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Searching for Effective Poverty Interventions

Conditional Cash Transfer in the Philippines

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Asian Development Bank

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Asian Development Bank
6 ADB Avenue, Mandaluyong City
1550 Metro Manila, Philippines
Tel +63 2 632 4444
Fax +63 2 636 2444
www.adb.org

For orders, please contact:
Department of External Relations
Fax +63 2 636 2648
adbpub@adb.org

This note is prepared by Norio Usui, senior country economist, Philippines Country Office, to elicit discussion and comments. The original paper was prepared in February 2011 as a PhCO Policy Note. Chris Spohr, Human and Social Development Division, Southeast Asia Department, provided useful comments and suggestions on an earlier draft. The author also thanks Junko Onishi, World Bank Office Manila, for useful discussion. Questions and comments can be addressed to the author (nusui@adb.org).

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Abbreviations

CCT	–	conditional cash transfer
DSWD	–	Department of Social Welfare and Development
MDG	–	Millennium Development Goal
NFA	–	National Food Authority
NHTS-PR	–	National Household Targeting System for Poverty Reduction
PMT	–	proxy means test
RCT	–	randomized control design
RD	–	regression discontinuity design
UCT	–	unconditional cash transfer

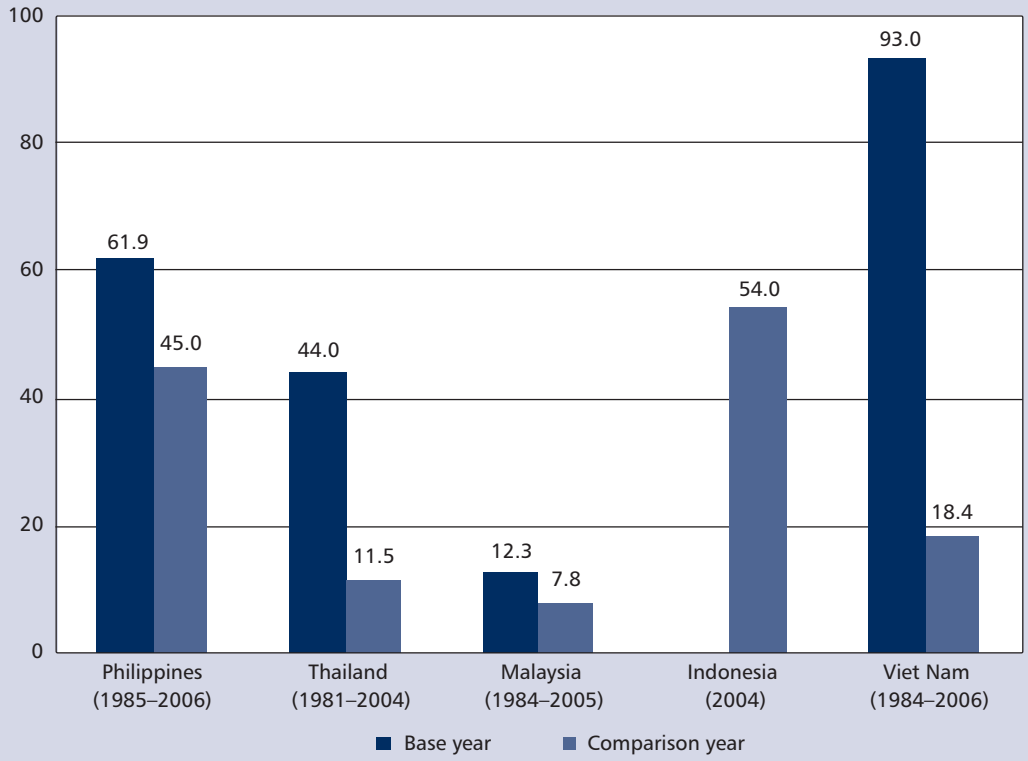
Summary

The Philippines lags behind its neighbor countries in its progress toward poverty reduction and faces challenges in achieving the Millennium Development Goal (MDG) targets on poverty, education, and health. A sluggish economic growth over the decades, led mainly by the service sector, did not create enough job opportunities to lift Filipino workers and their families out of poverty. The country thus needs a new development model to benefit the poor. While poverty can be best reduced by economic growth, poverty reduction efforts should be supplemented by an adequate social protection system to relieve the poorest of the poor. The Philippines' social protection system has been fragmented, uncoordinated, and poorly targeted. The conditional cash transfer (CCT) program, which was initiated in 2007, is currently becoming a centerpiece of the social protection system in the country. This note reviews the economic rationales for transferring a cash grant to poor families contingent on their certain behavior, the major challenges in designing a CCT program, the targeting methodologies, and the impact evaluation designs. It also looks into how the Philippines' CCT program was designed to resolve major difficulties in its design, targeting, and evaluation. Although the program is well prepared having been based on international experiences, it requires an effective implementation and careful monitoring and evaluation to achieve the expected goals. A CCT program with a rigorous impact evaluation offers an excellent opportunity, for both policy makers and development practitioners, to learn *what works and what does not work* as they search for effective poverty interventions.

Introduction

The Philippines has continued to experience slow progress in reducing poverty (Figure 1). The official poverty data shows that the country's poverty incidence fell from 33.4% in 1991 to 24.9% in 2003, but rose markedly to 26.4% in 2006, and then stagnated at 26.5% in 2009.[1] The latest progress report on the Millennium Development Goals (MDGs) reveals that universal primary education and targets for maternal and reproductive health are not likely to be achieved by 2015[2] (Table 1). The challenges in reducing poverty can be mainly attributed

Figure 1 **Poverty Incidence** (Head count ratio at $2 per day PPP, % of population)



PPP = purchasing power parity.

Source: World Bank. *World Development Indicator*. Washington, DC.

[1] The latest official poverty data, based on a new estimation methodology, was released on 8 February 2011. While the new estimates show lower poverty incidences since 1991, the overall trend of poverty reduction follows the same pattern with the previous estimates. www.nscb.gov.ph/pressreleases/2011/PR-22011-SS2-01_pov2009.asp

[2] Government of the Philippines. 2010. *Philippines 4th Progress Report on the Millennium Development Goals 2010.* Manila. www.neda.gov.ph/econreports_dbs/MDGS/

Table 1 **Probability of Meeting the Millennium Development Goals**

High
• Food poverty • Gender equality in education • Child mortality • Malaria • Tuberculosis case detection, treatment success, and cure rates • Access to sanitary toilet facilities
Medium
• Income poverty • Nutrition • Dietary energy requirement • Access to safe drinking water
Low
• Elementary participation, survival, and completion rates • Maternal mortality ratio • Access to reproductive health services • HIV and AIDS

Source: Government of the Philippines. 2010. *Philippines 4th Progress Report on the Millennium Development Goals 2010.* Manila. www.neda.gov.ph/econreports_dbs/MDGS/

to limited job opportunities due to a weak growth performance stemming from stagnant structural transformation, in particular slow industrialization. Workers have been restricted to low productivity jobs that do not pay enough to lift themselves and their families out of poverty.[3] The country thus needs to find a new development path to attain a more inclusive growth that can benefit the poor. At the same time, the effect of growth on poverty reduction should be supplemented by an adequate social protection system to relieve the poor from unexpected crises and disasters.

The social protection system in the Philippines is characterized by fragmented, uncoordinated, and poorly targeted programs. In 2009, over 60 social protection programs were in place and implemented by as many as 20 agencies, which resulted in poor coordination among the implementing agencies and duplication of program beneficiaries. The poor targeting of program beneficiaries led to high inclusion (unintended individuals or households are included as beneficiaries) and exclusion (intended individuals and households are excluded as beneficiaries) errors, limiting overall impacts of the programs funded by scarce public resources.

For example, the rice price subsidy program managed by the National Food Authority (NFA), which has been a mainstay of the country's social protection system for decades, made up for over 70% of total public spending on social protection in 2008. Of all NFA rice consumers, only 46% are considered poor. Further, only 24% of poor households could access the subsidized rice. These figures suggest serious leakage and under-coverage problems in the program. Although the government tried to improve the targeting by limiting the rice distribution to Family Access Card

[3] Usui, N. 2011. Transforming the Philippine Economy: Walking on Two Legs. *ADB Economics Working Paper Series* 252. Manila. The paper analyzes the process of structural transformation in the Philippines and finds that the key culprit of the lagged growth performance lies in stagnant structural transformation, in particular, slow industrialization. The slow poverty reduction in the country is a reflection of the limited job opportunities due to the lack of dynamic structural transformation.

(FAC) holders, considerable leakages and exclusions remained due to the lack of household level data needed for identifying eligible beneficiaries.[4]

Conditional cash transfer (CCT) programs have widely been implemented around the world, particularly in Latin America. A good many programs have made considerable success in improving welfare and social indicators of the poor.[5] In the Philippines, the Department of Social Welfare and Development (DSWD) has initiated the CCT program (Pantawid Pamilyang Pilipino Program or 4Ps) in 2008, following a pilot test in 2007, to establish a better social protection system. From an initial coverage of 6,000 households in the pilot test, the program coverage was expanded to 666,000 households in response to the food and fuel crisis in 2008 and subsequent global economic crisis in 2009. The program was further scaled up in 2010 to cover about 1 million households. The government intends to set the CCT program as the mainstay of the country's social protection system. Major development agencies, including the Asian Development Bank (ADB), provide loans and technical assistance to support this initial expansion and to strengthen related systems and capacities.[6] The government has further targeted the expansion of CCT grants to 2.3 million poor households by the end of 2011.

This note reviews economic arguments for and against CCT, its key design challenges, targeting methods, and methodologies for measuring the real impacts of CCT. It will then show how the Philippines' CCT program is designed to resolve major difficulties in designing, targeting, and evaluating. A CCT program with a rigorous impact evaluation offers an excellent opportunity—for both policy makers and development practitioners—to understand what works and what does not work as they search for effective poverty interventions.

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[4] Manasan, R. G. 2009. Reforming Social Protection Policy: Responding to the Global Financial Crisis and Beyond. *PIDS Discussion Paper* 2009-22. Manila: Philippine Institute for Development Studies; Jha, S. and B. Ramaswami. 2010. How Can Food Subsidies Work Better? Answers from India and the Philippines. *ADB Economics Working Paper Series* 221. Manila: ADB. Both papers suggest that program waste due mainly to fraud and excess costs is another key reason of the high exclusion error in the NFA rice subsidy program.

[5] Son, H. 2008. Conditional Cash Transfer Programs: An Effective Tool for Poverty Alleviation? *ERD Policy Brief Series* 51. Manila: ADB.

[6] ADB has approved a $400 million loan and two technical assistance grants totaling $1.1 million in September 2010 to support the government in financing the CCT project. ADB. 2010. Proposed Loan, Technical Assistance Grant, and Administration of Technical Assistance Grant – Republic of the Philippines: *Social Protection Support Project*. Manila.

Conditional Cash Transfer– *Why Do We Need It? How Can We Design It?*

What are the key objectives? CCT programs provide poor households with a cash grant based on their fulfillment of predetermined conditionalities. Usually, the grants are conditioned on minimum levels of use of education and health care services. In general, CCT programs, including that of the Philippines, have two objectives: one is to reduce immediate poverty through cash grants for poor households to finance immediate consumption (*redistributive goal*), and another is to reduce future poverty by encouraging poor households to invest in human capital (*investment goal*).

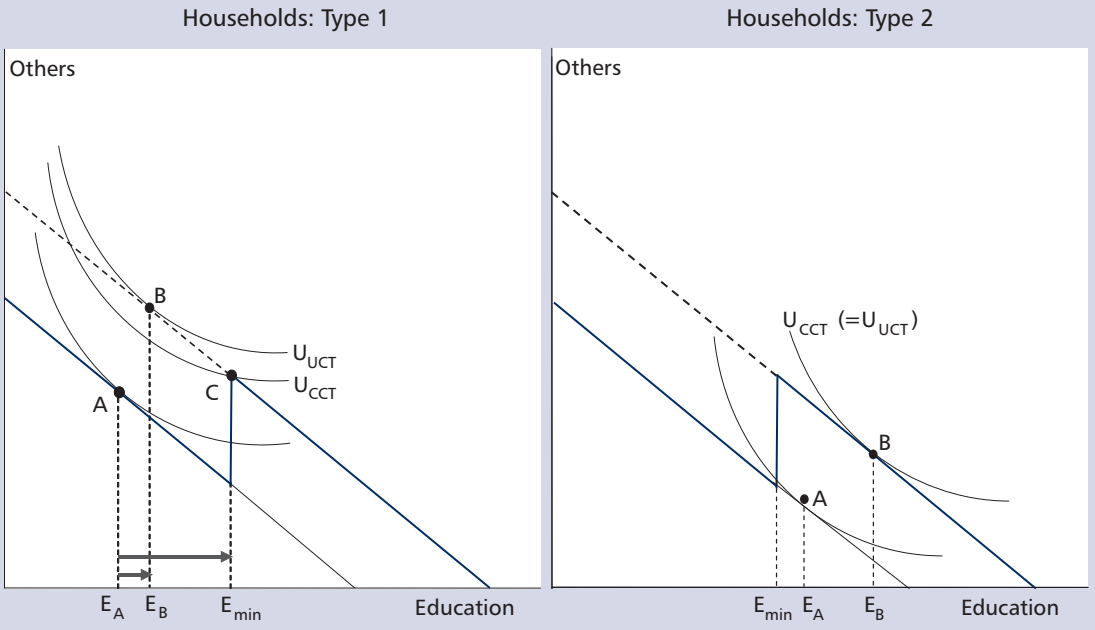
The two objectives of CCT sometimes contradict each other. To maximize the impact on human capital investment, one needs to focus on households that cannot send children to school or health centers without a cash grant. However, this tight targeting can impose a trade-off with the redistributive goal, since poor households whose children already go to school or health centers are excluded from the program. (This is not the case for the Philippines' CCT program since eligible poor households can get a cash grant irrespective of their current status of school attendance and health center visits). In designing a CCT program, policy makers need to find a right balance between the two goals depending on policy priorities.

Are cash grants effective? Irrespective of their being conditional or unconditional, direct cash transfers to poor households can face challenges. Even if poverty reduction is the central policy objective, it does not necessarily support direct cash transfers to the poor. Some may argue that, if economic growth is the main engine of poverty elimination, it would be better to spend scarce public resources for other services, such as infrastructure, for higher growth. Others may challenge cash grants because these may give disincentive for people to work and discourage self-reliance among recipients. However, infrastructure and some public services often fail to reach the poor or at least disproportionately benefit nonpoor, and may be inefficient and/or prone to corruption. Further, prevailing market failures in credit and insurance markets effectively prevent the poor from investing in both human and physical capitals to overcome their inherited disadvantages.

Why attach conditions? Attaching a constraint on cash transfers is not an orthodox idea for economists. Basic economic theory would suggest that unconditional cash transfer (UCT) is more desirable since it can offer a larger choice set for recipient households, allowing them to attain a higher welfare gain based on their preference. UCT allows recipients to tailor their consumption pattern to their specific needs and constraints. However, CCT is more powerful than UCT in inducing behavioral changes in recipient households since they need to increase their service consumption at least to a certain level specified in attached conditions.

Figure 2 illustrates two types of poor households (Type 1 and Type 2). Both types of households maximize their utility at point A given their budget constraint without a cash grant. With a cash

Figure 2 **Cash Transfers–Unconditional or Conditional?**



Source: Author.

grant without any conditions (UCT), both types increase their consumption on education to E_B. However, the level of consumption of education attained at point B by Type 1 households is still less than the policy target level (E_{min}). If we attach a condition that recipients should increase their consumption at least to the target level, Type 1 households maximize their utility at point C, which guarantees households' consumption of education service at the target level. This simple illustration shows that CCT can be a powerful tool in directing recipients' consumption patterns toward the intended direction. Efficiency loss with CCT, which is shown as the difference in utilities ($U_{UCT} - U_{CCT}$), can be regarded as a cost to encourage their investment in human capital.[7]

Why do we need behavioral changes? There are four broad sets of arguments for inducing behavioral changes with CCT. First, poor households do not necessarily have adequate information about the expected returns to investment in human capital (imperfect information by parents). Uneducated parents may not be well informed of the value of education, and the future value of education may be underestimated based on their current assessment of the value of education. Second, a decision by parents can contradict with the interest of a child who has no option but to follow the parents' decision (discrepancy between parent and child optima). Parents may not send their children to school or may require them to work since they put a higher priority on current consumption. Third, even if the level of investment in human capital is optimal at the household level, it cannot be socially optimal because of market failures, particularly spillover effects (market failures due to spillovers). Fourth, there is more political support for cash grants if taxpayers can see some behavioral changes by recipients (political support).

[7] There is no efficiency loss in Type 2 households since UCT and CCT are indifferent to their consumption decisions at point B. Even before receiving a conditional cash transfer, households have achieved the target level of consumption of education, i.e., their children are in school. Cash transfers to this type of households can be justified on grounds of redistributive objective to the poor.

Table 2 **Transfer Amounts and Conditionalities–The Conditional Cash Transfer Program in the Philippines**

	Health Grants	Educational Grants
Eligibility	*Poor* households with children 0–14 years old and/or pregnant women	*Poor* households with children 3–14 years old
Amount	P500 per household per month (12 months per year)	P300 per child per month (10 months per year, up to maximum 3 children)
Payment	Quarterly Recipients' accounts in the Land Bank of the Philippines (LBP)	
Duration	Up to 5 years	
Conditions	(1) All children 0–5 years old attend health centers to obtain services including immunizations (2) Pregnant women attend health centers according to Department of Health (DOH) protocol (3) All school-aged children (6–14 years old) comply with deworming protocol at schools (4) For households with children 0–14 years old, mother and/or spouse will attend family development sessions at least once a month	(1) Each child attends at least 85% of care/preschool (3–5 years old) and school (6–14 years old) days every month

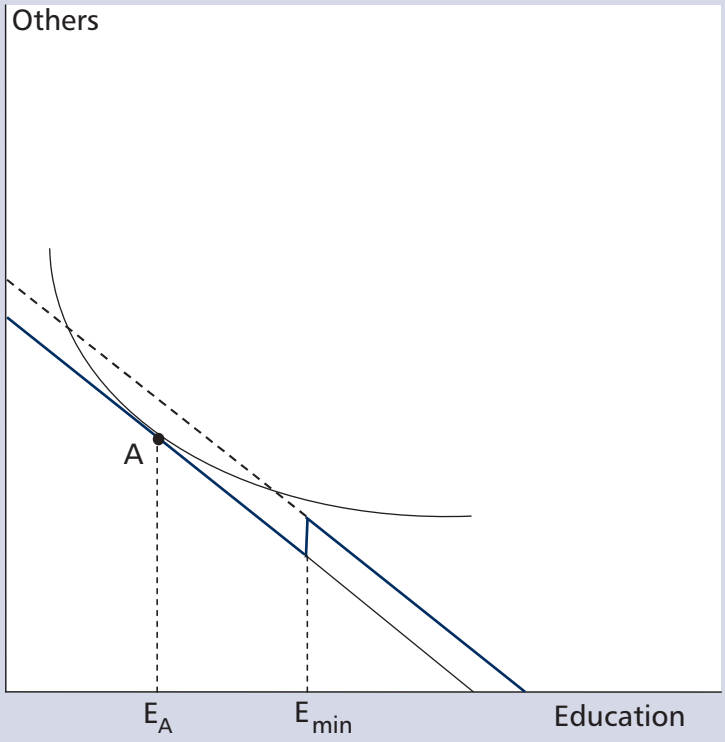
Sources: ADB. 2010. *Social Protection Support Project*. Manila; Department of Social Welfare and Development (DSWD). www.fo1.dswd.gov.ph/index.php?option=com_content&view=article&id=262&Itemid=126

What are the conditions? In selecting the "right" conditions for CCT, it is critical to consider linkages between conditions and intended goals. For example, if the policy goal is to achieve better health status of children, one needs to consider if their visits to health centers are the best way to achieve it. How effective are other options, such as trainings for mothers on health care and information campaigns for better health care? In many cases, links between service use and intended outcomes are complicated and unknown. This is one of the reasons for the need to attach a rigorous impact evaluation to CCT programs. Table 2 summarizes the conditions attached for health and education grants in the Philippines' CCT program.

What is the right amount? The amount to be transferred has significant implications for CCT's impact on its redistributive and investment goals. An appropriate amount depends on the relative importance of the two goals. If CCT puts a higher priority on behavioral changes for increasing investment in human capital, the grant amount should be more than enough for recipient households to compensate their foregone revenues and additional costs to fulfill conditions. To send children to school, they may need to give up incomes earned by their children. Regular visits to a health center may entail additional costs, such as transport. Recipients may even need to shoulder some costs to get cash from the banks.[8] If the CCT amount is not enough to compensate foregone revenues and costs of conditions, households will neither respond to CCT nor change their behaviors on human capital investment (Figure 3).

[8] Frequent cash transfers—monthly payments instead of quarterly—may be more of help to poor households. However, there is a trade-off between benefits of the poor and administrative costs of compliance check. It may also entail additional costs for recipient households. If they need to shoulder transport costs to access their bank accounts, it can reduce net transfer amounts. This example sounds trivial, but it shows the importance of a careful design of all detailed aspects of a CCT program.

Figure 3 **Insufficient Cash Transfer**



Source: Author.

On the contrary, if the cash transfer amount is too large, it is highly possible that recipient households will reduce their time allocation for work and lose incentives to find jobs. Even worse, they may choose leisure, preferring to survive on cash grants. Internationally, there is little evidence to suggest any appreciable decline in parents' labor participation (though several studies document declines in child labor), in part because benefit levels are chosen very carefully to avoid such adverse incentives. Eligible households in the Philippines' CCT program are expected to receive 23% of their average annual household incomes, which is comparable with those in successful CCT programs in other countries.[9] The cash transfer amount in the Philippines' CCT is set based on the international experience.

Until when should it continue? The concept of graduation describes a process whereby recipients of cash transfers no longer need them, and can therefore exit the program. Though it seems a simple idea, graduation is extremely difficult to define and implement. How can we assess whether and when a household is self-reliant, and no longer needs the assistance? This requires defining graduation criteria and setting thresholds that participating households must reach. Even if some households appear to pass the thresholds at a point in time, we need to carefully monitor if they can be resilient against future shocks. The CCT program in the Philippines plans to provide up to 5 years of cash grants for eligible households. ADB and other development agencies are assisting the government to explore policies and mechanisms for "referral" (connecting CCT beneficiaries to other programs to boost their productive potential, etc.) and for graduation from CCT grants.[10]

[9] ADB. 2010. *Social Protection Support Project*. Manila.
[10] ADB. 2010. *Technical Assistance to the Republic of the Philippines for Support for Social Protection Reform.* Manila.

Is the supply side OK? CCT is a demand-side intervention since it aims at increasing demands for social services by providing the poor with financial incentives. An analysis of the 2008 Annual Poverty Indicators Survey and other evidence suggest that demand-side factors, namely parents' low value placed on education, as well as the direct and indirect costs of schooling, are likely to be lead factors in dropout issues and lack of school attendance by poor children.[11] Financial burden and other demand-side factors also appear important for access to health services. Nonetheless, a critical assumption embedded in a CCT program is that good services are in place for poor households. If service providers, such as schools and health clinics, are located far away from recipients' residences, they may simply not participate in the program. If services provided there are of poor quality, this may undermine CCTs' impact in improving human capital even if eligible households participate in the program. CCT programs thus need to be complemented by supply-side interventions for better service provisions.[12]

[11] ADB. 2010. *Social Protection Support Project*. Manila.

[12] Complementing efforts of relevant government agencies to identify and address supply-side gaps, the Australian Agency for International Development is currently assisting the government with supply-side assessments. Impact evaluations designed in the Philippines' CCT program will measure the impacts of supply-side conditions on the effectiveness of CCT (Table 4).

Targeting–
How Can We Reach the Poor?

Addressing both current and future poverty of poor households is at the heart of conditional cash transfer (CCT) programs. A critical question is how to identify eligible households. Ideally, a targeting mechanism should concentrate benefits of CCT to the poorest segments of the population. However, unintended households may get to the roster of beneficiaries (inclusion error), and deserving households may be missed out since they are not permitted or are not able to participate in the program (exclusion error). As discussed earlier, most social protection programs in the Philippines have suffered from poor targeting.

National Household Targeting System for Poverty Reduction. In the Philippines, a variety of targeting systems has been developed by several government agencies due to the lack of coordination among these agencies. Poorly designed targeting systems have resulted in high leakage and under-coverage rates, low program impact, and wasted public resources. In 2010, the Department of Social Welfare and Development (DSWD) developed the National Household Targeting System for Poverty Reduction (NHTS-PR) for identifying the poor in their poverty interventions. The CCT program is the first social protection program to benefit from this newly established targeting system. An executive order issued in March 2010 requires all government agencies to use the NHTS-PR system for household targeting of poor households in relevant programs, but this has not yet been fully operationalized.

The new targeting system consists of three key steps: (i) geographical targeting, (ii) assessment of households, and (iii) validation of identified households (Table 3). In the geographical targeting, target municipalities are selected within the poorest 20 provinces, and then, depending on poverty incidence of the municipalities,[13] eligible barangays are identified. Once target barangays are set, household level information within the eligible barangays are collected through a series of interviews.

Proxy means test (PMT). Instead of asking directly about the income and expenditure of households, PMT estimates them with socioeconomic indicators at the household level. The indicators used in the NHTS-PR include (i) household consumption, (ii) education of household members, (iii) occupation, (iv) housing conditions, (v) access to basic services, (vi) ownership of assets, (vii) tenure status of housing, and (viii) regional dummy variables. PMT calculates a proxy income or expenditure for each household by a regression analysis, and then each household is classified into either eligible or non-eligible based on its proxy score against a cutoff point.

[13] After selecting the target provinces by using the Family Income and Expenditure Survey (FIES) 2006, target municipalities are chosen based on poverty indicators estimated in the Small Area Estimates (SAEs) 2003. FIES 2006 cannot provide reliable information on city and municipal level poverty due to the limited sample size.

Table 3 **National Household Targeting System for Poverty Reduction–The Philippines' New Targeting System**

Step 1 *Geographical targeting*
(1) Selection of 20 poorest provinces (Family Income and Expenditure Survey: FIES 2006) (2) Selection of poorest municipalities (Small Area Estimates: SAEs 2003) (3) Selections of barangays * If poverty incidence (PI) of a municipality > 50%, all barangays in the municipality are targeted. ** If PI of a municipality < 50%, target barangays in the municipality are selected based on municipal socioeconomic profile.
Step 2 *Household assessment*
(1) Collection of household level information through the Household Assessment Form (HAF), a 2-page questionnaire with 34 variables (2) Proxy Means Test (PMT): estimation of household income or expenditure through socioeconomic variables collected in HAF (3) Classification of households into poor and nonpoor based on their scores in the PMT
Step 3 *Validation of identified households*
(1) Validation in community assemblies (2) Spot check (3) Cross-checking with FIES 2006 data

Source: Department of Social Welfare and Development (DSWD). www.fo1.dswd.gov.ph/index.php?option=com_content&view=article&id=277&Itemid=127

PMT has advantages in screening eligible households. First, it uses a uniform weighted algorithm so that all households can be treated equally across regions and communities. Second, PMT makes it difficult for households to misrepresent themselves to increase the likelihood that they will be selected as eligible households. The selected indicators in the NHTS-PR are not easily manipulated and, at the same time, easily observable and verifiable by enumerators. It is well designed to identify intended poor households for the CCT program.

The last step in the NHTS-PR is the validation of the identified households. The lists of eligible households are validated in community assemblies to minimize exclusion and inclusion errors. In addition, the lists are evaluated by spot checks and cross-checking with available survey data. The DSWD plans to update the household level data every 4 years with field surveys.

Impact Evaluation—*How Can We Measure True Causal Impacts?*

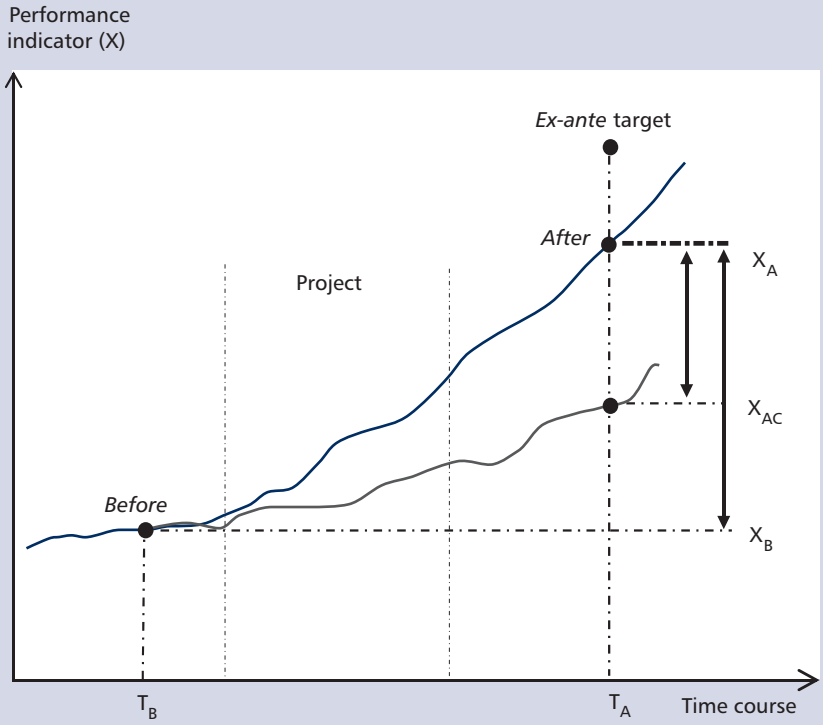
Dilemma of before-and-after comparison. A conventional approach for evaluating impacts of public programs, including social protection projects, is the so-called *before-and-after* comparison. In processing a project, we usually prepare *time-bound* and *measurable* performance indicators that allow the project to be monitored and evaluated subsequently.[14] Figure 4 illustrates a hypothetical case. At the designing stage of the project, we set up an *ex-ante* target for each performance indicator with a specific time frame—how much and when. At a certain stage after project completion (T_A), the actual value of the indicator (X_A) is measured to know the impact of the project. Although we discuss possible causes for explaining the gap between the *ex-ante* target and the actual value, project impact is usually measured by comparing the actual indicator value over the baseline value (X_B). In this approach, the project impact is estimated as X_A–X_B.

A key challenge of the before-and-after comparison lies in its complete lack of attribution or causality. Even if we find an improvement in the performance indicator, it is totally impossible to attribute the observed improvement, i.e., X_A–X_B, to the project. The improvement may be due partly to the project and partly to all other factors that are not related to the project. At most, what we can say is "our project might contribute, might be partially…might be." Much worse, at the stage when the project is already completed (T_A), we have no way of knowing to what extent the project could contribute to the improvement. If we want to know the real impact of the project, we need to extract the contribution that can be distinctly attributable to the project.

What is a "counterfactual"? The impact attributable to the project can only be obtained by comparing the actual observed indicator (X_A) and a hypothetical value of the indicator that would have prevailed in the absence of the project (X_{AC}). This hypothetical value is generally called a *counterfactual*. The example in Figure 4 shows that, even without the project, the performance indicator could have improved because of other factors outside the project. However, the counterfactual value *cannot* be observed since the project was already in place. In the context of the Philippines' CCT program, what we need is unobservable counterfactual outcomes, say school

[14] A tool widely used in development agencies is the design and monitoring framework (DMF). See, for example, ADB. 2006. *Guideline for Preparing a Design and Monitoring Framework*. While DMF is quite an effective tool for logical thinking in designing projects, *ex-ante time-bound* and *measurable* indicators for project outcome and impact have limited values for evaluation purposes due to the lack of references to the concepts of *attribution* and *causality*. DMF also requires us to list up possible risks and assumptions entailed for achieving *ex-ante* performance targets. After the project completion, however, it is not possible to find out which risks and assumptions specified at the design stage contributed to unexpected outcomes of performance indicators, much less to what extent they can be responsible for the outcomes. Overall, "the standard ADB evaluation focuses on inputs, activities, and outputs, and lacks a counterfactual analysis to allow an unbiased estimate of project impacts and reliable inferences of attribution" (ADB. 2006. *Impact Evaluation: Methodological and Operational Issues*. Manila. page 21).

Figure 4 **Dilemma of *Before-and-After* Comparison–*What We Need Is Counterfactual***



Source: Author.

enrollment of recipient households when they hypothetically did not receive cash grants. However, the households cannot be observed simultaneously in two different states, i.e., *with* and *without* the CCT program. The central objective of impact evaluation is to construct this unobservable counterfactual value (X_{AC}) for measuring the real impact of the project, i.e., X_A–X_{AC}. There are several methodologies in impact evaluation.[15]

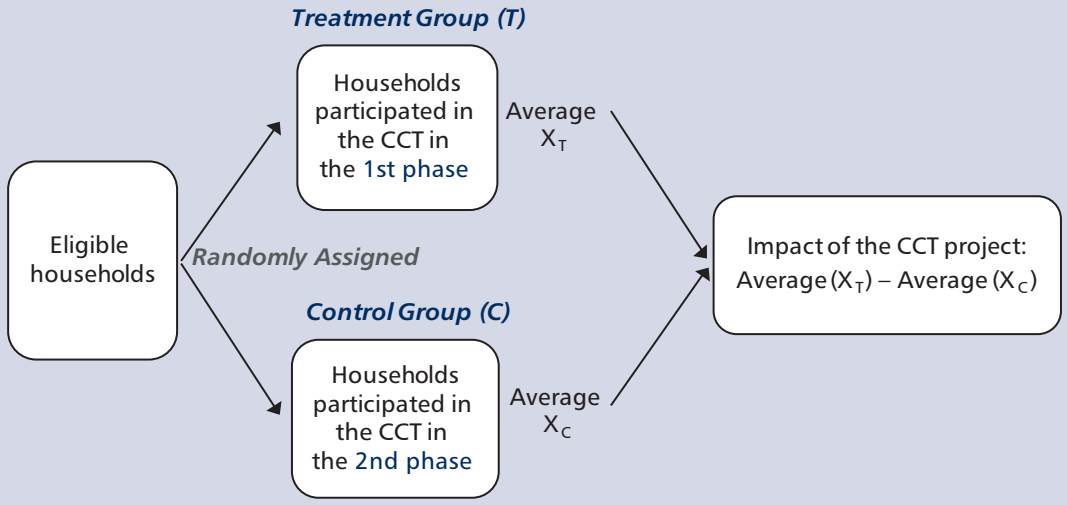
The CCT project of the Philippines adopts two different approaches: (i) a randomized control design (RCT) approach with phase-in design, and (ii) a regression discontinuity design (RD) approach. Three rounds of impact evaluation surveys are expected to be conducted, with the first round in 2011.[16]

Randomized control design (RCT) approach. In this approach, eligible households for the CCT are *randomly* assigned to a "treatment group" that will receive cash grants, and a "control group" that will not. By construction, the two groups are identical except for participation in the CCT

[15] Impact evaluation has become a standard toolkit of academic development economics and most development agencies. There are broadly two groups of impact evaluation methods. The first is random experiment designs, which use randomization to obtain the counterfactual. The second consists of non-experimental methods, which use statistical techniques to construct the counterfactual. For details, see ADB. 2006. *Impact Evaluation: Methodological and Operational Issues.* Manila; and World Bank. 2011. *Impact Evaluation in Practice*. Washington, DC.

[16] ADB is working with the World Bank and the Australian Agency for International Development to support impact evaluation and broader monitoring and evaluation.

Figure 5 **Randomized Control Design Approach with Phase-In**



CCT = conditional cash transfer.

Source: Author.

program.[17] It is thus possible to assume that both groups encounter the same external factors. Therefore, any difference in the outcomes between the two groups after project completion can be attributed solely to the CCT project. In the Philippines' CCT program, the program phase-in is structured to divide eligible households into the treatment and control groups. The CCT covers all eligible households in a phased-in manner, which implies that the eligible households receive the cash transfers at different times. The timing of actual receipt of the cash grants is randomized: households that participate in the CCT program in the second phase can serve as the control group for others that join the program in the first phase (Figure 5).

Sampling. The RCT approach is applied in some municipalities in each representative province. In each municipality, half of the barangays are randomly assigned to the CCT program immediately (treatment group), and the remaining half participate in the project after 1 year (control group).

Regression discontinuity design (RD) approach. This approach can be used when the program's beneficiaries are determined by an explicit rule, such as the proxy means test (PMT) in the Philippines' CCT program. Eligible households are determined based on their proxy scores against a cutoff point. This means that households are assigned to treatment (eligible for the program) and control (non-eligible for the program) groups based solely on their proxy scores. However, unlike the RCT designs, where we create control groups that will face exactly the same external conditions with treatment groups, the treatment and control groups in the RD approach are very different in their pre-program characteristics.

[17] This approach is different from another frequently used approach of *with and without* comparison, which measures impacts of a program by comparing between households that enrolled in the program and non-enrolled households. Since the two groups are not randomly selected, there is no guarantee that they are identical except for the program enrollment. This problem is called "selection bias."

Figure 6 **Regression Discontinuity Design Approach–A Hypothetical Case**

Source: Author.

Figure 6 shows a hypothetical case of the RD approach. Each dot indicates a single household's performance indicator, say a score of nutrition status (vertical axis), and a proxy score that is used for the eligibility test for the program (horizontal axis). The vertical line at the proxy score of 50 is the cutoff point. All households with proxy scores below the cutoff point are eligible for the program; the others are not eligible. The RD approach assumes that in the absence of the program, the relationship between the performance indicator and the proxy score is the same for the two groups. The linear regression line in the left side panel shows that there is a positive relationship between the two variables in the absence of the project, i.e., the poorer, the less healthy. If the project has a positive effect, dots of the treated households move upward and the regression line of the treated households intercepts with the cutoff line at a higher value (point A).[18] The RD approach aims at measuring the program's impact by capturing this "jump" or "discontinuity" in the regression lines at the cutoff point.

The RD approach implicitly assumes that there is no spurious discontinuity in the relationship between a performance indicator and a proxy score. Its power for measuring the impact of a program critically depends on our modeling capacity of the real statistical relationship between the two variables. Further, the RD method estimates the impact of the program around the cutoff point; the estimated result cannot necessarily be generalized to households whose scores are far away from the cutoff, where eligible and non-eligible households may not be similar. Despite these challenges, the RD approach has a strong merit compared with the RCT method. The RD approach does not require us to assign some of the eligible households to a control group. Randomization in the RCT approach sometimes creates ethical problems since some households that mostly need the support could be excluded from the project for the evaluation purpose. From the ethical perspective, the RD approach is compatible with the goal of getting the program to those most in need.

[18] For simplicity, this note assumes a linear relationship between the performance indicator and the proxy score. If the two variables have a curved relationship, it is not likely that the estimated discontinuity at the cutoff point captures the impact of the program. This problem is known as "the curvilinearity problem" in the RD approach. For details, see Angrist, J.D. and J.S. Pischke. 2009. Getting a Little Jumpy: Regression Discontinuity Designs. In *Mostly Harmless Econometrics, An Empiricist's Comparison*. Princeton, New Jersey: Princeton University Press.

Table 4 **Impact Evaluation Indicators Measured–The Conditional Cash Transfer Project in the Philippines**

Outcome Indicators	Output Indicators	Control Variables
Education		
Learning Achievement – Grade 6 test, home-based tests	School enrollment School attendance School attainment and grade completion Grade repetition and transition	Local school characteristics
Health and Nutrition		
Infant and maternal morbidities Nutritional status – anthropometrics Cognitive development Motor development	Immunization coverage Use of prenatal, delivery, and postnatal care Parental session attendance Monthly and quarterly growth monitoring for ages 0–2 and 3–5 Receipt of deworming pills at school Feeding practices (breastfeeding and nutritional supplements) Use of care and care seeking behavior knowledge-attitude-practice (KAP) in nutrition, childhood illnesses, and hygiene practices	Local health facility characteristics Psychosocial health
Socioeconomic/ Sociodemographic		
Household consumption and income including consumption of key child development commodities Subjective welfare	Savings and investment behavior (including borrowing) Social support (including health insurance and other social programs and remittances, and perceptions of sufficiency) Adult labor Child labor	Household member demographics – age, education, marital status, ethnicity, and self-reported IP status Housing characteristics – access to utilities Migration Household enterprise activities Shocks
Other	Female empowerment and decision-making 4Ps knowledge and perceptions Birth certificate	Global positioning system (GPS) Community characteristics Future expectations, attitudes to risk, and discount rates Community participation/social capital

Source: World Bank. 2010. Concept note on Pantawid Pamilyang Pilipino Program (4Ps), Quantitative Impact Evaluation. 23 June.

What will be measured? The main indicators measured in the impact evaluation in the Philippines' CCT program are socio-behavioral outcomes and conditioning variables that can possibly be affected by the program. The indicators cover not only areas in education and health—the key focuses in the program—but also demography and economic behavior (Table 4). For each area, there are indicators that capture "final outcomes" (such as learning achievement and nutritional status) and "intermediate outputs" (such as school enrollment and usage of health facilities). To check impacts of supply-side conditions, several "control variables" (such as status of service facilities and access to utilities) are measured. Given the concern for possible disincentive to work, work status of family members is also included in the list.

Sampling. Sample households are selected in several barangays for the RD study. In each barangay, some households with a proxy score higher than the cutoff and another with a lower score are selected as the RD study sample. Additional households, half of which have scores "just above" the cutoff and another half with scores "just below" the cutoff, are identified in each barangay for a good estimate around the cutoff point.

Conclusions

Over the past 2 decades, a wide variety of conditional cash transfer (CCT) programs has been implemented around the world to eradicate both current and future poverty. Rigorous impact evaluations that were embedded have demonstrated a considerable success in many countries, and CCT is now becoming a champion of social protection policy in many countries. Given the persistent poverty and the limited impact of traditional poverty interventions, the Philippines initiated the pilot test of CCT in 2007 and has scaled up its coverage in response to the global food and energy crisis and the subsequent financial crisis. The government aims to set the CCT program as the centerpiece of the country's social protection system.

While the CCT program is well designed, the success of the program depends critically on its effective implementation, and careful monitoring and evaluation. Its impact on poverty and human capital development depends greatly on the recipient households' response to the CCT. They may not able to send their children to school if the location is very far from their homes. Health centers and rural clinics may not provide quality services. Family members may reduce their work due to additional income from the CCT. Further, payment arrangements may impose additional burden to the recipients, and hence, may reduce net transfer amounts. International experiences of CCT programs can help us in assessing these possible reactions by the households. It is thus critical to ensure effective implementation, and careful monitoring and evaluation, to achieve the expected goals.

A key feature of the CCT program in the Philippines lies in its rigorous impact evaluation design. The program adopts a randomized control design and a regression discontinuity design to extract true impacts that can be distinctly attributable to the program. The impact evaluation enables us not only to capture the impacts attributable to poverty reduction and investment in human capital in recipients' households, but also to measure possible impacts on behavioral changes, such as savings and investment, and on labor supply. It is also designed to assess the supply-side conditions on the effectiveness of the CCT.

A well-designed impact evaluation offers an excellent opportunity—for both policy makers and development practitioners—to understand what works and what does not work during the project implementation process. Findings in the impact evaluation help them fine-tune the program design to maximize the benefits to the poor. The CCT program is thus a joint effort between the government and development agencies to search for a better design of the program.

A proponent of rigorous impact evaluation once mentioned that "aid thinking is lazy thinking."[19] In the traditional project design practice, specialists analyze their sectors to identify sector problems. Then they prepare a list of solutions to fix the identified problems. In many cases, the specialists' solutions are based on international best practices. The solutions go into a project document and once approved, the project moves to the implementation process. Considerable attention is then devoted to project implementation. Despite all these good intended efforts, if impact evaluation is not designed at the processing stage, the project officers cannot tell anything about impact

[19] Banerjee, A. V. 2007. *Making Aid Work*. Cambridge, MA: Boston Review Book, MIT Press. page 7.

that can be attributable to the project. They cannot diagnose main causes of unexpected results either.[20] We might have missed important learning opportunities during the project implementation process.

In coordination with policy makers, we, development practitioners, need to learn *what works and what do not work* during the diagnostic process in the impact evaluation. It is the best way to search for effective poverty interventions that can be best suited to the country. The CCT program gives us great learning opportunities. We have just started such an important project in the Philippines.

[20] This approach is sometimes called the "we are wise men approach" since it implicitly assumes that specialists are able to identify problems and prepare solutions before implementing the project. If the wise men's solutions are perfect, evaluation becomes less important since the solutions should always work well.

Searching for Effective Poverty Interventions
Conditional Cash Transfers in the Philippines

Conditional cash transfer (CCT), which was initiated in 2007, is becoming a centerpiece of the social protection system in the Philippines. This note reviews economic rationales for transferring a cash grant to the poor contingent on their certain behavior, major challenges in designing a CCT program, targeting methodologies, and impact evaluation designs, to show how the Philippines' CCT program is designed to resolve major difficulties in its design, targeting, and evaluation. The CCT program with a rigorous impact evaluation offers an excellent opportunity for policy makers and development practitioners to learn what works and what does not work in searching for effective poverty interventions.

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