

Thesis Abstract

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Digital Credit and Mobile Money Transfers (*Job Market Paper*)

For the past two decades, mobile money, a cellphone-based payment infrastructure, has been the key player in bringing financial services to the unbanked in developing economies. It has been widely used to make peer-to-peer (P2P) transfers, shown to be important in helping households deal with bad shocks. Recently, lenders in developing countries have used mobile money to extend digital credit loans to a wider population including the unbanked. Using unique administrative data on mobile money transactions, I observed statistically significant declines in P2P transfers during the first, second, and third months after the initial take-up of mobile money loans. The most substantial impact occurs in the third month, with a 95% confidence interval indicating a 14% to 31% decrease in the number of transfers sent and a 16% to 34% decrease in the number of transfers received. This decline in the volume of P2P transfers made is associated with a decline of similar magnitude in the number of unique accounts with which transfers are made. This effect is solely driven by borrowers who become delinquent in repaying their loans, suggesting a tendency for such borrowers to avoid using mobile money until their debt is fully repaid. I argue that the results are driven by the repayment enforcement mechanism allowing garnishment of mobile money wallets.

M-PESA, The Use of Financial Tools and Intra-household Resource Allocation

The innovation of mobile money has the potential to create universal access to savings services in developing economies. The impact of access to mobile money on welfare depends on its interaction with other financial services. This study explores the impact of mobile money on the use of formal and informal savings services. Using household survey data from Kenya, I find that households with access to mobile money are about 30% more likely to participate in a rotating savings and credit association (ROSCA). I find no evidence of an impact of access to mobile money on savings at home and savings with savings and credit cooperatives (SACCO). To further explore the impact of mobile money on household welfare, I document its impact on household consumption shares over time. I show that households with access to mobile money experience an initial increase in alcohol consumption and an initial decline in expenditures on children. Drawing links between the trends in the gender gap of mobile money adoption and ROSCA participation, I provide suggestive evidence that the impact of mobile money access on households' resource allocation and choice of financial tools is driven by the gender gap in the adoption of mobile money.

Spatial covariance functions (joint with Aldo Sandoval-Hernández and Tim Conley)

This is a simulation study that evaluates the performance of different approaches for controlling for spatial dependence in commonly used African datasets (e.g. Demographic and Health Surveys). We calibrate spatial statistical models to match the datasets and then conduct Monte-Carlo simulations using our calibrated models to evaluate the inference methods.