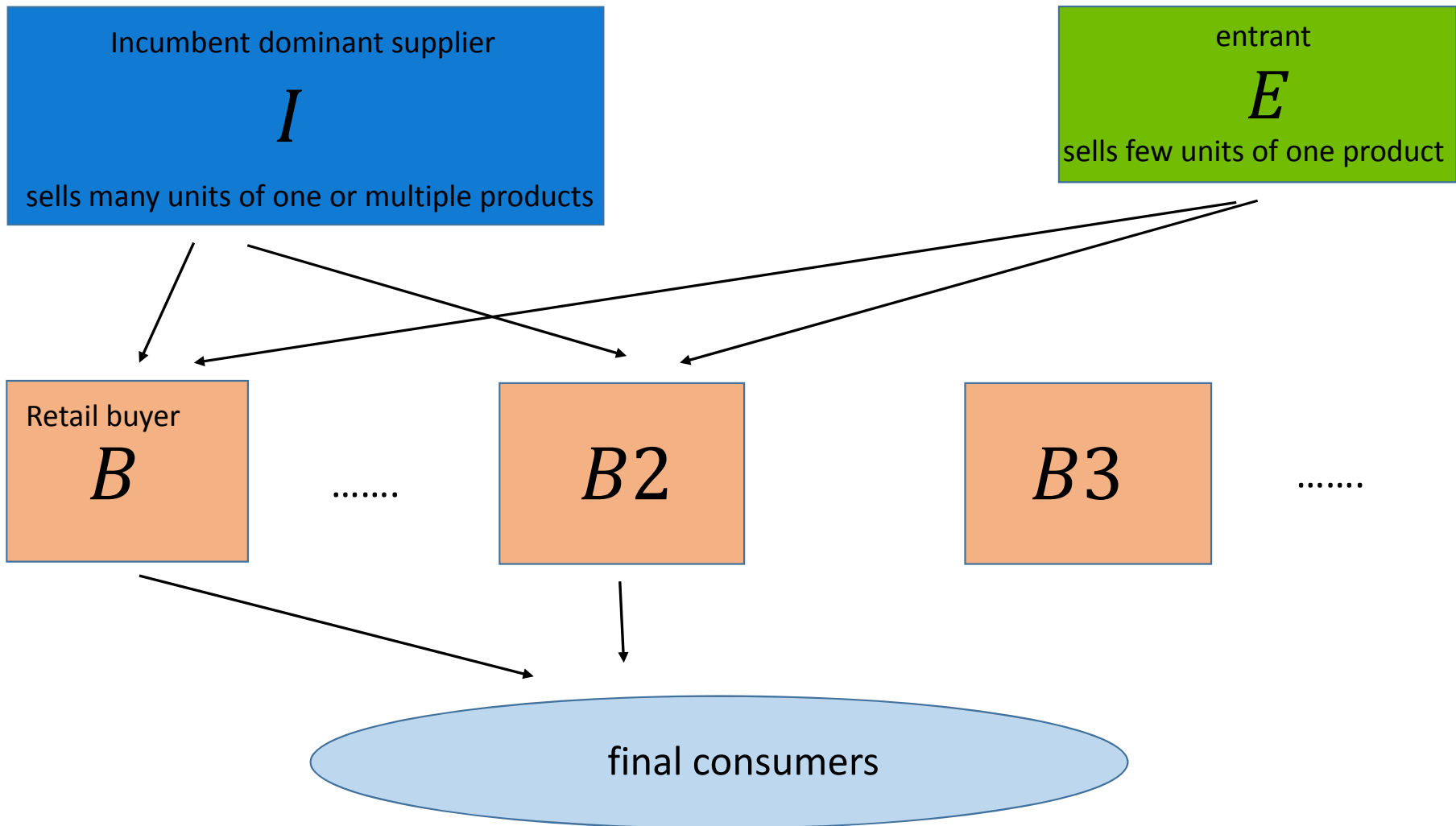# The Economics of Exclusionary Conduct and Vertical Restraints

Juan-Pablo Montero
Economics, PUC-Chile

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The Exclusionary Problem

Incumbent dominant supplier

I

sells many units of one or multiple products

entrant

E

sells few units of one product

Retail buyer

B

....

$B2$

$B3$

....

final consumers

Focus on the following vertical restraints

1. Exclusive dealing arrangements
   - incumbent offers the retail buyer a compensation for exclusivity
   - buyer must pay a penalty if the exclusivity is breached

2. Discounts

   2.1 Rebates (single-product discounts)
      - retail buyer needs to buy 100 units of a product, but the entrant can supply at most 10 units (the contestable demand)
      - the incumbent offers the buyer a 9% off the list price on all units if she buys exclusively from him, otherwise she must pay the list price for the 90 units

   2.2 Bundled discounts (multi-product discounts)
      - retailer needs to buy two unrelated products A and B, but entrant can supply only B (B is the contestable market)
      - incumbent offers the retailer one price for the bundle AB and another for just product A

Case examples of exclusive dealing arrangements

- Standard Fashion Co. v. Magrane-Houston Co. (1922)
- U.S. v. United Shoe Machinery Corporation (1950)
- U.S. v. Visa USA (2003)
- Conwood v. US Tobacco (2002)
- Philip Morris v. Compañía Chilena de Tabacos (2004)
- FNE-Chile v. Cervecera CCU Chile Ltda. (2008)
- Canada Chemicals v. Compañía Chilena de Fósforos S.A. (2008)

Case examples of rebate contracts (single-product discounts)

- EU Commission v. British Airways (2003)
- EU Commission v. Michelin II (2003)
- AMD v. Intel (2005)
- Allied Orthopedic v. Tyco (2010)
- ZF Meritor v. Eaton (2012)
- Canada Chemicals v. Compañía Chilena de Fósforos S.A. (2008)
- FNE-Chile v. Unilever (2013)

Case examples of bundled discounts (multi-product discounts)

- EU Commission v. Hoffman-La Roche (1976)
- Ortho Diagnostic Systems v. Abbott Laboratories (1996)
- LePage v. 3M (2003)
- *Cascade Health Solutions v. PeaceHealth* (2007)
- Cablevision v. Viacom (2013)

Focus here is on exclusion of efficient rivals...but

- exclusive contracts discounts can arise for efficiency reasons totally unrelated to exclusion
- they can be used to prevent double marginalization and solve agency and hold-up problems (e.g., Segal and Whinston 2000; Whinston 2006)
- rebates can also be used to screen buyers better informed about demand (Kolay-Shaffer-Ordover 2004) or to induce retail effort (Conlon and Mortimer 2015)
- they can stop inefficient entrants (Whinston 2006)
- exclusive arrangements can lead to more competition among (symmetric) suppliers (Calzolari and Denicolo 2013)
- can restore market power of single supplier dealing with competing retailers and secret offers (Hart and Tirole 1990)

Exclusive deals and the Chicago critique

- the Chicago School argument (see, e.g., Bork 1978): exclusives cannot be signed for anticompetitive reasons
- the incumbent cannot afford to compensate the buyer for not dealing with a more efficient rival
- the most the incumbent can offer its entire monopoly profit (but only once) which is less necessarily than what the rival can offer
- An example may help

Example with the Chicago critique

- Consider a buyer (B) that needs to buy 100 units (is willing to pay no more than $100 for each unit, which is the price that can charge to final consumers)
- Incumbent (I) can sell all 100 units at a unit cost of $80, so if I is the only supplier it will sell 100 units for $100 each
- there is a potential entrant (E), however, but can only sell 20 units a lower unit cost of 60 (20 units is the contestable demand)
- in the absence of contracts: I will sell 80 units for $100 each and E will sell the remaining 20 units for $80 each. B now makes $400 = 20×20$
- before E shows up, suppose I can strike the exclusive deal with B: offer B a compensation for the exclusivity and to charge a monopoly price on the contestable units.

- But how much can *I* offer in compensation?
- Since *I* can always make $1600 = 80\times(\$100 - \$80)$ on the non-contestable units, the most *I* can offer is $400 = \$2000 - \$1600$
- but this leaves both *I* and *B* with the same payoffs as without the contract
- if there is a small cost of writing the contract, parties are better off not signing any (the critique breaks the indifference with a downward sloping demand)
- offering more than $400 means *I* would be selling below cost for the contestable units
- the Chicago critique has a problem, though: it neglects any form of externality that can arise when two parties sign a contract (come back to these externalities shortly)

Rebates and the leverage argument

- this example follows the previous one (very close to Scott-Morton and Abrahamson's 2016 example).
- suppose that I offers the following rebate contract: a list price of \$100 (price cannot go above this!!) and 9% discount off the list price in all units if B buys exclusively from I
- what is the effective price p that I is charging for the last 20 units?

$$80 \times 0 + 20 \times (\$100 - p) = 100 \times \$9$$
$$p = \$55$$

- E cannot compete with this "price" because its cost per unit is higher: \$60 > \$55

- ▶ will B accept the rebate deal?
- ▶ yes because otherwise it would pay $100 for the first 80 units and $80 for the next 20 units ($9×100 > $20×20)
- ▶ this is the leverage argument:
  - ▶ I can use the non-contestable portion of the demand (the "80 units") as leverage to reduce the effective price in the contestable portion (the "20 units")
  - ▶ while keeping the actual price above cost ($91 > $80)
  - ▶ rebates don't need to be shown to be predatory to be anticompetitive

problem with this leverage argument

- there is a fundamental problem with this example
- will I ever offer this deal? (this question is absent in S-M&A's example)
- I can always charge $100 for the non-contestable units, even without the rebate contract
- this implies that I's outside profit is equal to $1600 = $20×80
- so, what is the highest discount I is willing to offer: 4%, which leads to an effective price of $80 = I's cost!
- two observations, despite there is no exclusion in this setting:
  - predation is still possible and cheaper with rebates the larger the non-contestable demand is
  - what if there are contractual externalities?

Exclusive contracts with externalities

Different post-Chicago models where exclusion does arise

1. "Rent Shifting" models:
   - uncertainty about E's cost
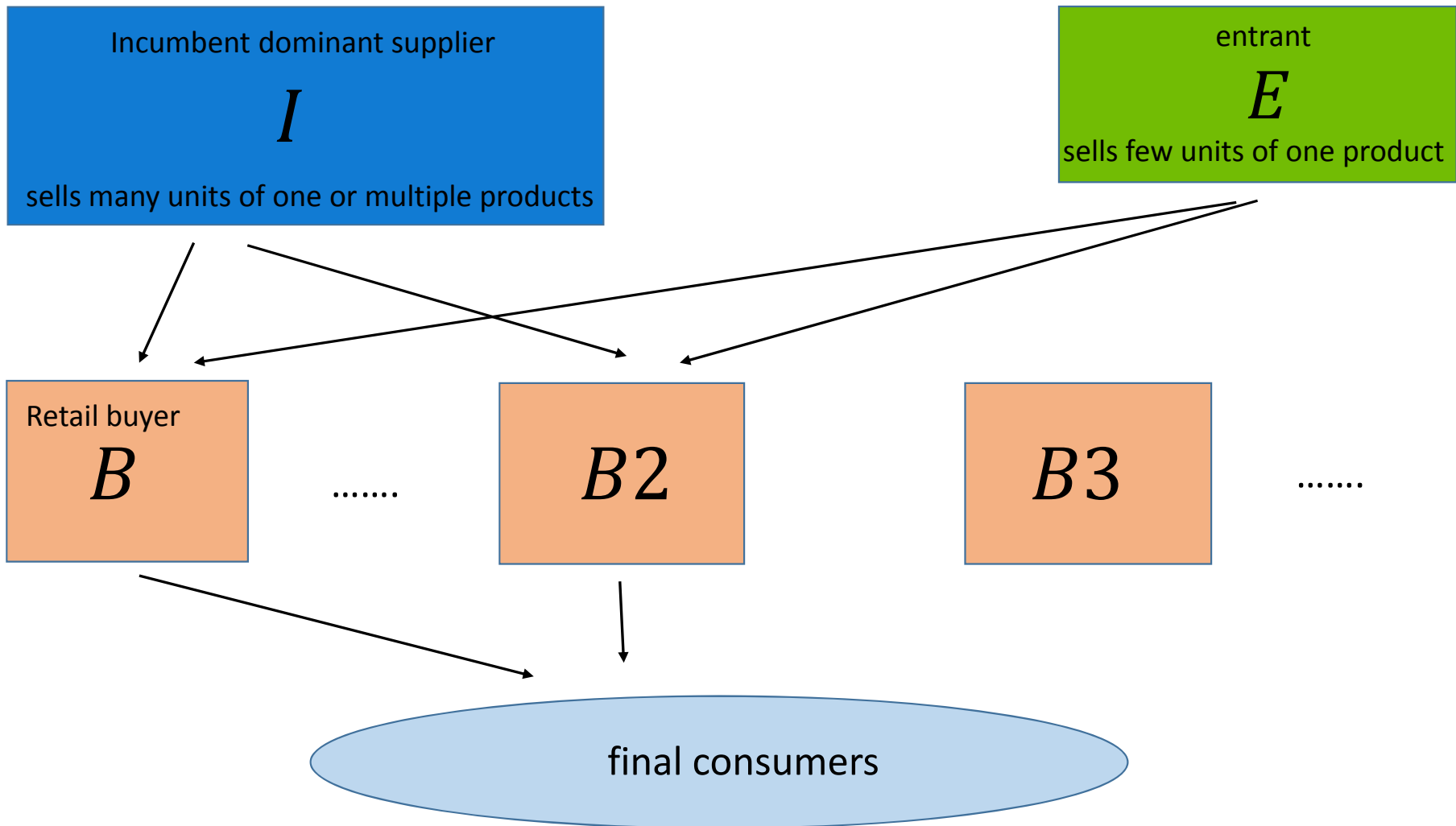   - Aghion & Bolton (1987), Spier & Whinston (1995), Choné & Linnemer (2015)

2. "Naked Exclusion" models:
   - exploit buyer/retailer side externalities from scale economies
   - Rasmussen et. al. (1991), Segal & Whinston (2000), Simpson & Wickelgren (2007), Spector (2011)

3. "Downstream Competition" models:
   - exploit final consumer, from intense downstream competition among retailers
   - Simpson & Wickelgren (2007), Abito & Wright (2009), Asker & Bar-Isaac (2014)

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B ……. *B2* *B3* …….

final consumers

Aghion and Bolton's (1987) exclusive dealing model

- this model captures I's basic trade-off:
  - I would like to let E in and appropriate its efficiency rents: $20\times(\$80 - \$60)$
  - but at times is not possible, so exclusion is a second best alternative
- in AB's model the trade-off arises because I and B don't know if E's cost is \$60 or \$20, they assign equal probabilities (the externality is across different potential entrants)
- before E shows up, I and B sign the following exclusive dealing contract (I makes a take-it-or-leave-it-offer):
  - a list price of \$96 that leaves B equally off when buying exclusively from I (i.e., with a surplus of $\$400 = \$20\times20$)
  - a penalty P that B must pay I in case B breaches the exclusivity and buys 20 units from E

Optimal penalty in Aghion and Bolton

- the one that extracts more (efficiency) rents from E
- how is done? setting the effective price slightly above E's cost, so E just enters
- the effective price p is the one that leaves B indifferent

$$80 \times \$4 + 20 \times (\$100 - p) - P \geq 100 \times \$4$$

- if I wants p≈\$60, then P=\$720
- but if p≈\$20, then P=\$1520
- since $\frac{1}{2} \times 1520 > 720$, it is optimal for I is to set P=\$1520 and exclude 50% of the time

Can rebates replicate the above exclusionary result?

- ▶ No! (Ide-Montero-Figueroa 2016)
- ▶ Every time that I offers a rebate that sets the effective price below its cost, it makes a loss
- ▶ the only that benefits from such rebate deal is B
- ▶ why can't rebates replicate the work of exclusives?
- ▶ rebates lack of an ex-ante commitment: exclusives commit B to a penalty in case breach ex-ante (i.e., before E shows up) while rebates operate fully ex-post, i.e., after B has heard from both I and E.
- ▶ rebates must implement the exclusivity ex-post using sufficiently large rewards so as to prevent entry
- ▶ but these rewards are costly for I, because B is not committed to transfer them back to I

Can rebates (single-product) be ever exclusionary?

- yes: when there is strong downstream competition among retailers and rebates/discounts are granted not on a per unit bases but on a lump-sum basis (Ide et al 2016)
- this prevents rebates to be passed through to final consumers
- this surplus extracted from final consumers is used by I to compensate retailers not to take E's offer (see also Asker and Bar-Isaac 2014)
- this seems to apply well to AMD v. Intel (2008): lump-sum rebates and strong competition among computer manufacturers

How about bundled discounts?

- recall: retailer needs to buy two unrelated products A and B, but entrant can supply only B (B is the contestable market)
- incumbent offers the retailer one price for the bundle AB and another for just product A
- exclusion can arise only when (Ide & Montero 2016):
    - entrant has scale economies
    - when downstream competition is strong
    - a good fraction of final consumers buy both products, it is not enough that retailers buy the two products
    - there is consumer heterogeneity (through valuations or shopping costs)
- mechanism: under strong downstream competition retailers are forced to buy I's bundles in order to effectively compete in the retail market, making it hard for E to reach a viable scale of operation
- somewhat paradoxically, to have an anticompetitive outcome upstream is necessary to have strong competition downstream

Conclusions

- discounts (rebates, bundled discounts) are not equivalent to exclusive dealing contracts
- discounts contracts can be exclusionary, but only if retail competition is strong enough (something totally overlooked in recent cases)