Rebates

Cédric Argenton

Tilburg University

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Rebates

- There are many ways of excluding a competitor from the market: tying/bundling, predatory pricing, exclusivity contracts, quantity-forcing, etc
- Rebate schemes are *non-linear pricing schemes* that allegedly foreclose a rival from the market, as they create powerful incentives for buyer to procure inputs from a single source
- As such, they are the price equivalent of direct single-branding obligations
- Economists tend to look at vertical restraints or relationships the same way: in terms of outcomes
- Case law has not developed this way, as anticompetitive practices are grouped into categories, each associated with a different criterion or test
- In the past years, rebates have been hotly debated, in part because new types of rebates have flourished: loyalty/fidelity rebates, retroactive rebates, sign-in rebates, bundled rebates.

Rebates (2)

- Partly, the intensity of the debate also comes from the fact that this area of antitrust enforcement is difficult, hence contentious
- Rebates, like predatory prices, go to the core of economic freedom in capitalist/free-market societies
- Courts/agencies have recently been, and should be, wary of interfering with price-setting
- At the same time, there is no point in policing non-price vertical restraints if price restraints are left unchecked!
- Agencies have no choice but to walk a tight rope: they are bound to be criticized
- Key: make sure that one does not prevent a firm from eliminating an inefficient competitor
- Hence, insistence on *as-efficient competitor* test

Rebates (3)

- Rebates, despite their name, should not necessarily seen as price cuts
- They are a form of differential pricing, depending on whether buyer fulfills a number of obligations
- No a priori evidence that a rebate scheme leads to an average price which is below the but-for price
- Indeed, the reverse is to be expected if price scheme is really anti-competitive (i.e. exclusionary)!

EU case law

- Long line of case law about rebates
- Case law recently clarified in the *Intel* case, ECJ 2014
- 3 types of schemes:
  - quantity rebates: price a fonction of quantities; presumptively lawful
  - exclusivity rebates: price conditional on buyers getting all or most of its requirements from dominant seller; presumptively unlawful; only defence = objective justification
  - other rebates (e.g. sales growth targets); effects analysis
- This is pushing the system of presumptions very far!
- From the point of view of economics, many vertical relationships can have the same effect; it does not depend on their form
- Need for administrable/predictable rules seems to have prevailed over need for minimizing adjudication errors

A theory of harm associated to minimum requirement contracts

- Today, look at minimum requirement contracts: low price associated to buyer procuring at least x% of its total requirements from dominant firm
- Could that be harmful? Isn't it the case that rival could also offer the same kind of tariff?
- Paper by Chen and Shaffer (Rand, 2014)
- Same setting as in "naked exclusion": incumbent can deny scale to entrant
- But here entry costs are not known in advance: agreement with incumbent only reduces the probability of entry
- Each buyer needs to be compensated only for first marginal contribution to the decrease in the probability of entry
- So, incumbent can profitably induce all buyers to sign, independently of any coordination failure

Model

- Players
  - incumbent I
  - potential entrant E
  - N homogeneous buyers
- Suppose each buyer wants to buy one unit of the good (WTP=1 till $q = 1$, 0 thereafter) [model works with elastic demand]
- Cost of incumbent: $c < 1$
- Cost of entrant: $\underline{c}$, $\delta = c - \underline{c}$
- Fixed cost of entry f, uniformly distributed between 0 and $N\delta$ [model works with other distributions, including unbounded ones
- Under "normal" competition, entrant always enter

Model (2)

- Period 1. I offers each buyer contract $\{s, x, p\}$ where s is the minimum share bought from I, x is a payment from I to the buyer, and p is the contractual price ($p \in [c, p_m]$)
- Period 2. Buyers simultaneously decide to accept or reject I's offer.
- Period 3. E learns about f and previous play. Decides to enter or not.
- Period 4. I and E (if active) compete for uncommitted purchases by posting prices in the spot market (Bertrand competition)
- Notation:
  - $\pi(p) = (p - c)q(p)$ (incumbent's profit under exclusion)
  - $S(p) = \int_p^{+\infty} q(v)dv = 1 - p$ (consumer surplus per buyer)
  - $L(p) = S(c) - S(p) - \pi(p)$ (deadweight loss per buyer under exclusion)

Pricing game

- Solve the game by backward induction
- Suppose that $n \leq N$ buyers agreed to $\{s, x, p\}$
- In Stage 4, if E has not entered, I charges $p_m = 1$ in the spot market (free buyers)
- Captive buyers buy at contractual price; each makes $S(p) + x$
- If E has entereed, then Bertrand competition: E makes all free sales at price $p_E = c$
- Free buyers make $S(c)$
- Captive buyers make $S(p_a) + x$ where $p_a = sp + (1 - s)c$

Entry decision

- Expected gross profit of E:

$$\Pi_E(n, s, p) = n(1 - s)\delta + (N - n)\delta$$

- Enters iff $f < \Pi_E(n, s, p)$
- f uniformly distributed; so, probability of entry is:

$$\alpha_n(s, p) = \Pi_E(n, s, p)$$

- So, I can deter entry by increasing n or s. [In the general model with elastic demand, it can also do it by increasing p.]
- Main observation (Lemma 1):
  - $\alpha_0(s, p) = 1$
  - for any $s > 0$, $\alpha_k > \alpha_{k+1}$ for $k = 0, 1, 2, ..., N - 1$
  - in particular, $\alpha_0 > \alpha_1$ and $\alpha_1 > \alpha_N$ for some $s > 0$

Buyers' acceptance decision

- Suppose buyer believes that $n-1$ other buyers will accept the offer
- Buyer compares his payoff if he accepts (so that n buyers are captive) and if he rejects so that ($n-1$ buyers are captive)
- $U_A(n) = (1-\alpha_n)S(p) + \alpha_n S(p_a) + x$
- $U_R(n-1) = (1-\alpha_{n-1})S(p_m) + \alpha_{n-1}S(c)$
- Accepts iff $U_A(n) > U_R(n-1)$
- Defines a threshold lump-sum payment:

$$\begin{aligned} x_n(s,p) &= (1-\alpha_{n-1})S(p_m) + \alpha_{n-1}S(c) - (1-\alpha_n)S(p) - \alpha_n S(p_a) \\ &= [(n-1)(1-s)\delta + (N-n+1)\delta](1-c) \\ &\quad - \{1-[n(1-s)\delta + (N-n)\delta]\}(1-p) \\ &\quad - [n(1-s)\delta + (N-n)\delta][1-sp-(1-s)c] \end{aligned}$$

Buyers' acceptance decision (2)

- Note: $\partial x_n(s,p)/\partial n = [(1-s)\delta - \delta](1-c+p-p_a) < 0$ (Lemma 2)
- That is, as n increases, it becomes easier and easier to compensate buyers, for their acceptance has less and less consequences in terms of foregone entry
- So, what will buyers do in equilibrium? It is obvious there are SPE in which all buyers accept $\{s, x_N(s,p), p\}$
- But focus on the case where they can coordinate on the best action from their collective point of view (PCPNE): can they all reject the offer?
- Not if $x \geq x_1(s,p) = x^*(s,p)$ (Lemma 3)

Incumbent's decision

- Does it pay off for I to offer such a contract?
- I's profit under free entry: 0 (entry happens 100% of the time: $\alpha_0 = 1$)
- When he restricts entry, I must compensate buyer for the loss in surplus *generated by their acceptance decision*
- I's profit per buyer under the scheme: $(1 - \alpha_N)\,\pi(p) + \alpha_N \pi(p_a) - x$
- Minimum compensation to be paid: $x^*(s,p) = S(c) - (1-\alpha_1)S(p) - \alpha_1 S(p_a)$
- Profitable iff $\alpha_1 [S(p_a) - S(p)] - \alpha_N [\pi(p) - \pi(p_a)] > L(p)$
- Incumbent can compensate buyer by allowing them to deal with entrant (brings extra surplus $\alpha_1 [S(p_a) - S(p)]$ to buyer but costs $\alpha_N [\pi(p) - \pi(p_a)]$ to incumbent)
- Works if α_1 bigger enough than α_N: always possible for s close to 0 and p close to c

Welfare

- Actual entry depends on the realization of fixed costs
- In any case, buyers end up paying more: p_a instead of c in case of entry, p instead of c in case of no entry
- So, less entry, less consumer surplus, and higher incumbent's profit
- Note: in this version of the model with inelastic demand, abuse is only exploitative (higher price paid by buyers but no change to output by construction); in general model higher prices translate into allocative inefficiency
- It it the combination of a contractual price, a minimum requirement, and probabilistic entry that delivers this stark outcome
- Less than 100% exclusivity requirement is worse than simple exclusivity contracts!