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Merger Control Economics

Overview

- The starting point of merger control economics
  - Appreciable adverse impact on competition
- Components of merger control economics
  - Market Definition
  - Structural Description
  - Theory of Harm
  - Defences

The starting point

The Purpose of Merger Review

To prohibit combinations which have caused or are likely to cause an appreciable adverse effect on competition (AAEC) within the relevant market

- **Focus on what changes as a result of the merger**
- **Test is with/without, and not before/after**

Market Power

Increase in market power means the ability of one or more firms to

- **Profitably increase prices**
- **Reduce output, choice or quality of goods and services**
- **Diminish innovation**

Merger Control Economics is about how to do the AAEC test

Competitive Concerns

- Unilateral Effects
- Coordinated Effects

Types of Mergers

Horizontal mergers

- **Parties are actual or potential competitors in the same relevant market (AT&T and T-Mobile, Sun Pharma and Ranbaxy)**

Vertical mergers

- **Parties are operating at different levels in the same supply chain (Nokia and Navteq)**

Conglomerate mergers

- **Parties are in closely related markets and produce complementary goods (P&G and Gillete)**

Components of merger control economics

Market Definition	Structural Description	Theory of Harm	Defences

Weighing up

Market Definition

- The frame of reference for understanding and analysing provisions of the Competition Act is that of the "**market**"

- In the context of merger control economics ,the main purpose of market definition is to identify in a systematic way the immediate competitive constraints facing the merged entity

"There are normally two dimensions to the definition of the rele[...] market: a product dimensio[...] geographic dimension." [...] identifying the re[...] to include the most re[...] constraints on behavi[...] ...firms"

"The objective of defining a market in both its product and geographic di[...]ension is to identify th[...]ual [...]or[...] the [...]ngs involved that are [...] of constraining their [...]ehavior and of preventing [...]em from behaving [...]dependently of an effective [...]mpetitive pressure."

Three key elements emerge:

(1) Product dimension

(2) Geographic dimension

(3) Constraint on the behaviour of the firm

"...market defini[...] specify the li[...] commerc[...]ection of the countr[...] which the competitive concern arises."

"[...] market is the product [...]ographic space in w[...]ivalry and competition take place." (par. 4.6) ACCC

Sources: UK CC and OFT guidelines, par. 5.2.1 and 5.2.5; EU Guidelines, par. 2; US DOJ and FTC guidelines, pg. 7 and ACCC Guidelines, par. 4.6

Standard hypothetical monopolist test (aka "SSNIP" test):

- A market is defined as a product or a group of products and a geographic area in which it is produced or sold, such that a **hypothetical profit maximising firm**, not subject to price regulation, that was the only present or future producer or seller of those products in that area likely would impose a "**small but significant and non-transitory**" increase in price *(above the competitive level)*, assuming the terms of sale of all other products are held constant.

- "small but significant and non-transitory" increase in price ("SSNIP") – considered to be between 5% and 10%

- Thought experiment informed by data and documents

- **For mergers the analysis is done starting at current prices**, not notional competitive prices – constraints from products under the status quo need to be identified

Step 1: Calculating the critical loss

- **Intuition:**
  - Price increase will cause a loss of some sales and profits earned from them while higher profits earned on remaining sales
  - Per unit profit from customers that do no switch increase by the amount of the price increase
  - Profit decrease resulting from customers that do switch is difference between the revenue that would have been earned and the cost of supplying them
  - The Critical loss is the level of lost sales where the producer/s are indifferent between raising the price and not raising the price
  - In other words, **Revenue gained + Reduced expenses = Revenue lost**

Step 1: Calculating the critical loss

- For an X% price increase, the critical loss is

$$L = \frac{X}{(X+M)}$$

- The table below uses this formula to illustrate how the critical loss for a 5% price increase varies with the gross margin.

Gross Margin	40%	75%	90%
Critical Loss	11.1%	6.3%	5.3%

Step 2: Does the actual level of sales lost exceeds the critical loss?

- Determine whether a hypothetical SSNIP in a provisionally defined market would cause customers to shift their purchases in amounts in excess of the critical loss
- If this is the case, then the SSNIP would be unprofitable and the provisional market is expanded to include the next closest substitute
- This step is usually informed by estimating demand elasticities, review of documents, customer reactions, surveys, etc.

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Is there a move away from market definition?

- The 2010 US Horizontal Merger Guidelines
  - Less reliance on market definition
  - Increased emphasis on competitive effects

- New economic concepts measuring unilateral effects
  - Diversion ratio
  - Upward pricing pressure

- Emphasis on defences

Structural Description

Structural description as a first cut

- As an initial indicator analyze market structure
  - Number of competitors and market shares
  - Market concentration
    - Post merger concentration and changes in concentration (C4, HHI)
  - Entry barriers

HHI Thresholds: United States

- US HHI thresholds
  - Unconcentrated markets: HHI < 1500
  - Moderately concentrated markets: 1500 < HHI < 2500
  - Highly concentrated markets: HHI > 2500
- Change in HHI
  - Unlikely to raise competitive concerns: Change in HHI below 100 or any merger in an unconcentrated market
  - Significant competitive concerns: Change in HHI of more than 100 in a moderately concentrated market or change in HHI between 100 and 200 in a highly concentrated market
  - Presumed to enhance market power: Change in HHI of more than 200 in a highly concentrated market

Theory of Harm

Theory of harm

- Even without further quantitative analysis, the structural factors need to be tied into a theory of harm that is logically coherent and consistent with the facts at hand
- Further, quantitative analysis can be performed to assess the likelihood of AAEC
- Horizontal, vertical and conglomerate mergers
- Unilateral and coordinated effects
- Will the merger create or strengthen market power?

Horizontal Mergers: Unilateral Effects

- Unilateral effects arise when the merger makes it profitable for the merged entity to increase prices post-merger
- Market types
  - Homogeneous products
  - Differentiated products
  - Bargaining and Auction/Tender markets

- Depending on data availability, economists use less or more sophisticated analysis to assess likelihood of an increase in price
  - Cross price elasticity of demand
  - Diversion Ratio and UPP
  - Merger Simulation
- Data required
  - Extent of switching: historical data on switching, customer survey on opinion about alternate products or response to price increase
  - Incremental profit margins: incremental cost using merging parties’ data

Co-ordinated effects

- Co-ordinated effects, i.e. whether the merger can make it easier for firms to co-ordinate their behaviour to reduce competition (and increase prices)
- This is termed tacit collusion or co-ordination
- Due to the lack of direct contact between firms, it is more difficult to detect and pursue through ex-post competition law enforcement
- Therefore, it is more important to prevent these situations from arising in the first place – competition authorities attempt to do this through merger control

Building a framework for merger assessment

- Considerable scope for empirical analysis of unilateral effects, however, there is no such straightforward approach for analysis of co-ordinated effects
- Then, how do we assess a merger's potential for co-ordinated effects?
  - Starting point is to determine whether the industry is one that is susceptible to tacit co-ordination at high levels of concentration
  - Therefore, one has to consider:
    - Whether the industry appears to be conducive to tacitly collusive behaviour and
    - Whether the merger changes these factors to make collusion more likely

Does the merger make a difference?

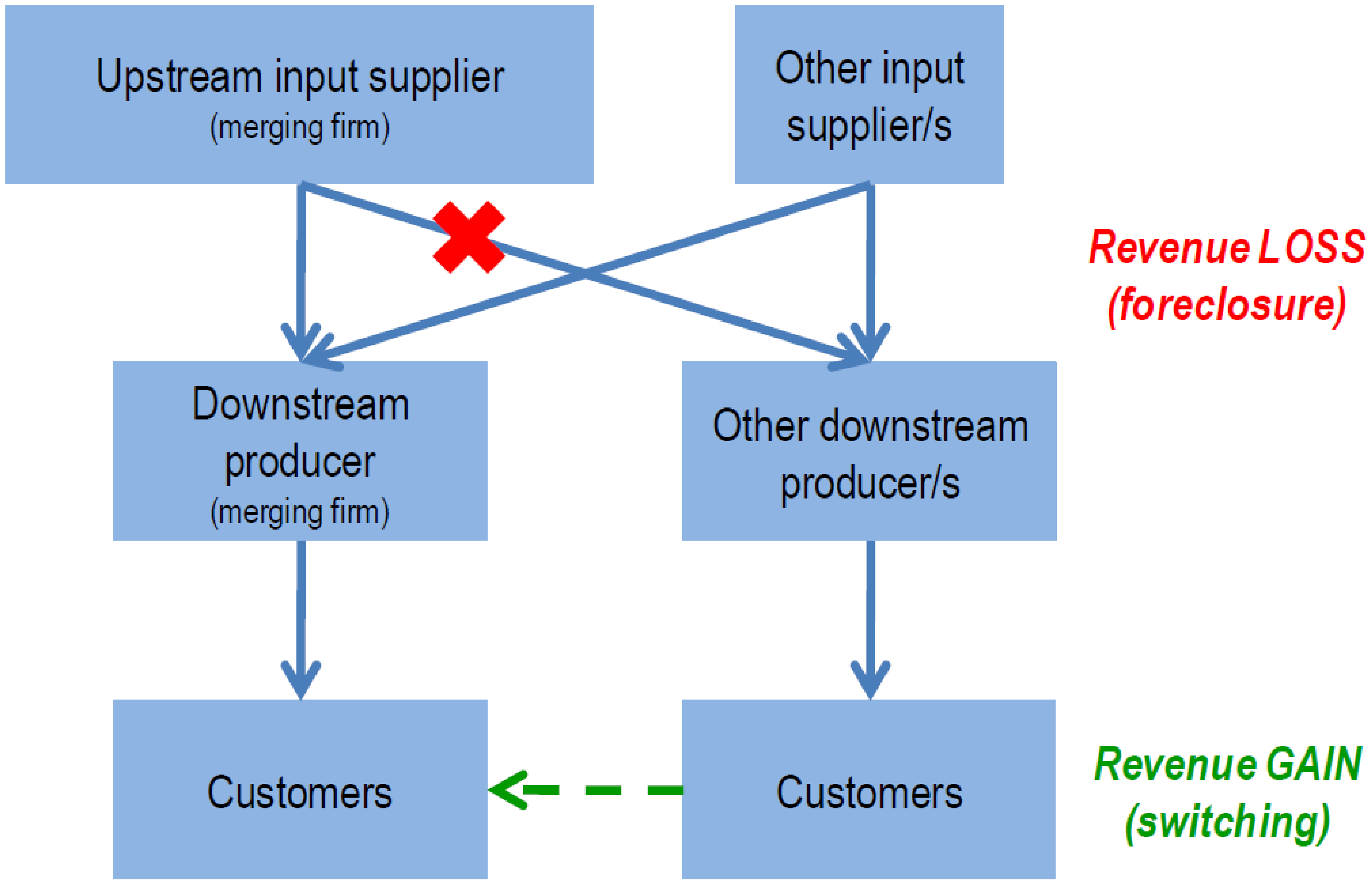
- How can a merger create or enhance the possibility of co-ordination?
  - **Removal of a maverick firm**
  - **Impact of spare capacity on the potential for co-ordination**:

Vertical and conglomerate mergers

- The competitive effects arising from vertical/conglomerate mergers are sometimes termed “indirect effects”
  - They stem from the bringing together of products that linked either in a production/distribution chain (vertical) or the products are sold to the same customers (conglomerate)
  - These mergers can be economically beneficial or they can be harmful
- Theory of harm
  - exclusionary motives (anti-competitive effects)
- Alternative solutions:
  - Vertical integration is not the only option
  - Contractual agreements can be entered into between the firms, however, these might also have competitive effects,

Can vertical/conglomerate mergers have anti-competitive effects?

- There are two types of foreclosure:
  - **Input foreclosure** - involves the restriction of access to an upstream input used by downstream competitors such as through a complete refusal to make the input available to downstream rivals, or merely making the input available to rivals on less favourable terms and conditions
  - **Customer foreclosure** - firm either increases its upstream competitor's costs or reduces it's (their) ability to compete by restricting access to a significant downstream customer base


Upstream input supplier
(merging firm)
Other input supplier/s
Revenue LOSS
(foreclosure)
Downstream producer
(merging firm)
Other downstream producer/s
Customers
Customers
Revenue GAIN
(switching)

Anti-competitive effects in conglomerate mergers

- Conglomerate mergers involve firms in different but closely related markets
  - Products are often complements
  - Competitive concerns arise only of there are common buyers for both products
  - Market power is exercised through bundling or tying which can foreclose competitors
  - Foreclosure can enable the parties to protect existing market power

Defences

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Efficiencies

- International approach
  - Benefit consumers
  - Merger specific
  - Verifiable
- India
  - Section 20(4)(n) allows for consideration of efficiencies

Efficiencies

- Efficiencies arising from a merger can be used to counter any potential anti-competitive effects
- Efficiencies can result in:
  - Lowering costs through economies of scale and scope (marginal and/or fixed costs)
  - Expanding demand (through improving quality and service)
  - Promoting innovations (dynamic efficiencies)
- Often efficiencies arise where merging parties bring complementary assets:
  - Intangible assets
  - Natural resources
  - Tangible physical assets and human resources
  - Access to new assets

Efficiencies

- Benefits from vertical and conglomerate mergers
  - reducing externalities
    - Double marginalisation
    - Free-riding and
    - Relationship specific investment
  - enabling price discrimination
    - For example, through bundling

Failing Firm Defence

- Requirements
  - Firm will shortly fail and exit the market
  - No less anti-competitive purchase scenario
  - Assets of the firm will also exit the marker

- At least half of the problematic mergers can be fixed with a remedy
  - Structural remedy modifies the allocation of property rights, such as a divestiture
  - Behavioural remedy sets constraints on the merged firms' behaviour, including an undertaking to not abuse certain assets, contractual obligations to ensure supply
    - Behavioural remedies generally require monitoring on the part of the competition authorities, whereas structural remedies do not
    - Easier on vertical rather than horizontal mergers
    - Ideally used only to fix a temporary problem not a permanent one
  - Important that the remedy solves the concerns identified