App Platform Model

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Overview and motivation

- Comprehensive characterization
- Monopoly platform (e.g., app store)
- Connecting between users and app developers
- Vertical differentiation between monopoly apps
- Consumers differ in WTP for quality
- Study implications for regulatory interventions

Below-cost fees

- Welfare-maximizing fees:
  - Below cost
- Worse than monopoly distortion:
  - Positive externalities of platform
    - Enables network effects for developers and consumers
- In reality: substantial fees
  - Probably above cost
- What can be done?

Competition in device market?

- Paper assumes platform monopoly
- In reality: Android vs. Apple
- But:
  - Switching costs
  - In-app activity negligible
  - Consistent with Commission in Apple Music Streaming

Competition in device market?

- Alternatively:
  - Could embrace the question:
    - How level of switching costs affects results
      - E.g., effect of commission cap:
        - Currently, increases device fee
          - Can device competition constrain this?

    - Competition btw Apple and Android:
      - One charges fees for phone
      - The other charges nothing
        - Third party sets fee

    → Can contribute to the Apple/EC debate

Competition in device market?

- Practices raising switching costs
  - (see e.g., DOJ complaint 2024)
  - The model abstracts from this

Hybrid platform with foreclosure

- Paper assumes each app is monopoly

→With hybrid platform:

  →A similar independent app excluded

- What if independent app remains and competes?
  - (e.g., Apple music vs Spotify)

  - Developer assumed to have zero marginal costs
  - But with music streaming, pays royalties

    →Commission passed on

    →Foreclosure via the commission (See their RAND paper, pure oligopoly?)

      →Indeed Apple Music increased fees

Hybrid platform price floor

- Paper shows consumers better off:
  - If platform charges higher in-app price
    - Justify a price floor?

Homogeneous consumers benchmark

- In Price cap/hybrid sections
- Reduction in commission/in app fees
  - Can harm consumers
  - Enables higher device fee
    - Exploits infra-marginal consumers
      - High willingness to pay
- Would this happen with homogeneous consumers?

  → Homogeneous consumers benchmark useful
    - Not only for alternative payment system

Endogenize which app to exclude in hybrid?

- Paper assumes platform excludes infra marginal apps
- If it decides which apps it wants to exclude?
  - Results imply it may want to exclude an inframarginal app

Cap on device fee

- Paper implies cap on device fee affects commission
- But Android charges no device fee
  - (third parties charge the fee)
    - And charges commission similar to Apple

RPM by platform?

- What if platform dictates developers' prices?
- Developers' pricing affects platform's profits

- Price could be too high for developer:
  - It disregards effect on participation

- Maybe price could be too low?
  - "Popcorn effect" – other profits on app for developer?

Combining a “Google like” case

- Google charges zero, but 3d party sets device fee
- Combined with other extensions?
  - E.g., hybrid: Google-Android story
  - Cap on commission?

Thank you!