

Better Spending for **Better Lives**

How Latin America and the Caribbean Can
Do More with Less

Chapter 4

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4 The Impact of Public Spending on Equity: Not Always as Intended

Economic growth and sound macroeconomic policies are essential to reduce poverty and income inequality. Governments can play a key role by using fiscal policy and public spending to further reduce poverty and inequality, and more importantly, ensure that these declines are long-lasting. However, because people and governments, and their behaviors, are involved, the effect of public spending is not always as intended. The relationship between spending and equity is complicated, indeed.

Governments can use fiscal policies (e.g., taxes and transfers) to target specific groups and redistribute resources from rich to poor individuals, households, and regions within a country. They can also provide in-kind transfers: quality services in education, health, and other public services that improve human capital, potentially enabling citizens to access more productive jobs, better remuneration, and an improved quality of life. Policies designed to increase human capital and overall productivity improve equity directly and indirectly through economic growth.

During the commodity boom at the beginning of this century, Latin America and the Caribbean experienced a period of economic growth marked by significant reductions in poverty and inequality. However, these gains were mainly driven by a favorable international environment—not productivity gains. During that period, Latin American and Caribbean countries also increased public spending—particularly social spending. Importantly, since the mid-1990s noncontributory social spending (NCSS) has risen to protect the huge number of informal workers without social insurance from various risks. Such widely praised policies to cover informal workers have indeed improved the lives of the poor but have created major problems for long-term poverty reduction, productivity, and the acquisition of human capital.

Hence, fiscal policy and public spending in the region seem to be making progress—albeit with several inefficiencies—in improving equity in the short run but still have a long way to go to achieve a long-run decline in poverty. If

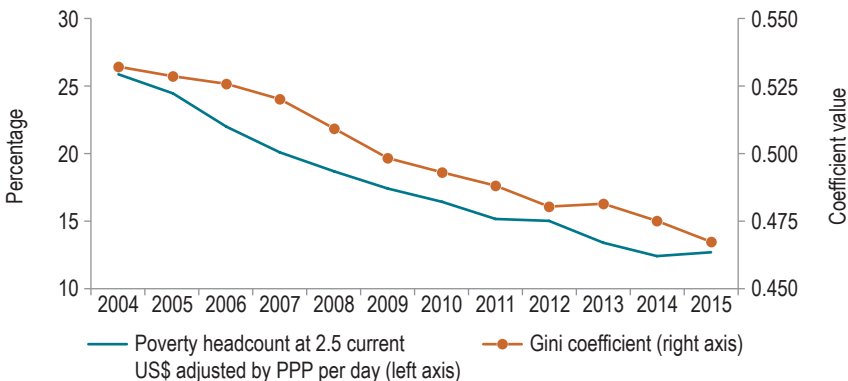
governments want to sustain the reduction in poverty and inequality, they need to change priorities: improve targeting, decrease reliance on noncontributory social spending, enhance the quality of education and health for the poor, and increase the overall efficiency of social spending.

This chapter focuses on the effect of public spending on the welfare state, providing evidence that public spending in Latin America and the Caribbean was not efficient in achieving a sustained decrease in poverty and inequality over the last decade. Important problems remain and this chapter identifies and quantifies: 1) the low redistributive capacity of fiscal policy, particularly spending policy; 2) high spending on regressive programs and low spending on progressive programs; 3) the low targeting capacity of social programs; 4) ever-greater noncontributory spending, which elicits behavioral responses that diminish the effect of social policy; 5) spending on health and education that, when quantified at cost, seems progressive, but when analyzed by its coverage and quality, is actually regressive; and 6) the increasing share of subnational governments' contributions to social spending, which adds an additional challenge for equity.

Past, Present, and Future

Over the last decade, poverty and inequality declined until leveling off in 2014 (see Figure 4.1). Poverty fell in virtually every country, and the fraction of people in the region living on less than \$2.50 per day halved from 25.9 percent in 2004 to 12.7 percent in 2015. The declines in inequality are similarly impressive. In 2004, the (disposable income) Gini

Figure 4.1 Poverty and Inequality in Latin America and the Caribbean



Source: Authors' calculation based on World Bank LAC Equity Lab and CEDLAS.

Note: Both series are calculated considering 11 countries from Latin America and the Caribbean.

coefficient¹ was 0.532 on average, and by 2015, it had fallen by more than 6 percentage points to 0.467.

Despite this decline in inequality, Latin America and the Caribbean continues to be one of the most unequal regions in the world.² The simple average for the Gini coefficient outside the region was 0.319 in the Organisation for Economic Co-operation and Development (OECD) economies (excluding Latin American and Caribbean countries), 0.360 in South Asia, 0.372 in East Asia, and 0.423 in Sub-Saharan Africa.³ With deteriorating external conditions since 2010, further declines in inequality are unlikely in Latin American and Caribbean countries, as their fiscal space shrinks and limits their ability to further increase social spending.

The region's continuous fall in poverty between 2003 and 2014 was primarily driven by economic growth rather than income redistribution. Between 2003 and 2007, about 73 percent of poverty reduction was due to economic growth; this share dropped to about 56 percent between 2007 and 2012, as redistribution played a more important role (World Bank, 2014). This growth fostered a relatively strong increase in labor income among the poor (Azevedo, Inchauste, and Sanfelice, 2013; Cord et al., 2017; Gasparini, Cruces, and Tornarolli, 2016). Of course, growth alone is not enough. How much and how efficiently public, and particularly social, spending contributes through cash and in-kind transfers to the decline in poverty and inequality is the subject of this chapter.

Most programs that affect equity directly are included in social spending and can be divided among programs that provide social insurance; programs that redistribute income; and those that build human capital, including education. Social insurance helps households manage adverse events like losing one's job (unemployment insurance), becoming sick (health insurance), suffering an accident (disability insurance), or facing old-age poverty (retirement pensions). Programs that redistribute income, on the other hand, focus on a subset of households—usually the poor—and aim to increase those households' consumption.

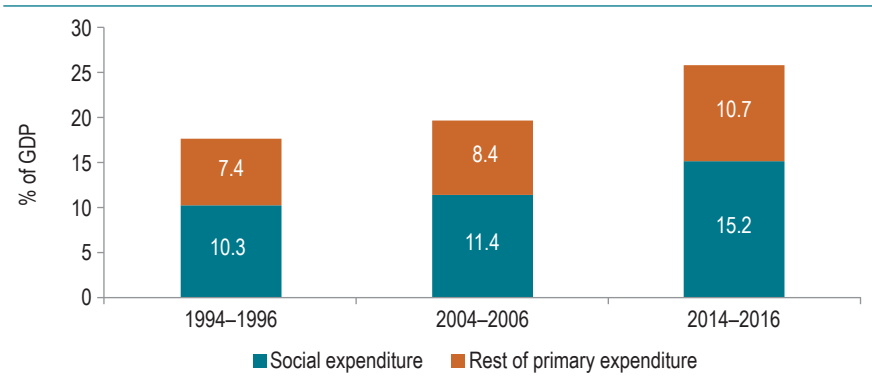
Countries in Latin America and the Caribbean increased public spending—particularly social spending—in recent decades. Social expenditure

¹ The Gini coefficient was calculated using the disposable income of households, that is, income after taxes and transfers.

² A growing literature analyzes the possible reasons for the decrease in inequality: López-Calva and Lustig (2010); Azevedo, Inchauste, and Sanfelice (2013); Lustig, López-Calva, and Ortiz-Juárez (2016); Levy and López-Calva (2016); de la Torre, Messina, and Silva (2017); and Busso et al. (2017), among others.

³ The average of Gini coefficients in countries in each region for the latest year available between 2011 and 2015 (World Development Indicators, World Bank).

Figure 4.2 Average Primary and Social Expenditure in Latin America and the Caribbean

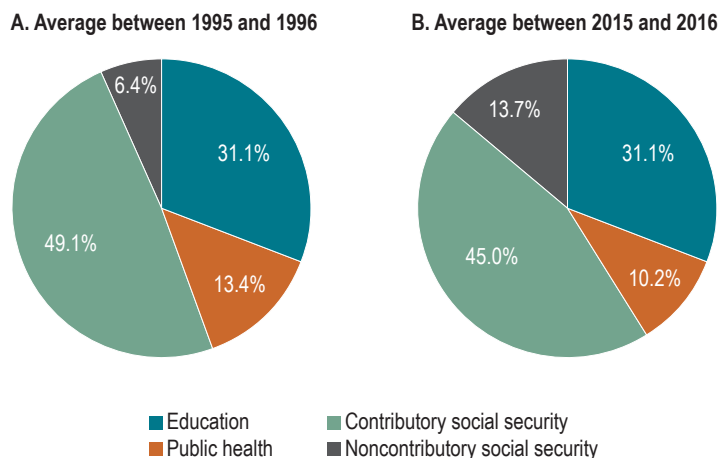


Source: Authors' calculation based on IDB/FMM Public Expenditure database and CEPALSTAT.
Note: Social expenditure includes: culture and religion; education; environmental protection; health; housing and community amenities; recreation; and social protection. It is based on 12 Latin American and Caribbean countries.

rose from 10.3 percent of gross domestic product (GDP) in 1990–1996 to 15.2 percent of GDP in 2014–2016 (while maintaining its participation in total expenditure at around 58 percent; Figure 4.2). This increase in spending occurred in a favorable international environment, with resource-rich countries enjoying a relatively long period of high commodity prices and more U.S.-dependent economies enjoying low interest rates; together these factors contributed to significant growth and a decline in poverty and inequality.

A major development since the mid-1990s has been a rise in noncontributory social spending; many governments introduced noncontributory pensions and health insurance, and cash transfers targeted to the poor. A growing consensus developed around the need to ensure a minimum income floor for the poor to allow them to escape poverty. The problem was that, since the origins of social insurance in the region in the mid-20th century, access has been limited to wage-employed workers.⁴ But many people are self-employed, while others are employed by firms that evade social security contributions. As a result, many workers—referred to as informal workers—have no access to social insurance, which explains Latin America's "truncated welfare state": formal workers are covered, informal ones are not. But informal workers also become sick, lose their jobs, have accidents, or face old-age poverty. Hence, governments began to expand noncontributory social spending. While in 1995–1996 noncontributory social spending accounted for 7 percent of total social spending,

⁴ This is an inheritance from Bismarck's first social insurance programs in Germany at the end of the 19th century (Kaplan and Levy, 2014).

Figure 4.3 Average Composition of Social Spending in Latin America and the Caribbean

Source: Authors' calculation based on IDB/FMM Public Expenditure database.

20 years later it had doubled to 14 percent (Figure 4.3). During the same period, the share of education remained at 31 percent (hence increasing as a percentage of GDP); thus, the increase in noncontributory social spending came at the expense of contributory social spending and public health.

First-Round Fiscal Incidence: No Behavioral Effects⁵

The tax and transfer system potentially plays an important role in reducing poverty and inequality. Fiscal incidence analysis consists of allocating taxes (personal income tax and consumption taxes, in particular) and public spending (social spending and consumption subsidies) to households or individuals and comparing incomes before and after taxes and transfers. Transfers include both cash transfers and benefits in kind, such as government services in education and health care. The incidence analysis

⁵ For this section and the next, part of the data and indicators—as cited—were developed by the Commitment to Equity (CEQ) Institute, which contributed kindly with papers and data from the CEQ Data Center on Fiscal Redistribution. The authors acknowledge its inputs although the opinions in this and other chapters are the authors' own, not endorsed by the CEQ Institute. Led by Nora Lustig since 2008, the CEQ project is an initiative of the Center for Inter-American Policy and Research (CIPR) and the Department of Economics, Tulane University, the Center for Global Development, and the Inter-American Dialogue. The CEQ project is housed in the CEQ Institute at Tulane. For more details visit www.commitmenttoequity.org. The information on the incidence of fiscal policy for each country comes from evidence recorded in each country from 2009 to 2016.

starts by defining the various types of income: market income, disposable income (equal to market income plus cash transfers less direct taxes and social security contributions), consumable income (post indirect taxation and subsidies), and final income (adding education and health spending to consumable income) (see Immervoll et al., 2009; and Lustig, 2017).

Benefit and tax incidence analysis show the first-round effects, that is, before the behavioral responses take place. This section aims to understand why fiscal policy in Latin America, especially spending policy, reduces inequality less than in more advanced economies, even without considering behavioral effects.

Inequality is much higher in Latin American countries than in advanced countries. According to the latest available incidence analysis for each country in Latin America and advanced countries (about 2012), Gini coefficients after direct taxes and cash transfers were 73 percent higher in Latin America than in advanced countries (Figures 4.4 and 4.8). Is this the result of differences in primary income of factors of production (market income), or of the incidence of taxes and expenditure? The answer lies in the differential effects of taxes and transfers among the regions. Inequality before direct taxes and transfers is only about 5.3 percent higher in Latin America (with a Gini of 0.515) than in advanced countries (with a Gini of 0.488), which is not that big a difference.⁶ Hence, the enormous difference in disposable income inequality between regions is due mostly to fiscal policy. In fact, for 16 Latin American countries, direct taxes and cash transfers reduce inequality by only 4.7 percent on average, while in a sample of advanced countries the decline is 38 percent.⁷ Uruguay, the country that redistributes the most in Latin America, redistributes less than the least-redistributing European country. Other high redistribution countries in Latin America are Argentina and Brazil (Figure 4.4).⁸

⁶ Even some advanced OECD countries such as Germany, Ireland, the United Kingdom, Italy, and the United States have market income Gini coefficients higher than 0.500, and thus higher than those of several countries in Latin America.

⁷ Including only the more “progressive” European Union countries, the reduction in inequality is even higher at 42 percent.

⁸ While this analysis focuses largely on the impact of spending on equity, the redistributive power of expenditures is higher than that of taxes. In OECD countries, direct taxes reduce inequality by about 30 percent, with the remaining 70 percent coming from cash transfers. In Latin America the relative impacts of cash transfers (65 percent) and direct taxes (35 percent) are similar to those in the OECD. Only direct taxes are included and, to compare with the OECD (2016a), a similar methodology is adopted, comparing sequential market income with market income after direct taxes and then with transfers, to obtain disposable income and the effect of direct taxes separated from spending. See Lustig (2017) for an explanation of the methodology using the marginal contribution of taxes and spending that does not depend on sequence and the effect of introducing consumption taxes in Latin America.

Figure 4.4 Differences in Income Inequality Pre- and Post-Taxes and Government Cash Transfers in Latin America, Compared with OECD and European Union, Circa 2012



Source: Author's elaboration based on the following works: a) Commitment to Equity Institute Data Center on Fiscal Redistribution. Based on information from: Argentina (Lustig and Pessino, 2014; Rossignolo, forthcoming); Bolivia (Paz Arauco et al., 2014); Brazil (Higgins and Pereira, 2014); Chile (Martínez-Aguilar et al., forthcoming); Colombia (Lustig and Meléndez, 2015); Costa Rica (Sauma and Trejos, 2014); Dominican Republic (Cabrera et al., 2016); Ecuador (Llerena Pinto et al., 2015); El Salvador (Bencke, Lustig, and Oliva, forthcoming); Guatemala (ICEFI, 2016a); Honduras (ICEFI, 2016b); Mexico (Scott, 2014); Nicaragua (ICEFI, 2016c); Paraguay (Higgins et al., 2013; Giménez et al., 2017); Peru (Jaramillo, 2014); and Uruguay (Buchi et al., 2014); b) all countries (Lustig, Pessino, and Scott, 2014; Lustig, 2017); c) EUROMOD version no. G4.0 for countries belonging to the European Union and OECDstat for OECD countries.

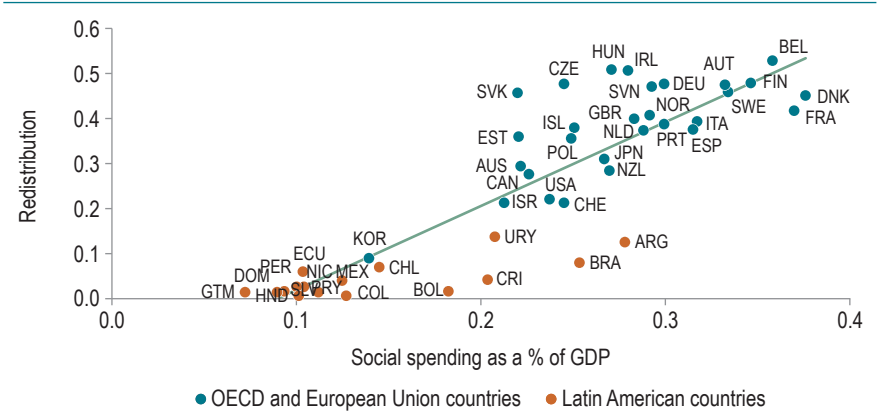
Note: Redistribution is defined as the difference between market income and disposable income inequality, expressed as a percentage of market income inequality.

Several reasons explain the substantial difference in redistribution between Latin American and advanced countries. Essentially, two characteristics of the fiscal system determine its degree of redistribution: the size of tax and expenditure interventions; and the progressivity or regressivity of each intervention, which is related to the degree that cash transfers leak out to the nonpoor.

Size Matters for Redistribution—But It’s Not Everything

There is a positive relation between the size of spending and redistribution. However, when comparing Latin American countries with OECD countries that spend roughly the same, advanced countries redistribute much more (Figure 4.5). The Latin American countries that reduce inequality most (between 6 percent and 14 percent) are Uruguay, Argentina, and Brazil, and they are also among the countries that spend most on social programs (Argentina leads in social spending with 28 percent of GDP, followed by Brazil with 25 percent, and Uruguay with 21 percent).

Figure 4.5 Social Spending and Redistribution in Latin America, OECD and European Union, Circa 2012



Source: Author’s elaboration based on the following works: a) Commitment to Equity Institute Data Center on Fiscal Redistribution. Based on information from: Argentina (Lustig and Pessino, 2014; Rossignolo, forthcoming); Bolivia (Paz Arauco et al., 2014); Brazil (Higgins and Pereira, 2014); Chile (Martínez-Aguilar et al., forthcoming); Colombia (Lustig and Meléndez, 2015); Costa Rica (Sauma and Trejos, 2014); Dominican Republic (Cabrera et al., 2016); Ecuador (Llerena Pinto et al., 2015); El Salvador (Beneke, Lustig, and Oliva, forthcoming); Guatemala (ICEFI, 2016a); Honduras (ICEFI, 2016b); Mexico (Scott, 2014); Nicaragua (ICEFI, 2016c); Paraguay (Higgins et al., 2013; Giménez et al., 2017); Peru (Jaramillo, 2014); and Uruguay (Bucheli et al., 2014); b) all countries (Lustig, Pessino, and Scott, 2014; Lustig, 2017); c) EUROMOD version no. G4.0 for countries belonging to the European Union and OECDstat for OECD countries.

Note: Redistribution is defined as the difference between market income and disposable income inequality, expressed as a percentage of market income inequality.

spending reduce inequality at least four times as much (from 40 percent in the United Kingdom to 53 percent in Hungary and Ireland).

The composition of social spending and the size of each component are important determinants of redistributive success. The largest differences between advanced and Latin American countries are pensions and direct transfers. Indeed, health and education spending are 20 to 50 percent higher in advanced countries than in Latin America, while cash transfers and contributory pensions are almost three times larger. Even where the levels and composition of social expenditure are similar to those of the average advanced country, as in Argentina and Brazil, redistribution capacity is still lower.

The average expenditure on contributory pensions for the 16 Latin American countries was 3.3 percent of GDP compared to 8.8 percent for the OECD (Figure 4.6). Even though some countries in the region, such as Brazil and Uruguay, spend close to the OECD average on pensions as a percentage of GDP, the effect on inequality is much smaller. Regarding cash transfers, Latin America spends 1.6 percent of GDP on direct transfers, while the OECD spends 4.4 percent on average.⁹ Again, average cash transfers in the countries that redistribute the most—Argentina, Brazil, and Uruguay—are similar to the OECD average of 4.4 percent of GDP.

Contributory Pensions, Noncontributory Spending, and Conditional Cash Transfers: Breaking It Down

While the size and composition of public spending explain part of its redistributive capacity, the progressivity of each expenditure item—contributory, noncontributory pension spending, and conditional cash transfers—and its relative size explain the incidence on inequality and poverty (see Box 4.1 for definitions of redistributive analysis).

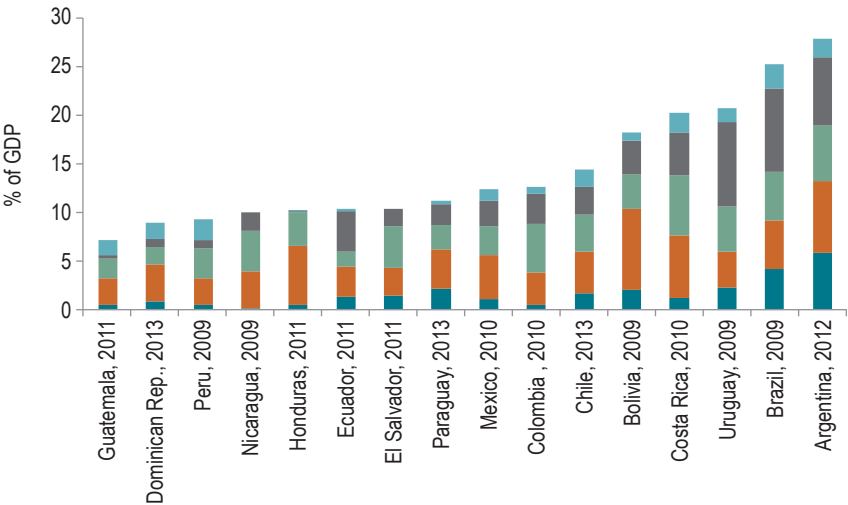
Contributory Pensions

Contributory pension spending in Latin America is pro-rich, meaning that the transfer increases with pre-fiscal income; hence, the rich receive a higher proportion than the poor in pension benefits. The exceptions are Argentina and Uruguay, where pension spending is slightly pro-poor. In fact, the distribution of contributory pension income by per capita income quintile ordered by pre-pension market income is quite different for

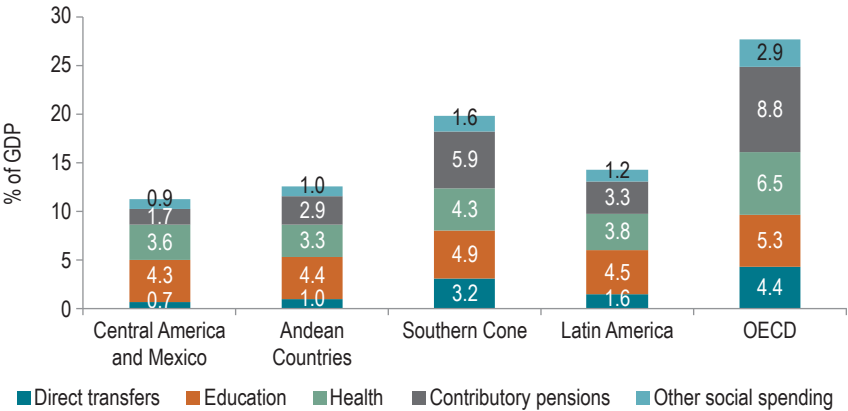
⁹ The figures in this section are from the same year of incidence study available in the Commitment to Equity (CEQ) project. For some countries, this spending continues to increase, especially in NCPs.

Figure 4.6 Composition of Government Social Spending

A. Countries of Latin America



B. Group of countries average



Source: Author's elaboration based on the following works: a) Commitment to Equity Institute Data Center on Fiscal Redistribution. Based on information from: Argentina (Lustig and Pessino, 2014; Rossignolo, forthcoming); Bolivia (Paz Arauco et al., 2014); Brazil (Higgins and Pereira, 2014); Chile (Martínez-Aguilar et al., forthcoming); Colombia (Lustig and Meléndez, 2015); Costa Rica (Sauma and Trejos, 2014); Dominican Republic (Cabrera et al., 2016); Ecuador (Llerena Pinto et al., 2015); El Salvador (Beneke, Lustig, and Oliva, forthcoming); Guatemala (ICEFI, 2016a); Honduras (ICEFI, 2016b); Mexico (Scott, 2014); Nicaragua (ICEFI, 2016c); Paraguay (Higgins et al., 2013; Giménez et al., 2017); Peru (Jaramillo, 2014); and Uruguay (Bucheli et al., 2014); b) all countries (Lustig, Pessino, and Scott, 2014; Lustig, 2017); c) OECDstat for OECD countries.

Argentina and Brazil than for El Salvador and Guatemala. In the first two countries, the two richest quintiles receive between 39 and 44 percent of pension income, similar to what the poorest two quintiles receive. However, in El Salvador and Guatemala, the two richest quintiles receive 80

BOX 4.1 DEFINITIONS OF REDISTRIBUTIVE ANALYSIS

The concentration coefficient provides a summary measure of the magnitude of pro-richness or pro-poorness of the transfer. If the transfer concentration or quasi-Gini coefficient is positive, the transfer or benefits increase for the higher-income population (pro-rich). If the concentration coefficient is negative, the transfer decreases with income (pro-poor), benefiting proportionally more poor than rich individuals. A concentration coefficient will be zero if all income units receive the same absolute amount of transfers.

The Kakwani index for transfers is defined as the difference between the Gini for market income and the concentration coefficient of the transfer (Kakwani, 1977). Spending is defined as regressive whenever the concentration coefficient is higher than the Gini for market income, or the Kakwani index is negative. While pro-poor spending is always absolutely progressive, pro-rich spending can be progressive when the concentration coefficient is lower than the Gini coefficient of market income.

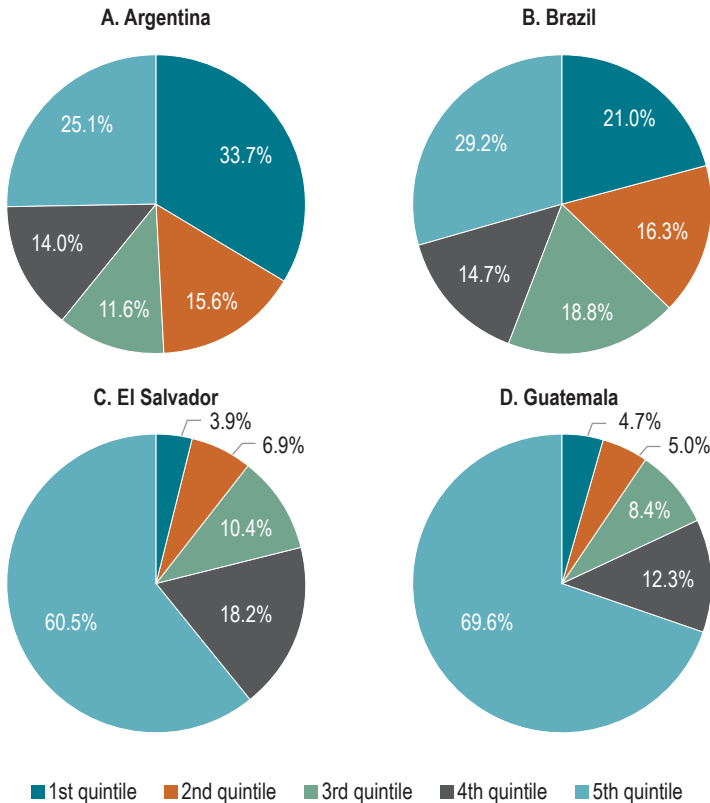
The redistributive effect can be captured by the difference in the Ginis of pre- and post-transfer income. Redistribution depends on the interaction between the size of the transfer, and progressivity (or targeting). A typical indicator of the redistributive effect of fiscal policy is the difference between the market income Gini and the Gini for income after taxes and transfers. If the redistributive effect is positive (negative), fiscal policy is equalizing (unequalizing) (Reynolds-Smolenski coefficient).

percent while the two poorest quintiles receive only 10 percent of total pension income (Figure 4.7).

For most of the 15 countries, the concentration coefficient is positive (hence, pension spending is pro-rich); but in about half the concentration coefficient is smaller than the market Gini coefficient, making pensions relatively progressive (Brazil has pro-rich spending but is relatively progressive when ranked by market income); in the other half, pro-rich pension spending is regressive. When considering the equalizing or unequalizing effect, which takes into consideration both the progressiveness and the size of the transfer,¹⁰ in half the countries pensions slightly improve the income distribution, while in the other half, pensions have an unequalizing effect. On average, Latin American contributory pensions decrease inequality slightly. However, contributory pensions are pro-poor and largely equalizing in the EU-27 (Figure 4.8). Hence, much of the difference in the redistributive

¹⁰ See Urban (2009) and Lustig (2017) for more details.

Figure 4.7 Distribution of Income from Pensions by Quintile of Per Capita Income (ranked by market income), Circa 2012



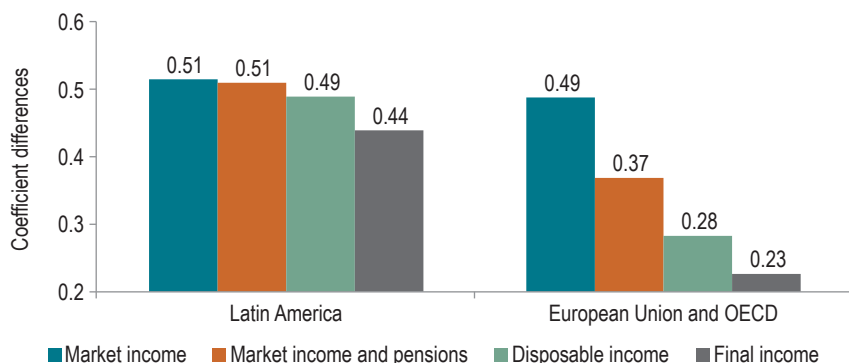
Source: Authors' calculation based on the following works: Lustig and Pessino (2014) for Argentina; Higgins and Pereira (2014) for Brazil; Beneke, Lustig, and Oliva (forthcoming) for El Salvador; ICEFI (2016a) for Guatemala; and Lustig, Pessino, and Scott (2014) and Lustig (2017) for all countries.

effect of social spending between the OECD and Latin America reflects differences in their pension redistributive power.¹¹

This difference in the redistributive power of pensions derives in part from the high informality of Latin American labor markets and the resulting segmentation of social security systems; informal workers, who tend to be poorer, are left out of the system. Contributory pensions in Latin America and the

¹¹ Since the effect of pensions can be overstated if considered a transfer rather than a part of market income, Lustig (2016, 2017) shows that the redistributive effect is six times larger between advanced and Latin American countries if pensions are considered a transfer and still large but only four times larger if pensions are considered part of market income.

Figure 4.8 Differences in Income Inequality, Pre- and Post-Pensions, and Government Cash and In-Kind Transfers in Health and Education



Source: Author's elaboration based on the following works: a) Commitment to Equity Institute Data Center on Fiscal Redistribution. Based on information from: Argentina (Lustig and Pessino, 2014; Rossignolo, forthcoming); Bolivia (Paz Arauco et al., 2014); Brazil (Higgins and Pereira, 2014); Chile (Martínez-Aguilar et al., forthcoming); Colombia (Lustig and Meléndez, 2015); Costa Rica (Sauma and Trejos, 2014); Dominican Republic (Cabrera et al., 2016); Ecuador (Llerena Pinto et al., 2015); El Salvador (Beneke, Lustig, and Oliva, forthcoming); Guatemala (ICEFI, 2016a); Honduras (ICEFI, 2016b); Mexico (Scott, 2014); Nicaragua (ICEFI, 2016c); Paraguay (Higgins et al., 2013; Giménez et al., 2017); Peru (Jaramillo, 2014); and Uruguay (Bucheli et al., 2014); b) all countries (Lustig, Pessino, and Scott, 2014; Lustig, 2017); c) EUROMOD version no. G4.0 for countries belonging to the European Union and OECDstat for OECD countries.

Note: Redistribution is defined as the difference between market income and disposable income inequality, expressed as a percentage of market income inequality.

Caribbean cover about 40 percent of workers, who tend to be better off, making the system highly unequal (Bosch, Melguizo, and Pagés, 2013; Bernstein et al., 2018). Moreover, benefits have outpaced workers' contributions and led to deficits in pension systems that have been covered by public revenues.

With the current systems in place and a rapidly aging population, pension deficits will increase over the next few decades. Hence, pensions today can be regarded in part as market income and in part as transfers since the government is financing them and partially running a deficit in all countries and the deficit will continue to increase in the absence of reforms. If eventually pensions are covered more from general taxes, it will be important to rethink their uneven coverage, inequality bias, and segmentation with a unique system of pensions (i.e., all noncontributory pensions).¹²

¹² However, there is another troublesome implication of formal-informal transits. Pension systems in the region, of either variety, usually require workers to contribute a minimum number of years to qualify for even the minimum pension. For a majority of those contributing, who have many or long formal-informal transits, the promise of a pension will be unfulfilled—surely a major social and political issue in the future. And this is not a result of low contribution rates in several countries (Levy, 2017).

Noncontributory Cash Benefits

Lack of coverage for pensions and family and children allowances, particularly among low-income workers and families, represents a major social problem. In response, Brazil and Argentina in the 1990s, followed by the rest of the region, introduced or expanded pension programs for the elderly, even if they never contributed to the pension system as workers or participated in the labor force. These are called noncontributory pensions, or NCPs. Also, conditional cash transfers (CCTs) were introduced in Brazil in the mid-1990s, in Mexico (through Progresa) in 1997, and eventually spread to most countries in the region. CCTs and NCPs were key initiatives to reduce poverty. As of 2014–2015, CCT programs served one-fifth of the region's population—132 million people and 30 million households—with spending equivalent to 0.3 percent to 0.5 percent of regional GDP (Levy and Rodríguez, 2005; Robles, Rubio, and Stampini, 2015; Cecchini and Atuesta, 2017; Figure 4.9A). Since workers receive benefits without contributing,¹³ the incentive is for workers on the margin of informality to become informal; this “subsidy” to informality has second-round negative consequences on poverty and productivity (efficiency).

NCPs are usually given to people over 65 or 70 years of age, although they vary across countries. The amounts paid are the same for all recipients, although the rules to qualify vary: in some cases, subject to a means test, in others subject to the beneficiary not having access to a contributory pension, and in other cases, universal. This variation is reflected in the average spending, which can range from 0.7 percent in Uruguay, to 2.4 percent in Brazil, 1.2 percent in Bolivia, and 3.7 percent in Argentina (Alaimo, Dborkin, and Izquierdo, 2018; Figure 4.9B).¹⁴

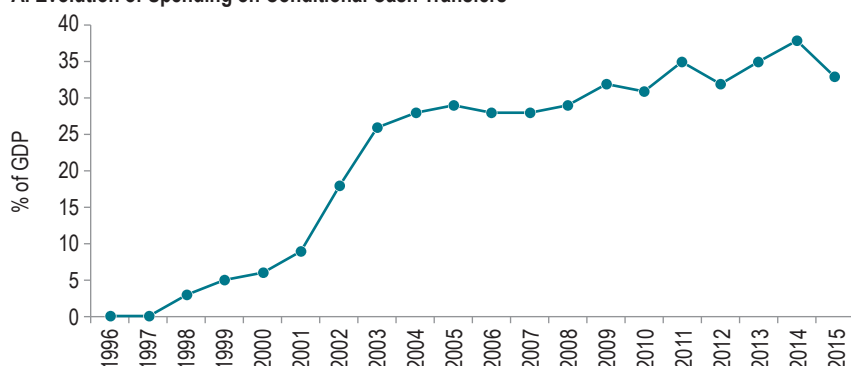
CCTs are one of the most progressive programs, with concentration coefficients ranging from the most progressive, -0.65 in Peru (with Juntos) and -0.61 in Uruguay (with Family Allowances), to less progressive programs. In all, the average concentration coefficient for CCTs is -0.46 for the Latin American countries considered. NCPs are much less progressive than CCTs. Since NCPs are larger programs than CCTs, even though they are less progressive, in some countries they have a higher impact on redistribution than CCTs because of their size (Figure 4.10).

¹³ Because these benefits are financed from general government revenues and not from a tax on wages, they are usually labeled “noncontributory programs.”

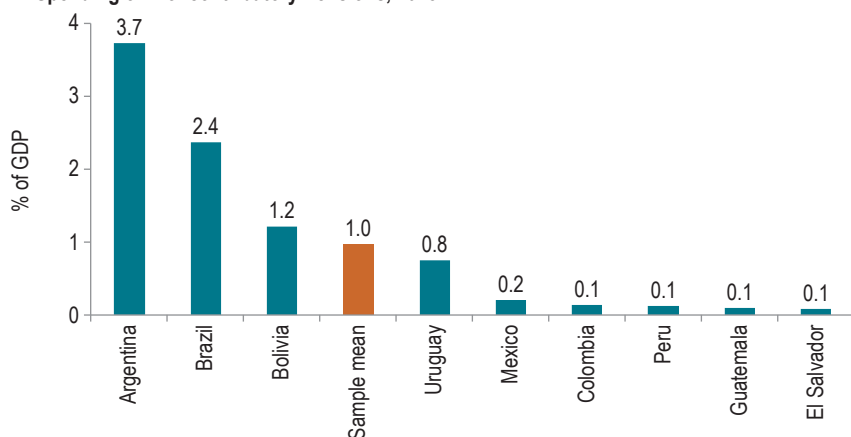
¹⁴ In Argentina this includes effects of the long-standing Social Pensions, in effect since 1948, and the more recent Pension Moratorium, in effect since 2005.

Figure 4.9 Spending on Conditional Cash Transfer Programs and Noncontributory Pensions in Latin America and the Caribbean

A. Evolution of Spending on Conditional Cash Transfers



B. Spending on Noncontributory Pensions, 2015



Source: In Panel A, authors' calculation based on Cecchini and Atuesta (2017). In Panel B, authors' calculations based on Pessino and Zentner (2018) and Alaimo, Dborkin, and Izquierdo (2018).

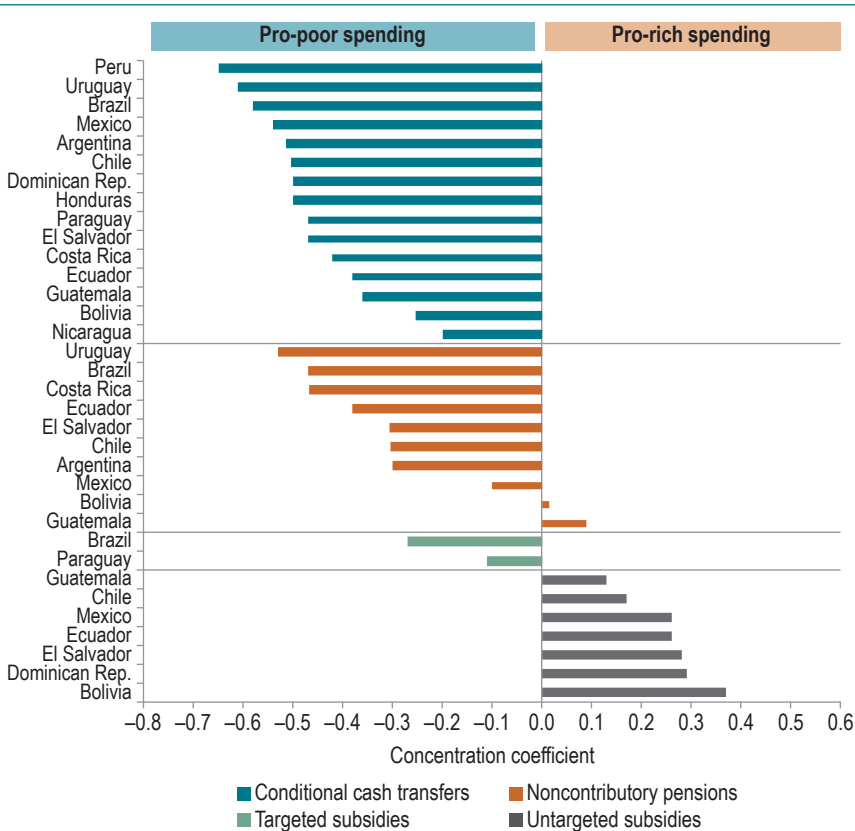
Note: In Panel B, Argentina includes "Moratoria Previsional"; Social Assistance Pensions; and Former Malvinas Soldiers. Bolivia includes "Renta Dignidad"; Brazil includes "Beneficio de Prestación Continuada" and "Beneficio Previsional Rural Semi-Contributivo"; Colombia includes "Colombia Mayor"; El Salvador includes "Pensión Básica Universal Adulto Mayor"; Guatemala includes "Programa Aporte Adulto Mayor"; Mexico includes "Pensión para Adultos Mayores"; Peru includes "Pensión 65"; and Uruguay includes "Pensión no Contributiva por Vejez e Invalidez."

Subsidies

Several studies on the impact of public spending on inequality and poverty ignore the regressive effect of subsidies, which are economically inefficient, poorly targeted if targeted at all, and thus, in most cases, pro-rich.

Price-based subsidies generate a high fiscal cost and result in a loss of economic efficiency. Energy subsidies are a clear example of untargeted pro-rich

Figure 4.10 Pro-Poor or Pro-Rich Transfer Spending (ordered by market income), Circa 2012



Source: Author's elaboration based on the following works: 1) Commitment to Equity Institute Data Center on Fiscal Redistribution. Based on information from: Argentina (Lustig and Pessino, 2014; Rossignolo, forthcoming); Bolivia (Paz Arauco et al., 2014); Brazil (Higgins and Pereira, 2014); Chile (Martínez-Aguilar et al., forthcoming); Colombia (Lustig and Meléndez, 2015); Costa Rica (Sauma and Trejos, 2014); Dominican Republic (Cabrera et al., 2016); Ecuador (Llerena Pinto et al., 2015); El Salvador (Beneke, Lustig, and Oliva, forthcoming); Guatemala (ICEFI, 2016a); Honduras (ICEFI, 2016b); Mexico (Scott, 2014); Nicaragua (ICEFI, 2016c); Paraguay (Higgins et al., 2013; Giménez et al., 2017); Peru (Jaramillo, 2014); and Uruguay (Bucheli et al., 2014); 2) all countries (Lustig, Pessino, and Scott, 2014; Lustig, 2017).

Note: Concentration coefficients are ranked in the scenario where contributory pensions are considered part of market income.

expenditure. These subsidies are distortionary, since many times they benefit the entire population through the final sales price of the subsidized products, regardless of the consumers' income level. Some countries in Latin America and the Caribbean spend 5 to 10 times more on regressive subsidies of this type than on CCTs, which are predominantly progressive and help reduce poverty. According to FIEL (2015, 2017) and Cavallo and Serebrisky (2016), energy subsidies in Latin America and the Caribbean represented 0.5 percent of GDP and about 61 percent of total subsidies in the region in 2015, down from 0.8

percent in 2013 (see the estimated efficiency loss from subsidies, transfers, and tax expenditures in Chapter 3). In several countries, propane gas, diesel, and electricity subsidies benefit the higher-income population, with the 10th decile receiving one-quarter of all the benefits and the first decile receiving only 5 percent; in other words, the wealthy receive five times more subsidies than the poor (Izquierdo, Loo-Kung, and Navajas, 2013; FIEL, 2017; Puig and Salinardi, 2015).

Equity can be improved by replacing subsidies with transfers that target low-income populations and even save resources. In the countries studied, untargeted subsidies were all pro-rich but relatively progressive (Figure 4.10). But the solution is easier said than done; since nonpoor beneficiaries will suffer from the loss and eventually protest, a phasedown of subsidies and consensus building will be needed for the change even if equity and efficiency increase.

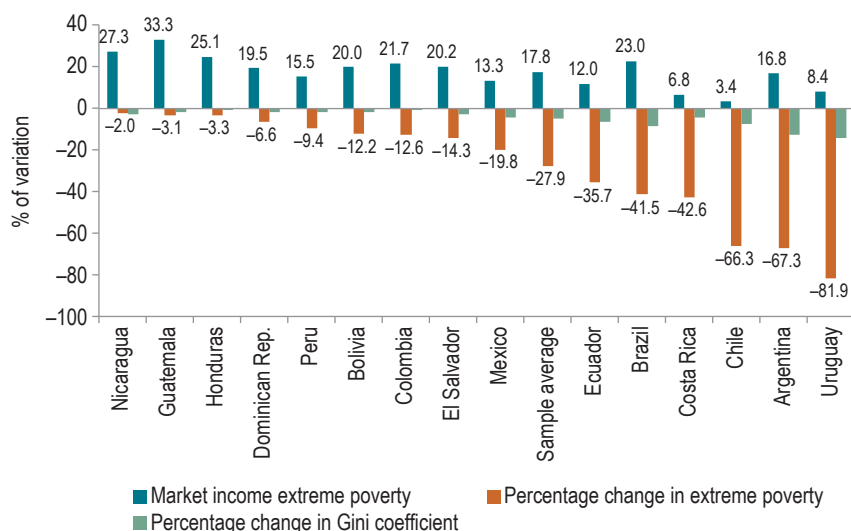
Closing the Extreme Poverty Gap

From a welfare perspective, a more progressive system that decreases poverty is desirable. Countries that rely on relatively less progressive transfers but of greater size might be better ranked in terms of reducing poverty than inequality. The sum of direct taxes, contributory pensions, and noncontributory cash transfers reduces extreme poverty rates in the 15 countries analyzed (Figure 4.11). Uruguay, Argentina, and Chile, the countries that reduce poverty the most, have also seen the largest decrease in income inequality. Costa Rica ranks fourth in poverty reduction, while Brazil is third in reducing inequality.

The impact of the cash transfers in the first round is to reduce extreme poverty from an average of 17.8 percent to 14.1 percent.¹⁵ The effectiveness in reducing poverty and inequality depends on the size of the transfer, the proportion of the poor population covered, and the amount of the transfer that is leaked to the nonpoor. As noted, a key challenge of expenditure policy is targeting, that is, guaranteeing that subsidies and transfers reach the poorest segments of the population. What percentage of benefits of cash transfers goes to the extreme and moderate poor and how much ends up in the pockets of the nonpoor (leakages)? According to 2013 data, the percentage of the extreme poor who are beneficiaries of CCTs and NCPs is only 46.9 percent and 12.8 percent, respectively. Since NCPs are targeted to the elderly who do not receive a contributory pension, in that more specific

¹⁵ The incidence of indirect taxes and subsidies diminishes the overall action of the fiscal system on poverty when compared to the effect of direct taxes and transfers alone (see Lustig, 2017).

Figure 4.11 Changes in Extreme Poverty and Inequality from Market Income to Disposable Income in Latin America



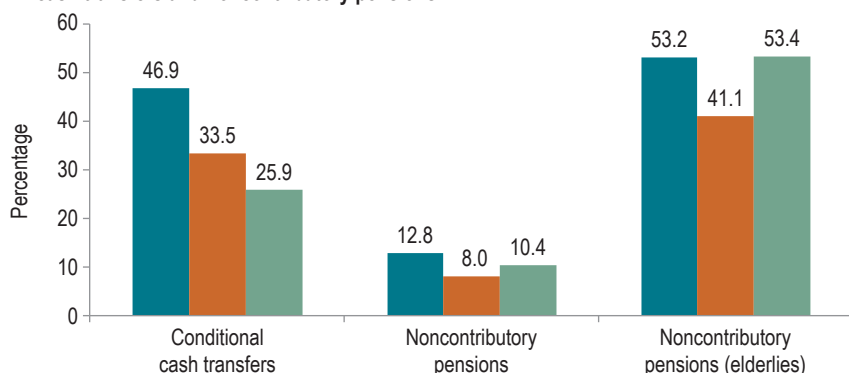
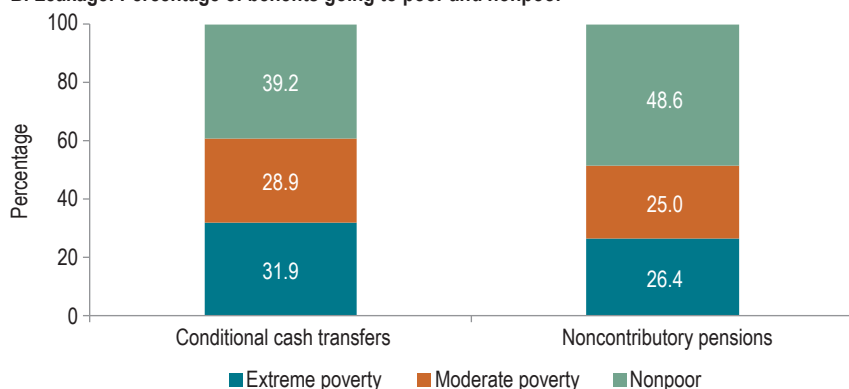
Source: Author's elaboration based on the following works: a) Commitment to Equity Institute Data Center on Fiscal Redistribution. Based on information from: Argentina (Lustig and Pessino, 2014; Rossignolo, forthcoming); Bolivia (Paz Arauco et al., 2014); Brazil (Higgins and Pereira, 2014); Chile (Martínez-Aguilar et al., forthcoming); Colombia (Lustig and Meléndez, 2015); Costa Rica (Sauma and Trejos, 2014); Dominican Republic (Cabrera et al., 2016); Ecuador (Llerena Pinto et al., 2015); El Salvador (Beneke, Lustig, and Oliva, forthcoming); Guatemala (ICEFI, 2016a); Honduras (ICEFI, 2016b); Mexico (Scott, 2014); Nicaragua (ICEFI, 2016c); Paraguay (Higgins et al., 2013; Giménez et al., 2017); Peru (Jaramillo, 2014); and Uruguay (Bucheli et al., 2014); b) all countries (Lustig, Pessino, and Scott, 2014; Lustig, 2017).

Note: Extreme Poverty defined at 2.5 current US\$ per day adjusted by PPP.

population the coverage is about 53 percent (Figure 4.12, panel A). About 39.2 percent of CCT beneficiaries and 48.6 percent of NCP beneficiaries are nonpoor (Figure 4.12, panel B). (Robles, Rubio, and Stampini, 2015).¹⁶

Although they do not represent a large share of GDP, the resources used for CCTs would be sufficient to cover the entire poor population, or at least the extreme poor, if they were retargeted. In fact, the number of beneficiaries from these programs is almost 2.5 times (148 percent) as large as the number of extreme poor. The potential savings from these leakages is estimated at 0.7 percent of GDP, which is about half the level

¹⁶ A measure of spending effectiveness used previously in CEQ assessments and in Bibi and Duclos (2010) divides the change in poverty by the amount spent as a proportion of GDP. Under this measure, Uruguay is more effective than Argentina and Brazil in reducing poverty per point of GDP spent. But Chile, with 4.6 percent of GDP spending on cash transfers, achieves the greatest effectiveness. This measure of effectiveness should be addressed with caution since the change is not linear for big spenders and might rank them incorrectly as less effective ones (Enami, Lustig, and Taqdiri, 2016).

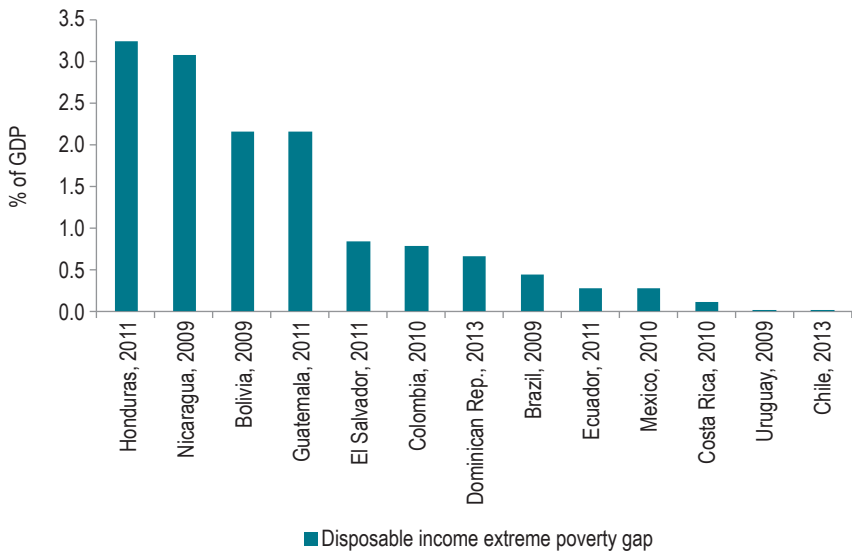
Figure 4.12 Coverage and Leakage of Transfers in Latin America and the Caribbean**A. Coverage: Percentage of poor who are beneficiaries of conditional cash transfers and noncontributory pensions****B. Leakage: Percentage of benefits going to poor and nonpoor**

Source: Authors' calculation based on Robles, Rubio, and Stampini (2015).

of spending devoted to these categories (Izquierdo, Loo-Kung, and Navajas, 2013; Cavallo and Serebrisky, 2016).

One important reason for inefficient targeting is that several countries in the region use means-tested or geographical targeting systems, which provide an estimate of per-capita income or consumption based on demographic characteristics and ownership of assets, but account for only 50 percent to 60 percent of the observed variability in living standards (Robles, Rubio, and Stampini, 2015). The integrated information systems implemented in Argentina in 1997 and in Brazil in 2001, based on up-to-date administrative data, could serve as initial models to improve targeting in the region's countries (Pessino and Fenochietto, 2007; Azevedo, Bouillon, and Irrarázaval, 2011; see also Chapter 9).

Figure 4.13 Disposable Income Extreme Poverty Gap, % of GDP in Latin America



Source: Author's elaboration based on the following works: a) Commitment to Equity Institute Data Center on Fiscal Redistribution. Based on information from: Argentina (Lustig and Pessino, 2014; Rossignolo, forthcoming); Bolivia (Paz Arauco et al., 2014); Brazil (Higgins and Pereira, 2014); Chile (Martínez-Aguilar et al., forthcoming); Colombia (Lustig and Meléndez, 2015); Costa Rica (Sauma and Trejos, 2014); Dominican Republic (Cabrera et al., 2016); Ecuador (Llerena Pinto et al., 2015); El Salvador (Beneke, Lustig, and Oliva, forthcoming); Guatemala (ICEFI, 2016a); Honduras (ICEFI, 2016b); Mexico (Scott, 2014); Nicaragua (ICEFI, 2016c); Paraguay (Higgins et al., 2013; Giménez et al., 2017); Peru (Jaramillo, 2014); and Uruguay (Bucheli et al., 2014); b) all countries (Lustig, Pessino, and Scott, 2014; Lustig, 2017).

It is also possible to quantify the cash transfers that would be needed to lift all inhabitants out of extreme poverty in each country, assuming perfect targeting. The extreme poverty gap indicator weights the percentage of the poor by the average gap between their incomes and the poverty line; thus, it considers how poor the poor are and, hence, the exact amount of resources needed to lift every person out of poverty. Closing the extreme poverty gap (below \$2.50 PPP per capita a day) would require somewhat more than 3 percent of GDP in Honduras and Nicaragua and 1 percent or less in Costa Rica, Uruguay, or Chile (Figure 4.13).

Considering the percentage of subsidy spending that is still high in several countries, and the leakages in all programs, there is scope to cover all the extreme poor without increasing spending, at least in all the countries that would require less than 1 percent of GDP.

Policymakers may wish to evaluate whether to increase the size of transfers or improve effectiveness by better targeting beneficiaries. Moreover, dependence on social assistance is another side effect of social insurance and protection that should be avoided. Latin America and the

Caribbean must avoid permanent welfare dependency and greater informality. After achieving complete coverage of chronic extreme poverty, the greatest triumph of CCTs would be their gradual reduction until they are no longer necessary. Regarding NCPs, expanding their coverage and generosity, which will have effects for decades to come, together with rapid aging of the population, can make these transfers unsustainable.

Argentina during the 2000s is an emblematic case of welfare dependency and unsustainability in the wake of high growth (Lustig and Pessino, 2014).¹⁷ In the early part of 2002, Argentina had emerged from a crisis and default that had increased poverty to almost 50 percent. From 2003 to 2006, with a booming economy and increasing commodity prices, poverty and inequality declined thanks to an increase in market income and not social transfers. However, after 2006, with a deteriorating economy, inflation, and higher distortionary taxation, cash transfers replaced market forces in combating poverty and inequality. In particular, the Pension Moratorium, which increased the coverage of pensions to more than 3 million older individuals who never or only sporadically contributed to social security, became a true, noncontributory pension program. While the program did not target the poor and suffered from significant leakage to the non-poor, it served to decrease moderate poverty. However, it also increased the proportion of households dependent on welfare payments from the government from a low of less than 10 percent in the 1990s to more than 40 percent by 2010, thereby increasing pension spending to a highly unsustainable level in the long run (see Chapter 3). Several other Latin American and Caribbean countries also expanded welfare programs after the 2008 crises, and spending has not returned to previous levels since then (World Bank, 2014). Transitory and decreasing cash transfers over time may better target extreme poverty in the short run, while more permanent skills programs targeted to the poor should be used to decrease poverty permanently.

In-Kind Transfers: Adding the Value of Public Services

The previous analysis does not consider the impact of in-kind benefits: public spending on health and education. Although CCTs provide incentives to improve human capital through school retention and expanded coverage of vaccinations, their effects are limited by size and target population;

¹⁷ Indicators for Argentina are based on Lustig and Pessino (2014) in most of the chapter, where imputations for direct taxes were not calculated (see Rossignolo, forthcoming, for an update).

moreover, the latest evidence shows few, if any, long-run effects.¹⁸ But, at least 50 percent of social spending in the region is on universal educational programs, and contributory and noncontributory health systems. Education spending accounted for an average 4.5 percent of GDP circa 2012 (5.3 percent in the OECD) and health spending 3.8 percent of GDP (6.5 percent in the OECD), with significant differences among countries (see Figure 4.6).

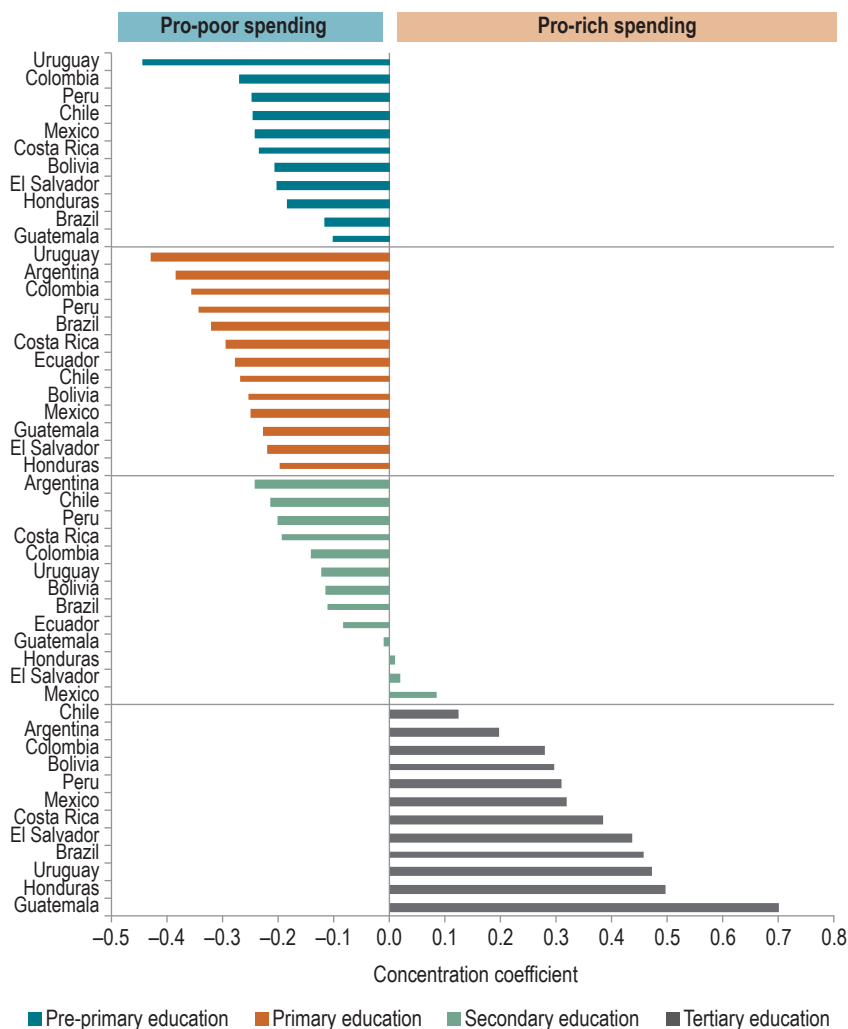
Once in-kind transfers are considered, inequality in all countries is reduced considerably more than by cash transfers, reflecting their relative size and progressive nature (Lustig, Pessino, and Scott, 2014; Lustig, 2017). In advanced countries, in-kind transfers, measured at cost, reduce the disposable income Gini by about 20 percent (OECD, 2011a) while they only reduce it by 10 percent in Latin American countries (although in both regions it is about 5 Gini points). Thus, the percentage gap with OECD countries increases even more (Figure 4.8). In-kind transfers further widen the difference in redistributive capacity between Latin American and advanced countries, even though the differences in health and education spending are smaller than with cash transfers. When analyzing their progressivity, while spending on pre-primary and primary education is pro-poor and equalizing in all Latin American countries, spending on secondary education is pro-poor in nine of the countries considered and slightly pro-rich in El Salvador and Mexico. Finally, spending on tertiary education is pro-rich in all Latin American countries since it primarily benefits the middle- and upper-income population (Figure 4.14).

Most countries spend less than 30 percent of the education budget on tertiary education. On equity grounds, education spending does not seem biased toward pro-rich and regressive spending; however, it is worrisome that early childhood spending was on average 0.4 percent of GDP while tertiary spending was about four times higher (see Chapter 3 and Figure 4.15).¹⁹

¹⁸ While results differ among Latin American and Caribbean countries, program evaluations reveal an increase in years of schooling, decrease in child labor, and improvements in key health indicators (Bouillon and Tejerina, 2006; Fiszbein and Schady, 2009). However, a recent review claimed that no evidence exists on the long-term effects on human capital (Sandberg, 2015) and some of the latest long-run evidence of these CCT programs based on 20 years of data corroborate this claim. Araujo, Bosch, and Schady (forthcoming), evaluating the 10-year effects of Ecuador's Bono de Desarrollo Humano program, conclude that "...any effect of cash transfers on the intergenerational transmission of poverty in Ecuador is likely to be modest." For similar claims in an international context and a different program in Malawi, see Baird, McIntosh, and Özler (2016).

¹⁹ On efficiency grounds, higher-level education spending might help generate innovation, adaptation of technologies, and, hence, foster growth. However, this rationale by itself does not warrant such a difference.

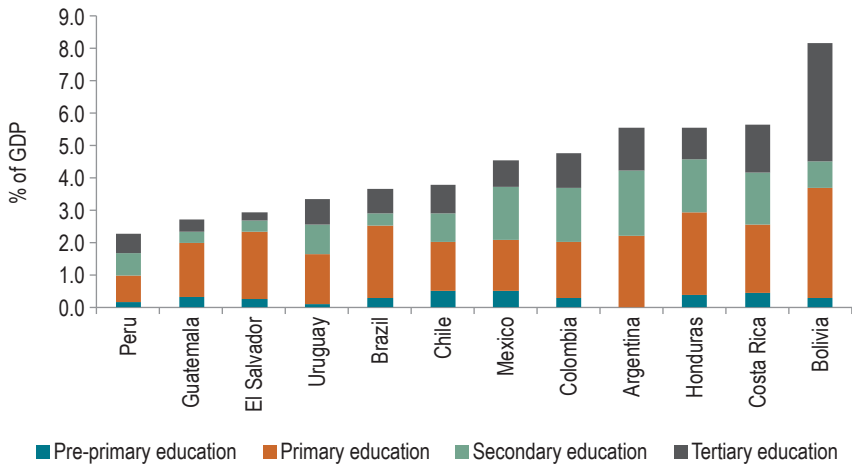
Figure 4.14 Pro-Poor or Pro-Rich Spending on Education by Level, Ordered by Market Income, Circa 2012



Source: Author's elaboration based on the following works: a) Commitment to Equity Institute Data Center on Fiscal Redistribution. Based on information from: Argentina (Lustig and Pessino, 2014; Rossignolo, forthcoming); Bolivia (Paz Arauco et al., 2014); Brazil (Higgins and Pereira, 2014); Chile (Martínez-Aguilar et al., forthcoming); Colombia (Lustig and Meléndez, 2015); Costa Rica (Sauma and Trejos, 2014); Dominican Republic (Cabrera et al., 2016); Ecuador (Llerena Pinto et al., 2015); El Salvador (Beneke, Lustig, and Oliva, forthcoming); Guatemala (ICEFI, 2016a); Honduras (ICEFI, 2016b); Mexico (Scott, 2014); Nicaragua (ICEFI, 2016c); Paraguay (Higgins et al., 2013; Giménez et al., 2017); Peru (Jaramillo, 2014); and Uruguay (Bucheli et al., 2014); b) all countries (Lustig, Pessino, and Scott, 2014; Lustig, 2017).

Note: Concentration coefficients are ranked in the scenario where contributory pensions are considered part of market income.

Figure 4.15 Public Spending on Education by Level, as % of GDP in Latin America Circa 2012



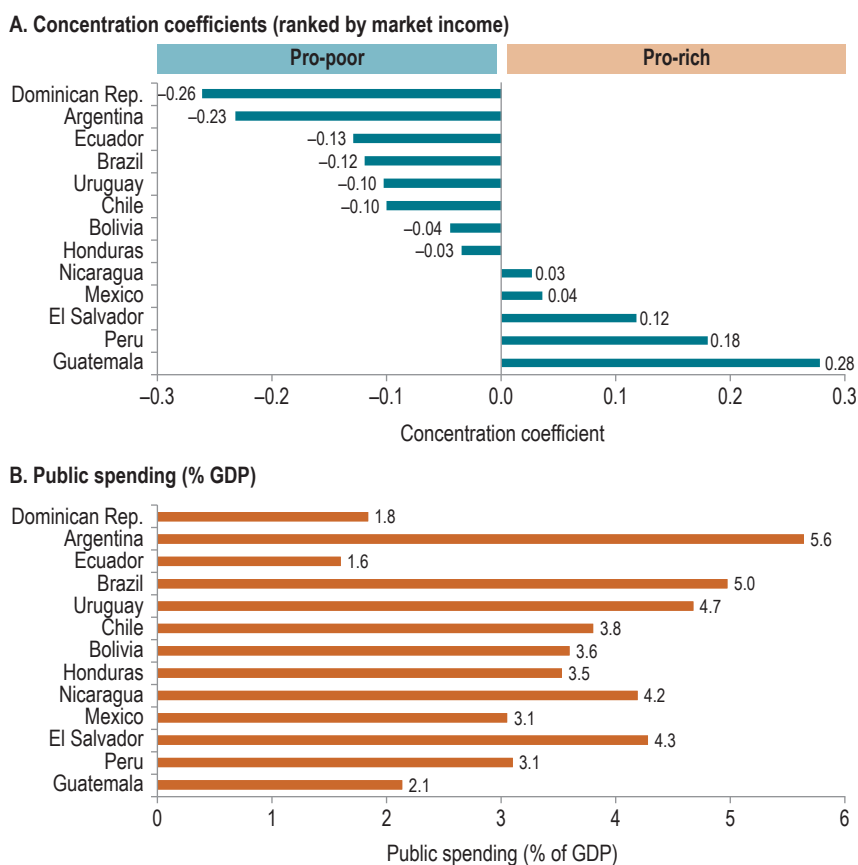
Source: Author's elaboration based on the following works: a) Commitment to Equity Institute Data Center on Fiscal Redistribution. Based on information from: Argentina (Lustig and Pessino, 2014; Rossignolo, forthcoming); Bolivia (Paz Arauco et al., 2014); Brazil (Higgins and Pereira, 2014); Chile (Martínez-Aguilar et al., forthcoming); Colombia (Lustig and Meléndez, 2015); Costa Rica (Sauma and Trejos, 2014); Dominican Republic (Cabrera et al., 2016); Ecuador (Llerena Pinto et al., 2015); El Salvador (Beneke, Lustig, and Oliva, forthcoming); Guatemala (ICEFI, 2016a); Honduras (ICEFI, 2016b); Mexico (Scott, 2014); Nicaragua (ICEFI, 2016c); Paraguay (Higgins et al., 2013; Giménez et al., 2017); Peru (Jaramillo, 2014); and Uruguay (Bucheli et al., 2014); b) all countries (Lustig, Pessino, and Scott, 2014; Lustig, 2017).

Health spending in most countries,²⁰ is only moderately pro-poor and slightly pro-rich but equalizing in El Salvador, Peru, and Guatemala (Figure 4.16).

The cost of providing a service can be different from the value assigned to it by the consumer of the service. Progressivity might be only the result of rich and middle-class individuals opting for private services, leaving the lower- quality public services to the poor (see Ferreira et al., 2013). The concern for Latin America is that the progressivity of health and education spending is being seriously undermined by the expenditures' inefficiencies and low quality. Typically, most fiscal incidence studies measure the distribution of budget or inputs such as access to public health establishments but fail to account for the distribution of results. While the distribution of

²⁰ Contributive health insurance is not included in some countries when not explicitly subsidized. In the case of Mexico, while noncontributory health insurance through Seguro Popular is pro-poor, contributory health insurance is pro-rich (Scott, de la Rosa, and Aranda, 2017).

Figure 4.16 Pro-Poor or Pro-Rich Spending in Health (Concentration coefficients) and Public Spending in Health in Selected Latin American Countries (ranked by market income), Circa 2012



Source: Author's elaboration based on the following works: a) Commitment to Equity Institute Data Center on Fiscal Redistribution. Based on information from: Argentina (Lustig and Pessino, 2014; Rossignolo, forthcoming); Bolivia (Paz Arauco et al., 2014); Brazil (Higgins and Pereira, 2014); Chile (Martínez-Aguilar et al., forthcoming); Colombia (Lustig and Meléndez, 2015); Costa Rica (Sauma and Trejos, 2014); Dominican Republic (Cabrera et al., 2016); Ecuador (Llerena Pinto et al., 2015); El Salvador (Beneke, Lustig, and Oliva, forthcoming); Guatemala (ICEFI, 2016a); Honduras (ICEFI, 2016b); Mexico (Scott, 2014); Nicaragua (ICEFI, 2016c); Paraguay (Higgins et al., 2013; Giménez et al., 2017); Peru (Jaramillo, 2014); and Uruguay (Bucheli et al., 2014); b) all countries (Lustig, Pessino, and Scott, 2014; Lustig, 2017).

Note: Concentration coefficients are ranked in the scenario where contributory pensions are considered part of market income.

“quantity” might be somewhat progressive (because it concentrates on the poor, albeit insufficiently), the distribution of quality is mostly regressive. Thus, the positive effect of coverage is reduced by the negative effect of quality differences by socioeconomic status.

Inequality of Opportunity

One of the objectives of fiscal policy should be equality of opportunity. Governments should ensure that circumstances such as gender, ethnicity, place of birth, or socioeconomic and family environment, which are beyond a person's control, do not influence the opportunities available to an individual or the results of his or her efforts. Success should depend on personal choices, effort, and talent rather than on the circumstances surrounding a person's birth (Roemer, 1998). Less access or lower-quality services in health and education highlight the marked inequality in access and outcomes of the most important public spending aimed at developing human capital.²¹ Poor children from disadvantaged families should benefit the most from human capital investments in market skills. However, apparently, the poor rarely overcome their unfortunate birth circumstances in Latin America and the Caribbean since investments in developing their hard and soft skills are insufficient in the early years of their life and not compensated for later on.²²

Even though life expectancy increased, and maternal and infant mortality decreased in Latin America and the Caribbean in recent decades,²³ inequality in health outcomes continues to be widespread (WHO, 2015). While health access and outcomes are broadly similar across income groups in advanced countries, large disparities persist in Latin America and the Caribbean (Figure 4.17A). This might be one reason why health 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 (Figure 4.17B).

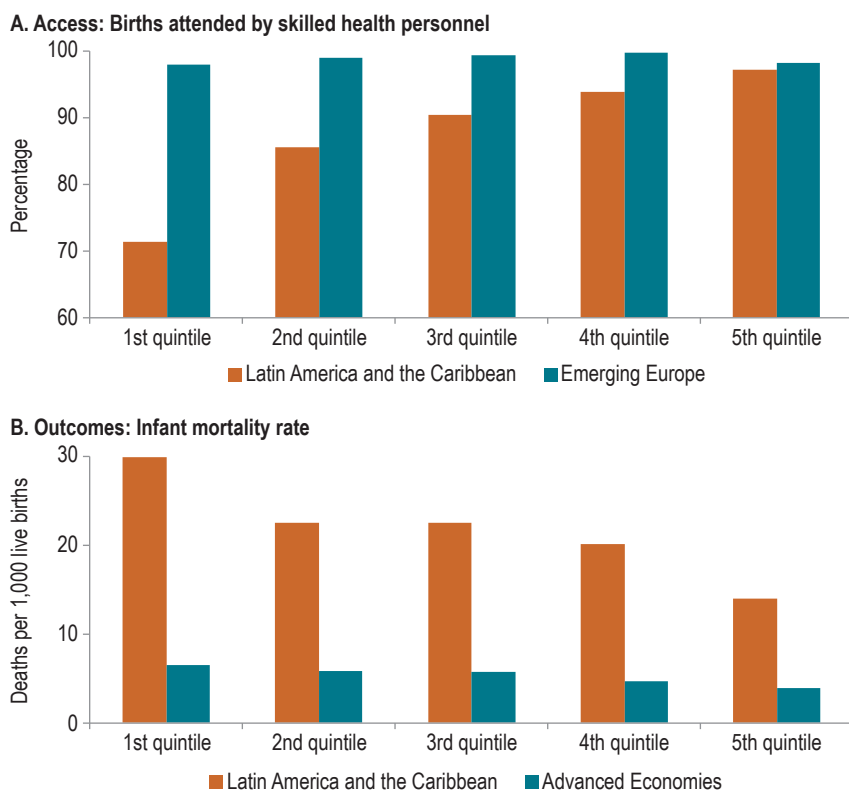
Education access and outcomes remain much worse for disadvantaged groups, partly because of pro-rich biases in access and quality. Indeed, about 50 percent of the poorest youth in the region does not finish lower secondary education, compared to 10 percent in the richest quintile (Figure 4.18A). The contrast is even greater for upper secondary and tertiary education. The same pattern prevails across education outcomes (see Figure 4.18B), as measured by the Program for International Student

²¹ There is a growing literature measuring inequality of opportunity (see, for example, Ferreira and Gignoux, 2011; Molinas Vega et al., 2012).

²² Heckman (2006, 2011a) notes that later investments are much costlier and less effective in improving skills and overall welfare of disadvantaged children than early childhood investments.

²³ Between 1990 and 2010, infant mortality in Latin America and the Caribbean fell from about 120 to 60 deaths per 1,000 live births, maternal mortality fell from 50 to 25 per 100,000 live births, and chronic malnutrition (or stunting) among children age 5 and younger fell from 25 percent to 12 percent of the population (Levy and Schady, 2013).

Figure 4.17 Inequalities in Health-Care Access and Outcomes in Latin America and the Caribbean and More Developed Countries



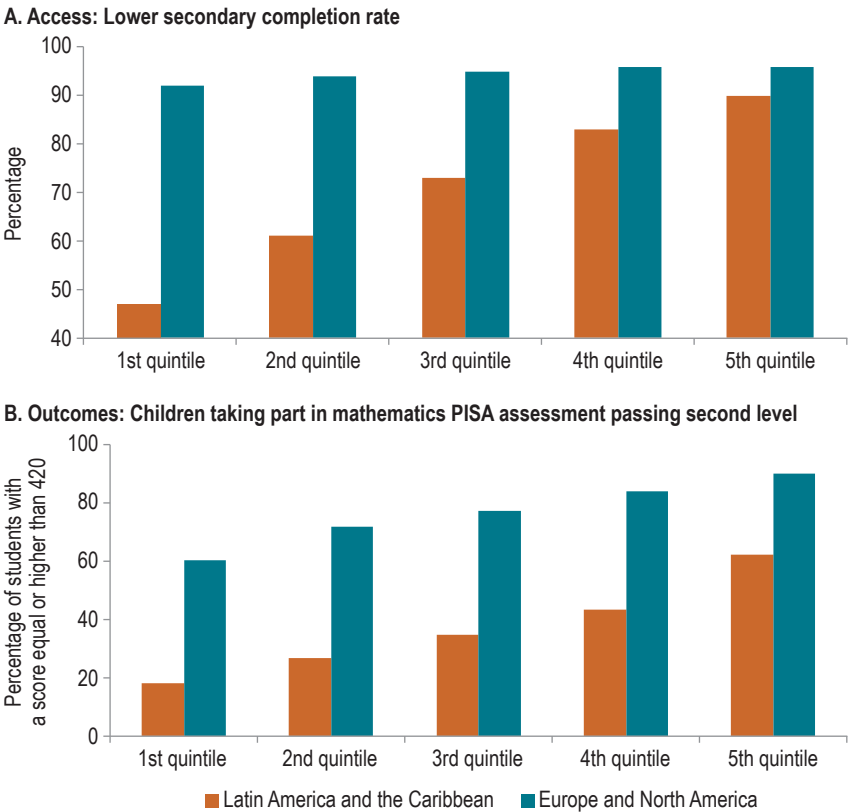
Source: Authors' calculation based on World Health Organization Global Health Observatory metadata. Note: Latest available data from 2008 to 2013 for both Panel A and Panel B. In Panel A, Latin America and the Caribbean includes Belize, Bolivia, Colombia, Costa Rica, the Dominican Republic, Haiti, Honduras, Panama, Peru, and Trinidad and Tobago, while Emerging Europe includes Belarus, Georgia, Serbia, and Ukraine. In Panel B, Latin America and the Caribbean includes Bolivia, Colombia, the Dominican Republic, Honduras, and Peru, while Advanced Economies includes England, Wales, and Canada.

Assessment (PISA) results (Busso et al., 2017). While on average, the best Latin American country performs worse than the worst advanced country, in terms of inequality of performance by socioeconomic status, the gap in performance is even wider.

Better schools are not the only factor shaping success in school; early life experiences also matter. Fifteen-year-old students in the OECD who attended early childhood education tend to perform better on standardized tests than those who did not, even after accounting for their socioeconomic backgrounds.²⁴ This early investment is essential

²⁴ (OECD, 2010, 2013b).

Figure 4.18 Inequalities in Education Access and Outcomes in Latin America and the Caribbean, and in More Developed Countries



Source: Authors' calculation based on UNESCO World Inequality Database on Education.
Note: In Panel A, Latin America and the Caribbean includes 21 countries, while Europe and North America includes 39 countries. The sample includes the last available data from each country included from 2006 to 2015 (most 2015). In Panel B, Latin America and the Caribbean includes Argentina, Brazil, Chile, Colombia, Costa Rica, the Dominican Republic, Mexico, Peru, Trinidad and Tobago, and Uruguay, while Europe and North America includes 34 countries. The sample includes most of the observations from PISA 2015. All indicators are broken down by a measure of household socioeconomic status.

for a child's future and tends to be absent in more disadvantaged households. Higher and better-quality spending on early childhood is both equitable and pro-growth; there is no equity-efficiency trade-off for programs that target disadvantaged children (see Box 4.2). According to James J. Heckman, a Nobel laureate in economics, families play a powerful role in shaping adult outcomes. A mountain of evidence shows that gaps in ability open up long before kindergarten (see evidence for Latin America in Berlinski and Schady, 2015). That is true for cognitive skills, like math and reading, and for noncognitive skills, like industry and

BOX 4.2 JAMAICA EARLY CHILDHOOD PROGRAM: AN EXAMPLE FOR THE REGION

- Between 2004 and 2010, the estimated number of children under 5 years of age in Latin America and the Caribbean who suffered from stunting or extreme poverty declined slightly from 11.6 million to 9.7 million (from 20 percent to 18 percent of children).
- Jamaica implemented and conducted the first long-term experimental evaluation of an early childhood development program in a developing country. Participants in a randomized intervention conducted in 1986-1987 that gave psychosocial stimulation to growth-stunted Jamaican toddlers, have reported 25 percent more earnings as adults than a control group. The intervention compensated for the economic consequences of early developmental delays and reduced later-life inequality (Gertler et al., 2014).
- According to data from 58 low- and middle-income countries (LMICs), 31.4 percent of all 36-to-59-month-old children had access to early education programs, with enrollment rates more than twice as high among children from the top wealth quintile (47.3 percent) compared with children from the lowest quintile (19.5 percent). Jamaica and Barbados lead the sample with more than 85 percent of all 36-to-59-month-old children having access to early education programs and with enrollment in the lowest quintile almost as high as in the wealthiest quintile (Black et al., 2017).

self-control. This evidence is corroborated by intergenerational inequality evidence in the region.²⁵

The Geography of Spending Equity

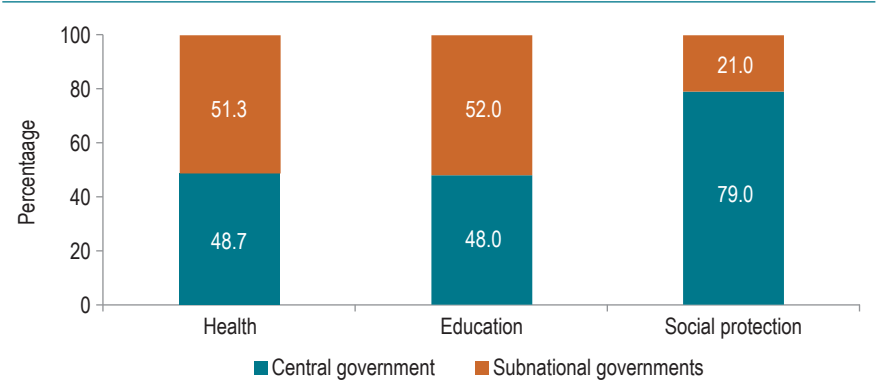
Social and economic disparities among territories are a critical factor in explaining inequality in Latin America and the Caribbean. In fact, there seems to be persistent vertical and horizontal disequilibrium in fiscal revenues and expenditures in the region (Fretes Cibils and Ter-Minassian, 2015). However, there is almost no literature regarding the nexus between personal income distribution and territorial inequality (ECLAC, 2017). In

²⁵ Intergenerational inequality in mobility is highly correlated with intragenerational income inequality. Most societies in Latin America and the Caribbean are not traditionally mobile. Recent studies show that intergenerational educational (attainment) mobility has been rising (Ferreira et al., 2013; Neidhöfer, Serrano, and Gasparini, 2018), but as with the literature on intra-generational inequality, there is no clear evidence of improvements in income and, hence, no room for complacency. These findings demonstrate that the region has improved in making education attainment more independent of family background and other circumstances; however, outcomes and achievements continue to be dependent on parents' outcomes.

the typical Latin American country, the ratio of per capita GDP between the wealthiest and poorest region is 9; that is four times higher than in the OECD. In some countries like Argentina and Mexico (both federal countries), this difference is 16 times larger (Muñoz, Pineda, and Radics, 2017). Taking the dispersion in subnational GDP per capita within countries as a measure of interregional inequality, GINI coefficients in a sample of Latin American countries are on average twice as large as in OECD countries (Muñoz, Pineda, and Radics, 2017). Territorial disparities in wealth, fiscal revenues, and expenditures, and more importantly, inequality in access to quality basic services across subnational governments, might be responsible for personal income inequality.

Of the fiscal policy instruments available, in-kind transfers in education and health have the largest impact on reducing per capita income inequality in the region (at least in terms of access, but not necessarily outcomes). Education and health are among the most important types of decentralized services, with more than 50 percent of spending in health and education executed by subnational governments in Latin America (Figure 4.19). Hence, analyzing whether subnational government spending is associated with more or less income inequality is central to a discussion of spending equity. Decentralization is expected to improve the efficiency of resource allocation since it can make government spending more responsive to local needs by tightening the loop of accountability between those who produce public goods and services and those who consume them (Faguet, 2012). However, it is uncertain that it would reduce territorial inequality.

Figure 4.19 Share of Social Spending by Central and Subnational Governments in Latin America, Circa 2015



Source: Authors' calculation based on IDB/FMM Public Expenditure database, and data from Ministries of Finance and Statistics and Central Banks of Latin America.

Note: Latin America includes Argentina, Bolivia, Brazil, Colombia, Guatemala, Mexico, and Peru.

While Latin American countries use intergovernmental transfers with some equalization features, they do not have true equalization transfers based on fiscal capacity or expenditure needs to alleviate territorial inequality (Muñoz, Pineda, and Radics, 2017). In advanced countries, these transfers help assure a similar level and quality of public services among citizens of different subnational territories.

In addition, territorial inequalities are large considering the quality of public services delivered. The World Bank's subnational Human Opportunity Index (HOI),²⁶ a measure of coverage in basic services corrected by the inequality in their distribution across income quintiles, shows large spatial inequalities in these indicators. In the region, territorial differences in the completion of primary education average 31 percent and can be as large as 67 percent (Figure 4.20, panel A). Something similar occurs with sanitation services (Figure 4.20, panel B).

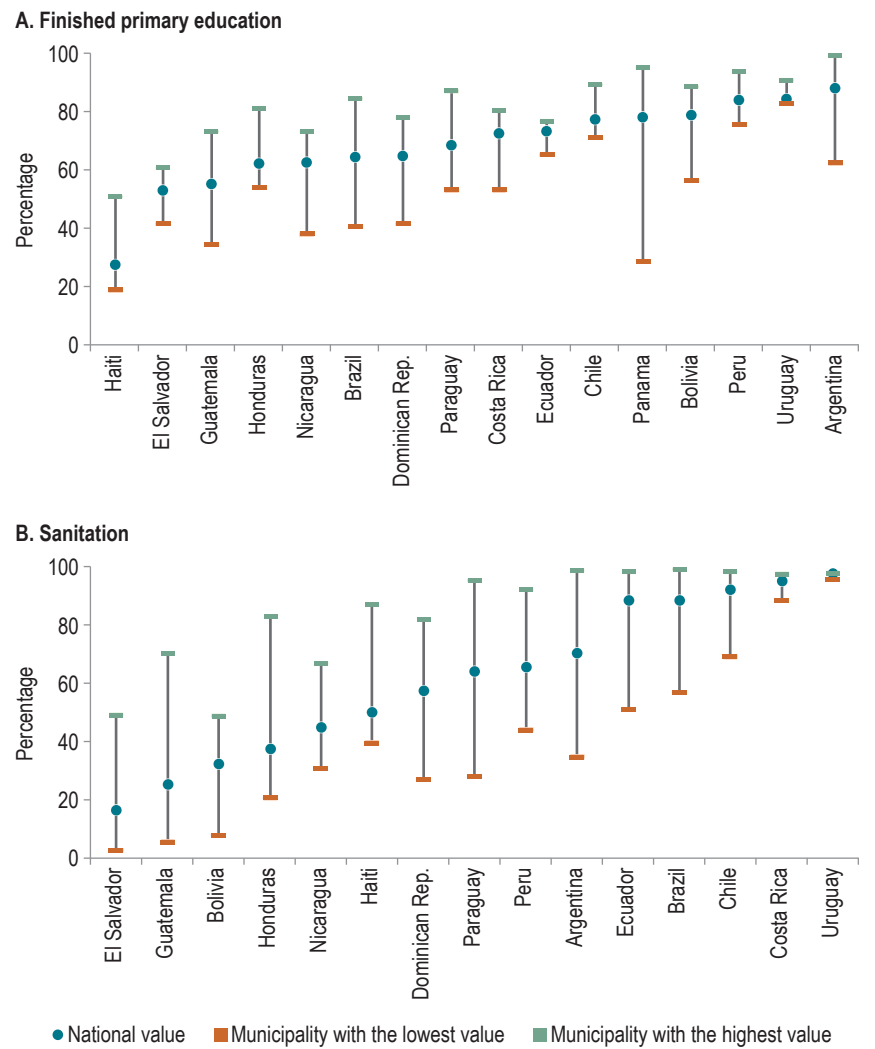
While more research is needed on decentralization and inequality in the region, there is evidence that territorial inequality translates into fiscal outturns and these, in turn, to outcomes in skills acquisition and quality of life. Better institutions, higher own revenues, and equalization and other types of transfers from the central government might help reduce these inequalities.

Second-Round Fiscal Incidence: Good Intentions, Bad Outcomes

Redistributive policies such as cash transfers can reduce incentives to work, save, and invest, and can even alter fertility decisions. These ("unwanted") behavioral effects likely increase market income inequality; therefore, fiscal incidence analysis exaggerates the true effect of the redistributive policies on disposable or final-income inequality. Transfers are likely to have a direct (first-round) distributive effect but, when the behavioral disincentive (second round) is considered, the result could be the opposite, counteracting the initial impact. Behavioral responses can also lower productivity (Bosch, Cobacho, and Pagés, 2014; Attanasio, Meghir, and Otero, 2014). Behavioral effects occur when individuals change their behavior to become eligible for benefits. They may cut back on their levels of work or turn to informal

²⁶ The HOI measures the availability of services necessary to progress in life "penalized" by how unfairly the services are distributed in the population. For example, two countries that have identical coverage may have a different HOI if the citizens that lack the service are all female, or black, or poor, or more generally, share a personal circumstance beyond their control. In other words, the HOI is coverage corrected for equity. In theory, one can increase it by changing people's circumstances (the "composition effect"), providing more service to all ("scale effect"), or distributing service more fairly ("equalization effect").

Figure 4.20 Subnational Human Opportunity Index: Gap between Municipalities with the Highest and Lowest Scores, 2014



Source: Authors' calculation based on World Bank LAC Equity Lab and Molinas Vega et al. (2012).
Note: Argentina and Uruguay only include urban data.

activities, save less to avoid asset ineligibility, or alter their family structure to avoid having other income-producing members of the household.

Studies of the undesired effects of cash transfer programs on adult workers concluded that they had little or no impact on the propensity to work or hours worked (Alzúa, Cruces, and Ripani, 2013; Banerjee et al., 2017). But, in most countries, high contributions to social security,

sometimes with low benefits, combined with weak enforcement of labor regulations, do impact informality. Firms and workers in formal activities are obliged to pay for a bundled set of health, pension, and related programs. Informal workers benefit from an unbundled set of parallel programs paid by the government, so-called “noncontributory programs.” This acts as a subsidy to informality, which is, in fact, very high in the region: the percentage of workers not contributing to social security is between 40.6 percent (for salaried workers) and 56.9 percent (for all workers). While noncontributory pensions serve a critical role in reducing old-age poverty, workers will question why they should participate in the contributory system when it is not even sure they will qualify for a pension, especially when they can obtain a pension in old age without saving while working. The same logic applies to other noncontributory programs that have a counterpart in the formal sector. They also represent a growing fiscal burden for countries and reduce productivity and growth (Levy, 2015).

Transfers significantly affect the choice between formal and informal work (Alaimo, Garganta, and Pessino, 2018).²⁷ However, most studies on the disincentive effects of government transfers do not translate the behavioral effects into estimates of counterfactual incomes, which requires an additional estimate of a microsimulation model (Ben-Shalom, Moffitt, and Scholz, 2012). Ignoring behavioral responses generally leads to overestimates of the impact of programs on poverty, as the levels of market income observed in the data are lower than they would have been in the absence of the program. In the language of causal analysis, what is needed is the counterfactual income of the family had it not received benefits. If that income could be determined, the difference between it and posttransfer income would be the measure of the impact of a program on income.

Garganta and Gasparini (2015) estimated the effect of a CCT program on informality in Argentina: the Asignación Universal por Hijo (AUH) targeted to households with children under 18 years old and with no formal jobs.²⁸ This cost the government 0.72 percent of GDP, or about 17 percent of pre-transfer income covering roughly 15 percent of households. While moderate poverty fell from 31.4 percent to 28.6 percent, (first-round)

²⁷ For example, after the introduction of a large noncontributory health insurance program in Mexico, Bosch and Campos-Vázquez (2014) find that the stock of formal workers would have increased by 2.4 percent between 2002 and 2009 in the absence of Seguro Popular. For the Subsidized Regime in Colombia, informality increased between 2 and 4 percentage points (Camacho, Conover, and Hoyos, 2013). Bosch and Guajardo (2012) estimate the Pension Moratorium in Argentina reduced formal employment among women by 2.5 percentage points, indicating it induced them to retire.

²⁸ The country offers this type of assistance to formal workers through contributions.

Table 4.1 Poverty and Inequality Incidence before and after Transfers with and without Disincentive Adjustment in Argentina, 2015 (1st Semester).

	Pre-transfer (actual, with formal moving to informality)	Pre-transfer (simulated, without formal moving to informality)	Post- transfer
Total households			
Income	12,753.82	12,810.06	13,023.16
Extreme poverty	7.71	7.51	4.09
Moderate poverty	31.35	30.75	28.56
Gini index	0.417	0.414	0.399
Eligible households (current program)			
Income	7,872.12	8,204.23	9,462.57
Extreme poverty	24.82	24.01	10.51
Moderate poverty	71.14	68.76	60.12
Gini index	0.376	0.380	0.319

Source: Authors' calculation based on Alaimo, Garganta, and Pessino (2018). Estimated from Permanent Household Survey Argentina (EPH) 2015, 1st semester.

informality increased between 2.8 and 3.6 percentage points.²⁹ Analyzing AUH transfers, Alaimo, Garganta, and Pessino (2018) estimate how the counterfactual behavioral response (some workers employed in the formal sector chose to have an informal job) affects poverty and public spending. This is the first study for Latin America and the Caribbean, estimating through microsimulation techniques the counterfactual market income and poverty that would have existed in the absence of the program.³⁰

Table 4.1 shows the pre-transfer market income and poverty measures for the AUH in the first column compared to counterfactual pre-transfer market income in the second column. Poverty without the AUH would have been 30.8 percent instead of 31.4 percent (the size of the behavioral effect is 0.6 percentage points less poverty incidence, as formal workers would not switch to the informal sector). Hence, first round incidence

²⁹ Another unintended effect of cash transfer programs conditional on having children is the increased probability of childbearing: both in Honduras and Argentina it increased more than 2 percentage points (Stecklov et al., 2007; Garganta et al., 2017).

³⁰ Assuming no taxes, if the income of a recipient is written as $DI=MI+B$, where MI stands for market income and B is the program benefit received, then the actual income change from the introduction of the program is $\Delta DI = \Delta MI + \Delta B$, which is smaller than the $\Delta DI = \Delta B$ used in the poverty-impact calculations, if $\Delta MI < 0$ (as is the case when individuals move from the formal into the informal sector). $\Delta MI/\Delta B$ is the factor by which the observed difference in income should be reduced to arrive at the true increase in income, and hence this is the factor to decrease the estimates of poverty reduction (Ben-Shalom, Moffitt, and Scholz, 2012).

effects exaggerate the “true” effect of the AUH by 0.6 percentage points: while the first-round effect of the AUH is a 2.8 percentage point decrease in poverty (31.4 percent to 28.6 percent), the true impact including the behavioral effect is only 2.2 percentage points (30.8 percent to 28.6 percent), or 21 percent lower.

Many CCT programs in Latin America and the Caribbean are large: the Ecuador Bono de Desarrollo Humano covers roughly one-quarter of households, while Progresa and Bolsa Familia in Mexico and Brazil cover about a fifth of households (Araujo et al., 2017). Clearly, the generosity of a program affects its impact on informality. Thus, even if the effect of one program might seem small, when combined with other programs, the effect can be significant. New data documenting public spending on noncontributory programs shows that in 2014 the region spent 1.8 percent of GDP on them, ranging from only 0.2 percent in Jamaica to 4.2 percent in Argentina (Figure 4.21 panel A).³¹ Most of this spending finances health and old-age pensions (Figure 4.21, panel B).³²

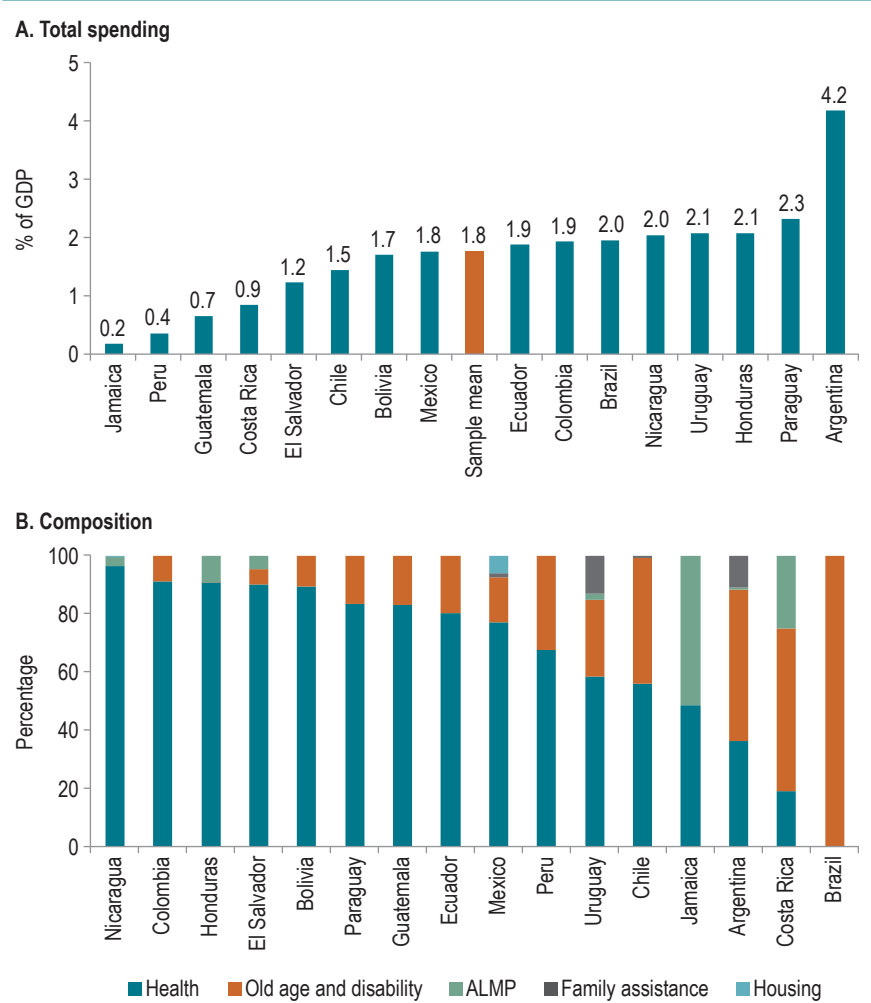
The overall effect of the subsidy to informality is hard to estimate. A program like AUH that spends 0.72 percent of GDP, generates a market poverty increase of 0.6 percentage points because it encourages informality in order to be eligible. Then, a gross estimate of the overall effect of the “subsidy to informality” (that is 4.2 percent for 2014 in Argentina) must be much larger: assuming a linear relationship, the behavioral effect would provoke a 3.5 percentage point increase in poverty that, in turn, would demand more public spending to eradicate poverty created by inefficient government spending; that is a pure waste of resources.

In sum, one possible—but difficult to implement—solution is to gradually decrease the tax on formality and the subsidy to informality and provide all workers with the same social insurance programs. This could be achieved by reducing labor contributions and replacing them with general taxes (Levy, 2008). Above all, poor workers need a more productive job; but they also need to benefit from social insurance and protection. Reaching this goal is essential for genuine social inclusion. It is time for Latin America and the Caribbean to move on and tackle new social challenges beyond those solved through CCTs (Antón, Hernández, and Levy, 2012).

³¹ In Argentina, the Pension Moratorium allowed workers of retirement age to receive a pension regardless of whether they had completed the full 30 years of social security contributions through formal employment. The difference between the amount of completed contributions and the 30-year benchmark would be reconciled by discounting their “debt” from their pension benefit.

³² Moreover, public spending on noncontributory programs more than doubled between 2000 and 2015.

Figure 4.21 Noncontributory Social Spending in Latin America and the Caribbean, 2014



Source: Authors' calculation based on Alaimo, Dborkin, and Izquierdo (2018).
Note: ALMP is Active Labor Market Policies.

The Policy Puzzle

Latin America and the Caribbean continues to be one of the most unequal regions in the world. Fiscal policy partially offsets the unequal distribution of income in some countries, mainly through expenditure policy. However, it reduces income inequality and poverty less than in advanced countries because programs are either not progressive enough or too small. Still, more spending does not necessarily lead to better outcomes for the poor.

Noncontributory programs help diminish inequality and poverty in the region, but subsidize informality. Coupled with high payroll taxation, they foster a truncated welfare state, reduce the distributive capacity of spending, and take a toll on productivity and growth.

While Latin America and the Caribbean advanced in equality of income and access to services, the provision of good-quality services for the poor remains highly unequal. The quality of human capital received by the higher- and lower-income groups varies dramatically, creating a gap in access to opportunities between the richest and the poorest. To create equal opportunities for all, the government must spend better rather than more.

Policymakers must weigh whether to increase the size of transfers or better target beneficiaries. They should not only consider first-round fiscal incidence analysis but also assess whether increasing the amount of transfers would be counterproductive (e.g., decrease labor force participation or increase participation in informal, less-productive activities). Latin America needs to avoid permanent welfare dependency and increased informality. It should focus on the chronic poor who cannot easily be lifted from poverty with economic growth. After achieving complete coverage of those in chronic need, the greatest triumph of CCTs would be their gradual disappearance over time with the whole region benefiting from economic stability, sustained growth, and a healthier, more educated, and more productive workforce.

In addition to leveling the playing field in terms of opportunities and outcomes, interventions should improve the quality of early childhood investments and later interventions for poor children, closing the gap in skills as early as possible. It would be prohibitively costly to postpone this investment. For adolescents and older individuals, remediation policies such as formal schooling, training, and mentoring require higher investments to level the playing field. Latin America and the Caribbean needs more policies that prevent inequalities from occurring in the first place (i.e., more predistribution) and not only policies that deepen redistribution. In recent decades, the balance between pre-distribution and redistribution has mostly shifted to redistribution to promote more “access” than “achievement.” It has produced clear, short-run results in several countries, but the region has not invested enough and in a smart way in long-term reductions in poverty and inequality. For these reasons, an accurate diagnosis of the causes of inequality and poverty must be performed before designing specific policies to mitigate them. Failure to do so can render these policies ineffective, further complicate the situation, and possibly transform a temporary poverty problem into a more permanent one, which can have concomitant effects on overall growth.

