The Mobile Money Revolution in Kenya

Based on research by William Jack and Tavneet Suri

MIT Sloan MANAGEMENT

Georgetown University Initiative on guide
Innovation, Development and Evaluation

An Efficient Financial System

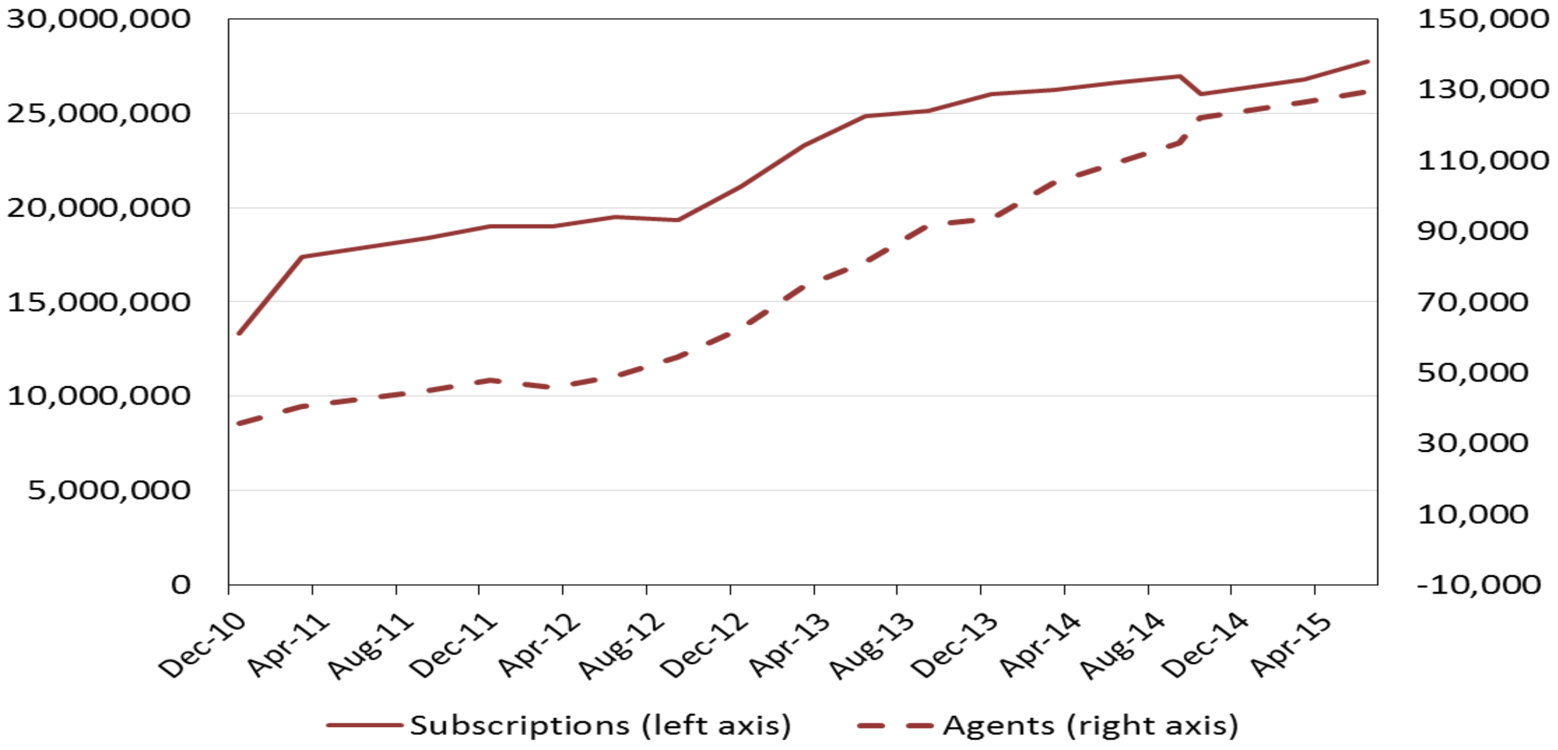
- **Decades of research: efficient financial systems are key to economic growth and poverty reduction**

- **One major reason financial markets in the developing world lack efficiency is high transaction costs**
  - Traditionally, financial systems have been bank based: branches are few and far between and accounts expensive to maintain

- **How can we lower transaction costs?**

Mobile Money: First Four Years

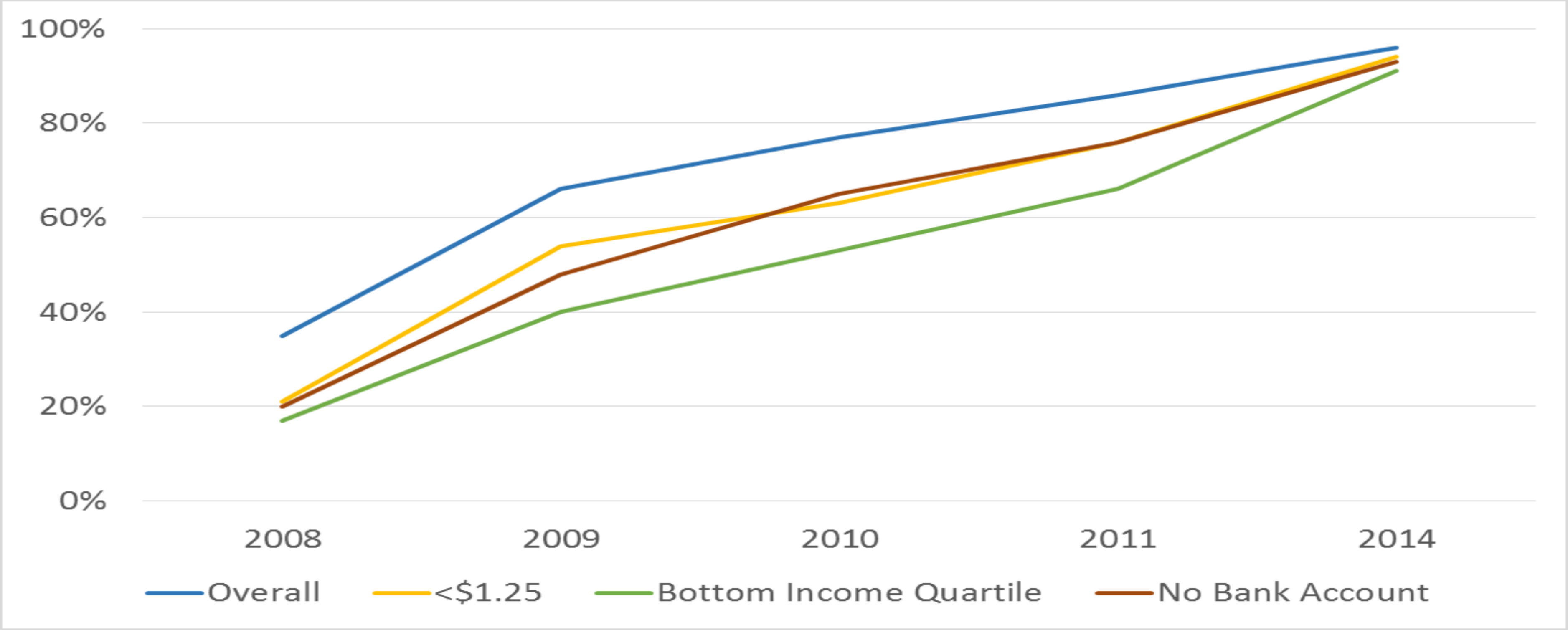
The Industry: Next Four Years



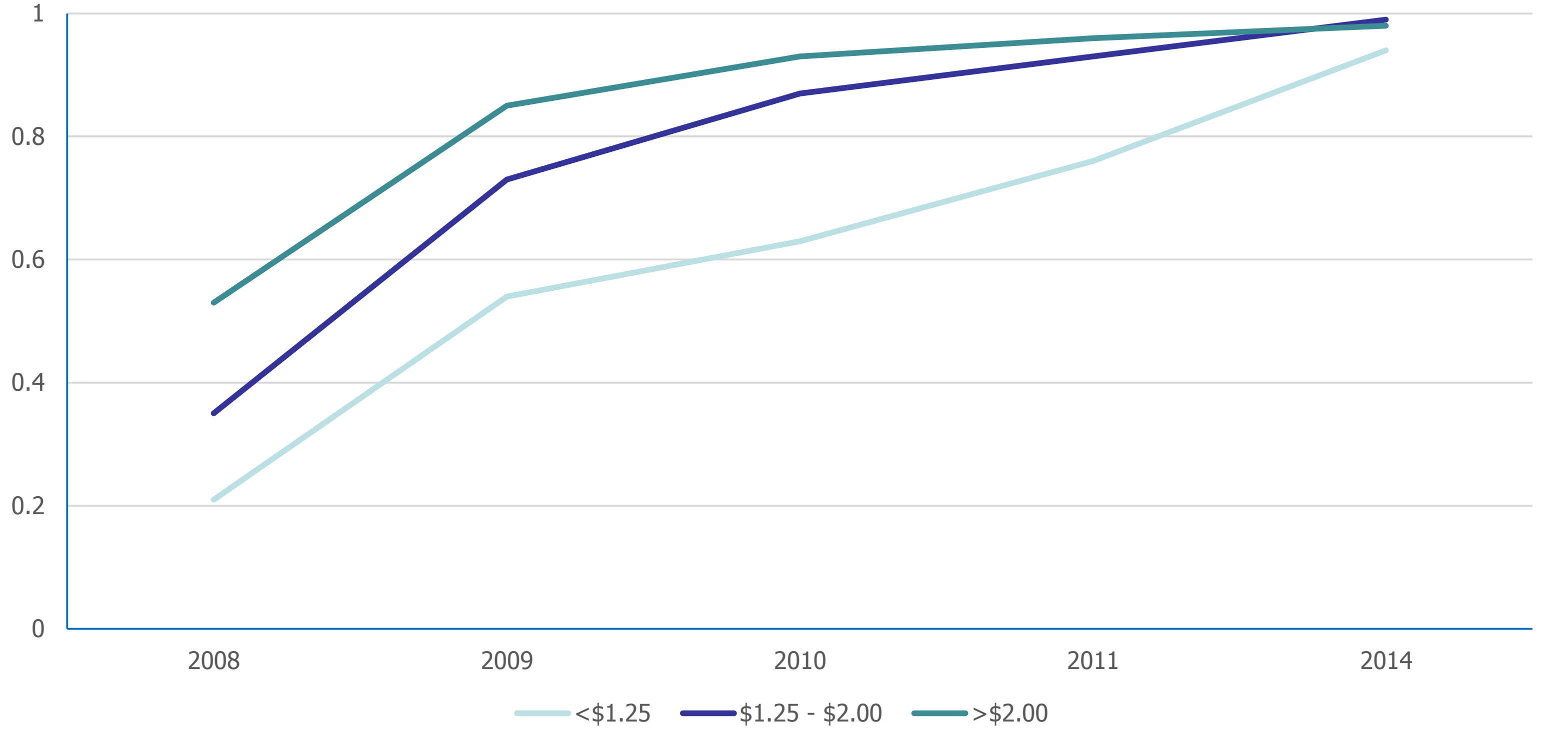
Household Survey

- **Large household panel survey across most of Kenya (92% coverage)**
- **Funded by FSD Kenya and the Gates Foundation**
- **Conducted in 2008, 2009, 2010, 2011 and 2014**
  - Last two rounds excluded Nairobi

M-PESA Adoption by Households



M-PESA Adoption by Income Level



Financial Health/Wellbeing

- **A core component of *financial health/wellbeing* is resilience, the ability to respond to unexpected negative events, or shocks**

- **How do we accomplish this in the developed world?**
  - Banks to save for a rainy day
  - Purchase insurance
  - Receive unemployment insurance and transfers from the govt.

Resilience and Social Economies

- **In the developing world, little private insurance and few public sector safety nets**

- **Instead: social ties create an insurance network to pool risk: is this efficient?**
  - Ideal network is as different in risk profile from you as possible
  - But transactions have to cross geographical space which has costs

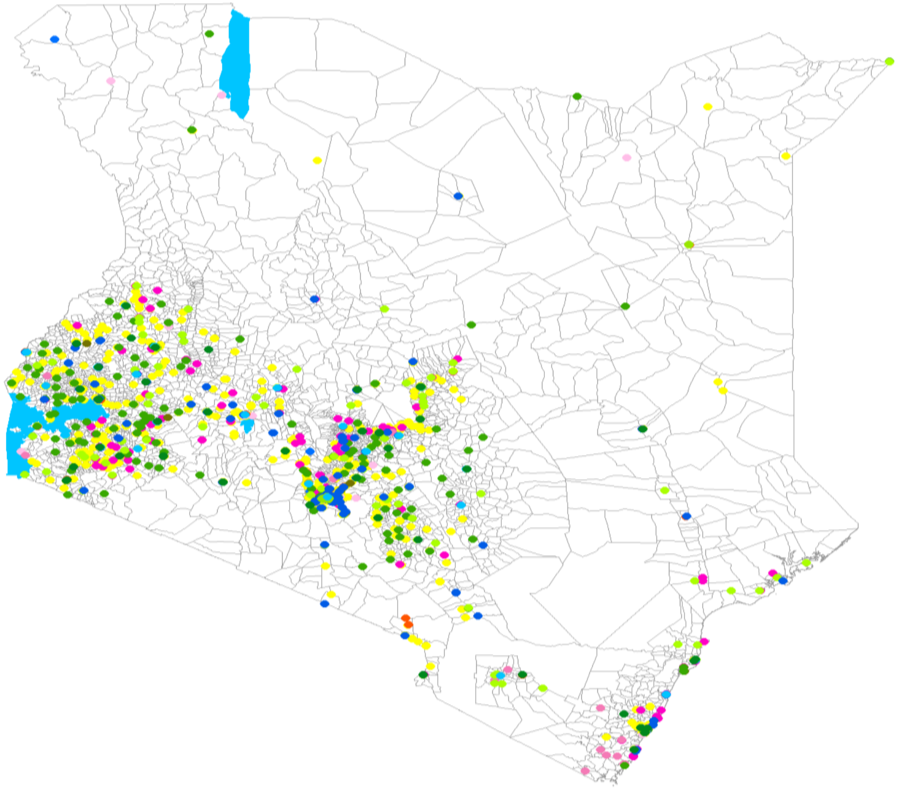
Financial Intermediation

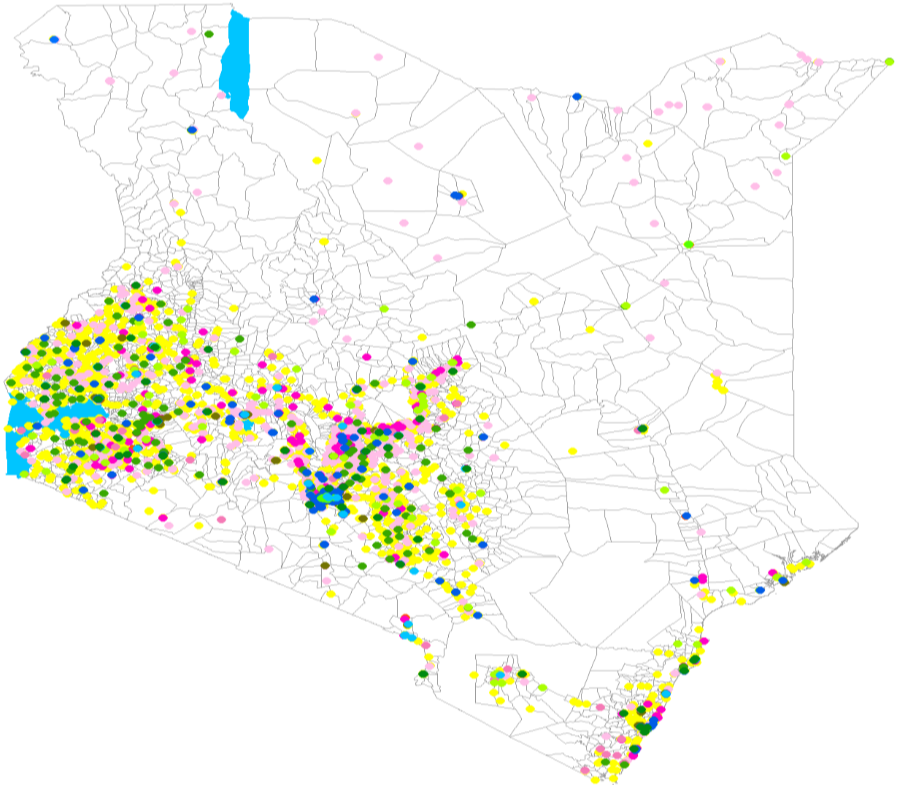
Transaction Costs

- **Kenyans faced large costs of transacting with the financial system**
  - The distance to the closest bank branch in 2007 was 9.2 km
  - 32% of households lived more than 10 km from a bank branch
  - 19% of households lived more than 20 km from a bank branch

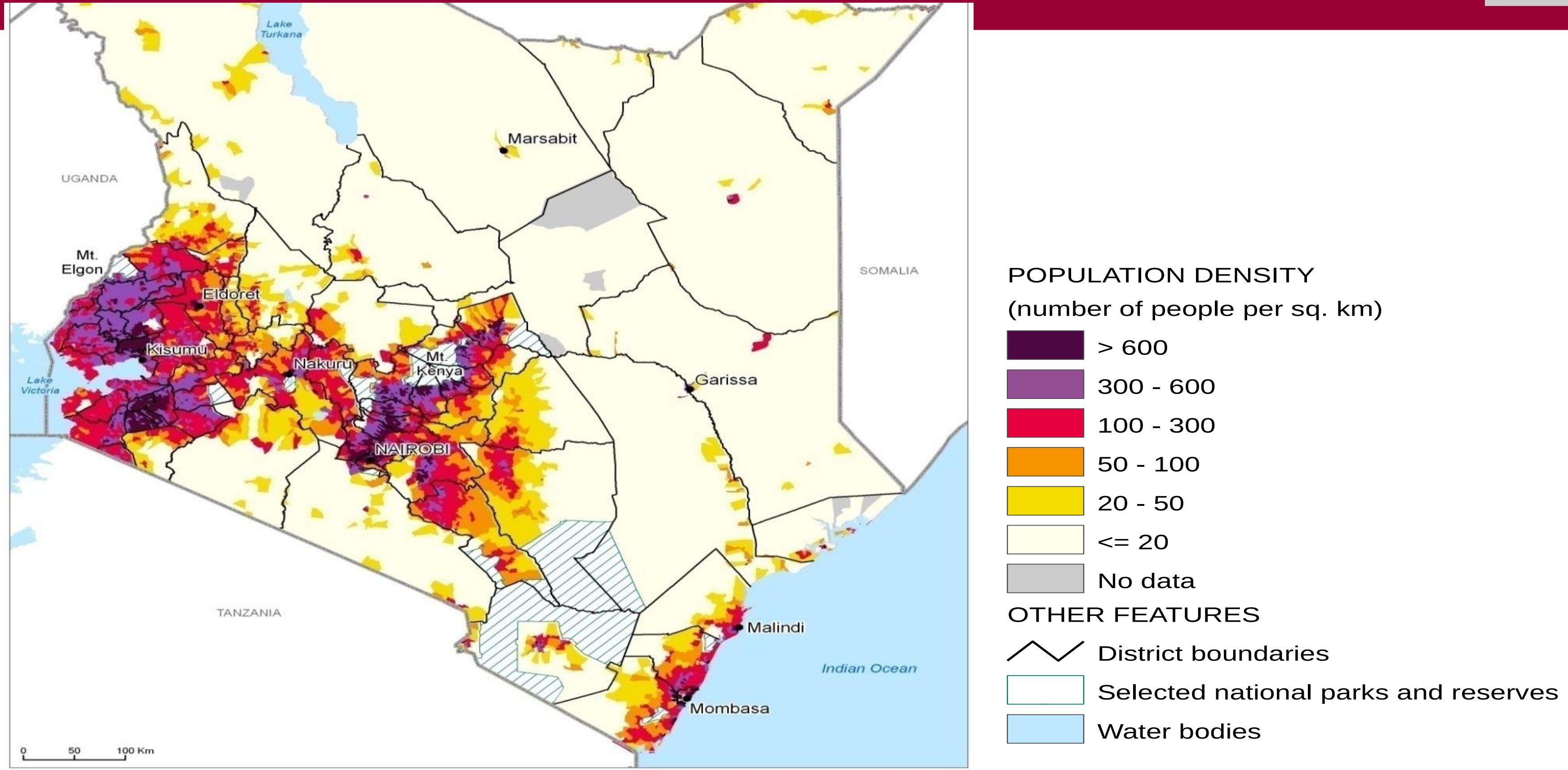
- **M-PESA lowered transaction costs dramatically**
  - Costs: for average distance of 200 km, KShs 35 vs. a KShs 460 bus
  - Distance to an agent was 4.9 km in 2007 (fell to 1.9 km by 2011)
  - 46% of households lived within 1 km of an agent

Financial Service Points, 2007-2011

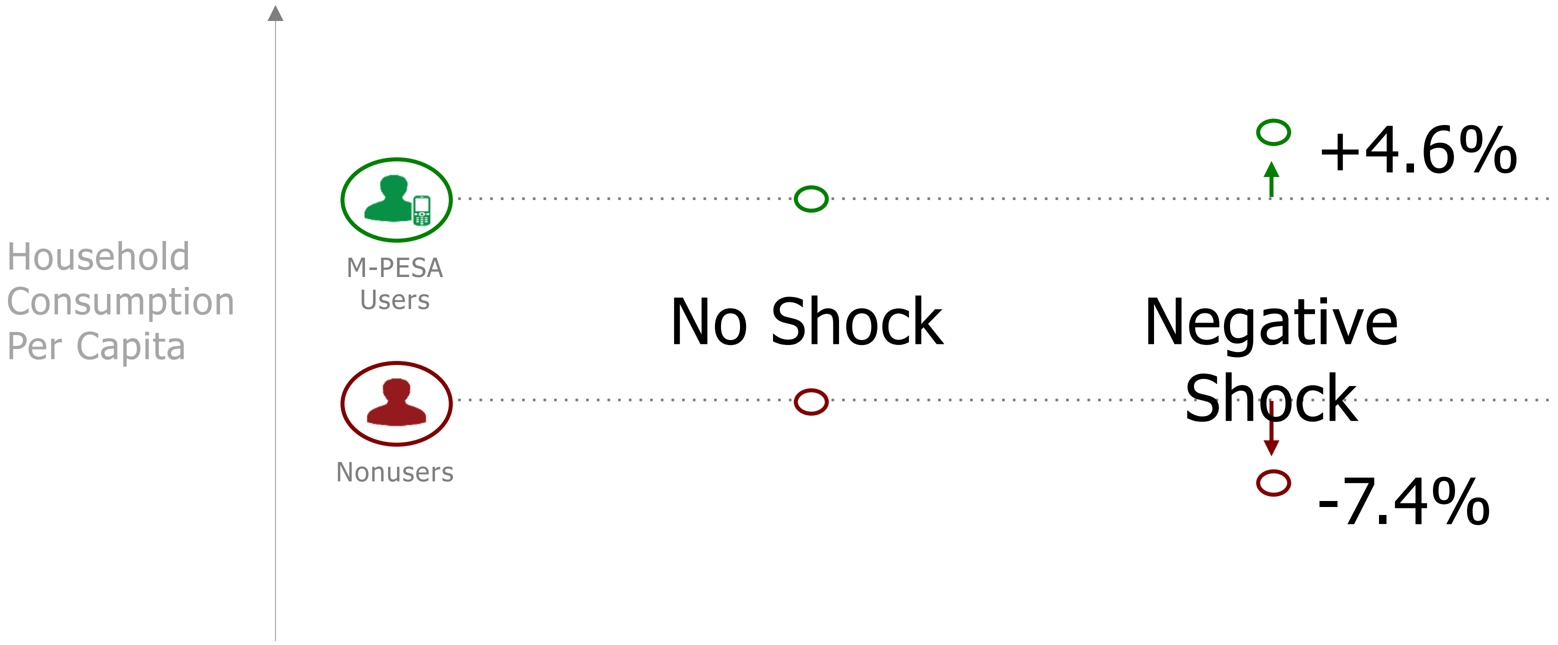




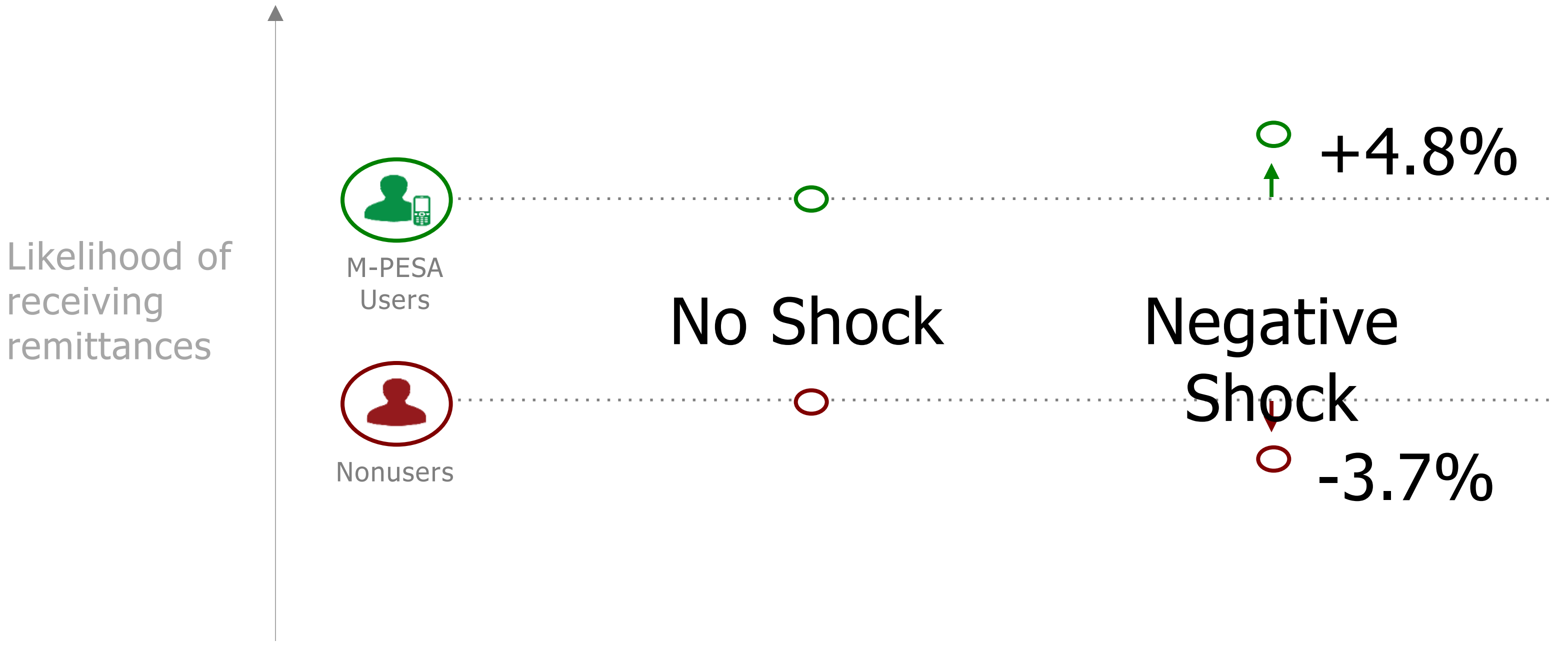
Economic Activity



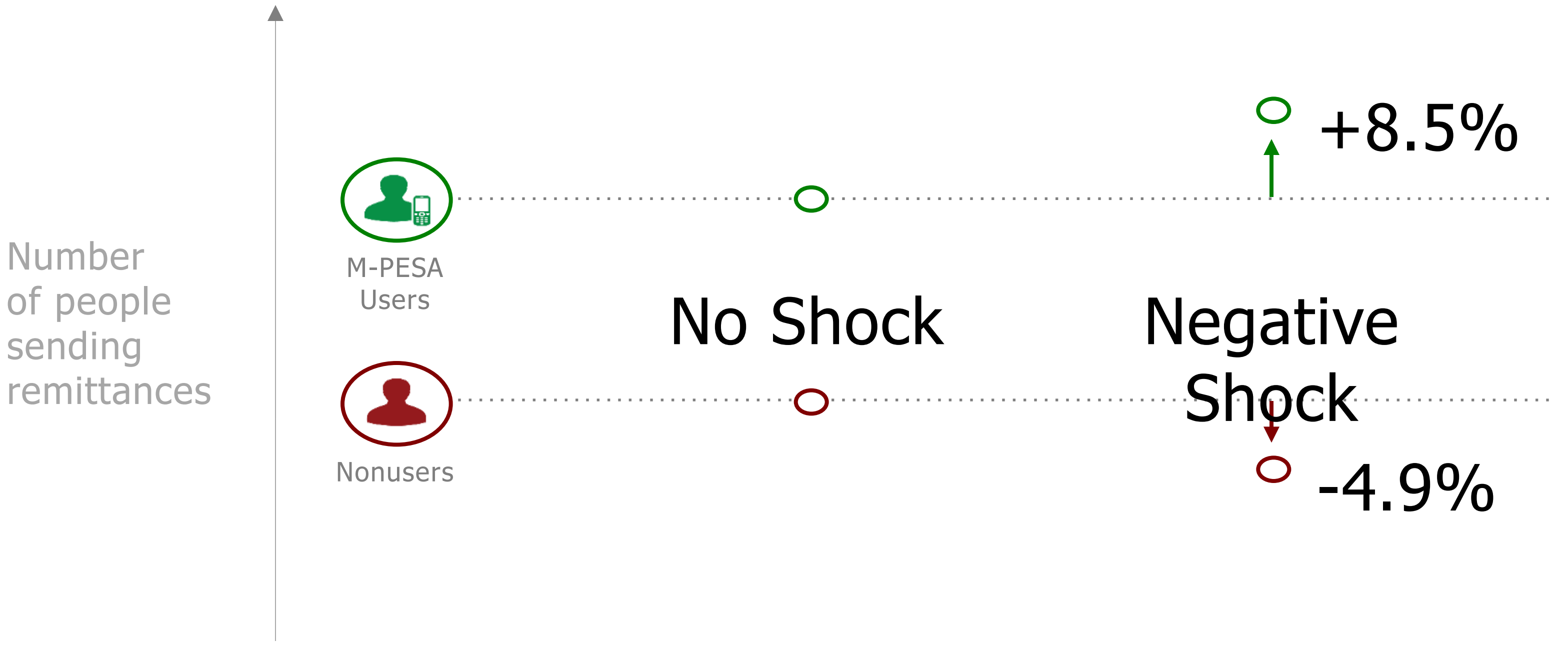
Resilience: Overall



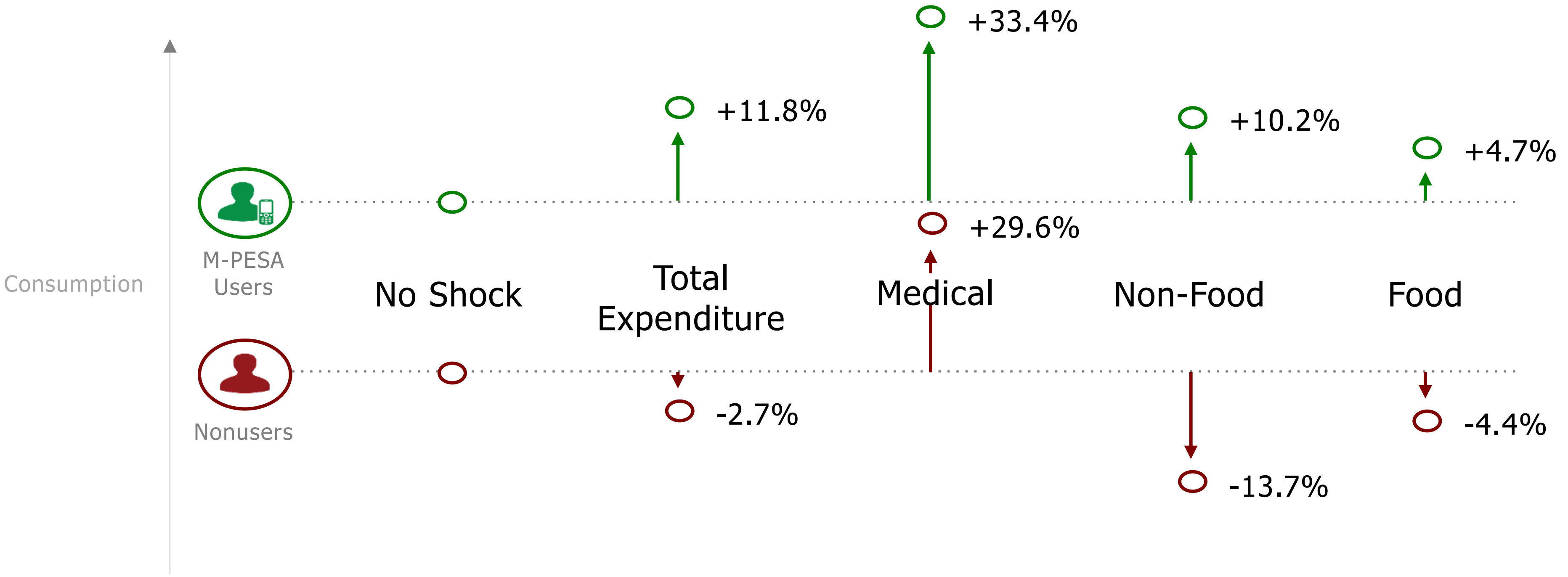
Resilience: Remittances



Resilience: Networks



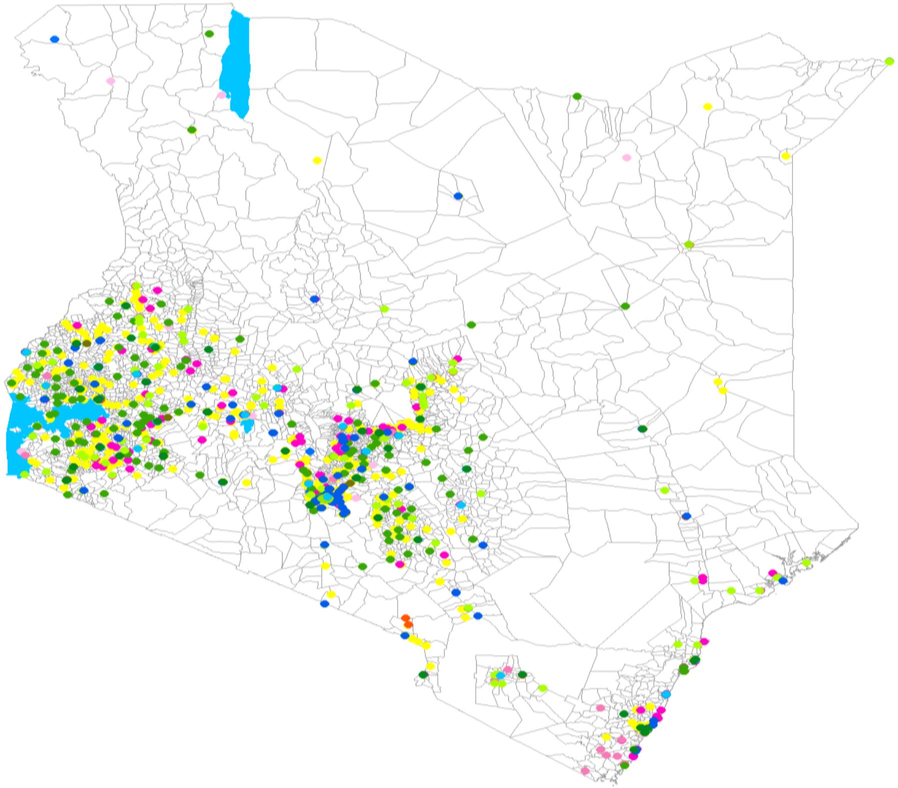
Resilience to Health Events

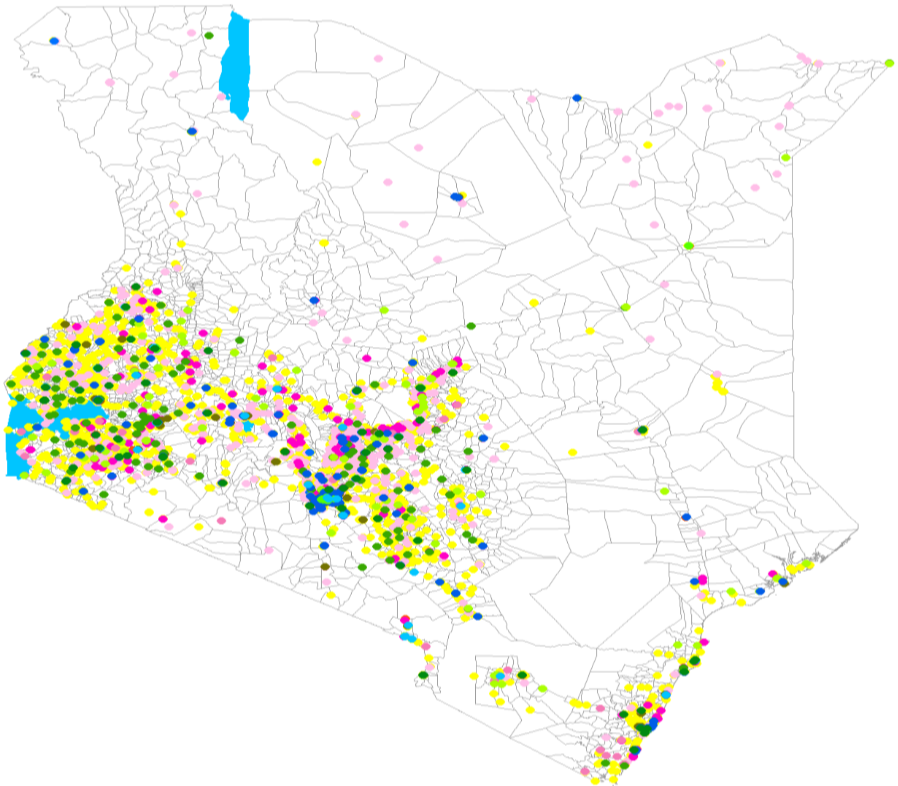


Eight Years Later….

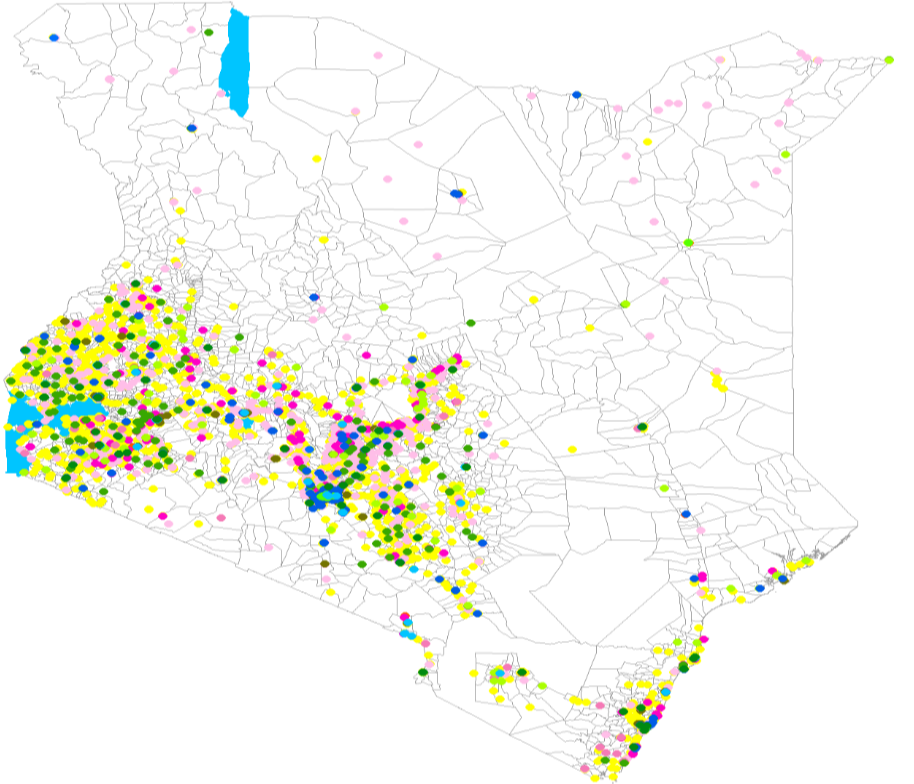
- **Better access to M-PESA has the following long term effects:**
  - Increases savings and consumption, hence reducing poverty, mostly for female headed households
    - Poverty reductions of about 2 percentage points
  - Does not increase physical assets
  - Changes occupational choice (less likely to be a farmer, more likely to be in a business), especially for women in the household

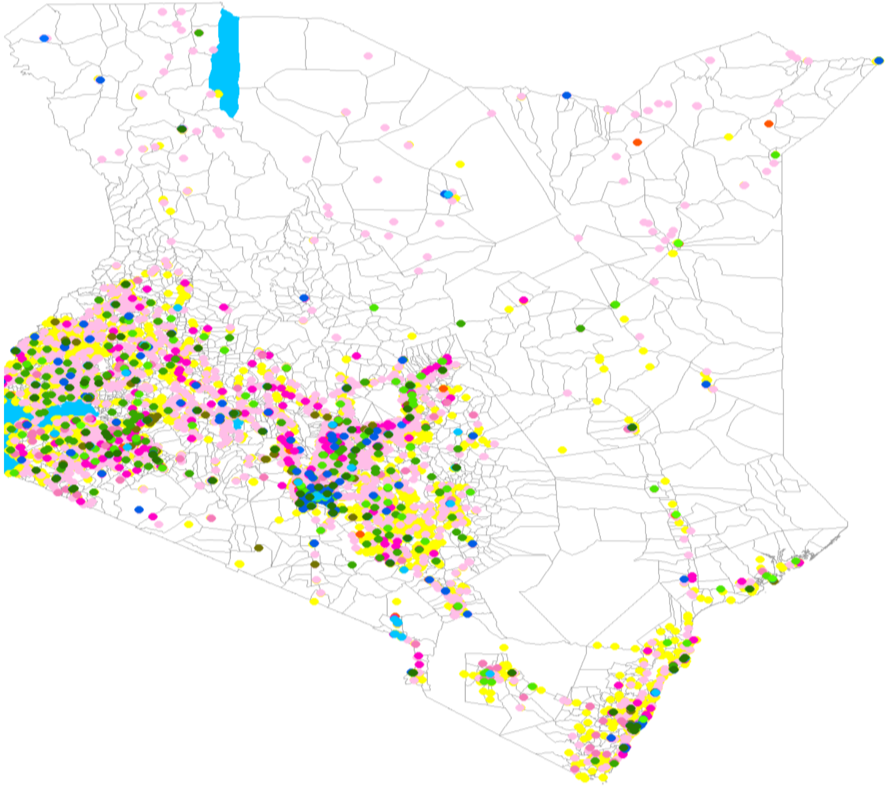
Financial Service Points, 2007-2011





Financial Service Points, 2011-2015





Access, 2007-2015

Average Distance to Closest Financial Institution

	Bank Branches	Bank Agents	Mobile Money Agents
2007	9.2 km	NA	4.9 km
2011	7.0 km	5.2 km	1.9 km
2015	6.0 km	1.9 km	1.4 km

Few Spillovers

- **By end 2014, outside Nairobi, 96% of HHs used M-PESA for P2P**
  - On average one transaction a month – limits to P2P transactions
- **Less than a third use it for:**
  - Paying bills, receiving payments or wages from an organization, paying for other goods or services

- **Only 5% used it to repay loan. However, M-Shwari (digital savings & credit product (Commercial Bank of Africa)) now has 12m users**

- **Next frontiers that will require a lot more innovation: P2B, B2B, G2P (being used in India)**

Conclusions

- **Lowering the transaction costs of interacting with the financial system has improved the lives of Kenyans**
  - Resilience and vulnerability
  - Savings and investment
  - Occupational shifts for adults, especially women

- **Financial markets interact with all other markets: little evidence of spillovers from mobile money yet**
  - Still a long way to go on that front and a much harder way to go