

APRIL 2025
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PRICING AND TECHNOLOGY: COMPETITION CONCERNS AND CASE EXPERIENCE

OVERVIEW

- Rich data and new pricing algorithms generate both opportunities and challenges for enforcers
- I will discuss some concerns using recent US cases as examples
- Specifically, I will focus on concerns regarding
 - Collusion
 - (other forms of) Conduct
 - Mergers
 - Consumer protection

GENERAL COMMENTS

- Generally, in modern markets there is often a need to break down traditional silos
- This does not mean that we need to “reinvent the wheel”
 - Just to be flexible/open minded
- Economics tends to be better suited for “flexibility”

CONSUMER PROTECTION AND COMPETITION

- Traditionally viewed as separate
- In practice closely related: demand and supply
- Some recent examples:
 - “junk fees”
 - Privacy
 - Targeted pricing
- Applies to the topics we are discussing

COLLUSION

- Difference between the legal and economic standard: implicit vs tacit
 - Surprising to both lawyers (who do not talk enough to economists) and economists (who do not talk to lawyers)
- Consider algorithms that reach a collusive outcome
- Where do we draw the line? How do we prove liability?
- Even more difficult: what are the remedies?
 - Should the focus be on outcomes?
 - Do we need to start monitoring the code?

COLLUSION

- Many of these issues are not new
- Technology:
 - Speeds things up
 - Improve information collection
 - Opens new frontiers
- Consider information sharing and price recommendation tools

REAL PAGE

- DOJ and state AGs sued RealPage and six major landlords
- Original lawsuit filed in July 2024, landlords added in January 2025
- RealPage, a property management company, collects data on rental rates and occupancy from large apartment building owners and makes pricing recommendations, it is accused of
 - Using its algorithmic pricing software to coordinate rental prices
 - Sharing sensitive information
- The six landlords (jointly own 1.3M units) are accused of:
 - Communicating with each other about rents, occupancy and competitively sensitive information
 - Conducting “market surveys”
 - Participating in “user groups” hosted by RealPage
 - Sharing information with competitors about parameters in RealPage software

REAL PAGE

- The compliant includes both traditional elements and some non-traditional ones
 - Hard to know how the litigation will end up pivoting
- RealPage price recommendations:
 - Does it matter if the recommendation internalized diversion between the parties (either explicitly or by learning)?
 - Would we care if the recommendations was “firewalled”? I.e., if each landlord had an “independent” algorithm?
 - What about the inputs? Suppose that all that RealPage did was provide non-public information that the landlords used to train their own models? Is data sharing a violation of the law?
- These issues are not limited to this industry (and have been present in other forms)
 - Medical billing data used to make billing recommendation
 - DOJ case against Agristats (information sharing among protein processors)

REAL PAGE

- We can potentially gain some insight into the DOJ thinking from a proposed consent with one landlord.
- The landlord agreed to stop:
 - Using competitors' competitively sensitive data to train or run any pricing model;
 - Using third-party software or algorithms to price apartments without the supervision of a court-appointed monitor; and
 - Soliciting, disclosing or using any competitively sensitive information with any other property manager as part of setting rental prices or generating rental pricing recommendations.
- Note the focus on information sharing

AMAZON

- In September 2023 the FTC sued Amazon (disclosure: I was at the FTC at the time)
- The complaint includes various allegations including coercive fulfillment practices and excessive seller fees
- To fully understand the effects of these allegations one needs to consider them together. However, today I will focus on the pricing allegations including:
 - Anti-discounting tactics to prevent rivals from growing by offering lower prices
 - Penalizing 3P sellers if their products were offered at lower prices elsewhere
 - Monitoring competitors and matching their prices on 1P sales
 - “Project Nessie”:
 - From the complaint: “Amazon created a secret algorithm internally codenamed “Project Nessie” to identify specific products for which it predicts other online stores will follow Amazon’s price increases. When activated, this algorithm raises prices for those products and, when other stores follow suit, keeps the now-higher price in place”

MERGERS

- Algorithmic pricing can raise concerns for merger analysis
- For example, if we think that it facilitates collusion then the risk of harm from “coordinated effects” rises
- This is important because merger control might be the last line of defense against tactic collusion
- Indeed, merger control might be the best way to incorporate economic analysis of collusion
 - The 2023 Merger Guidelines make this point

MERGERS

- The MG note that:
 - “Pricing algorithms, programmatic pricing software or services, and other analytical or surveillance tools that track or predict competitor prices or actions likewise can increase the observability of the market.” (and therefore lead a higher risk of coordination)
 - “Information exchange arrangements among market participants, such as public exchange of information through announcements or private exchanges through trade associations or publications, increase market observability”

MERGERS: ADDITIONAL POTENTIAL CONCERNS

- Data and algorithmic assets
- Historically, merger analysis focused on average prices
 - With richer data and more sophisticated algorithms should we look at the whole price distribution?
 - Should we look at more sophisticated pricing schemes?
- Should control of data and/or an algorithm give rise to “vertical” or “entrenchment” concerns?
 - Control of an essential/important input
 - Bundling/tying
- Alternatively, does having richer data and possible results from experimentation allow for a richer analysis?
- Implications for remedies

TARGETED PRICING

- It seems like targeted pricing is becoming more common
- In July 2024 the FTC issued orders to eight companies that offer “surveillance pricing” products (disclosure: I was at the FTC when this was issued)
- The goal is to better understand “products by third-party intermediaries that claim to use advanced algorithms, artificial intelligence and other technologies, along with personal information about consumers—such as their location, demographics, credit history, and browsing or shopping history—to categorize individuals and set a targeted price for a product or service.”
- The goals are to understand
 - How common? What information is being used? How is it being used?
 - What are the implication for competition and consumer protection?

TARGETED PRICING

- Why should an agency care?
- Outputs vs Inputs
 - Do we care about what information is being used to price discriminate?
 - More in the consumer protection realm
 - Scope for more careful research about privacy
 - Or do we care about the impacts on market outcome?
 - More in the realm of traditional research in economics
 - What are the welfare effects of PD? (or more generally of more “sophisticated” pricing)

TARGETED PRICING: WHAT IS THE EFFECT OF PD?

- Intuition:
 - Among many (not all!) economists (or folks trained to think like economists) is that PD increases output and therefore likely good
 - Among many (not all!) non-economists is that PD is unfair and leads to higher prices
 - Especially true if you think of targeted pricing as 3rd degree PD “on steroids” getting close to approximating 1st degree PD
- Actual analysis
 - Theory gives us little guidance
 - The effect depends on the demand curvature among consumers/groups/”markets”
 - These results are almost exclusively for “monopoly” setting (i.e. using residual demand curves)
 - Empirically we do not know much (see recent interesting paper by Eugenio Miravete)

CONSUMER RESPONSES

- Up to now I focused on concerns consumers might face
- But can algorithms and data be used to “push back”
 - Apps to find the lowest price
 - Software to maximize the price offering (if facing PD)
 - Apps to help reduce behavioral biases or provide better information

CONCLUDING COMMENTS

- Rich data and new pricing algorithms generate both opportunities and challenges for enforcers
- I focused on concerns regarding:
 - Collusion
 - Conduct
 - Mergers
 - Consumer Protection
- To meet the challenge agencies we will need to be open minded and breakdown some traditional silos
- But they will also need resources to keep up with technology