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Mobile Money and Giving After Natural Disasters

Editor's note: Joshua Blumenstock is an Assistant Professor at the University of Washington and a Post-Doctoral Associate at Yale University. In this guest post he talks about research he presented at our [Impact and Policy Conference](#).

While there has been a great deal of optimism in the development community about the potential for mobile phones to transform the lives of the world's poor, actual evidence is scant. However, a handful of new studies are providing evidence that many individuals are using new forms of "Mobile Money" to send assistance to friends and family in times of need. Mobile Money is a form of phone-based electronic currency akin to PayPal in the U.S. that has recently become quite popular in several developing countries.

In a [recent paper](#) I wrote with Nathan Eagle and Marcel Fafchamps, we took a huge dataset that contained records of every single phone-based transaction in Rwanda, and used the data to explore patterns of giving and communication. One trend that immediately jumped out of the data was the fact that immediately after major shocks like earthquakes and natural disasters, individuals send significant amounts of "Mobile Money" to people affected by the shocks. In the below video, you can see how dramatically the [Lake Kivu earthquake](#) affected patterns of mobile phone traffic in the country:

Perhaps more importantly, when we analyzed the social network dynamics captured in the billions of phone calls and transfers in our dataset, we found that the pattern of activity was most consistent with a model of *risk sharing*, where people give to each other based largely on quid-pro-quo. In other words, John helps Jane when Jane is in trouble because he expects Jane to reciprocate in John's time of need. In places like Rwanda where banks are rare and people typically don't have much in the way of savings, such risk sharing can make a major difference in keeping individuals insured against income volatility, and protected against the "poverty traps" that prevent poor people from moving out of poverty.

This is good news for those advocating for the expansion of mobile networks and mobile services in developing countries. To the extent that Mobile Money facilitates risk sharing, these results indicate that the technology can be a positive force for economic development. However, not everything is positive. We observe that it is chiefly the wealthy mobile phone owners, and the ones with the strongest social networks, who receive the lion's share of the risk sharing transfers. Taken together, the results indicate that the mobile network can improve the welfare of some but, absent intervention, the benefits may not reach those with the greatest need. For more details on the study, see [Blumenstock et al. \(2012\)](#); for closely related work, see Jack & Suri (2012).

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