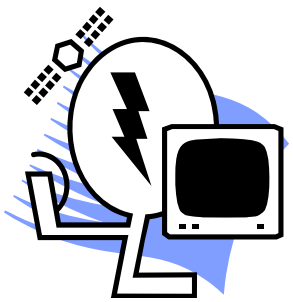
# The impact of price squeeze rules and margin regulation



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# Overview

- Vertical integration and margin squeeze
- Approaches to margin squeeze
  - Price squeeze rules in antitrust
  - Margin regulation
- Analysis
  - Impact on retail prices
  - Impact on investment
- Conclusions

# Vertical integration and margin squeeze

- Vertically integrated firm supplies an input to a downstream competitor
- Margin between its wholesale and retail prices is insufficient to cover retail costs
- EC Access Notice (for telecoms sector) sets out two methods:
  - Equally efficient operator (EEO): assess margin against retail costs of integrated firm
  - Reasonably efficient operator (REO): adjusts for inherent cost disadvantages of non-integrated competitors

# Price squeeze rules in antitrust

- EU competition law
  - Price (or margin) squeeze can be an abuse of dominance under Article 101 TFEU
  - *Deutsche Telecom* (2008): CFI rules margin squeeze is a distinct pricing practice that can constitute abuse
  - *TeliaSonera* (2011): ECJ confirms and clarifies this ruling
- US antitrust
  - *Pacific Bell v linkLine* (2009):
    US Supreme Court rules that a price squeeze claim cannot be brought under Sherman Act section 2 in the absence of an antitrust duty to deal

# Margin regulation

- Efficient Component Pricing Rule (ECPR)
  - Set access fee equal to opportunity cost of providing access
  - In simple settings:

    access price = integrated firm's retail price

    – its retail costs
  - Retail price is regulated / fixed
- Deregulated (or unregulated) retail markets
  - Similar principle often applied: margin regulation
  - E.g. upstream telecoms markets
  - Also pay TV (not a regulated utility)

# Questions

1. When price squeeze rule / margin regulation is imposed in a setting where retail prices are freely set, what happens to the retail price of the integrated firm?
2. What are the dynamic effects of these rules, e.g. impact on investment?

- NB: To be binding, regulation must entail a wider margin than the integrated firm would itself choose

# 1. Impact on retail prices

- Retail prices are unregulated (unlike ECPR)
- Two ways of satisfying wider margin requirement
  - ↓ wholesale price, $w$
  - ↑ retail price, $P$
  - FOCs: might expect a bit of both
- But also competitive effects
  - Lower $w$: pass through reduces competitor retail prices
  - Higher $P$: softens competitor response, raising competitor retail prices
  - Regulated firm chooses balance between ↓$w$ and ↑$P$

# Modelling price impact

- Based on Armstrong & Vickers (1998)
- Differentiated goods A, B
  - A produced by single firm
  - B produced by competitive fringe
- Firm A supplies input to B firms
  - Linear wholesale price $w$
  - Fixed coefficient technology (1–1)
- Pricing
  - A chooses $P$ and $w$, or equivalently, $P$ and $m$ (margin)
  - B firms set retail price $r$

# Price impact of margin regulation

- Firm A's profit function $\Pi(P, m)$
- Suppose margin is regulated at $M$ (i.e. requires $m \geq M$)
  - A sets retail price $P$ also taking account of impact on wholesale price via $M$
- How does $P$ change with regulated margin $M$?

$$P_M = \frac{\Pi_{mP}}{-\Pi_{PP}}$$

where subscripts denote partial derivatives

- Since $-\Pi_{PP} > 0$, $P$ increases with $M$ iff $\Pi_{mP} > 0$
  - This is the case for linear demand systems

# Summary of price impacts

- Competitor retail prices fall
  - Pass through of lower wholesale price
- Regulated firm's retail price likely to go up
  - One of two ways to satisfy margin rule
  - Competitive response to $\uparrow P$ preferable to that of $\downarrow w$
  - Integrated firm chooses balance between the two
- So:
  - Good for consumers of competitor products
  - Not so good for integrated firm's own consumers (and these are often more numerous)

# 2. Impact on investment

- Suppose
  - Firm A supplies input to B, as well as producing good A
  - Product B produced a single firm
  - Differentiated goods, linear demands
  - Price competition (e.g. Bertrand, Hotelling)
- Firms can make investments that expand demand (i.e. quality enhancing)
  - In upstream input: expands demand for both goods A & B
  - Downstream (retailing): expands demand for own good only
  - Investment incurs fixed cost, increasing and convex in demand expansion

# Investment impact of margin regulation

- Raises downstream investment by integrated firm
  - Wider retail margin increases benefit from winning consumer from its competitor (by raising quality)
- Raises investment by competitor
  - Integrated firm can no longer respond by ↓ retail price: makes competitor's investments more profitable
- Raises upstream investment by regulated firm
  - Complementarity of upstream & downstream investment: greater downstream investment promotes investment in upstream input
- Even $M$ = desired margin $m^*$ has these effects: changes marginal conditions for investment

# Comparison: access price regulation

- Access price regulation: fix $w = W$
- Reduces upstream investment
  - Integrated firm cannot raise wholesale price to benefit from higher quality input
- Reduces downstream investment by integrated firm
  - Complementarity of upstream & downstream investment
- Generally increases investment by competitor
  - Lower $w$ raises competitor's retail margin, stimulating investment
  - But lower quality input can reduce investment incentive: it is possible that further reductions in $w$ reduce competitor investment (for some parameter values)

# Conclusions

- Price squeeze rule / margin regulation widens margin between wholesale and retail prices
- Impact on prices
  - May raise retail price of integrated firm, though reduces those of competitors
  - May harm consumers in aggregate
- Impact on investment
  - Stimulates investment, by both integrated firm and competitor, and both up- and downstream
  - Contrast with wholesale price regulation, which harms investment by integrated firm