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Conglomerate mergers

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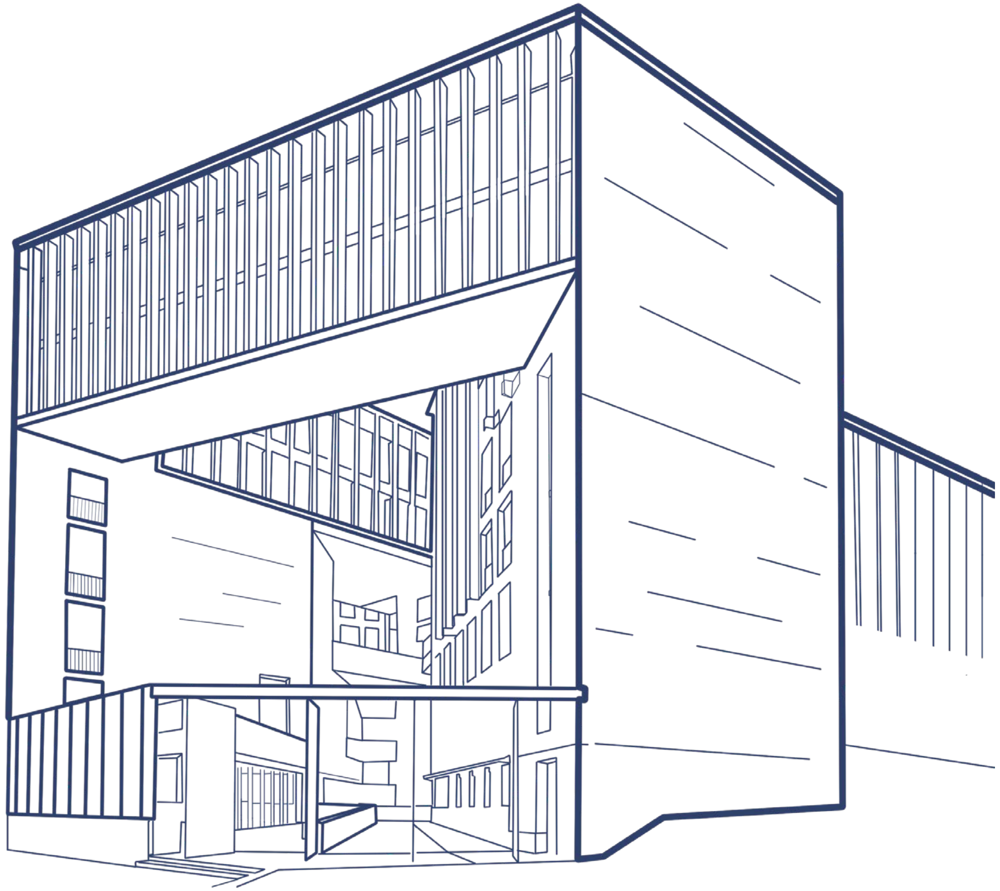

- **Complements versus substitutes**

- **Conglomerate mergers**

Complements versus substitutes

- Mergers
  - Horizontal mergers: UPP
  - Vertical and conglomerate mergers: EDM
- Article 101
  - Horizontal collusion versus vertical or R&D coordination
- Article 102
  - Predation versus (vertical or horizontal) foreclosure

Problem: not always clear-cut

- Heterogeneous users and usages
  - Two products / patents / bits of data can be substitutes for some users or usages, and complements for others

    illustrations: patent pools; code sharing (Qantas – Air China)
  - Products and usage may evolve over time

    illustration: Microsoft vs. Netscape (OSS / browser)
- Multi-sided markets

  TV channels: complements (viewers) & substitutes (advert.)

Blurring the picture further

- Endogeneity
  - Feature depends on sign of price elasticity
  - *Local* variable: depends on *endogenous* prices
- From markets to *ecosystems*
  - From individual products … to *baskets* of products
  - Heterogeneous patterns: one-stop vs. multi-stop
  - Also endogenous

Endogeneity I: technology adoption

- Lerner and Tirole (*AER* 2004)
  - Two patents
    - full version of technology requires *both* patents
    - limited version requires a single patent (*either one*)
  - From complements to substitutes as prices *increase*
    - low prices: adopters favour full version → *complements*
    - high prices: adopters favour limited version → *substitutes*

Endogeneity II: club effects

- Rey and Tirole (*JPE* 2019)
  - Two firms offering different varieties of a product
    - horizontal differentiation (Hotelling segment)
    - industry-wide club effects: value increases with total customer base
  - From complements to substitutes as prices *decrease*
    - high prices (nascent market): local monopolies → *complements*
    - low prices (mature market): full participation → *substitutes*

Ecosystems I

- Chen and Rey (*AER* 2012, *Rand* 2019)
  - Two goods, two firms: firm 1 (resp., 2) stronger on A, (resp., B)
  - Heterogenous shopping patterns: one- vs. multi-stop
  - Complements or substitutes?
    - market-by-market approach (e.g., A1 and A2): *substitutes*
    - in-house (e.g., A1 and B1): *complements* for *one-stop* shoppers
    - strong products (A1 and B2): *complements* for *multi-stop* shoppers

Ecosystems II

- Implications
  - Competition for one-stop shoppers is key driver
    - low margins on bundles
    - Thomassen *et al*. *AER* 2017: UK supermarkets
  - Double-marginalization on strong products
  - Cross-subsidization
    - gain on strong product
    - loss on weak one

Remark: potential competition

- Common wisdom: close substitutes
- Club effects
  - Social media
    - tipping
    - incumbency advantage
  - Entry: another social media? Alternative: “niche” strategy
    - attracts some consumers
    - gets the ball rolling

- Complements versus substitutes
- **Conglomerate mergers**

Conglomerate mergers: definition

- Antitrust: neither horizontal nor vertical
  - Separate product markets (non-substitutable products)
  - Same customer (independent / complementary products)
- EU Merger guidelines (2008)

  "Conglomerate mergers are mergers between firms that are in a relationship which is neither horizontal (as competitors in the same relevant market) nor vertical (as suppliers or customers). In practice, the focus of the present guidelines is on mergers between companies that are active in closely related markets (e.g. mergers involving suppliers of complementary products or products that belong to the same product range)."
- [Finance: broader definition – fully unrelated activities]

Conglomerate mergers: cases

- Recent wave in digital economy
  - 2014: *Google/Motorola*, $12.5 billion; *Facebook/WhatsApp*, $22 billion
  - 2015: *AT&T/DIRECTV*, $48.5 billion; *Dell/*EMC, $67 billion
  - 2016: *Microsoft/LinkedIn*, $26.2 billion
  - 2018: *Qualcomm/NXP*, $47 billion
  - 2019: *Nvidia/Mellanox*, $6.9 billion
  - 2020: *Google/Fitbit*, $2.1 billion; *Facebook/Giphy*, $315 million
  - 2023: *Booking/eTraveli*, $1.7 billion [Disclosure]
- Other sectors as well
  - 2016: *ASL/Arianespace*, €150 million
  - 2018: *Luxottica/Essilor*, €46 billion

End of a policy divide?

- US: no antitrust concerns
  - Robert Bork (1978): "no threat to competition"
  - Merger Guidelines: concerns disappear in 1982
  - No prohibition in 40 years
- EU: exclusionary concerns based on "portfolio effects"
  - *GE/Honeywell* (2001): upheld by CFI on non-congl. grounds
  - *Tetra Laval/Sidel* (2002): overturned by CFI/ECJ
  - No prohibition afterwards for 20 years
- Recent developments
  - US: Merger guidelines (December 2023)
  - EU: *Booking/ETG* (September 2023)
  - UK: *Facebook/Giphy* (October 2022)

Efficiency benefits

- Double marginalization [Cournot 1838]
  Applies to all complements (“vertical” / “horizontal”)
  - Reducing price of one component boosts demand for others
  - A merger leads to lower prices
- Can be transposed to investment, R&D and innovation
  - Reducing cost / increasing quality boosts demand for compl.
  - A merger leads to greater investment
- Tying, technical integration
  - Pervasive (cars and smartphones are “bundles”)
  - Lower transaction costs, consumption synergies

Theories of harm: (complete or partial) foreclosure

[Rey and Tirole *Handbook of Industrial Organization* 2007]

- Tying as an entry barrier [Whinston *AER* 1990]
  Commitment to aggressive response to entry
- Protecting core market [Carlton and Waldman *Rand* 2002]
  Scope econ.: entry in adjacent mkts may ease entry in core mkt
- Tying/interop. & innovation [Choi and Stefanadis *Rand* 2001]
  Force rivals or entrants to innovate in multiple markets
- Hold-up [Allain, Chambolle and Rey *RES* 2016]
  Create / exacerbate hold-up concerns for rivals

Theories of harm: bundling I

- Different types of practices
  - Pure bundling: offers only the bundle *A*–*B*
  - Tying: e.g., offers *B* and the bundle *A*–*B* (does not offer *A* alone)
  - Mixed bundling: offers *A*, *B* plus the bundle *A*–*B* at a discount
- Price effects
  - Lower prices for bundles (elimination of double marginalization)
  - Ambiguous impact on stand-alone prices
- Remark: mixed bundling versus quantity rebates
  - Pay-TV packages (basic, movies, news, sport, …): mixed bundling
  - *Lyonnaise Câble*: “star system”

Theories of harm: bundling II

- *GE / Honeywell* [Disclosure]
  - Complements: *GE* engines and *Honeywell* avionics, …
  - Calibrated model put forward by rival engine manufacturer
    - engines: two competing suppliers
    - avionics: three competing suppliers
    - demand for six “combinations”
  - Merger simulation
    - merger leads to lower market shares for rivals
    - even more so with mixed bundling (compared to no bundling)
    - but consumers … benefit (lower prices for bundle and rivals)

AT&T – Direct TV

- Parties (US)
  - *AT&T*: largest Internet and telephone service provider
  - *DIRECTV*: second largest pay-TV supplier
- Complaints
  - *American Cable Association*, Biglaiser: higher prices (content)
  - *Netflix*: abuse of market power (interconnection)
- Defence
  - *AT&T*: consumption synergies (save costs for consumers)
  - Katz and Berry & Haile: benefit from one-stop shopping
- After the merger, *AT&T* *raised* prices for TV packages

Consumption synergies

- Recurrent feature
  - *Aerospatiale-Alenia/De Havilland* (commuter aircraft)
    - would be the first to cover all markets (small/midsize/large aircraft)
    - airlines could save on spares and maint., pilot certif. and training
  - *AT&T/DirectTV*
    - save on number of setup boxes and installations (Internet + TV)
    - single consumer support, billing, …
  - *Eurotunnel/SeaFrance*
    - urgent freight: rail
    - non-urgent freight: ferries
  - More generally: one-stop shop benefits
    - saving on transaction costs (e.g., shopping costs, learning, …)
  - [Supply-side synergies: innovation spillovers *ATT/NCR*]

Consumption synergies: issues

- Pros and cons
  - Efficiency benefits
    - generates greater value
    - issue is whether they will be passed on to customers
  - Anti-competitive effect
    - *Aerospatiale-Alenia/de Haviland*; *GE/Honeywell*: “portfolio effects”
    - confers a competitive advantage to the conglomerate
    - can be exacerbated by bundling strategies
- Recent paper with Zhijun Chen
  “A theory of conglomerate mergers”
  - Heterog. consumption synergies or one-stop shop benefits
  - Theory of harm: portfolio differentiation, softer competition

Baseline setting

- Pre-merger: two separate markets A,B
  - Supply: identical firms $A_1 \dots A_{n_A}$ and $B_1 \dots B_{n_B}$
  - Consumers: independent unit demands for each product
  - Homogeneous unit costs and valuations: $u_A > c_A$, $u_B > c_B$
  - In each market $i = A, B$:
    - if $n_i > 1$, competition drives prices down to cost: $p_i = c_i$
    - if instead $n_i = 1$, monopoly pricing: $p_i = u_i$
- Conglomerate merger between A_1 and B_1
  - Conglomerate can offer *bundle* $A - B$
  - Generates consumption synergies (heter. across consumers)

If pure bundling and tying are *banned*

- Stand-alone prices remain unchanged
  - In any non-monopolized market, prices remain at cost
    - competition between multiple stand-alone rivals
    - competition between conglomerate and stand-alone rival
  - In any monopolized market, price remains at monopoly level
    - appropriates all consumer surplus
    - relaxes competitive pressure on the bundle
- In addition, conglomerate sells the bundle at a premium
- Win-win situation (Pareto-improvement)
  - Mix-and-matchers and stand-alone rivals are unharmed
  - Conglomerate and purchasers of bundle share added-value

If pure bundling and tying are *allowed*

- Same outcome in monopolized and dispersed markets
- Conglomerate withdraws from duopoly markets
  - Confers market power to stand-alone rival
  - Leads to higher stand-alone prices
  - Relaxes competitive pressure on bundle
- As a result
  - Consumers with low consumption synergies are harmed
  - Total consumer surplus can decrease
  - Conglomerate and stand-alone rivals increase their profits

Extension: imperfect competition

- Setting: two duopolies, horizontal differentiation
  - Perfect correlation across preferences for the two products
  - Ban on tying and bundling
- Strong rivalry: mixed bundling
  - Merger exacerbates differentiation and weakens competition
  - Higher stand-alone prices to limit cannibalization of bundle
- Weak rivalry: de facto pure bundling; the merger can
  - Harm all consumers (if initial rivalry is sufficiently weak)
  - Benefit rivals (all the more so as initial rivalry is already weak)

Extension: one-stop shop benefits

- One-stop shoppers benefit even absent bundling
  - Conglomerate cannot charge more for the bundle
  - No role for mixed bundling (same as no bundling)
- With pure bundling and tying: same analysis
- No pure bundling or tying: similar + some nuances
  - Dispersed + duopoly: price at cost in *concentrated* market
  - two duopolies: mixed strategies with higher expected prices

Extension: merger dynamics

- Setting: three markets A, B, C with n firms ($n > 1$)
  - Sequential merger opportunities
  - Endogenous merger and bundling/tying decisions
- Insights
  - A single conglomerate emerges, offering all products
  - If $n = 2$, remaining stand-alone firms do not want to merge
  - If $n > 2$, conglomerate deters subsequent mergers
    - offers both large and small bundles – but then only sells large one
    - deterrence reduces total consumer surplus and social welfare

Lessons: bundling

- Pure bundling more likely to raise serious concerns
  - Exacerbates portfolio differentiation effect
  - Higher stand-alone prices, particularly if weak competition
  - Can increase profit at the expense of consumers
- Mixed bundling can be socially beneficial
  - Can be needed to generate consumption synergies
  - Can foster the intensity of competition

    lower bundled prices: elimination of double marginalization
  - Caution, however, in case of weak rivalry

    possibly higher stand-alone prices, *de facto* pure bundling

Lessons: conglomerate mergers

- Efficiency gains

  Consumption synergies, one-stop shop benefits

- Portfolio differentiation effect

  Bundle versus basket, one-stop versus multi-stop shopping

- With tying / pure bundling, can create market power

  Increases profit at the expense of consumers

- Absent pure bundling, concerns if imperf. competition
  - Strong rivalry: win-win situation
  - Weak rivalry: creates market power (~ de facto pure bundling)