

Facilitating Richer Exchanges Using Mobile Technologies

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Several researchers have noted that all financial transactions are not simply discrete exchanges of value, but also carry rich meaning that is socially and culturally constructed. Current mobile phone cash transfer mechanisms only support discrete exchanges of either airtime or money, usually via an intermediary. Any additional information or sentiment must be conveyed via a "back-channel" between the sender and the recipient, often requiring a separate conversation.

This mechanism does not currently support all the exchanges that are socially and culturally valued. For example, in Uganda, one important tradition involves the regular sending of food to one's parents. Because the existing airtime-based transfer mechanism cannot convey this message of responsibility, migrants often must resort to buying food and sending it to their parents via taxi, incurring additional cost, but allowing for a meaning-rich exchange that is visible to the community. A recent study in Ghana found that 16% of remittances were given as food, and 23% as other goods¹. This is remarkable considering the relative difficulty and expense of such transfers. In fact, such exchanges form an essential part of the social safety net in countries lacking national support for social welfare.

Communications has a proven demand that could be used to bootstrap other services. Current users of communications services (often SMS) are likely to be the next adopters of mobile cash transfers. If they don't own a phone, they must rely on their friends, neighbors or relatives with access to a device (perhaps using their own SIM card). A local airtime retailer could provide the service of sending and receiving messages, both text and voice (and perhaps also video). If this retailer also provides cash transfer, successfully sending and receiving a number of messages may instill the trust needed to use this more risky service.

Based on theory and a first-hand empirical understanding, in close cooperation with potential users and implementing institutions, we will design and implement a new set of transaction mechanisms to better support the practices we have observed. We speculate that some of these might be "rich transactions", in that they support a richer exchange of information and sentiment than is possible using current mechanisms. A few preliminary examples:

- Transferring non-cash goods, including food and other goods, possibly through local vendors equipped with mobile phones. In addition to fulfilling filial obligations, this could also provide local business opportunities.
- Bundling of short audio (or video) messages along with the monetary transfer, explaining the intent and/or terms of the transaction. We could also allow responses, perhaps to express gratitude or reciprocity.
- Reputation mechanisms for agents, allowing for more informed calculations of risk.

We believe that novel transaction mechanisms could better support the rich sentiments behind many socially motivated exchanges. Given appropriate institutions and technology (a local provisions shop vendor with a mobile phone, for example), such exchanges could also be handled more efficiently.

¹ Mazzucato, Valentina; van den Boom, Bart; Nsowah-Nuamah, N.N.N., "Remittances in Ghana: Origin, Destination and Issues of Measurement", *International Migration*, Volume 46, Number 1, March 2008, pp. 103-122(20)

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