The Welfare Benefits of Pay-As-You-Go Financing

(by Gertler, Green, Li, and Sraer)

Discussion by Sasha Indarte

Lock out of consumption of services can deter default

Historically, utilities (electricity, water, etc.) have used this tactic

- Miss a payment, no more water!
- Similarly, landlords can let homes depreciate if renters are behind on payments

Technology is making this **easier** for lenders

- **This paper:** lender can remotely disable phones as part of **PAYGo financing**
- Related setting: "starter interrupters" used for subprime auto loans

Lock-out tech innovations can mitigate ***limited commitment***

- Will we see this in more areas? E.g., laptops, TVs, general loans?
- Does this technological innovation benefit consumers? How much?

Comment 1:
Equilibrium Effects of Financing with Lock-Out Tech

Partial vs General Equilibrium

In PE, a new contract can only benefit (rational) borrowers

- They can always stick with their outside option!

In GE, two possible costs may offset these gains:

1. Increase in price of purchased good (phone)
    - Redistributes surplus from infra-marginal to marginal phone buyers
    - Likely not a channel in the RCT, but could matter for the broader rise of this tech

2. Change in price of alternative financing sources (outside option)
    - Redistributes welfare between PAYGo and non-PAYGo users
    - PAYGo users gain if there is advantageous selection into PAYGo

Adverse or advantageous selection into PAYGo?

1. Adverse selection into PAYGo can happen if…
    - Low liquidity borrowers are more default prone AND select into PAYGo
    - Can happen if lower payments are esp. appealing to low-liquidity borrowers
    - → positive correlation between price sensitivity and default risk

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2. Advantageous selection can happen if…
   - Low risk borrowers have costly alternative sources of credit
   - High risk value PAYGo less because (1) lock-out makes default more costly and (2) lower payments are less valuable if you end up defaulting anyways
   - → negative correlation between price sensitivity and default risk

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Paper has evidence suggesting scenario #2 is more likely! Finds that price sensitivity is decreasing in default risk

Implications of Advantageous Selection

- GE cost of advantageous selection:
  - If low risk opt into PAYGo (i.e., cream skimming), the price of alternative funding sources may rise
  - Welfare gains of PAYGo user may come at a cost to non-users

- Model's outside option is a cash purchase of the phone
  - Could instead lead to adverse selection into PAYGo (only low liquidity borrow)

- **Suggestion:** modify outside option to include an **unsecured loan**
  - Include risk-based pricing for unsecured loan so selection can influence it
  - Comparing welfare gains of alternative loan vs PAYGo relative to cash doesn't feature this selection channel

More evidence on outside options?

- An unsecured loan may be a more plausible alt. than a secured loan
  - Setting aside selection channel, welfare gains may also be smaller against an unsecured loan (no loss of phone use!) or larger (unsecured may be very costly)

- 21% of PAYGo users have a credit card

- What might the remaining 79% use if not PAYGo nor credit card?
  - Payday loans?
  - Fintech lenders?
  - Auto title loans?
  - Borrowing from friends and family?

Comment 2: Calibration and the Cost of Default

Source of large welfare gains

- One reason for large welfare gains is high est. value of a phone
  - Est. WTP for *a phone* is around 30% of weekly long-run mean income!
- High value is (in part) inferred from reluctance to default and high WTP for the *PAYGo contract*
  - When we like our phone more, default with lock-out tech is more costly!
- Is the contract valuable because phones are valuable? Or because default is costly?
  - Non-pecuniary costs of default (e.g., stigma) could make PAYGo loans much more appealing than outside options (esp. expensive unsecured credit)

Suggestion: add a non-pecuniary default cost

- Across countries and credit markets, consumers perceive large moral and social costs to default
  - E.g., Bursztyn et al. (2019), Guiso et al. (2013), Diep-Nguyen and Dang (2022)

- Does the model have degrees of freedom to separately identify phone value and stigma cost? I think so!
  - High device value or stigma both increase (1) WTP for *contract* and (2) Pr(repay)
    - (True for stigma if default risk is higher with outside option, e.g., payday loan)

  - But device value ↑ WTP for phone while stigma ↓ WTP for phone

  - → targeting phone ownership rate could help discipline stigma cost

Conclusion

In conclusion…

- Insightful paper on important fintech innovation: lock-out tech
- RCT estimates PAYGo take-up and default sensitivity to loan price
  - Disciplines structural model, implying large welfare benefits of PAYGo loans
- Directions for future research:
  - How good of substitute for unsecured credit could loans with this tech be?
  - What are market-level effects of the rise of technology?
  - Behavioral borrowers: valuable commitment device or costlier over-borrowing?