

FIRM UP PERFORMANCE

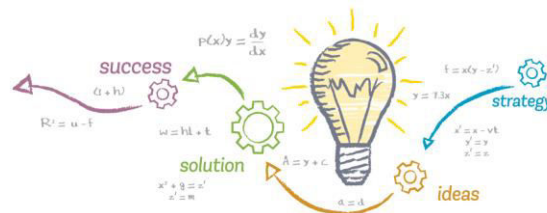
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WORLD BANK GROUP





FinTech Adoption by SMEs

Experimental Evidence from Mobile Money in Kenya

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Ravindra Ramrattan



This project is dedicated to the memory of a dear friend and former TiU PhD student, Ravindra Ramrattan, who lost his life at the tragic Westgate Mall terrorist attacks on 21 September 2013 in Nairobi.

1983-2013

Research questions

1. What **determines** the willingness to adopt **cashless payment technologies** by SMEs in the developing world?
2. What is the **impact of** such technologies **on** SMEs **financial performance**? Channels?

(Lipa Na) M-Pesa



M-Pesa: Mobile money product which allows **P2P** transfers of money via SMS.

Lipa Na M-Pesa: extension of M-Pesa targeted for businesses (specially retailers) → **P2B**

Benefits **over cash:**

- Analogous to paying with **debit card**.
- An **extra payment option** for the customer at no fixed cost
- Reduce **theft** (internal and external).

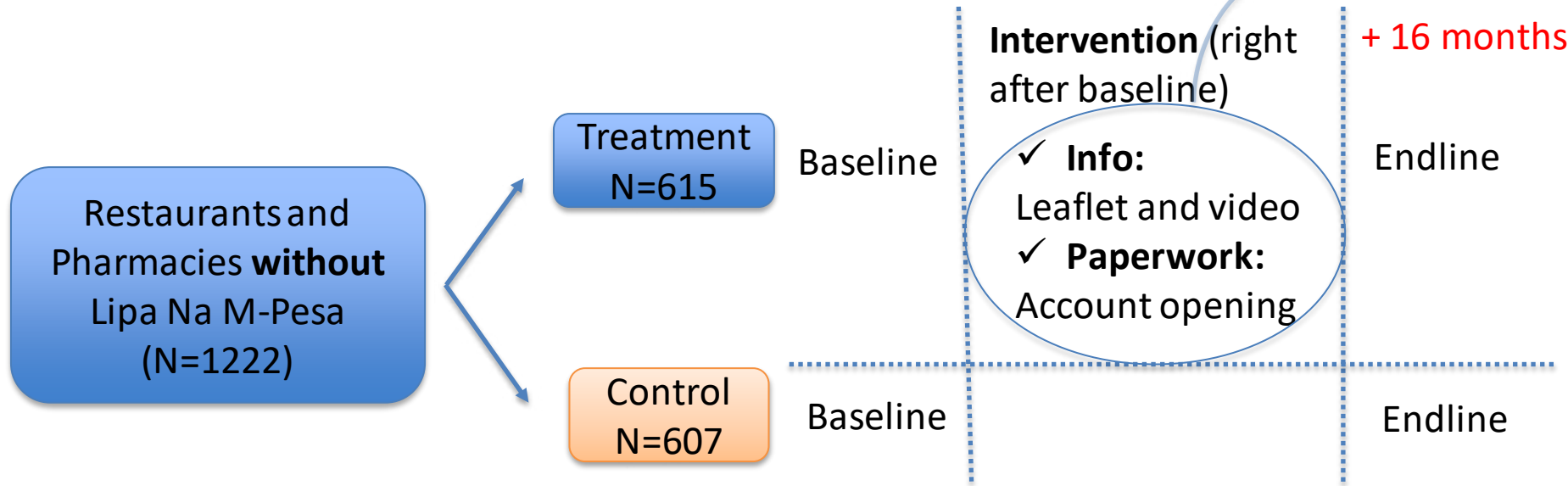
Benefits **over (standard) M-Pesa:**

- **Free** for customers, cheaper variable cost for businesses.
- One account in **several phones**.
- Unlimited **m-money storage** capacity.
- Transactions get recorded (**record-keeping**).

Experimental Design

Encouragement design

- Despite its potential, **low take up** (1/4 of the retailers had it). **Why?**
- What is the **impact** of Lipa Na M-Pesa on businesses **financial performance**?



Identification Strategy and Challenges

- **Willingness to adopt** the technology: answer YES to our offer to open an account on the owner's behalf.
- **Determinants**
 - ✓ **Experimental:** If someone answers "YES" → barriers released binding.
 - ✓ **Correlations:** baseline characteristics associated with answering "YES".
- **Impact:** ITT (ANCOVA) between treatment and control firms.
- **Challenges:**
 - Control firms opening accounts
 - Attrition (not selective)
 - Changes of requisites to open a Lipa Na M-Pesa account (business license required)

Results on **willingness to adopt**

- **Causal effect:** Simple information and relatively small transaction costs were binding barriers (40% of our sample answer **YES** to our offer).
- **Correlation:** Financial transparency aversion (-), previous use of M-Pesa (+) and cognitive ability (+).

Results on **impact**

- **Causal effects (ITT):**

- ↑ Lipa Na M-Pesa **usage** (40%).

- ↑ Perceived **safety** (9%), specially among firms highly exposed to thefts.

- ↑ **Mobile-money loans** (60%), (extensive and intensive margin) specially in small firms

- ↑ **Inventory** (small firms)

- ↓ **Sales volatility** (small firms)

- ≈ Other types of loans (informal and informal)

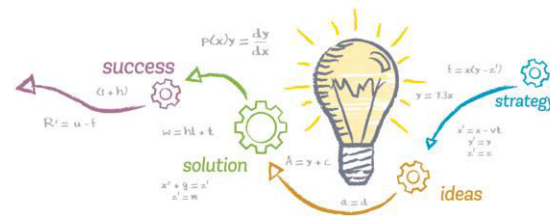
- ≈ Sales or long term investment

Conclusion

- Seemingly small barriers matter for adoption.
- Pathways: Lipa Na M-Pesa → transparent → prove creditworthiness → improve access to external finance to compensate short-term liquidity needs → sales volatility.
- Notably, those more averse to financial transparency are less likely to adopt it.

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Thank you!