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## Research Article

# M-money as Conduit for Conditional Cash Transfers in the Philippines<sup>1</sup>

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### Abstract

Many developing countries provide conditional cash transfers (CCTs) for their poorest families. In the Philippines, CCT use has expanded rapidly such that in five years the amount of transfers increased by 3,300%, with PHP34 billion (US\$801 million<sup>2</sup>) disbursed in 2013. This expansion of deliveries has complicated government logistics. In an effort to reach the poor in all areas of the country, the government partnered with the telecommunication firm Globe's network of GCash merchants to provide direct cash payouts to CCT beneficiaries. This article investigates the CCT implementation through the cash-based GCash Remit system to determine its effectiveness, efficiency, and security. A cost comparison was done between the GCash Remit mode of CCT delivery and the potential use of noncash mobile money (m-money) platforms already in the market. The study is based on field observations, a randomized survey of 194 CCT beneficiaries, interviews with CCT program implementers and m-money providers, and scrutiny of the tariff data of m-money providers.

## 1. Introduction

The World Bank's *World Development Report 2016: Digital Dividends*, focusing on digital dividends, devotes a section to digital finance, including mobile money. It discusses how the technology can reduce costs for recipients and provide efficiency gains in terms of time savings, providing more control for recipients and encouraging savings (World Bank, 2016). McKay and Pickens (2010) estimated that for a transactional value of \$23, using mobile money costs, on average, 38% less than commercial banks and 54% less than informal options for money transfers.

There is an increasing exploration into how mobile money technology can be used for development applications. Alampay and Bala (2010), for instance, have studied its potential use for those at the bottom of the pyramid in the Philippines, given the extent to which such remittances support its economy. In other countries there is experimentation in applying it to conditional cash transfer (CCT) programs. These are programs where the poor households are provided regular monthly funds provided they comply with certain conditions (e.g., regular health check-ups, children enrolling in school, etc.). For example, Aker, Boumniel, McClelland, and Tierney (2011) experimented with the short-term impact (a period of eight months) of using mobile cash transfers (through the mobile cash transfer program Zap) for CCT programs in Niger. Kikulwe, Fischer, and Qaim (2014) studied a sample of small-hold farmers in Kenya who were receiving cash transfers through mobile money (M-PESA) for agricultural use.

Given this, our study investigated whether mobile money technology could be a feasible alternative for

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2. Based on the 2013 average exchange rate at Bangko Sentral ng Pilipinas. See [http://www.bsp.gov.ph/dbank\\_reports/ExchangeRates\\_1\\_rpt.asp?frequency=Annual&range\\_from=2013&range\\_to=2013&conversion=Average](http://www.bsp.gov.ph/dbank_reports/ExchangeRates_1_rpt.asp?frequency=Annual&range_from=2013&range_to=2013&conversion=Average).

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delivering CCTs in the Philippines. Would it be a more cost effective option for government to consider for providing cash transfers? Would recipients benefit in terms of ease of access and lower costs, given the mobile money infrastructure already in place?

### **Conditional Cash Transfer Program in the Philippines**

As part of its poverty-reduction and social-protection strategy, the Philippine government has adopted a CCT program. Under this program, which began in 2008, the state provides cash incentives to poor Filipino families to alleviate their immediate consumption needs and break the intergenerational poverty cycle, on the condition that they also invest in human capital through proper health, nutrition, and education. Called the *Pantawid Pamilyang Pilipino* Program (Bridging Program for the Filipino Family), or 4Ps, it is one of the core programs of the Department of Social Welfare and Development (DSWD)—in partnership with the Department of Health, the Department of Education, the Department of the Interior and Local Government, the Land Bank of the Philippines (LBP), and other local stakeholders (Fernandez & Olfindo, 2011).

Launched in 2008, 4Ps was patterned after successful CCT programs in Latin America, such as *Bolsa Familia* in Brazil and *Oportunidades* in Mexico (Fiszbein et al., 2009). 4Ps targets poor households as identified by the National Household Targeting System for Poverty Reduction (NHTS-PR) Proxy Means Test (PMT). In 2011, the PMT identified 5,225,118 out of the 10,909,456 households in the country as households requiring the CCT benefit (DSWD, 2013). Depending on their number of children, beneficiaries may receive between PHP500 and PHP1,500 per month (US\$12–36) for a maximum of five years.

To be eligible for the grant, beneficiary households must meet four criteria:

1. The household must be in an impoverished area as identified by 4Ps through a multistep process based on official poverty incidence according to, inter alia, the National Statistics Office's latest Family Income and Expenditure Survey and the National Statistical Coordination Board's Small Area Estimates.
2. The household must be classified as poor through a household targeting system<sup>3</sup> that identifies the country's poor households.
3. The household must have a pregnant woman or at least one child aged 0–14 years.
4. The household must be willing to commit to meeting program conditions such as receipt of preventive health care by pregnant women and children, school enrollment and attendance by children, and parental participation in family development sessions.

Cash grant payments to a beneficiary household are terminated when the beneficiary no longer meets the necessary criteria or does not comply with all the program's conditions (Fernandez & Olfindo, 2011).

The Philippine government started 4Ps CCT in 2008, during the administration of former President Gloria Macapagal Arroyo. The program was continued and expanded in the term of President Benigno Aquino III, who came to power in 2010. During the Aquino administration the number of program beneficiaries has grown fourfold (see Figure 1), and the amount disbursed annually has grown to PHP34 billion. By September 2013 there were 3.9 million beneficiaries on record with DSWD, with the goal of expanding this number to 4.3 million before the end of President Aquino's six-year term in 2016.

4Ps, as with CCT programs elsewhere in the world, faced several challenges. One challenge was the logistics for the cash grant payments, which are managed by the aforementioned LBP, a government-owned bank that was the program's disbursing institution. These grants were remitted through the beneficiary households' accounts and can be withdrawn through LBP automated teller machines (ATMs) or via over-the-counter transactions at LBP branches.

Due to the unanticipated rapid expansion of 4Ps, DSWD and LBP encountered logistical difficulties in implementing CCT (Zimmerman & Bohling, 2013). Because the country comprises thousands of islands, many municipalities and remote areas covered by the program had no LBP branches or LBP ATMs. Thus, alternative ways to help beneficiaries claim their grants efficiently and conveniently had to be explored. LBP and DSWD

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3. This is based on the NHTS-PR, an information management system that identifies who and where the poor are in the country (<https://dswd09.wordpress.com/2012/09/16/hello-world/>).

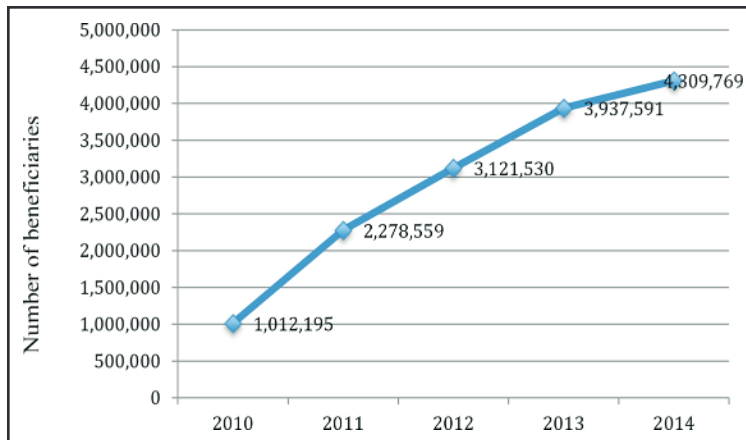


Figure 1. Number of CCT Beneficiaries, 2010–2014.

Source: Department of Social Welfare and Development.

mobile money (m-money) agents, who provided cash (not m-money) to CCT beneficiaries. This use of GCash Remit as a cash-based CCT delivery service began in November 2010. DSWD and LBP engaged the services of Globe to conduct a pilot GCash Remit distribution of CCT grants via agents in remote island municipalities in Palawan and Quezon provinces. The pilot was deemed a success, prompting DSWD to expand into more areas using GCash Remit (Globe, 2011). By 2011 CCT delivery via GCash Remit was serving about 300,000 beneficiaries and distributing about PHP1 billion (US\$23 million) in CCT grants to almost 70 areas in 16 regions (Bold, 2011).

Based on data provided by DSWD, GCash Remit was servicing approximately 12% of all CCT beneficiaries in 2013, after a peak of 29% in 2011 (see Figure 2). The value of the CCTs moving through GCash Remit has increased from PHP980 million in 2010 to PHP4 billion in 2013, with a peak of PHP6 billion in 2012.

This GCash Remit method of CCT disbursement made it more convenient for CCT beneficiaries not residing near LBP branches or ATMs to receive their cash payouts, reducing transportation costs and time spent queuing for the payments. It has also been argued that the GCash Remit CCT cash payment sites have spurred local economic activities as the beneficiaries spend their grants at the community level (Bold, 2011).

This article outlines our research into GCash Remit implementation in one Philippine municipality, San Jose, focusing on whether consideration should be given to moving away from the cash-only GCash Remit CCT distribution to a mobile money (m-money) model of the type provided by SMART Money and the GCash direct services.

## 2. Research Methodology

The findings in this article are drawn from four modes of data collection:

1. field observations in the municipality of San Jose, Occidental Mindoro Province in the Mimaropa Region, where GCash Remit was being used as a conduit for delivering CCTs;
2. a field survey of GCash Remit CCT recipients in San Jose;
3. interviews with DSWD personnel at the DSWD Central Office in Quezon City and the DSWD Mimaropa (Region IV-B) Regional Field Office in Manila regarding the implementation of CCT through GCash Remit;<sup>5</sup> and

4. Aside from LBP, PSPs include the MLhuillier network (offsite and over-the-counter), rural banks, PhilPost, First Consolidated Bank, and partner cooperatives.

5. The Mimaropa Region includes Palawan Province, one of the two provinces where CCTs via GCash Remit were first implemented.

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- an interview with a representative of m-money provider SMART Money, excerpts about m-money tariff data from the SMART Money and GCash websites, and a report by the Consultative Group to Assist the Poor (CGAP) authored by Zimmerman and Bohling (2013).

Two of the data-collection methods, the field observations and the field survey, were conducted over a three-day period, October 29–31, 2013, during CCT distribution at several locations in San Jose. Based on the schedule provided by DSWD, 4,093 CCT beneficiaries were expected during those three days across the eight payout venues, which serve 22 *barangays* (villages) in the municipality. Each of the eight payout sites serves a designated cluster of *barangays*. The payout venues are typically open spaces that can accommodate a large number of individuals (e.g., an open park, a *barangay* hall, a school ground).

Our structured survey was administered by enumerators with 192 respondents randomly selected from 13 *barangays* (of the 22 CCT-receiving *barangays* in San Jose). Respondents from six *barangays* were surveyed on the first day of the payout, from four *barangays* during the second, and from three *barangays* on the third.

Almost all the survey respondents were women because, by design, the cash transfers are intended to be given to women beneficiaries. (There were, however, a few cases where husbands or children collected the funds when a woman beneficiary was unable to do so for an unavoidable reason.) Most respondents walked to collect their CCT. Among those who had to pay for transportation, their mean travel cost was PHP15.99. The average travel time to the distribution center was 28 minutes, but there was a large variance in travel time, with one person reporting that she traveled for a day and spent PHP100 for the trip; others said they walked to the distribution point within a few minutes. The respondents' ages ranged between 15–53.

During the cash grant payouts, the survey respondents were identified through selection of every fifth CCT beneficiary in each of the payout lines (each *barangay* had its own line). In the afternoon of the first research day (October 29) when a simultaneous payout was scheduled at two locations (one in La Curva's *barangay* hall, the other in Murtha's *barangay* hall), the enumerators were divided into two teams, one for each location. However, due to limited personnel, the Murtha beneficiaries had to wait for the GCash Remit merchant to arrive after finishing the disbursements in La Curva. Based on field observations, the wait time usually exceeded one hour. Furthermore, distribution for Ilin Island *barangays* was conducted on another day at a different distribution point. This illustrates that using GCash Remit as a conduit can still lead to similar logistical constraints as the m-money technology was not used.

### 3. Research Findings

#### 3.1 Field Observation Findings

In San Jose we observed the two types of m-money providers, GCash and SMART Money, were present. We found that although GCash Remit is an m-money remitting service, the actual CCT transfer by DSWD

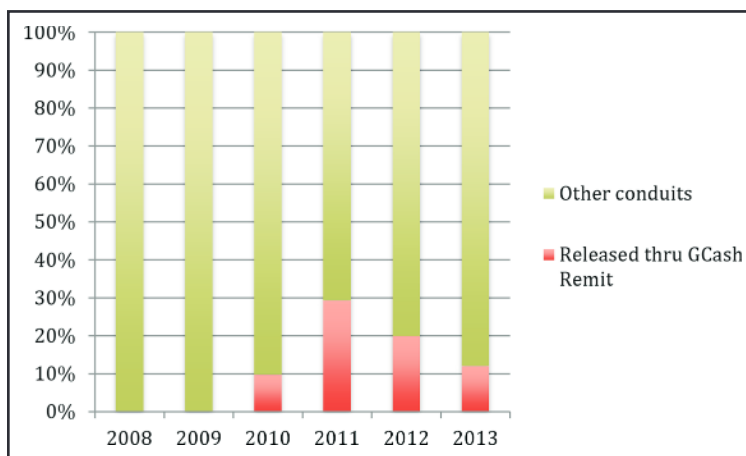


Figure 2. Proportion of CCT Funds Disbursed Through GCash Remit.

Source: DSWD.

to beneficiaries did not take advantage of the key features of m-money, i.e., the beneficiaries did not receive the CCTs directly via the mobile GCash platform.

We observed that in San Jose the step of GCash text verification that was done in its pilot implementation was no longer done during the disbursement of a CCT itself. This was seen as unnecessary since DSWD was doing the verification already. Hence, GCash Remit's merchant partners were operating in the same fashion as any other remittance channel—non-automated and dependent

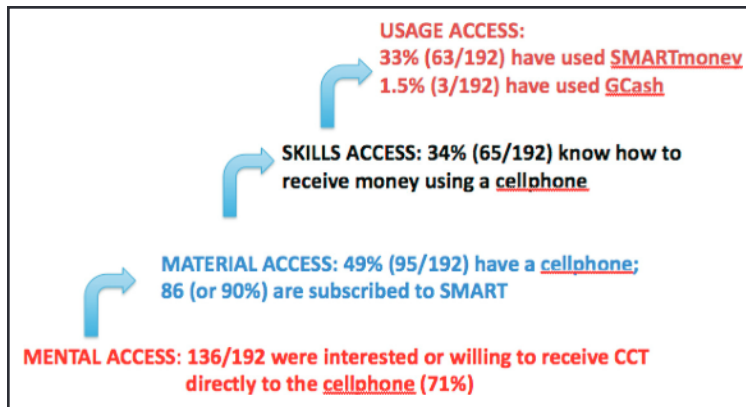


Figure 3. Stages of Access to M-money Among Surveyed CCT Beneficiaries.

done manually and the same merchant serviced multiple distribution points, beneficiaries in one location often had to wait for distribution to finish in the previous location. The result was long lines at the San Jose GCash Remit locations largely because beneficiaries had to wait for merchant partners to set up, while the processing itself might take only a minute or so for each beneficiary.

We further observed that vendors in San Jose, selling a variety of products (e.g., toys for children, clothes, snacks), proliferated where CCTs were distributed. When a distribution was finished and the GCash Remit merchants moved to another area, some vendors would also move to the next CCT disbursement location. Some of the disbursing merchants said they did not feel adequately secure under that arrangement.

Given that the method for delivering CCTs to San Jose beneficiaries did not involve the use of m-money technology, two questions arise: Would an m-money-based CCT system be feasible? Would it be more cost-effective? These questions were investigated in the field survey of San Jose CCT beneficiaries.

### 3.2 Survey Findings

The structured interview survey instrument was designed according to Van Dijk's "stages of access" model for accessing technology (Van Dijk, 2006). Thus, the survey interviews sought to understand respondents' experiences in terms of the following four stages of access to m-money CCTs:

1. Mental: Was the respondent interested in accessing CCTs through the mobile phone?
2. Material: Did the respondent have a mobile phone?
3. Skills: Did the respondent know how to receive m-money?
4. Usage: Did the respondent have previous experience receiving m-money?

Figure 3 shows the survey results for the 192 respondents in terms of each of the four access stages.

When asked whether they would be interested in/willing to receive their CCTs via m-money through the mobile phone, i.e., when probed on their *mental access* based on Van Dijk's (2006) framework, the majority of the responding CCT beneficiaries (71%) expressed their willingness. It was also found that respondents' distance from a known m-money claim/redemption center for GCash or SMART Money was statistically significant in relation to their willingness ( $\chi^2 = 12.96$ ;  $df = 1$ ;  $p = 0.000$ ). Those who were closer to a known cash-out center were more willing. This is likely because there are logistical costs (e.g., time, transportation) connected with having to convert mobile money to cash.

In terms of *material access*, i.e., ownership of cellphones, almost half the respondents (49%) said they owned a mobile phone, and most of these mobile phone owners (90%) were subscribers to the SMART mobile network. (This apparent high proportion of SMART subscribers would be an important factor to consider should CCTs be delivered through an m-money format, as SMART has a different mobile currency, SMART

largely on DSWD personnel to verify beneficiary identities and the GCash Remit partner merchants to directly distribute money after these identities had been verified. A recipient still had to physically bring the money to the GCash Remit locations and the funds were, in turn, distributed in the form of cash to each beneficiary. As such, the merchant partners' efficiency in distribution depended on the number of disbursing personnel present and the number of desks available. In the case of San Jose, because distribution was

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Table 1. CCT Transaction Costs for DSWD.

Conduit or modality	Period	Cost to DSWD (PHP1 = US\$0.02)
LBP cash card	2008–present	Initial PHP50 fee, no transaction costs thereafter (at LBP ATMs); PHP20 at other ATMs (interbank fees)
Philpost	2008–present	PHP50 per transfer
GCash Remit	2010–2011	PHP75 per transfer
GCash Remit	2012	PHP60 per transfer
MLhuillier	2013	PHP42 per transfer <sup>a</sup>
GCash Remit	2013	PHP42 per transfer <sup>b</sup>

Source: Department of Social Welfare and Development.

a. GCash Remit was disqualified for submitting its bid late.

b. MLhuillier did not participate, and PHP42 became the ceiling set for the bidding. A courier company, LBC, participated in the bidding, but was disqualified.

Money, than Globe's GCash). At the same time, we found no statistically significant relationship ( $\text{Chi} = 2.89$ ;  $\text{df} = 1$ ;  $\alpha = 0.089$ ) between mobile phone ownership and an interest in/willingness to receive CCTs via m-money. This implies that even those who did own a mobile phone were open to the option. Furthermore, some of those who said they did not own a phone reported knowing how to receive m-money, suggesting that some people share mobile phone handsets for m-money use (e.g., for remittances). However, in cases where mothers share their mobile phones, their receipt of CCTs may be at risk. This highlights the issues of control, security, and privacy, which would benefit from further investigation prior to implementation of a new distribution service.

We found that 34% of survey respondents reported having *skills access* to m-money, i.e., they reported knowing how to receive money using their mobile phone. This figure was significant as the World Bank's Global Findex data for 2011 stated that only 12.5% of Filipino adults received m-money, with an even lower figure (11.8%) for adults in the bottom 40% of income, but a higher figure (13.2%) for women, and an even higher figure (16%) for rural adults (World Bank, n.d.). Thus, the high m-money skills access figure (34%) obtained during this research might be a function of peculiarities in the sample and its location, suggesting a high potential sensitivity toward the mode of CCT delivery under local conditions. Of those who had skills to use m-money, more were familiar with SMART merchants than GCash merchants. The survey also found a statistically significant relationship ( $\text{Chi} = 7.729$ ;  $\text{df} = 1$ ;  $\alpha = 0.005$ ) between having preexisting knowledge of how to use m-money services and having a willingness to use m-money as a CCT conduit.

Finally, in terms of experience in using/accepting m-money, i.e., *usage access*, 33% of respondents had experience using SMART Money, compared to only 1.5% who had used GCash. Furthermore, it was found that respondents who had previous experience using m-money expressed greater interest in receiving their CCTs via this medium.

### 3.3 Findings from DSWD Interviews

The interviews with the program implementers at the DSWD Mimaropa Regional Field Office provided evidence of how 4Ps implementation had evolved since its inception. The payments were originally done once every three months, but were now done once every two months, and there was some interest among DSWD leadership in doing the payments monthly. The partnerships forged for CCT distribution had also changed over time (see Table 1), as had the transaction fees charged by the service providers.

As Table 1 shows, the amount charged by GCash Remit for each transfer had decreased from PHP75 in 2010 to PHP42 in 2013. This PHP42 per transaction fee was the ceiling set by DSWD after the previous round of bidding for the CCT tender earlier in 2013, in which another provider, MLhuillier, had won with a PHP42 bid. (MLhuillier is the country's largest pawnshop network as well as the most popular conduit for sending

domestic remittances in the Philippines. An estimated 23% of domestic payments are sent through MLhuillier [Zimmerman & Bohling, 2013]).

Benefits vary per household, depending on the number of children and the household's compliance with the program's conditions. (In 2013 at the time of the research the benefits were PHP500 per month per family plus PHP300 per month per child for up to three children, meaning that typical payments, if done bimonthly, ranged from PHP1,600 to PHP2,800 per recipient household.)

Interviews with DSWD program managers revealed that the CCT system required significant backroom operations, not only to implement CCT distribution, but also to monitor beneficiary compliance and compute the benefits that beneficiaries were to receive. DSWD's delivery modes were found to vary, depending on the availability of banks and other partners in the target areas. DSWD's preferred conduit was LBP, which is government-owned. Where LBP was present, beneficiaries could access their CCTs with an LBP cash card and the only cost to DSWD was an initial PHP50 fee to cover LBP's cost to make the cash card. Thereafter, DSWD incurred no transaction costs. However, when the CCT was withdrawn from another bank's ATM, there would be a transaction cost to the beneficiary.

Where LBP was not present, DSWD pursued other options such as rural bank partners or the Philippine Postal Corporation (Philpost). Only when these other conduits prove unfeasible or unavailable did DSWD consider alternative conduits such as GCash Remit. According to interviewee Antoinette Duero of the DSWD Central Office's Financial Management Service, around 80% of the CCT-recipient areas were served by the LBP, a rural bank, or Philpost, meaning that in only 20% of the CCT recipient areas another conduit—such as GCash Remit—was necessary (A. Duero, personal communication, 2013).

According to an interviewee at the DSWD Mimaropa Regional Field Office, the initial reason DSWD chose GCash Remit as a conduit in the Mimaropa Region was pragmatic. It was based initially on the need to have a partner with a presence in areas not served by LBP, a rural bank, or Philpost. For example, in the case of Mimaropa Region's Palawan Province (one of two provinces where GCash Remit was piloted in 2010), DSWD partnered with GCash Remit because the DSWD could not find an alternative at that time. In addition, DSWD and LBP perceived there would be cost savings by using GCash Remit rather than the alternatives they had tried in the past (e.g., using helicopters or boats; Bold, 2011) and a reduction in complexity if some of the logistics could be passed to a partner.

The DSWD Mimaropa Regional Field Office managers explained that GCash Remit CCTs are not sent directly to the beneficiaries, but rather to the GCash partner merchants, who then provide cash to the beneficiaries. In the first iteration of the GCash Remit implementation, there was a verification process between the GCash partner merchant and the GCash Remit CCT system, thus slowing the process. In the words of one of the Mimaropa DSWD interviewees:

There was no use of [mobile money or mobile phone] technology among the beneficiaries. Instead, beneficiaries were given transaction slips by DSWD with codes. They gave this to the GRemit merchant who entered the code for verification before remitting the cash. It was only the merchant who had a GCash account in this arrangement. They put the code that DSWD generated at the central office and texted this back to GRemit. They needed this then because they could not verify the GCash transfer without the code. This was done individually, and not in bulk, as a control measure in case the beneficiary did not appear on the day of the release for funds. Merchants then got paid per transaction [per beneficiary able to collect the CCT]. (Mimaropa Regional Field Office interviewee, 2013)

The interviewees shared instances when distribution was delayed because cell signals were unreliable. In bad weather, when sometimes there was no cell signal, the distribution might stop altogether for a time, such that at times the distribution took place at night.

Another difficulty cited by the DSWD interviewees was that beneficiaries would spend large sums for transportation to the GCash Remit collection points. Interviewees had received reports of recipients spending as much as PHP500 on transport to collect a payment valued at PHP5,200 (when payments were done quarterly). Accordingly, DSWD criteria for the presence of distribution points grew more stringent. Initially, DSWD was



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Table 2. Cost to Sender, SMART Money vs. GCash per Remittance Range, 2013.

Remittance range	SMART Money <sup>a</sup>		GCash
	Charges to sender (PHP5 for transfer of the first PHP1,000, and then PHP2.50 for each additional PHP500)	Total cost to sender	Cost to sender (at rate of PHP20 per PHP1,000 transferred)
PHP1–500	PHP5	PHP5	PHP20
PHP501–1,000	PHP5	PHP5	PHP20
PHP1,001–1,500	PHP5 + PHP2.50	PHP7.50	PHP40
PHP1,501–2,000	PHP5 + PHP5	PHP10	PHP40
PHP2,001–2,500	PHP5 + PHP7.50	PH.50	PHP60
PHP2,501–3,000	PHP5 + PHP10	PHP15	PHP60
above PHP3,000	PHP5 + PH.50 or more	PHP17.50 or more	PHP80 or more

Sources: SMART Money and GCash marketing materials.

a. There is also a one-time initial card application fee of PHP100 for SMART Money users.

satisfied if a conduit had distribution points at the municipal level, but now the standard was to try to partner with a conduit that could be present at the *barangay* level and, if possible, deliver to the home. The DSWD's benchmark was that, ideally, no one should spend more than PHP100 on transport to collect a CCT, according to Vincent Obcena of the DSWD Mimaropa Regional Field Office. But the ability of GCash Remit to meet this target depended on the spread of GCash merchants in a given area. The aforementioned CGAP study found recipient transport costs to be a widespread problem, especially for those living outside the National Capital Region, where some would travel more than two hours and pay twice the PHP100 benchmark to reach a pay-out point (Zimmerman & Bohling, 2013).

According to interviewee A. Duero of the DSWD central office, the DSWD Secretary preferred more frequent CCT releases in smaller amounts. However, if the DSWD were to do this, the operational costs would be greater, largely because of increased personnel costs and increased expenses directly connected to CCT distribution and compliance monitoring. (In 2013 DSWD employed more than 10,000 people to manage the program, mostly working at the regional level; Zimmerman & Bohling, 2013). However, operational costs could be reduced (and more frequent payments thus made more feasible) through reduced human resource costs if distribution were to take advantage of the features of m-money (A. Duero, personal communication, 2013).

### 3.4 Findings from M-money Provider Interviews and Data

Through interviews with representatives of m-money provider SMART Money and by scrutinizing data from the SMART Money and GCash websites and the CGAP report (Zimmerman & Bohling, 2013), we probed the degree to which use of m-money services as platforms for CCT delivery would be more cost efficient for the DSWD than using the current cash-based system.

Table 2 shows that at smaller increments (cash transfers of PHP2,000 or less), CCTs via both SMART Money and GCash could be delivered at a lower cost to the sender (i.e., to DSWD) than the PHP42 per transfer (see Table 1 and Table 4) being paid by DSWD to existing conduits MLhuillier and GCash Remit.

Table 2 shows that for all transfer amounts, SMART Money charges to the sender were lower than those of GCash, with GCash becoming less cost effective for the sender compared to SMART Money as the transfer amount increased. The maximum bimonthly CCT benefit payout in 2013 was PHP2,800, which would have cost the sender (DSWD) PHP15 if transferred via SMART Money and PHP60 if sent through GCash.

We also compared the costs incurred by a recipient of m-money via SMART Money and GCash, as outlined in Table 3.

Table 3. Cost to Recipients, SMART Money vs. GCash, per Remittance Range, in 2013.

Remittance range	Cost to recipient, SMART Money through ATMs	Cost to recipient, via SMART Money merchant (1% per transaction)	Cost to recipient, via GCash merchant
PHP1–500	PHP5 (Banco De Oro); PHP15 other networks	PHP1–5	None
PHP501–1,000	PHP5 (Banco De Oro); PHP15 other networks	PHP5–10	None
PHP1,001–1,500	PHP5 (Banco De Oro); PHP15 other networks	PHP10–15	None
PHP1,501–2,000	PHP5 (Banco De Oro); PHP15 other networks	PHP15–20	None
PHP2,001–2,500	PHP5 (Banco De Oro); PHP15 other networks	PHP20–25	None

Note: Calculations based on SMART Money and GCash 2013 transaction rates.

It is notable that with GCash there is no cost to the recipient apart from travel costs. With SMART Money the recipient is charged a 1% transaction fee if the transfer is entirely via the SMART Money ecosystem and no banks are involved. It was also noted that the different cash-out centers we interviewed in San Jose differed in their cash-out policies. This indicates a lack of uniformity in how cashing-out rates are implemented as far as ordinary remittances through m-money are concerned.

Finally, we compared total transaction cost (combined cost to sender and recipient) for transfers via GCash Remit, via SMART Money (through a SMART Money merchant), and via GCash (direct, on an m-money basis, not an over-the-counter cash basis). Table 4 provides the results of this comparison.

Table 4 shows that for smaller transfers (e.g., CCTs), the total transaction costs of a GCash or SMART Money (via a SMART Money merchant) m-money transfer would be competitive with—and even better than—the current total transaction cost incurred by DSWD for each cash-based GCash Remit transfer. However, GCash m-money transfers would not be cost-efficient for transactions greater than PHP2,000.

With SMART Money, m-money transactions appear, in terms of Table 4, to become less attractive when the transfer amount exceeds PHP2,700. However, it must be borne in mind that SMART Money has an ATM withdrawal option (see Table 3) for which the transaction fees remain unchanged regardless of the amount transferred, thus providing the potential for significant cost-effectiveness of large transfers. Furthermore, interviewee Lito Villanueva of SMART Communications suggested that the company could consider waiving costs for beneficiaries when they cash out (L. Villanueva, personal communication, 2013), as was the case in a UN-funded m-money cash-for-work program that used the SMART Money platform for rehabilitation projects after Typhoon Yolanda (see Lee-Brago, 2013). Such a measure would make SMART Money less costly than the current DSWD CCT transfer cost ceiling of PHP42.

A new alternative could be Globe Banko, which is partly owned by Globe and Bank of the Philippine Islands. It makes use of GCash's infrastructure and earns interest and provides debit cards that can make ATM withdrawals.

Nonetheless, there would still be limitations on m-money's viability, which would depend on the scale and density of service availability, particularly the density of cash-out centers in any given CCT-recipient area. In the case of San Jose, as noted above in the field observation findings and survey findings, both SMART Money and GCash m-money services were found to be present, with SMART Money more prevalent. But ATMs were not found to be commonplace in San Jose. And regardless of the transfer method used, transportation costs for cashing out are likely to continue to be a problem for many.

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Table 4. Total Transaction Cost (Cost to Sender + Recipient), GCash Remit vs. SMART Money Merchant vs. GCash Direct, per Remittance Range, in 2013.

Remittance range	Total transaction cost, via GCash Remit	Total transaction cost (maximum), via SMART Money merchant	Total transaction cost, GCash direct
PHP1–500	PHP42	PHP10	PHP20
PHP501–1,000	PHP42	PHP15	PHP20
PHP1,001–1,500	PHP42	PHP17.50–22.50	PHP40
PHP1,501–2,000	PHP42	PHP25–30	PHP40
PHP2,001–2,500	PHP42	PHP32.50–37.50	PHP60
PHP2,501–2,800	PHP42	PHP43	PHP60

Note: Author's calculations based on prevailing rates for the services in 2013.

### 4. Analysis and Conclusions

As currently implemented, with m-money technology not integral to its delivery, the GCash Remit CCT system is not substantially different, in terms of efficiency or security, from other modes of sending remittances (e.g., pawnshops, rural banks, Philpost). Meanwhile, m-money CCT systems have been successful in other countries (see Aker et al., 2011), and a temporary m-money CCT process has already been conducted in the Philippines by the UN through its aforementioned use of SMART Money to pay for Typhoon Yolanda rehabilitation work (see Lee-Brago, 2013). DSWD was also part of this UN-funded m-money implementation, making scaling up this model for long-term CCT purposes a seemingly viable proposition. (Interviewee L. Villanueva of SMART Communications did not say whether SMART intended to bid in future DSWD CCT conduit tenders [L. Villanueva, personal communication, 2013]).

Based on our computations, the costs of SMART Money or GCash m-money CCT transfers could be lower than those DSWD currently incurs for the GCash Remit transfers, especially for smaller and more frequent cash transfers. In the case of San Jose, SMART Money would appear to be the most feasible m-money CCT option since SMART has more centers than GCash in the municipality and most of the CCT beneficiaries who have mobile phones in that area subscribe to a SMART network. SMART Money would also appear to be a more viable platform if m-money CCTs were to be scaled up to the national level because SMART is the dominant mobile carrier in the Philippines, with two thirds' market share (Hanouche & Rotman, 2013). As such, DSWD's adoption of GCash as its initial conduit partner appears to have been primarily a function of chance rather than an in-depth comparison of alternatives.

But there is also no reason why a regional- or location-based selection of provider could not be considered by DSWD, in recognition of varying degrees of presence of these providers' m-money ecosystems across the country.

At present, a key variable in the 4Ps CCT system is the density of cash-out locations. Ideally, an m-money-based CCT system could reduce the importance of this cash-out variable. M-money offers the possibility for a CCT recipient to use the funds without ever needing to cash out, a model that greatly enhances both efficiency and security. Such a model requires m-money providers and DSWD to work with retailers—especially merchants of products that CCT beneficiaries typically consume in areas not well-served by cash-out points—to cater to cashless m-money transactions. ■

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### **Interviews**

- J. V. Arapeles. (personal communication, 2013). Interview with Jan Veronica Arapeles, Department of Social Welfare and Development (DSWD) MIMAROPA Regional Field Office (Region IV-B), Monitoring and Evaluation group, Manila, Philippines.
- Hector. (personal communication, 2013). Interview with Hector, CCT link representative, who only provided a first name, Puerto Princesa City, Philippines.
- A. Duero. (personal communication, 2013). Interview with Antoinette Duero, DSWD Central Office, Financial Management Service (FMS) group, Quezon City, Philippines.
- V. Obcena. (personal communication, 2013). Interview with Vincent Obcena, DSWD MIMAROPA Regional Field Office (Region IV-B), Manila, Philippines.
- L. Villanueva. (personal communication, 2013, December 16). Interview with Lito Villanueva, vice-president and head of innovation, SMART Communications, SMART Tower office, Makati City, Manila, Philippines.