

**BREAD PHD COURSE
MODULE 2:
CREDIT, INSURANCE & RISK**



SUB-MODULE E: DIGITIZATION

TWO CLASSES...

Thursday March 31: Mobile Money and Digitizing Transfers

- Jack, William and Tavneet Suri, "Risk Sharing and Transactions Costs: Evidence from Kenya's Mobile Money Revolution," *American Economic Review*, 2014, 1, 183–223.
- Riley, Emma, "Resisting Social Pressure in the Household Using Mobile Money: Experimental Evidence on Microenterprise Investment in Uganda," Working Paper, November 2020.
- VoxDev Lit on Mobile Money : <https://voxdev.org/voxdevlit/mobile-money>
- Muralidharan Kartik, Paul Niehaus, and Sandip Sukhtankar, "Building State Capacity: Evidence from Biometric Smartcards in India," *American Economic Review*, 2016, 106 (10), 2895–2929.



TWO CLASSES...

Friday April 1: Broader Gains to Digitization?

- Muralidharan Kartik, Paul Niehaus, and Sandip Sukhtankar, "Identity Verification Standards in Welfare Programs: Experimental Evidence from India," Working Paper, September 2021.
- Suri, Tavneet, Prashant Bharadwaj and William Jack, "Fintech and Household Resilience to Shocks: Evidence from Digital Loans in Kenya", Journal of Development Economics, November 2021, 153.
- Robinson, Jonathan, David Sungho Park, and Joshua E. Blumenstock, "The Impact of Digital Credit in Developing Economies: A Review of Recent Evidence" Working Paper, November, 2021.
- Higgins, Sean "Financial Technology Adoption", Working Paper, December, 2020.
- Field, Erica, Rohini Pande, Natalia Rigol, Simone Schaner, and Charity Troyer Moore, "On Her Own Account: How Strengthening Women's Financial Control Impacts Labor Supply and Gender Norms," American Economic Review, July 2021, 111 (7), 2342–75.
- Barnwal, Prabhat, "Curbing Leakage in Public Programs: Evidence from India's Direct Benefit Transfer Policy", September 2021.





CLASS 1: MOBILE MONEY & DIGITIZING TRANSFERS

INTRODUCTION

Mobile phones are changing finance in the developing world

Mobile money in 96 countries (310 deployments), >1.2b accounts,
>\$2b worth of transactions/day, >5.2m agent outlets

What are the benefits of a digital payments system in countries where bank access is extremely poor?

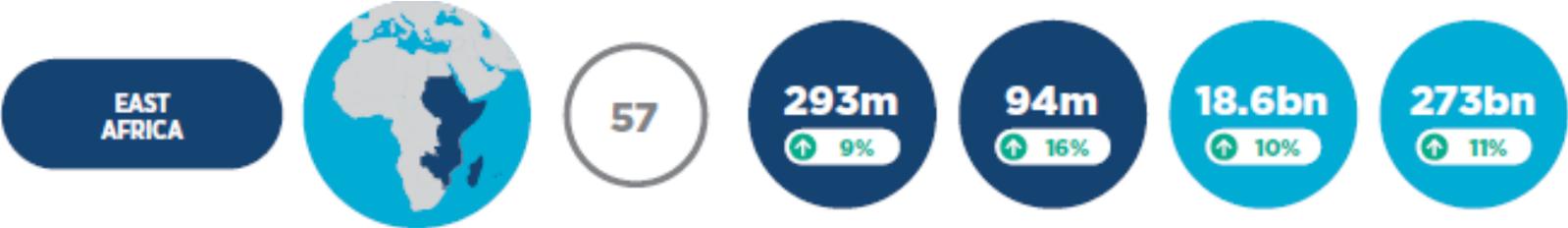




M-PESA IN KENYA

(with William Jack)

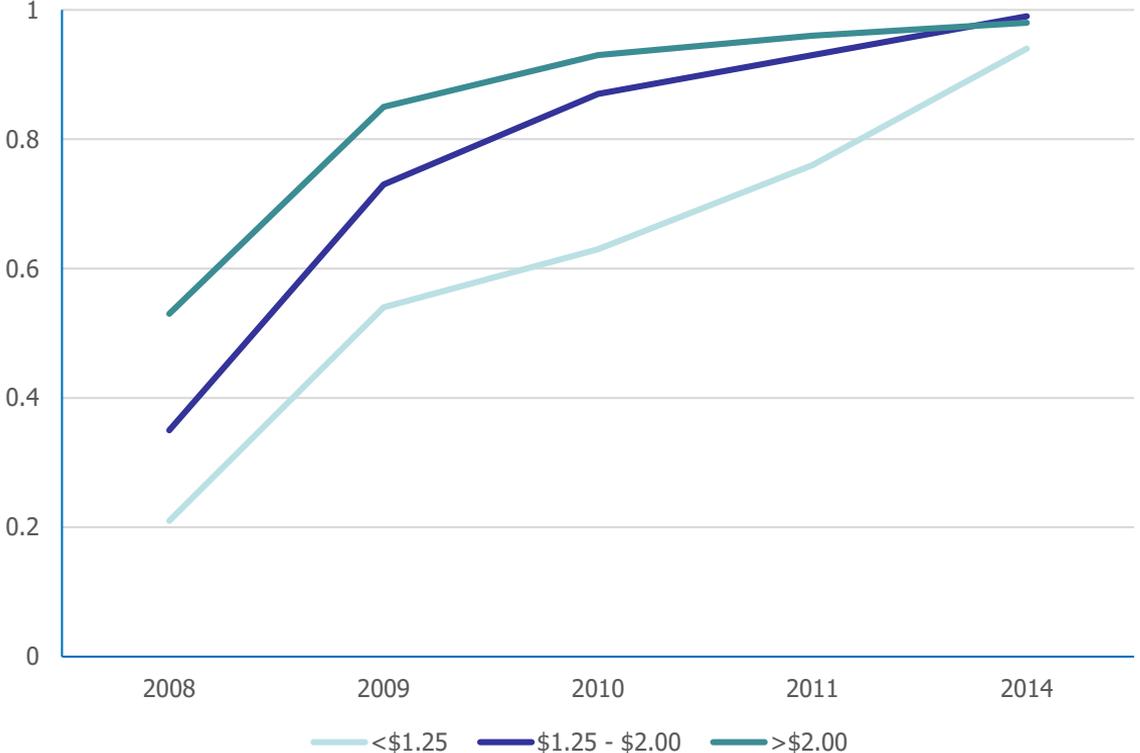
MOBILE MONEY IN SSA



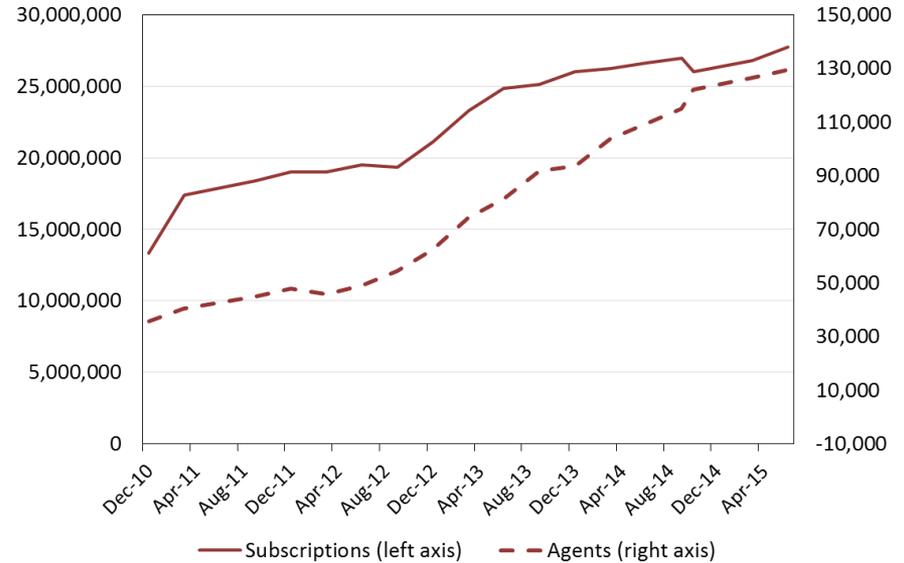
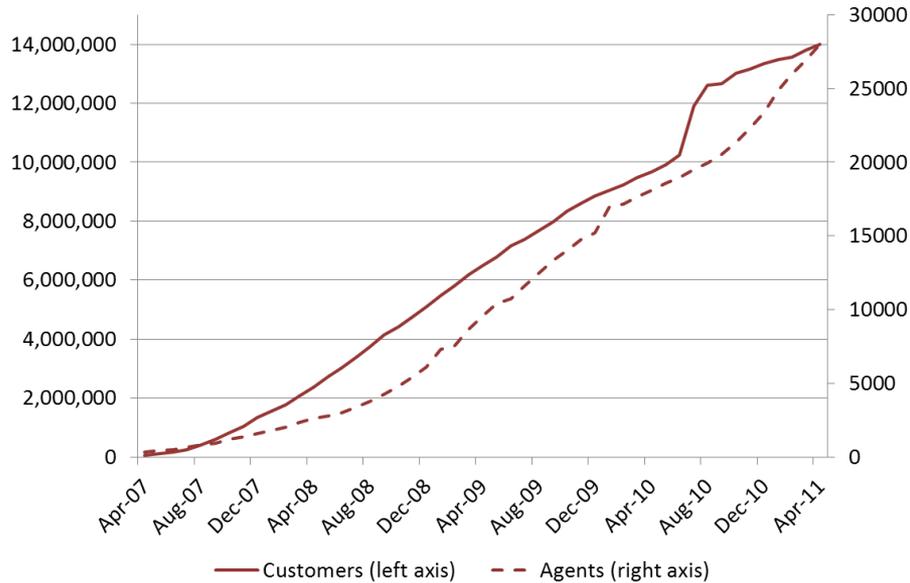
OPERATIONS OF M-PESA



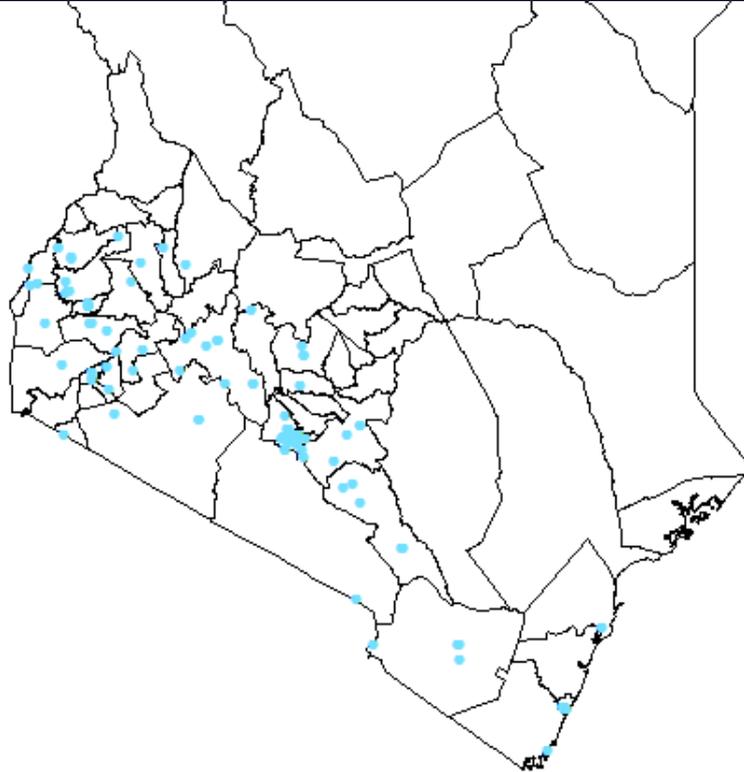
M-PESA ADOPTION BY POVERTY



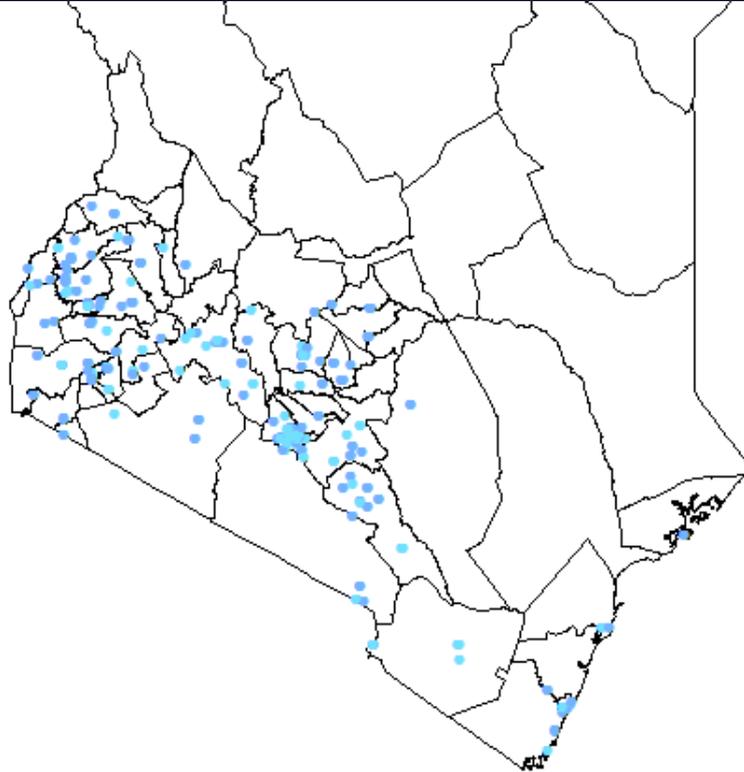
M-PESA: THE FIRST EIGHT YEARS



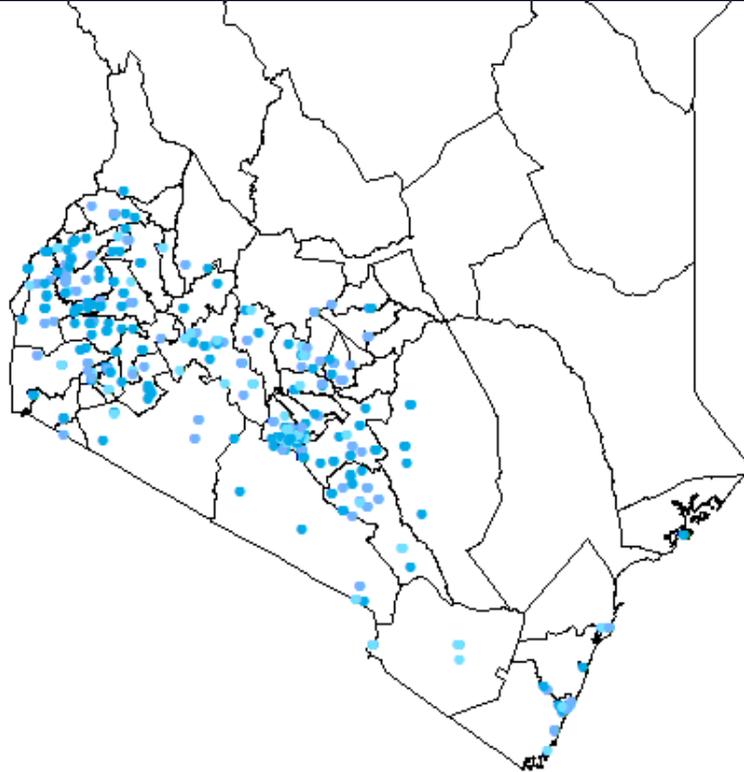
AGENT NETWORK: JUNE 2007



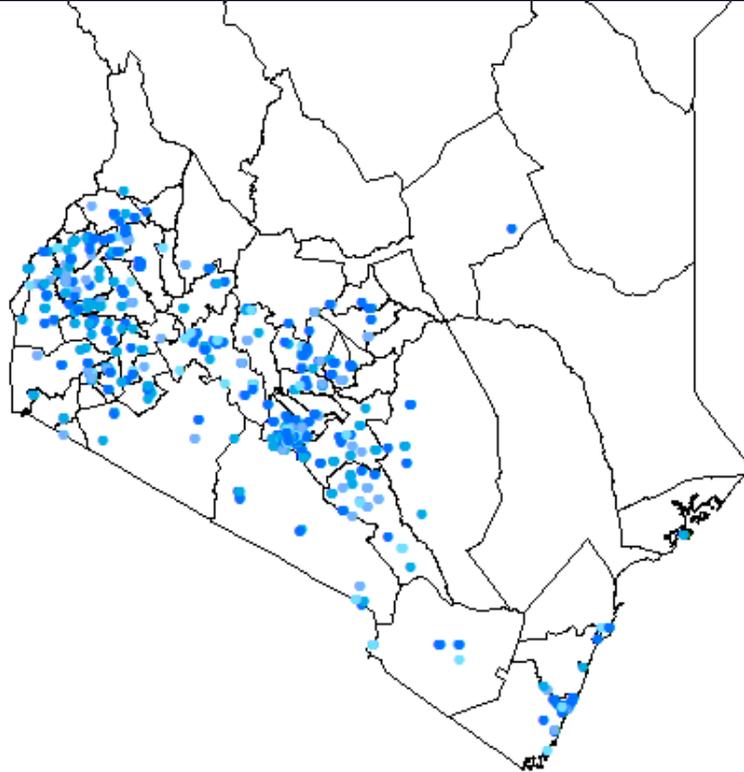
AGENT NETWORK: DEC 2007



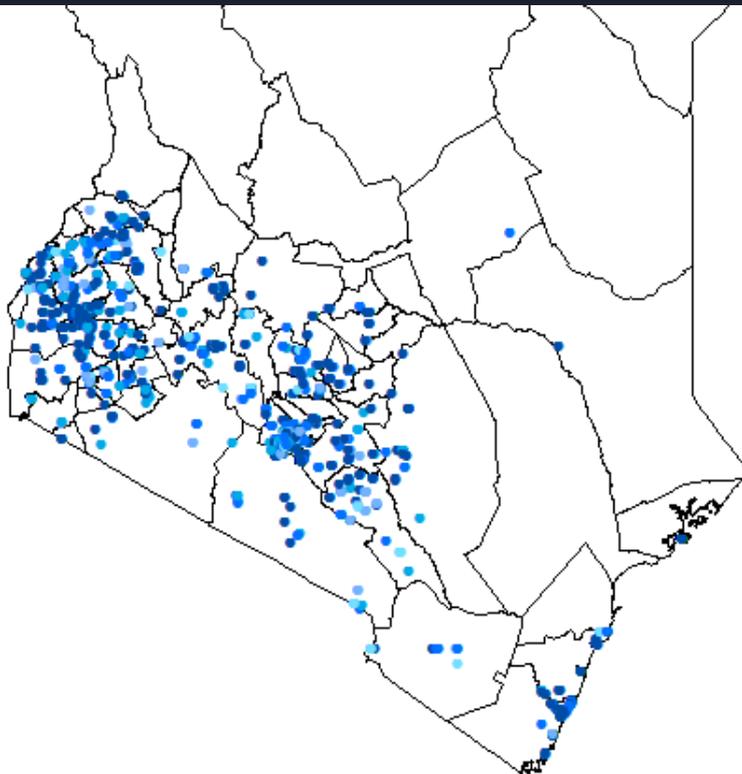
AGENT NETWORK: JUNE 2008



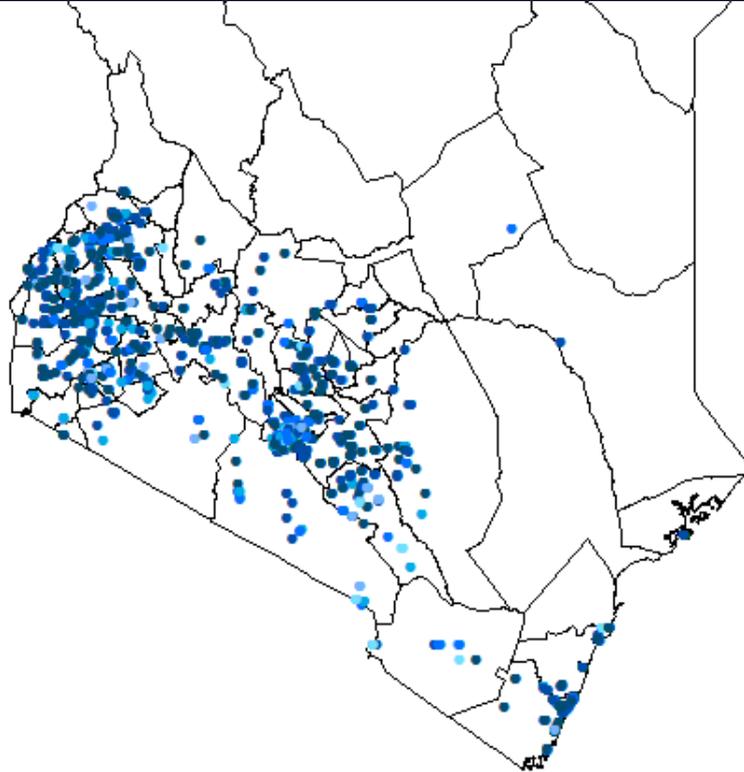
AGENT NETWORK: DEC 2008



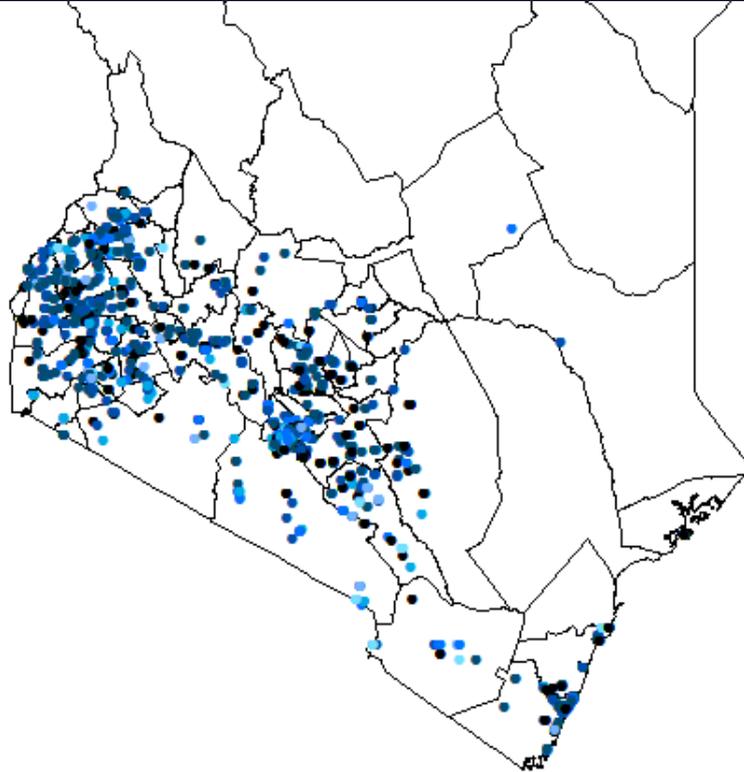
AGENT NETWORK: JUNE 2009



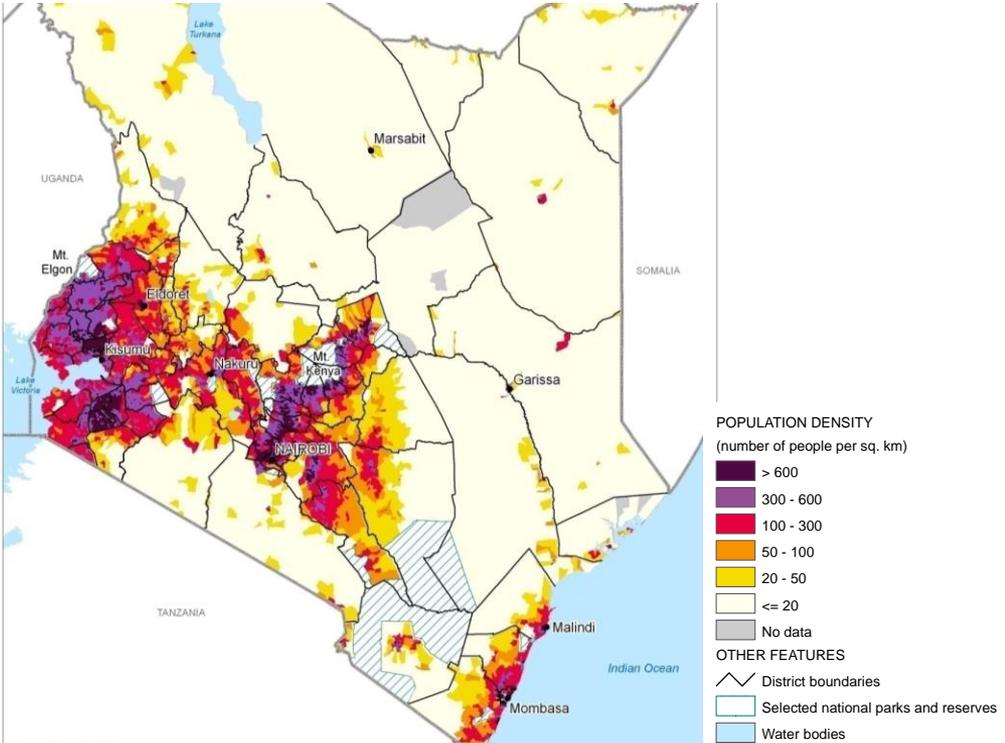
AGENT NETWORK: DEC 2009



AGENT NETWORK: JUNE 2010



NETWORK AND POP DENSITY



ACCESS: 2007-2015

		Bank Branches	Bank Agents	Mobile Money Agents
2007	Distance	9.2 km	NA	4.9 km
	HHs within 1km	28%	NA	46%
	HHs >10km	32%		
2011	Distance	7.0 km	5.2 km	1.9 km
	HHs within 1km	33%	36%	57%
	HHs >10km	27%		
2015	Distance	6.0 km	1.9 km	1.4 km
	HHs within 1km	39%	56%	68%



TRANSACTION COSTS (SURVEY)

	Frequency	Cost (KShs)
Hand Delivery by Self	13.5%	1.6
Bus Delivery Through Driver	3%	158.7
Western Union	0.4%	108
Postal Bank	2.9%	173.1
Direct Deposit	6.7%	85
M-PESA	60.8%	49.8
Other	3.3%	78.0

Costs: for average distance of 200 km, KShs 35 vs. a KShs 460 bus





FINANCIAL RESILIENCE

FINANCIAL RESILIENCE

Core to financial wellbeing: **resilience**, i.e. the response to shocks

Little private insurance and few public sector safety nets

Instead: social ties create an insurance network: efficient? Why not?

Literature: moral hazard, asymmetric information, commitment issues

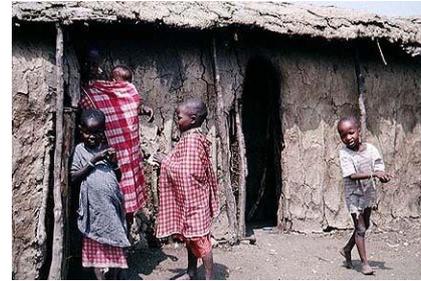
How about transaction costs?

Ideal network is as different in risk profile from you as possible

But transactions have to cross geographical space which has costs



FINANCIAL INTERMEDIATION



RESEARCH QUESTIONS

M-PESA lowered the transaction costs of P2P payments

What impacts did this have on households? Why is this a key reduction in transaction costs in a developing economy?

Role of personal networks; move away from such networks?

What are longer term effects of this technology?



RESEARCH DESIGN

Large household panel survey across most of Kenya (92%)

Conducted in 2008, 2009, 2010, 2011 and 2014

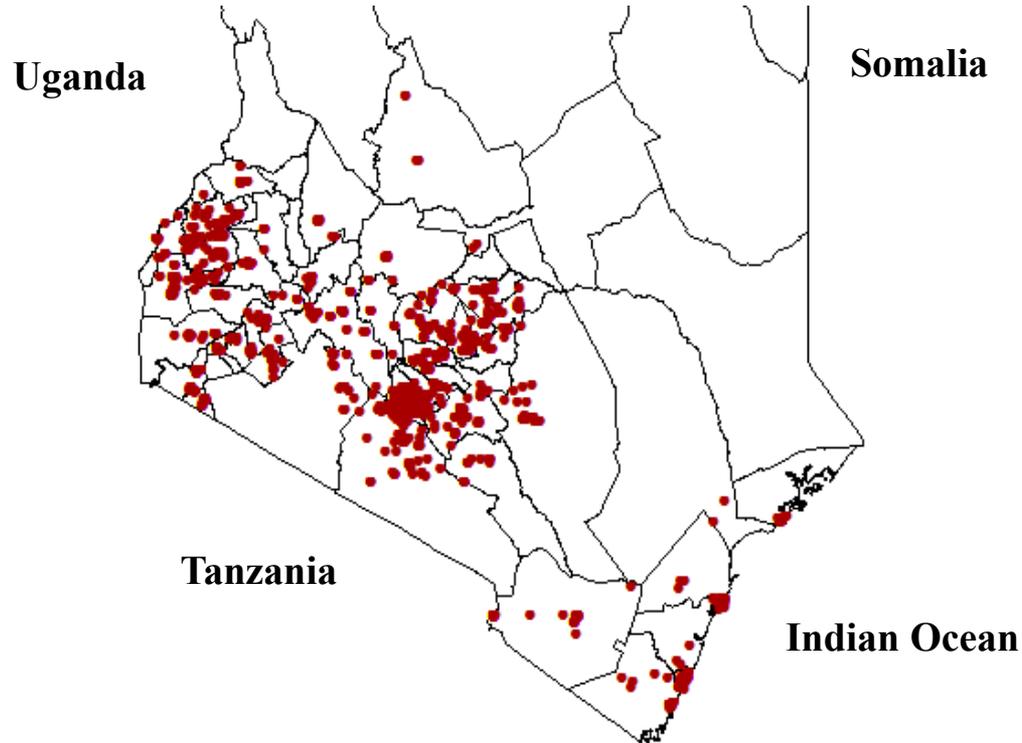
Last two rounds excluded Nairobi, use mostly 2008-2010 and 2014

Use the agent rollout at the household level for identification

Use measures of agent density: number of agents w/in 1km, 2km, etc



HOUSEHOLDS SURVEYED



Summary
Statistics



EMPIRICAL STRATEGY

$$c_{ijt} = \alpha_i + \gamma Shock_{ijt} + \mu User_{ijt} + \beta User_{ijt} \times Shock_{ijt} + \theta X_{ijt} \\ + \eta_{jt} + \pi_{it} + \varepsilon_{ijt},$$

where c_{ijt} is consumption of HH i in location j at time t
 $Shock$ is a measure of the income shock
 β is the coefficient of interest
 X_{ijt} are covariates (demographics, economic)



IDENTIFICATION

	Agent Density		Change in Agent Density	
	Coefficient	SE	Coefficient	SE
Log Wealth	0.0047	[0.0088]	-0.0042	[0.0577]
Cellphone Ownership	-0.0288*	[0.0175]	0.1593	[0.1459]
Household Size	-0.0054	[0.0067]	-0.0558	[0.0347]
Occupation of Head: Farmer	0.0290	[0.0189]	-0.1814	[0.1546]
Occupation of Head: Professional	0.0082	[0.0304]	-0.0743	[0.1715]
Occupation of Head: Business	-0.0409	[0.0276]	0.0096	[0.1977]
Household Head Years of Education	-0.0033	[0.0021]	-0.0256*	[0.0144]
HH has a SACCO account	0.0011	[0.0237]	-0.0979	[0.1598]
HH has a ROSCA	0.0172	[0.0180]	0.3194	[0.2182]
HH Has a Bank account	0.0181	[0.0184]	0.4118**	[0.1873]
Negative Shock	0.0120	[0.0151]	0.0550	[0.1493]
Illness Shock	0.0004	[0.0171]	-0.0928	[0.1360]



IDENTIFICATION: SHOCKS

	Coefficient	SE
M-PESA User	-0.0228	0.0287
Cellphone Ownership	-0.0267	0.0319
Agents within 1km	0.0033	0.0263
Log Distance to Agent	0.0089	0.0490
HH Head Education	0.0034	0.0026
HH Has a Bank account	0.0033	0.0310
HH has a SACCO	0.0070	0.0247
Occupation - Business	-0.0715**	0.0353
Occupation – Farmer	0.0450	0.0352
Occupation – Professional	-0.0130	0.0338
Occupation - Sales	0.0579	0.0461
Household size	0.0106	0.0105



IDENTIFICATION

	Agent Density		Distance to Closest Agent	
	Period 1	Changes	Period 1	Changes
Distance to Nairobi	-0.0009	0.0002	-0.0007	-0.0003
	[0.0031]	[0.0013]	[0.0056]	[0.0011]

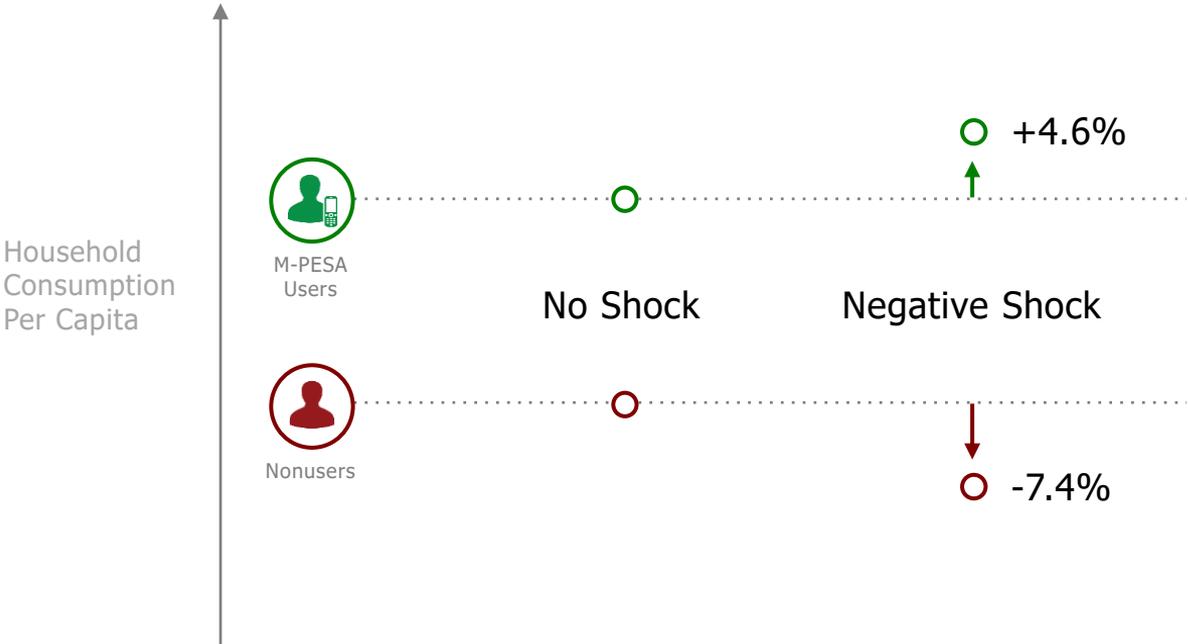


IDENTIFICATION: FALSIFICATION

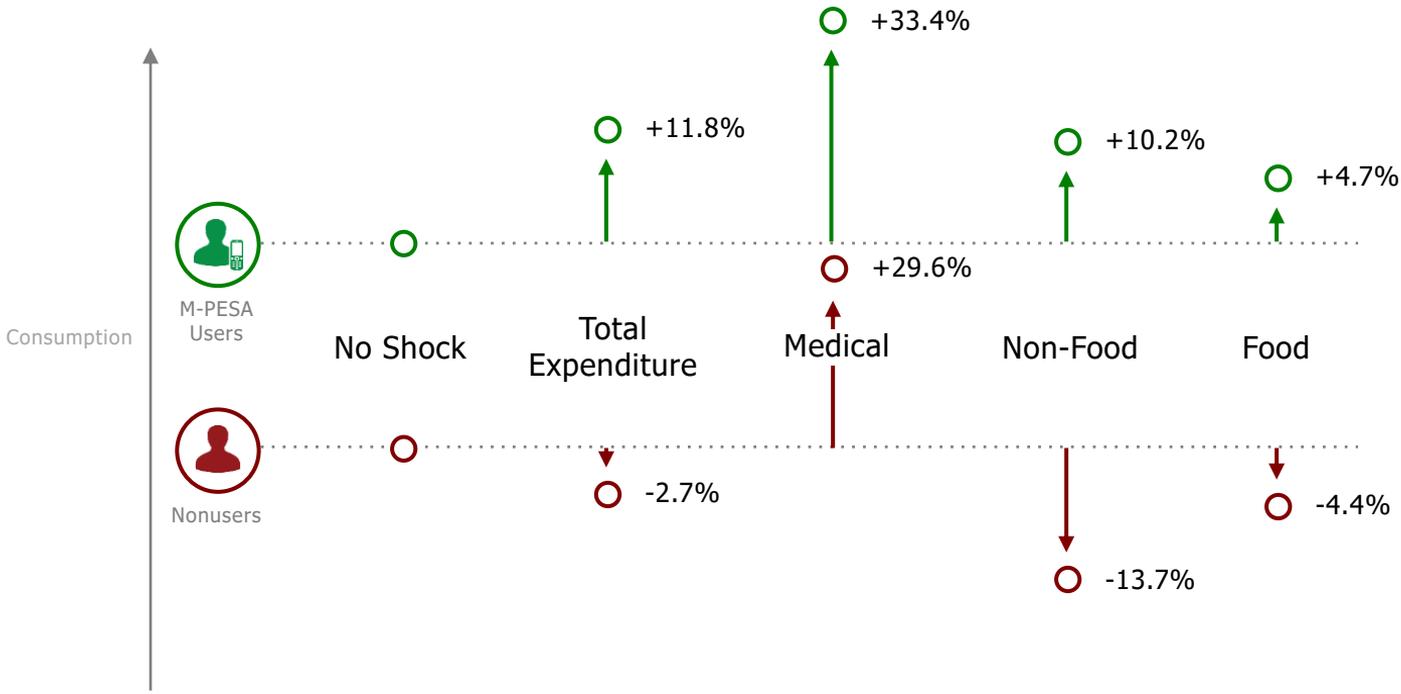
	Log Maize Consumption per Capita	Log Crop Consumption per Capita
Agent Density (w/in 1km)	-0.052 [0.051]	-0.023 [0.085]
Agent Density (w/in 2km)	-0.005 [0.037]	0.002 [0.044]
Log Distance to Closest Agent	0.039 [0.056]	0.014 [0.063]
Change in Agent Density (w/in 1km)	-0.025 [0.046]	-0.030 [0.055]
Change in Agent Density (w/in 2km)	-0.008 [0.018]	-0.004 [0.023]
Change in Distance to Closest Agent	0.004 [0.015]	-0.002 [0.017]



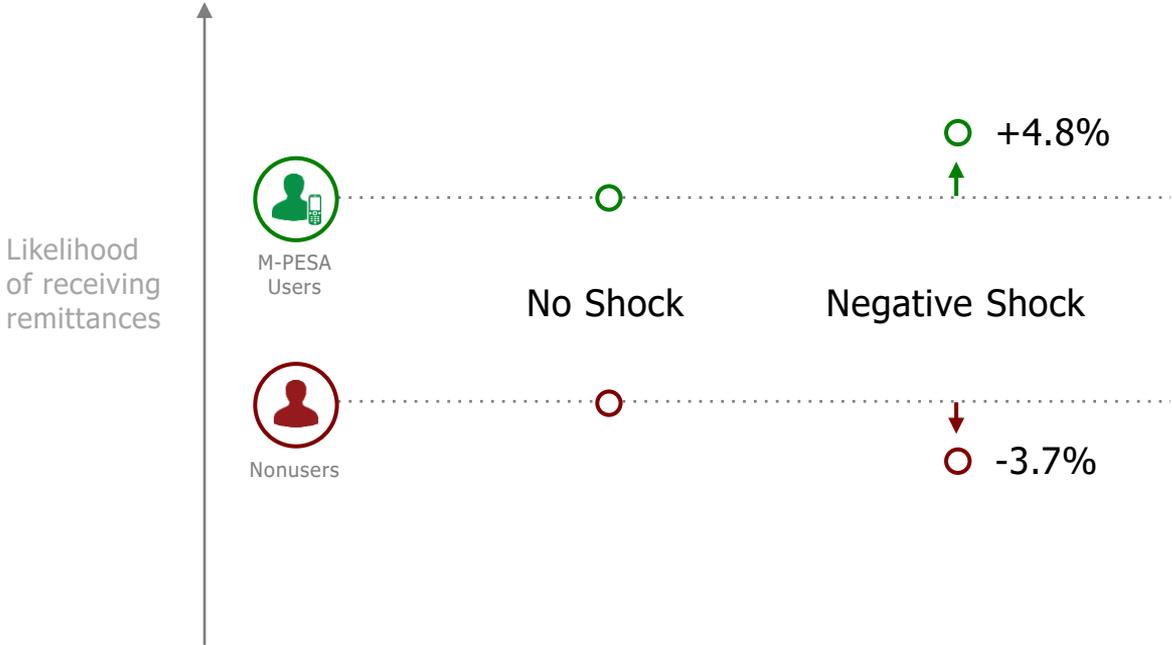
RESILIENCE: OVERALL



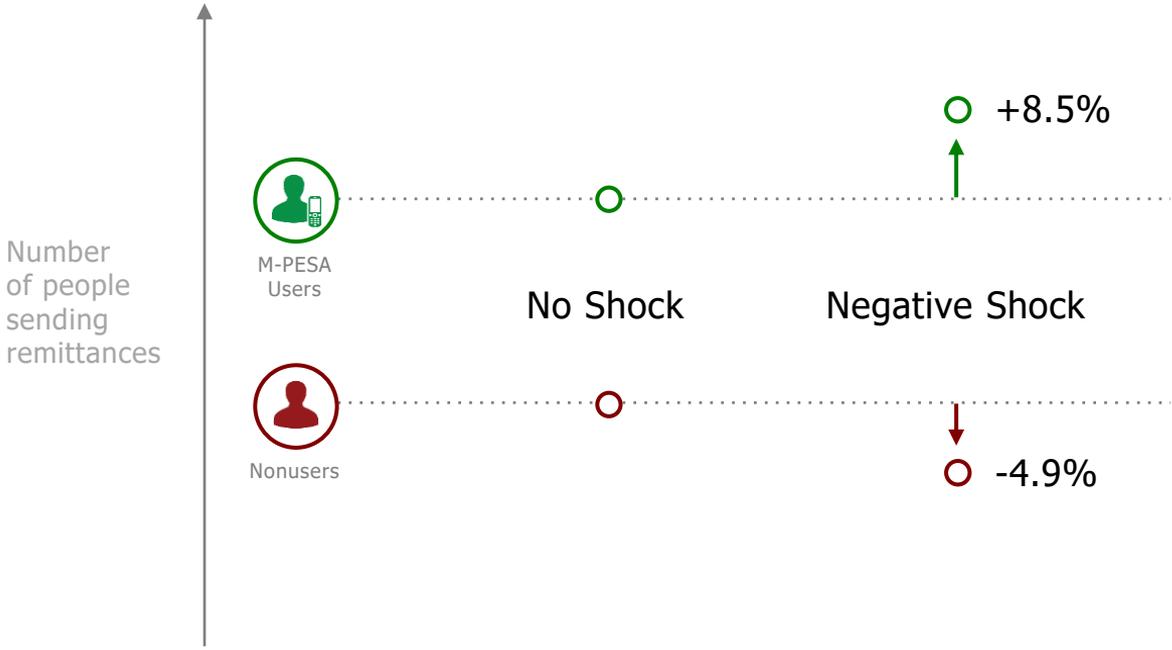
RESILIENCE TO HEALTH EVENTS



RESILIENCE: REMITTANCES



RESILIENCE: NETWORKS



BASIC RESULTS

	OLS	Panel	Panel	Without Nairobi
M-PESA User	0.553*** [0.037]	-0.090** [0.036]	-0.016 [0.047]	-0.008 [0.049]
Negative Shock	-0.207*** [0.038]	0.241** [0.116]	0.232 [0.169]	0.120 [0.141]
User*Negative Shock	0.101** [0.050]	0.176*** [0.050]	0.156** [0.062]	0.150** [0.065]
Shock, Users	-0.105*** [0.033]	0.052* [0.028]	0.055 [0.035]	0.050 [0.037]
Shock, Non-Users	-0.207*** [0.038]	-0.069** [0.032]	-0.068 [0.043]	-0.056 [0.045]



DIFFERENT SHOCK MEASURES

	Total Consumption		Non-Health Consumption
	Weather Shock	Illness Shock	Illness Shock
M-PESA User	-0.0260 [0.0358]	-0.0446 [0.0420]	-0.0279 [0.0407]
Negative Shock	-0.0603 [0.3352]	-0.0704 [0.1640]	-0.2052 [0.1686]
User*Shock	0.3329** [0.1511]	0.1547** [0.0738]	0.1595** [0.0692]
Shock, Users	-0.0878 [0.0903]	0.0545 [0.0418]	0.0101 [0.0404]
Shock, Non-Users	-0.2084*** [0.0959]	-0.0623 [0.0500]	-0.1275** [0.0483]



USING AGENT ROLL OUT

	Agents w/in 1km	Agents w/in 2km	Agents w/in 5km	Agents w/in 20km	Distance to Agent
Negative Shock	0.152 [0.152]	0.122 [0.153]	0.148 [0.160]	-0.176 [0.140]	0.619*** [0.203]
Agents	-0.022 [0.039]	-0.003 [0.031]	0.018 [0.024]	-0.002 [0.006]	0.051 [0.054]
Agents*Shock	0.055*** [0.019]	0.050*** [0.015]	0.021** [0.010]	-0.002 [0.005]	-0.058*** [0.019]



REMITTANCES

	Overall Shock			Illness Shock	
	Receive?	Number	Total Received	Receive?	Total Received
M-PESA User	0.160*** [0.047]	0.253** [0.127]	10.77*** [3.71]	0.182*** [0.041]	12.48*** [3.079]
Shock	-0.030 [0.143]	0.032 [0.427]	2.613 [11.70]	-0.187 [0.149]	-8.556 [11.13]
User*Shock	0.135** [0.063]	0.343* [0.177]	8.067* [4.668]	0.144** [0.070]	8.385 [5.312]
Shock, Users	0.066* [0.037]	0.104 [0.112]	5.180 [3.283]	0.071* [0.042]	6.470** [3.289]
Shock, Non-Users	-0.028 [0.041]	-0.094 [0.120]	-0.397 [2.652]	-0.044 [0.044]	-0.599 [3.061]



NETWORK SIZE

	Distance Travelled		Network Size		Fraction of Network	
	Overall	Illness	Overall	Illness	Overall	Illness
M-PESA User	71.35	-16.93	0.174***	0.194***	0.102***	0.116***
	[63.50]	[53.52]	[0.065]	[0.053]	[0.036]	[0.031]
Shock	-111.7	-111.3	-0.264	-0.478**	-0.024	-0.199
	[130.6]	[149.5]	[0.211]	[0.223]	[0.131]	[0.126]
User*Shock	-186.6**	-9.33	0.203**	0.253***	0.101**	0.110*
	[81.0]	[90.86]	[0.087]	[0.097]	[0.048]	[0.060]
Shock, Users	-57.71*	-10.03	0.112**	0.121**	0.046*	0.045*
	[31.31]	[40.46]	[0.056]	[0.057]	[0.024]	[0.026]
Shock, Non-Users	94.07	-79.23	-0.026	-0.057	-0.007	-0.014
	[63.49]	[71.99]	[0.058]	[0.062]	[0.038]	[0.044]

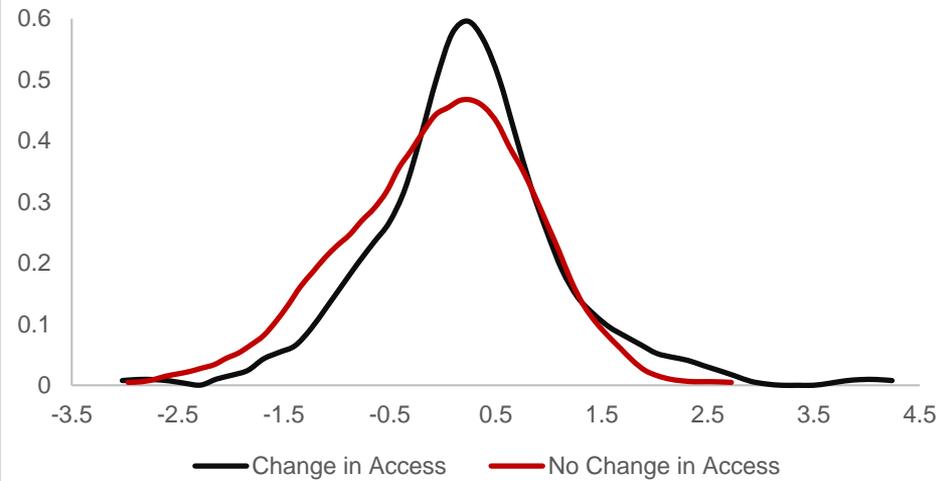


LONGER TERM EFFECTS

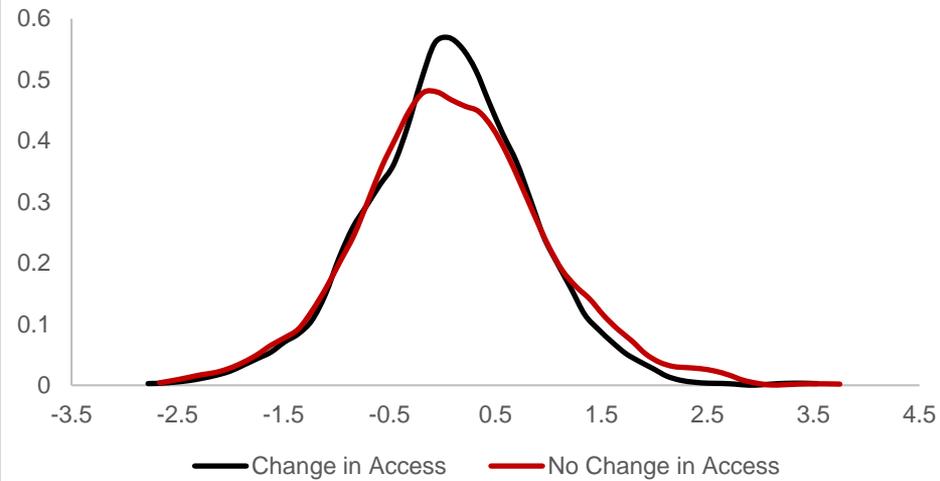
(with William Jack)

CHANGE IN INCOME: WOMEN

Female Headed Households



Male Headed Households



CHANGE IN INCOME

	(1)	(2)	(3)	(4)
	log(Per capita consumption)	Change in log(per capita consumption)	Extreme poverty (US \$1.25)	Poverty (US \$2)
Overall effect				
Change in agent density	0.012** (0.005)	-0.003 (0.003)	-0.007*** (0.002)	-0.007** (0.003)
Šidák-Holm <i>P</i> value	0.04	0.35	0.00	0.05
Effect disaggregated by gender of household head				
Change in agent density	0.009** (0.004)	-0.005* (0.003)	-0.006*** (0.002)	-0.005* (0.003)
Female head × change in agent density	0.022*** (0.008)	0.020*** (0.007)	-0.010*** (0.004)	-0.009 (0.006)
Female head	-0.080 (0.077)	-0.117* (0.068)	0.032 (0.042)	0.028 (0.036)
Effect of agent density for female headed	0.031*** (0.008)	0.014** (0.007)	-0.015*** (0.004)	-0.014*** (0.005)
Šidák-Holm <i>P</i> value	0.00	0.04	0.00	0.02
Effect for female headed,	0.185	0.085	-0.092	-0.086
25th–75th percentile				
Observations	1593	1593	1593	1593
Overall effect of gender when controlling for interactions with education of household head, wealth, and bank account				
Effect of agent density for female headed	0.030*** (0.006)	0.015** (0.006)	-0.015*** (0.003)	-0.015*** (0.004)
Šidák-Holm <i>P</i> value	0.00	0.02	0.00	0.00

CHANGE IN OCCUPATION

	(1)	(2)	(3)	(4)
	Business/sales	Semiskilled	Farming	Secondary
Overall effect				
Change in agent density	0.002*	0.000	-0.004***	-0.001
	(0.001)	(0.001)	(0.001)	(0.001)
Šidák-Holm <i>P</i> value	0.27	0.96	0.00	0.77
Effect by gender of household head				
Change in agent density	0.001	0.000	-0.003***	0.000
	(0.001)	(0.001)	(0.001)	(0.001)
Female head × change in agent density	0.002	-0.000	-0.002***	-0.002**
	(0.001)	(0.001)	(0.001)	(0.001)
Female head	0.094***	-0.147***	0.089***	-0.020
	(0.014)	(0.011)	(0.012)	(0.014)
Effect of agent density for female headed	0.003**	0.000	-0.005***	-0.002**
	(0.001)	(0.001)	(0.001)	(0.001)
Šidák-Holm <i>P</i> value	0.15	0.96	0.00	0.11
Effect for female headed, 25th–75th percentile	0.018	0.000	-0.031	-0.011



CHANGE IN ASSETS

	(1)	(2)	(3)	(4)	(5)
	log(Assets)	log(Savings)	Safety	Convenience	Bank account
Overall effect					
Change in agent density	0.009 (0.010)	0.022*** (0.009)	0.002 (0.001)	-0.002 (0.001)	0.006*** (0.002)
Sidak-Holm <i>P</i> value	0.90	0.17	0.83	0.69	0.01
Effect disaggregated by gender of household head					
Change in agent density	0.008 (0.010)	0.021** (0.009)	0.002 (0.001)	-0.001 (0.001)	0.007*** (0.002)
Female head × change in agent density	0.010 (0.014)	0.011 (0.017)	-0.003 (0.003)	-0.003 (0.003)	-0.002 (0.005)
Female head	-0.716*** (0.165)	-0.509*** (0.156)	-0.002 (0.027)	0.070** (0.033)	-0.118*** (0.041)
Effect of density for female headed	0.018 (0.013)	0.032* (0.017)	-0.001 (0.003)	-0.004 (0.003)	0.005 (0.005)
Sidak-Holm <i>P</i> value	0.85	0.53	0.99	0.85	0.96
Effect for female headed, 25th–75th percentile	0.110	0.223	-0.006	-0.026	0.027



OVERALL...

A reduction in poverty of 2 percentage points, approx. 196,000 households move out of extreme poverty

Approx. 186,000 women switched their main occupation from farming to being in a business/retail





JUST KENYA?

SIMILAR RESULTS IN...

Tanzania: Riley (2018)

Uganda (RCT): Wieser et al (2019)

Uganda: Munyegera and Matsumoto (2014)

Mozambique (RCT): Batista and Vicente (2020)

Bangladesh (RCT): Lee et al. (2021) [rural families + migrant in Dhaka]

- 30-45 min training on how to use mobile money

 - Menus in English

 - Help people memorize them

 - Money to practice transactions

- Assistance with paper work and any issues using MM





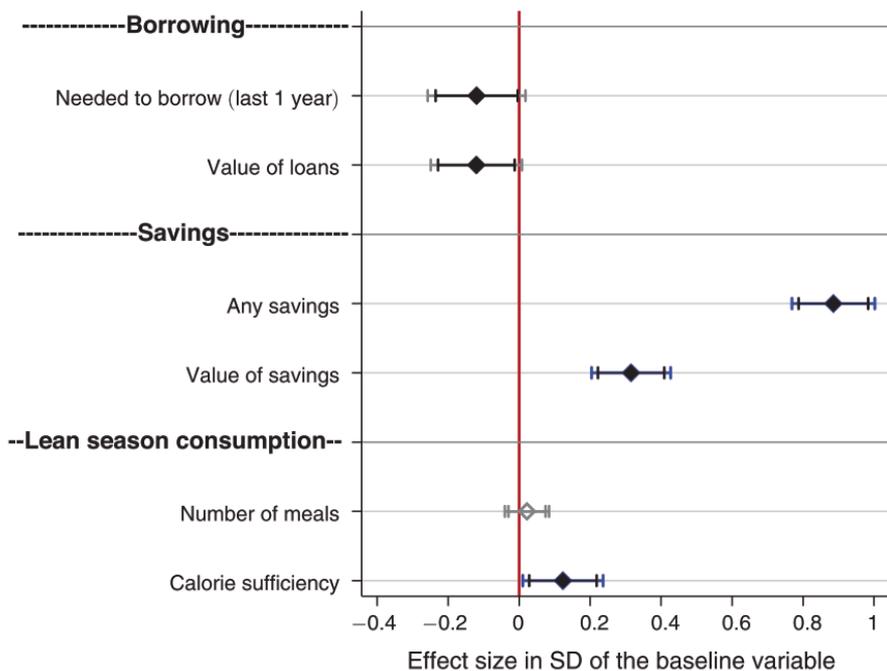
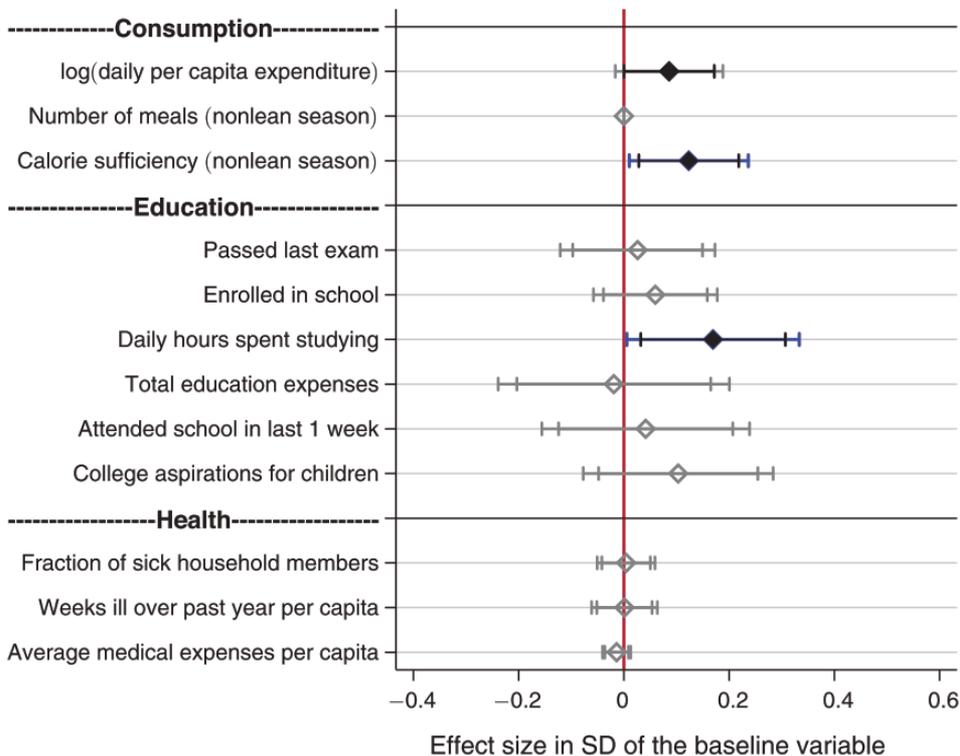
**LEE ET AL (2021):
IS THERE A DOWNSIDE?**

FIRST STAGE

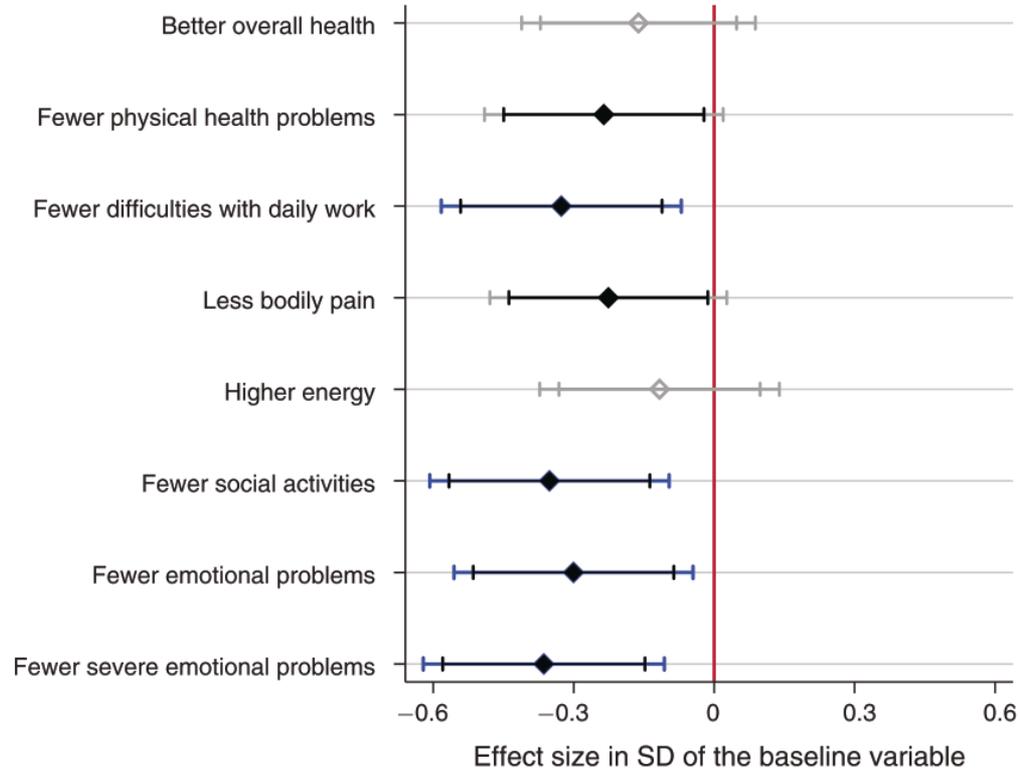
	Rural: Active bKash account	Rural: Active bKash account	Urban: Active bKash account	Urban: Active bKash account
	(1)	(2)	(3)	(4)
bKash treatment	0.48 (0.03)	0.48 (0.03)	0.48 (0.03)	0.47 (0.03)
R^2	0.23	0.24	0.23	0.25
Baseline controls	No	Yes	No	Yes
Endline control group mean	0.22	0.22	0.21	0.21
Observations	813	813	809	809



RESULTS: RURAL HOUSEHOLDS



RESULTS: MIGRANTS





RILEY (2021): WOMEN AND ENTERPRISES

MICROFINANCE FOR WOMEN

Many women in developing countries run businesses - remain small & unprofitable

Can pressure to share money w/in the household explain some of this?

Experiment with 3,000 female microfinance clients in urban Uganda:

Mobile Account: Business labelled MM account + cash loan

Mobile Disbursement: Business labelled MM account + loan on MM account

Control: Cash loan



SETTING: KAMPALA & ENTEBBE

3,000 female microfinance borrowers starting a new loan at BRAC Uganda

Eligibility criteria: had a phone (>99% do); all businesses verified by BRAC

Microfinance loans: individual liability but repayments collected in groups

All other aspects of group meetings remained the same

Summary statistics:

65% are married. For 60%, spouse also has a business

Average loan size is \$400; average profit is \$100 (40% of household income)

Businesses are highly inventory focused (selling stock)



WOMEN'S EMPOWERMENT

Mobile money services raise women's empowerment through two channels

Increasing women's bargaining power

better enabling women to enact their preferences

Other evidence :

Mobile money transfers raise women's decision making power, spending on children, mobility and save time [Aker et al., 2016]

Mobile savings accounts increased women's empowerment in Tanzania [Bastian et al., 2018]



BUSINESS OUTCOMES

	(1) profit	(2) savings	(3) capital
Mobile account	2.88 (3.61) [0.99]	0.93 (9.54) [0.99]	10.63 (21.16) [0.99]
Mobile disburse	17.61*** (3.54) [0.00]	8.46 (10.23) [0.74]	70.72*** (20.70) [0.03]
Observations	2,639	2,639	2,639
Control mean	109.8	155.3	659.6
Control mean baseline	116.6	134.3	638.1
p-value T1=T2	0.00	0.50	0.00

Intent-to-treat estimates. USD. All outcomes are winsorized at the 99% level. All regressions include strata dummies and include the baseline value of the outcome. Standard errors in parentheses. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$. False discovery rate adjusted p-values (q-values) in square brackets.



MECHANISMS: SOCIAL PRESSURE

Heterogeneous treatment effects by above the sample median in an index of social pressure to share money:

- willingness to pay to control money over spouse in incentivized game
- married
- when has money on hand reports her spouse and family takes it
- another household business



> MEDIAN FAMILY PRESSURE

	(1) profit	(2) savings	(3) capital
MA*family pressure	9.04 (7.87)	-4.05 (21.52)	-5.39 (46.25)
MD*family pressure	30.29*** (7.63)	-15.03 (22.74)	165.33*** (44.59)
Mobile account (MA)	-0.50 (6.02)	2.60 (14.96)	8.97 (32.61)
Mobile disburse (MD)	1.15 (5.67)	12.85 (16.54)	-3.42 (31.99)
Family pressure	-10.78* (5.53)	26.06 (16.52)	1.42 (35.24)
Observations	2,639	2,639	2,639
Control mean baseline	116.6	134.3	638.1

Intent-to-treat estimates. USD. All outcomes are winsorized at the 99% level. All regressions include strata dummies and include the baseline value of the outcome. Standard errors in parentheses. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.



EMPOWERMENT OUTCOMES

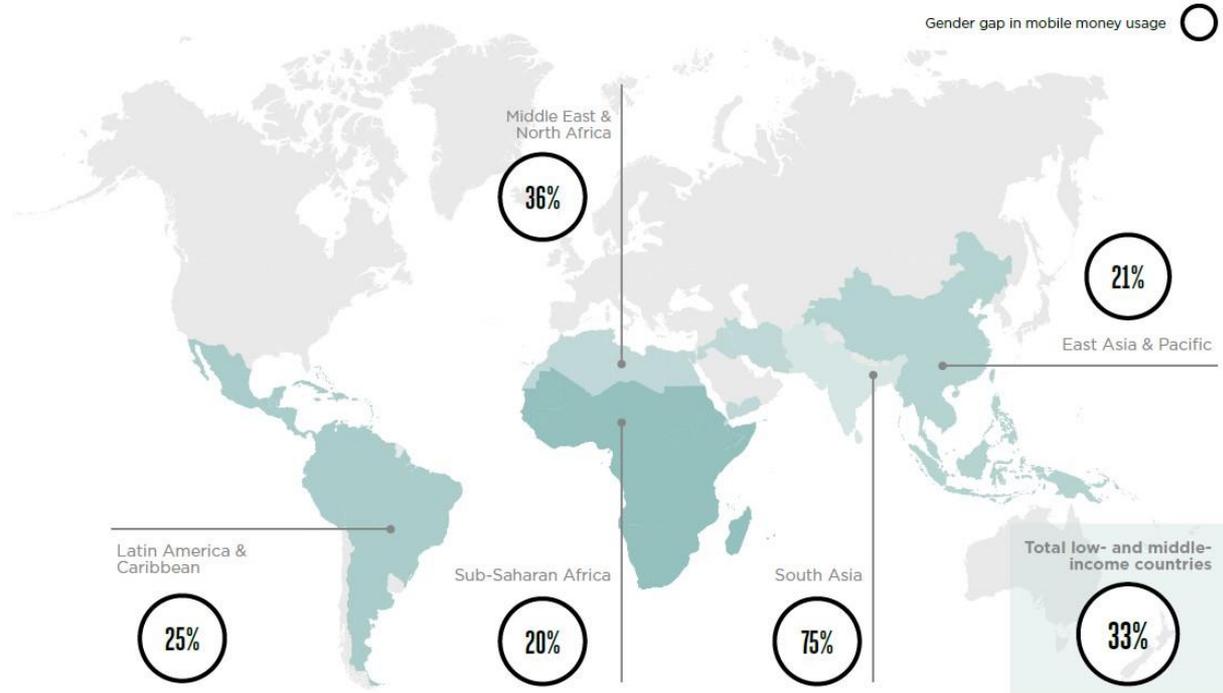
	(1) Switch to spouse	(2) Decisions alone	(3) Decisions equal	(4) Decides money earned	(5) Remittance share	(6) Income share	(7) Index 1	(8) Index 2
MA	0.05 (0.18)	0.08 (0.19)	-0.03 (0.19)	0.01 (0.02)	-0.02 (0.03)	0.01 (0.01)	0.00 (0.01)	0.01 (0.02)
MD	0.18 (0.18)	0.39** (0.19)	-0.03 (0.19)	0.02 (0.02)	0.02 (0.03)	0.01 (0.02)	0.04*** (0.01)	0.05*** (0.02)
Obs	1,591	2,642	2,642	2,642	1,205	2,617	2,642	2,642
R-squared	0.30	0.41	0.30	0.23	0.33	0.29	0.21	0.26
Control mean	5.14	7.02	5.15	0.76	0.79	0.56	0.01	0.00
p-value T1=T2	0.46	0.11	0.99	0.36	0.12	0.63	0.00	0.01

Intent-to-treat estimates. Switch to spouse is the amount required for the woman to select the spouse for payment - higher values indicate a higher amount is required. Decisions are the number of decisions out of 14 made alone or equally. Decides money alone is a dummy variable if the woman reports deciding how to spend her income. Remittance and income share are the share of remittances going to the woman's family and the share of household income the woman generates. Index 1 is an index



STILL A LONG WAY TO GO...

Gender gap in mobile money usage in low- and middle-income countries



Source: 2017 Global Findex database, ages 15+. The gender gap refers to how less likely a woman is to report using mobile money than a man.





TAKING STOCK

CONCLUSIONS

Payments are core to any financial system: understudied in development!

Despite all these gains from technology, there is still a long way to go
Little use of digital payments for P2B, B2B, G2P

Further liberalization and democratization of payments: APIs

- APIs have likely already changed the organizational structure of firms in the US – will this happen in developing economies?

Mobile money created a platform but still playing “blind man's bluff” on new products – that is where additional large (?) welfare gains may be





THANK YOU



DIGIFI INITIATIVE AT J-PAL

DIGIFI

Aim: Co-generate a body of evidence on digital ID and payment systems in SSA

Why: potential for digitization of financial services and identification to improve governance, enhance public sector service delivery and/or catalyze private markets

A growing number of African governments have already begun pursuing:

- Digitization of G2P and P2G payments
- Roll out of biometrically-authenticated ID systems

Evidence on the benefits and challenges of such digital systems is limited



j-p.al/digifi-framing-paper

Supply side channels

Demand side channels

Externalities

Supply AND Demand side channels together



DIGIFI

Proposal Development

Up to \$10,000

Exploratory work related to preliminary research ideas and to build a partnership with the implementing partner

Pilot & monitoring system

Up to \$75,000

Clear research question exploring first stage results & implementation OR data analysis support in the form of monitoring systems

Full randomized evaluation

Up to \$400,000

Africa Scholars (resident and non-resident), J-PAL Affiliates, J-PAL Invited researchers, PhD students with a J-PAL Affiliate or Invited Researcher on advisory committee eligible to apply



AFRICAN SCHOLARS: ELIGIBILITY



Resident African Scholars are those who:

- Those who have **completed a PhD** in Economics or a related field; and
 - Are based in an **academic institution in Africa.**
-



Non-resident African Scholars are those who:

- Those who completed **high school in Africa,**
- **Completed their PhD** in Economics or a related field,
- And are based in an **academic institution outside of Africa.**



AFRICAN SCHOLARS: FUNDING

Proposal Development

Up to \$10,000

Exploratory work related to preliminary research ideas and to build a partnership with the implementing partner

Pilot & monitoring systems

Up to \$75,000

Clear research question exploring first stage results & implementation OR data analysis support in the form of monitoring systems

Full randomised evaluation

Up to \$400,000

African Scholars who have successfully completed a pilot funded by J-PAL

African Scholars (resident and non-resident):

- Eligible to apply to to **proposal development and pilot grants** (Matched with a mentor who is a J-PAL Affiliate or Invited Researcher)
- **RCTs**, once a J-PAL funded pilot has been completed.





SEE YOU TOMORROW