



Closeness of competition from an economic perspective

Thomas Buettner
CET, DG COMP, European Commission

International Forum on European Competition Law
Brussels, 11 March 2016

Disclaimer: the views expressed are those of the presenter and cannot be regarded as stating an official position of the European Commission.

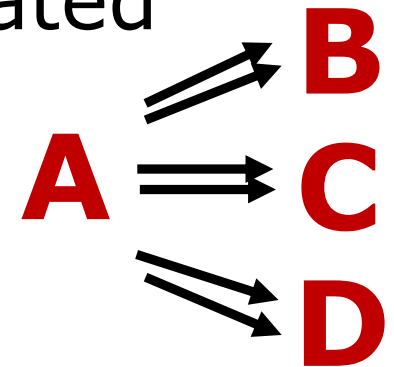
Context

- **SIEC** standard introduced to assess mergers in "**oligopolistic markets**" beyond dominance criterion (2004 EUMR)
- **Non-coordinated effects** assessed in many recent **horizontal mergers** without dominance (Mobile mergers in IRE, DE, ... GE/Alstom, and others)
- "**Close competitors**" is one factor in the assessment of horizontal non-coordinated effects in differentiated product markets (2004 EU HMG)

Outline

- Economic perspective and the guidelines
- Types of evidence for closeness
- General insights from economics using quantitative examples
- Quantitative and qualitative interpretation of evidence
- Conclusion: Close, closer, closest?

What are horizontal non-coordinated effects? (Economist's view)



- Price increase by firm A leads to demand shift to other firms B, C and D
- If A merges with B the demand shifted to B remains within the merged entity.
 - The merged entity has incentive to raise price (unilateral effect of elimination of competition between parties)
- C and D also face higher demand and will hence raise their prices (feedback or equilibrium effect).

Non-coordinated effects in the HMG

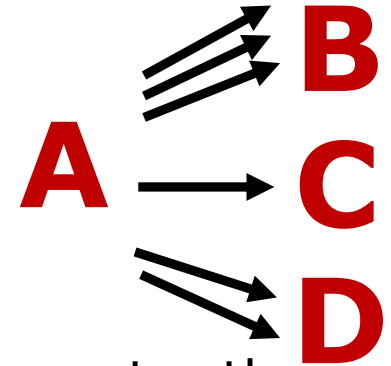
"24. A merger may significantly impede effective competition in a market by **removing important competitive constraints** on one or more sellers, who consequently have increased market power.

The **most direct effect of the merger will be the loss of competition between the merging firms**. For example, if prior to the merger one of the merging firms had raised its price, it would have lost some sales to the other merging firm. The merger removes this particular constraint.

Non-merging firms in the same market can also benefit from the reduction of competitive pressure that results from the merger, since **the merging firms' price increase may switch some demand to the rival firms, which, in turn, may find it profitable to increase their prices**. The reduction in these competitive constraints could lead to significant price increases in the relevant market." (EC Horizontal Merger Guidelines, para 24)

What is closeness and why do we care? (Economist's view)

- Economists' care about **degree of substitution** in differentiated product markets
- The more customers would move from A to B, the greater the elimination of competition between the merging parties
- A merger between close substitutes is likely to lead to greater price increases than a merger between distant substitutes (all else being equal - including margins)
- Does "closeness of competition" correspond to "degree of substitution"?



Closeness of competition in the HMG (1)

*"Merging firms are **close competitors***

28. Products may be differentiated within a relevant market such that some products are closer substitutes than others.

The higher the degree of substitutability between the merging firms' products, the more likely it is that the merging firms will raise prices significantly.

*For example, **a merger between two producers offering products which a substantial number of customers regard as their first and second choices could generate a significant price increase.** Thus the fact that rivalry between the parties has been an important source of competition on the market may be a central factor in the analysis. [...]* "

(EC Horizontal Merger Guidelines, para 28)

Closeness of competition in the HMG (2)

"28. [...] **High pre-merger margins may also make significant price increases more likely.**

*The merging firm's **incentive to raise prices is more likely to be constrained when rival firms produce close substitutes** to the products of the merging firms than when they offer less close substitutes. It is therefore less likely that a merger will significantly impede effective competition, in particular through the creation or strengthening of a dominant position, when there is a high degree of substitutability between the products of the merging firms and those supplied by rival producers."*

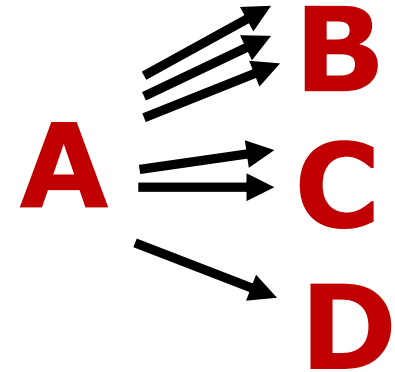
(EC Horizontal Merger Guidelines, para 28)

HMG are in line with economic principles

- HMG (¶24,28) reflect economics of non-coordinated effects with differentiated products
- HMG mention "close competitors" and "degree of substitution"
 - US HMG mention "close substitutes"

"Closeness" used as synonym for "degree of substitution" in the following

How can we measure closeness?



- Looking for evidence or proxies for customers' first and second choices.
- **Diversion ratios** formalise degree of substitution:
What percentage of customers leaving A (following a price increase) would choose B?
- Evidence depends on market and availability of evidence/data, e.g.
 - consumer markets v. bidding markets
 - quantitative v. qualitative evidence

Types of evidence

Quantitative evidence	Qualitative evidence
Econometric estimates of demand elasticities	Product positioning (brand perceptions, price points)
Data on customer switching	Qualitative customer surveys
Surveys on customers first/second choices	Companies' assessment (Internal documents)
Bidding data: frequency and impact of meets, ranking of suppliers, etc.	Market investigation

How should we interpret such evidence?

- Quantitative evidence may lead to direct measures of degree of substitution (*level* of diversion ratios)
- Qualitative evidence requires "softer" interpretation

Key questions:

- When is substitution close enough?
 - Close, closer, closest?
 - Relationship to dominance?
- > **Quantitative examples** illustrate general insights from economics

Quantitative examples: approach

- Look at different 4- \rightarrow 3 mergers in markets with price competition with differentiated products
- Vary degree of substitution / diversion ratios between firms
- Compute "indicative price rise" (IPR) of parties (without rival reactions) and "equilibrium effects"
 - Price effects summarise the interplay of substitution, margins and market position

Quantitative examples: assumptions

Common assumptions to all examples:

- Merger between firms A and B in four firm market
- Combined market share A+B: $40\% = 20\% + 20\%$
- Pre-merger margins for all firms: 40%
- Price competition with differentiated products
- Linear demand, high entry barriers, no efficiencies

Differences across examples:

- Varying market shares of firms C and D
- Varying diversion ratios to non-merging firms and between merging firms

Quantitative example 1

- Firms C and D each have 30% market share.
 - A+B merger leads to new market leader with 40% share (merger to dominance)
- Diversion ratios proportional to market shares ($d_{AB}=25\%$, $d_{AC}=38\%$, $d_{AD}=38\%$).
 - Diversion ratio to firms C and D higher than between the parties (not closest competitors)

Price effects:

- UPP/IPR (indicative price rise without rival reactions):
A,B: 6.7%
- Equilibrium: A,B: 8.1%, C,D: 2.6% Overall 4.8%

Quantitative example 2

- Rivals' market shares: C: 30%, D: 30%
Merger creates market leader/dominance
- Diversion ratio to firm C increased, diversion between merging firms held constant
($d_{AB}=25\%$, $d_{AC}=63\%$, $d_{AD}=13\%$)

Price effects:

- UPP/IPR: A,B: 6.7%
- Equilibrium: A,B: 8.4%, C: 2.3%, D: 3.3%
Overall 4.8%

Quantitative example 3

- Rivals' market shares: C: 50%, D: 10%
Merger does not create market leader/dominance
- Diversion ratio to firm C increases, diversion between merging firms held constant
($d_{AB}=25\%$, $d_{AC}=63\%$, $d_{AD}=13\%$)

Price effects:

- UPP/IPR: A,B: 6.7%
- Equilibrium: A,B: 8.4%, C: 2.3%, D: 3.3%
Overall 4.8%

Quantitative example 4

- Rivals' market shares: C: 50%, D: 10%
Merger does not create market leader/dominance
- Parties become closer substitutes, i.e. increase diversion between A and B, reduce diversion to C
($d_{AB}=33\%$, $d_{AC}=53\%$, $d_{AD}=13\%$)

Price effects:

- UPP/IPR: A,B: 10%
- Equilibrium: A,B: 12.8%, C: 2.9%, D: 4.6%
Overall 7%

Quantitative examples: summary

Ex	Market shares (%)		Diversion ratios (%)			IPR (%)	Equilibrium price effects (%)			
	A, B	C, D	A->B B->A	A->C B->C	A->D B->D		A,B	A,B	C	D
1	20+20	30;30	25	38	38	6.7	8.1	2.6	2.6	4.8
2	20+20	30;30	25	63	12	6.7	8.4	3.8	1.1	4.8
3	20+20	50;10	25	63	12	6.7	8.4	2.3	3.3	4.8
4	20+20	50;10	33	53	12	10	13	3	5	7

General insights from economics

(1) Degree of substitution between the merging parties is the main driver of effects

- Determines the **direct unilateral effect** of elimination of competition together with **margins**
 - Effect is a matter of degree rather than black or white
- Whether or not merged entity becomes largest firm (dominant) has little relevance
- **Absolute level of diversion ratios matters** more than diversions relative to non-merging firms or to market share benchmark

General insights from economics (cont'd)

(2) Substitution to rivals *much less* important than that between merging firms

- Position of rivals only influences equilibrium effect
 - Rivals benefit from increased demand
 - Feedback effect reinforces price increases
- US HMG: "Diversion ratios between products sold by merging firms and those sold by non-merging firms have at most secondary predictive value."

How can we interpret qualitative evidence?

- Market shares provide a first prior for effect of competition
- Qualitative evidence can be useful to *adjust this prior*
 - Are parties closer than suggested by market shares?
Are they closest competitors?
 - Are parties an important competitive force, etc.

Conclusion: Close, closer, closest?

Substitution between merging firms key driver of (static) effects

- In tight oligopolies everybody can be "close"

"Closer" or "closest" not required for SIEC

- No economic rationale, no requirement in HMG
- Comparisons can be informative about degree of substitution between the parties in qualitative assessment

In practice, SIEC depends on overall assessment

- Often both qualitative and quantitative evidence on closeness will be assessed
- Other elements also important (e.g. dynamics etc.)