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Cash Transfers in Latin America: Effects on Poverty and Redistribution

ABSTRACT We present comparative evidence for eight Latin American countries regarding the design and effects of cash transfers (CTs). On the basis of household survey data, we analyze their coverage, importance in household income, and effects on poverty reduction and income redistribution. We present a static microsimulation to analyze the potential impacts of alternative program designs, including perfect targeting and higher budgets. Our results illustrate wide variation in terms of design, coverage, and importance in household income. CTs account for a significant portion of household income in lower deciles. Nonetheless, their effects in terms of reducing the incidence, intensity, and severity of poverty are moderate at best, and although their progressivity is high, their redistributive impact is limited. These results are mainly explained by the meager resources involved. Even under perfect targeting, the budgets allocated would be insufficient to achieve full coverage among households in the lowest part of the income distribution.

JEL Codes: I38

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The provision of noncontributory cash transfers (CTs) has received much attention from scholars, policymakers, and international organizations since the mid-1990s in Latin America. These transfers were developed as a way to strengthen traditional social protection systems in the region, which were mainly tied to formal participation in the labor market. Even if a framework of social assistance did exist previously in the region, this new generation of transfers differs from more traditional ones in many aspects. CTs mainly consist in the distribution of cash to poor households with children, with payments conditioned on compliance with certain behaviors: school attendance for children, health controls for both children and pregnant women, and

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(in some cases) participation in nutrition and health training sessions for women, who are most often the recipients of the benefit. The main argument for the establishment of conditionalities (also called coresponsibilities) is their potential effectiveness in disrupting the intergenerational transmission of poverty through their effect on human capital accumulation. Evidence for the effect of conditionalities is still limited and shows mixed results, however.¹ As pointed out by Bosch and Manacorda, although conditionalities are almost universal features of the design of CT programs in the region, some programs are *de facto* unconditional.² The wide variation in terms of design and enforcement has led to a distinction between programs in which conditionalities, including their monitoring and sanctioning, are crucial (known as programs with hard conditionalities) and programs in which conditionalities do not play a crucial role and sanctioning is more flexible (soft conditionalities).³ In their systematic review, Baird and others find that both conditional and unconditional cash transfers improve the odds of school enrollment and attendance relative to noncash programs.⁴ The effects are larger for conditional programs compared with unconditional ones, but the difference is not statistically significant. However, when the type of conditionality is taken into account, programs with hard conditionalities have substantially larger effects on enrollment than those based on soft conditions.

Other distinctive features of CT programs are their strict eligibility criteria—most of which are based on proxy means testing of income—and the implementation of credible impact evaluations, which have contributed to expanding knowledge about the impacts of these programs.⁵ Finally, CTs have a low opportunity cost in terms of alternative public investments, as they involve a relatively low total budget compared with other social policies.

These innovative CT programs have generated a profuse literature, particularly focused on their evaluation.⁶ In general, there is agreement about

1. See Standing (2007); de Brauw and Hoddinott (2008); Schady and others (2008); Baird, Macintosh, and Özler (2011).

2. Bosch and Manacorda (2012).

3. Cecchini and Martínez (2011).

4. Baird and others (2014).

5. The pioneering program was *Progres-a-Oportunidades* in Mexico, which was created in 1997 and designed to allow for a randomized impact evaluation on a wide scope of outcome variables.

6. For reviews of this literature, see Bouillon and Tejerina (2006); Fiszbein and others (2009); Gaarder, Glassman, and Todd (2010); Cecchini and Martínez (2011); Saavedra and Garcia (2012); Manley, Gitter, and Slavchevska (2013); Molina-Millan and others (2016); Robles, Rubio, and Stampini (2017).

their positive impact in terms of improving living standards at the bottom of the distribution and reducing poverty and inequality. Although most evidence on these issues comes from specific country studies, recent comparative analyses have been undertaken. For example, Robles, Rubio, and Stampini examine CTs and noncontributory pensions in sixteen Latin American countries.⁷

CT programs have some common features, but they also differ in very specific ways. Key differences include the way they relate to the institutional and legal framework, the existence (or not) of complementary programs, the links between the transfer program and the rest of the social protection system, their funding conditions, their enforcement of conditionalities, their recertification and exit strategies, and the existence and type of benefit indexation mechanism. At a more basic level, they differ in the amount and structure of transfers and in their coverage.⁸ Given the wide variation, it is not strange that recent research has found substantial differences in the coverage of poor households and in the leakage to non-poor households, underscoring the need for more comparative evidence on these programs.⁹

In this paper, we provide evidence of the coverage of CTs in eight Latin American countries, as well as of their importance in household income and their effects on poverty reduction and income redistribution. Our analysis is based on recent household survey data. Besides considering the actual program effects, we develop a static microsimulation exercise to analyze the potential impacts of alternative program designs.

The rest of the article is organized as follows. The next section introduces the cash transfer (CT) programs under consideration and reviews existing literature on the impact of CTs on poverty and inequality. Subsequent sections discuss methodological issues; present our results related to program coverage and targeting and the importance of the transfers in household income; assess the direct effects on poverty and inequality reduction, as well as their effectiveness; and describe the results of arithmetical microsimulations of alternative designs. The final section provides some concluding comments.

7. Robles, Rubio, and Stampini (2017).

8. A detailed analysis of these aspects of design and implementation of CTs in the region is provided in Ibarrarán and others (2017).

9. Robles, Rubio, and Stampini (2017).

Noncontributive CTs to Households with Children: Selected Countries

Given the well-documented long-term effects of deprivation during childhood, the idea of giving money to poor households with children to foster human capital investment has gained many adherents and has even been described as a “quiet revolution” in development thinking.¹⁰ In Latin America, the expansion of these interventions since the mid-1990s implies that today, around 20 percent of the population lives in households covered by these transfers.¹¹ Another relevant change in social protection systems in Latin America in the 2000s was the reform of social pension schemes to provide near-universal coverage through noncontributory pension programs.¹² These two types of cash transfers are different in terms of coverage, budgets, conditionalities, and targeting, but especially in terms of the underlying political economy factors involved. Given these distinctions, in this article we focus solely on cash transfers directed to households with children.

We provide an in-depth analysis of CT programs in eight Latin American countries, considering poverty impacts and redistributive effects. We also provide evidence for the potential impact of alternative transfer designs. The countries included in this study were selected to guarantee the correct identification of beneficiary households and the transfer amount, based on household survey data.¹³

Table 1 lists the countries and programs considered in this study, together with the size of their budget relative to gross domestic product (GDP), for the years considered (2011–13). Only one country in the sample assigns more than 0.5 percent of GDP to these transfers, namely, Ecuador, where the figure reaches 1.12 percent of GDP.¹⁴

10. Barrientos and Hulme (2008).

11. See ECLAC (2015).

12. Rofman, Apella, and Vezza (2015); Robles, Rubio, and Stampini (2017).

13. This implies that we only consider countries for which the household survey provides information on whether the household is a beneficiary and for which information about the amount of the transfer is available or can be imputed without ambiguity. Consequently, our analysis excludes Argentina and Brazil, where the beneficiaries have to be identified indirectly through the consideration of perceived amounts of specific nonlabor incomes, and Mexico, where participation in the program can be deduced through the receipt of the transfer (see table A1 in the appendix).

14. Program budgets for the latest available year are presented in table A2 in the appendix. The main difference from table 1 is in Ecuador, where the budget dropped significantly following a reduction in coverage due to the application of stricter targeting rules. In the case of Chile, we consider only the cash transfers received by poor families with children; other related programs and benefits are not included in the figures presented in table 1.

TABLE 1. Coverage and Budget of Selected Cash Transfer Programs in Latin America: Sample Years

| <i>Country</i> | <i>Program</i> | <i>Budget (% GDP)</i> | <i>Year</i> |
|----------------|---------------------------|-----------------------|-------------|
| Bolivia | Bono Juancito Pinto | 0.23 | 2011 |
| Chile | Chile Solidario | 0.09 | 2011 |
| Costa Rica | Avancemos | 0.20 | 2013 |
| Ecuador | Bono de Desarrollo Humano | 1.12 | 2013 |
| Panama | Red de Oportunidades | 0.13 | 2013 |
| Paraguay | Tekopora | 0.14 | 2013 |
| Peru | Juntos | 0.17 | 2013 |
| Uruguay | Asignaciones Familiares | 0.37 | 2013 |

Source: ECLAC database on noncontributory social protection programs in Latin America and the Caribbean (<http://dds.cepal.org/bpsnc/> accessed 10 November 2016).

The amount of the transfer varies significantly across countries. A calculation based on household survey data, counting all people living in a given household as beneficiaries, indicates that the annual transfer per person in Uruguay is four times that in Peru and more than ten times that in Bolivia (figure 1).¹⁵ This is a first indication of the heterogeneity of these interventions and the kind of income security they provide.

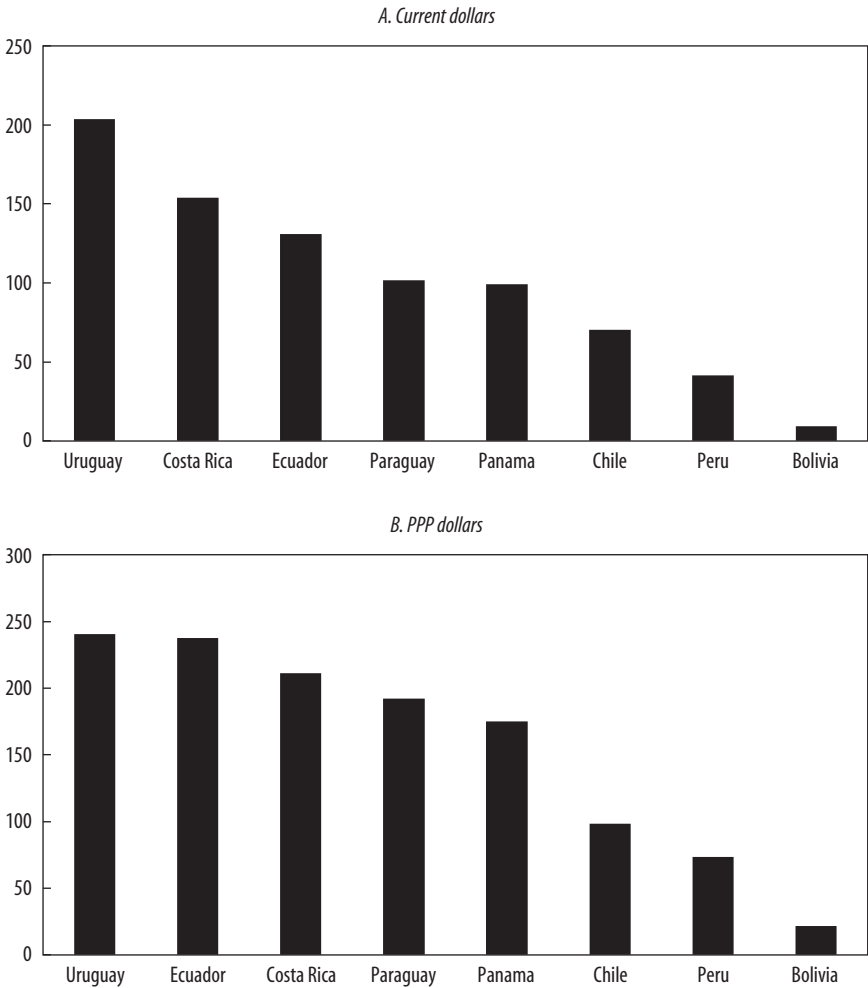
As stated above, the achievements of CT programs in terms of increasing the demand for education and health services are widely discussed. Various studies also document the direct impact of CTs on poverty and inequality reduction.¹⁶ Evidence from these studies suggests a high degree of cross-country variation, although comparative studies that consider different countries are scarce. Stampini and Tornarolli study the ability of conditional cash transfers (CCTs) to reach the poor in Latin American countries by providing standardized measures of poverty, coverage, and leakage for thirteen countries.¹⁷ To identify poor households, they use an international poverty line of US\$2.50 per capita per day for extreme poverty and US\$4.00 per capita per day for poverty. They find that the poverty headcount index would be 13 percent higher, on average, if CCTs did not exist (with a range from 1 percent in Paraguay to 59 percent in Uruguay). They report a greater impact in terms of the poverty gap and the squared poverty gap. They also find that over the decade, the implementation of CCTs in the region was characterized by growing levels of leakage.

15. In purchasing power parity (PPP) in U.S. dollars.

16. Soares and others (2007); Soares, Ribas, and Soares (2009); ECLAC (2010).

17. Stampini and Tornarolli (2012).

FIGURE 1. Annual Cash Transfer per Person, circa 2013^a



Source: Authors' illustration based on household surveys.
a. PPP values are taken from the World Bank.

Methodological Aspects

Our analysis is based on household surveys for eight Latin American countries. Data correspond to circa 2013; details on the programs considered and identification procedures are presented in table A3 in the appendix. We consider countries whose household survey directly asks interviewed households whether they are beneficiaries of the programs, and we exclude countries where beneficiaries can only be identified through indirect questions. This is the case, for example, for Argentina and Brazil, where beneficiaries can be indirectly identified through the value of specific components of nonlabor income, or Mexico, where the survey asks whether the household receives a transfer from the government social assistance program Oportunidades (but not whether it is a beneficiary).¹⁸ We opted not to include these countries to avoid any strategy that may lead to identification errors. Additionally, we do not include Colombia in our analysis as the latest available information on CT programs dates from 2008.¹⁹

We provide indicators of the incidence of poverty, the poverty gap, and the squared poverty gap, with and without transfers, based on reported household income. We also report inequality indexes and analyze redistributive impacts. When the value of benefits is reported in the survey, we use this information for the exercise. Otherwise, we use official information on the value of transfers.

Poverty is identified using poverty and indigence lines from the Economic Commission for Latin America and the Caribbean (ECLAC). These poverty lines, expressed in national currency, reflect a calculation of the cost of a basket of basic goods and services, using the cost-of-basic-needs method. The cost of a basic food basket that covers a person's nutritional needs was estimated for each country and geographical area, taking into account consumption habits, the actual availability of foodstuffs, and their relative prices, as well as the price differences between metropolitan areas, other urban areas, and rural areas at the moment data were collected. These data are used to define the indigence line. The poverty line is defined by adding

18. See Gasparini and Cruces (2010).

19. The size of transfers from the surveys is validated when compared to the overall transfer budgets (taken from the ECLAC Noncontributory Social Protection Programmes in Latin America and the Caribbean Database, <https://dds.cepal.org/bpsnc/index-en.php>, accessed 10 November 2016). The coverage from the surveys varies from 73 percent of the total budget in the case of Uruguay to 95 percent in the cases of Chile and Bolivia.

to the indigence line an estimate of the resources needed by a household to satisfy its basic nonnutritional needs. This estimated amount is the result of multiplying the indigence line by a constant factor of 2.00 for urban areas and 1.75 for rural areas. These data on the structure of household consumption of foodstuffs and other goods and services come from national expenditure surveys. The value of poverty and indigence lines is updated using cumulative variations in the consumer price index.²⁰ Additionally, poverty is estimated using the World Bank poverty line of US\$3.10 a day, applying the 2011 PPP conversion factor. As expected, results differ significantly in absolute levels, as poverty estimates are lower when measured with this lower threshold, but the main findings hold. Statistical results are presented in the appendix.²¹

We also provide evidence from microsimulation exercises using alternative program designs. We consider three different scenarios. In the first, we assume perfect targeting of the actual budgets of CT programs. In the second scenario, program budgets are doubled, and resources are targeted toward actual beneficiaries. In the third scenario, program budgets are doubled, but resources are targeted toward poorer households.

Our simple arithmetical microsimulations may overestimate the impacts of transfers on poverty and inequality, as they assume that household behavior in terms of labor force participation would not change if the transfer did not exist. Although this is a strong assumption, the available evidence does not detect, in general terms, unintended effects of CT programs on labor supply at the extensive margin, although reductions in hours of work or substitution away from formal and toward informal employment were detected in some cases.²²

20. See ECLAC (2013, p. 54). The same variation was applied to poverty and indigence lines through December 2006. From then on, the indigence line has been adjusted to reflect changes in food prices, whereas nonfood spending is adjusted to reflect changes in that component of the consumer price index.

21. When poverty is calculated using ECLAC thresholds, household income is corrected to account for lack of response (wage earners, self-employed, and retirees) and for probable biases from underreporting (ECLAC, 2010). This is necessary to maintain consistency with ECLAC poverty lines. To calculate distributional impacts or poverty using World Bank thresholds, income vectors are only corrected to account for lack of response (and not for potential underreporting).

22. For a survey, see Bosch and Manacorda (2012). Some specific studies on Latin America include Parker and Skoufias (2000), Galasso (2006), Maluccio (2007), Skoufias and di Maro (2008), and Alzúa, Cruces, and Ripani (2010).

TABLE 2. Coverage of Cash Transfer Programs

Percent of total population

| <i>Income decile</i> | <i>Bolivia</i> | <i>Chile</i> | <i>Costa Rica</i> | <i>Ecuador</i> | <i>Panama</i> | <i>Paraguay</i> | <i>Peru</i> | <i>Uruguay</i> |
|----------------------|----------------|--------------|-------------------|----------------|---------------|-----------------|-------------|----------------|
| First | 75.7 | 8.1 | 17.6 | 54.6 | 43.8 | 13.6 | 41.1 | 77.0 |
| Second | 63.6 | 5.6 | 23.1 | 52.1 | 25.5 | 7.2 | 26.7 | 59.3 |
| Third | 63.1 | 4.7 | 17.1 | 41.2 | 12.5 | 6.4 | 16.5 | 40.8 |
| Fourth | 64.1 | 3.3 | 13.7 | 31.7 | 7.4 | 4.0 | 9.3 | 23.3 |
| Fifth | 58.3 | 2.8 | 12.5 | 29.6 | 3.9 | 2.7 | 5.4 | 12.7 |
| Sixth | 51.4 | 2.6 | 11.1 | 21.5 | 3.8 | 3.0 | 2.1 | 7.9 |
| Seventh | 46.4 | 2.0 | 5.2 | 14.7 | 0.5 | 0.6 | 1.3 | 3.7 |
| Eighth | 38.9 | 1.2 | 1.6 | 9.4 | 1.0 | 0.5 | 0.8 | 1.6 |
| Ninth | 31.6 | 1.4 | 1.0 | 3.0 | 0.4 | 0.0 | 0.2 | 0.6 |
| Tenth | 19.9 | 0.8 | 0.4 | 0.9 | 0.0 | 0.1 | 0.0 | 0.2 |
| Total | 51.3 | 3.3 | 10.3 | 26.0 | 9.9 | 3.8 | 10.3 | 22.7 |

Source: Authors' compilation based on household surveys.

Beneficiaries of CTs and Importance of Transfer

With the expansion of CTs in the region, a significant percentage of the population is now covered by these programs, although there are important differences by country. According to household survey data, in Bolivia, half of the population lives in households that receive CTs, whereas in Chile and Paraguay coverage is less than 4 percent of the population (table 2). In all cases, the percentage of beneficiaries decreases with income, with high levels of variation in terms of coverage for poorer households. Bolivia, Ecuador, and Uruguay (the countries with the highest coverage in our sample) exhibit a higher inclusion of poorer individuals, whereas in Chile, Costa Rica, and Paraguay there is significant undercoverage among households in the first decile. In Chile and Paraguay, this undercoverage seems to result from the small size of the programs.

Whereas the first (or lowest) decile contains a significant proportion of total beneficiaries in Panama, Peru, Paraguay, and Uruguay, in Bolivia and Chile, the five upper deciles (from 6 to 10) contain 37 percent and 25 percent of total beneficiaries, respectively (table 3).

CTs constitute an important source of income among households in the lower deciles, although their importance varies by country. Transfers represent a larger share of total household income in Ecuador and Panama and a smaller share in Paraguay and Costa Rica (see table 4 and figure A1 in the appendix). If we restrict the analysis to the first decile, around one-third of total household income is explained by these CTs in Costa Rica, Ecuador, and Panama. Similar results are obtained when we compare the amount of

TABLE 3 . Distribution of Beneficiaries by Income Decile

| <i>Income decile</i> | <i>Bolivia</i> | <i>Chile</i> | <i>Costa Rica</i> | <i>Ecuador</i> | <i>Panama</i> | <i>Paraguay</i> | <i>Peru</i> | <i>Uruguay</i> |
|----------------------|----------------|--------------|-------------------|----------------|---------------|-----------------|-------------|----------------|
| First | 14.8 | 24.8 | 17.0 | 23.3 | 44.3 | 35.7 | 39.7 | 33.9 |
| Second | 12.4 | 17.2 | 22.3 | 18.0 | 25.8 | 18.8 | 25.8 | 26.1 |
| Third | 12.3 | 14.4 | 16.6 | 16.3 | 12.6 | 16.7 | 16.0 | 18.0 |
| Fourth | 12.5 | 10.2 | 13.2 | 12.0 | 7.5 | 10.5 | 9.0 | 10.3 |
| Fifth | 11.4 | 8.6 | 12.2 | 11.2 | 3.9 | 7.2 | 5.2 | 5.6 |
| Sixth | 10.0 | 8.0 | 10.7 | 8.3 | 3.8 | 7.9 | 2.1 | 3.5 |
| Seventh | 9.0 | 6.2 | 5.1 | 5.9 | 0.5 | 1.6 | 1.3 | 1.6 |
| Eighth | 7.6 | 3.8 | 1.6 | 3.5 | 1.1 | 1.4 | 0.7 | 0.7 |
| Ninth | 6.1 | 4.4 | 0.9 | 1.1 | 0.4 | 0.0 | 0.2 | 0.3 |
| Tenth | 3.9 | 2.4 | 0.4 | 0.4 | 0.0 | 0.2 | 0.0 | 0.1 |
| Total | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |

Source: Authors' compilation based on household surveys.

TABLE 4 . Transfers as a Percentage of Household Income of Beneficiary Households

| <i>Income decile</i> | <i>Bolivia</i> | <i>Chile</i> | <i>Costa Rica</i> | <i>Ecuador</i> | <i>Panama</i> | <i>Paraguay</i> | <i>Peru</i> | <i>Uruguay</i> |
|----------------------|----------------|--------------|-------------------|----------------|---------------|-----------------|-------------|----------------|
| First | 7.8 | 8.1 | 29.7 | 33.6 | 34.9 | 21.7 | 9.7 | 11.0 |
| Second | 2.4 | 3.4 | 11.1 | 19.4 | 15.3 | 12.5 | 5.7 | 6.0 |
| Third | 1.5 | 2.9 | 8.2 | 15.8 | 9.5 | 9.5 | 3.9 | 4.6 |
| Fourth | 1.1 | 2.5 | 7.2 | 12.6 | 6.5 | 8.8 | 3.2 | 3.8 |
| Fifth | 0.8 | 2.1 | 5.4 | 10.4 | 5.3 | 6.3 | 2.6 | 3.2 |
| Sixth | 0.6 | 2.0 | 4.8 | 9.5 | 2.9 | 3.8 | 2.1 | 2.6 |
| Seventh | 0.5 | 1.7 | 3.3 | 7.1 | 3.7 | 5.2 | 1.9 | 2.2 |
| Eighth | 0.4 | 1.4 | 3.0 | 5.7 | 1.2 | 5.7 | 1.4 | 2.0 |
| Ninth | 0.3 | 0.9 | 1.7 | 3.8 | 2.6 | — | 0.9 | 1.7 |
| Tenth | 0.2 | 0.6 | 0.8 | 2.8 | 0.6 | 2.9 | 0.1 | 0.8 |
| Total | 1.9 | 3.6 | 11.0 | 17.5 | 20.9 | 13.2 | 6.3 | 6.6 |

Source: Authors' compilation based on household surveys.

the transfer in per capita terms with the poverty and indigence lines (see figures A2 and A3 in the appendix). In most countries, receipt of CTs implies a significant improvement in terms of available resources for households at the bottom of the income distribution, especially in the first and—depending on the country—second deciles. Nevertheless, in Bolivia, Chile, and Peru, they account for less than 10 percent of total income.

Impacts of CTs on Poverty and Inequality

By providing a new source of income to households, CTs can help to reduce poverty and inequality. To assess the effects on poverty, we use the three poverty indicators developed by Foster, Greer, and Thorbecke: namely, the incidence,

TABLE 5 . Direct Effect of Conditional Cash Transfers (CCTs) on Poverty: ECLAC Thresholds^a
Percent of population

| Country | FGT ₀ | | FGT ₁ | | FGT ₂ | |
|------------|------------------|--------------|------------------|--------------|------------------|--------------|
| | With CCTs | Without CCTs | With CCTs | Without CCTs | With CCTs | Without CCTs |
| Bolivia | 36.0 | 36.2 | 15.2 | 15.5 | 9.1 | 9.3 |
| Chile | 7.8 | 7.8 | 2.5 | 2.5 | 1.3 | 1.3 |
| Costa Rica | 17.7 | 18.3 | 6.9 | 7.2 | 4.0 | 4.3 |
| Ecuador | 33.6 | 36.0 | 11.7 | 13.6 | 5.7 | 7.3 |
| Panama | 22.8 | 23.2 | 9.9 | 10.5 | 5.9 | 6.6 |
| Paraguay | 40.5 | 40.7 | 16.5 | 16.7 | 9.2 | 9.4 |
| Peru | 24.0 | 24.3 | 8.2 | 8.4 | 3.9 | 4.1 |
| Uruguay | 5.6 | 6.6 | 1.5 | 1.9 | 0.6 | 0.8 |

Source: Authors' compilation based on household surveys.

a. FGT₀: Incidence of poverty (headcount ratio); FGT₁: Poverty gap; FGT₂: Squared poverty gap.

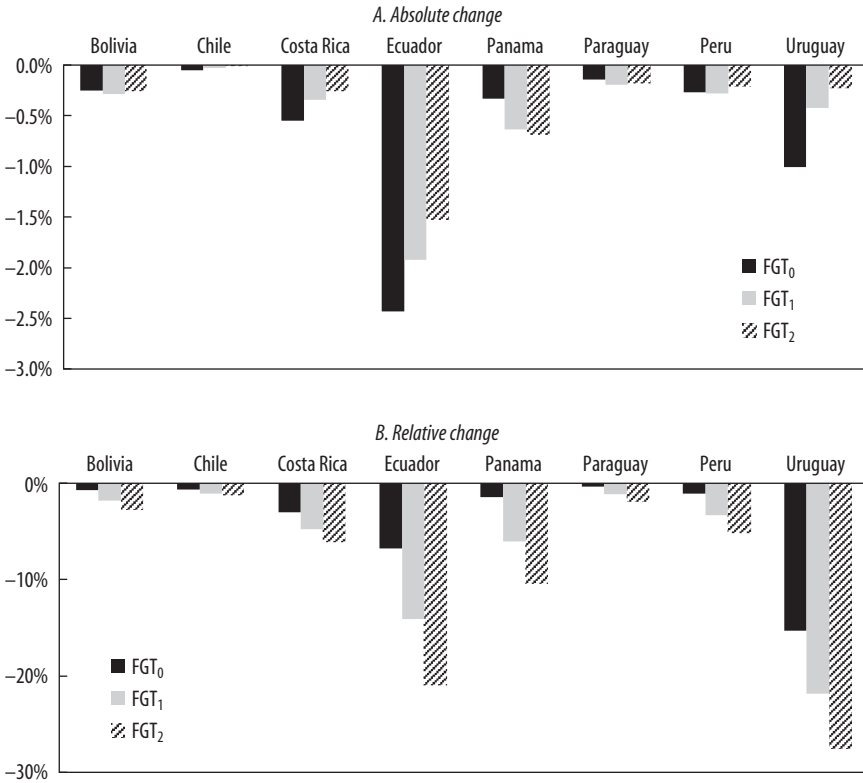
or headcount, ratio (FGT₀); the poverty gap (FGT₁), and the squared poverty gap (FGT₂).²³ We calculate these indicators using the original income reported by households and assuming that CTs did not exist. The measure of poverty is based on the ECLAC poverty lines.

In absolute terms, the change in poverty indicators due to CTs is limited in all countries (table 5). The one exception is Ecuador, which exhibits the highest decrease in the incidence of poverty (FGT₀) as a consequence of transfers (2.4 points), followed by Uruguay (1.0 point). Although the absolute changes in poverty indicators are moderate (lower than one point in all countries except Ecuador and Uruguay), the change in percentages is higher, as small absolute changes in countries with low poverty (such as Uruguay) imply high relative reductions in poverty (see figure 2). Consequently, CTs result in a 15 percent reduction of poverty in Uruguay, 7 percent in Ecuador, and 3 percent in Costa Rica. Also, percentage changes in poverty intensity and severity tend to be higher than changes in incidence. The general picture is that reductions in the incidence, intensity, and severity of poverty are moderate in absolute terms, with important variations among countries and greater achievements in Ecuador and Uruguay. When poverty is calculated using the World Bank poverty line of US\$3.10 a day, the incidence is lower in all countries, and the effects of CTs are smaller (see table A4 and figure A3). Nevertheless, the ordering of countries in terms of the size of effects is similar (figure A4).

To study the impact of CTs on inequality, we computed indicators of progressivity and redistributive impact. A transfer is considered progressive if

23. Foster, Greer, and Thorbecke (1984).

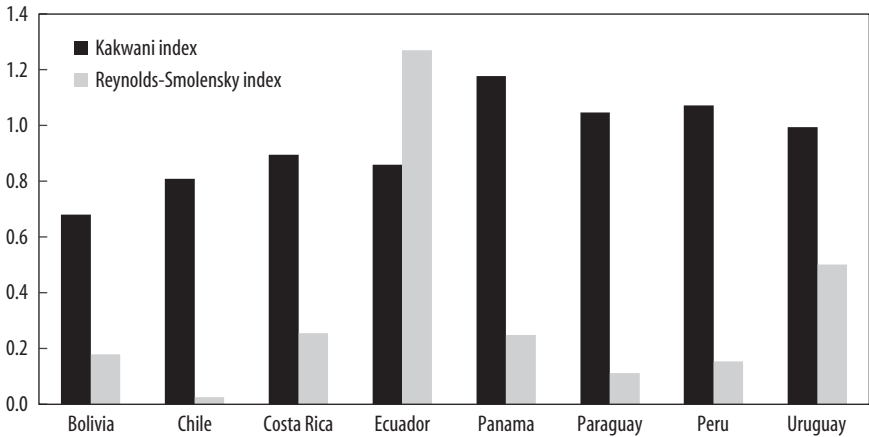
FIGURE 2. Change in Poverty Indicators Induced by Cash Transfer Programs



Source: Authors' illustration based on household surveys.

the amount decreases with increases in household income. A typical way to measure progressivity is to use the Kakwani index, where a positive value indicates progressivity and larger values indicate greater progressivity.²⁴ The redistributive impact, in turn, is commonly measured using the Reynolds–Smolensky index, which corresponds to the difference in the Gini index before and after the transfer. The total redistributive effect of a transfer

24. The Kakwani index is defined as double the area between the concentration curve corresponding to the transfer and the Lorenz curve corresponding to the initial income distribution. In the case of transfers, we compute it as the difference between the Gini index corresponding to the initial income minus the concentration index corresponding to the benefits induced by the transfer (see Gasparini, Cicowiez, and Escudero, 2013).

FIGURE 3 . Progressivity and Redistributive Impact of Noncontributory Cash Transfers

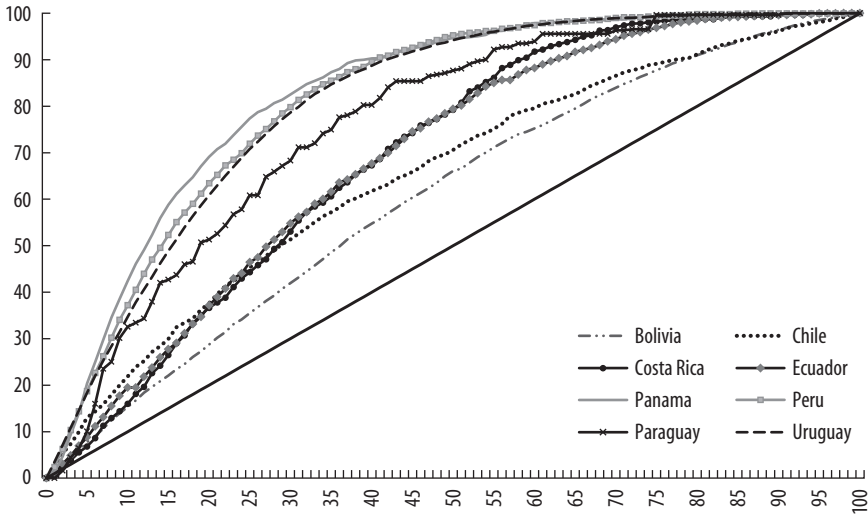
Source: Authors' illustration based on household surveys.

depends positively on its progressivity and its mean value, whereas it depends negatively on the potential reordering of households due to the transfer. This implies that transfers may be highly progressive, as in Panama, Paraguay, Peru, and Uruguay, and still have a low redistributive impact. Indeed, in these cases, the variation between the Gini index before and after the transfers is lower than half a percentage point, even when the transfers are highly progressive. This is mainly explained by the low value of average benefits; that is, the relatively low level of the resources involved. Ecuador's CT program exhibits the highest redistributive impact; it also involves the highest level of resources (figure 3). Thus, even if programs are very well targeted and exhibit high progressivity, their impacts in terms of redistribution depend on the share of total household income that they represent.²⁵

The progressivity of transfers can also be illustrated through concentration curves, which show results similar to those obtained using the Kakwani index (figure 4). All programs help to reduce inequality: Panama, Uruguay, and Peru are the most progressive programs (the concentration curves are more distant from the 45° line); Paraguay, Ecuador, and Costa Rica are in an intermediate range; and Chile and Bolivia are the least progressive.

25. A similar exercise carried out for Brazil and Mexico, the "stars" among these kinds of interventions, finds that CTs in these countries were able to reduce the Gini inequality by around 2.7 points (Soares and others 2007).

FIGURE 4. Concentration Curves of CTs

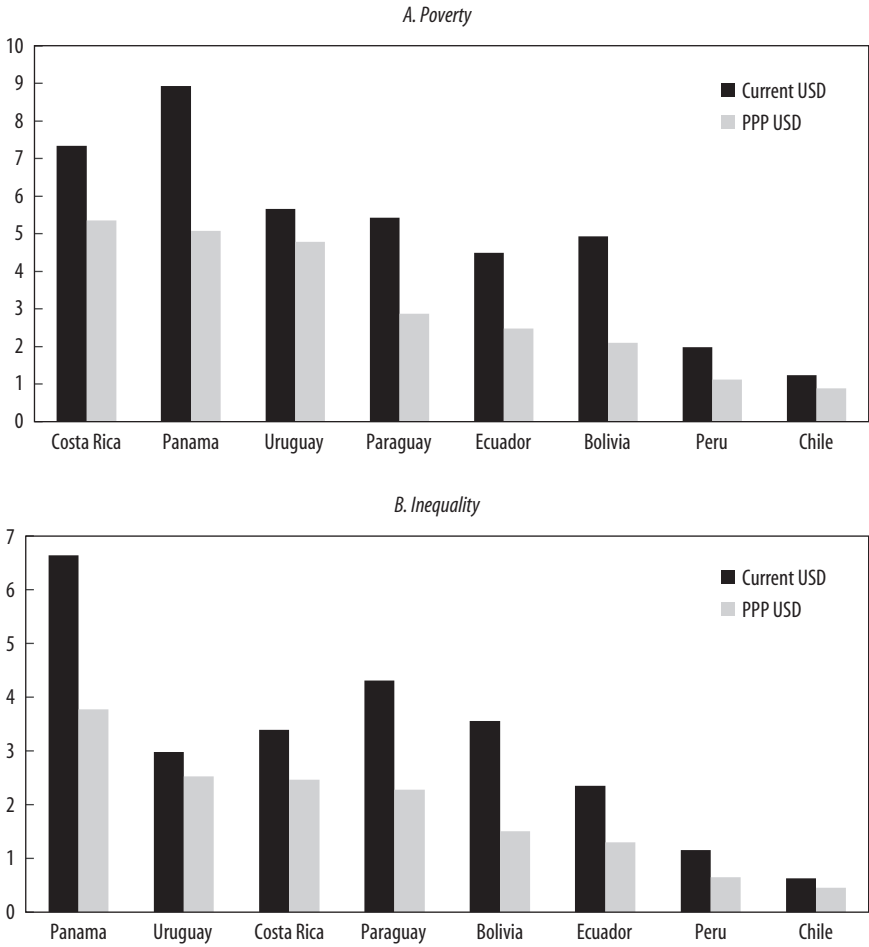


Source: Authors' illustration based on household surveys.

We compared the efficiency of CT programs in different countries in terms of their capacity for reducing poverty and inequality per dollar invested. Figure 5 shows the achievements in percentage points of reduction of poverty incidence and inequality per billion dollars invested (in current and PPP dollars). The ordering of countries is similar in terms of their effectiveness in reducing both poverty and inequality (in current and PPP dollars). Panama, Costa Rica, and Uruguay are the best performers, whereas Peru and Chile present lower indicators in both cases.

Alternative Designs of CTs: Effects on Poverty and Inequality

The effects of transfers on poverty and inequality are a result of the targeting of their implementation and the amount of the transfers, as discussed previously. To disentangle the potential role of these two channels, we develop static microsimulations and consider the impact of three alternative program designs, as follows: in scenario 1, the program budget is unchanged, but the program is perfectly targeted toward poorer households with children; in scenario 2, the program budget is doubled, but beneficiaries remain the same;

FIGURE 5. Reduction in Poverty and Inequality, by Dollar Invested

Source: Authors' illustration based on household surveys and the ECLAC database on noncontributory social protection programs in Latin America and the Caribbean (<http://dds.cepal.org/bpsnc/> accessed 10 November 2016).

and scenario 3 combines scenarios 1 and 2. In this section, we present the results obtained from these three alternative designs and compare them with the current design.

The scenario of perfect targeting is clearly hypothetical. Even with the use of modern tools, targeting mechanisms are not perfect. Statistical errors persist, as traditional proxy means tests are able to explain only a limited percentage of the variability associated with household welfare.²⁶ In contrast, scenarios assuming a doubling of the budget, although extreme, are not impossible, given both the limited resources involved today and the coexistence of cash transfers with duplications in social assistance programs and generalized subsidies, which may create fiscal space for social protection. A first analysis consists of looking at the distribution of beneficiaries under different scenarios. This distribution does not change with respect to the original program under scenario 2 (only the budget is doubled), but it does change with respect to the original in scenarios 1 and 3, which assume perfect targeting. In these cases, the distribution of beneficiaries coincides, but the scenarios imply different budgets. Under perfect targeting of cash programs (scenarios 1 and 3), transfers are provided to the poorest households with children. Moreover, transfers are provided in an ordered manner, starting with the households in the lowest percentiles with the greatest number of children, until each country's budget runs out. By construction, the excluded households among the poorest correspond to those where there are no children. The result is that no household belonging to the two upper deciles receives the CT in any country (table 6). Moreover, only in Bolivia, Ecuador, and Uruguay are transfers given to households outside of the first two deciles, while Chile and Paraguay end up allocating their entire budget to households in the first decile.

Significant increases in coverage in the first decile occur under perfect targeting (scenarios 1 and 3), especially in Costa Rica, Ecuador, Panama, and Peru (table 7). However, under these scenarios, coverage in Chile and Paraguay does not reach 50 percent of the population in the first deciles. This implies that even if the transfers were efficiently assigned, the budgets allocated to transfer programs in these countries would be insufficient to achieve universal coverage in the lowest part of the income distribution.

The alternative program designs imply, in general terms, very modest poverty reduction effects among the total population compared with the actual

26. Ibararán and others (2017).

TABLE 6 . Distribution of Beneficiaries by Income Decile under Different Scenarios

| <i>Country and scenario</i> | <i>Income decile</i> | | | | | | | | | | <i>Total</i> |
|-----------------------------|----------------------|----------|----------|----------|----------|----------|----------|----------|----------|-----------|--------------|
| | <i>1</i> | <i>2</i> | <i>3</i> | <i>4</i> | <i>5</i> | <i>6</i> | <i>7</i> | <i>8</i> | <i>9</i> | <i>10</i> | |
| Bolivia | | | | | | | | | | | |
| Original and scenario 2 | 15 | 12 | 12 | 12 | 11 | 10 | 9 | 8 | 6 | 4 | 100 |
| Scenarios 1 and 3 | 16 | 15 | 14 | 15 | 14 | 12 | 13 | 1 | 0 | 0 | 100 |
| Chile | | | | | | | | | | | |
| Original and scenario 2 | 25 | 17 | 14 | 10 | 9 | 8 | 6 | 4 | 4 | 2 | 100 |
| Scenarios 1 and 3 | 100 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 100 |
| Costa Rica | | | | | | | | | | | |
| Original and scenario 2 | 17 | 22 | 17 | 13 | 12 | 11 | 5 | 2 | 1 | 0 | 100 |
| Scenarios 1 and 3 | 72 | 28 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 100 |
| Ecuador | | | | | | | | | | | |
| Original and scenario 2 | 23 | 18 | 16 | 12 | 11 | 8 | 6 | 3 | 1 | 0 | 100 |
| Scenarios 1 and 3 | 31 | 25 | 26 | 18 | 0 | 0 | 0 | 0 | 0 | 0 | 100 |
| Panama | | | | | | | | | | | |
| Original and scenario 2 | 44 | 26 | 13 | 7 | 4 | 4 | 1 | 1 | 0 | 0 | 100 |
| Scenarios 1 and 3 | 93 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 100 |
| Peru | | | | | | | | | | | |
| Original and scenario 2 | 40 | 26 | 16 | 9 | 5 | 2 | 1 | 1 | 0 | 0 | 100 |
| Scenarios 1 and 3 | 78 | 22 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 100 |
| Paraguay | | | | | | | | | | | |
| Original and scenario 2 | 36 | 19 | 17 | 10 | 7 | 8 | 2 | 1 | 0 | 0 | 100 |
| Scenarios 1 and 3 | 100 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 100 |
| Uruguay | | | | | | | | | | | |
| Original and scenario 2 | 34 | 26 | 18 | 10 | 6 | 3 | 2 | 1 | 0 | 0 | 100 |
| Scenarios 1 and 3 | 42 | 40 | 18 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 100 |

Source: Authors' compilation based on household surveys.

designs, with the exception of Ecuador. In fact, gains in terms of poverty reduction due to efficient targeting are around half a point in Costa Rica and Ecuador in scenario 1 (table 8). When the budget is doubled and perfect targeting is achieved (scenario 3), three countries are able to decrease their poverty incidence by more than one percentage point (absolute change) compared with the actual design of the programs (Costa Rica, Ecuador, and Uruguay). Even in this optimistic scenario, the amounts involved are not enough to pull the whole population out of poverty. Higher gains are made under alternative designs in alleviating the intensity of poverty (FGT_1): Ecuador, Costa Rica, and now also Panama (under scenario 3) get the major improvements. A similar result is obtained for the severity of poverty (FGT_2). Results regarding extreme poverty are presented in table A5 in the appendix.

TABLE 7. Coverage of Cash Transfer Programs by Income Decile under Different Scenarios

| Country and scenario | Income decile | | | | | | | | | | Total |
|-------------------------|---------------|----|----|----|----|----|----|----|----|----|-------|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | |
| Bolivia | | | | | | | | | | | |
| Original and scenario 2 | 76 | 64 | 63 | 64 | 58 | 51 | 46 | 39 | 32 | 20 | 51 |
| Scenarios 1 and 3 | 79 | 70 | 69 | 71 | 67 | 60 | 61 | 6 | 0 | 0 | 48 |
| Chile | | | | | | | | | | | |
| Original and scenario 2 | 8 | 6 | 5 | 3 | 3 | 3 | 2 | 1 | 1 | 1 | 3 |
| Scenarios 1 and 3 | 30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| Costa Rica | | | | | | | | | | | |
| Original and scenario 2 | 18 | 23 | 17 | 14 | 13 | 11 | 5 | 2 | 1 | 0 | 10 |
| Scenarios 1 and 3 | 66 | 26 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 9 |
| Ecuador | | | | | | | | | | | |
| Original and scenario 2 | 55 | 52 | 41 | 32 | 30 | 22 | 15 | 9 | 3 | 1 | 26 |
| Scenarios 1 and 3 | 84 | 85 | 77 | 54 | 0 | 0 | 0 | 0 | 0 | 0 | 30 |
| Panama | | | | | | | | | | | |
| Original and scenario 2 | 44 | 25 | 12 | 7 | 4 | 4 | 1 | 1 | 0 | 0 | 10 |
| Scenarios 1 and 3 | 93 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10 |
| Peru | | | | | | | | | | | |
| Original and scenario 2 | 41 | 27 | 17 | 9 | 5 | 2 | 1 | 1 | 0 | 0 | 10 |
| Scenarios 1 and 3 | 85 | 24 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 11 |
| Paraguay | | | | | | | | | | | |
| Original and scenario 2 | 14 | 7 | 6 | 4 | 3 | 3 | 1 | 1 | 0 | 0 | 4 |
| Scenarios 1 and 3 | 38 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 |
| Uruguay | | | | | | | | | | | |
| Original and scenario 2 | 77 | 59 | 41 | 23 | 13 | 8 | 4 | 2 | 1 | 0 | 23 |
| Scenarios 1 and 3 | 92 | 87 | 39 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 22 |

Source: Authors' compilation based on household surveys.

Scenarios 1 and 3 imply a considerable increase in the progressivity of transfers, as reflected by the change in the Kakwani index (figure 6), especially in Chile, Costa Rica, and Paraguay. The Kakwani index corresponding to scenario 2 is equivalent to that of the original transfer (as only the budget of the program is changed). As expected, the progressivity of the programs could be increased by improving targeting.

Improvements in targeting and especially in the amount of transfers lead to significant decreases in the Gini index, as reflected in the increases in the Reynolds–Smolensky index compared with the baseline without CTs (figure 7). Major gains are obtained in Ecuador, especially under scenario 3, as the net redistributive impact implies a reduction of three Gini points with respect to the baseline without transfers and almost two additional Gini points with respect to the redistribution of the original

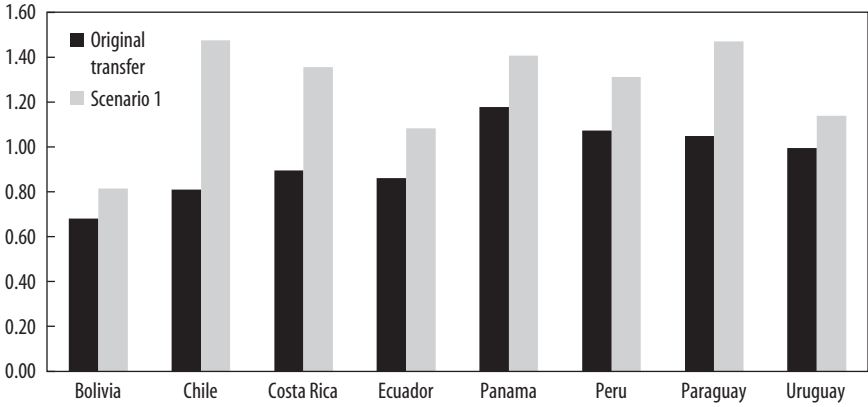
TABLE 8 . Poverty Incidence and Change under Different Scenarios: ECLAC Thresholds
Percent of population

| Poverty measure and country | Poverty incidence | | | | | Change (relative to original program) | | |
|--------------------------------|-------------------|---------------------|----------|------|------|--|------|------|
| | No transfer | Original program | Scenario | | | Scenario | | |
| | | | 1 | 2 | 3 | 1 | 2 | 3 |
| FGT₀ | | | | | | | | |
| Bolivia | 36.2 | 36.0 | 36.0 | 35.4 | 35.7 | 0.0 | -0.6 | -0.3 |
| Chile | 7.8 | 7.8 | 7.7 | 7.6 | 7.6 | -0.1 | -0.2 | -0.2 |
| Costa Rica | 18.3 | 17.7 | 17.2 | 16.8 | 16.3 | -0.5 | -0.9 | -1.4 |
| Ecuador | 36.0 | 33.6 | 33.1 | 30.0 | 26.1 | -0.5 | -3.5 | -7.5 |
| Panama | 23.2 | 22.8 | 23.2 | 22.5 | 23.2 | 0.3 | -0.4 | 0.3 |
| Peru | 24.3 | 24.0 | 24.1 | 23.3 | 23.4 | 0.1 | -0.7 | -0.6 |
| Paraguay | 40.7 | 40.5 | 40.6 | 40.0 | 40.6 | 0.0 | -0.5 | 0.0 |
| Uruguay | 6.6 | 5.6 | 5.3 | 4.7 | 4.3 | -0.2 | -0.9 | -1.3 |
| FGT₁ | | | | | | | | |
| Bolivia | 15.5 | 15.2 | 14.9 | 14.8 | 14.3 | -0.3 | -0.4 | -0.9 |
| Chile | 2.5 | 2.5 | 2.3 | 2.3 | 2.1 | -0.2 | -0.2 | -0.4 |
| Costa Rica | 7.2 | 6.9 | 6.0 | 6.2 | 5.2 | -0.9 | -0.7 | -1.7 |
| Ecuador | 13.6 | 11.7 | 8.9 | 9.5 | 5.9 | -2.8 | -2.2 | -5.8 |
| Panama | 10.5 | 9.9 | 9.6 | 9.3 | 8.8 | -0.2 | -0.6 | -1.1 |
| Peru | 8.4 | 8.2 | 8.0 | 7.6 | 7.3 | -0.1 | -0.6 | -0.9 |
| Paraguay | 16.7 | 16.5 | 16.3 | 15.9 | 16.0 | -0.3 | -0.6 | -0.6 |
| Uruguay | 1.9 | 1.5 | 1.4 | 1.2 | 1.0 | -0.1 | -0.3 | -0.5 |
| FGT₂ | | | | | | | | |
| Bolivia | 9.3 | 9.1 | 8.7 | 8.7 | 8.2 | -0.4 | -0.4 | -0.9 |
| Chile | 1.3 | 1.3 | 1.1 | 1.1 | 0.9 | -0.2 | -0.2 | -0.4 |
| Costa Rica | 4.3 | 4.0 | 3.2 | 3.4 | 2.6 | -0.8 | -0.6 | -1.4 |
| Ecuador | 7.3 | 5.7 | 3.4 | 4.3 | 2.1 | -2.3 | -1.5 | -3.7 |
| Panama | 6.6 | 5.9 | 5.4 | 5.3 | 4.5 | -0.4 | -0.5 | -1.4 |
| Peru | 4.1 | 3.9 | 3.8 | 3.5 | 3.3 | -0.1 | -0.4 | -0.6 |
| Paraguay | 9.4 | 9.2 | 8.8 | 8.6 | 8.3 | -0.5 | -0.6 | -0.9 |
| Uruguay | 0.8 | 0.6 | 0.6 | 0.5 | 0.4 | 0.0 | -0.2 | -0.2 |

Source: Authors' compilation based on household surveys.

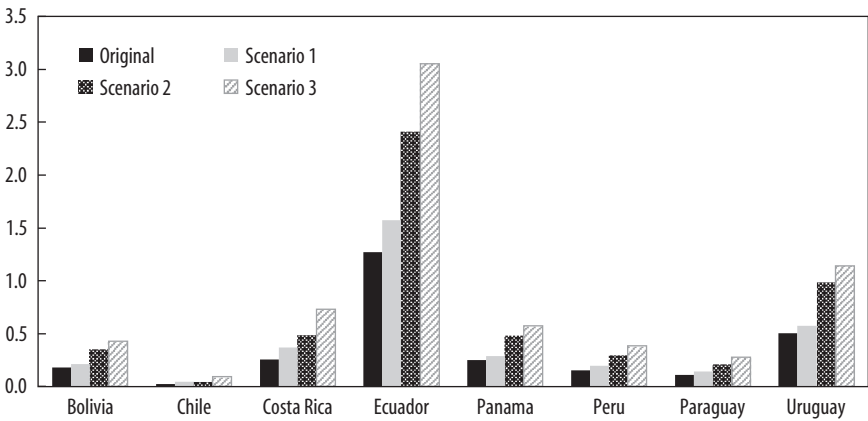
program. The effects are also significant for Uruguay under scenarios 2 and 3: if the CT budget were doubled, the Gini coefficient could be reduced by 1.5 points (with respect to the baseline without transfers); however, the gains with respect to the original program are less dramatic, at around half a Gini point. For the other countries, as discussed above, the redistributive impact of CTs is limited because of the amounts involved. In those cases, even the doubling of the budget of CTs creates limited redistributive effects. In all cases, the improvement in targeting implied by scenario 1,

FIGURE 6. Progressivity of Noncontributory Cash Transfers under Perfect Targeting (Scenario 1): The Kakwani Index



Source: Authors' illustration based on household surveys.

FIGURE 7. Reynolds–Smolensky Index under Different Scenarios



Source: Authors' illustration based on household surveys.

despite leading to important increases in progressivity, does not result in a significant redistributive effect compared with the original program design.

Conclusion

Cash transfers to poor households with children provide a reliable source of income, covering a significant proportion of the population in Latin America. The comparative analysis presented in this article, however, illustrates important variations among countries in terms of the coverage and effectiveness of the programs. According to household survey data, coverage ranges from 3 percent of the population in Chile to 50 percent in Bolivia. In the first decile of the population, coverage is 8 percent in Chile but reaches 76 percent in Bolivia and 77 percent in Uruguay. Thus, CTs represent a significant portion of household resources at the bottom of the income distribution, again with important variations among the cases considered (from 8 to 35 percent of total income in the first decile). Undoubtedly, these transfers help to improve living conditions and lessen poverty in beneficiary households, but their effects in terms of poverty eradication or inequality reduction in the cases considered in this paper are limited, mainly because of the amount of resources involved. Expansion in program coverage has not been accompanied by significant increases in budgets. Resources are far from sufficient to bring households up to the poverty line, and even with a very optimistic scenario of perfect targeting and doubling of resources, poverty rates remain almost unchanged and income redistribution is quite modest. In the cases considered in this paper, CTs seem to have taken a reduced fiscal space to improve people's living conditions and, according to available impact evaluations, to obtain favorable results in different dimensions. Given the magnitude of prevailing poverty gaps in the region, the resources needed to eradicate current poverty or significantly redistribute income would be significantly higher, and beneficiary households remain largely vulnerable despite the transfers.

Appendix: Supplementary Tables and Figures

TABLE A 1. Data Set Coverage of Conditional Cash Transfers (CCTs)

| Country | Program | Year | CCT reception | | CCT amount | | |
|------------|---------------------|------|---|---|--------------------|---|-----------------------------------|
| | | | Question | Variable name | Question on amount | Question | Variable name |
| Bolivia | Bono Juancito Pinto | 2011 | ¿Ha recibido el Bono Juancito Pintos? | bonojp | No | — | — |
| Chile | Chile Solidario | 2013 | Su núcleo, ¿participa en Chile Solidario? / Su núcleo, ¿participa en el programa de Ingreso Ético Familiar? / El mes pasado, ¿recibió alguien en este hogar: bono de protección familiar? | y21a / y21b / y22a / y22b / y22c / y22d | Yes | Bono de Protección Familiar (Pesos por mes) | y2201h / y2202h / y2203h / y2204h |
| Costa Rica | Avancemos | 2013 | ¿Durante este año algún miembro del hogar ha recibido ayuda en dinero del IMAS o participó en programas como Hogar Comunitario, Creciendo Juntas, Jefes de Hogar, Capacitaciones? | imas1 | No | — | — |

| Ecuador | Bono de Desarrollo Humano | 2013 | ¿Recibe el Bono de Desarrollo Humano (Bono Solidario)? | bono-sol ^b | Yes* — | ¿Cuánto recibió en el mes de ____ por el Bono de Desarrollo Humano (Bono Solidario)? | ingbono |
|----------|---------------------------|------|--|-----------------------|------------------|--|---------------------------------------|
| Panamá | Red de Oportunidades | 2013 | — | — | Yes | Ingreso por subsidios (Red de Oportunidades) | ysub1 |
| Paraguay | Tekopora | 2013 | — | — | Yes | Ingresos del estado — Tekopora (garantías declarados por mes) | e01h |
| Peru | Juntos | 2013 | En los últimos 6 meses, de ____ a ____, ¿recibió Ud. ingresos por concepto de: ¿Transferencia del programa Juntos? | juntos ^b | Yes* — | En los últimos 6 meses, de ____ a ____, ¿recibió Ud. ingresos por concepto de: ¿Transferencia del programa Juntos? | ingju / ingjue |
| Uruguay | Asignaciones Familiares | 2013 | ¿Cobra Asignaciones Familiares? | cobraaf | Yes ^c | Si marcó SI en la variable cobraaf, ¿Cuántas asignaciones cobra por ____? | ctasaf1 / ctasaf2 / ctasaf3 / ctasaf4 |

Source: Authors' compilation based on household surveys.

*Not used.

a. An age restriction was also applied to define households that receive transfers (at least one member between five and fifteen years old).

b. An age restriction was also applied to define households that receive transfers (at least one member under fifteen years old).

c. Only the number of each type of beneficiary is collected. Secondary data are needed to estimate amounts transferred.

TABLE A2. Coverage and Budget of Selected Child Transfer Programs in Latin America: Latest Available Data

| <i>Country</i> | <i>Program</i> | <i>Budget (% GDP)</i> | <i>Year</i> |
|----------------|---------------------------|-----------------------|-------------|
| Bolivia | Bono Juancito Pinto | 0.20 | 2012 |
| Chile | Chile Solidario | 0.16 | 2011 |
| Costa Rica | Avancemos | 0.19 | 2014 |
| Ecuador | Bono de Desarrollo Humano | 0.40 | 2014 |
| Panama | Red de Oportunidades | 0.13 | 2013 |
| Paraguay | Tekopora | 0.17 | 2014 |
| Peru | Juntos | 0.20 | 2014 |
| Uruguay | Asignaciones Familiares | 0.46 | 2012 |

Source: ECLAC database on noncontributory social protection programs in Latin America and the Caribbean (<http://dds.cepal.org/bpsnc/> accessed 10 November 2016).

TABLE A3. Characteristics of Household Surveys

| <i>Country</i> | <i>Survey name</i> | <i>Year</i> | <i>Coverage</i> | <i>Number of households</i> | <i>Number of people</i> |
|----------------|---|-------------|-----------------|-----------------------------|-------------------------|
| Bolivia | Encuesta Continua de Hogares (ECH) | 2011 | National | 8,851 | 33,821 |
| Chile | Encuesta de Caracterización Socioeconómica Nacional (CASEN) | 2013 | National | 66,725 | 218,491 |
| Costa Rica | Encuesta Nacional de Hogares (ENAHO) | 2013 | National | 11,219 | 38,779 |
| Ecuador | Encuesta Nacional de Empleo, Desempleo y Subempleo (ENEMDU) | 2013 | National | 21,303 | 81,386 |
| Panama | Encuesta de Hogares de Propósitos Múltiples (EHPM) | 2013 | National | 11,905 | 44,237 |
| Paraguay | Encuesta Permanente de Hogares (EPH) | 2013 | National | 5,424 | 21,207 |
| Peru | Encuesta Nacional de Hogares (ENAHO) | 2013 | National | 30,453 | 117,731 |
| Uruguay | Encuesta Continua de Hogares (ECH) | 2013 | National | 46,622 | 127,925 |

Source: Authors' compilation based on household surveys.

TABLE A4. Direct Effect of Conditional Cash Transfers (CCTs) on Poverty: World Bank Threshold^a Percent of population

| <i>Country</i> | <i>FGT₀</i> | | <i>FGT₁</i> | | <i>FGT₂</i> | |
|----------------|------------------------|---------------------|------------------------|---------------------|------------------------|---------------------|
| | <i>With CCTs</i> | <i>Without CCTs</i> | <i>With CCTs</i> | <i>Without CCTs</i> | <i>With CCTs</i> | <i>Without CCTs</i> |
| Bolivia | 16.20 | 16.51 | 7.30 | 7.54 | 4.51 | 4.74 |
| Chile | 2.28 | 2.30 | 0.97 | 0.99 | 0.63 | 0.64 |
| Costa Rica | 6.38 | 6.77 | 2.75 | 2.99 | 1.74 | 1.92 |
| Ecuador | 11.99 | 14.83 | 3.72 | 5.30 | 1.86 | 2.91 |
| Panama | 10.61 | 10.89 | 4.65 | 5.13 | 2.75 | 3.18 |
| Paraguay | 9.47 | 9.67 | 3.62 | 3.81 | 2.17 | 2.30 |
| Peru | 9.46 | 9.78 | 3.04 | 3.28 | 1.38 | 1.53 |
| Uruguay | 0.33 | 0.66 | 0.09 | 0.17 | 0.04 | 0.08 |

Source: Authors' compilation based on household surveys.

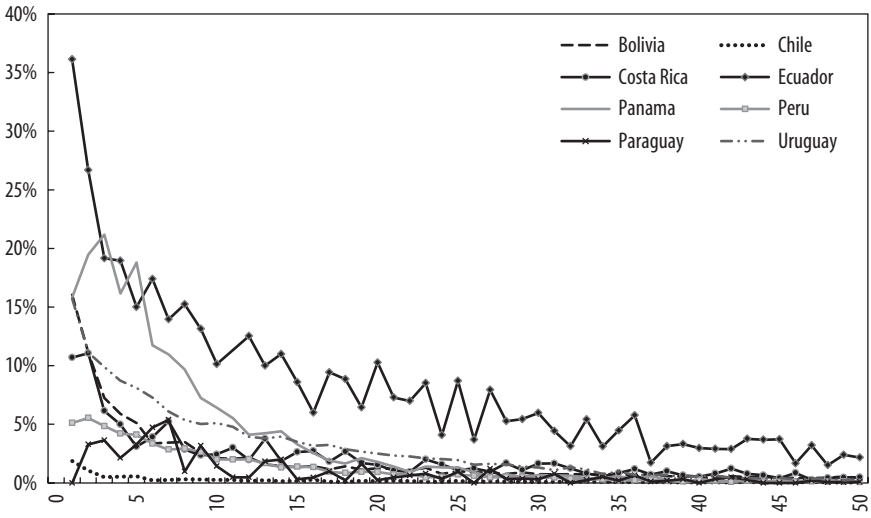
a. The poverty line is defined as the World Bank threshold of US\$3.10 a day using 2011 prices at PPP. FGT₀: Incidence of poverty (headcount ratio); FGT₁: Poverty gap; FGT₂: Squared poverty gap.

TABLE A 5 . Extreme Poverty Incidence and Change under Different Scenarios: ECLAC Thresholds
Percent of population

| Poverty measure and country | Extreme poverty incidence | | | | | Change (relative to original program) | | |
|-----------------------------|---------------------------|------------------|----------|------|------|---------------------------------------|------|------|
| | No transfer | Original program | Scenario | | | Scenario | | |
| | | | 1 | 2 | 3 | 1 | 2 | 3 |
| FGT₀ | | | | | | | | |
| Bolivia | 18.7 | 18.4 | 18.2 | 18.1 | 18.0 | -0.1 | -0.3 | -0.4 |
| Chile | 2.5 | 2.5 | 2.1 | 2.5 | 1.9 | -0.4 | 0.0 | -0.6 |
| Costa Rica | 7.6 | 7.2 | 6.2 | 6.9 | 5.1 | -1.0 | -0.3 | -2.1 |
| Ecuador | 14.9 | 12.0 | 10.9 | 9.5 | 7.6 | -1.1 | -2.5 | -4.4 |
| Panama | 12.4 | 11.8 | 11.6 | 11.2 | 10.4 | -0.2 | -0.7 | -1.5 |
| Peru | 5.1 | 4.7 | 4.4 | 4.3 | 3.7 | -0.3 | -0.4 | -1.0 |
| Paraguay | 19.3 | 19.1 | 19.3 | 19.0 | 19.3 | 0.2 | -0.1 | 0.2 |
| Uruguay | 1.5 | 0.9 | 0.9 | 0.6 | 0.5 | 0.0 | -0.3 | -0.4 |
| FGT₁ | | | | | | | | |
| Bolivia | 8.1 | 7.8 | 7.8 | 7.5 | 7.5 | 0.0 | -0.3 | -0.3 |
| Chile | 1.0 | 1.0 | 0.9 | 1.0 | 0.7 | -0.2 | 0.0 | -0.3 |
| Costa Rica | 3.3 | 3.0 | 2.4 | 2.9 | 1.8 | -0.7 | -0.2 | -1.3 |
| Ecuador | 5.2 | 3.7 | 3.3 | 2.8 | 2.0 | -0.4 | -0.9 | -1.6 |
| Panama | 5.8 | 5.1 | 4.5 | 4.5 | 3.3 | -0.6 | -0.6 | -1.8 |
| Peru | 1.5 | 1.3 | 1.1 | 1.2 | 0.9 | -0.2 | -0.1 | -0.4 |
| Paraguay | 7.2 | 7.0 | 6.8 | 6.8 | 6.4 | -0.2 | -0.2 | -0.6 |
| Uruguay | 0.4 | 0.2 | 0.2 | 0.2 | 0.1 | 0.0 | -0.1 | -0.1 |
| FGT₂ | | | | | | | | |
| Bolivia | 4.9 | 4.7 | 4.7 | 4.5 | 4.4 | 0.0 | -0.2 | -0.3 |
| Chile | 0.7 | 0.7 | 0.5 | 0.6 | 0.4 | -0.1 | 0.0 | -0.2 |
| Costa Rica | 2.1 | 1.9 | 1.4 | 1.8 | 1.0 | -0.5 | -0.1 | -0.9 |
| Ecuador | 2.8 | 1.8 | 1.5 | 1.3 | 0.9 | -0.3 | -0.4 | -0.9 |
| Panama | 3.7 | 3.0 | 2.4 | 2.5 | 1.6 | -0.5 | -0.5 | -1.4 |
| Peru | 0.6 | 0.5 | 0.4 | 0.5 | 0.3 | -0.1 | -0.1 | -0.2 |
| Paraguay | 4.1 | 3.9 | 3.5 | 3.8 | 3.0 | -0.4 | -0.1 | -0.9 |
| Uruguay | 0.2 | 0.1 | 0.1 | 0.1 | 0.1 | 0.0 | 0.0 | -0.1 |

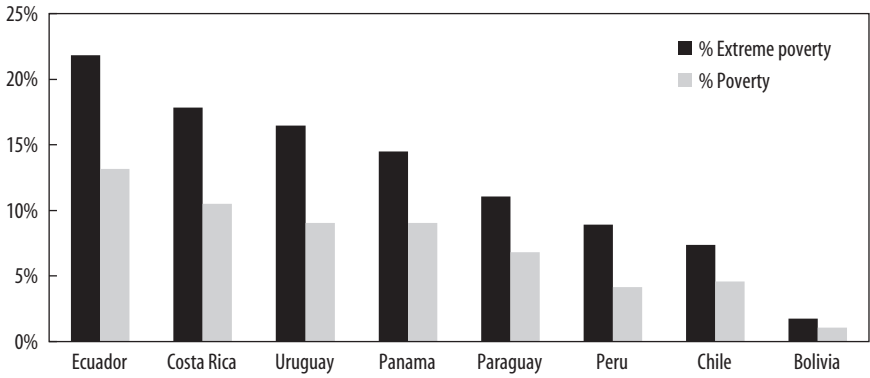
Source. Authors' compilation based on household surveys.

FIGURE A1. Importance of Transfer in Income of Beneficiary Households



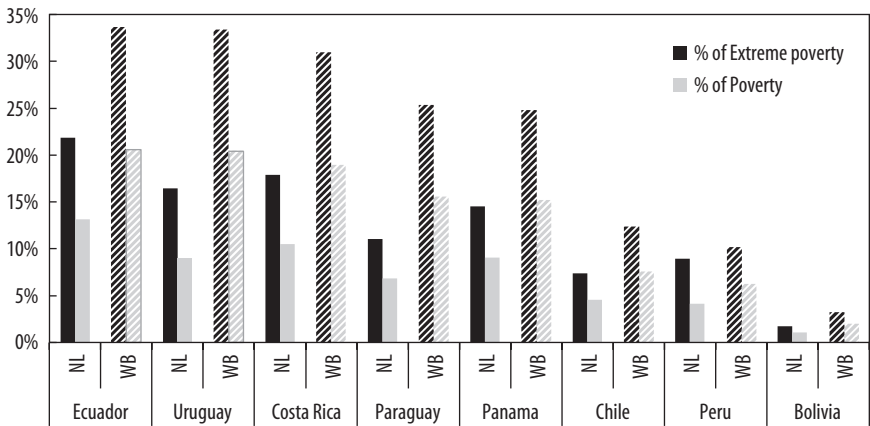
Source: Authors' illustration based on household surveys.

FIGURE A2 . Per Capita Transfers as Percentage of Poverty and Extreme Poverty Line: ECLAC Thresholds



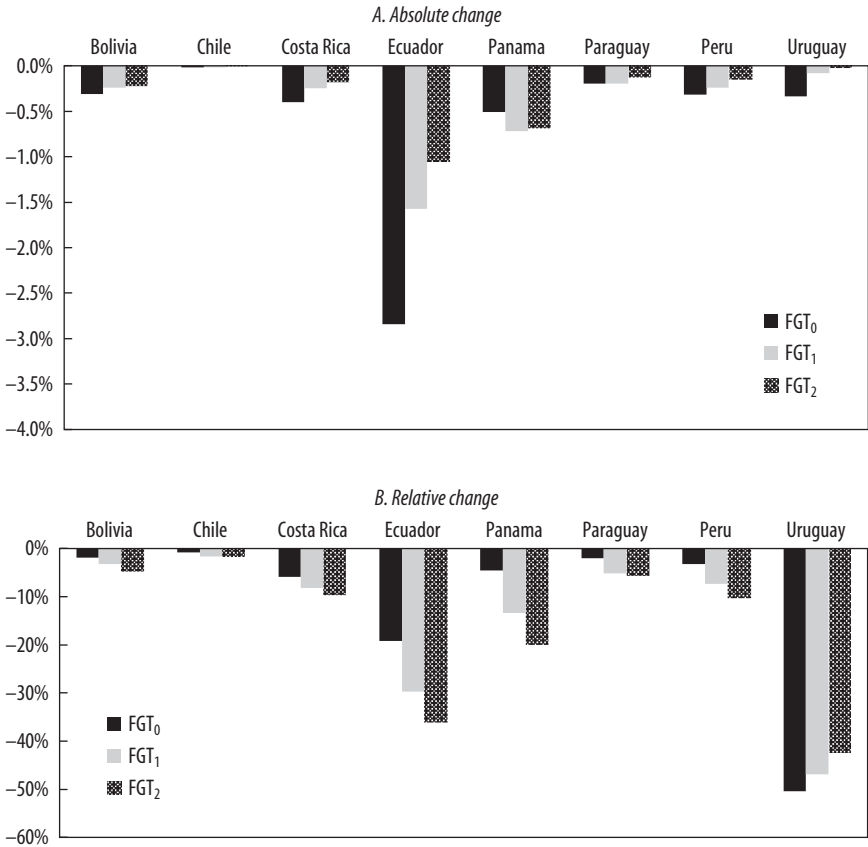
Source: Authors' illustration based on household surveys.

FIGURE A3 . Per Capita Transfers as Percentage of Poverty and Extreme Poverty Lines: National Line (NL) and World Bank (WB) Thresholds



Source: Authors' illustration based on household surveys.

FIGURE A 4. Change in Poverty Indicators Induced by Cash Transfers: World Bank (WB) Thresholds



Source: Authors' illustration based on household surveys.

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