Digital Solutions to Deliver Social Protection

- Jenny C. Aker
- The Fletcher School, Tufts University
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Source: Concern Worldwide
THE CHALLENGE
159 countries have 700 social protection measures
200 of these are cash-based, although 1.7 billion remain unbanked
100 million adults receive payments in cash

Payments in cash incur significant logistical and security challenges
2/3 of unbanked adults have a mobile phone

Source: FINDEX 2017

Two-thirds of unbanked adults have a mobile phone
Adults without an account owning a mobile phone, 2017
Mobile money deployments have increased

300 mobile money deployments across 95 countries with 866 million registered users

Sub-Saharan African total active accounts 2010 / 2018

Source: GSMA 2018
The Context
The Context

• New mobile money transfer program (introduced in January 2010)
  o Few agents outside of capital city
  o Little consumer familiarity with the program
  o Limited adoption

• Low mobile phone penetration (30%)

• High illiteracy rates (85%)
  • Challenges with manipulating mobile phones and remembering PIN codes

• Limited operational capacity of mobile phone service provider in the mobile money sphere
  o Needed to link Concern’s program recipient lists with Zain Zap Interface
The Innovation

- Implemented by Concern Worldwide in 116 villages in response to 2009/2010 food crisis
- Monthly (unconditional) cash transfer of $USD45 for 5 months ($USD 225 total)
  - 2/3 of annual per capita GDP
  - Provided during hungry season (May through September)
- Targeting
  - Households in each village were classified into vulnerability categories (A, B, C and D)
    - Categories C and D selected (61% of village population)
    - Women received the cash transfer
The Innovation

A

B

C

D

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Cash, In-Kind, Electronic, Manual
IMPLEMENTATION AND EVALUATION
The Questions

- How does the cash delivery mechanism affect the costs of implementing unconditional cash transfers (including leakage)?
- Does the cash delivery mechanism affect household behavior and well-being?
- If so, why?

- Exploit randomized assignment of villages to different cash delivery mechanisms
- Collect quantitative and qualitative data on costs, behavior, prices and mechanisms
96 villages were randomly assigned to one of three interventions:

- **T1. Cash:** Manual cash transfer each month in the recipient’s village or in a nearby village
- **T2. Mobile:** Manual cash transfer plus Zap-enabled mobile phone
- **T3. Zap:** Zap-enabled mobile phone plus the cash transfer via mobile money transfer

- No pure comparison group
- No difference in timing of transfers
- Value of the phone about $USD 5
**The Research**

- **T1-C**: Impact of the cash program (unobserved)
- **T2-T1**: Additional effect of the mobile phone
- **T3-T2**: Additional effect of the mobile money transfer approach

No pure comparison group
The Research

- Reduced costs of obtaining transfer can increase time spent on productive activities and change the location and timing of purchases
- Reduced transaction costs associated with informal private transfers help households to better cope with shocks (Jack and Suri 2012, Blumenstock, Eagle and Fafchamps 2011)
- Reduced communication costs increase access to information and lead to more optimal decision-making (Jensen 2007, Aker 2010)
- Increased privacy of the cash transfer leaves more income available for the household and affects investment strategies (Jaklela and Ozler 2012)
- Increased intra-household bargaining: Targeting women can improve women’s control over resources and investment in public goods (Doepke and Tertilt 2011, Lundberg et al 1997, Duflo and Udry 2004, Robinson 2012 Schaner 2012)
The Findings

- Costs
- Well-Being (Food Security and Nutritional Status)
- Mechanisms
The Findings: Costs

Cost per recipient is $.90 more in zap villages – If the program continued for another 2 months, Zap would have been less expensive per program recipient than manual cash.
Program recipients in cash/placebo villages had to travel 2 km (one way) to get the transfer, approximately \( \frac{1}{2} \) hour (excluding waiting time).

The zap group had to travel less than .5 km (less than 10 minutes).

The time savings is equivalent to USD$0.92 over the five-month period (lower bound), or 2kg of millet -- enough to feed a family of five for one day.
Almost all households used the transfer to buy staple grains (millet). Zap households were more likely to buy other foodstuffs (cowpeas, condiments, meat, and oil). Relatively few households used the transfer to buy seeds, school fees, debts, or clothes.
Household diet diversity was 16% higher in Zap households as compared with Mobile and Cash households.
The Findings

- Children in Zap households ate .30 more meals per day as compared with the Cash and Mobile households.
- Relatively higher weight-for-height z-scores in Zap households, but not a statistically significant effect.
The Findings

- Reduced costs of obtaining transfer can increase time spent on productive activities and change the location and timing of purchases.
- Reduced transaction costs associated with informal private transfers help households to better cope with shocks (Blumenstock, Eagle and Fafchamps 2012, Jack and Suri 2012).
- Reduced communication costs increase access to information and lead to more optimal decision-making (Jensen 2007, Aker 2010).
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THE ADAPTATION
Mobile Money Adoption is Heterogeneous

The number of active users is far below total subscribers, and ranges from 1-20% in West Africa.
Mobile Money Agent Density is a Challenge
There are 228 agents per 100,000 people in Sub-Saharan Africa, with large differences by country.

Mobile money agents have 7x more reach than ATMs and 20x more reach than bank branches.

Per 100,000 adults:
- 11 Banks
- 33 ATMs
- 228 Mobile money agents

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Lessons Learned

- Gender
- Responsible Research
- Failure
Conclusions

• Mobile money decreased costs for implementing agency and program recipients, but large fixed costs
  o Potentially cheaper in an environment where mobile money is more well-known and has a larger agent network
  o However, issues around sensitization and PIN codes must be addressed

• Benefits beyond simple cost reduction
  o Increased diversity of purchases, improved diet diversity
  o High marginal utility of income – potentially more variation in outcomes under other conditions

• Why? Decreased observability of transfer and increases women’s control over resources
  o Intra-household decision-making is very context specific
  o Potential other impacts or channels in the longer term
• Evidence of impact in Kenya and Rwanda, but a fraction of what we need to know

• “If we build it, they will come”
  o Need a supply-side (agents, platform) and demand side approach (sensitization, trust, ability to use)
  o Is m-money profitable for the service providers in the short-term? Would other financial services be profitable?

• Mobile money can potentially promote financial inclusion, but will not necessarily “bank the unbanked”
  • Savings, credit, insurance

• Payments can potentially “push” take-up (but will people use it?)
Thank you
Merci
Na gode
Fofo
#4 | Mobile money is less costly than manual cash

Beneficiaries of mobile money cash transfers had to travel shorter distances in Niger

Program recipients receiving manual cash had to travel approximately 2 km (one way) to get the transfer, approximately ½ hour

Aker et al (2016)

The group receiving transfers via mobile money had to travel less than .5 km (less than 10 minutes)

The mobile money transfer group was able to spread out their cash out (i.e., different days)
#1 | Mobile Money Adoption is Heterogeneous

The number of active users is far below total subscribers, and ranges from 1-20% in West Africa

![Bar chart showing the number of mobile money accounts in different countries]

- Benin
- Burkina Faso
- Cote d'Ivoire
- Guinea Bissau
- Mali
- Niger
- Senegal
- Togo

**Number of Mobile Money Accounts**
#2 | Mobile Money Agent Density is a Challenge

There are 228 agents per 100,000 people in Sub-Saharan Africa, with large differences by country.
1. Build or support existing mobile money systems
   • Register more agents or different types of agents

2. Think of creative ways to increase adoption
   • Have a more flexible approach to registration or use a technology that allows a user to send money to a non-mobile money user (called “envole-code”).

3. Spread out payments to avoid crowding

4. Balance innovation with concerns about corruption and leakage