Detecting Cartels in Europe – the Role of Economics*

Hans W. Friederiszick
European Commission, DG COMP, CET until 12th of October 2006
European School of Management and Technology, ESMT Berlin

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overview

- policy instruments for cartel detection in Europe – current situation
- the optimal instrument mix to maximize deterrence and desistance
- economic analysis for cartel detection - 3 principles and an outline of a two-step framework
- concluding remarks
instruments for cartel detection

- complaints
- leniency
- economic analysis

inspection

prosecution

side remark: interviews with individuals under the threat of imprisonment not available in Europe – see US leniency plus policy
detecting cartels in Europe – current situation

- leniency program at EU level since 1996 (modernized in 2002)
- 80 applications from 1996 to 2002; 165 applications from 2002 to 2005
- from 2002 to 2005 the Commission adopted 30 statements of objections, roughly 2/3 based on leniency

Source: Commission Report on Competition Policy 2005
leniency has become the dominant instrument for cartel detection at EU level

How should an optimal cartel policy weight the different instruments?
Arguments for a balanced instrument mix (or why a purely leniency based approach falls short of optimality)…
Arguments for a balanced instrument mix - I

- Cartel dynamics: deterrence/desistance main objectives

\[
\frac{1}{1 - \delta} \pi_{col} < \pi_{dev} + \frac{\delta}{1 - \delta} \pi_{comp}
\]

- Leniency increases deviation profit; ex officio (triggered by complainant or economic analysis) reduced collusive profit

- Both leniency and ex officio reduces slack in cartel incentive constraint

- Absence of corner solution a policy maximizing those objectives should rely on all instruments available
Arguments for a balanced instrument mix - II

- full deterrence/desistance might not be achieved due to institutional & legal limitations (cap on fines; no rewards) as well as uncertainty & limited rationality by cartelists

\[ \frac{1}{1 - \delta} \pi^{col} - \Delta \geq \pi^{dev} + \frac{\delta}{1 - \delta} \pi^{comp} \]

- cartels may still be observed
- detection based on ex officio inspections becomes the only instrument outside the logic of cartel dynamics
however: destabilizing marginally stable cartels may not be welfare maximizing compared to a policy of destabilizing cartels with “slack”

- Marginally stable cartels exhibit low margin between expected collusive and expected defection profits
  - breaking-up those cartels results in limited welfare gains
- Marginally stable cartels may often include cartels close to their imminent break-up point
  - leniency policy may result in “Sterbehilfe” (terminal care) for cartels
- Cartels with slack may infect neighboring markets (multi market contact logic)
  - detecting stable cartels provides additional welfare gains in neighboring markets
Arguments for a balanced instrument mix - III

- **ex officio policy complementary to leniency policy**
  - increases incentives for the “race to leniency”
- **provides a better understanding of the mechanics of a cartel**
  - helps to better target inspection and write better decisions
ideal enforcement: recognizing strong complementarities

leniency

complaints

economic analysis
economic analysis for cartel detection - 3 principles and an outline of a two-step framework
3 principles for robust economic analysis in cartel cases

- should be a credible threat
  - decrease false positives to some extent
  - reasonably robust to eliminate fishing expeditions
    - focus on changes; counterfactual analysis
- should not be easy to be circumvented (even if public)
  - has to be addressed for each individual indicator
  - there should be no single indicator in general
- should not be too resource intensive
  - marginal information should be proportional to cost of information gathering
  - has to take into account capabilities of competition authority
outline of a framework for economic analysis - objectives

- working group in DG COMP developed framework to strengthen economic analysis in cartel cases
- quantitative and qualitative economic analysis aimed at establishing the requirements
  - for issuing an inspection decision in a given antitrust market;
  - justifying the opportunity cost of carrying out an inspection.

not a tool for proving the existence of cartels
outline of a framework – main structure

two steps:

- **industry analysis**: scoring approach aimed at exclusion of cases where cartel activity is relatively improbable (necessary requirements; minimize false negatives)

- **critical event analysis**: in-depth approach aimed at testing collusive against competitive scenario (necessary & sufficient requirements; “more likely standard”; minimize false positives)

why a two-step approach?

- to limit resource requirements

- while achieving a reasonable level of robustness
concluding remarks

- economics can play a role in a pro-active cartel policy!

But some caveats remain:
- data requirements
- administrative capabilities
- explicit vs. tacit collusion
research context


- **Gual, Jordi and Nuria Mas (2004):** EU Antitrust Policy: priority setting and impact assessment study. *Internal Report*, DG COMP.

- **Grout, Paul A. and Silvia Sonderegger (2005):** Predicting cartels. *Economic discussion paper*, OFT.


OECD roundtable conference (2006) concluding that circumstantial evidence, in particular economic evidence, is getting increasingly important for two reasons:

- it is getting more and more difficult to find direct evidence, so that circumstantial evidence is needed;
- economic evidence is important to trigger investigations.

Some countries trigger investigations based exclusively on economic indicators

- Italian baby milk case (cross-country price benchmarking)
- Dutch shrimps case (structural indicators)
- economic criteria to prioritize complainants in the Brazilian gasoline retail market (margin increase& reduction of price dispersion& regions)
Step 1: Industry Analysis

Step I: Industry analysis
- Top down analysis/ complainants/ other suspicion
- Price related indicators
- Transparency related indicators
- Concentration related indicators
- Entry related indicators

Step II: Critical event analysis
- Scoring

8 Primary Indicators (5 points each)
10 Secondary Indicators (2 points each)

5 out of 8 primary indicators and minimum score of 40 points overall

Indicators are chosen based on:
- theoretical considerations (robustness)
- practicability (data availability, calculation)
Step 1: Industry Analysis cont.

- **Defining the Antitrust Market**
  best guess approach, open to modification

- **Observation period**
  period over which the analysis is carried out

- **Critical time window**
  time period within the observation period that is under particular suspicion

- **Assess individual indicators**
  underlying question, data requirements, method of calculation, threshold, motivation

  ► **Mixture of checklist and structural break approach**
Outcome & Limitations of Step 1

- Scoring and Qualitative assessment allow a refinement of the theory of harm and a first indication on potential critical events.
- Each individual indicator is necessarily inconclusive as to the purpose of meeting the standard for triggering an inspection.
- Even aggregating all indicators in the scoring does not fully address false positives.
- The industry analysis is concerned about picking up cartelized markets. It does not predominantly worry about false positives.
- False positives are dealt with in step 2. Step 2 aims at testing a possible theory of harm.
Step 2: Critical Event Analysis

- **Critical event analysis**: in-depth approach aimed at testing collusive against competitive scenarios (“more likely standard”; minimize false positives)

- **Critical event**: a significant change in one of the market factors (such as the number of players in the market or a change in the price level) - either itself or through the subsequent reaction of market participants to that change - allows to infer the probability of the market being either in a competitive or in a collusive situation.

  - **focus is on ‘changes’**
How to identify and analyze critical events

**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?

**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?
How to identify critical events – a typology

- Ordered along the life-span of a cartel
- Overall seven critical events are identified
- Open to new ones…

For example (cartel start-up): structural break in prices and in price volatility at industry level, see Abrantes-Metz et al. (2006)
How to **analyze** critical events – a general test:

- **critical event evidence**: the empirical evidence of the critical event has to be (re)-assessed;

- **effective competition scenario**: it has to be assessed which factors specific to the industry could explain the observed behaviour under the assumption of effective competition;

- **collusive scenario**: it has to be assessed which factors specific to the industry could explain the observed behaviour under the assumption of collusion;

- **verification test**: based on the scenarios developed under step b) and c) it has to be argued that the observed behaviour is **more likely** to be explained by a collusive scenario.
The case library – a collection of cartel cases

1. benchmarking
2. identify appropriate analytical tools
   - which tests have proven to be useful?
   - can the test provide sufficient evidence?
3. guidance on how to carry out the analysis
   - case description, references

► important for the creation of in-house expertise