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

For the past two decades, mobile money 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. More recently lenders in developing countries have used mobile money to extend digital credit loans to a wider population including the unbanked. I use unique administrative data on mobile money transactions to show that the adoption of mobile money digital credit crowds out mobile money P2P transfers. I find that loan adoption decreases the number of transfers sent monthly by 14% and the number of transfers received monthly by 17%. Moreover, loan adopters sent transfers to 15% fewer accounts and received transfers from 17% fewer accounts. The effect on P2P transfers of loan adoption is mostly driven by borrowers who are eventually delinquent in the repayment of their loans. These findings are consistent with delinquent borrowers avoiding the use of mobile money until their debt is repaid. I argue that this is due to the repayment enforcement mechanism which allows lenders to garnish the mobile money wallet of delinquent borrowers. Garnishing the mobile money wallet incentivizes delinquent borrowers to refrain from using mobile money until they have fully repaid their debt.

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)

In this study, we propose the use of the Bessel-Lommel covariance function to model spatial dependence in cross-sectional observations. For a list of studies published in leading journals, first, we estimate the spatial autocovariance function (ACF) using non-parametric methods and then we find the set of parameters of the Bessel-Lommel covariance function that better match the spatial autocorrelation structure present in the data. The preliminary results suggest that the proposed covariance function can match complex patterns of spatial dependence very accurately.