

Search Platforms: Showrooming and Price Parity Clauses

Chengsi Wang
Monash University

Julian Wright
NUS

Platform Strategy Research Symposium, 2017

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

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

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

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

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

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

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

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

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.

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.

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.

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.

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.

Showrooming

- Platforms justify price parity clauses as needed to rule out “showrooming”
- **Showrooming:** consumers search on platform but purchase directly at lower price

Showrooming

- Platforms justify price parity clauses as needed to rule out “showrooming”
- **Showrooming**: consumers search on platform but purchase directly at lower price

Our main contributions

- Provide model of search platforms
 - matches key features of these markets
- Use model to explore the implications of showrooming and price parity clauses

Our main contributions

- Provide model of search platforms
 - matches key features of these markets
- Use model to explore the implications of showrooming and price parity clauses

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 ℓ gets $v_\ell^i - p^i$ if she buys one unit from firm i
- Match value v_ℓ^i is iid draw from distn G on $[\underline{v}, \bar{v}]$
 - G has weakly increasing hazard rate

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 ℓ gets $v_\ell^i - p^i$ if she buys one unit from firm i
- Match value v_ℓ^i is iid draw from distn G on $[\underline{v}, \bar{v}]$
 - G has weakly increasing hazard rate

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 ℓ gets $v_\ell^i - p^i$ if she buys one unit from firm i
- Match value v_ℓ^i is iid draw from distn G on $[\underline{v}, \bar{v}]$
 - G has weakly increasing hazard rate

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 ℓ gets $v_\ell^i - p^i$ if she buys one unit from firm i
- Match value v_ℓ^i is iid draw from distn G on $[\underline{v}, \bar{v}]$
 - G has weakly increasing hazard rate

Consumer search — direct market

- Firms can always be searched for directly
- Consumers search sequentially
 - consumers incur a search cost $s_i > 0$ every time they sample a firm
 - consumer i learns firm j 's price p_j^i and the match value v_j^i
 - x_i defined by $\int_{x_i}^{\infty} (v - x_i) dG(v) = s_i$ defines cutoff rule; consumer buys whenever realizes $v_j^i - p_j^i > x_i - p_j$
 - consumer's expected gross surplus (including search cost) equals x_i
 - eqm direct price $p_i = \frac{1-G(x_i)}{g(x_i)}$

Consumer search — direct market

- 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 ℓ learns firm i 's price p_d^i and the match value v_ℓ^i
 - x_d defined by $\int_{x_d}^{\bar{v}} (v - x_d) dG(v) = s_d$ defines cutoff rule; consumer buys whenever realizes $v_\ell^i - p_d^i > x_d - p_d$
 - 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

- 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 ℓ learns firm i 's price p_d^i and the match value v_ℓ^i
 - x_d defined by $\int_{x_d}^{\bar{v}} (v - x_d) dG(v) = s_d$ defines cutoff rule; consumer buys whenever realizes $v_\ell^i - p_d^i > x_d - p_d$
 - 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

- 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 ℓ learns firm i 's price p_d^i and the match value v_ℓ^i
 - x_d defined by $\int_{x_d}^{\bar{v}} (v - x_d) dG(v) = s_d$ defines cutoff rule; consumer buys whenever realizes $v_\ell^i - p_d^i > x_d - p_d$
 - 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

- 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 ℓ learns firm i 's price p_d^i and the match value v_ℓ^i
 - x_d defined by $\int_{x_d}^{\bar{v}} (v - x_d) dG(v) = s_d$ defines cutoff rule; consumer buys whenever realizes $v_\ell^i - p_d^i > x_d - p_d$
 - 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

- 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 ℓ learns firm i 's price p_d^i and the match value v_ℓ^i
 - x_d defined by $\int_{x_d}^{\bar{v}} (v - x_d) dG(v) = s_d$ defines cutoff rule; consumer buys whenever realizes $v_\ell^i - p_d^i > x_d - p_d$
 - 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

- 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 ℓ learns firm i 's price p_d^i and the match value v_ℓ^i
 - x_d defined by $\int_{x_d}^{\bar{v}} (v - x_d) dG(v) = s_d$ defines cutoff rule; consumer buys whenever realizes $v_\ell^i - p_d^i > x_d - p_d$
 - consumer's expected gross surplus (including search cost) equals x_d
 - eqm direct price $p_d = \frac{1-G(x_d)}{g(x_d)}$

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 , $\Delta_m = \frac{1-Q(x_d)}{s(x_d)} - \frac{1-Q(x_m)}{s(x_m)} > 0$
- For each intermediated transaction:
 - M incurs a cost c
 - M collects the per-transaction seller fee f_S
 - firm i 's price is p_m^i
 - consumers obtain a convenience benefit $b > 0$ if completing transactions on M

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
 - M collects the per-transaction seller fee f_S
 - firm i 's price is p_m^i
 - consumers obtain a convenience benefit $b > 0$ if completing transactions on M

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
 - M collects the per-transaction seller fee f_S
 - firm i 's price is p_m^i
 - consumers obtain a convenience benefit $b > 0$ if completing transactions on M

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
 - M collects the per-transaction seller fee f_s
 - firm i 's price is p_m^i
 - consumers obtain a convenience benefit $b > 0$ if completing transactions on M

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
 - M collects the per-transaction seller fee f_S
 - firm i 's price is p_m^i
 - consumers obtain a convenience benefit $b > 0$ if completing transactions on M

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
 - M collects the per-transaction seller fee f_S
 - firm i 's price is p_m^i
 - consumers obtain a convenience benefit $b > 0$ if completing transactions on M

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
 - M collects the per-transaction seller fee f_s
 - firm i 's price is p_m^i
 - consumers obtain a convenience benefit $b > 0$ if completing transactions on M

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
 - M collects the per-transaction seller fee f_s
 - firm i 's price is p_m^i
 - consumers obtain a convenience benefit $b > 0$ if completing transactions on M

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
 - M collects the per-transaction seller fee f_s
 - firm i 's price is p_m^i
 - consumers obtain a convenience benefit $b > 0$ if completing transactions on M

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)
 - carry out sequential search until they stop search or complete a purchase

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)
 - carry out sequential search until they stop search or complete a purchase

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)
 - carry out sequential search until they stop search or complete a purchase

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 $f_S \leq c + b_H - b_L$

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 $f_S \leq c + b_H - b_L$

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 $f_S \leq c + b_H - b_L$

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 $f_S \leq c + b_H - b_L$

Viability

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

Viability

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

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

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

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

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

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

Firms' participation constraint with wide-PPC

- 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

- 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

- 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

- 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

- 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

- 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

- 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

Narrow-PPC

- Rules out wanting to search directly
- Rules out showrooming
- Competitive constraint on fee remains
- Eqm fee f_S still set equal to $c + b_H - b_L$

Narrow-PPC

- Rules out wanting to search directly
- Rules out showrooming
- Competitive constraint on fee remains
- Eqm fee f_S still set equal to $c + b_H - b_L$

Narrow-PPC

- Rules out wanting to search directly
- Rules out showrooming
- Competitive constraint on fee remains
- Eqm fee f_S still set equal to $c + b_H - b_L$

Narrow-PPC

- Rules out wanting to search directly
- Rules out showrooming
- Competitive constraint on fee remains
- Eqm fee f_S still set equal to $c + b_H - b_L$

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 $\Delta_s + \Delta_m + b_H > c + b_H - b_L$

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 $\Delta_s + \Delta_m + b_H > c + b_H - b_L$

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 $\Delta_s + \Delta_m + b_H > c + b_H - b_L$

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
- Always better for consumers than wide-PPC

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
- Always better for consumers than wide-PPC

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
- Always better for consumers than wide-PPC

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
- Always better for consumers than wide-PPC

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
- Always better for consumers than wide-PPC

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
- Always better for consumers than wide-PPC

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
- Always better for consumers than wide-PPC

Loyal consumers

- 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

- 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

- 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

- 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

- 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

- 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

- 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

- 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

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

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

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

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

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

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

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

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

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