Collusion

Antitrust laws prohibit agreements aimed at fixing prices, sharing markets etc.

Rationale: such agreements allow firms to exercise market power they would not have otherwise

Collusion may take different forms, and laws may differ as to what is collusion and what is evidence required to prove it

Plan: what is collusion, what helps firms to sustain it, what actions can be taken to fight it

Collusion, I: enforcement

Collusion refers to a situation where firms set prices which are higher than some competitive benchmark (or prices close enough to monopoly situation)

For economists, collusion is an outcome

What ingredients are necessary to <u>enforce</u> collusion?

Timely <u>detection</u> of deviations from collusive actions

Credible mechanism for the <u>punishment</u> of deviations

Threat of punishment prevents firms from deviating

Examples (explicit agreement not necessary)

Collusion, II: Coordination

Which collusive price? The problem of coordination

Tacit collusion: costly experimentation to coordinate on a collusive outcome, risk of triggering price wars

Explicit collusion: firms coordinate on collusive outcome and avoid problems due to shock adjustments

(Market sharing schemes: possible to adjust to cost and demand shocks without triggering price wars)

Firms will try to talk in order to coordinate!

Collusion, III: formalisation

Firms meet in the marketplace for an infinite number of periods (or with uncertain final date)

Collusion if following Incentive Compatibility Constraint (IC) holds for each firm:

$$\Pi^c + \delta V^c \geq \Pi^d + \delta V^p$$

Or:

$$\delta \geq (\Pi^d - \Pi^c)/(V^c - V^p)$$

(RHS is called critical discount factor)

Trigger strategies.

Factors that facilitate collusion

I. Structural factors

Concentration

Entry

Cross-ownership and other links with competitors

Regularity and frequency of orders

Buyers' power

Evolution of demand

Symmetry

Multi-market contacts

Facilitating factors, II

II. Price transparency and exchange of information

Observability of firms' actions facilitate enforcement

- Green and Porter's model
- Exchange of information on *past/current* data

Coordination and the role of communication

- Focal points
- Exchange of information on *future* prices and outputs (private v. public announcements)

Examples: ATP and collusion in auctions

Facilitating factors, III

III. Pricing rules and contracts

Most-Favoured Nation clause (ambiguous effect)

Meeting-Competition clauses (helps collusion, by eliciting information on rivals and discouraging deviations in the first place)

Resale price maintenance (enhances cartel stability by eliminating variation in retail prices)

Uniform delivered pricing; basing point pricing

PRACTICE: How to detect and fight collusion?

For economists, collusion as an outcome

Both tacit and explicit agreements may sustain collusion

So, why not inferring collusion from market data?

Inferring collusion from data. Problems, I: price levels

Price data availability (list v. effective prices)

Difficult to estimate ‘monopoly price’ and marginal costs

Where to set the threshold level?

A *dangerous principle*: firms guilty because able to set a high price…(market power not a problem *per se*)

Standards of proof, II: data

Inferring collusion from data. Problems, II: evolution of prices

Price parallelism: not a proof of collusion (common shocks)

Which legal certainty if firms are found guilty for independent business practices?

'Parallelism plus' not convincing either, unless there is proof of coordination on facilitating factors (eg., RPM, info exchange)

Periods of 'price wars' not sufficient condition for collusion either (new capacity, new competitors, demand shocks…)

Conclusion

Econometric tests as complementary evidence, not proof of collusion (results sensitive to different techniques used)

Standards of proof, III: hard evidence

Hard evidence only (of communication on prices and/or coordination on facilitating practices) as proof

(focus on observable elements verifiable in courts, to preserve legal certainty: fax, e-mail, phone calls, video etc.)

Too lenient with the firms?

(Since collusion can be reached tacitly, focusing on ‘hard evidence’ amounts to permitting collusion?)

Not necessarily: firms will try to coordinate to avoid costly market experimentation and will leave ‘traces’

More active policies can be used, ex ante and ex post

Ex ante policies to fight collusion

Black list of facilitating practices might deter collusion and free resources for cartel detection

- Private announcements of future prices/outputs
- Exchange of disaggregate current/past information
- Meeting competition, RPM and other clauses, if adopted by coordination
- Cross-ownership among competitors not to be allowed
- Merger control (joint dominance)

Deterrence of collusion: criminal sanctions?

Ex post policies to fight collusion

Surprise inspections

Leniency programmes

The US and EU experience:

- Leniency must be clear and certain (not discretionary)
- Leniency should be extended to firms that report *after* an investigation has started

Other horizontal agreements: JVs

Joint-Ventures: as for mergers, trade-off between market power and efficiency

A special case: Research Joint-Ventures

Because of spillovers and non-rivalry, R&D unlikely to attain socially optimal levels

RJV may promote R&D by sharing costs and avoiding duplications, but:

R&D may fall absent competition, and…

collusion may extend to marketing and production

Only RJV on basic research should be allowed