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Conditional Cash Transfers: Making Choices for Recipients with Children

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Abstract

In this paper, we focus on the poverty alleviation program targeting low-income individuals with dependents, especially those with children. We examine individuals' choices when choosing among three distinct types of cash transfer programs provided by the government. Our finding is that parents, whose children frequently exhibit undesirable daily habits or possess significant potential for skill acquisition on completing their education demonstrate a tendency to choose a conditional cash transfer program with stringent requirements to maximize their utility. Moreover, the implementation of the conditional cash transfer program minimizes government expenditures. Consequently, policymakers should consider the future prevalence because the pro-

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gram is beneficial in increasing children's likelihood of acquiring skills and fostering their independence from social security.

Keywords: conditional cash transfer, school attendance, poverty alleviation, parental involvement

1 Introduction

To alleviate poverty, governments implement many policies, such as in-kind and cash transfer programs for the poor. Numerous countries have adopted diverse cash transfer programs, including conditional cash transfer programs that require recipients to fulfill specific obligations to receive financial assistance from the government. An example of a conditional cash transfer program is the workfare system, which necessitates recipients to engage in work activities to receive cash benefits. The aim of this program is to enable recipients to accumulate skills and achieve self-reliance.¹ The program also aims to efficiently target individuals in need when faced with asymmetric information regarding their productivity (Besley and Coate, 1992; Gahvari and Mattos, 2007; Nakamura, 2007).

Alatas et al. (2016) shows that the inclusion of a minor application cost in cash transfer program enhances their ability to target the poor. Meanwhile, several conditional cash transfer programs exist that require the attendance of the recipients' children in school. One such example is Progresa, which was initially implemented in Mexico in 1997 and has been called Oportunidades since 2002. Progresa/ Oportunidades has given positive impacts on students' school attendance (Schultz, 2004; Behrmam et al., 2005; Lalive and Cattaneo, 2009; Bobonis and Finan, 2009; Dubois

¹Mascini et al. (2012) explains that welfare programs, such as workfare programs are increasingly being implemented with a mandatory nature to integrate recipients into the labor market and foster their independence from social security. However, Blanco et al. (2017) demonstrates that workers under unconditional scheme exhibit higher productivity levels compared to those under conditional schemes. Therefore, it is imperative to thoroughly examine the contents and implications of these conditions.

et al., 2012; Parker and Todd, 2017).

Our study focuses on the poor who have dependent children and examines their choice when presented with three different types of government cash transfer programs. First, the government offers cash transfers to the poor, without any specific requirements. Second, the government provides cash to the poor contingent on their child's regular school attendance. Third, the government offers cash transfers to the poor, with the condition that they ensure their child's school attendance and actively participate in their child's education, such as attending parent-teacher meetings or encouraging their child to read books at home.

Our findings indicate that, parents, whose children frequently exhibit undesirable daily habits or possess significant potential for skill acquisition on completing their education demonstrate a tendency to choose a conditional cash transfer program with stringent requirements, even if it entails associated costs. Moreover, this program has the potential to minimize the government's expenses for poverty alleviation.

In Section 2, we analyze the utility for both children and parents within the framework of a simple model, considering three distinct types of cash transfer programs. In Section 3, we delve into a comprehensive discussion on individuals' selection of cash transfer programs to maximize their utility. In Section 4, we provide the concluding remarks based on our findings.

2 Model

We propose a simple model based on Bursztyn and Coffman (2012). Some pairs of a child and a parent exist and each parent chooses one of the government's cash transfer programs to maximize their utility over two periods. There are three options for cash transfer programs. First, the government provides a cash transfer program, CT , without any conditions to parents who are eligible due to their low incomes. Second, it offers a cash transfer program, CCT , to parents with low incomes, which requires their child's school attendance as a condition. Third, it provides a cash transfer program, $SCCT$, to parents with low incomes, which not only requires their child's school attendance but also involves parental engagement in their child's education. This includes attending parent-teacher meetings at school, encouraging their child to read books at home, and monitoring their child's completion of school assignments.

Let us consider the utility of a child and a parent within a cash transfer program that does not impose any conditions. The child is faced with the decisions of whether or not to attend school. When child i chooses to attend school, they incur costs denoted as C_i^c in the first period and have a possibility of obtaining payoffs denoted as V_i^c in the second period with probability p . These payoffs are generated by the acquisition of skills that the child may obtain on completing their education with the probability p and $0 \leq p \leq 1$ is satisfied. Meanwhile, if the child decides not to attend school, they neither incur any costs in the first period nor obtain any payoffs

in the second period. Therefore, the child's utility, U_i^c , can be formed as follows:

$$U_i^c = \begin{cases} -C_i^c + \delta pV_i^c & \text{if } e_i=1 \\ 0 & \text{if } e_i=0, \end{cases} \quad (1)$$

where e_i indicates the child's school attendance. $e_i = 1$ shows that the child attends school, while $e_i = 0$ signifies the child does not attend school. δ is the discount present value and $0 \leq \delta \leq 1$ is satisfied. When considering the child's decision making process, we show that the child chooses to attend school independently if $C_i^c \leq pV_i^c$ is satisfied. Conversely, the child decides not to attend school if $C_i^c > pV_i^c$ is satisfied. In situations where parents desire their children to attend school despite $C_i^c > pV_i^c$, contractual agreements between parents and their children are established. For the purpose of this analysis, we assume that $C_i^c > pV_i^c$ holds, as our focus is on examining the contracts between parents and children regarding the child's school attendance.

When parents are motivated to encourage their child school attendance, they provide financial incentives in the form of money, w_i , in the first period and this serves as an incentive for the child to attend school. We assume that there is imperfect information regarding the child's actual school attendance. Parents are unable to directly observe the costs associated with their child's school attendance and must rely on behavioral cues to estimate the likelihood of their child attending school. Given this imperfect information, the child's utility function becomes as

$$U_i^c = \begin{cases} -C_i^c + \frac{w_i}{\pi_i^{CT}} + \delta p V_i^c & \text{if } e_i=1 \\ 0 & \text{if } e_i=0, \end{cases} \quad (2)$$

π_i represents the level of certainty regarding a child's school attendance, and $0 \leq \pi_i \leq 1$ is satisfied. When there is perfect information available regarding a child's attendance, $\pi_i = 1$ is satisfied, whereas $\pi_i = 0$ is applicable when the parent is unable to observe the child's school attendance situation. When a child exhibits poor daily habits, it becomes challenging for a parent to ascertain their motivation to attend school.² Conversely, when a child demonstrates good daily habits and exhibits reliable behavior, the uncertainty associated with their school attendance diminishes. The child attends school when the condition $C_i^c \leq \frac{w_i}{\pi_i^{CT}} + \delta p V_i^a$ is satisfied.

First, a parent whose income falls below a certain level can receive unconditional cash transfers from the government through a cash transfer program, irrespective of their child's school attendance. Therefore, the parent's utility function can be formed as

$$U_i^a = \begin{cases} M^{CT} - \frac{w_i}{\pi_i^{CT}} + \delta p V_i^a & \text{if } e_i=1, \\ M^{CT} & \text{if } e_i=0. \end{cases} \quad (3)$$

In the context of this program, M^{CT} represents the monetary value received by the parent from the government.

Second, we investigate the utility experienced by both the child and the parent

²Parents can only monitor their child's departure from home each morning; however, there exists a possibility that the child may choose not to attend school and instead engage in other activities.

within the framework of a Conditional Cash Transfer program, *CCT*, which mandates the school attendance of the recipient's child. In this case, the utility function of the child is formed as

$$U_i^c = \begin{cases} -C_i^c + \frac{w_i}{\pi_i^{CCT}} + \delta p V_i^c & \text{if } e_i=1 \\ 0 & \text{if } e_i=0. \end{cases} \quad (4)$$

Meanwhile, the parent's utility function is written as

$$U_i^a = \begin{cases} M^{CCT} - \frac{w_i}{\pi_i^{CCT}} + \delta p V_i^a & \text{if } e_i=1 \\ 0 & \text{if } e_i=0. \end{cases} \quad (5)$$

In this program, the level of certainty regarding a child school attendance is higher compared to that of the *CT* program, as each child's attendance is closely monitored by policy implementers and relevant information is provided to participating parents. Therefore, $\pi_i^{CT} < \pi_i^{CCT}$ is satisfied. M^{CCT} denotes the amount of cash provided by the government as part of this program.

Third, we analyze the utility experienced by both the child and the parent within the context of another conditional cash transfer program, *SCCT*, which mandates both a child's school attendance and active parental involvement in their child's education. When a parent provides financial resources to facilitate their child's school attendance, the child's utility function can be expressed as follows:

$$U_i^c = \begin{cases} -C_i^c + \frac{w_i}{\pi_i^{SCCT}} + \delta p' V_i^c & \text{if } e_i=1 \\ 0 & \text{if } e_i=0. \end{cases} \quad (6)$$

Meanwhile, the parent's utility function is written as

$$U_i^a = \begin{cases} M^{SCCT} - C_i^a - \frac{w_i}{\pi_i^{SCCT}} + \delta p' V_n^a & \text{if } e_i=1 \\ 0 & \text{if } e_i=0. \end{cases} \quad (7)$$

M^{SCCT} denotes the amount of cash provided by the government as part of this program. C_i^a represents the cost associated with parental involvement in the child's education. p' signifies the probability that a parent-child pair will achieve higher payoffs on completing education under the *SCCT* program. It is assumed that $0 \leq p < p' \leq 1$ is satisfied, as parental involvement positively impacts the child's academic performance and increases the likelihood of skill acquisition.³ Furthermore, as parental involvement enhances parents' ability to monitor their child's school attendance, the relationship $0 \leq \pi_i^{CT} < \pi_i^{CCT} < \pi_i^{SCCT} \leq 1$ is satisfied.

3 Making Choices of cash transfer programs

We analyze the individual utility associated with three distinct types of cash transfer programs. Individuals are tasked with selecting the program that maximizes their utility. Despite the *SCCT* program requiring the highest level of commitment and parental cost, certain families choose this particular program. Through an examination of individual program choices, we derive the following propositions.

Proposition 1 *Parents with children exhibiting poor daily habits show a preference*

³Various studies have demonstrate the positive effects of parental involvement on children's performance (Hill and Craft, 2003; Gunderson et al., 2013; Blair, 2014). However, the impact of homework assistance remains controversial (Hill and Tyson, 2009; Sankaran et al., 2020).

for the *SCCT* program.

Proof. From (7), it is clarified that a higher value of π_i contributes to an increase in parental utility. Under the *SCCT* program, parents gain access to information regarding their child's school attendance not only through program-provided updates but also through their active involvement in school activities. This increased involvement enables parents to have a better understanding of the costs associated with their child's school attendance and enhances the certainty surrounding their child's school attendance. Moreover, the heightened probability of their child acquiring skills through parental involvement after completing their education further augments parental utility. Consequently, the *SCCT* program emerges as the most appealing choice for parents facing greater uncertainty regarding their child's school attendance. ■

Proposition 2 *Parents whose children exhibit high potential demonstrate a preference for the *SCCT* program.*

Proof. (7) shows that a higher value of p' contributes to an increase in parental utility. Therefore, when a parent has a child with significant potential to acquire skills on completing education, they choose the *SCCT* program to maximize their utility, even if it entails costs for parental involvement. ■

Subsequently, we analyze a cash transfer program aimed at minimizing government costs. In light of this analysis, we derive the following proposition.

Proposition 3 *In situations where a significant number of children exhibit poor daily habits and demonstrate unreliable attitudes, the SCCT program emerges as the most cost-effective option.*

Proof. Parents, under the *SCCT* program, do not incur significant additional expenses due to imperfect information regarding their children’s school attendance, which aims to motivate school attendance. As a result, parents choose the *SCCT* program when the cost of parental involvement is lower than the associated extra costs caused by imperfect information under the other programs. This situation occurs when there is considerable uncertainty regarding their child’s school attendance. Consequently, the government can reduce the amount of cash transfers provided to parents once the information becomes clearer, enabling parents to maximize their utility. ■

In the case of low certainty regarding their children’s school attendance, it is observed that the poor choose the *SCCT* program, despite their obligation to receive cash assistance from the government.⁴ Moreover, this choice proves beneficial in enhancing children’s academic performance and increasing their likelihood of acquiring skills on completion of their education.

From (7), it is evident that parents who face lower costs of parental involvement, C_i^a , are more likely to choose the *SCCT* program. To encourage parents to choose the *SCCT* program, the government can support schools in establishing day care services

⁴Fitzsimons (2016), Kaiser (2017), and Mazza (2017) indicate the impact of poverty on children’s behavioral problems. Consequently, it can be inferred that the poor parents face a low level of certainty regarding their children’s school attendance.

for children during parent-teacher meetings. Additionally, providing reimbursement for transportation expenses incurred by parents when attending school-related events can help alleviate the financial burden associated with parental involvement. These initiatives aim to reduce the costs of parental involvement and promote the adoption of the *SCCT* program.

4 Conclusion

We conduct an analysis of individual choices within three different cash transfer programs aimed at poverty alleviation. Our research reveals that recipients may choose a conditional cash transfer program, despite incurring associated costs, when it requires the highest level of recipient engagement, such as urging their child to attend school and participating in various school activities. In the presence of imperfect information regarding their child's school attendance, parents are compelled to bear additional costs to ensure their child's attendance in order to maximize their own utility. However, the conditional cash transfer program provides parents with valuable information about their child's school attendance while also facilitating enhanced parental monitoring abilities. Moreover, through increased parental involvement, the child's school attendance becomes more transparent within a conditional cash transfer program that emphasizes not only the child's attendance but also parental engagement.

From a government perspective, the conditional cash transfer program offers an

optimal solution as it allows for a reduction in the amount of cash transferred to recipients. This is because parents with children who exhibit unreliable attitudes tend to choose this program, even if the government's cash transfer amount is comparatively lower than that of other programs.

To encourage individuals to select the program, it is crucial to minimize the costs associated with parental involvement. One effective approach is to support schools in offering child care services during parent-teacher meetings. By implementing such measures, the program stands a greater chance of being embraced by a larger segment of the population, positioning it as a successful poverty alleviation initiative.

References

- [1] Alatas, V., Banerjee, A., Hanna, R., Olken, B. A., Purnamasari, R., Wai-Poi, M. (2016), "Self-Targeting: Evidence from a Field Experiment in Indonesia", *Journal of Political Economy* 124(2), 371-427.
- [2] Behrman, J. R., Sengupta, P., and Todd, P. E. (2005), "Progressing through PROGRESA: An Impact Assessment of a School Subsidy Experiment in Rural Mexico", *Economic Development and Cultural Change* 54 (1), 237-275.
- [3] Besley, T. and Coate, S. (1992), "Workfare versus Welfare: Incentive Arguments for Work Requirements in Poverty Alleviation Programs", *The American Economic Review* 82(1), 249-261.

- [4] Blanco, M., Dalton, P. S., and Vargas, J. F. (2017), "Does the Unemployment Benefit Institution Affect the Productivity of Workers? Evidence from the Field", *Management Science* 63(11), 3691-3707.
- [5] Blair S. L. (2014), "Parental Involvement and Children's Educational Performance: A Comparison of Filipino and U.S. Parents", *Journal of Comparative Family Studies*, Vol. 45(3), 351-366.
- [6] Bobonis, G. J. and Finan, F. (2009), "Neighborhood Peer Effects in Secondary School Enrollment Decisions", *Review of Economics and Statistics* 91 (4), 695-716.
- [7] Bursztyn, L. and Coffman, C. (2012), "The Schooling Decision: Family Preferences, Intergenerational Conflict, and Moral Hazard in the Brazilian Favelas", *Journal of Political Economy* 120(3), 359-397.
- [8] Dubois, P, de Janvry, A., and Sadoulet, E. (2012), "Effects on School Enrollment and Performance of a Conditional Cash Transfer Program in Mexico" *Journal of Labor Economics* 30 (3), 555-589.
- [9] Fitzsimons, E., Goodman, A., Kelly, E., and Smith, J. P. (2016), "Poverty dynamics and parental mental health: Determinants of childhood mental health in the UK", *Social Science & Medicine* 175, 43-51.

- [10] Gahvari, F. and Mattos, E. (2007), "Conditional Cash Transfers, Public Provision of Private Goods, and Income Redistribution", *The American Economic Review* 97(1), 491-502.
- [11] Gunderson, E. A., Gripshover, S., Romero, C., Dweck, C. S., Goldin-Meadow, S. and Levine, S. C. (2013), "Parent Praise to 1- to 3- Year Olds Predicts Children's Motivational Frameworks 5 Years Later", *Child Development*, Vol.84(5), 1526-1541.
- [12] Hill, N. E. and Craft, S. A. (2003), "Parent- School Involvement and School Performance: Mediated Path among Socioeconomically Comparable African American and Euro-American Families", *Journal of Educational Psychology*, Vol.95(1), 74-83.
- [13] Hill, N. E. and Tyson, D. F. (2009), "Parental Involvement in Middle School: A Meta-Analytic Assessment of the Strategies that Promote Achievement", *Developmental Psychology*, 45(3), 740-763.
- [14] Kaiser, T., Li, J., Pollmann-Schult, M., Song, A. Y. (2017), "Poverty and Child Behavioral Problems: The Mediating Role of Parenting and Parental Well-Being", *International Journal of Environmental Research and Public Health* 14(9), 981.
- [15] Lalive, R. and Cattaneo, M. A. (2009), "Social Interactions and Schooling Decisions", *Review of Economics and Statistics* 91 (3), 457-477.

- [16] Mascini, P., Soentken, M., and Van der Veen, R., (2012), Form Welfare to Workfare The Implementation of Workfare Policies, 165-189, in *The Transformation of Solidarity: Changing Risks and the Future of the Welfare State*, Amsterdam University Press.
- [17] Mazza, J. R., Lambert, J., Zunzunegui, M. V., Tremblay, R. E., Boivin, M., Cote, S. M. (2017), "Early adolescence behavior problems and timing of poverty during childhood: A comparison of lifecourse models", *Social Science & Medicine* 177, 35-42.
- [18] Nakamura, Y. (2007), "Policy for Poverty Alleviation and Income Redistribution with Quasi-Public Goods", *Journal of Public Economic Theory* 9(6), 1031-1040.
- [19] Parker, S. W. and Todd, P. E. (2017), "Conditional Cash Transfers: The Case of Progresa/Oportunidades", *Journal of Economic Literature* 55(3), 866-915.
- [20] Sankaran, C., Sorrentino, O., and Hernandez, E. (2020), "I'll See You in School": A Multiple proxy Analysis of the Role of Parental Involvement in K-12 Education and Improves Student Outcomes", Boston College Working Paper BC EC WP 1016.
- [21] Schultz, T. P. (2004), "School Subsidies for the Poor: Evaluating the Mexican Progresa Poverty Program", *Journal of Developing economics* 74(1), 199-250.