2019/SOM1/CPLG/SEM/005

Assessing Non-Horizontal Mergers

Submitted by: RBB Economics

Seminar on Economic Analysis in Horizontal and Non-Horizontal Mergers
Santiago, Chile
28 February – 1 March 2019

RBB | Economics

Assessing non-horizontal mergers

APEC Chile 2019

Jan Peter van der Veer

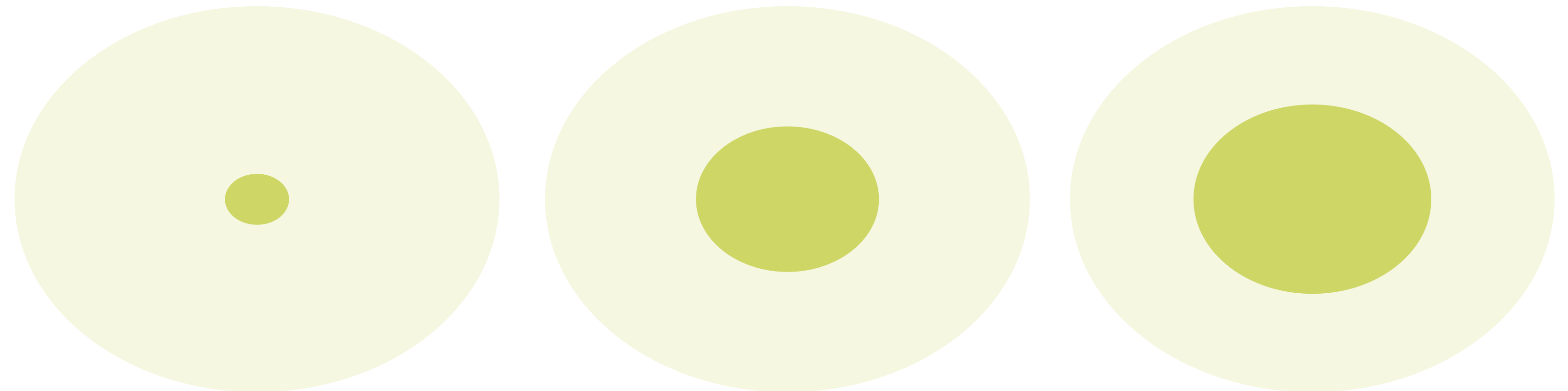
janpeter.vanderveer@rbbecon.com

1 March 2019

Overview

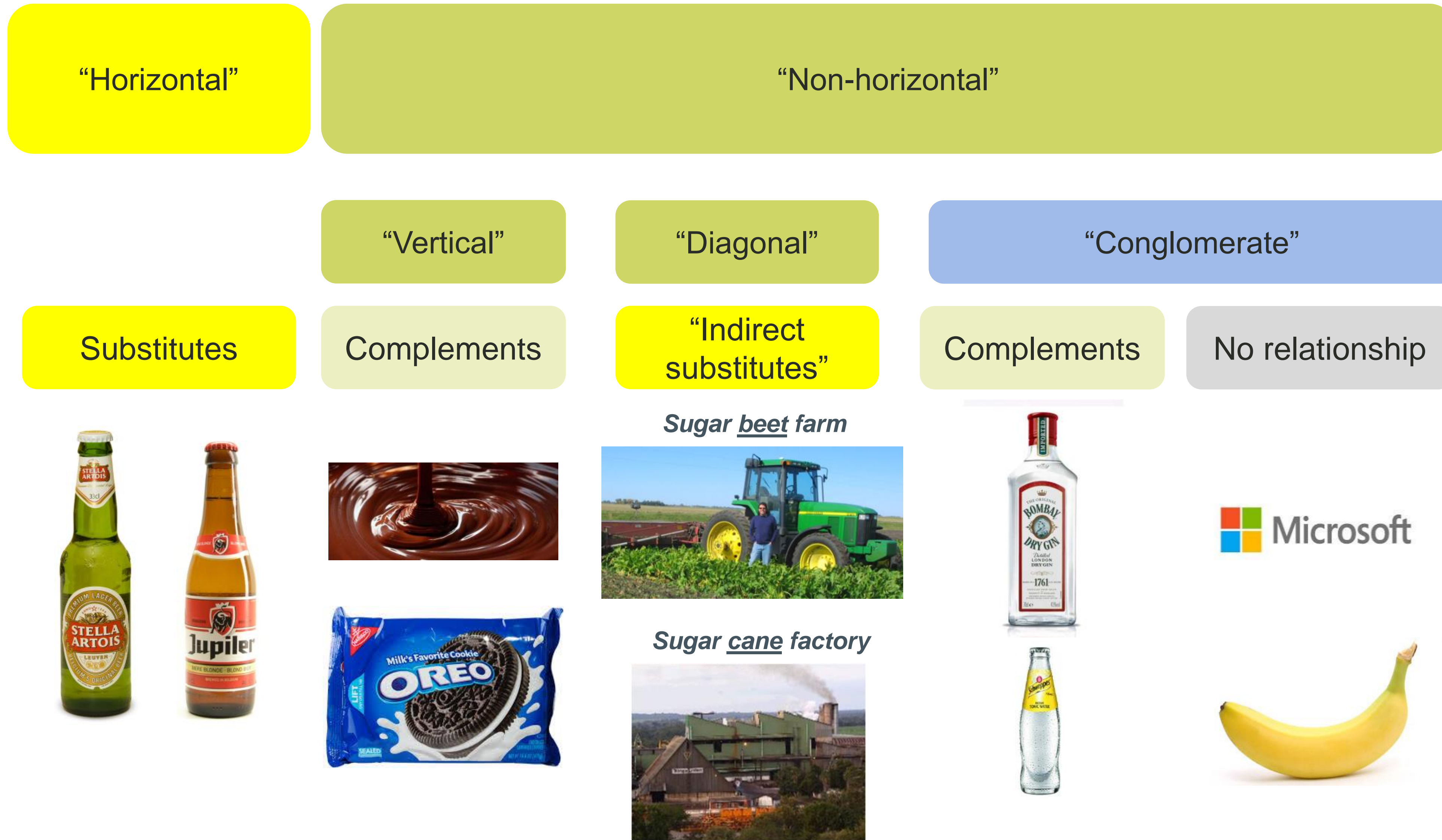
- Introduction
- Input foreclosure
- GE/Avio: total input foreclosure
- vGUPPI: partial foreclosure
- Customer foreclosure (time permitting)
- Conglomerate mergers (time permitting)
- Questions

Introduction



A taxonomy of mergers

RBB | Economics



Mergers in the presence of substitutes and complements

RBB | Economics

Horizontal mergers

- producers of substitute goods

$$\uparrow pA \rightarrow \downarrow qA \text{ and } \uparrow qB$$

- merger eliminates a direct competitive constraint and this may lead to a price increase

Non-horizontal mergers

- producers of complementary goods

$$\downarrow pA \rightarrow \uparrow qA \text{ and } \uparrow qB$$

Pre-merger, no incentive to boost demand for the complementary product

Post-merger, internalisation of externality may lead to a price decrease

Non-horizontal mergers are more likely to be pro-competitive…

RBB Economics

"Much of the controversy associated with non-horizontal merger enforcement arises from the widely held view that anticompetitive harm from such a transaction is unlikely (and if present is difficult to identify) and therefore that the motivation for non-horizontal mergers is not to enhance or preserve market power, but to realize efficiencies."

— J. Church, "*The Impact of Vertical and Conglomerate Mergers on Competition*" (2004), Report for the European Commission

"Efficiency effects … are likely to dominate in most cases"

— Motta (2004), "*Competition Policy: Theory and Practice*", Cambridge University Press, page 377.

"[11] Non-horizontal mergers are generally less likely to significantly impede effective competition than horizontal mergers,
[12] […] vertical or conglomerate mergers do not entail the loss of direct competition,
[13][and] provide substantial scope for efficiencies.
[92] […] conglomerate mergers in the majority of circumstances will not lead to any competition problems, […]. "

— EC Non-Horizontal Merger Guidelines (2008)

…but in some cases they can also give rise to anti-competitive effects

RBB | Economics

Non-horizontal mergers may **still be anti-competitive** if they permit post-merger behaviour that is able to exclude rivals

Most non-horizontal theories of harm focus on **anti-competitive foreclosure**: using strength in one product market to foreclose rivals in the other neighbouring market, ultimately harming consumers.

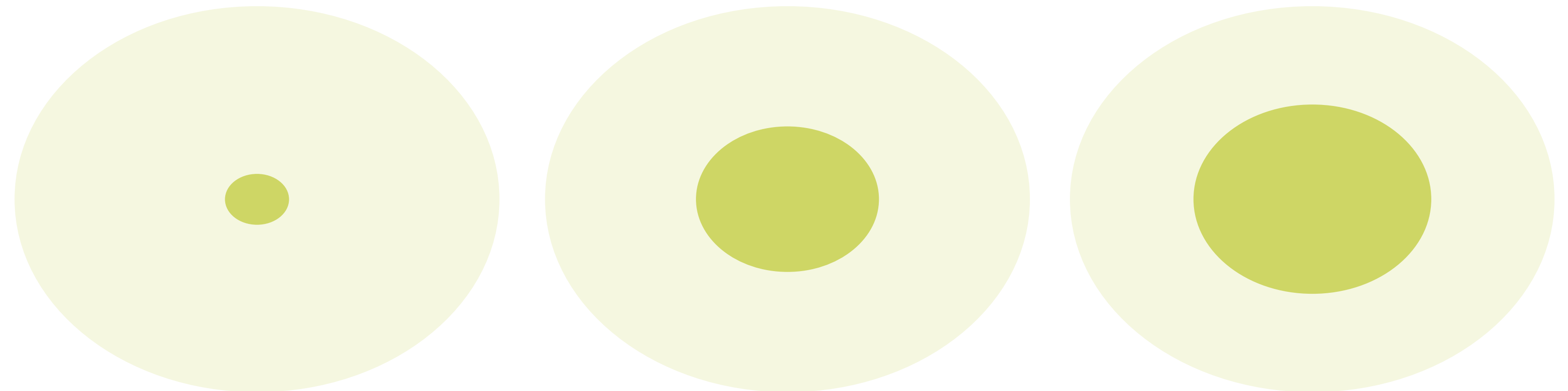
Vertical/diagonal mergers:

- **Input foreclosure**: merged firm may deny its horizontal competitors access to the vertically-related good (or allow access but charge higher prices).
- **Customer foreclosure**: merged firm may refuse to purchase from horizontal rivals

Conglomerate mergers:

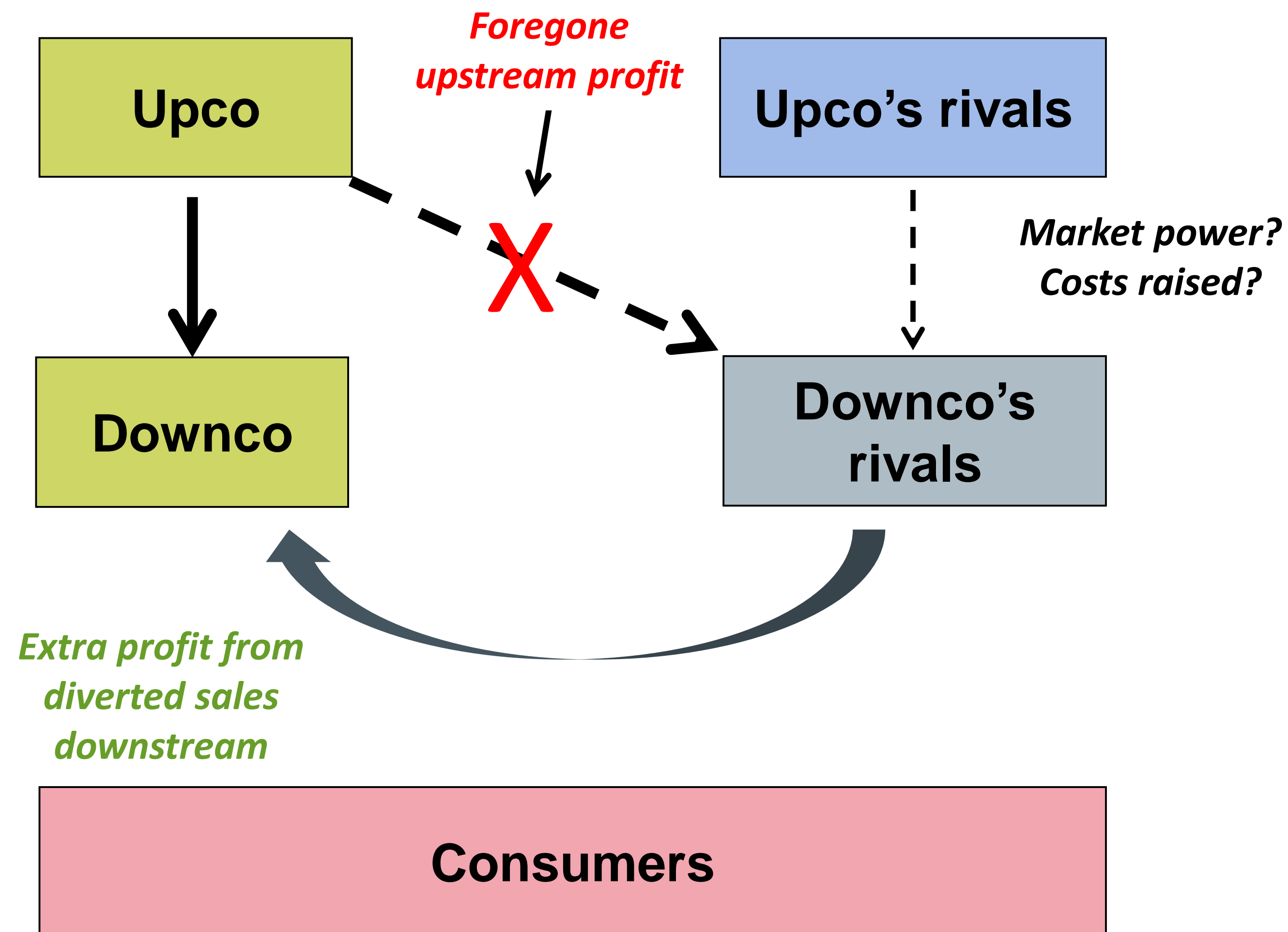
- by tying the sales of the products together, a firm enjoying significant market power in one market (the “tying” market) might be able to leverage this power into another market (the “tied” market)

Input foreclosure



Input foreclosure: the basic idea

- **Refusing to supply downstream rivals – or charging a higher price**
  – in order to affect their competitiveness and capture further sales downstream



Assessing non-horizontal mergers in practice: the European perspective

RBB | Economics

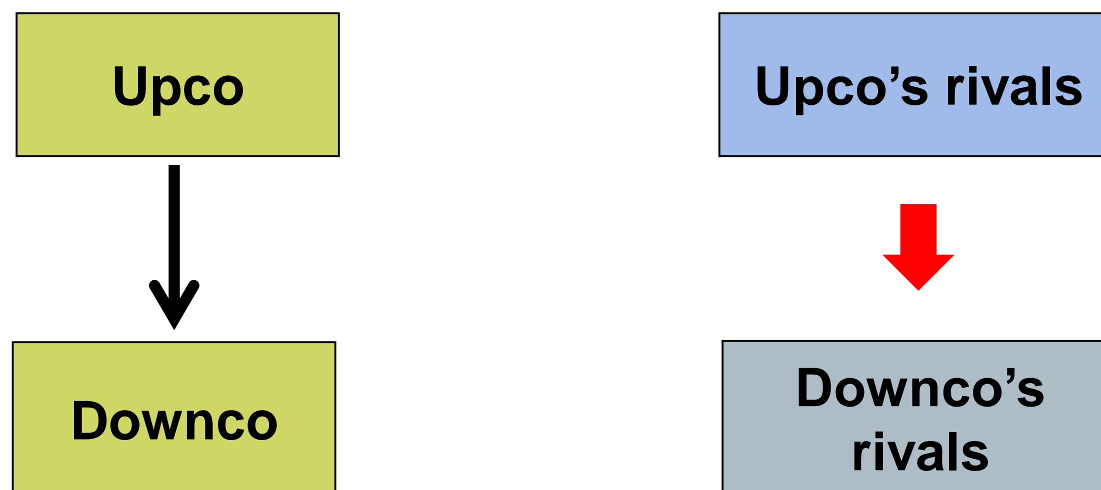
- Old approach largely based on “abstract” theories of harm rather than empirical analyses
  - Foreclosure often seen as concern in and of itself

- Following the adoption of the NHMG (2008), Commission changed this and also introduced the new term “**anti-competitive foreclosure**”
  - Para 18: “*foreclosing or raising rivals’ costs matters only in the presence of an adverse impact on consumers*”
  - In line with EC Art.102 Guidance Paper (on abuse of dominance)

- Application of this “competition, not competitors” principle requires an assessment of the following “closely intertwined” factors:
  - **Ability** – *is the merged entity able to foreclose*?
  - **Incentive** – *is it profitable for the merged entity to foreclose*?
  - **Effects** – *would final consumers suffer*?

Input foreclosure: ability

- Focus is on assessing market power in the upstream market
  - Degree of competition among Firm A's rivals, ease of entry, buyer power, dynamic effects (e.g. self-supply, vertical integration of rivals).
  - Absence of market power for Firm A makes input foreclosure unlikely
- BUT not only about market power in the upstream market: also depends on importance of the upstream good for the downstream rivals
  - Harming rivals' ability to compete becomes easier (a) as the share of input as % of rivals' marginal costs increases, or (b) if the input is *essential*



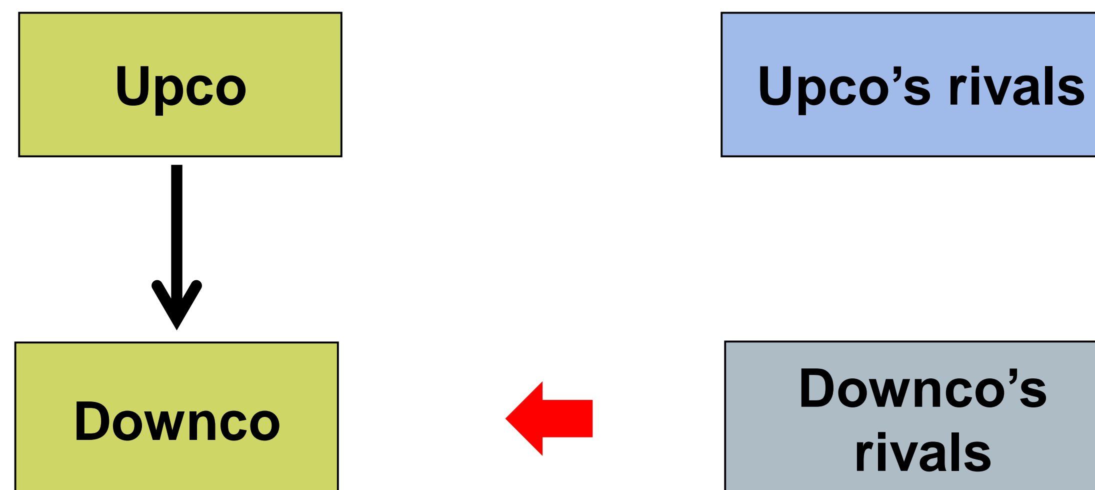
Input foreclosure: incentives

RBB | Economics

Would the strategy be profitable?

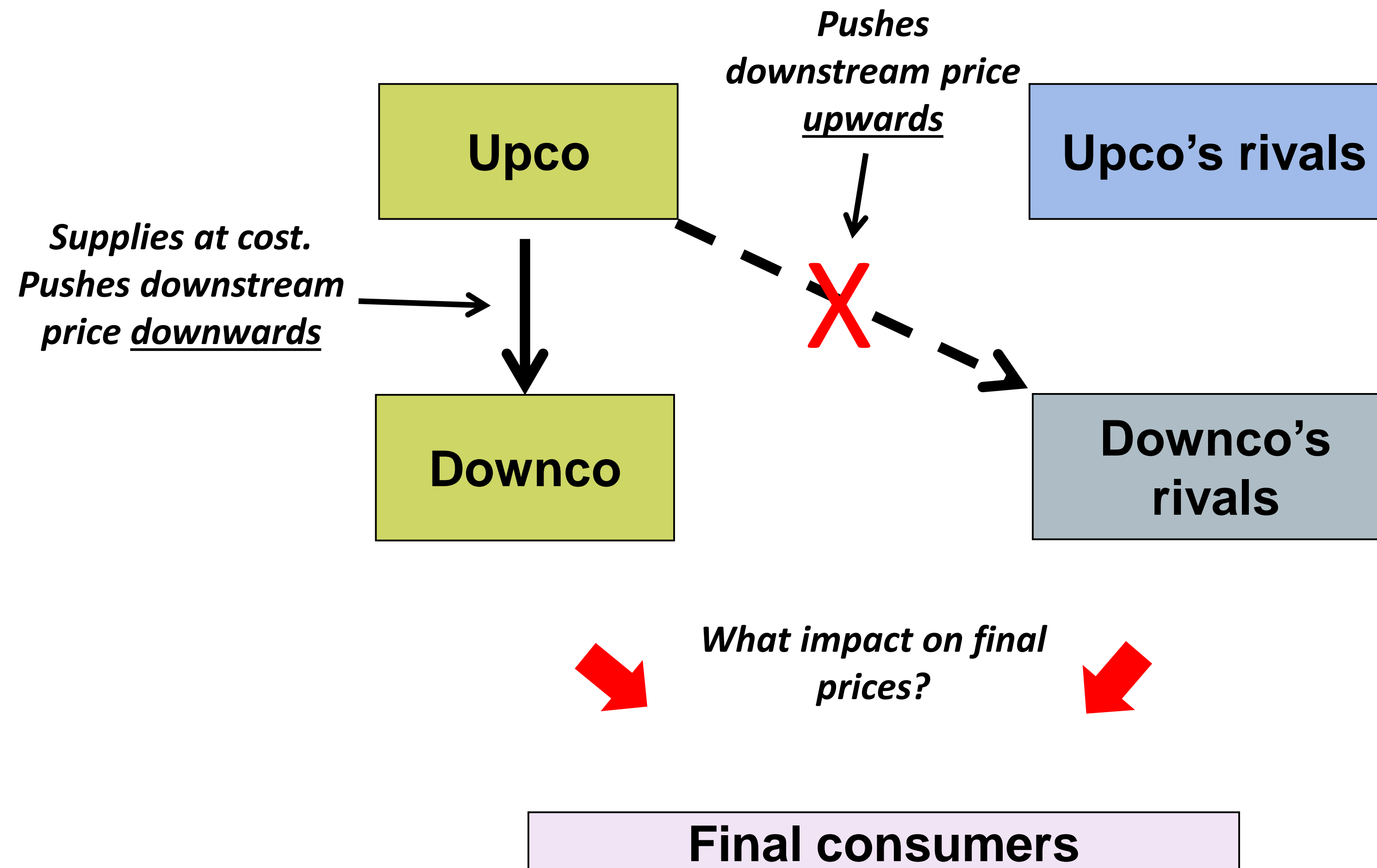
Incentive to foreclose only if additional downstream margins (benefits) are larger than foregone upstream margins (costs). Key parameters include:

- Diversion ratios downstream: diversion to Downco only from affected rivals. Gains from diversion weakened by presence of unaffected rivals (due to self-supply, credible threats to switch, terms secured by long term contracts, etc.).
- Margins: higher upstream margins imply greater foregone profit relative to downstream units gained
  - Ratio of inputs:outputs must also be considered.
  - If foreclosure through higher prices, we must consider increase in upstream unit margins too



Input foreclosure: effects

RBB | Economics



- **Final price** involves balancing **efficiency** and **cost-raising effects**
- Balancing may be implicit, e.g. only intervening in cases where cost-raising effects are found to be significant

Total and partial input foreclosure

RBB | Economics

Input foreclosure can be *total* or *partial*

– *"Total" means refusing to supply the input to downstream rivals*

– *"Partial" means continuing to offer the good but at a higher price*

From a theoretical viewpoint, a partial input foreclosure strategy with a *very* high price is akin to a total input foreclosure strategy

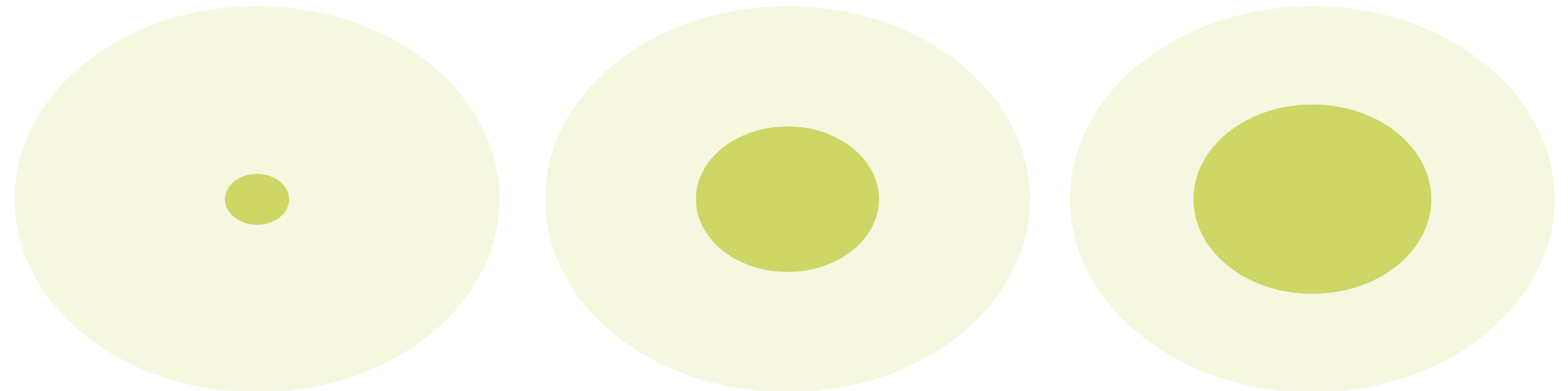
Focus on *total* input foreclosure first!

– If there is an incentive to engage in *total* input foreclosure, there will be an incentive to engage in *partial* input foreclosure too

– If there is no incentive to engage *total* input foreclosure, there may still be an incentive to engage in *partial* input foreclosure

Case study: GE/Avio

An assessment of total input foreclosure



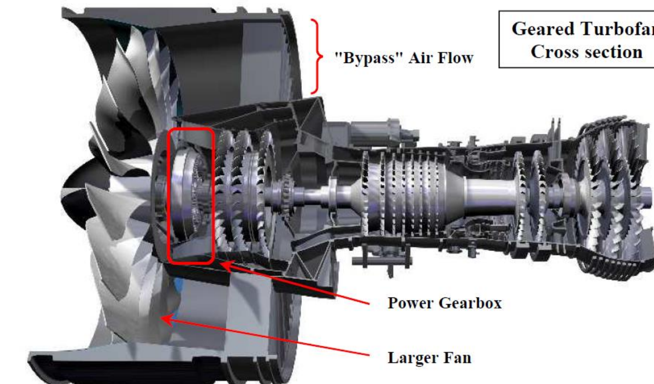
Background

GE produces **aircraft engines**

- Sells to airframers / airlines
- Only a small number of engine models are “certified” to operate on each airframe

Avio produces a number of **components** for aircraft engines

- Components are Power Gearboxes, Accessory Drive Trains, Oil Pumps and Tanks, Combustion Chambers, etc.
- Components are to some extent bespoke for each engine model
- Relevant components are a very small fraction of the cost of an engine (around 5-10% in total), but are essential for it to function

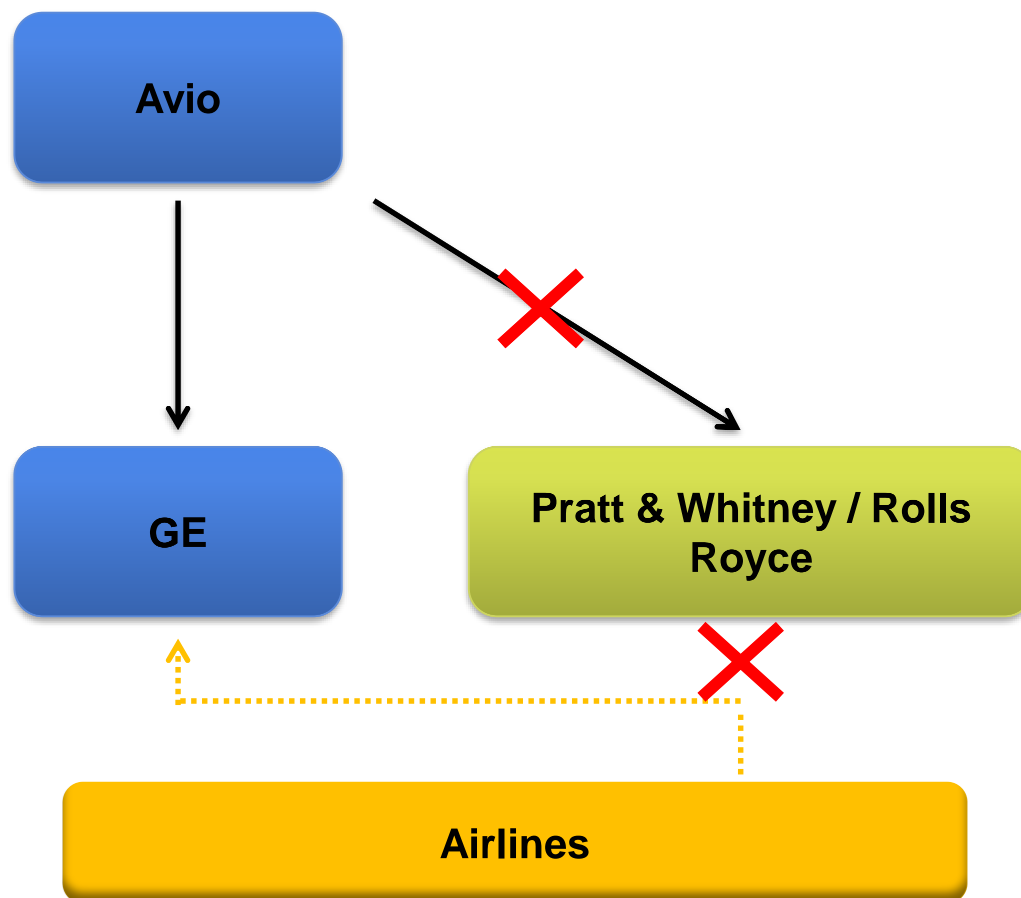


GE and Avio do not compete – Avio is upstream of GE in the production chain – so no direct loss of competition

So what was the concern?

Theory of harm: total input foreclosure

- Concern: Avio would refuse to supply rival engine producers with components in the hope of increasing sales of GE engines



- Would GE have both the ability and incentive to engage in such a foreclosure strategy?
- *Partial* input foreclosure unlikely at the outset
  - Components only small % of engine price – no significant switching expected from higher prices
  - Stringent quality regulations imply no scope for varying non-price parameters
- Only *total* foreclosure considered in more detail

Would GE/Avio have the ability to foreclose?

RBB | Economics

Avio does not possess **market power** in the supply of engine components as customers could switch to alternative sources of supply

- Engine manufacturers own the IP surrounding the design of their components, so they could use alternative sources of supply
- Engine manufacturers already self-supply part of their own components, and could quickly ramp-up the scale of this in-house production
- Low market share (between 1% and 30%) under all meaningful market definitions
- A large number of effective rival suppliers would be able to produce these components

Commercial relationship between Avio and P&W/RR governed by Long-Term Agreements, which include comprehensive contractual protections against any type of supply disruption (and also price/quality changes).

➡ **GE/Avio unlikely to have the ability to foreclose.**

Would GE/Avio have an incentive to foreclose? (1/2)

RBB Economics

Would the likely benefits of a foreclosure strategy outweigh its likely costs?

The **benefits** of foreclosure are likely to be modest:

- Limited additional GE engine sales:
  - Any disruption to sales of rival engines will only be **short-lived**
  - As a result of **self-supply** only a partial disruption of competitors would be possible
  - Customers with an **installed base** of the rival engine are very unlikely to want to switch.
  - GE unable to sell additional engines due to **capacity constraints**
- Limited benefit to GE of any additional sales:
  - GE would only gain a fraction (50%) of the profits from additional engine sales, as the “GE engines” are actually produced by a **joint venture** with another firm

Would GE/Avio have an incentive to foreclose? (2/2)

RBB | Economics

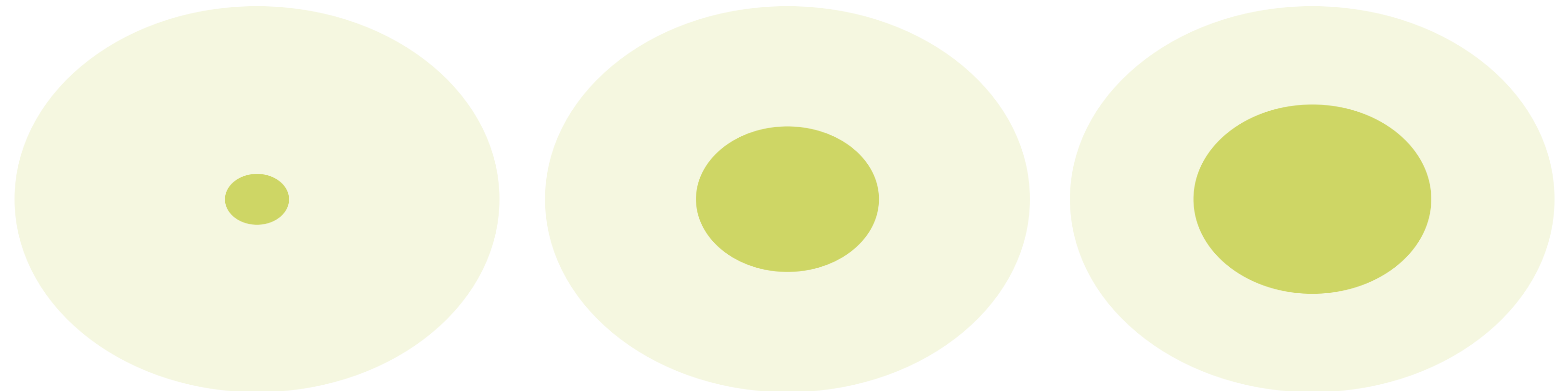
The **costs** of foreclosure are likely to be high:

- **Loss of component sales** for the entire duration of the rival engine programme
- **Loss of associated spare parts** sales
- Substantial **damages** for breach of contract (even if non-wilful)
- **Retaliation**, for example engine manufacturers switching their purchases of other products away from Avio, airframers not certifying GE engines on future airframes
- Substantial **reputational damage**, in an industry where firms necessarily have to engage in long-term relationships with each other

➡ **GE/Avio unlikely to have an incentive to foreclose.**

vGUPPI

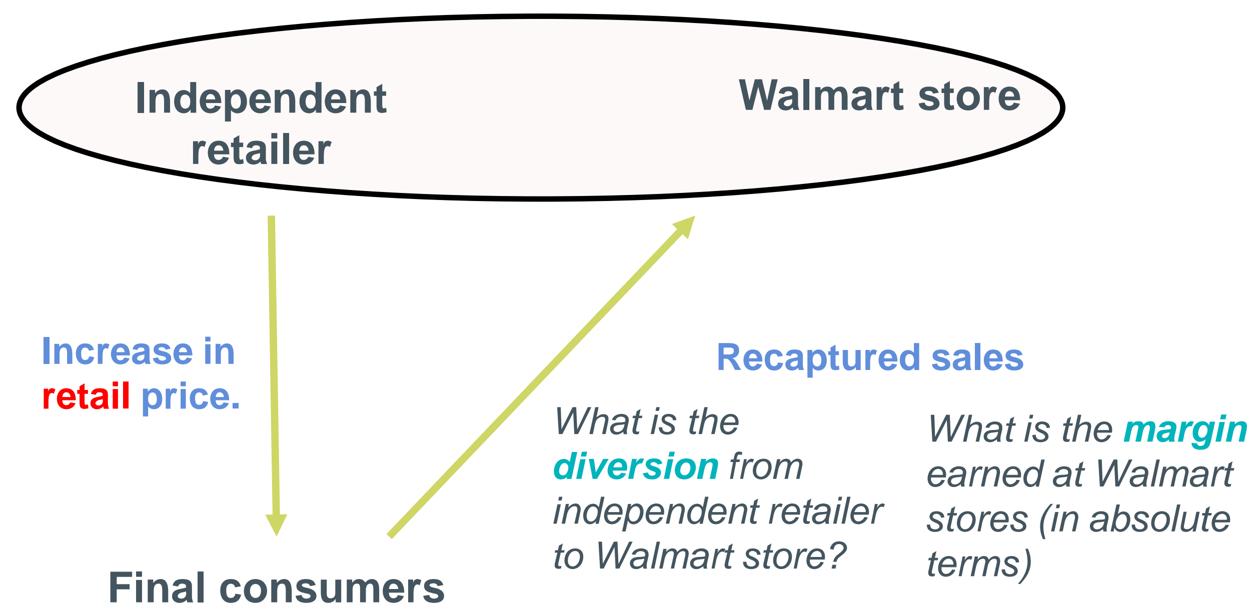
Assessing the incentive to engage in partial foreclosure



vGUPPI: starting with the standard GUPPI approach

RBB Economics

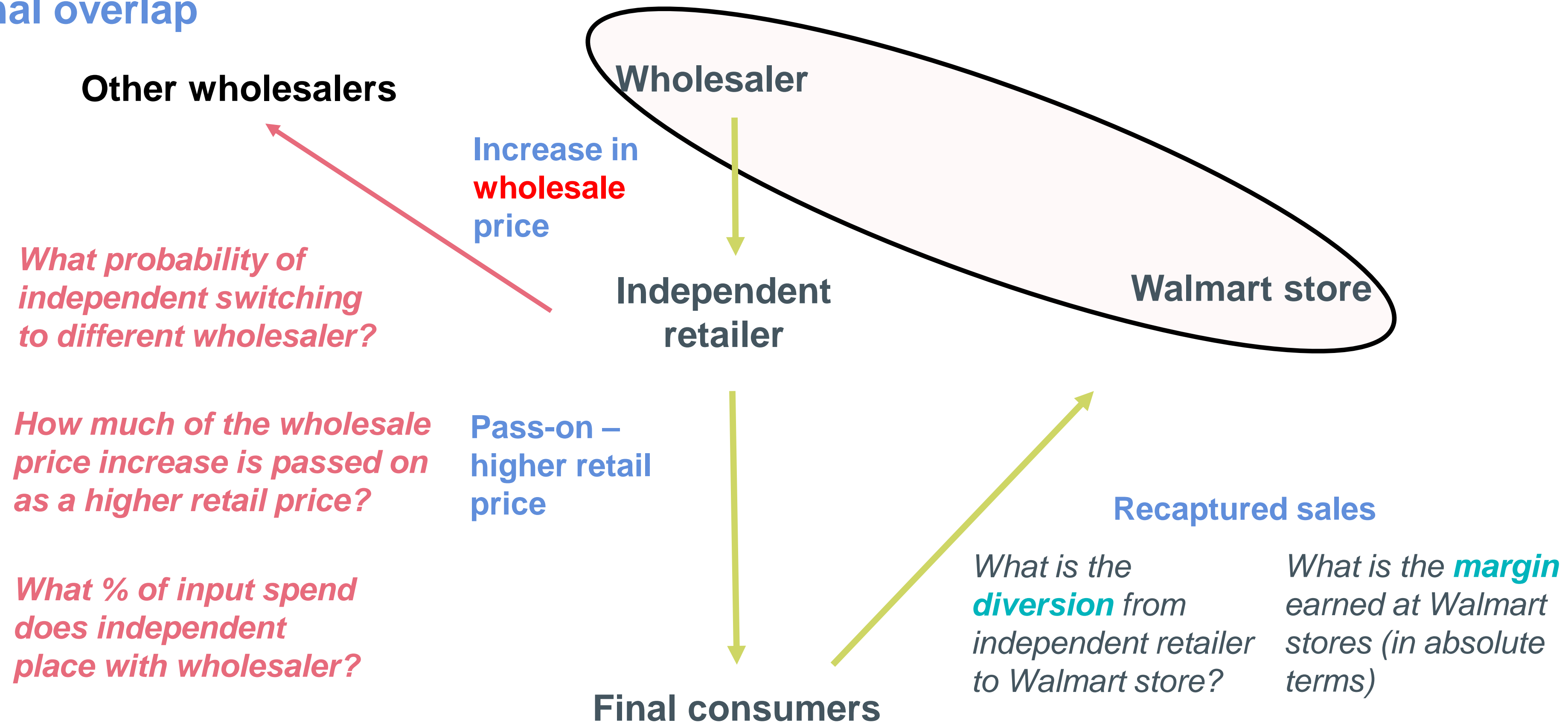
Horizontal overlap (standard approach)



vGUPPI: accounting for “leakage”

RBB Economics

Vertical/diagonal overlap



vGUPPI is the standard GUPPI, scaled down to account for the various “leakages” shown in red

vGUPPI: some measurement issues

Diversion ratios

- Past switching? Consumer surveys?
- "Critical diversion ratio"
  - How much diversion is required to produce vGUPPI of 5% / 10%?
  - Is this plausible/realistic?

Retail switching to other wholesalers following wholesale price increase

- Wholesale price elasticity
- Inferences from wholesale margins?
  - In principle yes: inverse relationship between variable margins and elasticity
  - But relationship not always straightforward

Pass-through

- Often (but not always) between 50-100% - complex theory
- Empirical analysis usually required

vGUPPI: cases

RBB | Economics

Cases where authorities explicitly mention the use of vGUPPI

- McKesson's acquisition of Katz Group's healthcare business in Canada

http://www.competitionbureau.gc.ca/eic/site/cb-bc.nsf/eng/04174.html

http://icn2018delhi.in/images/ICN-survey-report-on-vertical-mergers-17-03-18.pdf

- Tesco/Booker case in the UK

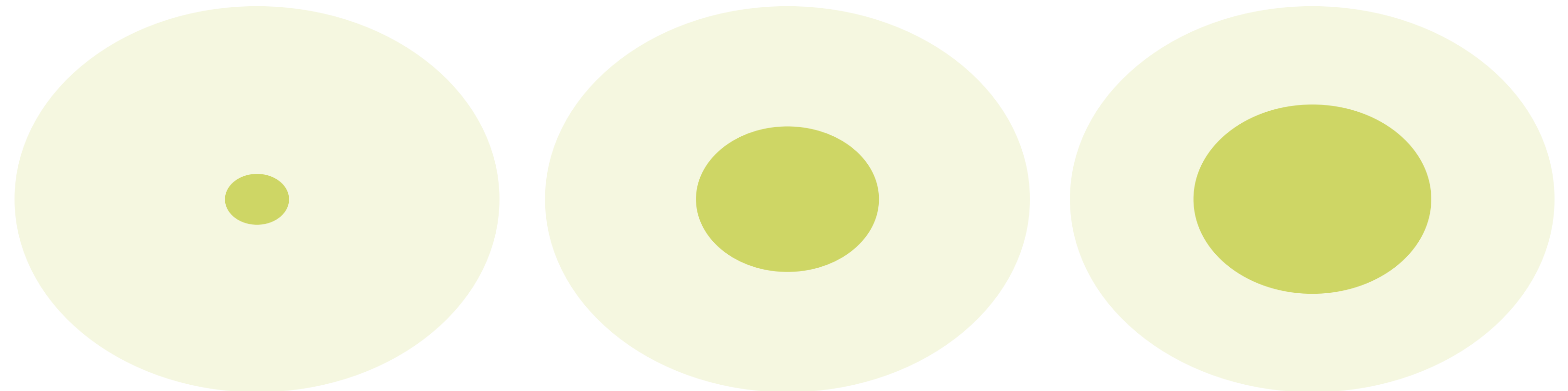
https://assets.publishing.service.gov.uk/media/5a3a7d9ae5274a73593a0cc7/appendices_and_glossary_tesco_booker_final_report.pdf

- AT&T/Time Warner in Chile

http://icn2018delhi.in/images/ICN-survey-report-on-vertical-mergers-17-03-18.pdf

Authorities have so far relied more on vertical arithmetic tools than on vGUPPI

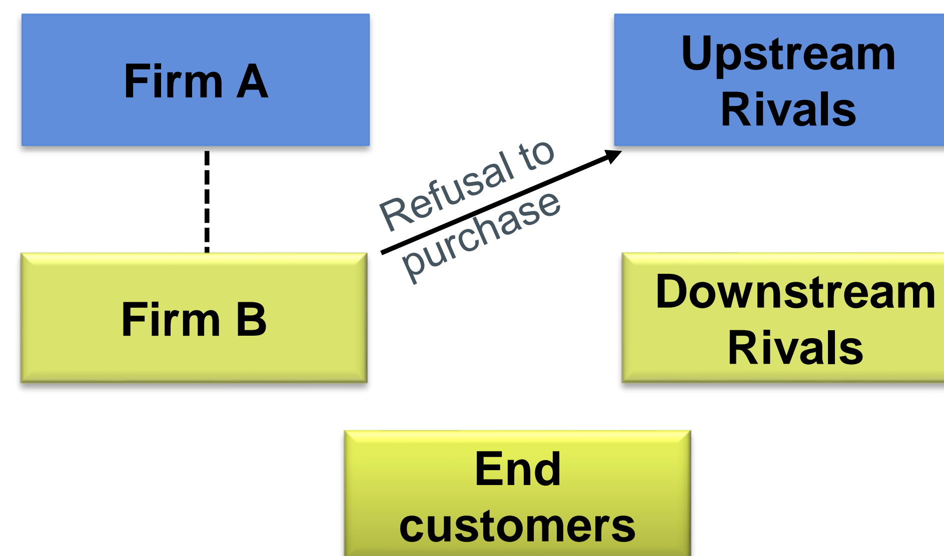
Customer foreclosure



Customer foreclosure: theory

RBB | Economics

- Firm B is a **critical source of demand** for Upstream Rivals and Firm B refuses to purchase from Upstream Rivals…
- Failure to access Firm B leads to a **denial of substantial scale economies** for Upstream Rivals…
- Upstream Rivals operate at a **higher level of cost…**



➡ Upstream Rivals charge higher prices to Downstream Rivals, resulting in end customers switching to Firm B, thus benefiting Firm B

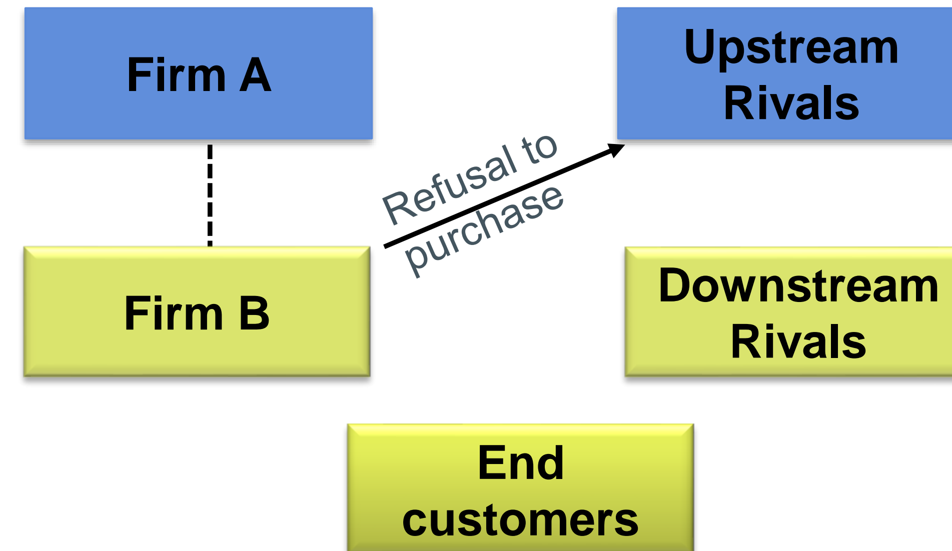
and/or

➡ Firm A can charge higher prices to Downstream Rivals, benefiting Firm A

Customer foreclosure: ability

Key question: does merged entity have the ability to raise rivals' costs by refusing to purchase from them?

- Substantial scale economies and Firm B critical to achieving them?
- Upstream Rivals cannot induce Downstream Rivals to grow (and capture share from Firm B)?
- Upstream Rivals cannot forward integrate or supply end customers directly?
- Downstream Rivals do not have alternative sources of supply whose cost base is not dependent on selling to Firm B?

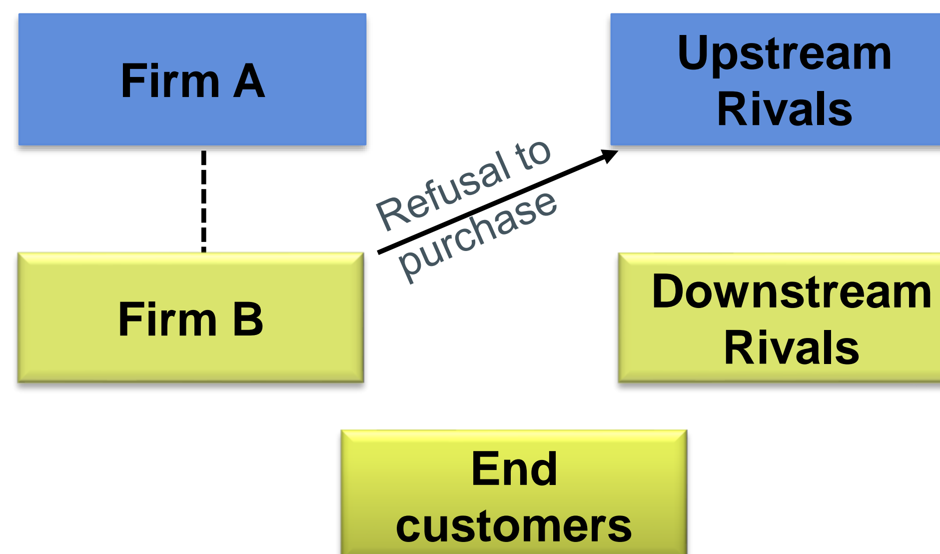


Customer foreclosure: incentive and effects on consumers

RBB | Economics

Incentive: will the merged entity find it profitable to engage in this behaviour?

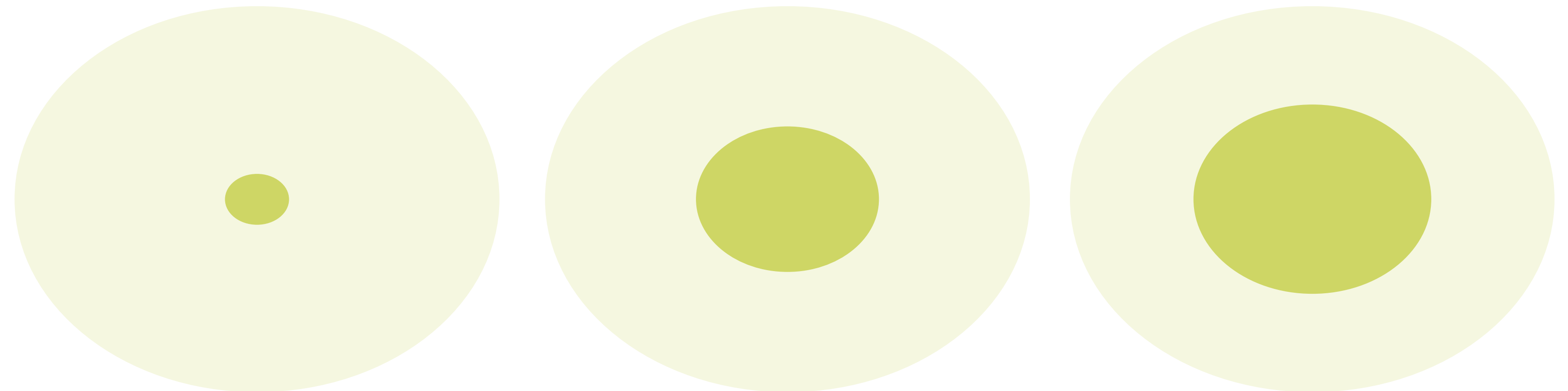
- Impact of foregoing Upstream Rivals' input
  - raises Firm B's costs / reduces Firm B's revenues?
- How does this negative impact compare to the benefits to Firm A and/or B?



Effects on consumers

- Only relevant if ability and incentive both exist
- Higher cost to Downstream Rivals offset by Firm B's efficiency gain?
  - e.g. reduced double marginalisation, Firm A produces more efficiently, environment for investment?
  - If Firm B lowers prices, Downstream Rivals may not be able to pass on higher costs – no impact on end customers in that case?

Conglomerate mergers



Conglomerate mergers: overview

RBB | Economics

- **Conglomerate theories of harm usually only raised in cases where merging products are closely related, e.g. complementary goods**

- **Theory of harm: leverage strong position in one market to another market, through tying or bundling**
  - Tying: purchase of good A conditional on good B also being purchased
  - Pure bundling: A and B only sold together
  - Mixed bundling: discount offered if A and B are both purchased

- **Tying and bundling is usually pro-competitive: elimination of “double marginalisation” (Cournot effect), technical efficiencies etc.**

- **Anticompetitive effects only occur in (very) rare cases – see next slide.**

Conglomerate mergers: assessment of theory of harm

RBB | Economics

Ability to foreclose (not mere ability to engage in tying of bundling!)

- Significant market power in leveraging or tying market? "Must-have" products?

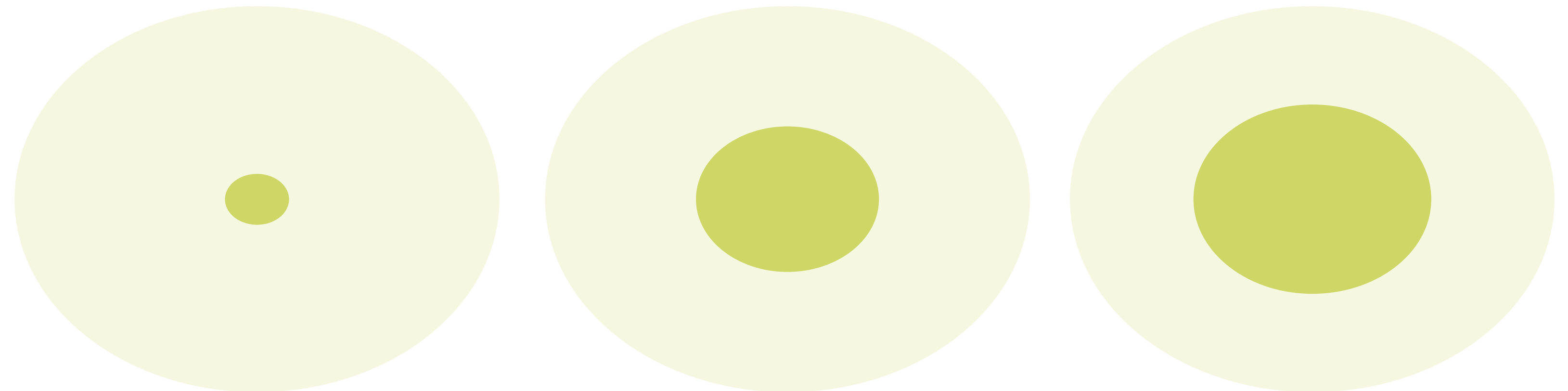
Incentive to foreclose: is the strategy profitable? Trade-off between:

- **Costs** associated with bundling or tying (some customers may stop buying altogether)
- **Gains** from expanding sales (e.g. customers now also purchasing good B) and possible higher prices (if market power is created)

Overall effect on consumers

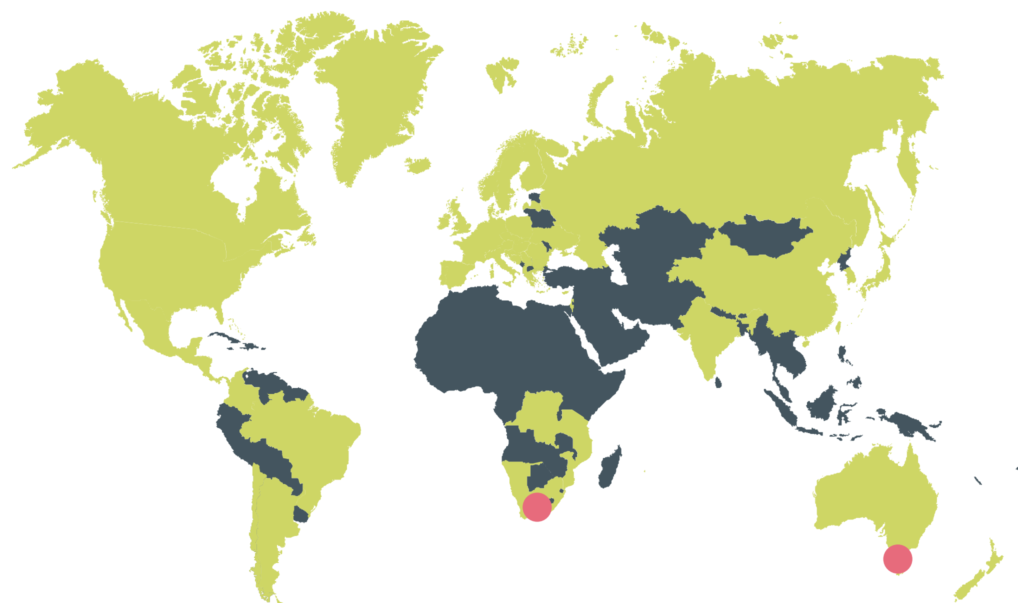
- Will customers accept or resist the tie/bundle?
- Is rivals' **ability to compete** affected? Mere loss of sales not a problem. Economies of scale?
- Will merged entity ultimately increase prices?

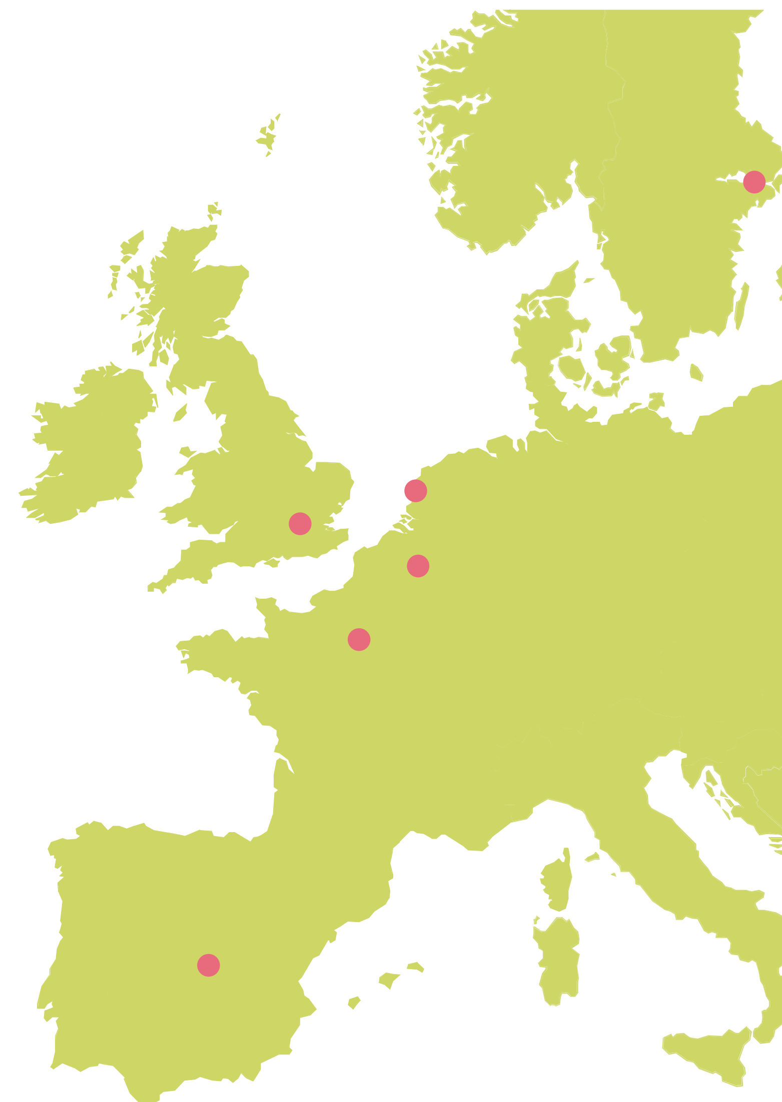
Thank you for your attention – Q&A



Locations and contact

RBB | Economics





Our office locations

- London
- Brussels
- The Hague
- Johannesburg
- Melbourne
- Madrid
- Stockholm
- Paris

Countries in which RBB has undertaken cases

RBB | Economics