# Cell phones, electronic delivery systems and social cash transfers: Recent evidence and experiences from Africa

*Katharine Vincent and Tracy Cull*

**Regional Hunger and Vulnerability Programme, Johannesburg, South Africa**

**Abstract** Electronic delivery systems for social cash transfer programmes offer advantages to programme implementers and benefit recipients in terms of enhanced cost efficiency and flexibility. The rapid penetration of cell phone infrastructure, combined with a growing interest from banks to extend financial services, is likely to make the electronic delivery of cash transfers an increasingly viable option. Taking into account the broader benefits for cash transfer recipients arising from improved access to financial services infrastructure, this article elaborates recent evidence and experiences from Kenya, Malawi, Namibia and Swaziland. The article concludes with an assessment of the opportunities and challenges for scaling-up electronic delivery systems.

**Keywords** telecommunications, information technology, payment of benefits, Africa, Kenya, Malawi, Namibia, Swaziland



## Introduction

The transfer of cash on a regular and predictable basis to vulnerable groups as a form of social protection is viewed with increasing interest by donors,

Addresses for correspondence: Katharine Vincent, Regional Hunger and Vulnerability Programme, 1st Floor, 22 Wellington Road, Parktown, Johannesburg 2193, South Africa; Email: katharine@rhvp.org. Tracy Cull, Regional Hunger and Vulnerability Programme, 1st Floor, 22 Wellington Road, Parktown, Johannesburg 2193, South Africa; Email: tracy@rhvp.org.

This article is an extended version of a briefing paper prepared as part of the Regional Hunger and Vulnerability Programme's Frontiers of Social Protection Series (Vincent, 2010). We thank colleagues who commented on that brief: Stephen Devereux, Frank Ellis, Nicholas Freeland, Alec Joubert, Craig Kilfoil, David Porteous and Philip White; and the two reviewers of an earlier draft of this article. Any errors remain the authors' responsibility.



*Published by Blackwell Publishing Ltd, 9600 Garsington Road, Oxford OX4 2DQ, UK and 350 Main Street, Malden, MA 02148, USA*

non-governmental organizations (NGOs) and national governments in southern Africa, with a number of pilot projects and national programmes having been implemented (see, for example, Ellis, Devereux and White, 2009). Providing individuals with regular and predictable cash transfers confers upon the recipient greater flexibility to plan expenditures to meet immediate basic consumption needs while also providing opportunities for investment in productive activities. A growing body of evidence shows that cash transfers are effective in reducing vulnerability and chronic poverty, and have wider positive impacts within recipient households and communities (for a review, see Vincent and Cull, 2009).

Despite mounting evidence in support of the use of cash transfers as a form of social protection, ensuring the effective delivery of cash to recipients living in often remote and inaccessible areas can be problematic. To date, cash transfers typically have been delivered through government departments and NGOs, often in conjunction with payment outlets such as post offices. But there are disadvantages of this mechanism for the implementer and recipients. The physical delivery of cash is expensive, as the liquidity of the resource implies that it may be siphoned off as it passes through many sets of hands after leaving the implementer and before reaching the legitimate recipient. In addition to instances of fraud and corruption, the physical movement of funds may also face the risk of cash-in-transit heists. As a result, the costs of physically delivering cash transfers may represent a disproportionately high percentage of programme budgets. The policy need to identify more effective delivery mechanisms has thus become important.



Information and communication technologies offer new opportunities for delivering cash transfers (see, for example, Langhan, Mackay and Kilfoil, 2008; Bankable Frontier Associates, 2006). The electronic delivery of cash may be achieved through a variety of mechanisms. These include debit card, smart card or cell phone, and may use a range of financial infrastructure, such as banks, automated teller machines (ATMs) and point-of-sale (POS) devices. A variety of electronic delivery systems have been proposed and piloted to increase the effectiveness of cash transfer programmes in southern Africa (see Table 1). This article reviews the experiences of several programmes: the Dowa Emergency Cash Transfer in Malawi, the Basic Income Grant in Namibia, the Kerio Valley Cash Transfer in Kenya, and the Emergency Drought Relief Programme and Old Age Grant in Swaziland. Evidence from these projects and programmes on the costs and benefits, to the implementer and recipients, of using electronic delivery systems for cash transfers is reviewed. The article also highlights that the growing commercial interest shown by the private sector in electronic transfer mechanisms has broadened the options available to policy-makers when seeking the most appropriate delivery mode for public cash transfer programmes.

**Table 1.** *Cash transfer projects and programmes that have used or are using electronic delivery mechanisms*

| Project name | Country | Delivery mechanism | Financial infrastructure | Period of operation |
|---|---|---|---|---|
| Concern Worldwide's Dowa Emergency Cash Transfer | Malawi | Biometric smart card | Mobile POS (Opportunity International Bank of Malawi) | December 2006-April 2007 |
| Save the Children's Emergency Drought Response | Swaziland | Optional debit card/ post office cash | Bank/ATM (Standard Bank) | November 2007-April 2008 |
| Old Age Grant | Swaziland | Debit card | Bank/ATM (any of Swaziland's five major banks) | Pilot began in 2009 |
| Concern Worldwide's Kerio Valley Cash Transfer Pilot | Kenya | Cell phone (SIM card) | POS devices at M-PESA agent outlets | April-June 2008 |
| Hunger Safety Net Programme | Kenya | Biometric smart card | Bank/ATM/POS (Equity Bank) | 2009-2012 (first 3-year pilot) |
| Basic Income Grant Pilot | Namibia | Biometric smart card | POS at NamPost post office | January 2008-December 2009 |
| Old Age Pension | Namibia | Biometric smart card | POS at NamPost post office | 2006-current |



## Cash transfers as a form of social protection

Social protection can be defined as all initiatives that provide income or consumption transfers to the poor, that protect the vulnerable against livelihood risks, and which enhance the social status and rights of socially excluded and marginalized individuals (Devereux and Sabates-Wheeler, 2007). Among those requiring social protection are the chronically poor, including rural landless populations and orphans; those who are economically at risk, such as individuals living with HIV and AIDS, internally displaced persons and refugees; and the socially vulnerable, including ethnic minorities, individuals with disabilities, and child-headed households. In order to protect their livelihoods, each of these groups may need different forms or combinations of social protection: social transfers (e.g. disability or child grants), social services (home-based care, education, health care), and/or social transformation (broader policy and legislation changes to ensure the rights of vulnerable groups). The more conventional notion of social insurance, including contributory pensions and maternity leave, is also encompassed by the concept of social protection.

The area of social protection that is probably most immediately relevant to pro-poor development is that of social transfers. Social transfers are non-contributory (often tax-financed), predictable transfers directed to specified recipients. They can take various forms: cash, vouchers, food, agricultural inputs, medicines, and school-fee or health-care waivers. To cite a few examples, Swaziland and Lesotho have tax-financed social pension schemes that provide cash transfers to elderly citizens; Malawi has an input subsidy programme that provides subsidized fertiliser and seed to vulnerable, but viable, farmers; and Zimbabwe has a Basic Education Assistance Module that provides school-fee waivers.[1] Many countries also provide Anti Retro-Virals (ARVs) to citizens living with HIV/AIDS. Among these different forms, cash transfers are particularly popular among recipients. Currently, there are a number of cash transfer programmes in operation in southern Africa (Ellis, Devereux and White, 2009), and in the light of growing evidence of their developmental potential as an instrument of social protection (Barrientos and DeJong, 2006; Farrington and Slater, 2006), particular attention is being accorded to them.

## Electronic delivery systems for social cash transfers



During the last decade cash transfers first began to be considered as an alternative to food aid, not least because it was thought that cash would be easier to deliver than bulky foodstuffs. However, evidence from transfer projects and programmes shows that the delivery of transfers "in cash" is prone to costly leakages as a result of corruption, fraud and cash-in-transit heists. Further, costs are incurred through the requirement for armoured vehicles to transport the cash in a secure manner and through the need to hire security personnel to discourage crime at designated places of payment. There is also the cost of hiring extra staff, or the opportunity cost of diverting existing staff from their core functions, to oversee the labour-intensive payment process (see, for example, Vincent and Freeland, 2008a). Thus, delivery costs can be a disproportionate burden on programme budgets. Accordingly, identifying more cost-efficient delivery mechanisms is important (Devereux and Vincent, 2010).

As well as there being cash transfer delivery costs for government, the mode of delivery may also have cost implications for recipients. The traditional system of "pulling" recipients to a designated place of payment in order to receive their transfer entails both actual and opportunity costs in terms of transport and lost labour time — as well as causing considerable problems for recipients who are not suitably fit and able to travel to the place of payment. Electronic transfers offer the potential to convert "pull" delivery systems into "push" systems, whereby the

1. For more information on these and a range of other social transfer programmes operating in southern Africa see <http://www.wahenga.net/briefs/case_study>.

organizer pushes delivery down to the level of the individual cash-transfer recipient (Bankable Frontier Associates, 2006). The aim of electronic delivery systems is to improve cost efficiency by reducing the fiduciary risk to implementing agencies (through enforcing stringent banking rules on the reconciliation of accounts, thus preventing the risk of cash going astray), reducing the management load on donors and implementers, and ensuring enhanced flexibility and convenience of access for recipients.

The electronic delivery of cash can be achieved through a variety of mechanisms (e.g. debit card, smart card or cell phone) and by using a range of financial infrastructures (e.g. banks, ATMs and POS devices). The costs and benefits of different electronic systems depend upon specific local conditions, such as rural infrastructure, population density (and the dispersion of recipients), the cost of initial infrastructure installation and recurrent operating costs. To date, the challenges of poor infrastructure, and the cost of rectifying this, has meant that private-sector partners have often been wary to participate, despite the potential for future commercial benefits. However, evidence from a number of projects and programmes over the last couple of years suggests that the private sector, in particular, is waking up to the opportunities offered by market extension and a direct route to new clients to whom they can offer tailored services. A variety of projects and programmes have used a combination of different mechanisms and infrastructure: this article focuses on the use of cell phones and the banking system, reviewing experiences and focusing on the feasibility for the more widespread use of electronic delivery systems.



## *Cell phones*

At the end of 2008, there were over 246 million cell phone subscriptions in Africa (out of a population of just under one billion, approx.), and between 2003 and 2008 the rate of growth was more than double that in the rest of the world. Even vulnerable groups, such as the elderly, are embracing the technology and learning how to use cell phones (Vincent, Cull and Freeland, 2009; Vincent and Freeland, 2008b). In 2008, 58.5 per cent of the population of Africa was covered by a cell phone signal, with some countries, including South Africa, Botswana, Mauritius and the Seychelles, approaching 100 per cent coverage of inhabited areas (ITU, 2009). A number of governments, such as those of South Africa, Kenya and Uganda, have obliged cell phone operators to provide a certain level of population coverage as part of their license conditions and/or require them to install community-service telephones, thus ensuring that coverage is not solely restricted to urban areas (Gray, 2006). The rapid growth in cell phone ownership and signal coverage has paved the way for consideration to be given to cell phones as a mechanism for the electronic delivery of cash transfers.

Perhaps the most promising example of the potential of cell phones to be used as a delivery mechanism for cash transfers is the phenomenal success of Kenya's M-PESA scheme, operated by Safaricom (a local subsidiary of Vodafone). M-PESA is a service that allows e-money to be transferred by cell phone (with instructions originated from the SIM tool kit that results in an encrypted SMS recording the transfer). Users must register at an authorized M-PESA agent by providing their Safaricom cell phone number and their national identification card. Once registered, they can buy electronic funds at any M-PESA agent and send these by SMS to any other cell phone user in Kenya (even if they are not on the Safaricom network). Electronic funds can then be redeemed for cash at any M-PESA agent, or exchanged for Safaricom airtime, or used to pay bills. An M-PESA registered cell phone can also hold funds up to the equivalent of USD 500. Just two years after its introduction, M-PESA has over 7 million registered users, and 10,000 agents, reflecting the faith that consumers place in the safety and convenience of the service (Camnar, Pulver and Sjoblom, 2009).

The wide accessibility and uptake of M-PESA amongst Kenyans of a variety of ages and technological abilities prompted the NGO Concern Worldwide to pioneer the use of the platform as an electronic delivery mechanism for a short-term emergency cash transfer in 2008 — the Kerio Valley Cash Transfer (KVCT) project. Kerio Valley is a remote area of Kenya that suffered post-election violence, and which lost much livestock to cattle rustling, threatening the livelihoods of the population. Cash transfers delivered by M-PESA were considered a more cost-effective and secure option than providing food aid. Some challenges did have to be overcome: in this remote area, only about 40 per cent of targeted beneficiaries had access to cell phones. In response, the beneficiaries were provided with SIM cards and grouped into clusters, with each cluster having access to at least one cell phone handset.[2] As there was no M-PESA agent operating within 80 kilometres, a temporary agent had to be established at the local police station, with Safaricom ensuring that sufficient cash was made available to pay all beneficiaries on payment dates (Datta, Ejakait and Odak, 2008). In total, the equivalent of USD 53,000 was disbursed, in two instalments, to 570 households. The project evaluation showed this to be a secure, cost-effective and rapid emergency response that respected individual's choices and empowered communities by providing them with access to communications technology (Brewin, 2008). The positive evidence of this project has acted to further strengthen arguments in support of cell phones as an appropriate electronic delivery mechanism for cash transfers.

Of more general importance, however, there are broader positive changes brought about by M-PESA's success; namely, the growth in consumer support for



2. This case study also exemplifies the fact that, despite the growth in infrastructure, and in order to ensure feasibility, further hardware inputs may still be required.

electronic money and the concurrent development of infrastructure (signal coverage and the number of M-PESA agents). The number of M-PESA authorized agents has grown dramatically in line with increasing consumer demand for services, and this typically benefits small-scale retailers. Even though Safaricom may have led this innovation, the rapid uptake of the M-PESA service has paved the way for other private-sector partners to expand infrastructure with the aim of also taking advantage of this growth market. For instance, Paynet, a private network of ATMs, has entered into partnership with M-PESA to allow their machines to be used to access electronic funds held in cell phone accounts. M-PESA has also now been launched in the United Republic of Tanzania by another Vodafone subsidiary, Vodacom. Following on from M-PESA's success, another East African-based cell phone operator — Zain — launched a rival SMS-based cash transfer system known as Zap in early 2009, which allows cash to be transferred between customers in Kenya, the United Republic of Tanzania and Uganda. As a result of the above, arguments centred on the constraints of poor signal coverage and limited access to handsets can no longer be used as an excuse to exclude the possibility of cell phone-based delivery mechanisms for public (government-to-person) cash transfers, particularly in East Africa.

Official data shows that an increasing volume of money transfers in Kenya is taking place by cell phone compared to traditional channels, such as the post office, commercial money-transfer companies such as Western Union or through friends and family. Factors contributing to this rapid growth include the wider penetration of cell phones amongst those who do not have a personal bank account, the low cost of transfers relative to the formal banking sector, and the convenience — which includes the ability to remit money more securely. However, one reason for the slow introduction, to date, of similar cell phone-based cash transfer platforms elsewhere in southern Africa is the existence of more stringent financial regulations in some countries. In South Africa, for example, the Reserve Bank limits the provision and management of electronic money to banks — and prevents cell phone operators from offering these services.[3] That said, there are other opportunities to be seized by financial institutions, especially by banks, in the electronic delivery of cash transfers.



### *Debit cards and smart cards*

As is the case in other regions of the world, the banking sector in southern Africa is an integral partner in the electronic transfer of cash. In the southern African context it thus also has a key role to play in the electronic delivery of social cash transfers. In fact, the first examples of electronic delivery systems in Africa all tended to provide

3. An exception is a joint venture between MTN Banking and Standard Bank, which has earned the approval of regulators through the backing of a bank.

cash transfer recipients with bank debit cards or smart cards that they could use to access transfers through the existing financial infrastructure, whether these were POS devices or ATMs.

Increasingly, banks recognize the commercial opportunities to be had in facilitating the electronic delivery of government cash transfers. In addition to the potential revenue to be gained (typically, cash transfer programmes pay a transaction fee per transfer) there are significant incremental benefits to banks. Government programmes usually target nationally-dispersed recipients, meaning that sufficient critical mass may be reached in certain areas to make the deployment of new infrastructure viable, where it may have been uneconomical previously. Under normal circumstances, recipients of social cash transfers would not fit the profile of typical bank customers. However, the regular and guaranteed, albeit small, income provided by longer-term cash transfer schemes makes recipients an ideal market for banks, and less of a risk than other working-age members of the population whose informal-sector income is likely to be variable and/or seasonal.

It has been shown that recipients of social cash transfers in pilot projects, who have received their transfers electronically, make continuing use of their access to the financial services infrastructure above and beyond the initial intended purpose of accessing cash. The Dowa Emergency Cash Transfer (DECT) in 2006-2007 in Malawi was delivered through the use of a biometric smart card accessed through mobile POS devices (provided and operated by Opportunity International Bank of Malawi — OIBM) that toured the Dowa district on predetermined dates. Although the target unit was the household, the implementing NGO (Concern Worldwide Malawi) made the decision for women to receive the money. During the evaluation, chiefs and elders in one community reported:



> For the majority of women, this was their first time to experience banking, something that only their husbands knew before. They have since learned an important skill of banking and wish to save their earnings from soya beans at the bank (Focus group discussion, chiefs and elders, Mwavu village, reported in Devereux et al., 2007).

Furthermore, many of the personal accounts opened for DECT were still open long after the project had finished, suggesting that recipients were indeed still enjoying the ancillary benefits of access to financial services infrastructure for saving and person-to-person transfers (e.g. remittances).[4]

However, in many parts of southern Africa, the high set-up costs associated with the physical infrastructure required for banking, in contrast to cell phone signals, has restricted the reach of formal banking outside of densely populated urban areas. Swaziland is a good case in point. In 2007, after a highly publicized and politically embarrassing debacle concerning the delivery of the recently-introduced Old Age

4. For a practical example of some the broader economic and social benefits of providing access to telecommunication technology, see Vincent and Freeland (2008a) and Vincent, Cull and Freeland (2009).

Grant,[5] the government tendered for private-sector partners. Several institutions expressed interest, including two major banks. Of these, Standard Bank was short listed. During the proposal stage, however, concern was expressed by the selection committee over the extent of Standard Bank's financial infrastructure in Swaziland. At the time, Standard Bank had 12 branches and agencies[6] and 20 ATMs, all concentrated in major urban areas, and it was deemed unsatisfactory to expect rural pensioners to travel relatively long distances to collect their grants. To address the inadequacies of the financial infrastructure, an interim solution was implemented that gave pensioners the choice of electronic disbursement through bank accounts or physical delivery through the post office, depending on their location.

## Remaining barriers to scaling-up electronic delivery mechanisms

The more recent profusion of pilot projects experimenting with electronic delivery suggests an increasingly enabling operating environment. Of course, as more positive evidence comes to light, the more likely it will be that private-sector partners will engage with such pilots. However, and importantly, the costing data derived from pilot projects, which are typically of limited duration and restricted spatial scale, do not give an accurate reflection of the true cost-efficiency gains of using electronic delivery mechanisms. Much of the costing data is inevitably skewed. This occurs because the major costs of electronic delivery systems occur at the implementation phase, when recipients are registered and provided with access to the delivery mechanism and infrastructure i.e. a debit card, smart card, SIM card, and/or a bank account. Thereafter, recurrent transaction costs are minimal. With projects being of limited duration, the cost calculations rarely factor in this important reality.



As a result of the time- and cost-intensive nature of the set-up of the payment mechanism relative to recurrent operating costs, the incentive for private-sector partners to become involved is much greater for long-term programmes than short-term pilots. Indeed Standard Bank stated at the evaluation of the Save the Children Emergency Drought Response in Swaziland that the short duration of the project made it unusually expensive and time consuming for them to open bank accounts for all the recipients — but they saw their participation as useful for potential involvement in the long-term electronic delivery of a government-run cash transfer programme at a later date. Swaziland is now in the second phase of

5. The agency charged with disbursing the Old Age Grant — the SwaziPost post office — was unable to manage the payments. Recipients complained to their MPs and the matter was brought to parliament, where a task team was established to investigate alternative delivery mechanisms. In the meantime, the Department of Social Welfare assumed responsibility for the quarterly payments.
6. An agency is a small branch that performs a limited number of services.

piloting an Electronic Disbursement Programme, whereby its 60,000 Old Age Grant recipients will be able to open an account at a bank of their choice (from the five major banks operating in the country). In due course, grant recipients will have their cash paid electronically on a monthly basis to their bank account, as opposed to physical payments paid on a quarterly basis. Once operational, the system will hold the potential for a more frequent payment schedule, such as on a weekly basis, which may be viewed favourably by recipients whilst incurring negligible extra administration costs. The second phase of the Electronic Disbursement Programme is a precursor to the Swazi government launching a tender (for the second time) for a private-sector partner to deliver the Old Age Grant in its entirety.

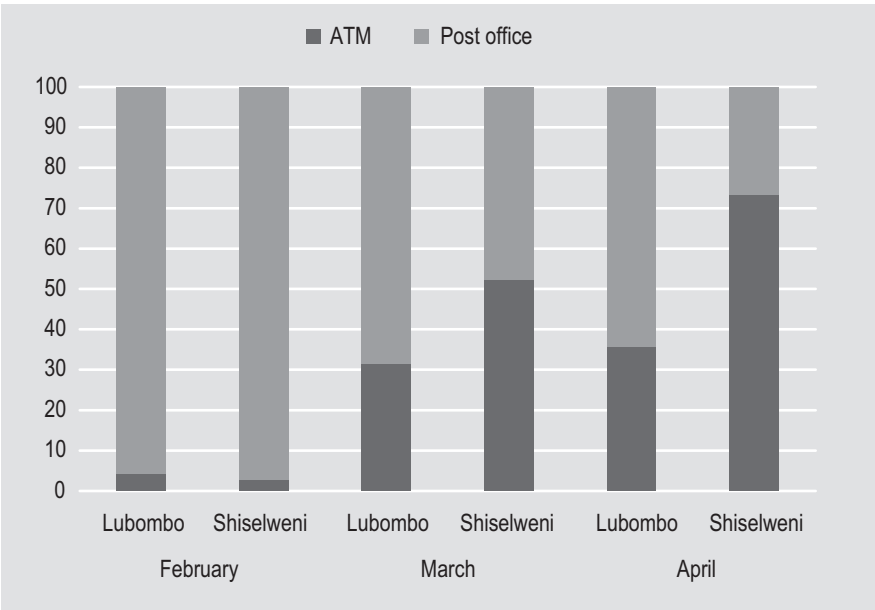
As well as the challenge of high initial set-up costs, there are other challenges associated with pilots that limit the lessons they might offer to national authorities about the process of scaling-up an electronic delivery mechanism to programme level. The short duration of pilot projects means that any concerns arising with regard to the delivery mechanism are rarely addressed, as no sooner do they arise than the project finishes. This was noticed by Concern Worldwide with their cell phone delivery in the Kerio Valley, which provided only two transfers. For example, a number of recipients had lost their SIM cards by the time of the second payment. Another observation was that the cell phones were not suitably robust to cope with the frequent insertion and removal of SIM cards, as often one piece of hardware was shared within a cluster. As this project was of limited length, there was no scope for addressing these concerns and developing solutions — but if the approach were to be scaled-up, there certainly would be a need to find workable solutions.



So far, only one government-led programme in Africa has embraced an electronic delivery mechanism from inception, and that is the recently launched Hunger Safety Net Programme (HSNP) in Kenya. HSNP is a phased programme that is targeting 300,000 households in the first three years, with a plan to increase to 1.5 million households in the second phase. All households are located in the arid and semi-arid lands of northern Kenya. Bi-monthly cash transfers of KSH 2,300 (in 2010, equivalent to USD 30 approx.) are delivered electronically into bank accounts in conjunction with the private-sector partner, Equity Bank.[7] All recipients receive a biometric smart card, which they use to access their cash through POS devices. In contrast to magnetic stripe cards (the typical format of debit cards), smart cards contain a chip that stores the account information (balance, transactions etc.) on the card itself, rather than just in a central database. Thus, the POS devices do not need to be online at all times, but rather only require occasional contact with a central server to upload information from the cards. This approach is appropriate for northern Kenya, as the area is covered by a cell phone signal.

7. For more information on the scoping that occurred prior to the selection of Equity Bank, see FSD Kenya (2007).

**Figure 1.** *Delivery mechanism used to access cash disbursed under the Emergency Drought Response in Swaziland (% of beneficiaries)*






*Source:* Based on data from Devereux and Jere (2008).

The HSNP is in the early stages of implementation. The first disbursement was postponed due to delays, both, in the setting-up of the appropriate administration and the implementation of infrastructure. As regards the challenge of delivery, this includes the need to establish POS devices with agents (typically storekeepers and traders) in this remote area. Although it is too early for an evaluation of this programme, early indications have highlighted some teething problems in ensuring appropriate levels of cash are made available around payment days, given that this is an area where the circulation of cash is currently minimal. The problem of predicting where cash will be required is exacerbated by the fact that the mobile populations are free to choose a place of payment.

This leads to a key observation regarding the pilots and programmes that have used electronic delivery mechanisms to date: few have been able to use the full capability of the technology available. In practice, extraordinary efforts have been required to ensure that the system works as it is meant to: in the HSNP, Equity Bank has had to ensure that enough cash is available on the day of payment, as under normal circumstances inadequate amounts are in circulation in the local economy; in the KVCT project, a new M-PESA agency had to be set up at the local police station; and in the DECT in Malawi, OIBM had to provide a mobile POS to compensate for the lack of POS devices in the district.

In only two projects have electronic delivery systems worked without further infrastructural support: the Basic Income Grant (BIG) in Namibia, and the Emergency Drought Response in Swaziland. In the BIG project, cash is disbursed into bank accounts held with NamPost, which already issues biometric smart cards as standard to its banking customers, and has a branch within the Otjivero pilot location (Basic Income Grant Coalition, 2009).

In Swaziland, 1,225 households out of the 1,748 targeted in the Emergency Drought Response received cash in addition to food. When these households were issued with bank accounts they were able to access their cash through debit cards at the ATM. Figure 1 depicts the situation at the start of the scheme, when understanding of, and confidence in, the banking system was low, At first, recipients tended to queue to withdraw their cash on the habitual day of disbursement. As individuals became more familiar with the technology, confidence in the security of electronic cash delivery grew, and individuals learnt to access cash as and when it was convenient for them to do so. This has also acted to spread out the demand for cash over time.

## The planned future use of electronic delivery systems



The growing opportunities for electronic delivery systems and the increasing body of supportive evidence from pilot projects and programmes means that a number of national cash transfer schemes are considering following in the steps of HSNP. As mentioned above, Swaziland has already entered the second phase of its Electronic Disbursement Programme, which aims to provide all 60,000 Old Age Grant recipients with access to a bank account (at a bank of their choice).

In 2008, the government department with responsibility for Mozambique's *Programa de Subsidio de Alimentos* (PSA),[8] the Ministry for Women and Social Action (MMAS), commissioned the Regional Hunger and Vulnerability Programme (RHVP) to undertake a study into the potential for the alternative delivery of the PSA. The PSA currently delivers using a time- and resource-intensive "pull" mechanism that costs up to 40 per cent of the value of the transfer. Private-sector partners under consideration for involvement in the PSA include two banks, Barclays and *Banco Opportunidade de Moçambique* (a sister company to Opportunity International Bank of Malawi), and Payshop, a smart card and POS operator.

In Lesotho, the Lesotho PostBank has recently received a commitment for funds from the Millennium Challenge Account to introduce smart card-based

8. PSA translates as "food subsidy programme", although it is actually a cash transfer to vulnerable groups. For more information, see RHVB (2007) and Vincent and Freeland (2008b).

transactions systems, which offer the potential for the electronic delivery of the Old Age Pension (as well as the recently announced Child Grant Cash Transfer programme).

Ghana currently uses a "pull" mechanism involving the physical delivery of cash through the Post Office in its Livelihood Empowerment Against Poverty (LEAP) programme. LEAP is a government run and funded programme that began in March 2008, which is expected to reach 164,000 households (equivalent to almost 20 per cent of Ghana's extremely poor households) when the national rollout-period ends in 2012. Programme officials have expressed interest in the possibility of using electronic delivery systems. One contender that may be considered by the Department of Social Welfare is likely to be the recently-launched "e-zwich" platform, operated by the Ghana Inter-Bank Payment Settlement System, which facilitates smart card use.

## Conclusions

There is much promising evidence for the use of electronic delivery systems in cash transfer programmes, with experiments having taken place in pilots across southern Africa and with consideration now being given to the use of such systems in a number of national programmes. The major benefit of electronic delivery systems is the increased cost-efficiency (lower transaction cost per transfer than traditional "pull" systems involving the physical delivery of cash), not to mention the increased levels of convenience both to the programme implementer and the transfer recipient. This article has reviewed evidence from Kenya, Malawi, Namibia and Swaziland, and has also highlighted the growing interest shown by Lesotho, Mozambique and Ghana.



Electronic delivery systems lend themselves to private-sector participation, where a private-sector company — typically a bank, smart card platform, or cell phone operator — enters into partnership with the programme implementer. A combination of the improved availability of infrastructure in Africa, together with increasing interest from private-sector partners and the growing potential for commercial opportunities, has paved the way for an increasing number of projects and programmes using electronic delivery mechanisms. As regards scaling-up electronic delivery systems, the time- and cost-intensive nature of the set-up of the payment mechanism relative to recurrent operating costs means that the incentive for private-sector partners to engage is much greater for long-term programmes than short-term pilots. Undertaking cash transfer programme registration formalities concurrently with private-sector partner registration procedures (in terms of the opening of bank accounts or distributing SIM cards or smart cards) thus makes sense, wherever possible. But electronic delivery systems are not a panacea for a successful and efficient cash transfer programme, and the lessons

learned from existing experiences need to be borne in mind to ensure that they work to maximum efficiency and benefit.

## Bibliography

**Bankable Frontier Associates.** 2006. *Scoping report on the payment of social transfers through the financial system* (report commissioned by DFID). Boston, MA. <http://www.bankablefrontier.com/assets/pdfs/report-V4.0.pdf> (accessed on 20.05.2010).

**Barrientos, A.; DeJong, J.** 2006. "Reducing child poverty with cash transfers: A sure thing?" in *Development Policy Review*, Vol. 24, No. 5.

**Basic Income Grant Coalition.** 2009. *Making the difference! The BIG in Namibia: Basic Income Grant Pilot Project assessment report, April 2009*. Windhoek. <http://www.bignam.org/Publications/BIG_Assessment_report_08b.pdf> (accessed on 20.05.2010).

**Brewin, M.** 2008. *Evaluation of concern Kenya's Kerio Valley Cash Transfer Pilot (KVCTP), April-June 2008*. Nairobi, Concern Kenya. <http://mobileactive.org/files/KenyaCashTansferPilot-EvaluationReport-July08.pdf> (accessed on 20.05.2010).

**Camnar, G.; Pulver, C.; Sjoblom, E.** 2009. *What makes a successful mobile money implementation? M-PESA in Kenya and Tanzania*. Nairobi, Financial Sector Deepening. <http://www.fsdkenya.org/pdf_documents/09-08-28_MPESA_in_Kenya_Tanzania.pdf> (accessed on 20.05.2010).

**Datta, D.; Ejakait, A.; Odak, M.** 2008. "Mobile phone-based cash transfers: Lessons from the Kenya emergency response", in *Humanitarian Exchange Magazine*, No. 40. <http://www.odihpn.org/report.asp?id=2936> (accessed on 20.05.2010).

**Devereux, S.; et al.** 2007. *An evaluation of Concern Worldwide's Dowa Emergency Cash Transfer Project (DECT) in Malawi, 2006-07*. Dublin, Concern Worldwide. <http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.114.9379&rep=rep1&type=pdf> (accessed on 20.05.2010).

**Devereux, S.; Sabates-Wheeler, R.** (**eds.**). 2007. "Debating social protection", in *IDS Bulletin*, Vol. 38, No. 3.

**Devereux, S.; Jere, P.** 2008. *Choice, dignity and empowerment? Cash and food transfers in Swaziland: An evaluation of Save the Children's Emergency Drought Response 2007-08*. Mbabane, Save the Children. <http://www.ids.ac.uk/download.cfm?objectid=21C569F6-5056-8171-7B2DB0A1440D6033> (accessed on 20.05.2010).

**Devereux, S.; Vincent, K.** 2010. "Using technology to deliver social protection: Exploring opportunities and risks", in *Development in Practice*, Vol. 20, No. 3.

**Ellis, F.; Devereux, S.; White, P.** 2009. *Social protection in Africa*. Cheltenham, E. Elgar.

**Farrington, J.; Slater, R.** 2006. "Introduction: Cash transfers: Panacea for poverty reduction or money down the drain?" in *Development Policy Review*, Vol. 24, No. 5.

**FSD Kenya.** 2007. *Kenya's payment market: Identifying an enabling environment for government to person transfers through the banking sector*. Nairobi. <http://www.

fsdkenya.org/pdf_documents/opportunities/G2P_Report_Final.pdf> (accessed on 25.05.2010).

**Gray, V.** 2006. "África, el continente móvil", in *Economia Exterior*, No. 36. <http://www.itu.int/ITU-D/ict/statistics/at_glance/Africa_EE2006_s.pdf> (accessed on 25.05.2010).

**ITU.** 2009. *Information society statistical profiles 2009: Africa*. Geneva, International Telecommunication Union. <http://www.itu.int/ITU-D/ict/material/ISSP09-AFR_final-en.pdf> (accessed on 25.05.2010).

**Langhan, S.; Mackay, G.; Kilfoil, C.** 2008. *Distribution mechanism scoping study for a regular national government social cash transfer to the chronically poor and vulnerable in Zambia*. Lusaka, FinMark Trust Zambia. <http://www.finmark.org.za/documents/Zambiacashtransfer.pdf> (accessed on 25.05.2010).

**RHVB.** 2007. *Food Subsidies Programme, Mozambique* (REBA Case study brief, No. 7). Johannesburg, Regional Hunger and Vulnerability Programme. <http://www.wahenga.net/uploads/documents/reba_studies/REBA_Case_Study_Brief_7_Feb2008.pdf> (accessed on 25.05.2010).

**Vincent, K.** 2010. *Electronic delivery of social cash transfers: Lessons learned and opportunities for Africa* (Frontiers of social protection brief, No. 3). Johannesburg, Regional Hunger and Vulnerability Programme. <http://www.wahenga.net/sites/default/files/briefs/FOSP%20-%20BRIEF%203%20-%20Web.pdf> (accessed on 25.05.2010).

**Vincent, K.; Cull, T.** 2009. *Impacts of social cash transfers: Case study evidence from across southern Africa* (Conference paper No. 47, IESE conference "Dinamicas de Pobreza e Padrões de Acumulação em Mozambique", Maputo, 22-23 April). <http://www.iese.ac.mz/lib/publication/II_conf/CP47_2009_Vincent.pdf> (accessed on 25.05.2010).

**Vincent, K.; Cull, T.; Freeland, N.** 2009. *"Ever upwardly mobile": How do cellphones benefit vulnerable people? Lessons from farming cooperatives in Lesotho* (Wahenga brief, No. 16). Johannesburg , Regional Hunger and Vulnerability Programme. <http://www.wahenga.net/sites/default/files/briefs/Brief_16_-_Ever_upwardly_mobile.pdf> (accessed on 25.05.2010).

**Vincent, K.; Freeland, N.** 2008a. "Upwardly mobile: The potential to deliver social protection by cellphone — Lessons from Lesotho", in J. Pettersson Sören (ed.), *Proceedings of the 1st International Conference on M4D Mobile Communication Technology for Development, 11-12 December 2008*. Karlstad, Karlstad University. <http://kau.diva-portal.org/smash/record.jsf?pid=diva2:133042> (accessed on 25.05.2010).

**Vincent, K.; Freeland, N.** 2008b. *Social transfer delivery mechanisms at the national level: Innovations in Swaziland and Mozambique* (conference paper, international conference on "Social Protection for the Poorest in Africa — Learning from Experience", Entebbe, 8-10 September).