

Authors

William Jack
Georgetown University

Tavneet Suri
Massachusetts Institute of Technology

American Economic Review 2014, 104(1): 183–223
<http://dx.doi.org/10.1257/aer.104.1.183>

Risk Sharing and Transactions Costs: Evidence from Kenya's Mobile Money Revolution

By WILLIAM JACK AND TAVNEET SURI

We explore the impact of reduced transaction costs on risk sharing by estimating the effects of a mobile money innovation on consumption. In our panel sample, adoption of the innovation increased from 43 to 70 percent. We find that, while shocks reduce consumption by 7 percent for nonusers, the consumption of user households is unaffected. The mechanisms underlying these consumption effects are increases in remittances received and the diversity of senders. We report robustness checks supporting these results and use the four-fold expansion of the mobile money agent network as a source of exogenous variation in access to the innovation. (JEL E42, G22, O16, O17, Z13)

In developing countries, informal networks provide an important means by which individuals and households share risk, though the insurance they provide is often incomplete. Economists have proposed a number of reasons for this incompleteness, including information asymmetries, which manifest in problems of moral hazard, and limited commitment, both of which induce positive correlations between realized income and consumption. In this article we emphasize a complementary source of incompleteness: transaction costs—literally, the costs of transferring resources between individuals. We test the impact of transaction costs on risk sharing by analyzing data from a large panel household survey that we designed and administered in Kenya over a three-year period to capture the expansion of “mobile money.” This financial innovation has allowed individuals to transfer purchasing power by simple short messaging service (SMS) technology and has dramatically reduced the cost of sending money across large distances.

Mobile money is a recent innovation in developing economies—one of the first and most successful examples to date is Kenya’s “M-PESA.” In just four years after its

^{*}Jack: Department of Economics, Georgetown University, 370b and O Street NW, Washington, DC 20057 (e-mail: wj@georgetown.edu). Suri: MIT Sloan School of Management, E53-517, 300 Main Street, Cambridge, MA 02142 (e-mail: suri@mit.edu). The authors would like to thank the Financial Sector Deepening Trust for access to and funding the first round of data collection and the Consortium on Financial Systems and Poverty (CFSP) at the University of Chicago for funding the subsequent rounds of data collection. They would also like to thank Luca Anderlini, Michael Bourns, Joseph Doyle, Esther Duflo, David Foray, Paul Fournier, Ganesha Gokhale, Caroline Hoxby, Antonette Schmitz, Thomas Wiles, Frank Yello, and CFSP members, as well as seminar audiences at Cambridge University, Columbia Sustainable Development Sciences Council, Georgetown, Georgia State University, ISE/UCS, MIT Sloan, the MIT/Harvard Development and Environment Seminar, the NBER Summer Institute, the NBER Productivity Group, UCSD, Warwick, and the World Bank for comments. The authors appreciate the exceptional research assistance provided by Indira Sena, Adam Ray, Benjamin Munn, Daniel Reynolds, and Shreshth Bhargava, as well as the unparalleled data supervision and management provided by Sciences for the Field.

[†]Go to <http://dx.doi.org/10.1257/aer.104.1.183> to visit the article page for additional materials and author disclosures (AER.104.01.001).

[‡]“M” is for mobile, and “PESA” means money in Swahili. Mobile payment systems have also been developed in the Philippines, Afghanistan, Sudan, Ghana and in a number of countries in Latin America and the Middle East (Shen, 2009 and Foray and Pichon 2009). M-PESA itself has been started in Tanzania and South Africa. For

Risk Sharing and Transactions Costs: Evidence from Kenya’s Mobile Money Revolution

We explore the impact of reduced transaction costs on risk sharing by estimating the effects of a mobile money innovation on consumption. In our panel sample, adoption of the innovation increased from 43 to 70 percent. We find that, while shocks reduce consumption by 7 percent for nonusers, the consumption of user households is unaffected. The mechanisms underlying these consumption effects are increases in remittances received and the diversity of senders. We report robustness checks supporting these results and use the four-fold expansion of the mobile money agent network as a source of exogenous variation in

access to the innovation.

December 31, 2014