# Module 10: Procompetitive Justifications for Exclusive Contracts

Market Organization & Public Policy (Ec 731) · George Georgiadis

- So far, we have studied the use of exclusive contracts for anticompetitive purposes.
- Can exclusive contracts have any procompetitive motives?
  - *Marvel (JLE, 1982):* Exclusive contracts can protect relationship-specific investments (*i.e.*, avoid hold-up).
- An example:
  - When a manufacturer advertises and brings customers into a retail store, the retailer might switch those customers to other products that offer him a higher margin.
  - Anticipating this, the manufacturer has weak incentives to advertise.
  - An exclusive contract restores these incentives.
- Other examples:
  1. GM and Fisher's 1919 exclusive contract. (Klein, JLEO, 1988)
     - GM agreed to buy only Fisher autobodies.
     - Purpose was to protect Fisher's investments in specialized equipment.
  2. United Shoe Machinery Corporation's contracts with shoe manufacturers (Masten and Snyder, JLE, 1993)
     - US 1922 Antitrust case: United argue it needed to protect its investments in tradining shoe manufacturers how to efficiently organize their production processes.
     - W/o an exclusive contract, they could use this knowledge with other firms' shoe machines, thus reducing United's incentives to invest in training.

**Model (Segal and Whinston, RAND, 2000)**

- A model of exclusive contracting in the presence of noncontractible investments.

- A buyer ($B$) and a seller ($S$) who may contract prior to making noncontractible investments.
- There is also an external source ($E$) from where $B$ can procure the product instead.

**Timing:**

1. $B$ and $S$ can sign a contract that specifies exclusivity (*i.e.*, $B$ must buy from $S$).
2. $B$ and $S$ make noncontractible investments that determine $B$'s value from trade with both $S$ and $E$, as well as $S$'s cost.
   - Assume values and cost are observable by both parties.
3. $B$ and $S$ 50-50 Nash-bargain over terms trade.
   - If they don't reach an agreement, $B$ can buy from $E$ provided he is not bound to $S$ by an exclusive contract.

**Setup (simplified):**

- $B$ needs at most one unit of the product.
  - Values $S$'s product at $v$, and $E$'s product at $v_E$.
- If $S$ invests $i_s$, then his unit cost is $c(i_S)$, where $c' < 0$.
- The external source has unit cost $c_E$, where $v > c_E > c(i_S)$ for all $i_S$.
  - So it is efficient for $B$ to always buy from $S$.

**An Irrelevance Result**

- Efficient investment solves

$$\max_{i_S} \{[v - c(i_S)] - i_S\}$$

so it satisfies $c'(i_S^{**}) = -1$.

- What is the effect of an exclusive contract?

  - Let $e = 1$ denote an exclusive contract, and $e = 0$ indicate no exclusivity.
  - Note that bargaining always results in $B$ and $S$ agreeing to trade.
  - $S$'s payoff is

$$\begin{aligned} u_S(i_S|e) &= d_S(i_S|e) + \frac{1}{2}[v - c(i_S) - d_B(i_S|e) - d_S(i_S|e)] - i_S \\ &= \frac{1}{2}[v - c(i_S)] + \frac{1}{2}[d_S(i_S|e) - d_B(i_S|e)] - i_S \end{aligned}$$

  where $d_S(i_S|e)$ and $d_B(i_S|e)$ are $S$'s and $B$'s disagreement payoffs.

  - These are:

$$\begin{aligned} d_S(i_S|e) &= 0 \\ d_B(i_S|e) &= \begin{cases} v_E - c_E & \text{if } e = 0 \\ 0 & \text{if } e = 1 \end{cases} \end{aligned}$$

  - So an exclusive contract increases $S$'s payoff and decreases $B$'s payoff.
    - *Intuitively*, $B$ is in a worse bargaining position with an exclusive contract.
  - But does it increase $S$'s incentives to invest?
    - No, $i_S^*$ is independent of $e$!

- *Takeaway:* Exclusivity is irrelevant for both investment and efficiency.

  - Because investment only affects the value of trade between $B$ and $S$.
  - For exclusivity to matter, investments must affect the value of trade between $B$ and $E$, and hence disagreement payoffs.

- Let us return to the examples from earlier:

1. GM-Fisher relationship: Investment is purely internal.
2. United - shoe manufacturers relationship: Investments do affect external value.
   - Advertising and training investments increase not only the value of trade between $B$ and $S$, but also the value of trade between $B$ and $E$.

- Extend the model to incorporate (i) seller investments that also affect external value, and (ii) buyer investments.

**Seller Investments that also affect External Value**

- Let $v(i_S)$ and $v_E(i_S)$ denote $B$'s values of trade with $S$ and $E$, respectively, and assume that $v' > 0$ and $v_E' \lesseqgtr 0$; *i.e.*, internal and external investments may be complements or substitutes.
- $S$'s payoff is

$$u_S(i_S|e) = \frac{1}{2}\left[v(i_S) - c(i_S)\right] - i_S - \frac{1}{2}\begin{cases} v_E(i_S) - c_E & \text{if } e = 0 \\ 0 & \text{if } e = 1 \end{cases}$$

- If $e = 0$, then $i_S^0$ satisfies $v'(i_S^0) - c'(i_S^0) - v_E'(i_S^1) = 2$.
- If $e = 1$, then $i_S^1$ satisfies $v'(i_S^1) - c'(i_S^1) = 2$.
- Which case results in higher investment level? (Assume $v'' - c'' > 0$.)
  - If $v_E' > 0$ (*i.e.*, investments are complements), then $i_S^1 > i_S^0$ so that an exclusive contract results in higher effort.
  - If instead $v_E' < 0$ (*i.e.*, investments are substitutes), then an exclusive contract results in lower effort.

**Buyer Investments**

- Now suppose that $B$ is the one to invest instead of $S$.
- Buyer's valuation is $v(i_B)$ or $v_E(i_B)$ when he trades with $S$ or $E$, respectively.
  - Assume $v' > 0$, and $v_E' \lesseqgtr 0$. (internal and external investments may be complements or substitutes)

- $B$'s payoff is

$$u_B(i_B|e) = \frac{1}{2}\left[v(i_B) - c(i_B)\right] - i_B + \frac{1}{2}\begin{cases} v_E(i_B) - c_E & \text{if } e = 0 \\ 0 & \text{if } e = 1 \end{cases}$$

- If $e = 0$, then $i_B^0$ satisfies $v'(i_B^0) - c'(i_B^0) = 2$
- If $e = 1$, then $i_B^1$ satisfies $v'(i_B^1) - c'(i_B^1) + v_E'(i_B^1) = 2$
- Which case results in higher investment level? (Assume $v'' - c'' > 0$.)
  - If investments are complements ($v_E' > 0$), then $i_B^1 < i_B^0$.
  - If investments are substitutes ($v_E' < 0$), then $i_B^1 > i_B^0$.
- So an exclusive contract lowers the level of $B$'s investment when investments are complements, while it increases it when they are substitutes.

| | *Investment by* | |
|---|---|---|
| | $S$ | $B$ |
| *Complementary* | Investment ↑ | Investment ↓ |
| *Substitutes* | Investment ↓ | Investment ↑ |

**Welfare Effects**

- When do these effects of exclusivity on investments raise welfare?
- Assuming $E$ is competitive, this is equivalent to asking whether $B$ and $S$'s joint payoff is higher or lower under an exclusive contract.
  - In general, an exclusive contract that increases investment will increase (decrease) welfare when the investment would be underprovided (overprovided) without the exclusive.

| | *Investment by* | |
|---|---|---|
| | $S$ | $B$ |
| *Complementary* | Welfare ↑ | Welfare ↓ |
| *Substitutes* | Welfare ↓ | Welfare ↑ |

- Useful for evaluating firms' procompetitive justifications in antitrust investigations.

# References

Marvel H.P., (1982), “Exclusive Dealing”, *Journal of Law and Economics*, (25), 1-25.

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