Search Platforms: Showrooming and Price Parity Clauses

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Platforms facilitate search

- Many online platforms help consumers search
  - hotel booking services
  - online travel agencies
  - online marketplaces
  - price comparison websites

- Key features of these markets
  - consumers can search through platform or directly
  - consumers can purchase through platform or directly
  - participating firms set prices and pay commissions (fees) to the platform for sales through the platform
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Price parity clauses

- Many of these platforms have imposed price parity clauses
  - **Wide price parity clause**: The price a firm sets on the platform is constrained to be no higher than the price the same firm charges for the same good when sold directly or through rival platform
  - **Narrow price parity clause**: The price a firm sets on the platform is constrained to be no higher than the price the same firm charges for the same good when sold directly
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Price parity clauses

- These vertical restraints are under investigation by various competition authorities
  - Amazon removed price parity clauses in EU in response to investigations in Europe
  - Booking.com and Expedia recently made 5-year commitments to not impose wide price parity in Europe
  - Price parity clauses (either form) made illegal in Austria, France, Germany, and Italy for Booking.com and Expedia
  - CMA proposed removing wide price parity clauses for price comparison websites for automobile insurance in U.K.
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- Provide model of search platforms
  - matches key features of these markets
- Use model to explore the implications of showrooming and price parity clauses
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Assumptions on consumers and firms

- A continuum (measure 1) of
  - consumers (buyers) denoted $B$
  - firms (sellers) denoted $S$

- Firms produce horizontally differentiated products
  - we normalize their production cost to zero

- Consumer $\ell$ gets $v_\ell^i - p^i$ if she buys one unit from firm $i$

- Match value $v_\ell^i$ is iid draw from distn $G$ on $[v, \bar{v}]$
  - $G$ has weakly increasing hazard rate
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Firms can always be searched for directly

Consumers search sequentially
- Consumers incur a search cost $s_d > 0$ every time they sample a firm.
- Consumer $\ell$ learns firm $i$’s price $p_d^i$ and the match value $v_d^i$.
- $x_d$ defined by $\int_{x_d}^{v_d}(v - x_d)dG(v) = s_d$ defines cutoff rule; consumer buys whenever realizes $v_d^i - p_d^i > x_d - p_d$.
- Consumer’s expected gross surplus (including search cost) equals $x_d$.
- Eqm direct price $p_d = \frac{1 - G(x_d)}{g(x_d)}$. 

Consumer search — direct market
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A search platform

- Firms choose whether to sell over the platform $M$
- Search works in the same way, except $s_m < s_d$
  - higher gross expected surplus on $M$, $\Delta_s = x_m - x_d > 0$
  - lower mark-up on $M$, $\Delta_m = \frac{1-G(x_d)}{g(x_d)} - \frac{1-G(x_m)}{g(x_m)} > 0$
- For each intermediated transaction:
  - $M$ incurs a cost $c$
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Timing

Game proceeds in three stages:

1. \( M \) sets \( f_s \geq 0 \)

2. Firms decide whether to join \( M \) and set their prices

3. Without observing firms’ decisions, consumers decide:
   - whether to search on \( M \) or search directly
   - whether to switch channels (assumed costless)
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Platform competition

- Two platforms $M^L$ and $M^H$ with $b^H \geq b^L$
  - get asymmetric Bertrand competition between platforms
  - $M^H$ takes the whole market in equilibrium
Constraints on fees

- **Constraint from consumers being able to search directly**
  - implies $f_S \leq \Delta_s + \Delta_m + b$
- **Constraint from showrooming**
  - implies $f_S \leq b$
- **Constraint from firm participation**
  - if consumers are all searching on platform, does not constrain fees
- **Constraint from platform competition**
  - implies $f_S \leq c + b_H - b_L$
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Viability

- If $b \geq c$
  - platform viable
  - showrooming helps constrain fees
- If $b < c$
  - platform not viable
Viability

- If $b \geq c$
  - platform viable
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Wide-PPC

- Rules out consumers wanting to search directly
- Rules out showrooming
- Rules out competitive constraint (no substitution by consumers to lower fee platform)
- Fees set to make consumers indifferent between searching on a platform versus not searching at all (implies $p_m = x_m + b$)
- If firm participation doesn’t constrain fees, consumers always worse off
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Consumers search on platforms

Firms willing to participate since if they don’t, consumers won’t find them

What if one platform lowers its fees to induce lower prices and so more consumers?

- to lower its price, firm must abandon higher-fee platform
- it loses consumers who only search on higher-fee platform
- the deviating platform may need to lower its fee a lot to induce firms to abandon rival platform

This can make the participation constraint irrelevant
Firms’ participation constraint with wide-PPC

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- Rules out showrooming
- Competitive constraint on fee remains
- Eqm fee $f_S$ still set equal to $c + b_H - b_L$
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Implication of narrow-PPC

1. Low platform cost \((c \leq b_L)\). Competition constrained fees; narrow-PPC is irrelevant

2. Moderate platform cost \((b_L < c \leq b_H)\). Showrooming constrained fees; narrow-PPC replaces this constraint with weaker competitive constraint, hurting consumers

3. High platform cost \((c > b_H)\). Narrow-PPC results in platforms becoming viable. Consumer surplus increases iff \(\Delta_s + \Delta_m + b_H > c + b_H - b_L\)
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Implication of narrow-PPC

- **Imposition of narrow-PPC:**
  - removes the constraints arising from the direct channel (showrooming and the comparison with direct prices)
  - fees are only constrained by platform competition
  - good for consumers if platform competition sufficiently effective and removing showrooming is necessary for viability
  - bad for consumers if removing showrooming unnecessary and showrooming was the binding constraint
  - irrelevant if removing showrooming unnecessary and competition was the binding constraint anyway

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With loyal consumers who do not search, narrow-PPC may imply wide-PPC

- Suppose one platform lowers its fees
- Under narrow-PPC firms can lower their prices on the deviating platform
- Under narrow-PPC firms cannot lower their direct prices below price on non-deviating platform
- Implies price on deviating platform lower than direct price
- Shifts loyal consumers to buy over the deviating platform
- Firm may be worse off

May explain why removal of wide-PPC has had little effect
Loyal consumers

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Concluding remarks

- PPCs suppress price competition
  - between platform and buying directly $\Rightarrow$ slows down disintermediation
  - between competing platforms
- Banning PPCs remove competitive harms
- Main question is whether should still allow narrow-PPC
  - viability is unlikely to be an issue, but need to look at effect on investment
  - there may anyway be less restrictive ways to prevent showrooming such as fixed fees, referral fees, advertising
  - loyal consumers may imply narrow-PPC has same (bad) effects as wide-PPC
  - platforms anyway have other ways to discipline firms that engage in showrooming
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