

E.CA Economics

Defending Cartels in Regulatory Investigations—the Role of Economics

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Question: What role does (can/should) economics play in cartel/by object infringements?

Agenda

Economics to detect cartels

Economics to prosecute / defend cartel allegations

Economics to set the level of fines

Overlap between administrative proceedings and private litigation

Detect cartels

Framework for anti-cartel enforcement in Europe

- Cartels are generally held to be “bad”
 - Negative impact on consumer welfare, viz. Commissioner Almunia in Berlin, Apr 14, 2011: “Cartels: the priority in competition enforcement”, stating that “*the question is not whether cartels should be allowed; nobody would be in favor of this option. Our only task here is finding the best way to fight them*”
 - Pursuing cartels is good for regulatory image, viz. DG Italianer’s keynote speech at the ICN workshop in Bruges, Oct 10, 2011: “Zero tolerance for international cartels”
- Goals for antitrust enforcement
 - Deter future behavior
 - Make up for damages suffered
- Pursue these goals through a mix of administrative and/or criminal tools, at regulatory and/or civil level
- European approach
 - Deter through massive and seemingly ever-increasing administrative fines at EU level
 - Allow criminal enforcement at Member State level
 - Leave recoup of damages suffered to civil claims at Member State level

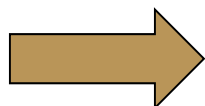
Detect cartels

Material to successful antitrust enforcement: detecting & investigating cartels

- The majority of EC antitrust decisions is based on an amnesty application under the 2006 Leniency Notice
- But also through market monitoring and *ex officio* work, e.g. *Elevators*, *Pre-Stressing Steel*, *Chocolate*

Economics can help to:

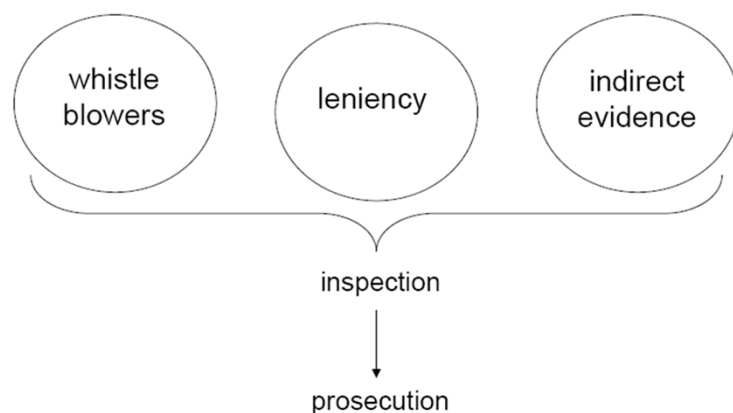
- Understand the effects of cartels, in turn allowing to spot cartels more easily (viz. market monitoring)
- Prioritize, i.e. use scarce resources to detect and go after the most harmful cartels (also important when deciding on settlements)



Of relevance for internal auditing, regulatory priority setting, identifying primary jurisdiction, etc

Economics to detect cartels

- Economic analysis can be used to trigger inspections, justify resources spend by competition authorities or to file complaints
- In general there are three ways to detect cartels:



Roughly 2/3 of the cartels are detected through leniency; only a small number through indirect, economic evidence! Are we sure that we detect the right cartels?

- Various criteria do exists and can be ordered for example according to the traditional “structure – conduct – performance” paradigm (following Rey 2006):
 - Structure: certain structural characteristics of industries are conducive to collusion and cartel stability
 - Conduct: cartels result in certain behaviors that might be detected
 - Performance: supranormal profits may indicate cartels

Economics to detect cartels – structural factors (1)

Industry structure:

- Low number of competitors:
 - Cartel organization is easier; gains from maintaining collusion are larger relative to one time gains from deviation
- High entry barriers:
 - Protect supracompetitive prices from entry of new competitors
- Frequent interaction between the firms and transparency:
 - Easier to sustain collusion as firms can react more quickly to deviations

Demand Side:

- Market growth:
 - Preferable to sustain collusion if future profits are increasing relative to present profits from deviation
- Low demand elasticity:
 - Allows larger price increases with successful collusion; this might provide higher incentives to collude
- No significant buyer power:
 - Powerful buyers can make collusion less profitable and less stable
- No network effects:
 - Network effects tend to tilt the market to a single firm thereby creating fierce competition for the market

Economics to detect cartels – structural factors (2)

Supply side:

- No significant innovations/mature industries:
 - Significant product innovations give a competitor an advantage over its rivals; this reduces the profitability of collusion and the cost of deviation
- Homogenous products:
 - Market transparency is high and there are no differentiated characteristics that reduce competition
- Symmetry in costs:
 - Asymmetric costs make it more difficult to agree on a collusive price; low cost firms may have a stronger incentive to deviate
- Symmetry in capacities:
 - Limited capacities by some firms limit their ability to retaliate a deviator
- Multi market contacts:
 - May smooth asymmetries between firms and increase the frequency of interaction
- Cooperative agreements and structural links:
 - Links like cross shareholding reduce the incentive to retaliate; cooperative agreements like joint ventures increase the scope for retaliation

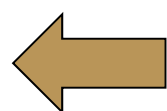
Economics to detect cartels – conduct and performance

Conduct:

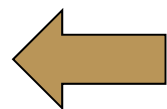
- Price parallelism
- Market share stability

Performance:

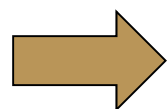
- Supracompetitive profits may indicate collusion



Problem of structural indicators: they can be misused to justify permanent monitoring of specific industries, like cement, gasoline markets or the chemical industry. A further problem is the non-linear relationship between structural factors and the probability of explicit collusion, e.g. for transparency. There is also an endogeneity issue: factors are derived based on past experience with detected cartels. But what are the structural factors of non-detected cartels? And can we be sure that in NEW SECTORS cartels function in the same manner?



Problem of conduct and performance indicators here: the screens based on conduct are in particular weak to separate collusive from non-collusive behaviour, e.g. price parallelism is also observed in perfectly competitive industries; competitive benchmark is missing; robust performance indicators are often not publicly available



**More reliable approaches focus on CHANGES,
rich data methods and a holistic approach**

Cartel screens based on CHANGES

Cartel exogenous shocks

Discreet change in the market environment of the alleged cartel e.g.

- entry
- drastic innovation
- exogenous supply shocks



Structural break

Discreet change in market behaviour or performance of the alleged cartel members e.g.

- drop in prices
- increased price volatility
- change in cost-price relationships



Method 1: focus on exogenous shock

Do exogenous shocks exist that should result in different reactions by a cartelized vs. a competitive market?

Example: Cost pass through generally expected to be larger in competition than under collusion

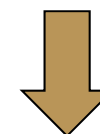
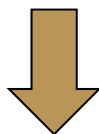
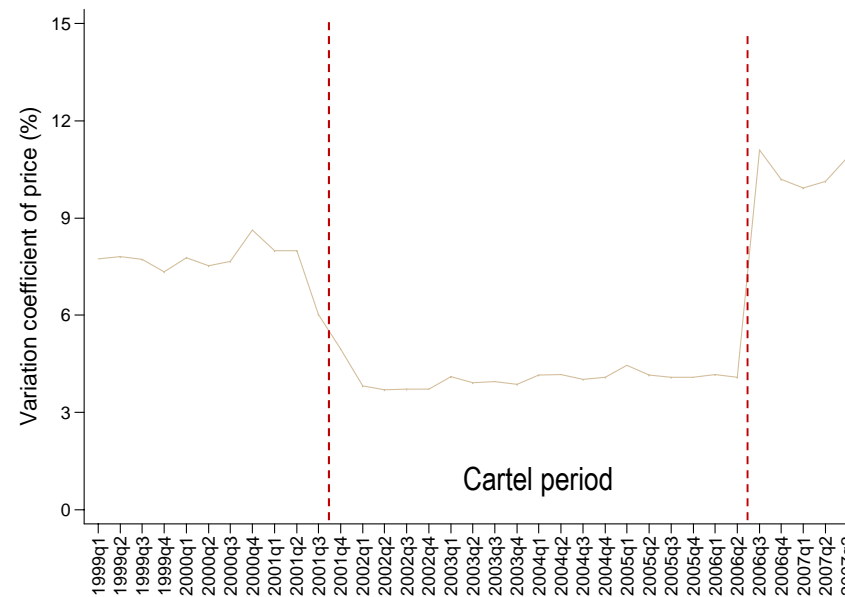
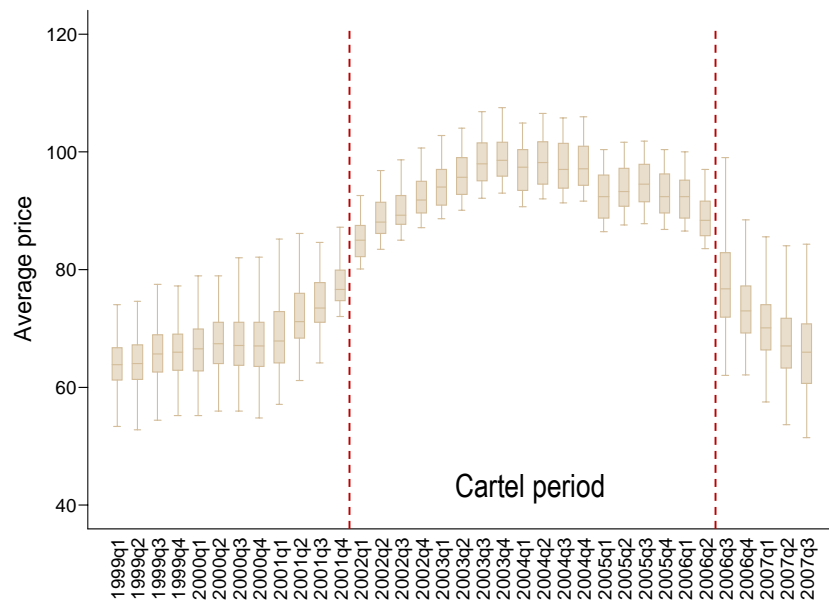


Method 2: focus on structural break

Do structural breaks exist that cannot be explained by the reaction of competitive markets to observable changes in the market environment?

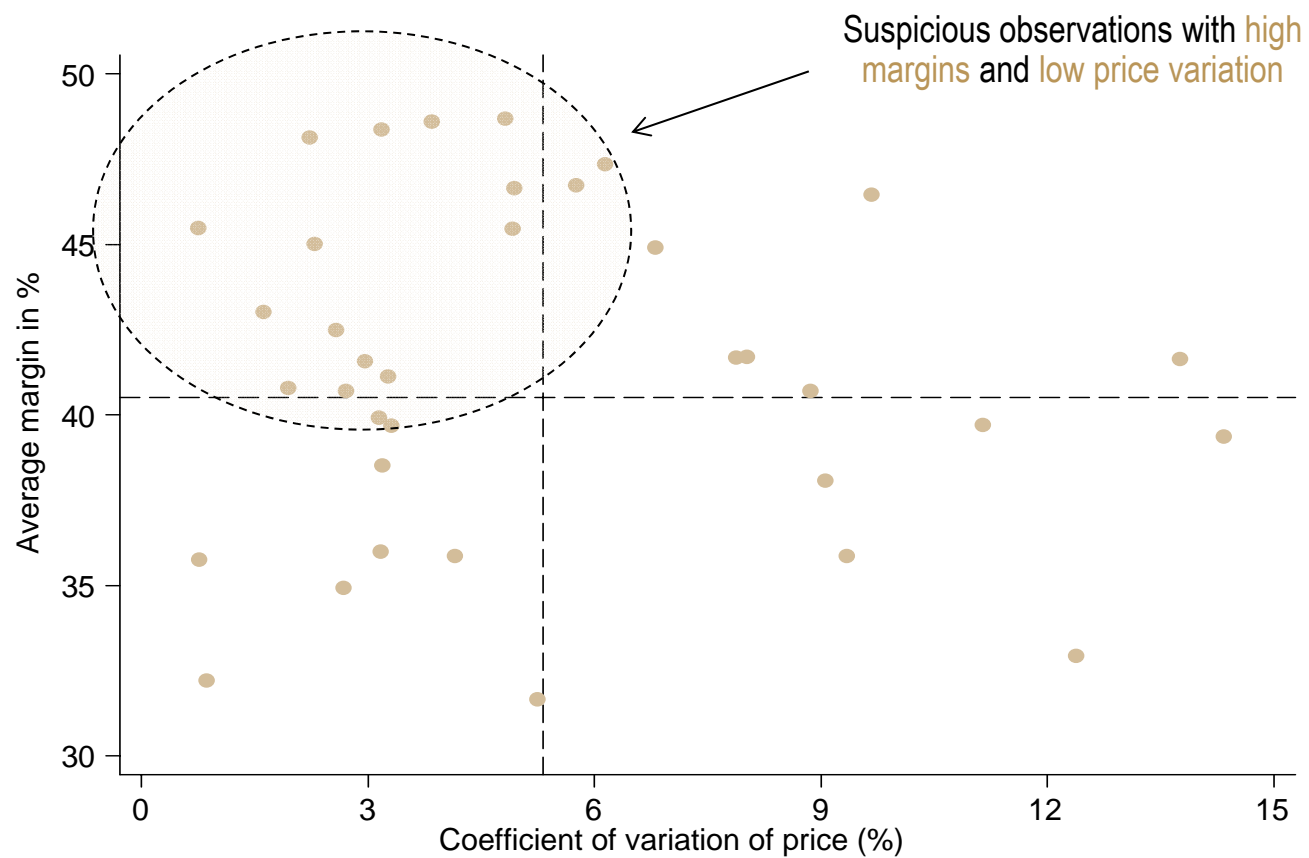
Example: Volatility of prices lower under collusion

Methods in a rich data environment (1)



In this example price levels increase while price volatility decreases: did market structure change? Any other of the relevant factors increasing the probability of collusion?

Methods in a rich data environment (2)



Conclusion

- Economic analysis can be used to trigger inspections, justify resources spend by competition authorities or to file complaints
- More sophisticated approaches focus on changes and rich data methods
- A holistic approach is required to meet even the relatively low legal standards of triggering inspections!

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Economics to prosecute / defend cartel allegations

Economics to set the level of fines

Overlap between administrative proceedings and private litigation

Economics to prosecute / defend cartel allegations

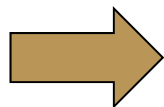
- Article 101 TFEU: prohibits agreements and concerted practices, affecting trade between Member States, fixing prices or capacities, allocate markets or customers, rig bids, etc under a “by object” standard, i.e.:
 - Effects need not be examined, see *UK Tractor*
 - Effectiveness / implementation not a pre-requisite, see *Wood Pulp II*
- 2011 Horizontal Guidelines, para 74: exchanging information on companies’ individualized intentions concerning future conduct regarding prices or quantities identified as a “by object” infringement, i.e.:
 - No need for agreement, see also *T-Mobile*
- Three defenses available:
 - Clear disassociation from cartel, see *Hüls (Polypropylene)*, *Anic*
 - The “legal and economic context” (but really a “tick the box” test?)
 - Article 101(3) TFEU (deemed “very unlikely” in the Horizontal Guidelines)

Economics to prosecute / defend cartel allegations

- Negative impact assumed?
 - Rebuttable presumption, see *Hüls (Polypropylene)*, albeit unsuccessful
 - General Court has “*unlimited jurisdiction*” to review Commission decisions re cartels (i.e. under the “by object” standard), including the power to take into account “*the extent of the market affected and the damage to the economic public order*”, see *Copper Tubes* – up to the parties to address effects and reason them sufficiently, and then the General Court can consider cartel effects, see separate statements Van der Woude J. and Forwood J., arguing that:
 - “*An infringement which is only ‘by object’ is less severe than an infringement which had real effects*”
 - “*The mere fact that the Commission may not have taken something into account does not necessarily preclude us from hearing arguments in relation to what the effects are*”
 - Even blatant price fixing has been allowed under Article 101(3), see *Uniform Eurocheques*

Economics to prosecute / defend cartels – opinions by economists

- Massimo Motta (2004): “...inferring *illegal* collusive behaviour...from market data (that is, looking only on the outcomes) would not be desirable, and the legal approach which requests some hard evidence as proof for collusion is sensible practice”. S.189
- Peter Davis and Eliana Garcés (2009): “Identifying tacit collusion or the likelihood of tacit collusion is notoriously difficult” S.317
- Kai Uwe Kühn (2001/2006, summarized by Davis, S.327) proposes that, “given the intrinsic difficulty in inferring whether prices are the results of competitive oligopoly or tacit collusion, it is more desirable to focus on suppressing certain forms of communication between firms”,...



There is a firm belief in economics that economic evidence alone is not sufficient to proof collusion in the sense of an illegal hardcore violation!

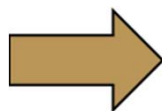
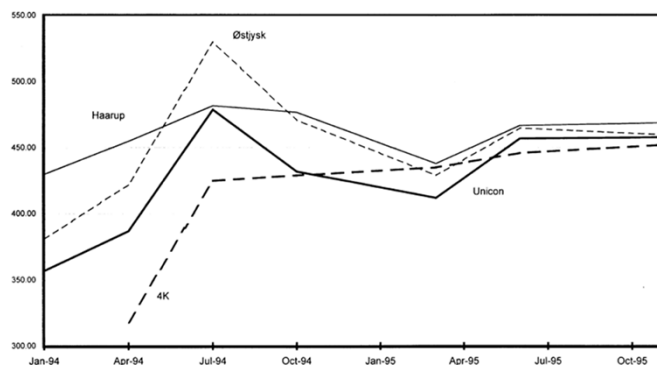
Economics to prosecute / defend cartels – potential roles

- **Assessment of smoking gun evidence:**
 - Information exchange vs. hardcore cartel
 - Tacit collusion vs. explicit collusion
 - Special case: single infringement vs. several “short lived” infringements
- **Implementation of an agreement:** between coming to an agreement and effectively steering the market prices stays implementation; this can be tested by economists
- **Evaluation of information revealed during leniency:** was the information revealed substantially different from information revealed by others?
- **Affected commerce and effect of an cartel:** will be discussed in the next section, because EU Commission does not take this into account for the finding of an infringement, but only for setting the fines. Important!

Economics to prosecute / defend cartels – assessment of smoking gun evidence

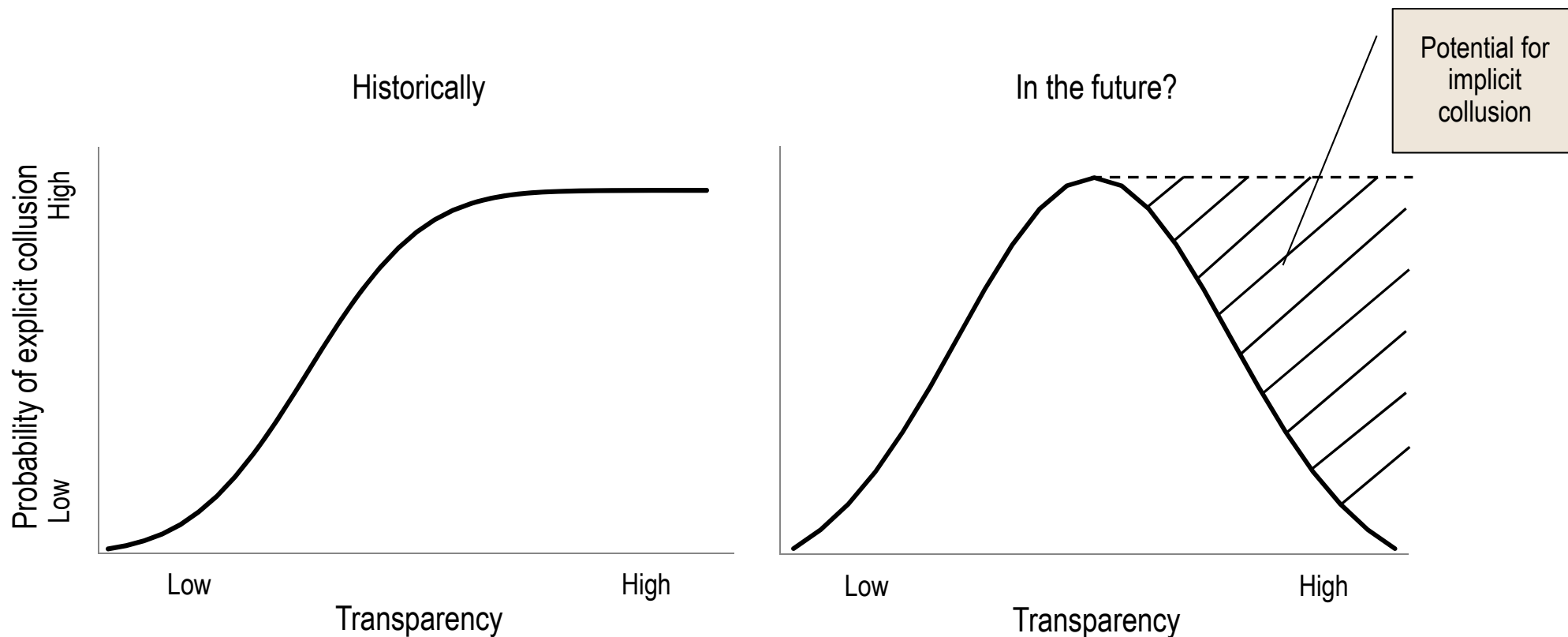
Some stylized examples

- Consider the market of jet fuel; small number of jet fuel suppliers serve at specific airport and often share storage and other infrastructure facilities. This is organized within a Joint Venture and within this Joint Venture detailed information is exchanged between “competitors”, like on contracts concluded by suppliers with airlines; on product flows into storage for each supplier; on deliveries to each airline by supplier, including estimated future deliveries; on tariffs charged by the JV to each member for the supply of airport services. Hardcore cartel, tacit collusion or information exchange?
- In the US and German spectrum auctions a small number of telecom firms bid for various packages of frequencies. Through specific “numbers” in their bids they communicated via the market – so some commentators argued – their preferences for specific packages and effectively delineated the market. Hardcore cartel (bid rigging), tacit collusion or information exchange?
- In the Danish ready-mix market the competition authority entrusted the firms to publish specific past prices (average and average of five lowest; 3 month delayed). Prices increased by 15% to 20% after the introduction of the regulation. Hardcore cartel, tacit collusion or information exchange?



Economics can help to better delineate between hardcore violations, tacit collusion and information exchange!

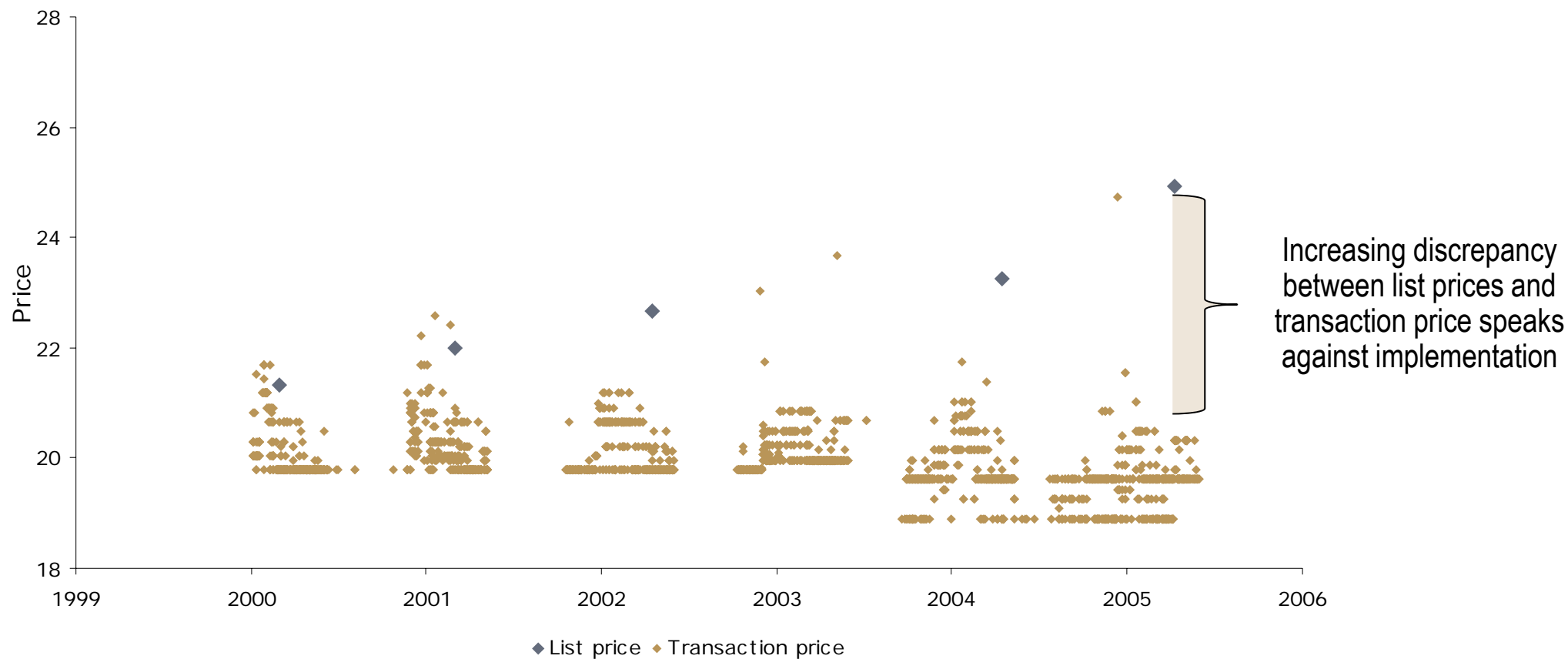
Relationship between explicit and implicit collusion and cartel fines



Implicit collusion (which relies on information exchange) is a plausible substitute for explicit collusion (cartels); more aggressive persecution of explicit collusion therefore requires stronger control mechanisms for information exchange

Note: non linearity is also present with respect to, for example, the number of firms. See Fonseca et al. 2011

Economics to prosecute / defend cartels – implementation of an agreement



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Economics to set the level of fines – potential roles

- Aim when setting fines = prevention and deterrence, viz. Commissioner Almunia in Berlin, Apr 14, 2011: “Cartels: the priority in competition enforcement”, stating that he puts “*prevention first because we want to help companies understand the rules, stay on the right side of the law, and take their own responsibilities seriously*”, but that “*when companies do decide to break the law, it is our responsibility to punish them*”
- Economics can play a role when arguing:
 - Base turnover, incl. what products / customers are in or out
 - Jurisdiction
 - Parental liability
 - Various secondary fine parameters
 - Etc

Economics to set the level of fines – the fines guidelines

Basic amount

- “Value of sales” as the starting point:
 - “The combination of the value of sales to which the infringement relates and of the duration of the infringement is regarded as providing an appropriate proxy to reflect the economic importance of the infringement. Reference to these factors provides a good indication of the order of magnitude of the fine ...” (para 6)
 - “In determining the basic amount of the fine to be imposed, the Commission will take the *value of the undertaking's sales of goods or services to which the infringement directly or indirectly relates* in the relevant geographic area within the EEA.” (para 13)
- Basic amount proportional to value of sales and depending on gravity and duration of the infringement; up to 30%; hardcore violations generally at the higher end; entry fee between 15 to 25%

Adjustments to the basis amount

- Based on an overall assessment aggravating and mitigating circumstances are identified;
- Specific increase for deterrence reasons
- Legal cap at 10% total turnover of the undertaking
- Leniency rebates
- Ability to pay

Economics to set the level of fines – potential roles

- **Affected commerce:** this should be based on proper market definition! Otherwise errors are huge given the up to 30% presumption!
 - Consider two markets A and B, say of the same size. If the Commission wrongly assumes both markets to be affected while in reality market A was affected only, and presumes a 30% overcharge, it will result in excessive fines. An empirical assessment of the effects would “adjust” for this: If wrongly applied to market A and B one would find a very low average effect, around 15%, so that the absolute amount would equal 30% of the turnover of market A. Note: obviously the better approach would be to make a proper market definition in the first place...
 - Example 1: For example consider an industry where large projects and small projects exists. The cartelists allocate customers of large projects, but not customers of small projects. What is the right turnover figure?
 - Example 2: Consider an industry where only 5% of the total value added is “controlled” by the cartel, while 95% of the value added is earned upstream. Is it right to charge 30% on the total value added, that is the 100%, or only on the 5% controlled by the cartelists?
- **Basic amount:** Assessment of implementation and assessment of effect relevant for gravity and duration:
 - Para 22 FG: *“In order to decide whether the proportion of the value of sales to be considered in a given case should be at the lower end or at the higher end of the scale, the Commission will have regard to a number of factors, such as ... whether the infringement has been implemented”*
 - Duration: empirical evidence on temporal drop out

Economics to set the level of fines – potential roles

- Adjustments to the basic amounts:
 - Para 27 FG: “*It will do so on the basis of an overall assessment which takes account of all the relevant circumstances*”
 - In line with a holistic economic approach
 - Para 28 FG: Ring leader will be fined heavier
 - empirical assessment of existence of retaliation measures
 - Para 29 FG: “*adopting competitive conduct in the market*” during the infringement period will be considered a mitigating factor
 - benchmarking behaviour of firms with competitors behaviour or other competitive benchmarks
 - Para 31: “The Commission will also take into account the need to increase the fine in order to exceed the amount of gains improperly made as a result of the infringement where it is possible to estimate that amount”
 - Opens the door for an full-fledged econometric assessment of effect – but only to the detriment of the cartelists?
- Ability to pay

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Overlap between administrative proceedings and private litigation

Overlap administrative proceedings and private litigation

From the Commission's perspective

- See Commissioner Almunia in Brussels, Sep 22, 2011: "Public enforcement and private damages actions in antitrust", stating that "*our legislative action must make possible that every victim of the companies that breach competition law should exercise their right to be compensated for damages*"

From a plaintiff's perspective

- Damage assessment in administrative proceeding would give guidance to national judges/ encourage private litigation
- Collected data would be highly valuable for damage calculation when made available to plaintiff's economists

But:

- This will have important implications for the working of a competition authority
 - Defendants will seek the right to carefully evaluate any damages calculation done by the Commission; this will have important resource implications
- The willingness to submit evidence during leniency proceeding will be affected

What can be done:

- More careful reflection of the Commission on the starting points mentioned in the report; the „true“ starting point should be investigated more carefully even if infringement period is restricted to a shorter reference period due to lack of sufficient evidence – indications of the true starting point are important for „before/ after“ test to quantify damages
- More detailed description of the authorities' understanding of the cartel mechanisms, of different phases of the cartel and documented events of implementation – this allows specific testing by economists

Thank you!

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