

# “Platform Competition under Asymmetric Information”

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# The main result

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- Monopoly platform may need to subsidize the side which obtains smaller info. rents
- Potential competition could harm welfare by inducing the incumbent platform to distort trade downward (similar to entry deterrence with high prices)
- Multi-homing facilitates entry deterrence

# Monopoly

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		Seller	
		I	$\emptyset$
Buyer	I	$U_B - F_B^I, U_S - F_S^I$	$-F_B^I, 0$
	$\emptyset$	$0, -F_S^I$	$0, 0$

- Two equil.: optimistic and pessimistic
- D&C: make it a dom. strategy for one side to join

# Attracting buyers

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		Seller	
		I	$\emptyset$
Buyer	I	$U_B + \varepsilon, U_S - F_S^I$	$\varepsilon, 0$
	$\emptyset$	$\varepsilon, -F_S^I$	$0, 0$

- $F_B^I = -\varepsilon$
- The platform concedes  $U_B$  to the buyer  $\Rightarrow q$  is distorted downward to minimize  $U_B$

# Competition

Seller

		Seller		
		I	E	$\emptyset$
Buyer	I	$U_B^I - F_B^I, U_S^I - F_S^I$	$-F_B^I, -F_S^E$	$-F_B^I, 0$
	E	$-F_B^E, -F_S^I$	$U_B^E - F_B^E, U_S^E - F_S^E$	$-F_B^E, 0$
	$\emptyset$	$0, -F_S^I$	$0, -F_S^E$	$0, 0$

- To enter, E must induce an equil. at (E,E)

# Competition – E goes after B

Seller

		Seller		
		I	E	$\emptyset$
Buyer	I	$U_B^I - F_B^I, U_S^I - F_S^I$	$-F_B^I, -F_S^E$	$-F_B^I, 0$
	E	$-F_B^E, -F_S^I$	$U_B^E - F_B^E, U_S^E - F_S^E$	$-F_B^E, 0$
	$\emptyset$	$0, -F_S^I$	$0, -F_S^E$	$0, 0$

- Subsidize B to “exploit” S

# Entry deterrence

		Seller		
		I	E	$\emptyset$
Buyer	I	$U_B^I - F_B^I, U_S^I - F_S^I$	$-F_B^I, -F_S^E$	$-F_B^I, 0$
	E	$-F_B^E, -F_S^I$	$U_B^E - F_B^E, U_S^E - F_S^E$	$-F_B^E, 0$
	$\emptyset$	$0, -F_S^I$	$0, -F_S^E$	$0, 0$

- To deter entry, I must set  $F_B^I$ ,  $F_S^I$ , and  $q^I$  such that E's D&C strategy is unprofitable

# Entry deterrence

		Seller		
		I	E	$\emptyset$
Buyer	I	$U_B^I - F_B^I, U_S^I - F_S^I$	$-F_B^I, -F_S^E$	$-F_B^I, 0$
	E	$-F_B^E, -F_S^I$	$U_B^E - F_B^E, U_S^E - F_S^E$	$-F_B^E, 0$
	$\emptyset$	$0, -F_S^I$	$0, -F_S^E$	$0, 0$

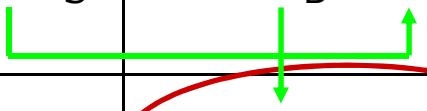
- The higher  $U_B^I$  is, the more costly entry becomes  $\Rightarrow q^I$  is efficient if I expects E to go after B



# Entry deterrence – E goes after S

Seller

		Seller		
		I	E	$\emptyset$
Buyer	I	$U_B^I - F_B^I, U_S^I - F_S^I$	$-F_B^I, -F_S^E$	$-F_B^I, 0$
	E	$-F_B^E, -F_S^I$	$U_B^E - F_B^E, U_S^E - F_S^E$	$-F_B^E, 0$
	$\emptyset$	$0, -F_S^I$	$0, -F_S^E$	$0, 0$



- Since E does not compete for B (only I does),  $q^I$  is distorted downward as in the monopoly case

# Entry deterrence

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- The deterrence strategy depends on who E goes after:
  - If E goes after B,  $q^I$  is set efficiently to raise the cost of entry
  - If E is indifferent or goes after S,  $q^I$  is distorted downward to limit B's info. rents

# Comments

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- The paper is really about entry deterrence in two-sided markets
- The monopoly outcome here is efficient since there is no ex ante asymmetry of info. - what happens if the agents are partly info. before they enter?
- Entry deterrence can harm welfare since  $q^I$  may be distorted downward – is it possible to write a model where  $q^I$  is distorted upward (as in entry deterrence models)?
- We do see entry in two-sided markets: what's needed to make entry possible?

# Comments

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- ☐ The platform trades with both sides – would anything change if the platform was simply a “market place”?
- ☐ Net neutrality
- ☐ What happens when agents are ex ante heterogeneous?
- ☐ Is it necessary that the rents are due to asym. info?