Partial Exclusivity

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BECCLE Annual Conference
NHH, Bergen – April 27, 2017

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Auctions or negotiations ?

Selling or procurement situations

- Selling of TV rights for sports.

- M&A (in particular Acquisitions).

- Supermarket private-label products or procurement in general.

Do not always resort to competition (tendering, auction)

- Often private negotiations long in advance (e.g. TV rights for the 2026 Football World Cup have already been sold in the U.S., Rugby Top 14).

- Tacit renewal of a contract (many antitrust cases).

Puzzle for economists

- Bulow and Klemperer (1996) : the maximum revenue (i.e., using a Myerson's optimal mechanism with reserve prices) with n (symmetric) bidders is less than the revenue from an English auction with $n+1$ (symmetric) bidders.

This paper

Room for vertical collusion

- The seller and one buyer can profitably deal together and exclude other potential buyers.

- But exclusion is only partial and an auction occurs with positive probability.

Intuition : too much rent for the winner in a first price auction

- B_1 bids $b_1 = \mathbb{E}\left[v|v < v_1\right] < v_1$.

- Whenever $b_1 < v_0 < v_1$, $S + B_0$ prefer to deal together rather than letting B_1 win the auction.

Timing
### Partial exclusivity with a purchase option

One seller (S) and $n + 1$ buyers (B_0 (preferred), $B_1, \cdots, B_n$)

1. Ex ante, B_0 and S agree (or not) on a transfer for a purchase option with a fixed strike price $\overline{b}$.

2. B_0 and $B_1, \cdots, B_n$ privately observe v_0 and $v_1, \cdots, v_n$ (i.i.d, drawn from distribution F).

3. B_0 decides to use the option or not.

4. If not, an auction is run with $n + 1$ bidders (sealed-bid first price auction).

Buying Option $\Rightarrow$ Partial Exclusivity

- Choosing a strike price $\overline{b} \Longleftrightarrow$ choosing a threshold $\overline{v}$.
- If $v_0 > \overline{v}$ then B_0 buys at price $\overline{b}$.
- If $v_0 < \overline{v}$ then B_0 does not buy and S runs an auction.

Partial exclusivity
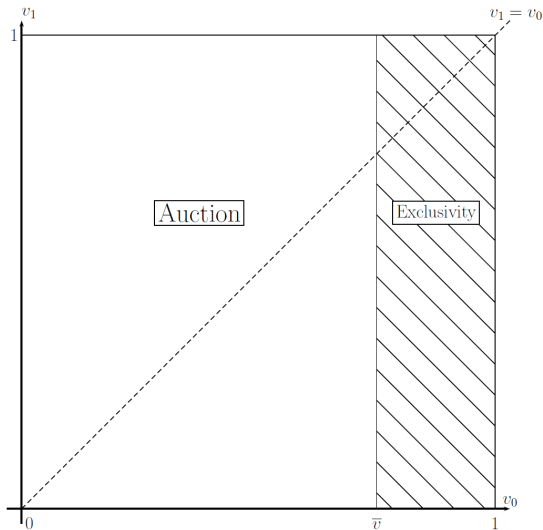
Naive competitors
Assume $B_1, \cdots, B_n$ are not aware of the ex ante agreement

Bidding strategies in the auction

- Naive competitors bid as in an auction with $n+1$ symmetric bidders.
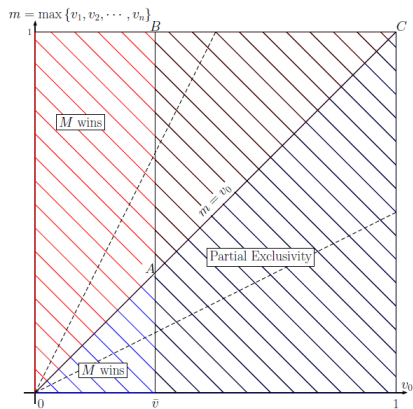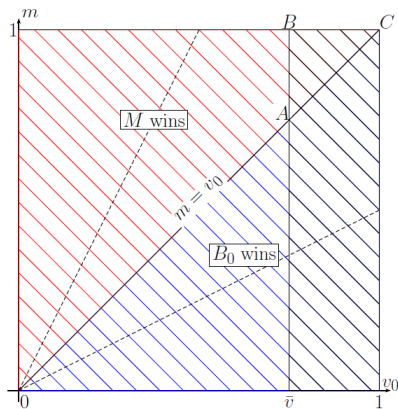- So the preferred buyer does B_0 (best-reply to unchanged strategies).

For any distribution F and $n \geq 1$

Partial Exclusivity is optimal (unique cutoff $\bar{v}(n)$).
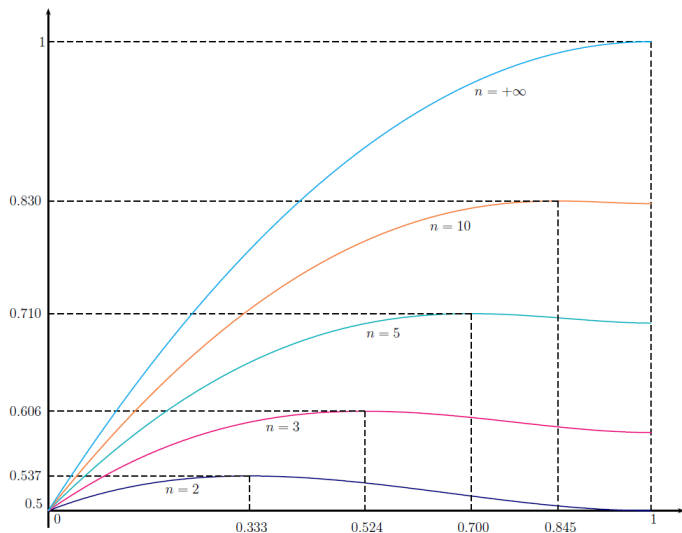
If F and $1-F$ are log-concave

- Probability to run an auction increases with the number of potential buyers (i.e. $\bar{v}(n)$ increasing in n).
- If $\widetilde{F} \geq^{\mathrm{lr}} F$ there is less exclusivity for $\widetilde{F}$.
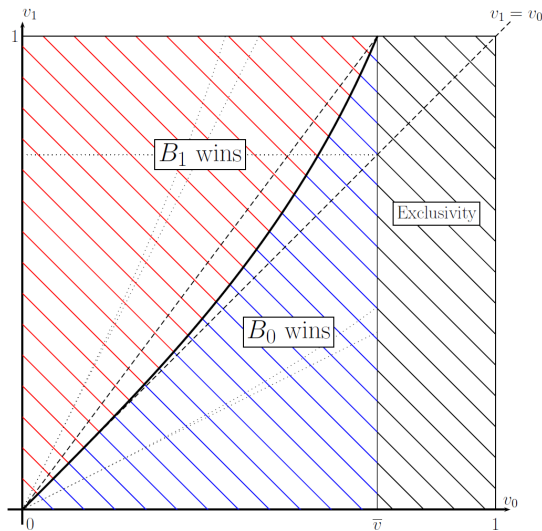
Graphical proof

Comparative static on n
F uniform over $[0, 1]$

Sophisticated competitors
Asymmetric auction à la Maskin and Riley

Sophisticated competitors
Assume $B_1, \cdots, B_n$ are aware of the ex ante agreement

Sophisticated competitors reduce their bids.

- This makes partial exclusivity less attractive as it reduces the expected revenue when the auction takes place.
- But the intuition of the naive case still remains valid.

Results with sophisticated buyers

- If $n = 1$, then for any distribution F :
  Partial Exclusivity $\succ$ Full Competition $\sim$ Full Exclusivity.

- If F is uniform, then for any n, partial exclusivity is optimal.

Sophisticated competitors
But the value of the strike price $\bar{b}$ is not observed

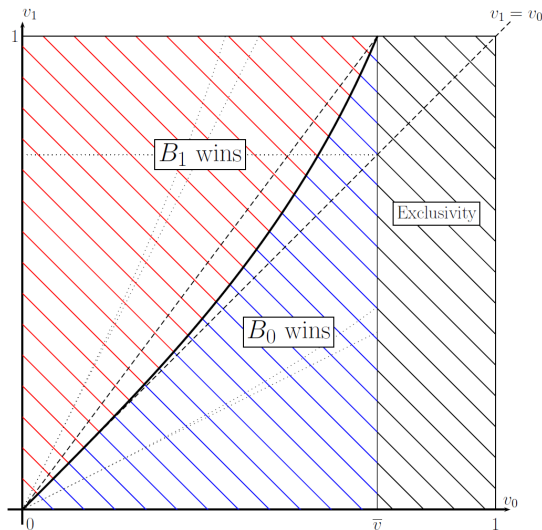**(Perverse) incentive to reduce** $\bar{v}$, i.e., exclusivity more attractive with a secret strike price.

- Because a deviation in the strike price is not observed, bidding behaviour is unaffected.

- B_0 replaces B_1 as the selected buyer but it remains profitable as long as v_0 is larger than B_1 highest bid.

Results with unobserved strike price

- If $n = 1$ then (for any distribution F), full exclusivity is the only equilibrium.

- For $n \geq 2$ then (for any distribution F), partial exclusivity is optimal and $\bar{v}(n-1) \leq \bar{v}^e(n) \leq b_n^*(1)$.
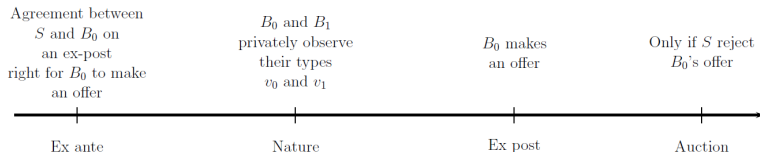
Sophisticated competitors
Asymmetric auction à la Maskin and Riley

Timing with pre-auction negotiation
Partial exclusivity with a priority right

Agreement between S and B_0 on an ex-post right for B_0 to make an offer	B_0 and B_1 privately observe their types v_0 and v_1	B_0 makes an offer	Only if S reject B_0's offer
Ex ante	Nature	Ex post	Auction

Continuum of semi-separating equilibria

- For any $\overline{v} \in [0, 1]$, B_0 offers $\overline{b} = \overline{v}/(1 + \overline{v})$ if $v_0 > \overline{v}$ and 0 otherwise.
- S accepts to sell at $\overline{b}$ and rejects the zero price offer.
- If the seller receives an out-of-equilibrium offer, she believes that $v_0 \geq \overline{v}$ and rejects it.
- *All equilibria survive usual refinement criteria.*

Partial Exclusivity
One competitor. Uniform distribution

|	Π_0	Π_S	$(\Pi_0 + \Pi_S)$	Π_1	W	$Pr(B_0 \text{ wins})$	$Pr(B_1 \text{ wins})$
(a) 1st price	4	8	12	4	16	.5	.5
(b) 1st price with res. price 0.5	2	10	12	2	14	.325	.325
(c) Optimal mechanism	n/a	n/a	14	1	15	.75	.25
(d) Right of first refusal	7	6	13	2	15	.75	.25
(e) Purchase option (Naive)	5.48	7.40	**12.89**	1.93	**14.81**	**.72**	.28
(f) Purchase option (Sophist.)	5.54	6.8	**12.33**	3	**15.4**	**.66**	.34

[1] All values for profits qnd welfare are to be divided by 24.
[2] All values for the purchase option cases are approximated values.

The various scenarios
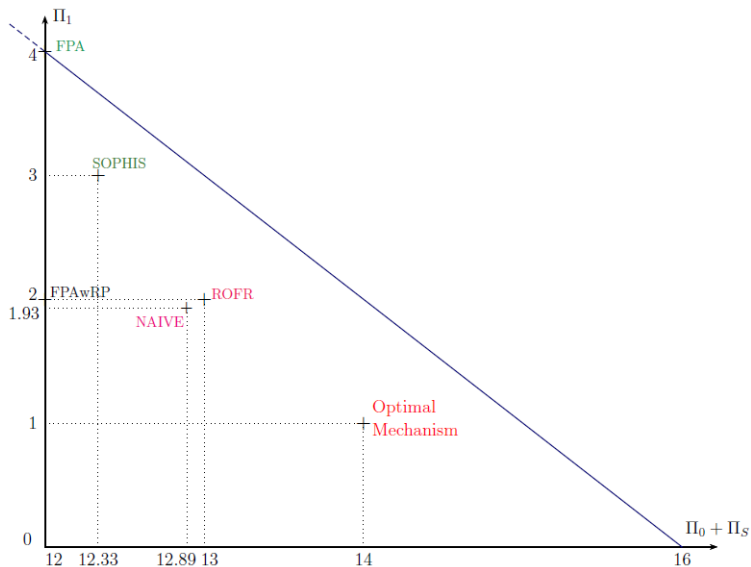
The various scenarios
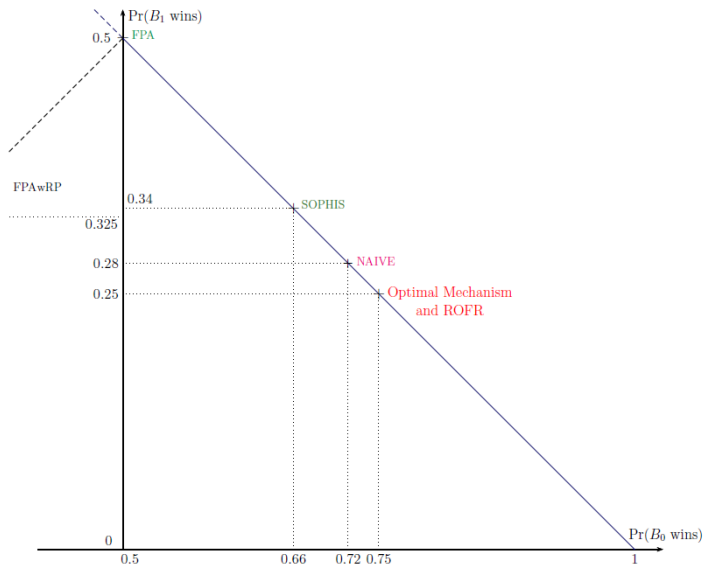
Antitrust issues

- These vertical agreements all reduce welfare.

- Right of first refusal (or English clause) much disliked by antitrust enforcers.

- Our purchase option is less harmful than ROFR or auction with reserve price (or right to resell) – at least with sophisticated buyers.

- The priority right seems relatively mild : Does multiplicity of equilibria call for regulatory intervention ?

- **Purchase option is not exactly a rent shifting mechanism : allocative inefficiency, but partially excluded buyers pay a lower price when they win the auction.**

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