

Gatekeepers and Self-Preferencing: Incentives and Welfare Trade-offs in Two-sided Markets

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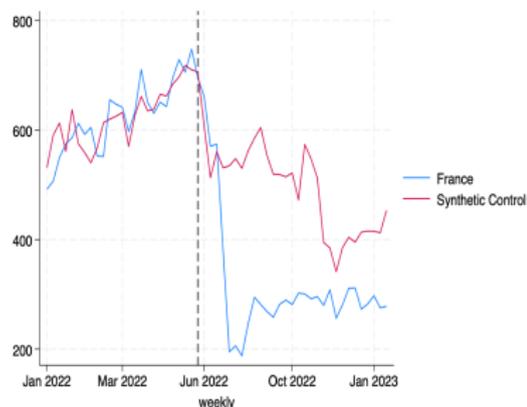
Bocconi & Fudan

One Example

A recent antitrust case against Google: FCA targeted display advertising market

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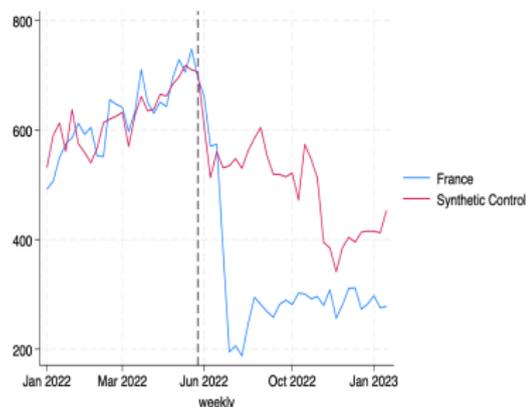
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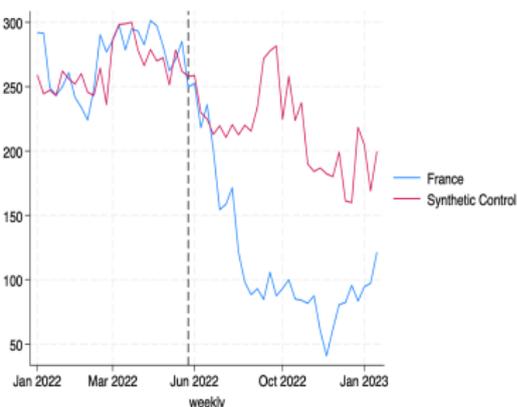
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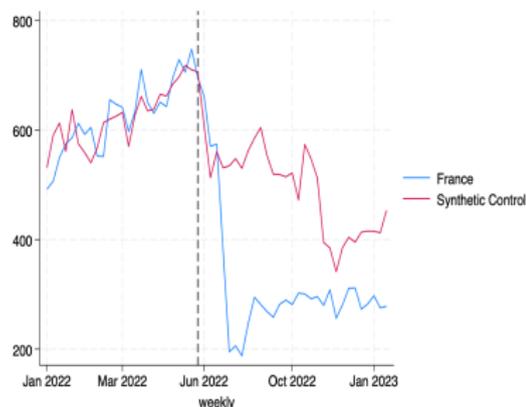
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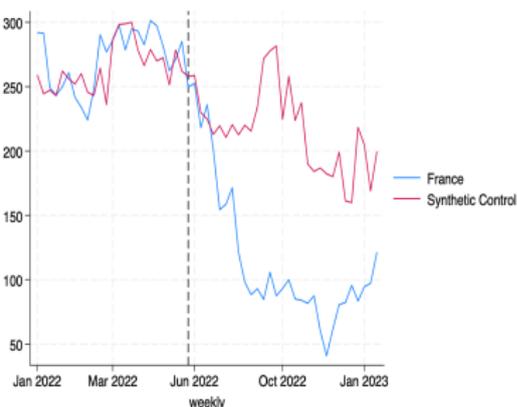
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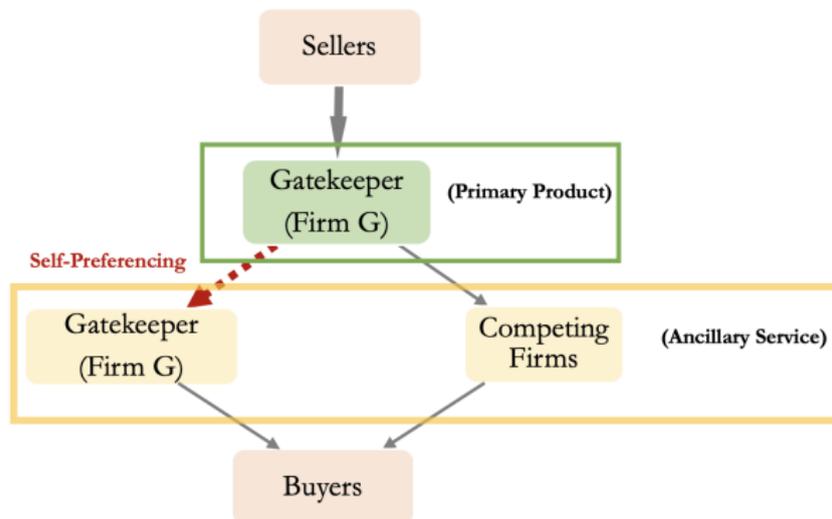
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(b) Publisher Revenue (\$ Thousands)

- ▶ Regulating without careful design may **backfire**? A comprehensive study is needed!

Model



- ▶ Primary market (primary product): monopolized by firm G
- ▶ Adjacent market (ancillary service): provided by firm G (first-party) and $N \geq 1$ competing firm(s) (third-party)
- ▶ Highlighted market features:
 - ★ chosen and purchased by sellers
 - ★ affects surplus of both buyers and sellers
 - ★ buyers' and sellers' preferences can differ

Self-Preferencing: big company **diminishes** the surplus of sellers if they use competing ancillary service

Utility

► Buyer:

- surplus/utility:

$$U_b = \begin{cases} v_G^b, & \text{if 1P ancillary service} \\ v_G^b - \beta_b, & \text{if 3P ancillary service.} \end{cases}$$

buyers' value over 1P service is v_G^b , over 3P service is $v_G^b - \beta_b$,
with $\beta_b \leq 0$.

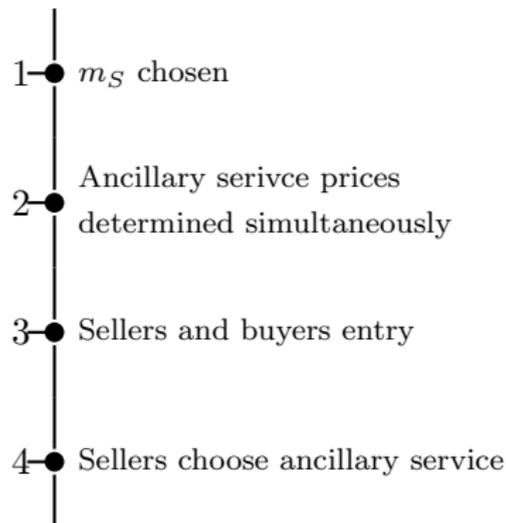
► Sellers:

- consideration set: 1P service & a randomly chosen product (equal chance among competing firms)
- 1P and 3P services: both horizontally differentiated and vertically differentiated
- vertical differentiation: 1P service value v_G^s , 3P services value $v_G^s - \beta_s$, with $\beta_s \leq 0$.
- surplus/utility:

$$U_s(\theta_j, i) = v_i^s - p_i - m_S - t|\theta_j - l_i|$$

Timeline and Assumptions

Timeline



Assumptions

- ▶ All firms derive a positive equilibrium demand ($|\beta_s| < 3t$)
- ▶ There exists competition between ancillary services and no corner solution in user entry ($\underline{v}^b < v^b < \bar{v}^b$ and $\underline{v}^s < v^s < \bar{v}^s$)
- ▶ No marginal costs
- ▶ Firms take user entry as given when choosing ancillary service prices

Key Findings: Welfare Implication

Findings

- ▶ Gatekeeper is motivated to practice self-preferencing even when its ancillary service is inferior.
- ▶ Impact of self-preferencing depends on buyers' and sellers' preferences, and the gatekeeper's pricing instruments.
- ▶ Regulating self-preferencing is necessary in the long run.

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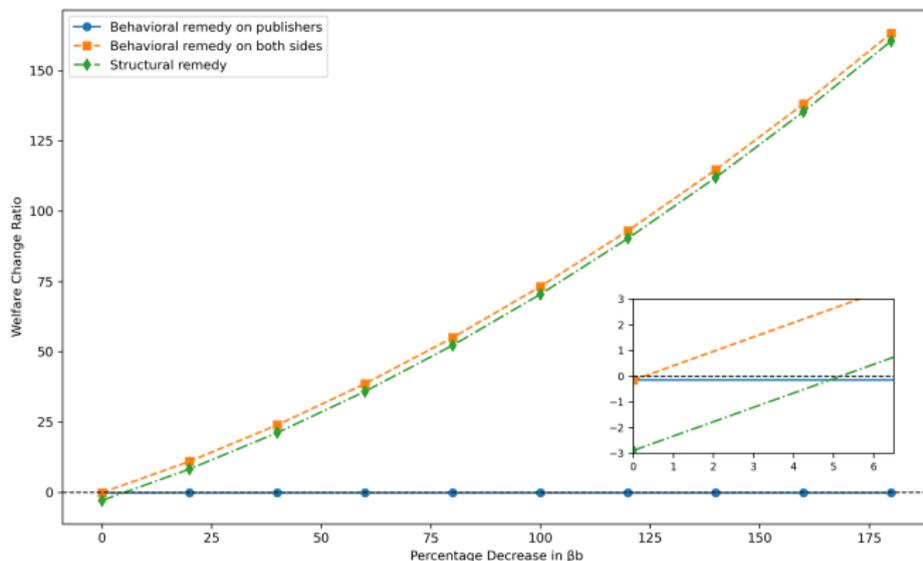
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- ▶ Observations: publishers and advertisers are **worse off** after regulation
- ▶ Conditions: advertisers **dislike** interacting with non-Google adtech

Counterfactual Exercises

Figure: Social Welfare Impact of Different Regulations



Conclusion

- ▶ **Welfare:** jointly determined by many factors
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 - buyers' and sellers' preference over ancillary services
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 - high similarity
 - enhanced by network effects

Conclusion

- ▶ **Welfare:** jointly determined by many factors
 - product quality
 - buyers' and sellers' preference over ancillary services
 - dominant firm's price instruments
- ▶ **Self-preferencing Incentive:** not always profitable
 - ancillary service quality not too low
 - high similarity
 - enhanced by network effects
- ▶ **Policy:** regulation is highly needed.
 - no absolute answer
 - any nuance in regulation design and market characteristics affects effectiveness

Thank you!

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