Open Payment Infrastructure and Market Participation: The Role of Interoperability in Financial Inclusion

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What is this paper about?

- **Question:** How does interoperability affect financial market participation?
- **Bigger question:** Should payment systems be interoperable?
- Answer: interoperability increases participation
- Also increases risk-taking by small investors

Overall asessment

- Important question as central banks try to make their payments interoperable
- Convincing causal impact of UPI on market participation
- Comments:

1. Welfare implications and costs
2. Separating interoperability and digitalization
3. Minor comments

Should payments be interoperable?

- I hope for a yes/no/depends answer
- The most successful attempt – Brunnermeier, Limodio, Spadavecchia (2023)
- Interoperability reduces fees but also hurts financial inclusion
- This paper: positive effects on market participation but also increased risks
- Can we say more?

Suggestions

- What are the effects on household income, consumption, and welfare?
- How does interoperability affect discount rates and rates of corporate investment?
- Are small business loans affected? Access to lending?
- What are the costs of interoperability? See Shohini Kundu's NBER discussion

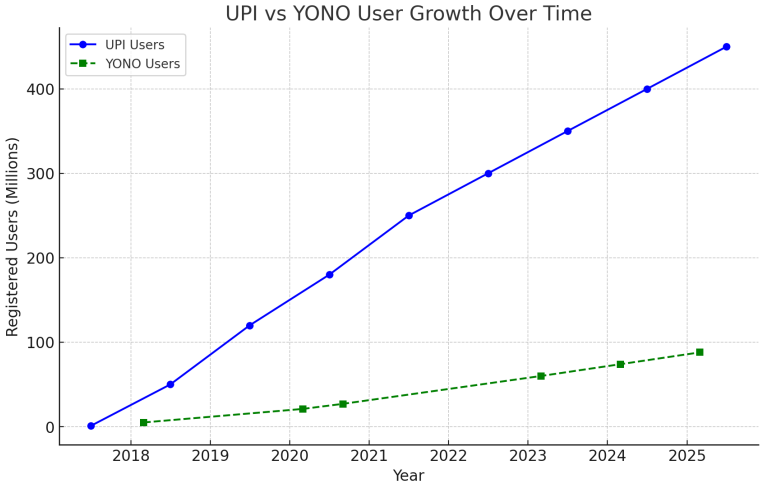
Interoperability vs digitalization

- Very challenging to separate
- If a new FinTech joins UPI, it is both interoperability and digitalization
- UPI Exposure can mean both as UPI grows over time
- Authors' solution: compare UPI to YONO (single-bank, non-interoperable)
- Right direction but still remaining caveats

UPI vs YONO

- Ideal setting: non-interoperable clone of UPI
- Identification assumption: YONO is similar to the clone
- Important differences between the two:
  - UPI is heavily promoted and has multiple banks, while YONO does not
  - UPI is more popular and transparent
- Bank and design effects are remaining
- Extremely challenging to nail down but would be groundbreaking

UPI vs YONO


UPI vs YONO User Growth Over Time
UPI Users
YONO Users
Registered Users (Millions)
0
100
200
300
400
2018
2019
2020
2021
2022
2023
2024
2025
Year

Minor comments

- Cross-country interoperability (Brunnermeier, James, Landau (2019))
- 4G instrument is highly endogenous
- Do Rambachan and Roth test for parallel trends, as differences can arise after UPI
- Discuss why some areas are high-UPI, potentially due to demographics (Crouzet et al (2024))

- If interoperability is the mechanism, why are results stronger in urban areas?

Conclusion

- Important question and convincing evidence about UPI and participation
- More welfare analysis would be interesting (maybe in future papers)
- Separating interoperability and digitalization is challenging
- Good luck!