Opportunities for Complementary Research and Analysis

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Leveraging the Global Findex Microdata for Policy and Research

Roadmap

Introduction

- No longer news to say digital finance (DF) constitute meaningful consumption weight in households budgets
  - Quite slow to update consumption baskets with DF in calculating CPI, inflation
  - Even in countries where consumption baskets reflect DF [EG. Ghana], they rely on posted prices (INCORRECTLY!) -- an issue I'll turn to later
- **FINDEX DATA:**
  - Nationally representative $+$
  - Unique job illustrating importance of DF $+$
  - Distribution [breath $+$ depth] of DF penetration across ctrs, "massive progress globally" esp. in developing ctrs.

Where do we go from here wrt research?
- FINDEX DATA lays foundation for many RQs
- I'll discuss in light of own work $+$ other areas ripe for research

Complementary [Micro] Research

I. Consumer Finance:

- [a] Substantial evidence shows DF users are **"poorly informed"**
  - $1/3^{rd}$ consumers cannot do own transactions and rely on agents -- cross country work [TCI 2022: In TZ, UG, BD]
  - 55% of the time consumers do not know the official prices but agents fully know in rural Ghana [Annan 2022]
  - 40% of time consumers do not know who better quality [cheaper + reliable] agents are [TCI 2022; Annan 2022]

- [b] Key point: such market features could open up possibilities for
  - potential exploitation of consumers
  - consumer mistakes
  - underutilization of DFS, etc.

Complementary [Micro] Research

II. Retail Finance:

- [a] Agents – key building blocks to robust DF ecosystem – are "sparse" in rural areas [ReFinD 2021]

- [b] DF users tend to experience agent exploitation EG:
  - In rural Ghana: 20% transactions overcharged by attracting unexpected fees [Annan (2022) Experiment]
  - In TZ, UG, BD: over-charging evidence in ongoing cross-country exercise (span agent-assisted services) [TCI 2022]

Complementary [Micro] Research

Cont'd II. Retail Finance:

Annan (2022) Experiment -- Overview

- [a] Work conducted across 130 local markets in rural Ghana
- [b] Census retail MOMO agents and document impose illegal markup
  - ▸ 20% transactions overcharged
  - ▸ 100GHS: 1.0GHS (official) vs 1.8GHS (true) $\Rightarrow$ +80% increase in fees
- [c] Market-level intervention: randomly inform users and mkt participants [official prices + report overpricing behavior]
  - ▸ -72% decrease in p (overpricing)
  - ▸ +54% increase in accuracy of consumer beliefs about overpricing
  - ▸ +40% increase in Q^D usage of DFS (ϵ=1.0)
  - ▸ +40% increase in sales revenue of MOMO retailers
- [d] w several positive spillovers: ↑ MOMO services accompanied by ↑ in non-MOMO services; ↑ higher overall profits; etc

Complementary [Micro] Research

III. Behavioral Finance:

Two Pieces of Motivating Evidence

- [a] Lack of switch by consumers to better quality agents
  - ▶ users do not know who better quality agents are to consider switching...
  - ▶ More work to understand switching and its effect on learning outcomes, demand for DFS, including prices + quality of services in EQBM

- [b] DF users misperceive the extent of overpricing
  - ▶ When asked, "users say 60% of time retailers overcharge, but in reality it's 20% (Annan 2022)"
  - ▶ In principle, DFS demand is driven by (i) bias + (ii) price
  - ▶ More work to understand welfare costs of such bias in users beliefs

Complementary [Micro] Research

IV. Pricing (cross-cutting issue):

- MOMO/DF "convenient", but users **price-sensitive** to DFS usage
  - ▶ Best illustrated by users ST negative responses to digi tax policy experiments. EG. in Ghana, TZ: -40% decrease in DFS usage

Transaction Cost Index (TCI) -- Overview

- We designed and implemented 3 measurement approaches
  - ▶ professional mystery shopping (MS) vs
  - ▶ local MS vs
  - ▶ consumer intercepts, with potential for scale
- Tracking prices of DFS: True prices > Official prices at retail outlets
- Tracking quality of DFS: Reliability + Prices (overcharging) + Transparency + Services
  - ▶ **Within-market** (and across-market) variation in prices and quality
  - ▶ Estimated savings to consumer from switching to high quality agents **9%** of total transaction value (meaningful?)

Concluding Thoughts w Implications for [Macro] Research

Macro research? a lot of scope

- We showed True prices of DFS $\neq$ Official prices at agent outlets $\Rightarrow$ **posted prices INCORRECTLY!** reflect prices consumers face
    - Incorporating such "hard-to-measure" micro prices into CPI cals;
    - Mis-measurement of CPI + inflation if use official posted, lower prices?
- Macro work: implications of DFS for macro-relev questions EG prices
- How to develop scalable measurement methods for nationwide tracking of hidden prices to inform national estimates

- FINDEX DATA lays foundation for many RQs – Micro and Macro
- Common, relevant DF research themes:
    - information to users
    - exploitation (and consumer protection)
    - retail agent networks – entry and competition
    - user beliefs (and welfare)
    - pricing (and interoperability)
    - measurements and merging w FINDEX DATA
    - external validity: compare experiment data samples w FINDEX DATA
    - improving national CPI and inflation estimates

Thank You!