
RESEARCH NOTES

EVALUATING THE IMPACT OF BRAZIL'S BOLSA FAMÍLIA Cash Transfer Programs in Comparative Perspective

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Abstract: This note reviews the targeting performance of Bolsa Família and its impact on inequality, poverty, consumption, education, health care, and labor force participation. Bolsa Família has several design and implementation characteristics that distance it from a pure human-capital-based conditional cash transfer model. For that reason, we compare the impact of Bolsa Família to that of other conditional cash transfer programs in Latin America, such as in Mexico, Colombia, Ecuador, and Chile. We show that, as have other programs, Bolsa Família has helped reduce inequality and extreme poverty and has improved education outcomes, without having a negative impact on labor force participation. Where the program has failed to have its intended impact, in health and nutrition, supply-side constraints seem to be the principal problem.

INTRODUCTION

Bolsa Família is one of the largest conditional cash transfer (CCT) programs in the world, benefiting roughly 11 million families. Like most

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CCT programs in Latin America, Bolsa Família provides a conditional¹ monthly transfer to poor households—those that earn less than R\$120 (US\$68) per capita monthly—with children up to seventeen years of age and/or a pregnant woman with up to a maximum of three children. Unlike other programs in the region, it also provides a monthly transfer to extremely poor households—those that earn less than R\$60 (US\$34) per capita—regardless of their composition. For extremely poor childless households, there is no conditionality attached to the transfer.

The program started in 2003 with the merger of four existing conditional and unconditional cash transfer programs of the federal government: Bolsa Escola, a minimum-income grant related to primary education; Fome Zero and Bolsa Alimentação, two income grants related to food security, the former unconditional and the latter conditional on health checkups and immunization updates; and Vale Gás, a subsidy to help poor households buy cooking gas. By the end of 2006, Bolsa Família had been scaled up to include 11 million households.

Bolsa Família's targeting and implementation methods have been closely scrutinized because Bolsa Família has unique features that make it very different from the standard CCT model, with a focus on the accumulation of human capital (for a comparison of the features of Bolsa Família vis-à-vis five other CCT programs in the region, see Handa and Davis 2006). The most distinctive features of the program are the use of self-declared income instead of a proxy means method to assess eligibility; the existence of an unconditional transfer to extremely poor households regardless of the presence of children or pregnant women; and the decentralized nature of the application process and of the monitoring of conditionalities, in which municipalities play an important role.

As Handa and Davis (2006) and Soares and Britto (2007) argue, there are some tensions between the two main objectives of CCT programs, namely, immediate poverty alleviation through the cash transfer and long-term human capital accumulation through health care and education related conditionalities. The CCT programs differ in the emphasis they put on one or the other objective (e.g., targeting criteria, conditionalities, exit rules). Considering the program's unconditional component, its greater turnover of beneficiaries than in other CCT programs, and the fact that the program expands regardless of local infrastructure for compliance and monitoring,² Bolsa Família seems to have clearly resolved these

1. Bolsa Família conditionalities are related to education: 85 percent attendance rate for school-age children to fifteen years old and 80 percent attendance rate for those of the ages sixteen and seventeen, as well as regular visits to health centers for children younger than seven and for pregnant and breast-feeding women.

2. This approach to the program's implementation is in clear contrast with the design of both Oportunidades and Familias en Acción, two typical CCT programs with a strong emphasis on monitoring conditionalities.

emphases in favor of poverty alleviation. As of late 2008, education conditionalities were monitored for 85 percent of beneficiaries, and health conditionalities were monitored for 59 percent of beneficiaries, revealing that the follow-up for health conditionalities is much more difficult.

Moreover, unlike other countries in the region, Brazil has a minimum income law that guarantees citizenship income to all citizens since 2004. The law, however, states that, according to availability of funds, this right should be implemented with priority to poor and vulnerable populations. For this reason, some commentators consider Bolsa Família a first step toward citizenship income rather than a pure CCT program (Britto 2008).

To shed some light on the discussion of whether Bolsa Família's unique targeting and implementation features jeopardize its impacts in comparison with the performance of other CCT programs in the region, we summarize some of the main findings of recent research on the impact of Bolsa Família and compare it with evidence from countries with similar programs.

This note is made up of five sections. The second section presents some evidence on the targeting performance of Bolsa Família in comparison to Oportunidades (Mexico) and Chile Solidario (Chile). Oportunidades, besides being considered by some specialists the gold standard of the CCT model, is the only program in the region that has a scale similar to that of Bolsa Família. Chile Solidario is an interesting case to consider in a comparative perspective because, unlike the other two programs, it focuses only on the extremely poor, thus having a much narrower target. The third section reviews the impact of Bolsa Família on inequality and poverty compared to Oportunidades. The fourth section comments on new evidence from a Bolsa Família quasi-experimental impact evaluation undertaken by the Center of Development and Regional Planning (CEDEPLAR) of the Federal University of Minas Gerais, Brazil (UFMG). In doing so, we compare the impact of Bolsa Família to that of other cash transfer programs in Latin America, such as Oportunidades/Progresá, Familias en Acción (Colombia), Bono de Desarrollo Humano (Ecuador), and Chile Solidario to assess Bolsa Família's performance in comparison to these programs.³ It is important to note that reviews of the impact evaluations of CCT programs, such as those by Handa and Davis (2006), Parker, Rubalcava, and Terurel (2008), and Fiszbein and Schady (2009), mention only earlier impact evaluation reports on Bolsa Escola and Bolsa Alimentação (two of the former CCT programs merged under Bolsa Família) and focus only on a limited number of outcome variables. Therefore, CEDEPLAR's report is the first thorough and comprehensive assessment of the impact of Bolsa Família program.

3. The criteria for selection of those programs were based on the availability of information, similarities with Bolsa Família, and to guarantee some balance between experimental and quasi-experimental evaluations.

THE TARGETING OF BOLSA FAMÍLIA

Bolsa Família uses unverified means testing conducted at the municipal level to select its beneficiaries.⁴ However, because information on formal-sector workers' employment status and earnings is cross-checked in a federal database, it more accurately uses a semiverified selection method (given the constraints of fully verified systems in developing countries with large informal sectors) (for a thorough description and review of Bolsa Família's targeting and implementation procedures, see Lindert et al. 2007). In any case, Bolsa Família's targeting strategy has been criticized under the arguments that potential beneficiaries have an incentive to omit sources of income and that its decentralized process may lead to selection distortions, such as patronage and leakage (Handa and Davis 2006).

Table 1 reports some targeting indicators for Bolsa Família and Oportunidades/Progresá, the Mexican CCT program that uses proxy means to select beneficiary families.⁵ The Mexican statistics come from the 2004 Encuesta Nacional de Ingreso-Gasto de los Hogares (ENIGH), and the Brazilian statistics come from the 2004 Pesquisa Nacional por Amostra de Domicílios (PNAD). Whereas ENIGH clearly identifies individual beneficiaries of Oportunidades, PNAD observes only households with beneficiaries, not individuals. Moreover, because Bolsa Família's merger of the four original programs had not been completed by the 2004 PNAD survey, we treated beneficiaries of all four programs as beneficiaries of Bolsa Família. Also, both ENIGH and PNAD are annual, national household surveys, and given the relatively large size of the programs at the national level, we found the survey data adequate for analyzing program incidence. Moreover, for comparisons across Mexican and Brazilian data, we used only the monetary value of earned in-kind items to compute household income (all statistics reported here are sample weighted; for more details on data and methodology, see Soares, Osório, et al. 2009).

In Table 1, the exclusion error, which represents undercoverage, is the ratio of the nonbeneficiary poor to the total poor population. The inclusion error, which represents leakage, is the number of beneficiary nonpoor divided by the total beneficiary population. The inclusion targeting rate is the ratio of the beneficiary poor to the total poor, and the exclusion targeting rate is the ratio of the nonbeneficiary nonpoor to the total nonpoor population.

4. The application form (Cadastro Único) also gathers information on consumption that is used to cross-check reported income. The operational rule of thumb is that when consumption is 20 percent greater than reported income, the information should be double-checked.

5. It is important to note that, in 2004, Bolsa Família had not achieved its target of 11 million beneficiary families. Using the 2004 PNAD survey, we identified 6.3 million beneficiary families as of September 2004.

Table 1 Undercoverage and Leakage Rates of Bolsa Família and Oportunidades

	Exclusion error (under-coverage)	Inclusion error (leakage)	Inclusion targeting	Exclusion targeting
Bolsa Família (PNAD 2004)	59%	49%	41%	92%
Oportunidades (ENIGH 2004)	70%	36%	30%	93%

Source: Own calculations based on PNAD 2004 and ENIGH 2004.

The results for such measures vary according to the poverty line chosen. For Mexico, we used the 2004 intermediate capability official poverty line of 909.71 pesos for urban areas and 651.77 pesos for rural areas. For Brazil, we used the cutoff point for program eligibility in 2004, namely R\$100.

The right-hand column of table 1 shows that Bolsa Família and Oportunidades have roughly similar exclusion-targeting measures of slightly greater than 90 percent. Given the large scale of the programs, these measures are remarkably high. However, the undercoverage rate and the inclusion-targeting rate are worse in Oportunidades than in Bolsa Família. The ratio of nonbeneficiary poor to total poor is 70 percent in the former but 59 percent in the latter. Moreover, in Bolsa Família, the ratio of beneficiary poor to total poor is 41 percent, whereas in Oportunidades it is only 30 percent. In contrast, Bolsa Família has a higher inclusion error than Oportunidades: 49 percent of all beneficiaries are nonpoor in the former as compared with 36 percent in the latter.

These contrasting outcomes demonstrate that cash transfer programs face a trade-off between extending coverage and improving efficiency in targeting. Oportunidades has more efficient targeting than Bolsa Família, but at the price of the program covering fewer poor households. Indeed, it is very difficult to expand a targeted program without increasing its leakage rate.

Another way to measure targeting performance is to compare the cumulative distribution of the transfers with the cumulative distribution of all pretransfer income (Coady, Grosh, and Hoddinott 2004) by taking the ratio of the two at specific cutoff points along the distribution. If targeting is effective, this index should be higher at poorer percentiles. For instance, if the index were four at the twentieth percentile, then the poorest 20 percent of the population would receive 80 percent of transfers. Table 2 presents this targeting measure for selected percentiles, as well as the concentration index of the transfers, which serves as a targeting measure for the whole distribution (Soares, Osório, et al. 2009). The more negative this index is, the more progressive is the program—the more the program directs transfers to poorer percentiles.

Table 2 Targeting Performance of Bolsa Família, Chile Solidario, and Oportunidades

	Concentration Index	Performance: Ratios of transfer/percentile			
		Poorest 10%	Poorest 20%	Poorest 30%	Poorest 40%
Bolsa Família (PNAD 2004)	-58.9	3.3	2.9	2.5	2.2
Chile Solidario (CASEN 2003)	-56.9	3.7	3.0	2.4	2.1
Oportunidades (ENIGH 2004)	-55.8	3.6	2.9	2.5	2.1

Sources: Own calculations based on PNAD 2004, ENIGH 2004, and CASEN 2003.

To establish yet another benchmark, table 2 includes the Chilean CCT program Chile Solidario, with statistics from the 2003 national household survey Encuesta de Caracterización Socioeconómica Nacional (CASEN) (we also adapted the income definition in CASEN for comparison with PNAD and ENIGH; for more details on data and methodology, see Soares et al. 2009). Whereas Bolsa Família and Oportunidades seek to cover all poor households, Chile Solidario targets extremely poor households. The performance indices suggest that all three programs are very well targeted. According to Coady and colleagues' (2004) targeting performance rank, these three programs are among the ten best of 122 programs worldwide.

Chile Solidario and Oportunidades perform better than Bolsa Família for the poorest 10 percent of the population (with ratios of 3.6 and 3.7 versus 3.3). However, Bolsa Família ranks alongside these programs for the twentieth through the fortieth percentiles.

The concentration indices rank Bolsa Família as the best performer when considering the entire distribution of transfers, as it has lower leakage at the higher percentiles (see Soares, Osório, et al. 2009). For the Brazilian program, the index is -58.9; for the other two it is -56.9 and -55.8. Nevertheless, Bolsa Família is not necessarily a better performer, as the incidence curves of the three programs cross one another. Therefore, judgment of targeting performance depends on the percentile of the distribution at which the poverty line is drawn.

THE IMPACT ON INEQUALITY AND POVERTY

Because of the progressive impact of cash transfers on the distribution of total income, they have had a notable impact on reducing inequality even though they were not designed to do so. In addition, there are impli-

cations for poverty because in middle-income countries, poverty responds more to changes in inequality than to changes in average income.

Soares and colleagues (2006) decomposed the Gini index variation into changes in the concentration index and changes in the relative share of different income sources, including Bolsa Família. They found that the Gini index for Brazil fell by 4.7 percent from 1995 to 2004 and that Bolsa Família was responsible for 21 percent of that fall (before 1995 there were no CCT programs in Brazil, so there is confidence that 1995 is a baseline year). As the transfers represented a mere 0.5 percent of total Brazilian household income, it is impressive that Bolsa Família was the second most important income source—after labor earnings—thus driving down inequality. Oportunidades had a similar impact on Mexican inequality, responsible for 21 percent of the overall 5 percent fall of the Gini index for Mexico between 1996 (before Progresá was implemented) and 2004, and also corresponding to only 0.5 percent of total Mexican household income (Soares et al. 2009).⁶

Cash transfer programs have also had a significant impact on overall poverty, particularly extreme poverty. For the poorest 5 percent of the population, in Brazil and Mexico, transfers amount to 10 percent or more of their total income. Thus, bottom-sensitive measures of poverty reveal a greater impact than the headcount ratio. For example, in Brazil, the poverty gap measure shows that Bolsa Família was responsible for a 12 percent reduction in poverty, whereas the poverty severity measure shows that it produced a 19 percent reduction (Zepeda 2006).

Nevertheless, good targeting is not enough to trigger a sizable impact on inequality and poverty. As Ravallion (2007) has shown, most targeting measures are not correlated with poverty impact because they do not account for program coverage. A CCT can have almost perfect targeting, but if its scale is small, reaching few of the poor, its impact will be negligible.

THE BASELINE IMPACT EVALUATION OF BOLSA FAMÍLIA

Experimental designs are considered the best approach for estimating a valid counterfactual in impact evaluation. For that reason, Progresá and Bono de Desarrollo Humano implemented social experiments. Treated and control villages in the former and households in the latter were chosen through a lottery. Such a process should guarantee that, on average,

6. In the case of Chile Solidario, we have already seen that transfer income is well targeted. In terms of its impact on inequality, however, Soares and colleagues (2009) show that it corresponds to such a small share of the total income that its contribution to decreased inequality is modest. Moreover, inequality did not vary in Chile as much as in Brazil and Mexico.

treated (beneficiary) and control (nonbeneficiary) households have the same observed and unobserved characteristics, such that any differences in outcomes after program implementation can be attributed to the impact of such intervention.⁷

In the case of an experimental evaluation in Ecuador, both groups were contaminated: 42 percent of the control group received the treatment, and 22 percent of households that should have received the benefit did not receive it. Difficulties in the coordination between implementation of the program and the evaluation design are common problems that have led to the adoption of quasi-experimental techniques, even with a social experiment. Schady and Araujo (2008), for instance, apply instrumental variable techniques to circumvent the contamination issue in the evaluation of Bono de Desarrollo Humano.

In the case of Familias en Acción, a quasi-experimental design was adopted, namely propensity score matching (PSM) methods that assume that selection into the program is fully based on observables (EDEPO, 2004). In this method, analytical units—municipalities and/or households—are matched according to degree of similarity, which is proxied by the estimated probability of treatment (i.e., of being selected as a beneficiary of the program, conditional on a set of observed characteristics).

The impact evaluation of Chile Solidario also relies on two quasi-experimental techniques. The first one is matching over the score used to select beneficiaries. As the cutoff point of eligibility varies across regions, it is possible to find treated and untreated households with the same score. The second technique is regression discontinuity design, which estimates the impact of the program around the threshold of eligibility (Galasso 2006).

The impact evaluation of Bolsa Família also relies on PSM techniques to measure the average difference between households receiving Bolsa Família transfers and similar nontreated households.⁸ As with in Familias en Acción, Bolsa Família's evaluation survey went to field when the program was already being implemented; therefore, it is not a pure baseline survey.⁹ However, some first impacts can be estimated, albeit the results reported indicate differences between treated and control households after the program started. The identifying assumption is that the matching

7. Implicitly, there is no general equilibrium or externality effects (i.e., the program does not indirectly affect control observations).

8. Diaz and Handa (2006) and Handa and Maluccio (2008), analyzing Progresia and Red de Protección Social (Nicaragua), respectively, showed that the results obtained using PMS, even in a nonexperimental setting, are very close to those that experimental evaluation design yields.

9. It is considered a baseline because follow-up surveys are planned, such that one could also apply dosage or duration techniques to assess the impact of the program (MDS 2007b).

procedure based on the propensity score is able to control for differences in outcomes before the program started. This is a strong, unascertainable assumption, but given the fast pace of the program's implementation and the fact that other cash transfer programs had been operating for a reasonable amount of time in many municipalities, there was no other alternative.

The findings summarized in this section have been presented in CEDEPLAR's baseline report on the impact evaluation of Bolsa Família (Oliveira et al. 2007; Ministry of Social Development [MDS] 2007a and 2007b). The report is based on the *Avaliação de Impacto do Bolsa Família (AIBF)*, a nationally and regionally representative sample survey carried out by CEDEPLAR and commissioned by the MDS in 2005. The report gauges the impacts of the program on key aspects of household behavior, namely aggregate consumption and its composition, education outcomes, health care, nutrition, and labor force participation. Because the report uses only a baseline evaluation that compares the variables of interest within a cross-sectional estimation framework, its results should be cautiously considered.

Unlike the analysis of Bolsa Família's targeting, the baseline impact evaluation report defines the treated group as beneficiaries who receive Bolsa Família only: those who were still receiving other cash transfers at the time of the survey are not included in the treated group but make up an alternative control group. For purposes of comparison, we report only the results based on comparisons to the group of households without beneficiaries of any cash transfer program. In addition to not receiving any cash transfers, the comparison group considered here had per capita income of less than R\$100, the 2005 eligibility cutoff point.¹⁰

Consumption Expenditure

The evaluation found that Bolsa Família has not significantly affected the aggregate level of household consumption (Oliveira et al. 2007). This impact is similar to the result found for Ecuador's Bono Solidario (Fiszbein and Schady 2009) but contrasts with that of Mexico's Oportunidades (Hoddinot, Skoufias, and Washburn 2000) and of Colombia's Familias en Acción (Attanasio and Mesnard 2006), which found positive and significant impacts on aggregate consumption. Fiszbein and Schady (2009) argue that the lack of impact in the case of Ecuador may be a result of income loss triggered by a significant reduction in child labor. A similar argument is put forward for Brazil (MDS 2007b).

10. The report presents results for different comparison groups according to different cutoff points. We opted to report only the results for the comparison group, defined by the cutoff of R\$100.

Nevertheless, Bolsa Família has affected expenditures on food, education, and children's clothing—and consequently the income shares spent on such items. The monthly expenditures on these items increased R\$23.18, R\$2.65, and R\$1.34, respectively, in beneficiary households (Oliveira et al. 2007).

The positive impact of increased expenditure on children's clothing is similar to impacts recorded in Mexico (Hoddinot et al. 2000) and Colombia (Attanasio and Mesnard 2006), and it is most likely related to the perception of beneficiary families that the transfer was a bonus to be spent in the best interest of their children and/or to the fact that the transfer is delivered to mothers. This same reasoning also helps explain the increase in household expenditures on education. However, there was no significant impact on consumption related to children's health (Oliveira et al. 2007) despite conditionalities on health checkups.¹¹

Education

Bolsa Família has had a clear positive impact on school attendance. The probability of absence in the most recent month before the survey was 3.6 percentage points lower for children in the program. Also, those children's probability of dropping out was 1.6 percentage points less than that of children in nontreated households (MDS 2007a). Similarly, the Mexican program Oportunidades has contributed to an increase in school attendance and a decrease in dropouts. It has also increased re-entry rates among older dropouts (Behrman, Sengupta, and Todd 2005). The Colombian program Familias en Acción has increased enrollment rates for children between the ages of twelve and seventeen—five percentage points in urban areas and ten percentage points in rural areas—but has had no impact on children aged eight to eleven (Attanasio, Fitzsimons, and Gomez 2005). In Ecuador, Bono de Desarrollo Humano has led to an increase of ten percentage points in school enrollment (Schady and Araujo 2008). For Chile Solidario, Galasso (2006) has estimated a positive impact of seven percentage points on enrollment for children aged six to fourteen. However, children benefiting from Bolsa Família are almost four percentage points more likely than nontreated children of failing to advance in school (Oliveira et al. 2007). In Mexico grade promotion improved but achievement scores were negatively affected (Behrman, Sengupta, and Todd 2000). Such adverse impacts can be attributed to the program's effect of increasing the number of underachieving students. Because such students have been out of school for a while (or have never attended), they

11. It is important to note that poor families in Brazil have access to the public health system, which, though far from perfect, is reasonably efficient in providing free basic health care.

are likely to have difficulty catching up with those who have always been in school.

Health Care: Immunization and Checkups

The CEDEPLAR evaluation (Oliveira et al. 2007) found that Bolsa Família had no impact on child immunizations despite conditionalities regarding this matter. In contrast, the Colombian program Familias en Acción has improved the probability of adequate vaccination for children up to two years old and the probability of compliance with checkups for children up to four years old (Attanasio et al. 2005). The use of public health services and the number of nutrition-monitoring visits have also been greater in Mexican villages covered by the CCT program (Gertler 2004). In Ecuador and Brazil, there has been no impact on health checkups (Paxson and Schady 2008), whereas in Chile, health checkups have increased only for children younger than six years old living in rural areas (Galasso 2006).

Because Bolsa Família has purportedly created greater awareness about the need to access public health services and obtain child immunizations, the absence of impact suggests that supply-side impediments are an important constraint. The lack of health services available to beneficiaries is likely a contributing factor. Nevertheless, the evaluation did not control for this aspect.

It is important to note that in Mexico and Colombia, villages were selected to participate in the program only when education and health facilities were in place. In addition, the benefit payment was tightly linked to the monitoring of conditionalities. In Ecuador, conditionalities were not monitored in the first years of the program, whereas in Brazil, compliance is checked at the level of the municipality and then passed to the federal government.

Nutrition

The AIBF collected anthropometric data to evaluate the impact of Bolsa Família on chronic malnutrition (stunting) and acute malnutrition (wasting). Stunting is measured by the lack of height for age and wasting by the lack of body mass for height and age. The results of the impact evaluation do not indicate any positive impact of the program on either indicator (MDS 2007b); indeed, a negative effect was found on the average z-score for stunting (-0.183) for children between six and sixty months of age. This unexpected result is similar to the one reported in the evaluation of Bolsa Alimentação (a smaller CCT program previous to Bolsa Família) by Morris and colleagues (2004). They found a negative and significant impact on wasting and a marginally significant impact on stunting for beneficiaries of Bolsa Alimentação in an experimental design setting. The

authors attribute this result to families' fear that they might be excluded from the program if children gain weight. In any case, the negative result needs to be further investigated in the follow-up of the evaluation.

Another source of information on this issue is the Chamada Nutricional (Nutritional Call), an evaluation survey that MDS conducted in health centers of semiarid regions (Santos et al. 2007). This evaluation showed a significant impact of Bolsa Família on the reduction of stunting for children aged six to eleven months and on the reduction of wasting for children up to five months old.

However, the program did not have impact on children aged twelve to thirty-six months. This is the critical age for children's nutritional vulnerability because of the increasing demand for nutrients (Martorell 1999). The lack of impact might be related to the failure to monitor children's growth through regular visits to a health center even though such visits are a conditionality of the program. As in the case of immunizations, the underlying problem is likely a lack of health services, rather than households' unwillingness to send their children for checkups.

A cautionary note on the nutrition results is that the Chamada Nutricional was based on a self-selected sample of children who attended a health center on a national vaccination day.¹² The authors did not adopt any technique to correct this treatment selectivity and did not control for the initial nutritional condition of children in their analysis. Thus, the evaluation results could be biased.

In Mexico, the CCT program did have significant, positive impacts on the height of children between twelve and thirty-six months old: one centimeter in a year (Behrman and Hoddinott 2005). However, it is not clear whether this positive impact was due to the program's nutritional supplements or to the cash transfers.

By comparison, Colombia's Familias en Acción did have a positive impact on both the height and the weight of children up to two years old without offering food supplements (Attanasio et al. 2005). This result could be linked to the impact of increasing household visits to health centers to enable monitoring of children's growth and the provision of advice to parents on how to prevent malnutrition of their children.

Labor Supply

Critics of Bolsa Família allege that it has a negative impact on labor force participation. However, the evaluation found that the labor mar-

12. Chamada Nutricional assumes that almost 100 percent of children usually attend health centers to be immunized. However, according to the AIBF, 23–25 percent of the children in its sample either did not have the vaccination card or failed to show it when asked to do so (Oliveira et al. 2007).

ket participation rate of treated adults was, in fact, 2.6 percentage points higher than for nontreated adults (Oliveira et al. 2007). This impact was gendered: the participation rate of beneficiary women was 4.3 percentage points higher than for men.

Notwithstanding such beneficial impacts, it is not possible to confirm whether treated adults' higher labor force participation has been accompanied by an increasing participation rate for children. Even though there was a section in the major MDS (2007b) publication addressing education and child labor, it presented no specific results on this outcome. It would be interesting to investigate whether parent's labor supply is a complement to or a substitute for child labor.

The reported impacts of CCTs on labor force participation vary across countries, but overall they do not show a negative impact. This is an important result. The Colombian program *Familias en Acción* (Attanasio et al. 2004) and the Mexican *Oportunidades* (Parker and Skoufias 2000) have had no impact on adults' labor force participation. Chile *Solidario* has had a positive and significant effect on labor force participation in rural areas (Galasso 2006).

Although *Familias en Acción* (Attanasio et al. 2006) has had no impact on adults' participation, it has slightly diminished the participation of children aged ten to thirteen years old and has had an even more pronounced effect on reducing their participation in domestic work. In Mexico, the CCT program has contributed to a significant reduction of the proportion of children engaged in any kind of labor (Parker and Skoufias 2000). In Ecuador, *Bono de Desarrollo Humano* did not have any effect on adults' labor supply but had a negative impact on child labor, which was greater for children more likely to leave of school because of work opportunities (Edmonds and Schady 2008).

CONCLUSION

Bolsa Família and other major CCT programs in Latin America, such as those in Chile and Mexico, have had an impressive targeting performance, even though they have adopted different targeting methods. However, such programs should implement constant monitoring of targeting performance to minimize the exclusion of potential beneficiaries, particularly the extremely poor. For example, in all countries with CCT programs, a substantial proportion of eligible households (e.g., about 60 percent in Brazil and 70 percent in Mexico) were not reached in 2004.¹³

13. Soares et al. (2009), using more recent data from PNAD 2006, show that the expansion of the number of beneficiary families of Bolsa Família between 2004 and 2006 has reduced the exclusion error to 44 percent.

An important point is that targeting effectiveness, together with the large size of the program, has allowed Bolsa Família, as well as Oportunidades, to help diminish income inequality in a substantial and very cost-effective way even though such an impact was not an explicit objective of either program. These programs have also had a noteworthy impact on reducing poverty, particularly extreme poverty. Among extremely poor households, transfers represent a sizable proportion of total income.

Although Bolsa Família has not had a noticeable impact on aggregate consumption, it has affected the share of the total household budget spent on certain important items. Expenditures on food, education, and children's clothing have increased, for instance. Nevertheless, the increase in food expenditure has not necessarily implied improvements in child or adult nutrition because such an outcome also depends on the quality of the household diet and on preventive measures taken against underfeeding as a result of monitoring by health personnel.

Bolsa Família has been effective in both increasing school attendance and decreasing dropout rates, as have other CCTs. However, the decrease in dropouts has had an unfortunate side effect: it has led to more children lagging behind in school. Such findings confirm that the program, as a demand-side intervention, is not able, on its own, to have a positive impact on some education outcomes. Namely, the program does not necessarily enable disadvantaged children to break the intergenerational transmission of poverty if educational policies do not concomitantly improve the performance of such children while in school. This problem underscores the need to improve educational quality or provide special attention for underachieving children.

The Nutritional Call Survey has shown positive impacts on reducing wasting and stunting in infants, but it has not shown significant effects on children aged one to three years, who are often especially vulnerable. Nonetheless, these results could be plagued by selectivity bias, as the survey took place in health centers instead of randomly in households.

The AIBF survey has revealed that a substantial number of poor children (23–25 percent) either have not had or have failed to show their vaccination cards. That is, they have probably not attended health centers. In addition, beneficiary children are no more likely than nonbeneficiary children to have their vaccination card updated. This might point to a supply-side problem arising from a lack of coverage of health service among the poorer population. One could argue that the major problem is the low level of monitoring of health conditionalities, which was only 59 percent in the second semester of 2008; however, it is hard to disentangle what is simply due to the lack of monitoring and what is due to the lack of better health infrastructure and services in some municipalities. Lack of coordi-

nation at the local level between the unit responsible for the program and the health unit may also be partially responsible for the low figures.¹⁴

Bolsa Família has had a positive impact on adult labor force participation, and the impact is greater among women. This could be because of parents replacing their children in work, but the evaluation has not assessed this point. Nevertheless, the receipt of cash transfers does not appear to lead people to exit the labor force, as some critics have contended. However, it is also important to investigate what has happened to child labor to determine whether the cash transfer and the school-attendance conditionality succeeded in taking children out of work or whether children continued to combine both school attendance and work activities.

The Brazilian Program for the Eradication of Child Labor (Programa para a Erradicacao do Trabalho Infantil, PETI), which was recently incorporated into Bolsa Família, has addressed this problem by including an extra shift in school (*jornada ampliada*) (for an evaluation of PETI, see Pianto and Soares 2003). This not only has helped the school performance of beneficiary children but also has constrained them from spending such time at work.

Some of the explanations offered here for the impact of the Brazilian program cannot be explored further without access to the AIBF micro-data. The recent release of the primary data from the AIBF survey will enable researchers to examine more closely some of these preliminary findings to establish clearer causal relations between outcomes and program efforts. In particular, the primary data will enable researchers to assess the set of CCT beneficiaries, not only Bolsa Família beneficiaries, against a comparison group of nonbeneficiaries. It is plausible, for instance, that impacts were much more consolidated for the beneficiaries of the older CCT programs like Bolsa Escola and Bolsa Família. The release of data has had such a beneficial effect, for example, in Progresá and Oportunidades. Moreover, the follow-up survey of the impact evaluation will be critical in assessing the robustness of the preliminary results we report here.

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14. To improve the quality of the registry of beneficiaries and the monitoring of conditionalities, the federal government has developed an index of decentralized management, which indicates the performance of the municipalities in updating both registry and conditionality compliance information. Extra resources are transferred to the municipalities according to this index as an incentive tool to improve their performance.

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