Mobile Money Systems for Humanitarian Delivery

World Vision Cash Transfer Project in Gihembe Refugee Camp, Rwanda

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Introduction[105]

One of the factors driving the steady shift towards employing technology is the rapid expansion of the mobile telecommunications system and its potential to reach even remote areas of the world. According to global statistics, there are almost 7 billion mobile-cellular subscriptions,[106] three-quarters of them in developing countries. This creates a new opportunity for cash transfer using mobile phones. Such was the case of Kenya, where this system was used for the first time.[107] Concern World Wide was the first to use mobile phones for bulk cash transfer in early 2008 in response to the Kenyan post-election crisis.

This study is an assessment of a mobile money system (MMS) used to transfer cash to refugees from the Democratic Republic of Congo (DRC) based in Gihembe, Rwanda. It is based on document and literature reviews, as well as group discussions held between 5 May and 6 June 2014. Overall more than 100 refugee families, in mixed groups and in another group involving only women heads of households, were involved in the discussions. Interviews with UNHCR and VISA were also held, and WFP and World Vision were represented in the discussions by groups of 3-5 experts working in the pilot.

This study does not claim to be complete, but describes the opportunities and challenges as observed at the current stage of the project. We therefore recommend further longitudinal study to be carried out to find out the long-term impacts of the system.

Project background

Currently, Rwanda hosts more than 75,000 refugees, most of them from DRC, who arrived at different times. Some are recent arrivals while those in Gihembe, numbering 14,500 (3,500 households), came in 1996. For many years the refugees have been receiving humanitarian services in-kind including food or firewood. There were also instances of using cash vouchers. However, direct cash distribution presented some pitfalls: among others, difficulties for refugees and internally displaced people to use formal banks, and the security challenges associated with accessing remote insecure areas where refugees and disaster victims were mostly located (see Porcaro and Walker, pp. 33-36). These called for the use of alternative means to disburse cash in an accessible and safe manner.

World Food Program (WFP), Office of the United Nations High Commissioner for Refugees (UNHCR), World Vision Rwanda, Bank of Kigali (BoK) and VISA decided to implement a pilot project to test MMS. WFP, UNHCR and World Vision worked together to prepare the refugees, identify and contract merchants and money agents willing to serve the refugees and provide the mobile and cell phones; while VISA and AirTel (mobile communications provider) took responsibility for providing the electronic system (mVISA) and managing the transactions respectively. The project started as a pre-pilot in December 2013 with 177 heads of households. Based on quick information gathered from beneficiaries regarding the levels of satisfaction, the program was then expanded in January 2014 to cover all the 3,500 households (14,500 persons) in the refugee camp. The total amount of money transferred every month amounts to about US$140,000.[108]

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106 International Telecommunications Union. (2014). *The World in 2014: ICT Facts and Figures*. pp. 1-8. Available from: http://www.itu.int/en/ITU-D/Statistics/Pages/facts/default.aspx. [Accessed 2 Sept. 2014].
107 Datta, D. et al. (2008). Mobile Phone-based Cash Transfers: Lessons from the Kenya Emergency Response. *Humanitarian Exchange Magazine*. 40. October. pp. 37-40. Available from: http://www.odihpn.org/humanitarian-exchange-magazine/issue-40/mobile-phone-based-cash-transfers-lessons-from-the-kenya-emergency-response. [Accessed 2 Sept. 2014].
108 World Vision Rwanda. (2014). Cash transfer project highlights. Unpublished. pp. 1-2.

The MMS uses short message services (SMS), operating on a VISA systems platform, to handle transactions between the refugees and sixteen vendors with a diversified food basket (a diverse range of food products). Money is transferred from BoK to vendors' and money agents' accounts when refugees purchase food or receive money. The vendors and money agents are required to have an account with the BoK, but the refugees are not. SMS texts are automatically sent by the mVISA system informing beneficiaries about the availability of the monthly amount in their e-accounts. The system also updates the amount after every purchase or withdrawal has been accepted. The system provides an option for withdrawal of cash in case the registered vendors don't offer competitive services in both quality and price. If beneficiaries decide to withdraw cash instead of purchasing food directly from the designated vendors, they bear transaction costs. Normally, one transaction is anticipated to be necessary, and thus is free. However, subsequent transaction costs are borne by beneficiaries, the aim being to discourage withdrawal of cash as such withdrawal may not necessarily be for purchasing food.

Results and discussions

The results of the group discussions were positive. The mobile money option provided beneficiaries with several opportunities including the option to purchase their preferred food types, and created a good environment for disaster victims and host communities to interact (through local businesses) leading to more interdependence. Other key benefits included:

- **Safety and security:** in-kind distribution is crowded and messy. Food distribution normally poses security risks to aid workers who manage warehouses, or transport and distribute food to beneficiaries. MMS can help in managing these risks as well as risks to the beneficiaries. In some places, such as Darfur, community leaders *(Sheiks)* take a portion of beneficiary ration from each household as payment for their presumed community services.[109] This ultimately reduces the family's per capita food consumption. The MMS avoids all such possibilities as rations are directly transferred to the beneficiary's e-wallet. The system also benefits vendors and aid workers. Money is directly transferred to vendors' accounts without the

need for them to go to banks to make deposits at the end of a good market day. They save time and feel safer as they don't carry large amounts of money.

- **Social cohesion:** initial findings suggest that cash had a positive impact on relationships within households, between households, and even between communities. Refugees consistently reported improved relationships within the community due to reduced amounts of theft and interpersonal loans, both of which were key sources of conflict within the community. Refugees also reported reduced need for illegal firewood collection due to purchasing preferred food items that require less cooking time, which has addressed one of the key sources of conflict with the local community, namely the scramble over natural resources. These changes have positive security implications.

- **Restoring dignity:** standing in a line to receive food rations, or visiting a shop with a food voucher, can be a humiliating moment for families who had their own livelihoods before a crisis. Being in control of their cash using their phones, being able to buy what they want, and when they want, gave beneficiaries a sense of dignity.

- Finally, the system brought a number of actors together (aid agencies, private sector, merchants, and local authorities) to work on the same agenda. These entities worked closely on matters that are relevant to the project including tracking of beneficiary satisfaction, and challenges encountered. Organisational relationships in turn contributed to better understanding of each other's businesses. The involvement of communications companies in the humanitarian sector opens up opportunities for other forms of technology products that improve humanitarian services (see Porcaro and Walker, pp. 33-36; see also Kaiser and Fielding, pp. 37-41).

As is the case for any newly adopted system, some challenges remain. Almost all discussants unanimously mentioned telephone network interruption to be the number one challenge of the system. Since transactions depend on SMS messages, connectivity disruptions caused anxiety to both the vendors and the refugee families. For instance, a beneficiary sends an SMS message to instruct the system to deduct money from his/her account. If

109 World Vision Sudan. (2012). Food distribution monitoring report. Unpublished. pp. 15-20.

Section 2

connectivity is lost during the transaction period, he/she cannot receive goods until connectivity is restored which can take from few minutes to few hours. In a few cases, World Vision had to intervene by sending messages to the BoK headquarters to resolve hanging SMS messages. Other key challenges raised by discussants were lack of stable power system to recharge mobile phones, illiteracy (difficulty in writing and reading SMS messages, and memorising the five-digit PIN number); and loss of SIM cards and at times of cell phones. In addition, MMS required intensive awareness creation and subsequent sensitisation of beneficiaries (see Porcaro and Walker, pp. 33-36). The project would not have succeeded without an experienced and competent local partner working closely with the beneficiaries.

Some concerns were raised by supporting NGOs on the ground in relation to data security. Owing to the engagement of multiple entities in the process, there were some apprehensions from the organisations regarding the risks associated with electronic storage and sharing of personal and financial data, due to perceived risk of repercussions if data was to fall into the wrong hands. Electronic data is considered more of a risk than printed data as it is potentially easier to move or access. This highlights a lack of protocol for data management among the involved agencies (see Kaiser and Fielding, pp. 37-41).

Conclusion and recommendations

Technologies sponsored and sanctioned by the humanitarian community should be simple to use, cost-effective, reliable and secured (see Porcaro and Walker, pp. 33-36). Security costs that protect the mobile banking system are normally borne by the technology providers (banks and communications companies) and should not be transferred to users. The following precautions may be necessary for a secure money transfer system:

1. Use mobile phones with basic functions (voice and text systems only) and avoid use of smart phones as their systems can be accessed remotely;

2. Ensure adequate beneficiary education on securing SIM cards and PIN codes even from close relatives;

3. Pay closer attention to how stolen or malfunctioning SIM cards are replaced; and

4. Ensure that mobile service provider companies have a proper information security policy that governs access to network elements and information assets by employees, agents or external fraudulent users.

Now that an increasing number of mobile telephone companies provide MMS, humanitarian agencies have the option of engaging the local service provider already most popular among beneficiary populations. A greater number of users would mean a bigger market for the private companies, which opens opportunities for competitive bidding to reduce service costs: MMS providers can offer free cell phones, SIM cards and lower transaction costs if they know they can sustain their business for a longer period of time. In addition, continuous monitoring and evaluation by partners and researchers may contribute to the refinement of the program and smooth integration into the country's economy.

The overall outcome of the quick performance assessment of World Vision's Mobile Money System programme in Gihembe was positive. MMS provided beneficiaries with ease, security, and options to purchase preferred food types. As mentioned above, the system is secured, and allows beneficiaries to use the money in their phones (e-wallet) at an appropriate time. The system also provided opportunities for refugees to create closer relationships with the host community and country. Donors and humanitarian actors on the ground expressed satisfaction; unlike food and cash voucher distribution systems, this technology made their work easier and safer. Envy and mistrust between disaster victims and host communities can be a source of insecurity in environments where resources are scarce and valuable supplies such as food stocks and equipment are controlled by aid agencies. The current system allowed them to mitigate some of the risks associated with in-kind distribution of goods. Relationships between World Vision's field workers and refugee families improved as complaints on resource-related issues lessened.

European Interagency Security Forum (EISF)

EISF is an independent network of Security Focal Points who currently represent 66 Europe-based humanitarian NGOs operating internationally. EISF is committed to improving the security of relief operations and staff. It aims to increase safe access by humanitarian agencies to people affected by emergencies. Key to its work is the development of research and tools which promote awareness, preparedness and good practice.

EISF was created to establish a more prominent role for security risk management in international humanitarian operations. It facilitates exchange between member organisations and other bodies such as the UN, institutional donors, academic and research institutions, the private sector, and a broad range of international NGOs. EISF's vision is to become a global reference point for applied practice and collective knowledge, and key to its work is the development of practical research for security risk management in the humanitarian sector.

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Cover photo: Mary Kiperus, community health worker, uses a mobile phone for reporting to the local nurse. Leparua village, Isiolo County, Kenya. February, 2014. © Christian Aid/Elizabeth Dalziel.

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