

The economic impact of cartels and anti-cartel enforcement

KEYWORDS: cartels, anti-competitive harm, deterrence, detection, selection bias, Monte Carlo simulation

BACKGROUND

- Evaluations of the consumer harm (welfare reduction) caused by cartels are typically partial because they do not attempt to quantify the impact of deterrence, or acknowledge that the Competition Authority (CA) does not root out all anti-competitive cases.
- This paper proposes a broader framework for evaluation which encompasses these unobserved impacts.
- Calibration of this framework is challenging because one cannot rely on estimates for cases which have been observed to make deductions about those that have not - an example of the classic sample selection problem which is endemic across much of the empirical Industrial Organisation literature.

METHODOLOGY

- It proposes a methodology in which the cartels detected by a CA are interpreted as a sample drawn from an otherwise unknown population, which also includes deterred cases and cases which the CA did not detect.
- This methodology identifies what information is required in order to quantify the magnitudes of the unknown deterred and undetected harms:
 - the nature of the potential population distribution of harm: for example are there many small harm and few large harm cases,
 - the magnitudes of the aggregate probabilities of deterrence and detection: i.e. what are the overall rates of cartel detection and deterrence in a given economy, and
 - how these probabilities vary with case harm: is it the high harm or the low harm cases that are more/less likely to be deterred/detected?
- We proceed, where possible, by employing results from previous empirical and theoretical literatures to fill in this information.
- In the absence of previous empirical works on the likely magnitude of the aggregate deterrence probability, we leave open the possibility of a wide range of potential magnitudes for this parameter in the Monte Carlo simulation (the Monte Carlo method runs a large number of simulations to acquire a probability distribution of an unobserved phenomenon).

KEY FINDINGS

Even if we focus only on the most cautious lower bound estimates, we find that:

- The harm detected by the CA really is only the tip of the iceberg, accounting for only a small fraction (at most one sixth) of total potential harm;
- Deterrence is at least twice as effective as detection as a means for removing harm;
- Undetected harm is at least twice as large as detected harm.

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- Less cautiously, according to the point (mean) estimates, all three effects are much greater.

POLICY ISSUES

- Some of the implications are self-evident. For policy-makers, deterrence is arguably the most important arm of cartel policy, and harm due to undetected cartels is likely to be considerable.
- Measuring the success of a CA simply by calculating the amount of harm it removes by virtue of cartel busts can be misleading. Indeed, we use the results of our simulations to show that a 'poor' CA (relatively ineffectual in deterring and detecting) actually detects more harm than a 'good' CA, simply because its inability to deter leaves far more cartels out there to be detected.
- The paper also suggests a simple but important proposition. In many aspects of economic and social life, positively skewed distributions apply - a small proportion of causes (e.g. 20 per cent) generate a very large proportion of effects (e.g. 80 per cent), e.g. the largest few websites generate the vast majority of internet advertising income, the largest customers generate most revenues for businesses, etc. This is well understood in general and here we see that the same is true for cartel-induced harm. If so, even small departures from a random sample can lead to potentially large selection bias. In this context, this implies that the use of 'simple multipliers', which ignore within population variance, can be potentially misleading.

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