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The efficiency of collusion: implications for the efficiency of criminal sanctions

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Topics

- Background
- Workable Competition and Cooperation
- Economic efficiency of collusion
    - Conditions that facilitate collusion
    - Collusion damages
    - Some New Zealand examples
- An economist's take on criminalisation

Background Comment:

Collusion/affiliated actions: may be tacit or explicit: either way they are cooperative

Survey on Cartels

Margaret C. Levenstein and Valerie Y. Suslow, "What Determines Cartel Success?", *Journal of Economic Literature* ,Vol. XLIV (March 2006), pp. 43-95.

- Average duration 5 years; a number between 5-10 years and a few much longer
- May entail price and non-price elements
- *"the biggest challenges cartels face are entry and adjustment of the collusive agreement in response to changing economic conditions. Cartels that develop organizational structures that allow them the flexibility to respond to these changing conditions are more likely to survive. Price wars that erupt are often the result of bargaining issues that arise in such circumstances"*

Workable Competition

> *"….. a market framework in which the pressures of other participants (or the existence of potential new entrants) is sufficient to ensure that each participant is constrained to act efficiently and in its planning to take account of those other participants or likely entrants as unknown quantities. To that end there must be an opportunity for each participant or new entrant to achieve an equal footing with the efficient participants in the market by having equivalent access to the means of entry, sources of supply, outlets for product, information, expertise and finance."*

Enables investment and innovation that promote dynamic efficiency.

Forward looking means that *time* and *uncertainty* are essential features of decision-making in workably competitive markets

Workably competitive markets balance competition and cooperation

Demand for cooperation arises for various reasons

a) managing uncertainty
b) managing spillovers: e.g. research and diffusion of innovation
c) managing industry policy/regulation

Commercial settings that may assist cooperation

- Repeated *vs* one shot transactions/relationships: offer
  - the opportunity to reconcile the pursuit of individual interest and cooperation
  - wider class of strategies for competition of various sorts
  - may be played across markets or time
- the relationship running for an infinite or unknown period of time,
- low information acquisition costs,
  - number of firms
  - clarity of signal (is it confounded with intrinsic uncertainty)
  - modes of interaction: e.g. is information costlessly provided (by the state)?
  - Information acquisition processes: "I will match any price"
- low discount rates (patience) of the parties,
- high expected growth;
- low business risk;
- similarity in firms' costs, and
- Convenient forums for information exchange: e.g. industry and regulatory

Uncertainty and competition

- Competition is not carried out in a vacuum: there exists strategic and intrinsic uncertainty. Diffusion of information/innovation can also be important for competition and efficiency

- Particularly for forward looking decisions managing uncertainty is valuable and this interacts with competition

- A well-known example is the role of winner's curse where parties bidding for an object of common but unknown value know that if they win they have almost certainly paid too much: adjustment for this possibility reduces bidding (competition) vigor. The reduction in competition may be reduced by participants' learning of others' general views. Narrowing the range of views
    - requires some form of communication
    - may be implemented in various ways (e.g. two step auctions)
    - a role for futures markets

Common Value Uncertainty Examples

Procurement (uncertainty about future costs of large projects):

Groenewegen, J (1994) "About double organised markets: issues of competition and cooperation. The Dutch construction cartel: an illustration", *Journal of Economic Issues*, 28, 901-999

The case of meat procurement in NZ

- In the mid 1990s the Commission marched into a meat-packing company's office and asked for the industry's agreed prices to pay farmer and it was handed over. The level of penalties ordered was appealed and companies were ordered to pay significant fines

- Peculiar key characteristics
  - –Agreement was reached every Thursday about prices to be offered farmers for their stock on the following Monday
  - –Discussions ranged over all aspects of the state of the industry;
  - –Most of 16 companies participated religiously;
  - –Many of these companies were fundamentally different;
  - - All were operating in a dynamic risky market;
  - - The prices paid were uniformly *greater* than the agreed price;

The case of meat procurement in NZ (con't)

Mellsop Thesis:

- –the information exchange was in lieu of a (forward) market which was too costly because of high transactions costs
- –When the practice was prohibited farmers were paid less for their stock (relative to the derived value of the stock): there was thus a gain in total surplus from the activity
- –Suggests that the "collusion" was " information exchange" that led to discovering the general; level of prices and therefore less risky, more competitive bidding

Suggests that a) information exchange (markets) can be valuable

b) per-se-illegal price fixing should have penalties that are sensitive to efficiency effects

The Car Wash case

In the *car wash case* (1990s) one oil company executive revealed to another that his company was going to raise the price of its free carwashes: price fixing was found and the companies fined. The fine was higher because of the way a company reacted to the case and lower because raising the price was economically efficient

The Efficiency of Collusion in Prices

- If collusion in prices fixes prices any efficiency loss is that of static efficiency per period:
  - The efficiency loss is not equal to transfers
  - The efficiency loss is generally small

- If it does not inhibit investment/innovation the effect on dynamic economic welfare will be small: it may be positive or negative

  - FERSTHMAN, C. AND PAKES, A. "A Dynamic Oligopoly with Collusion and Price Wars." *RAND Journal of Economics*, Vol. 31(2000), pp. 207-236.

If there are episodes of collusion prices may be higher and attract entry and a sequence of collusion and price wars results. In some circumstances this yields more entry and innovation over time and higher welfare

- Giacomo Calzolari and Giancarlo Spagnolo, "Relational Procurement" working paper, February, 2009

"Shorter contract duration and restricted participation facilitate agreements among suppliers, however, inducing an additional trade-off between reputational forces and collusion. We show that when non contractible quality is very important, this trade off may disappear with the buyer benefitting from collusion, as it allows to procure high non contractible quality more efficiently."

Non-price cooperation

- Price cooperation does not imply competition is limited: there may be vigorous non-price competition

- Vigorous competition does not imply there is no cooperation (Coke *vs* Pepsi)

- Non-price cooperation has been the subject of EU constraints

  NIKOLAOS GEORGANTZ´IS and GERARDO SABATER-GRANDE, "Market Transparency and Collusion: On the UK Agricultural Tractor Registration Exchange", *European Journal of Law and Economics*, 14: 129–150, 2002

"Going back to the tractors' tacit collusion case, we would argue that, as suspected by the EC Commission, information on specific models and retailer market shares with a detailed geographical breakdown by brand and retailer may have been used as a signal of a precommitment to a lower promotional effort and a less competitive environment in the posterior price-setting game or as an efficient way of detecting deviations from collusion with respect to both price and non price strategies."

Cooperation and Industry Structure

- Loose affiliations of entities are common and very often efficient
  - Joint Ventures
  - Procurement (e.g. Giacomo Calzolari and Giancarlo Spagnolo, above)
- Loose affiliations of entities can enhance competition against the counterfactual
- Facilitation devices may be organisational structures/information provision
- The boundaries between cooperation, competition and efficient structures/practices are very unclear

Competition Law Prohibitions

- Price fixing a *per se offence* may be transaction cost efficient if price fixing is generally harmful, hard to detect and penalties are assessed at levels affected by the economic (efficiency) effect of the prohibitions

- Detection

    - Explicit collusion: requires tangible evidence;

    - Tacit collusion is generally not detectable from data, requires inference

    - "Facilitating devices" are:
        - increasingly targeted by the EU

          MICHELE GRILLO, "Collusion and Facilitating Practices: A New Perspective in Antitrust Analysis", *European Journal of Law and Economics*, 14: 151–169, 2002
        - typically regarded as subsidiary to core "cooperation" in US law

    - Incentivising whistle blowers raises the likelihood of (detected) collusion to participants and lowers the likelihood of successful potential explicit collusion: it will be part of the competitive game

Some Effects of Competition Prohibition/Penalties

- Generally inhibit (particularly transparent) cartels
- Inhibit free information exchange and informal cooperation
- Shore up collusion in some cases
  - Barbara McCutcheon, "Do Meetings in Smoke-Filled Rooms Facilitate Collusion? *The Journal of Political Economy*, Vol. 105, No. 2 (Apr., 1997), pp. 330-350

    "When firms interact in a dynamic environment in which the law helps them to prevent renegotiation, the firms may benefit from the law that makes it costly, but not very costly, to meet to discuss prices. The Sherman Act may help firms to collude."

  - Susan Athey and Kyle Bagwell, "Optimal Collusion with Private Information" *The RAND Journal of Economics*, Vol. 32, No. 3 (Autumn, 2001), pp. 428-465

    "Our findings suggest that antitrust policy can have perverse consequences. A recurring theme is that successfully colluding firms tolerate productive inefficiency before lowering prices. An antagonistic antitrust policy, which limits firms' ability to communicate or exchange bribes, may thus limit productive efficiency without affecting prices.

  - Joseph E. Harrington, "Cartel Pricing Dynamics in the Presence of an Antitrust Authority", *The RAND Journal of Economics*, Vol. 35, No. 4 (Winter, 2004), pp. 651-673

    "Though making price-fixing illegal may induce a cartel to initially price lower, in some cases it may allow the cartel to eventually price higher"

Addition of Criminal Sanctions for Collusion

- Will have the effects of heavy penalties on specific actions in a domain of commerce where
  - Economic efficiency costs of the action will be problematic and may be positive or negative
  - The "*crime*" largely concerns transfers
  - Much judgement will often be required to assess culpability
- Will require a higher standard of proof of collusion
- Will (presumably) enlarge the net to the *contemplation* of collusion ??
- Will raise the cost of hitherto cooperative activity

There is no Sharp Dichotomy Between

Competition and Cooperation in Workably Competitive Markets