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The Juancito Pinto conditional cash transfer program in Bolivia: Analyzing the impact on primary education

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Abstract

In Bolivia, although primary education enrolment rates are high, major gaps persist for those who face higher opportunity costs to study, such as girls and indigenous and rural students. To address this situation, a conditional cash transfer program known as the *Bono Juancito Pinto* was designed for primary school students in 2006. This type of program has the potential to improve access to education, foster social mobility and help fight intergenerational poverty. Five years on, has Bolivia's scheme generated positive results? The *ex ante* impact analysis presented in this policy brief suggests that the program has led to an increase in enrolment levels and reduced income inequality, yet its impact on poverty remains low. With a view to maximizing the results of the transfer, this document presents policy options that target population groups with high education opportunity costs, each designed and evaluated through micro-simulations.

Essentials

- Bolivia's Juancito Pinto cash transfer program will have a positive impact on the levels of school enrolment and income distribution with a moderate impact on poverty levels.

- Complementary programs that help offset costs of studying such as distribution of school supplies, transportation and school meals could contribute to the program's goals.

- Differentiated interventions for rural students and girls —two population groups facing high opportunity costs to study— could improve results of the program and reduce inequality.

- Offering higher cash transfers for students completing upper grades of primary school would increase enrolment.

Introduction

Bolivia has achieved universal access to education for children up to the age of 11, as measured by enrolment rates. However, by the end of the primary level and beginning of the secondary level, dropout rates increase, and gender, ethnic and rural-urban gaps become significant. For example, while completion rates for primary education stand at 85.7 per cent for boys and 84.2 per cent for girls in urban areas, they fall to 53.9 per cent and 43.9 per cent respectively in rural areas. Gaps in access to education stem from multiple causes. Lower enrolment rates by rural youth —most of them indigenous— could be associated with the opportunity costs of studying. For example, many have to walk long distances to school and they tend to start working at an earlier age to support their families. In light of these issues, the Bolivian government saw the need to improve primary-level enrolment and completion rates for populations that face monetary difficulties that impact their ability to begin and finish primary school.

Figure 1
BJP beneficiaries (thousands of people as percentage of total population)
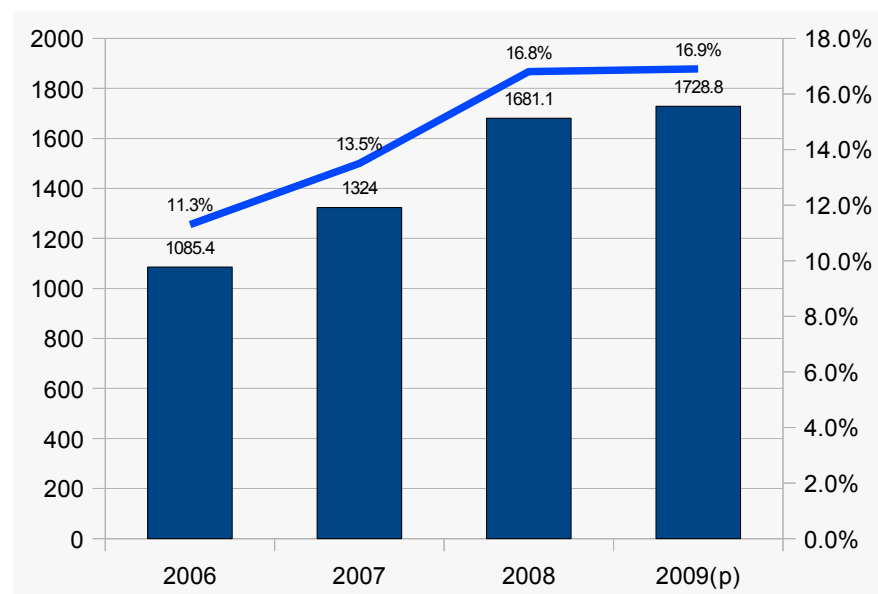
Source: Education statistics from the Economic and Social Policies Analysis Unit and Educational Information System, Bolivia Ministry of Education
(p) Preliminary data

The Juancito Pinto cash transfer program

The Juancito Pinto cash transfer program (*Bono Juancito Pinto*, BJP) created in 2006 has benefited primary school students in Bolivia. The short-term objective of the program is to increase enrolment and completion levels. Over the long term it is expected to encourage human capital accumulation and thereby break intergenerational poverty cycles. The BJP works as an incentive for families to send their children to school, contributing Bs 200 (US$28.20) per student per year. This is particularly significant for populations with a high opportunity cost to study. When the BJP was first implemented, it targeted students in Grades 1 through 5. In 2007, it was extended to include sixth-graders along with those attending special education centres and adolescents enrolled in the alternative youth education program. In the following year, it grew to include seventh- and eighth-graders. Thus, the BJP coverage grew from 11.3 per cent of the population in 2006 to 16.9 per cent in 2009 (see Figure 1), encouraging enrolment in the upper years of primary school.

Only students under the age of 18 can receive the transfer (with the exception of students attending special education centres), and beneficiaries are required to attend at least 80 per cent of their classes. The transfer is paid in cash at the end of the school year to the mother, father, tutor or guardian of the student, always in the student's presence. In 2009, beneficiary households used the cash transfer primarily for clothing, school uniforms and shoes (43.1 per cent). It was also used broadly for savings (26.1 per cent) and school supplies (18.7 per cent).

Impact on enrolment, poverty and income distribution

This policy brief is based on an in-depth study conducted by Ernesto Yáñez for FOCAL and UNDP-Bolivia that analyzes the BJP's impact on enrolment levels, poverty and income distribution. Since the National Household Surveys conducted after 2005 introduced changes that could have distorted the results of the study, it has taken the form of an *ex ante* impact simulation using 2005 data. These types of simulations are commonly used methods to evaluate the possible outcomes of a social program by forecasting budgets and impacts on specific variables. The

Figure 2
Enrolment rate per income decile (%)
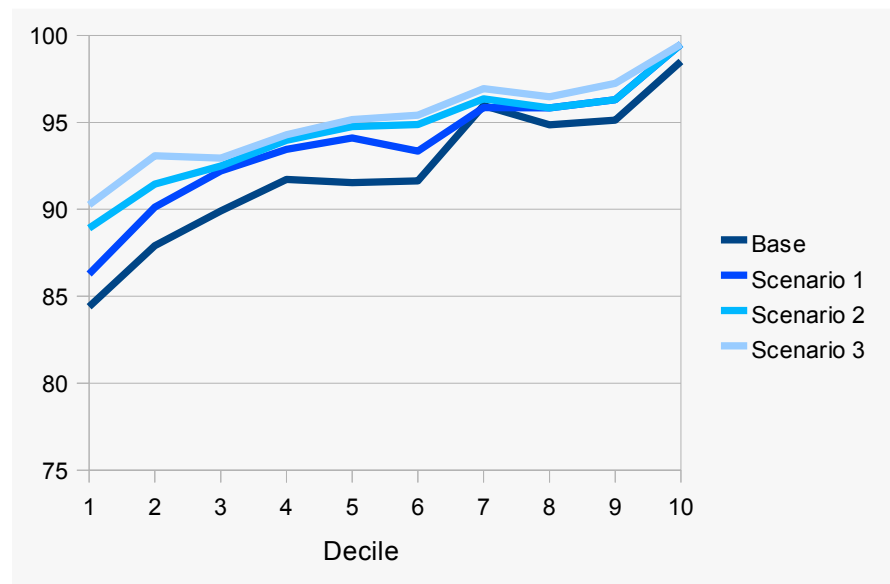
Source: Prepared by the authors
Base Scenario: Situation before the conditional cash transfer (CCT)
Scenario 1: CCT for students in Grades 1 to 5
Scenario 2: CCT for students in Grades 1 to 6
Scenario 3: CCT for students in Grades 1 to 8

model developed in the study forecasts the impact of the BJP and offers policy options to optimize future results while maintaining standard administrative costs.

With respect to enrolment rates, the study suggests an improvement of 3.6 per cent as a direct effect of the BJP (see Figure 2). The largest enrolment impacts of the program are found at the lower levels. While transferring cash to students in Grades 1 through 5 would increase the enrolment rate by 1.92 per cent, including

sixth-graders in the program would reduce the increase to 0.86 per cent, showing that incorporating higher grades decreases the marginal impact on enrolment rates. This trend of a reduced impact of the BJP in upper grades reflects the higher opportunity cost of studying for older students, because as they grow older they can expect to earn higher wages. The study also reveals that the transfer would be progressive in nature, its impact being greater when looking at the poorest segments of society. The enrolment rate of the poorest

(decile 1) would increase by 4.2 per cent with the implementation of the BJP compared to 1.7 per cent for the rest of the population. The transfer would also offer a better enrolment payoff in rural areas where it could cause rates to jump by 5.9 per cent compared to 2.5 per cent in urban settings. Finally, the transfer benefits women and men, as well as indigenous and non-indigenous populations relatively equally.

The study finds that while the BJP has no statistically significant impact on poverty reduction, it does have a statistically significant impact on extreme poverty. Although it may not have the potential to lift beneficiaries completely out of poverty, it would add to their income and contribute directly to a decline of one per cent in the level of indigence.

Further, the study finds that the BJP would reduce the income gap between the rich and the poor with stronger effects in the poorest regions of the country. This would translate into a drop of one per cent in inequality at the national level (measured by the Gini coefficient drop from 0.605 to 0.599). This trend appears progressive, with the urban decline representing 0.7 per cent compared to the 2.4 per cent reduction of inequality in rural areas. This is a result of the transfer's greater influence on enrolment levels for the poorest deciles of society. It also reflects the more numerous

Figure 3
Change in household income per capita according to income deciles (with respect to the base scenario) (%)
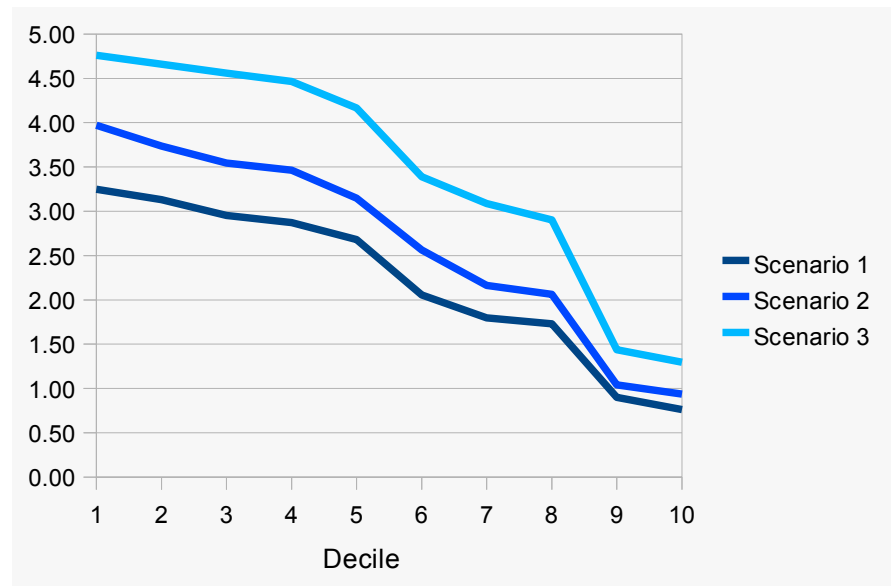
Source: Prepared by the authors
Scenario 1: Conditional cash transfer (CCT) for students in Grades 1 to 5
Scenario 2: CCT for students in Grades 1 to 6
Scenario 3: CCT for students in Grades 1 to 8

beneficiaries found in the poorest segments of society given they usually have more children.

Leveraging greater impact

Adjustments to the amount and allocation of the transfer have been explored in the study in order to present alternatives to maximize the positive effects of the BJP. Micro-simulations were conducted to assess their potential impact on the levels of

enrolment, poverty and inequality.

The first alternative would be to extend the benefits of the program to every child of primary school age, even those currently out of school. Looking at this universal transfer option makes it possible to assess the effectiveness of the program's current conditionality —such as attending a minimum of 80 per cent of classes— which is costly to monitor. The results of the simulation suggest the transfer's conditionality is essential to bring about improvements in school

enrolment. In the absence of conditions to participate in the program, the levels of enrolment decrease to pre-BJP levels (90.75 per cent). This confirms that income is not the only factor preventing some sectors of the population from attending school; the BJP must be accompanied by conditionality.

The second alternative would be to maintain the original conditionality but increase the transfer amount for all primary school levels by 25 per cent (Bs 250), which represents the minimum amount needed to generate a significant impact in the simulation. This could help measure to what extent the benefits associated with the BJP increase as the amount transferred rises, offering insight into the optimal amount to bring about greater changes. The simulation shows that when preserving the conditionality of the program, an increase of 25 per cent in the amount of the transfer maximizes the positive impacts of the BJP. Enrolment levels, for example, would increase by 0.5 per cent.

The three other proposals explored seek to establish differentiated interventions according to population groups and regions. The third policy option would be to increase the transfer amount to Bs 300 for Grades 6, 7 and 8 —the simulation's minimum transfer to see significant improvement for these beneficiaries— to offer

Table 1
Micro-simulation of the BJP's impact on enrolment according to different scenarios (%)

	Do not study	Study and work	Study	Enrolment rate	Cost*
Base Scenario	9.26	1.5	89.25	90.75	N/A
Scenario 3	5.67	2.6	91.73	94.33	421.6
Scenario 4	9.26	1.5	89.25	90.75	446.9
Scenario 5	5.15	2.72	92.14	94.86	529.9
Scenario 6	5.3	2.73	91.97	94.7	501.5
Scenario 7	4.98	2.81	92.2	95.01	516.6
Scenario 8	5.02	2.85	92.13	94.98	528.5

Source: Prepared by the authors

*The cost only includes the amount of the transfer and does not consider logistics, administration and/or targeting costs.

Base Scenario: Situation before the conditional cash transfer (CCT)

Scenario 3: CCT of Bs 200 for primary school students in Grades 1 to 8

Scenario 4: Non-conditional cash transfer for primary school students in Grades 1 to 8

Scenario 5: CCT of Bs 250, an increase of 25 per cent with respect to scenario 3

Scenario 6: CCT of Bs 300, an increase of 50 per cent for students in Grades 6 to 8 only (students in Grades 1 to 5 receive the same amount as in scenario 3)

Scenario 7: CCT of Bs 200 for urban students in Grades 1 to 8, and CCT of Bs 300 for rural students in Grades 1 to 8

Scenario 8: CCT of Bs 200 for male students in Grades 1 to 8, and CCT of Bs 300 for female students in Grades 1 to 8

greater incentives for older students since they face higher opportunity costs to study due to the jobs available to them if they drop out. The simulation demonstrates that levels of enrolment rise by 0.36 per cent when offering larger sums to older students.

The fourth option would be to implement this higher transfer of Bs 300 to primary-level rural students only. The opportunity cost for this population is generally higher. For instance, they may have to walk longer distances to

get to school, and their families tend to rely more on their work for income. Receiving more money could compensate the sacrifices rural children and their families make when they are sent to school. Indeed, the simulation shows that in receiving more funds, rural students would be enrolled at 95.01 per cent, which is 0.68 per cent more than with the original transfers.

The fifth alternative would be to apply this increased transfer of Bs 300 to all primary-level female students.

Table 2
Micro-simulation of the BJP's impact on income distribution according to different scenarios

	National				Urban				Rural			
	Gini	Standard Deviation	IL	SL	Gini	Standard Deviation	IL	SL	Gini	Standard Deviation	IL	SL
Base Scenario	0.605	0.008	0.59	0.62	0.545	0.01	0.524	0.565	0.618	0.005	0.607	0.629
Scenario 3	0.599	0.008	0.584	0.615	0.541	0.01	0.52	0.562	0.603	0.005	0.592	0.613
Scenario 4	0.599	0.008	0.583	0.614	0.541	0.01	0.52	0.562	0.601	0.005	0.59	0.612
Scenario 5	0.598	0.008	0.582	0.613	0.54	0.011	0.519	0.561	0.599	0.005	0.588	0.61
Scenario 6	0.598	0.008	0.583	0.614	0.54	0.011	0.52	0.561	0.6	0.005	0.589	0.611
Scenario 7	0.598	0.008	0.582	0.613	0.541	0.01	0.52	0.562	0.595	0.005	0.584	0.606
Scenario 8	0.598	0.008	0.582	0.613	0.54	0.011	0.519	0.561	0.599	0.005	0.588	0.61

Source: Prepared by the authors
IL: inferior limit ; SL: superior limit
See Table 1 for description of scenarios

A higher transfer could encourage this population to remain in school longer. Indeed, the simulation suggests that levels of enrolment would increase by 0.65 per cent should the transfer amount be higher for female students.

Overall, the proposals establishing differentiated interventions for older students, rural students and female students, as opposed to implementing higher transfers for all, would yield the best results in terms of enrolment.

Further, the various BJP simulations generate little results in terms of poverty reduction. The proposed scenario that would bring about some results in lowering poverty levels, albeit minimal, is the one targeted at rural students. This means it will be necessary to implement other welfare measures to complement the BJP, addressing the multi-faceted poverty challenges.

With regard to income distribution, all proposed modifications to the program except the universal transfer increase would help address the income gap, reducing the Gini coefficient from 0.599 to 0.598 and pulling the country closer to equality (Gini coefficient zero). The best option would be to increase the amount of the transfer to rural students since it produces the greatest impact on reducing income inequality (Gini coefficient declining from 0.603 to 0.595 in rural areas).

Conclusions

The micro-simulations suggest that Bolivia's Juancito Pinto cash transfer program would yield better results if it were to implement differentiated interventions according to population groups and regions. For instance, an increase in the transfer to rural students could be considered. Meanwhile, the offer in education could be improved in anticipation of the increased levels of enrolment resulting from the program. This would involve improving the education infrastructure, the number of teachers, the quality of teacher training, and the availability of school supplies, among others. In addition, complementary programs could be established to offer compelling incentives addressing

all types of access barriers. These could include distribution of school supplies, school transportation and meals, to name a few examples. Producing a more refined evaluation of the opportunity cost of studying at different wage levels would allow the fine-tuning of cash transfer amounts. Current data collection methods in Bolivia impede a more thorough evaluation of the program; it would be important for the National Household Survey to proceed in a way that would allow for an evaluation of this promising initiative.

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FURTHER READINGS

Bornhorst, Fabian. "How Good Are Ex Ante Program Evaluation Techniques? The Case of School Enrollment in PROGRESA." Working Paper 09/187. Washington, D.C.: International Monetary Fund (IMF), 2009.

Bourguignon, François, Francisco Ferreira and Phillippe Leite. "Ex Ante Evaluation of Conditional Cash Transfer Programs: The Case of Bolsa Escola." World Bank Policy Research Working Paper No. 2916. Washington, D.C.: WB, 2002.

Bourguignon, François, Martin Fournier and Marc Gurgand. "Fast Development with a Stable Income Distribution: Taiwan, 1979-1994." Working Paper 200023-04. Paris: Centre de recherche en économie et en statistique (CREST), 2001.

ECLAC. *La Protección Social de Cara al Futuro: Acceso, Financiamiento y Solidaridad*. Santiago de Chile: ECLAC, 2006.

Orazio, Atanasio, Meguir Costas and Ana Santiago. "Education Choices in Mexico: Using a Structural Model and a Randomized Experiment to Evaluate PROGRESA". London: The Institute for Fiscal Studies, 2006.

Todd, Petra, and Kenneth I. Wolpin. "Using a Social Experiment to Validate a Dynamic Behavioral Model of Child Schooling and Fertility: Assessing the Impact of a School Subsidy Program in Mexico." PIER Working Paper 03-022. Philadelphia: Penn Institute for Economic Research, 2002.

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