Nonlinear pricing and exclusion: II. Must-stock products

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Outline

"Unavoidable trading partner"

Communication from the Commission - Guidance on the Commission's enforcement priorities in applying Article 82 of the EC Treaty to abusive exclusionary conduct by dominant undertakings (February 2009)

Losing the dominant firm as a supplier is not an option

- its brand is a "must stock item" preferred by many final consumers
- ... the capacity constraints on the other suppliers are such that a part of demand can only be provided for by the dominant supplier.

"Competitors may not be able to compete for an individual customer's entire demand because the dominant undertaking is an unavoidable trading partner at least for part of the demand on the market [...]"

"Contestable share of demand"

"how much of the customer's purchase requirements can realistically be switched to a competitor"

Depends on

- time horizon
- rivals' capacity constraint
- client-specific factors that may limit how quickly a buyer can ramp-up products based on rival suppliers

Uncertainty about contestable share of demand

When a dominant firm faces growing competitive threat from a competitor

- form expectations about the share of their demand clients consider switching to competitors
- In *Intel* (May 2009): "what volumes were actually *thought* to be at risk during the period examined"?
  - See section VI.1. "The growing competitive threat from AMD"

In this paper, we regard contestable share as a random variable

- Quantitative assessment is difficult for the dominant firm... and for enforcers!
- particularly in industries with rapid pace of innovations

Exclusionary effect of rebates

"When customers must carry a certain percentage of the leading firm's products, discounts can be structured to induce purchasers to buy all or nearly all needs beyond that uncontestable percentage from the leading firm"

U.S. Department of Justice (2008)

In "II. must-stock products", we look at quantity rebates (nonlinear pricing)

- Static scenario of exclusion that can explain the highly nonlinear price-quantity schedules observed in practice
- Role of uncertainty about the characteristics of rival product

Outline

Two dimensions of uncertainty about rival product

- Contestable share of demand: s_E
- Unit surplus created by the rival good: ω_E
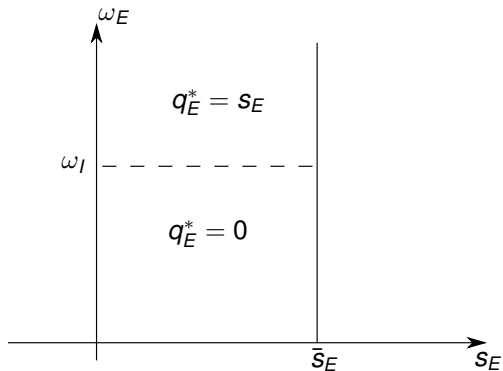
Figure 1: Efficient quantity supplied from competitor

Design of price-quantity schedules

Timing of events

1. Dominant firm and buyer choose a price-quantity schedule
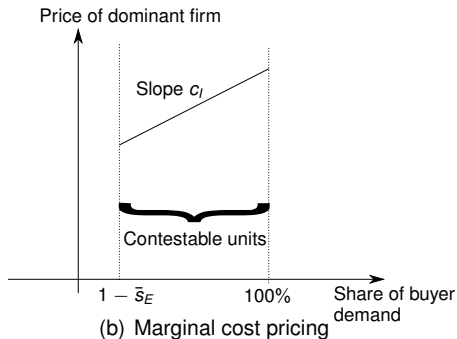2. Buyer and competitor negotiate unit price and quantity of rival good

Mechanism

- Rebates granted by dominant firm give the buyer bargaining power when negotiating with the rival
- Flavor of vertical collusion
- Transfers plays the role of recoupment

Example: Marginal cost pricing
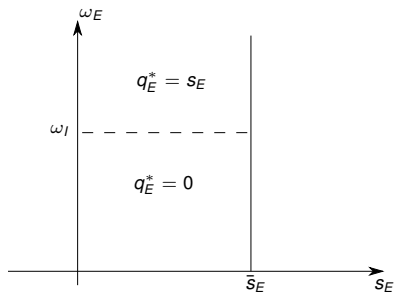
(a) Efficient allocation

(b) Marginal cost pricing

The rival, if it is efficient

- serves contestable share
- pockets the extra surplus generated by his product

Below-cost pricing under perfect information

Suppose dominant firm knows rival more efficient (say $c_E < c_I$)

- Sells marginal units at $c_E(+\varepsilon)$ to force rival to sell at cost
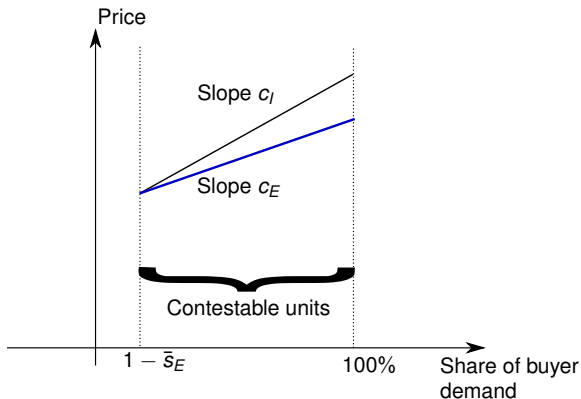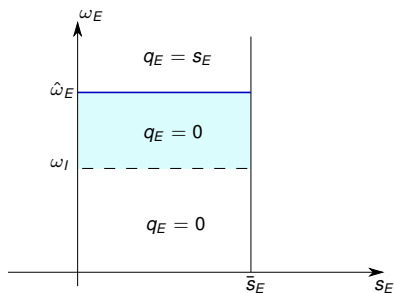- Rival serves contestable demand (which is efficient), but earns no profit
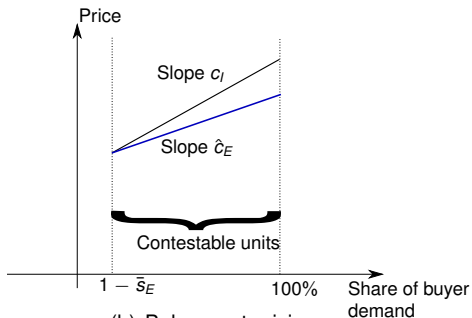

Figure 2: Below-cost pricing

Below-cost pricing under imperfect information

Suppose dominant firm does not know rival cost

- Rival is driven out of the market if it cannot match incumbent's price
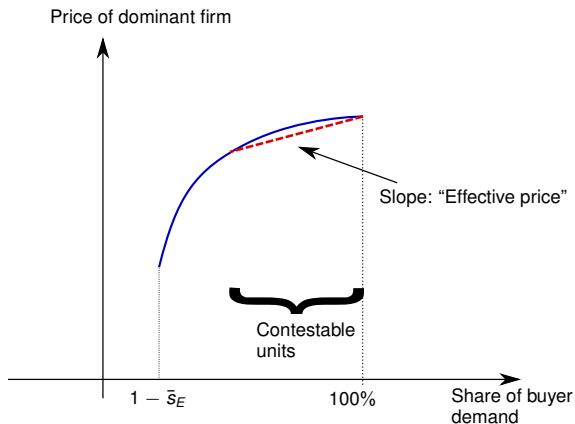- Tradeoff between rent extraction and (inefficient) exclusion
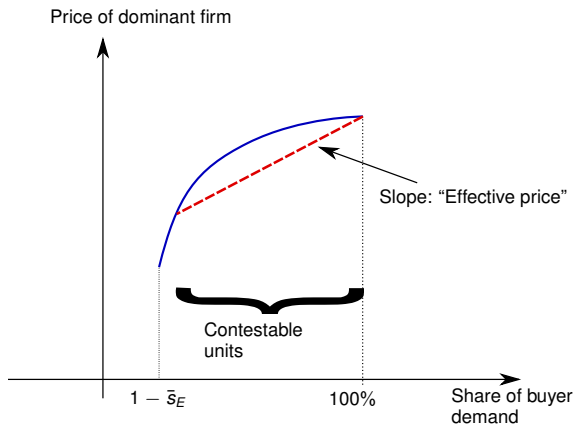

(a) Flat barrier to entry

(b) Below cost pricing

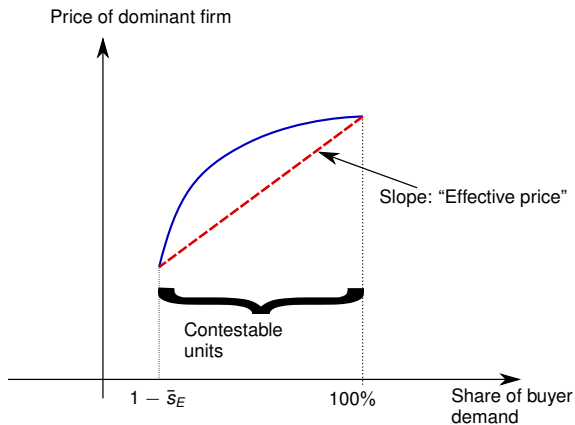Optimal when the two dimensions of uncertainty are independent
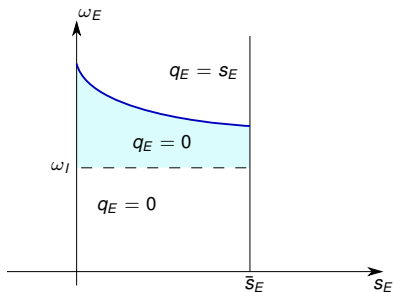
Higher barrier to entry for smaller contestable demand

Higher barrier to entry for smaller contestable demand

Price of dominant firm

Slope: "Effective price"

Contestable units

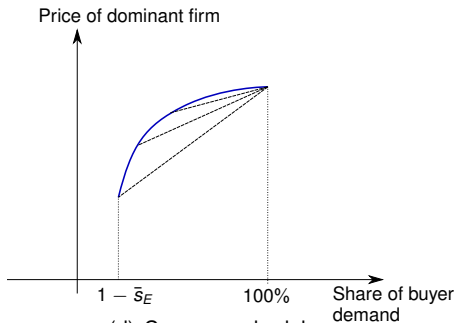$1 - \bar{s}_E$ 100%   Share of buyer demand

Higher barrier to entry for smaller contestable demand

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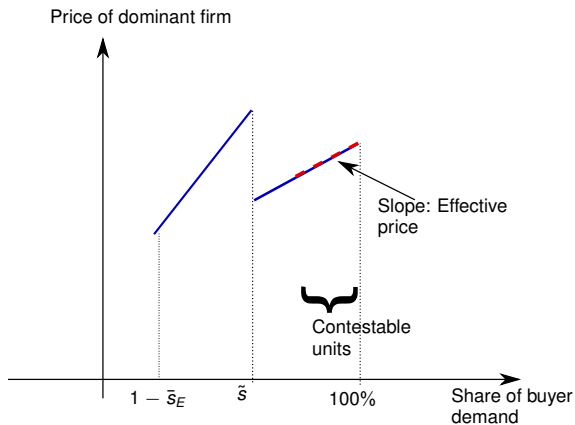

(c) Decreasing barrier to entry

(d) Concave schedule

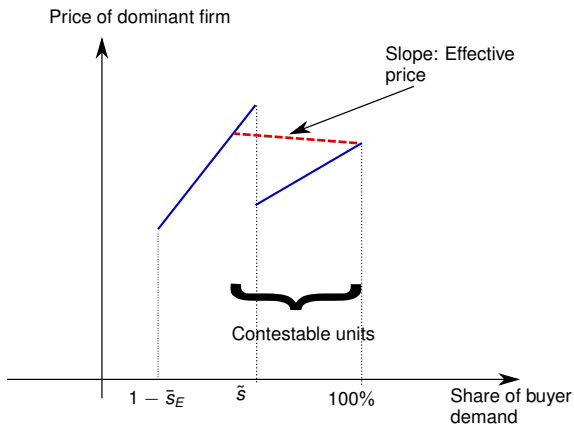Optimal when entry is more responsive for larger contestable demand

(ω_E first-order stoch. decreases with s_E)

- Concavity of schedule not due to economies of scale
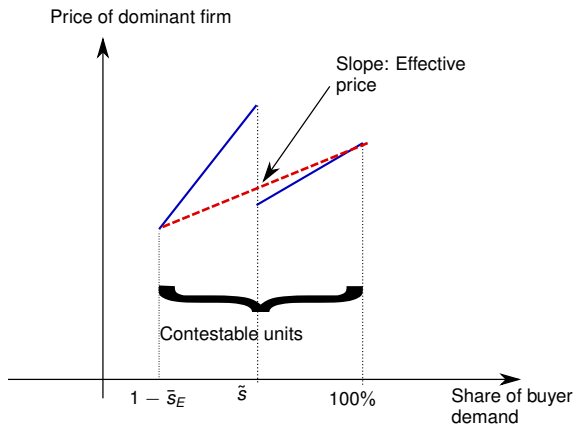- Effective price of contestable units is below marginal cost
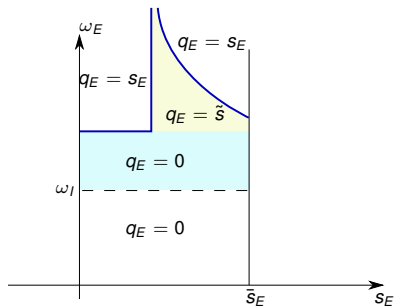
Retroactive rebates

Price of dominant firm

Slope: Effective price

Contestable units

$1 - \bar{s}_E$ $\tilde{s}$ 100% Share of buyer demand

Retroactive rebates

Price of dominant firm

Slope: Effective price

Contestable units

$1 - \bar{s}_E$ $\tilde{s}$ 100%

Share of buyer demand

Retroactive rebates

Price of dominant firm

Slope: Effective price

Contestable units
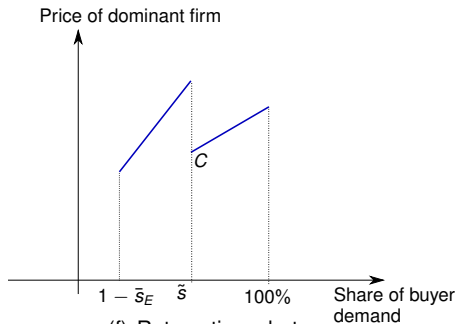
$1 - \bar{s}_E$ $\tilde{s}$ 100%

Share of buyer demand

Retroactive rebates

(e) Hump-shaped barrier to entry

(f) Retroactive rebates

Optimal when entry is more responsive for small and large contestable shares

- Partial foreclosure in the yellow area: Barrier to expansion

Outline

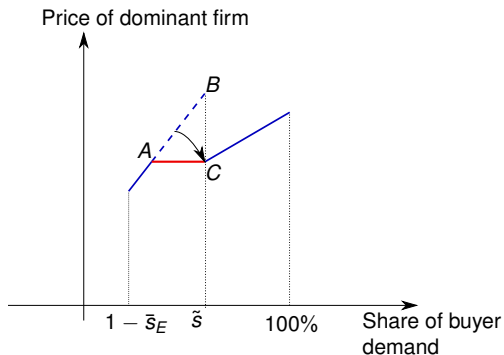# Finite disposal costs and buyer opportunism

Figure 3: Under zero disposal costs

When disposal or resell are possible

- Less exclusionary power and higher profit for dominant firm and buyer
- Incentive to artificially increase disposal costs: monitoring, ban on resell