

# Regulation of & with Digital Platforms

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facebook



# Regulating Digital Platforms

## Definitions:

- *Regulating:*
  - *Consumer protection: ensure consumers are protected from risky transactions.*
  - *Antitrust: rein in market power and encourage competition.*
- *Digital Platforms (very loose definition):*
  - *Enable interactions between two or more side of users (multi-sided platforms).*
  - *Facilitate search, matching (incl. payment), trust.*
  - *They are not all GAFAM.*



# Many Stakeholders Involved

- Policymakers, Journalists, Regulators, Legal Scholars,...
- Why us?
  - Identify (for the theorists in the room) and quantify (empiricists) trade-offs.
- As we go through this talk, we will show a variety of:
  - Research Questions
  - Methodologies
  - Data sources



Consumer Protection

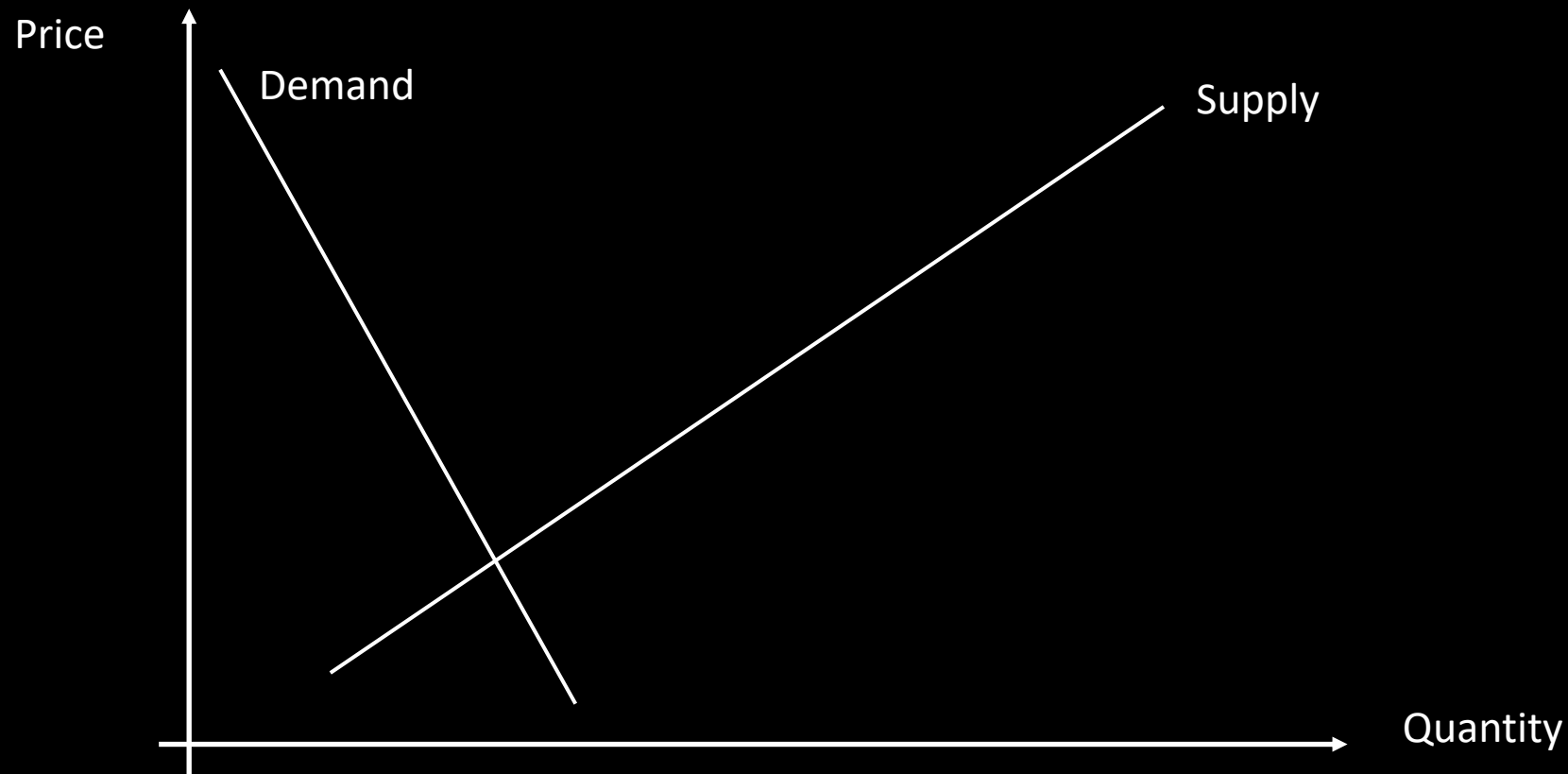
# Consumer Protection

- Most digital platforms enter existing markets, which are already subject to regulation...
  - Occupational Licensing.
  - Certifications.
  - Health and Safety Inspections.



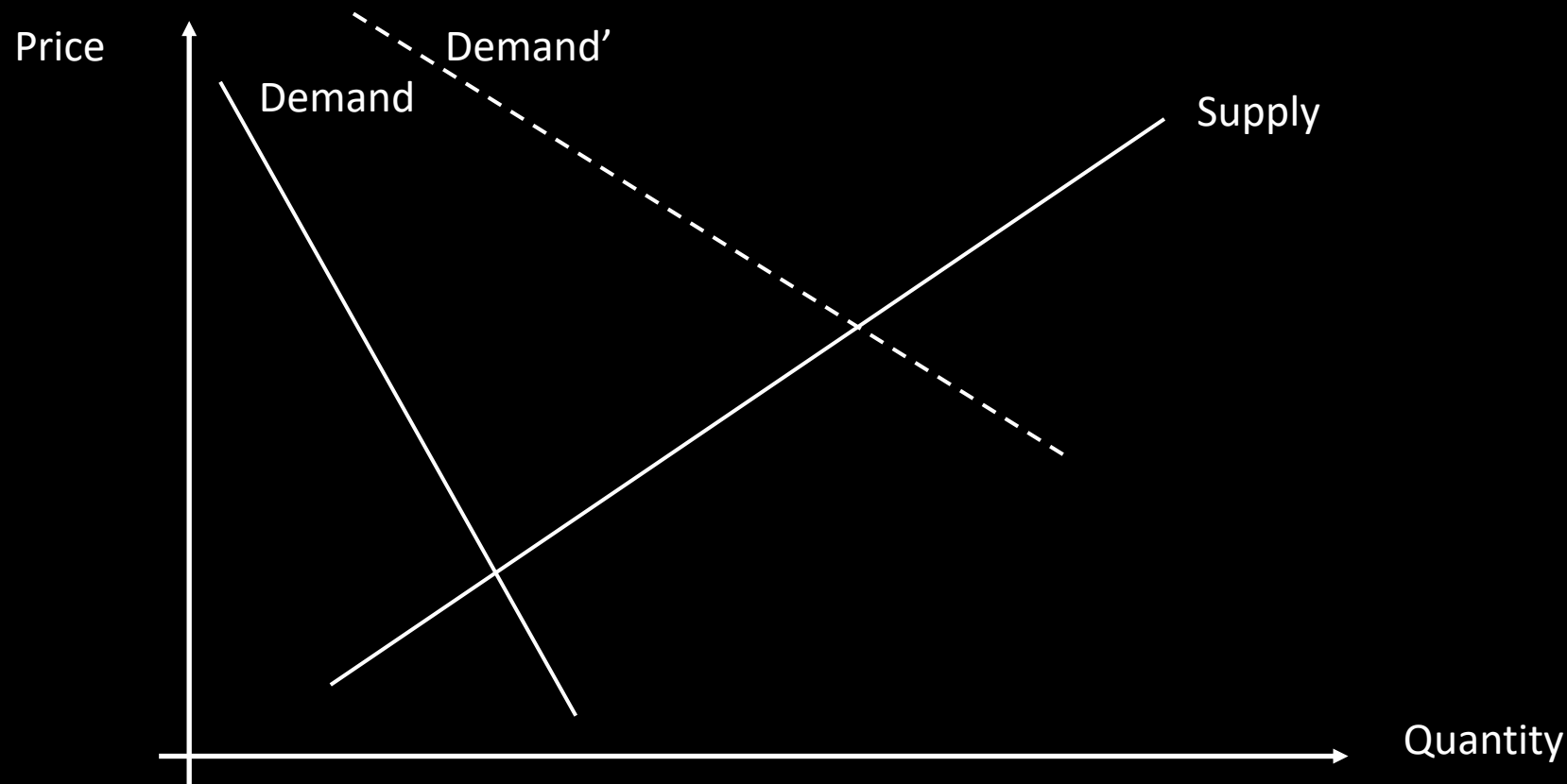
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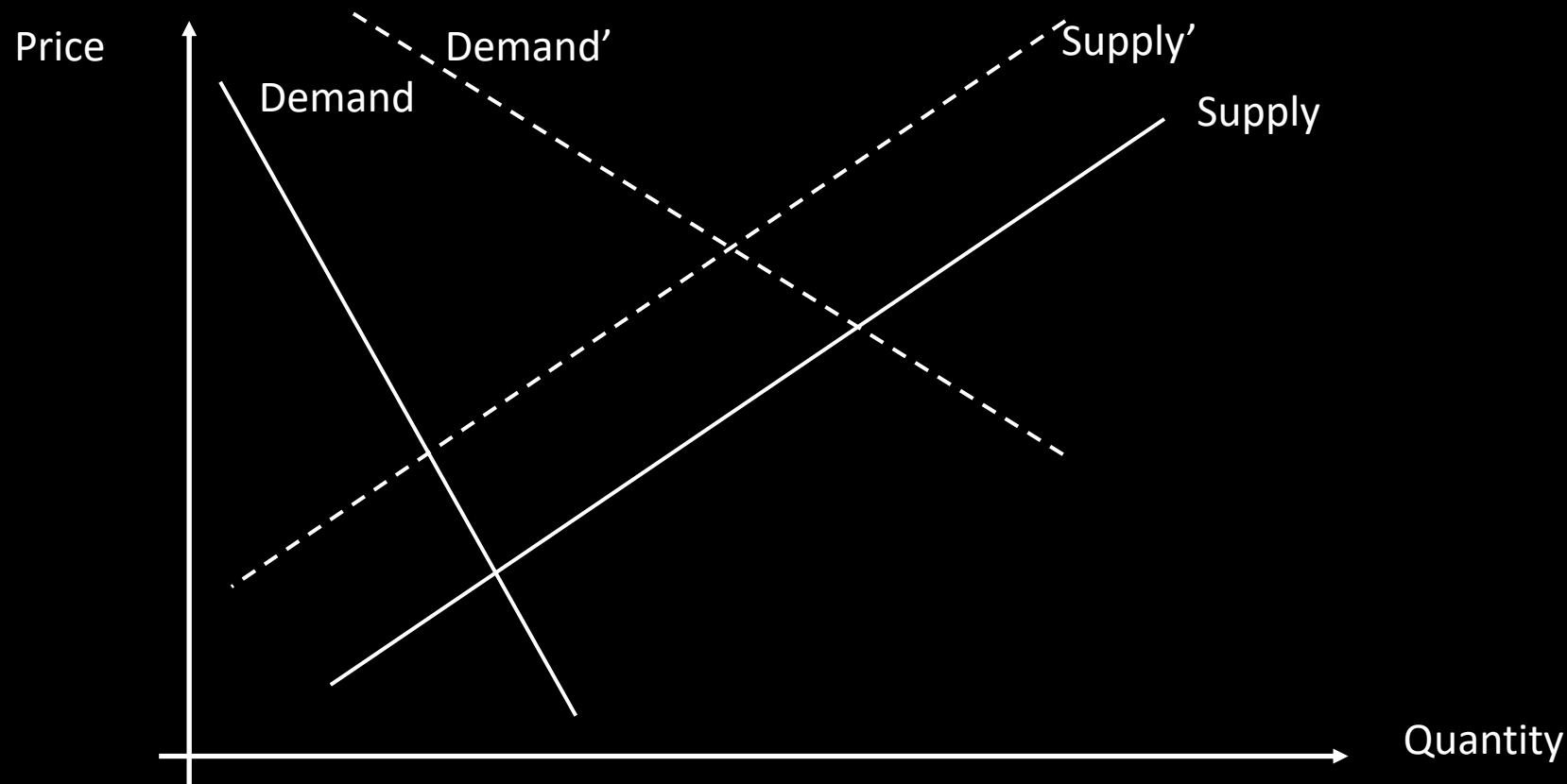
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- Given it already exists, we could simply extend existing regulation to “online providers.” E.g.:
  - Extend safety/accessibility regulation for hotels to Airbnb hosts.
  - Extend taxi medallion requirements for taxis to Uber/Lyft drivers.

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    - Extend safety/accessibility regulation for hotels to Airbnb hosts.
    - Extend taxi medallion requirements for taxis to Uber/Lyft drivers.
1. Is existing regulation justified in the first place?
  2. Does fundamentally different supply warrant different regulation?
  3. What other options are available to address asymmetric information?

# 1. Is Existing Regulation Justified in the First Place?

(+) Raise quality... But how much?

(-) Raise Entry Barriers... But how much?

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- Farronato, Fradkin, Larsen, Brynjolfsson, 2021, “Consumer Protection in an Online World: An Analysis of Occupational Licensing” (WP)

Answer: not at all.

Main limitation: use customer satisfaction metrics as proxy for quality.

How can we better measure quality we should care about?

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(-) Raise Entry Barriers... But how much?

- Blair, Fisher, 2022, “Does Occupational Licensing Reduce the Effectiveness of Customer Search on Digital Platforms?” (WP)

Answer: quite substantially.

Main limitation: cannot separate role of different regulatory requirements.

Which requirements (exams, on the job training, schooling,...) have largest net benefits?

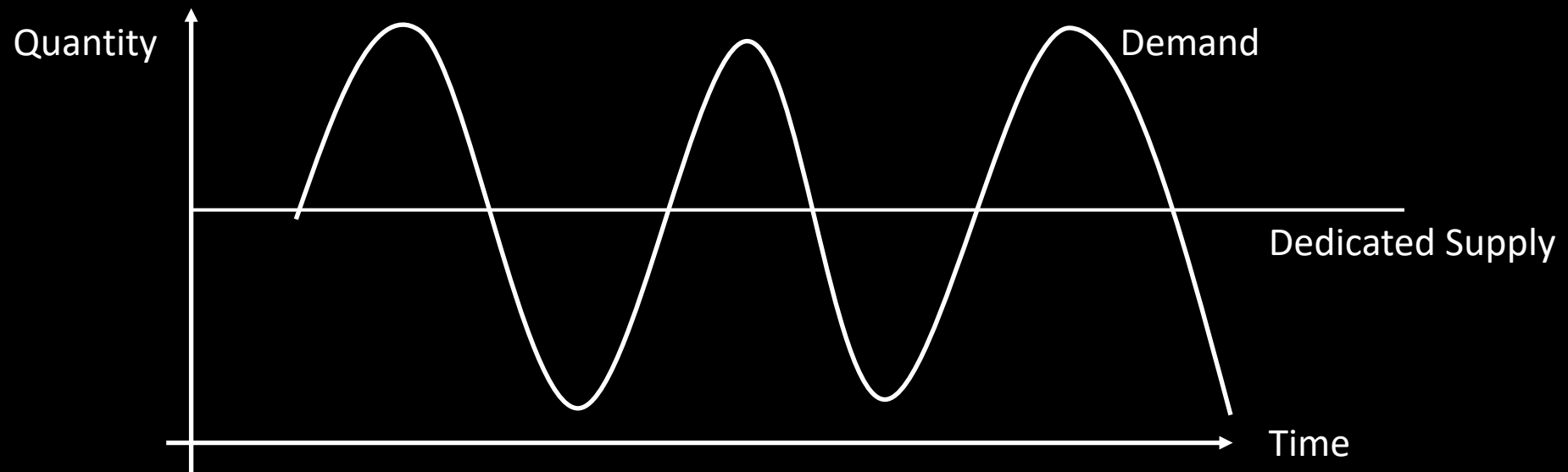
## 2.Does Fundamentally Different Supply Warrant Different Regulation?

- Existing regulation is designed for “professional providers.”
- This tends to generate “dedicated supply:”
  - Hotels whose rooms are available 365 days a year;
  - Taxis who are available in 8-hour shifts (or close enough).



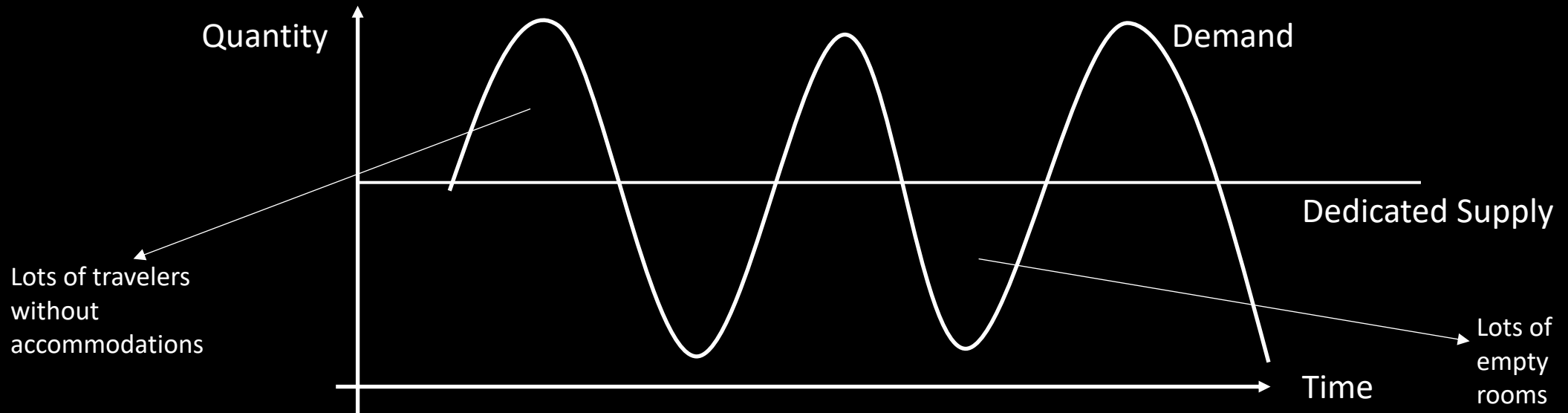
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- Digital Platforms facilitate entry of “flexible supply:”
  - Farronato and Fradkin, Forthcoming, “The Welfare Effects of Peer Entry: The Case of Airbnb and the Accommodation Industry” (AER):
    - Flexible supply is responsive to demand fluctuations, by entering when demand is high and contracting when demand is low.
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  - Chen, Rossi, Chevalier, Oehlsen, 2019, “The Value of Flexible Work: Evidence from Uber Drivers” (JPE):
    - Flexible supply values flexibility, by providing services when their reservation wage is low and doing other activities when it is high
    - Reservation wages are highly volatile, implying that more standard work hours (shifts) are worse for drivers.

## 2.Does Fundamentally Different Supply Warrant Different Regulation?

- How should we design a two-part regulatory system while maintaining fair competition?
- How do we distinguish between “flexible” and “dedicated” supply?
  - In some cities, home-sharing hosts are subject to fewer restrictions than hotels, but cannot rent to travelers for more than X nights in a year.
  - In others, ridesharing drivers are subject to fewer restrictions than taxi drivers, but also cannot perform the same pick-up/drop-offs as taxis (e.g., airports).

### 3. What other options are available to address asymmetric information?

- Existing regulation tends to take the form of ex-ante screening.
- Can ongoing monitoring substitute for ex-ante screening?
  - Athey, Castilo, Chandar, 2021, “Service Quality on Online Platforms: Empirical Evidence about Driving Quality at Uber” (WP):
    - Telemetry data (breaks, accelerations) as objective quality of safety.
    - Customer ratings positively correlate with safety, but also reflect other quality measures.
    - UberX drivers are better than UberTaxi drivers.
  - Previous + Liu, Brynjolfsson, Dowlatabadi, Forthcoming, “Do Digital Platforms Reduce Moral Hazard? The Case of Uber and Taxis” (MS)
    - Customer ratings (+ platform’s removal of drivers below a threshold) reduce moral hazard.

### 3. What other options are available to address asymmetric information?

- When existing regulation is already based on ongoing monitoring, can crowd substitute (Shapiro, 1986) or complement expert?



**Peter C.**

Fairfax, VA

👤 1 friend

★ 9 reviews

★ ★ ★ ★ ★ 1/3/2013

halfway finishing my pho , FOUND COCKROACH inside the pho broth and had big fight with server(seems like one of the owner) after he insist on me paying for the pho.. not even apologizing , told me I still have to pay for other pho which I can almost guess that it was made from same dirty pot..

WILL DEFINITELY CALL HEALTH DEPT. and most DEFINITELY they wont see me again!

freakin, disgusting S#\$&!

👍 Useful 11

😄 Funny 2

😎 Cool



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- When existing regulation is already based on ongoing monitoring, can crowd substitute (Shapiro, 1986) or complement expert?
  - Dai, Luca, 2020, “Digitizing Disclosure: The Case of Restaurant Hygiene Scores” (AEJ:Micro)
    - Disclosing letter grades on Yelp drives demand away from dirty restaurants.
  - Farronato, Zervas, 2022. “Consumer Reviews and Regulation: Evidence from NYC Restaurants” (WP)
    - Hygiene signals in online reviews drive demand away from dirty restaurants.
    - But online reviews are more informative about some hygiene dimensions (pests and food handling) than others (worker hygiene).

A conceptual illustration for antitrust law. The background is a light orange world map. A large wooden gavel is positioned diagonally across the upper half. Scattered around are various financial symbols: several gold coins on the left, and several banknotes (100 Euro, 100 US Dollar, and a green bill with a dollar sign) on the right and bottom. Stacks of white papers are also visible. The word "ANTITRUST" is centered in a large, dark grey, serif font.

# ANTITRUST

# An Active Debate

- Many economists involved:
  - Luis Cabral, Jacques Cremer, Ginger Jin, Fiona Scott Morton, Tommaso Valletti.
- Worth a read:
  - Scott-Morton et al., 2019, “Committee for the Study of Digital Platforms,” Report, Stigler Center for the Study of of the Economy and the State. (*Stigler report*)
  - Furman et al., 2019, “Unlocking Digital Competition,” Report of the digital competition expert panel. (*Furman report*)
  - Crémer et al., 2019, “Competition Policy for the Digital Era,” Final Report, European Commission. (*EU report*)

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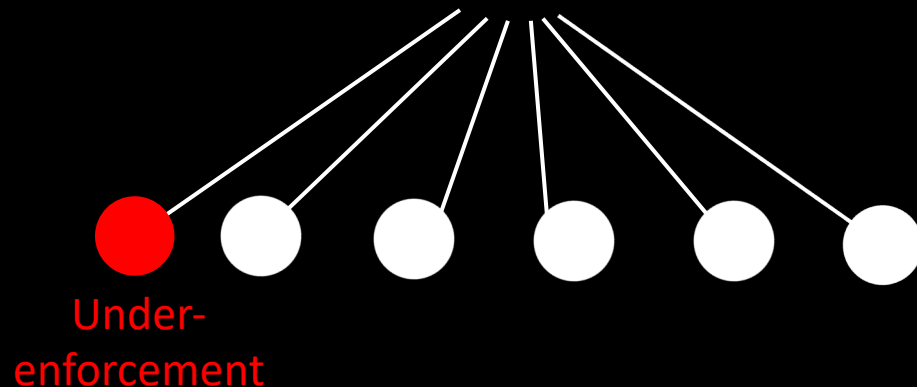
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Under-  
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# Very Timely – Digital Markets Act

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  - Quantitative thresholds: Market cap > €65B, Revenue in EU > €6.5B in the last 3 years, >45M monthly users and >10K businesses.
- Ex-ante obligations based on 2 principles:
  - **Contestability** (give market a chance at competition): e.g., interoperability
  - **Fairness** (competition based on merits): e.g., no self-preferencing, no combining data across services.

# What Makes Digital Platforms Different?

(from Stigler report) Confluence of:

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- Strong economies of scale and scope.
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- Marginal and distribution costs  $\sim 0$ .
- Strong economies of scale and scope.
- Increasing marginal returns to data.
- Strong network effects.
  - In non GAFAM, unlikely to be strong enough to justify concentration of activity on a single platform (Farronato, Fong, Fradkin, 2022, “Dog Eat Dog: Measuring Network Effects Using a Digital Platform Merger,” WP).

# Tools to Address Market Power

## Merger Policy: 3-step approach

1. Market Definition.

2. Effect of Conduct.

3. Remedies.

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### 2. Effect of Conduct.

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## Not Merger Policy:

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2. Ex-post: check for abuses of dominant position (e.g., bundling) and remedy.

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### 3. Remedies.

## Not Merger Policy:

### 1. Ex-ante: E.g., require interoperability, forbid self-preferencing.

- But... difficult to define (and enforce) which companies fall into these ex-ante requirements.

### 2. Ex-post: check for abuses of dominant position (e.g., bundling) and remedy.

- But... could be too late.

# Three Main Margins of Interest

All three directly impact current and/or future consumer welfare:

1. Prices (for both consumers and businesses);
2. Quality (broadly defined: e.g., includes privacy and ad load);
3. Innovation (and related mechanisms to appropriate the returns).

# Merger Policy

Aridor, 2022, “Drivers of Digital Attention: Evidence from a Social Media Experiment” (JMP):

- Creative way to collect primary data: parental control software.
- Shut off access to Youtube or Instagram.
- Track time usage: can measure substitution despite lack of prices!
  - Substitution across categories: entertainment, social media, messaging.
  - Substitution between apps owned by same company (Facebook).
  - Substitution off the phone (minimal cross-device substitution).
  - Substitution is affected by inertia/digital addiction.

# Merger Policy

Tools to evaluate mergers in digital setting:

- Diversion ratios (Conlon and Mortimer, 2021):
  - $d_{kj}$  measures the share of consumers/time/expenditures switching from product  $j$  to product  $k$  following a change in the characteristics (price/quality/availability) of product  $j$ .
  - Higher  $d_{kj}$  implies more substitutability and so higher risks from the merger between  $j$  and  $k$ .
- Upward Pricing Pressure test (Farrell and Shapiro, 2010):
  - Does the merger induce higher ad load?
  - Upward pressure from internalization of business stealing and higher ad prices.
  - Downward pressure from quality efficiency gains.

# Merger Policy... for Users of Digital Platforms

- Decarolis and Rovigatti, Forthcoming, “From Mad Men to Maths Men: Concentration and Buyer Power in Online Advertising” (AER):
  - Google has 75-80% of market for sponsored search ads.
  - But... advertisers don't advertise on their own → ad intermediaries as “bidding rings,” which reduce revenues of ad exchanges.
  - ~ Battle of giants.
  - Who benefits/who is harmed by two-layer (highly concentrated) intermediation?

# Not Merger Policy: Interoperability

Björkegren, 2022, “Competition in Network Industries: Evidence from the Rwandan Mobile Phone Network” (RAND):

- Evaluate effect of competition on incentives to invest (phone towers) and welfare (directly affected by tower network, other users with same phone operator, and prices):
  - Competition is good: increases investments (esp. in rural areas) + reduces prices.
  - Interoperability can backfire: not allowing for differential prices across in-network and out-of-network leads operators to be unable to internalize returns on investments, thus reducing incentives to invest (compared to diff. prices).

# Not Merger Policy: Tying

Remember when Internet Explorer was the rare example of digital tying?!?

Kim and Luca, 2019, “Product Quality and Entering Through Tying: Experimental Evidence” (MS):

- Are Google-only reviews better than other reviews?
- Experiments with participants from Mechanical Turk:
  - Google-only
  - Google+Yelp+Tripadvisor
- Participants prefer Google+Yelp+Tripadvisor.
- Suggestive evidence that tying may have benefited Google.

# Concluding Thoughts

- Incredibly exciting time to study regulation of digital platforms.
- Increasingly difficult to get companies to collaborate on some of these topics.
- Must be creative in data collection methods:
  - Freedom of Information Act (FOIA) requests;
  - Enroll study participants and track their digital behavior (but make it as realistic as possible);
  - Combine actual and hypothetical (surveys) choices;
  - Scraping;
  - Access data from third parties/intermediaries (e.g., AirDNA).
- Look out for policy changes (e.g., GDPR in 2018, DMA soon, more to come in the US).

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