natural Disasters-CCF),¹⁶ regional risk pools (like the Caribbean Catastrophic Risk Insurance Facility – CCRIF),¹⁷ or insurance and

¹⁶ The CCF is a facility that provides IDB borrowing member countries with a significant amount of liquid resources following a severe disaster to help them provide humanitarian relief and restore basic services to the population. The CCF offers parametric contingent loans that are prepared in advance through the IDB’s regular investment loan process, but are disbursed after it is verified that a disaster event with the previously agreed characteristics (such as type, location, and intensity) has occurred.

¹⁷ CCRIF was developed in 2007 under the technical leadership of the World Bank. It was formed as a multi-country risk pool. It provides parametric policies backed by both traditional and capital markets.

re-insurance contracts.¹⁸ All these mechanisms require the political will to pay up-front costs in order to reduce the fiscal impacts of disasters ex-post.

One of the most promising forms of disaster insurance is what is known as a catastrophe (or cat) bond: a tradable financial instrument that spreads risk across global capital markets. These bonds are usually issued by governments, insurance or reinsurance companies—the insurers of the insurers. Although they typically cover only a fraction of the damages, they can provide financial relief very swiftly in the case of severe events as the financial terms are based on the characteristics of the event rather than on an estimate of the losses; in this way they resemble parametric insurance. Thus, the financial benefits tend to be less contentious and governments can provide relief quickly before foreign aid arrives.

This insurance provides an additional, perhaps less understood, benefit. Countries at high risk of a natural disaster are also more in danger of defaulting on their debt if a catastrophe strikes.¹⁹ Consequently, they have less credibility in capital markets and must sell their debt at higher yields. By reducing the risk of default and lowering financing costs, cat bonds allow countries to borrow more. Estimates from Borensztein, Cavallo, and Jeanne (2017) suggest governments could increase their external borrowing from around 30% to more than 60% of GDP on average, providing welfare gains equivalent to several percentage points of overall consumption. Even if they do not actually increase their borrowing, welfare would rise given lower interest rates.

In 2006, Mexico became a pioneer in the region by issuing a US\$160 million cat bond to cover damages in the event of an earthquake. But for most countries, insuring against catastrophes is expensive. It has been estimated that cat bonds can cost around four times their potential welfare gains. This is in part due to the complexity associated with estimating a once-in-a-century event and the uncertainty related to those estimates. Moreover, private companies may face disincentives investing in the costly risk analysis and modeling required as their work may end up in the public domain. The result is an information-starved environment in which investors shy away and coverage is expensive. In this area, the public sector, as well as multilateral institutions, can play a critical role.

Developing countries face three types of obstacles implementing ex ante financing mechanisms: paucity of markets (insurance markets remain undeveloped, especially in developing countries); political resistance (politicians may balk at supporting expenditures to protect for risks that may not materialize, and that if they materialize, the benefits could be capitalized by other politicians); and inadequate institutional framework (the risk assessment analysis is lacking and the legal framework to enforce contracts is weak in many countries). Against that background, multilateral development banks (MDBs) can play a catalytic role. They can subsidize the research and the studies forecasting the probability

¹⁸ See Hallegatte et al. 2017 for a broader discussion of each of the options.

¹⁹ See Borensztein, Cavallo, and Valenzuela (2009).

of disasters that are required to support local insurance markets or share the results of public research on risk assessment with the private sector to support insurance markets.

The penetration of insurance against catastrophic risk is also low in the private sector in developing countries (see Löw, 2018). While research identifying the relationship between insurance penetration, recovery, and mitigation outcomes is surprisingly limited, the existing evidence suggests that having insurance increases the likelihood of reconstruction, reduces the financial hardship of the affected population after the disaster, and speeds time to recovery (see Kousky, 2019). Notably, insurance penetration is uneven across income groups, with low-income households having less insurance coverage than high-income households. In Chile, for example, only 4.5% of low-income households have insurance against earthquakes compared to 33% of high-income households.²⁰ This suggests that those most in need following a disaster are least likely to have access through insurance. Governments have a role to play in supporting the development of private insurance markets to cover catastrophic risks. Special emphasis should be placed on creating products that cater to low-income households who are less protected and more exposed.

Conclusions

Climate change and catastrophic natural disasters can negatively affect growth and increase poverty because they disproportionately burden the most vulnerable sectors of the economy. Similarly, the economic impacts of the Covid-19 pandemic are concentrated among more vulnerable households and sectors, exacerbating inequality. The two-way causality between income inequality and the negative impacts of climatic events implies that higher inequality will lead to larger negative impacts when a climate shock hits, which leaves the poor more vulnerable to future shocks. This negative feedback loop highlights the importance of policies that reduce inequality by focusing on resilience. A more equitable society is better positioned to withstand the challenges of climate change, natural disasters and pandemics.

Countries must adopt measures to mitigate climate change and, at the same time, prepare to deal with the consequences, including higher temperatures and natural disasters, through better adaptation. The low-growth environment, tight fiscal budgets, and the persistently high levels of inequality prevailing in many countries in the region create additional challenges for policymakers: disaster preparedness is costly, and the payoff uncertain. The efforts required to build up resilience in the region demand collaboration between national authorities and the international community. Multilateral development banks can assist through advice and the development of new products. The broader international community, in turn, faces an additional challenge, because addressing climate change requires collective action at the global level and a high level of collaboration and coordination between countries.

²⁰ Casen Survey: <https://www.hacienda.cl/english/documents/statistics/casen-survey.html>.

CHAPTER 7

Policies to Promote Inclusion and Growth

Over the past two decades, Latin America and the Caribbean has made considerable progress in boosting income levels and reducing inequality and poverty. However, growth declined in recent years and inequality had started to rise again. A growing middle class likely had greater aspirations for the future, leading to more forceful demands for better services. While other factors were surely at play, the growing gap between the persistently high levels of inequality and poor prospects, on the one hand, and the desire for better opportunities and services, on the other, sparked protests in the region in the second half of 2019.

On top of this, the region is now grappling with the Covid-19 pandemic and the associated economic crisis. Governments have taken strong non-pharmaceutical measures to save lives. The organized partial closure of economies has led to a severe recession in the region. As discussed in the 2020 Latin American and Caribbean Economic Report, Policies to Fight the Pandemic, this is not an ordinary recession as it bears virtually no resemblance to typical business cycle fluctuations. This implies that typical policies for demand management (countercyclical monetary and fiscal policy) may be inappropriate, especially if they provoke activities that go against social distancing objectives required to slow the spread of the disease. Rather, policies should be aimed at providing relief to assist families that lose their source of income and to maintain the productive nucleus of the economy intact. Governments around the region are indeed taking such actions, but, at the same time, they are facing significant fiscal and other macroeconomic constraints.

Unfortunately, the current crisis will only exacerbate the underlying issues of inequality and exclusion faced by the region. The objective of this report is to present analysis and find policies that will increase opportunities for all, particularly the most disadvantaged, as the current crisis abates. Inclusion is both complex and multidimensional, and it is impossible to be comprehensive in a short report; the focus was placed on certain areas. Many important topics, such as education, skills, gender, indigenous rights, health, informality, the future of work, and access to specific public services, were left for consideration

elsewhere.¹ Here, the emphasis is on more structural factors to boost inclusive growth once governments decide to open up their economies.

Macroeconomic and financial stability are necessary conditions to promote inclusive growth once the health emergency abates, and as described in Nuguer and Powell (2020), policymakers in the region have been very active fighting this pandemic. Interestingly, low and stable inflation is not only good for growth, but also pro-poor. Moreover, expansionary monetary policy that stimulates the economy in normal periods of low growth benefits everyone, but especially low-income households. This new setting means that the traditional arguments to strengthen central banks through effective independence and separation from the politics of the day are not just important to maintain price stability in Latin America and the Caribbean, but also for achieving inclusive growth.

Regarding financial stability, the region made significant progress improving banking regulation and supervision, and banks have come into the Covid-19 crisis with high capital and liquidity ratios (Nuguer and Powell, 2020). However, the crisis is putting pressure on financial systems with higher demand for liquidity and a sharp rise in credit risk. Despite progress on financial inclusion, financial systems remain relatively shallow, and many poorer families are excluded from the world of financial services due to a lack of funds, high costs, or a lack of trust, which may be related to poor information. New research on financial education, particularly programs aimed at youth, provides greater optimism that they can be beneficial. Given high costs and weak competition, some countries have experimented with direct interventions, such as targeted credit and interest rate caps. The evidence is mixed, with some beneficial impacts but also unintended consequences. If used, such interventions should be carefully calibrated and rigorously evaluated. Other ways to improve competition may be preferable, such as providing better information to consumers, regulations that make switching between institutions easier, and ensuring that innovations in the fintech space are regulated in a way that balances low-entry costs with financial stability.² The current crisis may also represent an opportunity with regard to boosting financial inclusion, as expanded programs to provide transfers to families and very small firms can be implemented through the financial system, providing incentives for them to open their first account, and at low cost.

The current crisis is also putting significant strain on countries' fiscal accounts, with higher fiscal deficits and debt on the rise. At the same time, it is important that governments

¹ See Busso and Messina (forthcoming). Márquez et al. (2007) focused on issues regarding inclusion covering several of these areas as well as some topics included in this report. While there has been progress since that date, the more analytical recommendations regarding how to promote inclusion still appear relevant. More specifically, see Ñopo (2012) on discrimination, Berlinski and Schady (2015) on early childhood learning, and Busso et al. (2017) on education and skills. Powell (2015) and Izquierdo, Pessino, and Vuletin (2018) considered the record regarding public spending and outcomes in various social sectors while IDB (2003), Powell (2013) and Alaimo et al. (2015) considered labor market issues.

² IDB/Finnovista. 2018.

do not lose sight of medium-term objectives and potential opportunities for fiscal reforms that enhance inclusive growth. Fiscal policymakers have been very active trying to keep the core of the economies as intact as possible in an effort to boost inclusive growth once the health threat is contained. In this sense, growth and equality are frequently seen as substitutes, and policies are viewed as achieving one at the expense of the other. But this is not always the case, especially given the actual structure of current tax systems and spending. For example, there might be some space to enhance the tax base or make the tax system more progressive and then use those revenues to drive growth. Countries attempting to raise revenues and spending levels from currently low levels should ensure these additional resources are put to good use. Boosting efficiency and targeting of spending could lead to significantly more bang for the buck.³

In response to the crisis, transfers to poorer families and to micro and very small firms have been increased. This is understandable as it provides relief to the most vulnerable and those with very few assets who may have lost their livelihoods. As the crisis abates, such programs will need to be reevaluated as they may also create incentives for workers to stay in low-productivity, informal enterprises which may lower growth. Reallocating spending such that it boosts general economic activity or provides incentives for more productive activities, particularly for low-income households, can be a better approach. Some aspects of infrastructure spending can benefit low-wage earners, and better spending on higher education and skills can raise growth and improve equity at the same time.

Tax systems are often thought of as a way to obtain revenues rather than as tools for development.⁴ In many cases, reforming the current tax systems can boost growth and reduce inequality at the same time. Tax systems can be made more progressive, while tax and expenditure plans can be developed to boost activity, especially for poorer households or regions. While value-added taxes may appear regressive at first sight, a better design can render them progressive, especially if combined with higher pro-poor spending. There is an urgent need to eliminate tax spending (such as tax exemptions that are normally regressive) and use the proceeds to boost pro-poor spending. Relying more on well-designed property and income taxes would also increase progressivity in many cases. Understanding the patterns of inequality in the region is critical to formulating the right policy response.

Despite much recent analysis, the subnational regional dimension has received less quantitative attention. Regional inequality within countries is higher in Latin America and the Caribbean than in some other areas of the world, and while poorer areas do appear to be growing faster than richer ones, the speed of convergence is slow. The Covid-19 crisis

³ See Izquierdo, Pessino, and Vuletin (2018).

⁴ See Corbacho, Fretes Cibils, and Lora (2013).

may have halted this convergence completely or even reversed the trend. Looking only at differences in average household incomes, national and subnational regional differences explain as much as 25% of total individual family inequality. That is a substantial share as the subnational regions considered remain fairly large; a more granular division would no doubt explain an even higher percentage. Thus, transfers from richer to poorer areas (normally administered by national governments) could play an important role and should be part of the policy mix. However, there are dangers, and such transfers should not erode incentives for areas to boost their own tax revenues or provoke moral hazard—the idea that budget constraints need not be heeded as the subnational authority might be bailed out. In many cases, the current system of transfers, while substantial in terms of volume, does little to reduce regional inequality and may well stimulate perverse incentives. Reform towards a system of carefully designed fiscal equalization transfers, as employed in many OECD countries, would constitute significant progress.

Another factor behind the recovery and the handling of the current crisis is trust. Trust has many dimensions—between individuals, firms, and government. Low trust in each dimension can have negative impacts on economic activity and well-being and the efficiency of the policies that a government carries out, especially during a pandemic. There are positive associations between trust, growth, investment, innovation, and the availability of finance. Trust has been low and declining in the region, and while there may be many complex socioeconomic reasons behind this, policy interventions can help. A judicial system that is efficient and seen to be fair is key. Better information systems can increase credit access for both individuals and firms. Regulations and incentives to improve corporate governance and stronger creditor rights can help improve access to outside financing. Governments can also enhance trust in their own activities by providing better information and ensuring the public knows what the government plans, how it is going to execute those plans, and what the results are. Improving communication along these dimensions can produce real results, such as improving tax collection when citizens grow more confident their taxes will be used to good effect. Still, much work needs to be done in this area to understand the origins and consequences of low trust, and the potential policies to deal with it.

A growing concern in the region is that climate change is impacting temperatures and the frequency and severity of natural disasters. The lockdowns imposed in many countries in response to Covid-19 provide clear evidence of how the way we travel and power our societies contributes to carbon emissions. Countries need to refocus and join coordinated global action to mitigate climate change and advance towards net-zero emissions. Temperature changes are already having negative economic impacts in warmer climate zones. Sadly, these impacts tend to fall more heavily on low-income families that work in sectors more acutely affected by climate change and cannot afford the necessary adaptations. Extreme weather may become more common and storms may become more

frequent and stronger.⁵ There is evidence that severe events have persistent economic impacts. Again, these effects tend to fall disproportionately on poorer households that may live in more precarious dwellings and are less likely to be insured. Insurance gaps are larger in poorer countries. These arguments imply that both climate mitigation and improved planning, including adaptation measures, support inclusive growth. This is particularly the case if adaptation efforts focus on ensuring poorer, and more vulnerable areas are prepared, appropriate building codes are followed, lower-income families have access to insurance, and governments have the fiscal resources and capacity to act quickly to help if disaster strikes. Catastrophe bonds and other insurance products may play a useful role.

The collapse of external demand and the stay-at-home orders have provoked sharp falls in economic activity. Shutdowns have a particular impact on inequality. While poorer households, particularly those working in often informal frontline service jobs such as restaurants and retail, have lost their source of income, middle- and high-income households are more likely to retain their jobs and salaries and are able to work from home. The crisis will therefore only increase the gap between rich and poor. Once the health emergency abates, the region will face many challenges, including low growth and even greater disparities in income and opportunities. There will be an urgent demand for policymakers to act, and this report has identified specific actions for them to consider in several areas. While many reforms are politically sensitive in nature, the current crisis may provide an opportunity to pursue more fundamental changes. A good example is tax and spending reform. Despite the preponderance of costly transfers and subsidies, current systems do little to reduce inequality, especially compared to Continental Europe or OECD members. Covid-19 might provide the impetus for a deeper rethink. This report is by no means comprehensive, and policies in other areas could complement those suggested here. There is a policy sweet spot for countries if they select actions that both promote economic activity and boost opportunities for the poor and more vulnerable.

⁵ See Cavallo, Powell, and Serebrisky (forthcoming).

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