Pathways to Financial Inclusion: Experimental Evidence from Afghanistan

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Policy Motivation

- Mobile money opens substantial scope for financial innovation
  - 40% increase to 100M users in 2014, 255+ services world wide (GSMA)

- Yet penetration is far from universal – some leaders, many laggards
What can we learn from Afghanistan?

• Limited infrastructure and limited trust in banking system; significant challenges of instability, violence, and corruption
  • 10% banked, 4% save formally, 32% literacy (World Bank)
• Widespread adoption of mobile phones in last 15 years
  • From 25,000 subscribers in 2002 to 20M+ now (World Bank)
  • Competitive market: 4 private operators and 1 state-owned operator

3 goals for today:
1. Introduce a “lower bound” case for financial inclusion
2. Summarize 5 years of ethnographic & experimental research
3. Preview what’s coming next with government mobile salaries
Background: Research Engagement

• Research partner: Roshan
  – Largest telecom, nationwide coverage, 6.5M+ subs
  – Launched M-Paisa (mobile money platform) in 2008
    • Provides storage of value & means of exchange,
    • Backed by network of agents (“human ATMs”)

• Collaborations
  • Effectiveness of mobile salary payments (2014, 2016)
  • Automatic contributions to mobile savings accounts (2016)
  • Using mobile phone data to measure vulnerability (2016)
M-Paisa Transaction Volumes
M-Paisa Transaction Amounts

Chart showing the transaction amounts over time, with categories for different types of transactions.
1st Project: Overview (2015, 2016)

• How do mobile salaries affect account usage?
• And how does violence affect MM adoption?
  1. Geolocate universe of M-Paisa users and violent events
  2. Randomized rollout of mobile salaries to 341 Afghan employees of large development contractor (CADG)

• Key results
  1. 50% cost savings for employer relative to cash system
  2. Large increases in micro-savings & airtime purchases
  3. Violence exposure and expectations decrease take up; 80% of extra withdrawals substitute into cash holdings
M-Paisa Users – Daily Locations
Merging Locations and Violence
Mobile Salaries Increase Usage

The Effect of Mobile Salaries

- Mobile Money Balance (AfS)

Date:
- Jul 01, 12
- Oct 01, 12
- Jan 01, 13
- Apr 01, 13

Lines:
- Control
- Treat
- 95 Percent CI
Violence Beliefs Decrease Take Up
2nd Project: Overview (2016)

• “Mobile-izing Savings” in Afghanistan
  1. Create a simple phone-based savings account, with automatic payroll deduction
  2. Randomize initial contribution levels for 949 Roshan staff to test does *default enrollment* increase savings?
  3. More experiments (text msgs, financial consultation) to learn why does default enrollment work?

• Key results
  1. Default enrollment is very effective: roughly equal to 50% matching incentives for increasing participation
  2. Present bias is mechanism behind this default effect
Introducing “M-Pasandaz”: Key Features

• Working with Roshan, we developed a mobile money-based savings account called “M-Pasandaz”
  – Secondary mobile money account with basic functionality (check balance, transfer out)
  – Automatic payroll deduction option
    • Up to 10% of monthly salary
    • Auto-deposited to M-Pasandaz on payday
    • Matching incentives provided by employer

• The fine print
  • Withdrawals are free and instantaneous
  • Any withdrawal forfeits all incentives
  • Incentives paid at end of 6-month “trial” period
  • Payroll deduction is the only way to deposit to M-Pasandaz
  • Contribution rate can be changed at any time (takes 2-3 minutes)
Research Design: Policy Experiment

• Sample cross-randomized into treatments:

1. Default enrollment status
   A. Default In: 5% of salary auto-deposits to M-Pasandaz
   B. Default Out: 0% of salary auto-deposits to M-Pasandaz
      – Note: anyone can change rate, at any time, by calling HR

2. Matching incentive level
   i. White Plan: No matching incentives provided
   ii. Blue Plan: 25% match on all contributions
   iii. Red Plan: 50% match on all contributions
      – Note: Employees cannot change plan type
Results: “Pricing the default effect”

• Default is roughly equivalent to a 50% match
Experimental Design: Project Timeline

- **Timeline**
  - Study Phase 1: Defaults and matching contributions
  - Study Phase 2: Understanding why default work
3rd Project: Overview (in field)

• Government Mobile Salary Payments
  1. Civil servants paid today using a mix of EFT and cash systems – high levels of leakage and dissatisfaction
  2. Pilot with 3,000 Ministry of Labor employees in Kabul launches in July: measure cost savings & experiences
  3. 250k teachers, 100k other civil servants, 370k ANDSF: leverage scale & network effect to attract private users

• Key points
  1. States must pay their employees in order to function
  2. Once demonstrated, potential to be a popular reform
Conclusions

- Mobile salaries can help catalyze MM adoption by offering benefits to employers, employees and MNOs.
  - Preference for liquidity with violence requires robust network

- With mobile salaries, automatic payroll deduction generates large increases in short-term savings.
  - Making savings a “passive” decision is effective (50% match)

- Government of Afghanistan exploring mobile salaries.
  - More broadly: digitizing government payments and receipts
Thanks for your attention
Feedback, comments, suggestions welcome!

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