

# Optimal Enforcement and Decision Structures for Competition Policy: Economic Considerations

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## 1. Introduction

Competition Authorities (CAs) at both national and cross-national (i.e. European Union) level have recently adopted significant reforms in their enforcement and decision procedures. One such reform, in particular, is that many competition authorities are willing to use economics-based methodologies in the implementation of competition policy drawing on developments in Industrial Organisation theory over the last 30 years. This has led to the adoption of an *effects-based* rather than a *Per Se* approach to assessing cases<sup>3</sup>. It has also resulted in the appointment of eminent academic economists to top positions in some competition authorities.

There have been many other reforms in enforcement and decision structures in competition policy. In Europe, the Commission's Regulation 1/2003 and the 139/2004 Regulation on the Control of Concentrations have been landmark reforms<sup>4</sup> amounting to the most far-reaching restructuring of the EU Competition Policy procedures in more than forty years. Further, the Commission and many national competition authorities have undertaken a series of further important changes in their decision structure by introducing in the system review panels, the chief economists departments, a hearing officer etc.

All these reforms have been the subject of heated debate in recent years<sup>5</sup>. Now, while in the past economists have focused on analysing the potential anti-competitive outcomes of various business conducts, as they have become more involved in the implementation and enforcement of Competition Policy they have recently turned their attention to considering

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<sup>3</sup> See for example the recent decision on *Microsoft* (2004) and the US Supreme Court decision in *Leegin vs PSKS*. See also the recent (December 2008) Guidance paper issued by the Commission on implementing Competition Policy in the area abusive practices by dominant firms (art. 82 EC).

<sup>4</sup> For a recent economic analysis of the effectiveness of the 1/2003 reforms see Will *et.al* (2008).

<sup>5</sup> See for example the collection of articles in "The Reform of EC Competition Law", edited by I. Kokkoris and I Lianos, Kluwer Publishers, 2008.

the optimal design of Competition Authority decision and enforcement practices and of other enforcement procedures as, for example, those related to the role of the Courts.

In this note we survey recent contributions by economists on optimal decision and enforcement procedures. We start by examining the circumstances under which *effects-based* procedures are superior to *Per Se* procedures. This leads on to an analysis of the concept of Legal Uncertainty and how it impacts on the choice of decision procedures. Finally we turn to an analysis of the role and impact of both judicial reviews/appeals processes and internal error-correction/review mechanisms such as those established recently by the European Commission DG COMP.

## ***2. Optimal decision procedures: effects-based vs. Per Se***

We begin by examining a basic issue that has been widely discussed for a long time by both lawyers and economists - that of *effects-based* vs. *Per Se* procedures. Following the seminal contribution of judge Easterbrook (1992), this discussion has typically used the decision-error cost minimisation approach. The discussion has had two serious drawbacks.

- It has focused almost entirely on decision-error costs – the costs of false acquittals and wrongful convictions – and so has taken account solely of the impact of the decisions made by the competition authority on the cases coming before it. It has ignored the indirect or deterrent effects of the decisions on firms contemplating taking an action which could become subject to an investigation by the authority.
- The arguments have remained rather informal and although various factors have been identified that could bear on the relative magnitude of decision-cost errors under various decision rules, there has been no coherent framework or formula for determining when an *effects-based* rule would dominate a *Per Se* legal standard.

Recently Katsoulacos and Ulph (2008a) – hereafter K&U (2008a) - develop a *very general* welfare-based framework for determining the conditions under which, for *any* type of potentially anti-competitive business practice, an *effects-based* approach is superior to a *Per Se*<sup>6</sup> legal standard. The framework incorporates decision-error costs but

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<sup>6</sup> A *Per Se* legal standard allows or disallows an entire class of actions without trying to identify more carefully sub-classes of actions that might generally be harmful or generally benign. A *discriminating* legal standard or *effects-based* approach requires the CA to establish explicit criteria for deeming some actions to be harmful and others benign and to then investigate each case to see which of these criteria it meets. An extreme form of the *effects-based* approach is what in US is termed *Rule – of – Reason* under which competition authorities have the discretion to apply economic methodologies on a case-by-case basis.

also incorporates indirect/deterrent effects. The new results that emerge from this framework are:

- *Effects-based* procedures that reduce the costs of decision errors relative to *Per Se* are termed *effectively discriminating*. The condition for effects-based procedures to be effectively discriminating involves a comparison of the quality of the model/analysis available to the CA in undertaking an effects-based investigation with the strength of presumption of legality/illegality. The *quality of the model/analysis* depends on the propensity to make Type I and Type II errors (resp. false convictions and false acquittals). The *strength of the presumption of legality/illegality* depends on the frequency with which actions are anti-competitive, the degree of harm they cause if they are and the degree of benefit they create if they are pro-competitive<sup>7</sup>.
- However decision errors affect only the welfare consequences of the CA's procedures on the cases that come to its attention. But CA's procedures could also affect firms who do not come to its attention, for example by influencing the decision of a firm to engage in potentially anti-competitive actions. These *indirect/behavioural/deterrence* effects could potentially have much more significant welfare effects than the *direct/decision* effects. So the second important result of K&U (2008a) comes from incorporating indirect effects of different decision procedures adopted by a CA on the behaviour of firms deciding whether or not to take an action. This enables them to undertake a full welfare analysis of the overall effects of adopting different legal standards and show that even if effects-based procedures improve on decision errors they could lower welfare relative to Per Se. They also identify the full welfare consequences of making improvements to the underlying model/analysis used by the CA under an *effects-based* procedure.
- K&U (2008a) also demonstrate that in choosing between alternative procedures it is important to take account of certain other features of a CA's operations – the coverage rate (i.e. the fraction of all actions that is investigated by the CA), delays in decision-making, and the penalty (or fine) regime. They show how these procedural factors enter explicitly into the welfare comparison of different legal standards<sup>8</sup>.

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<sup>7</sup> Previous literature had identified all these factors as being relevant, but had not shown exactly how they should be combined to give an exact test.

<sup>8</sup> These factors had been ignored in the existing literature on legal standards.

The importance of deterrence effects is shown in Katsoulacos (2008) in an application of the above framework to the analysis of legal standards for refusals to license intellectual property rights and to the recent decision by the European Commission and the Court of First Instance in the *Microsoft* (2007) case. It is shown that if a *Per Se Legality* standard is not used to handle such refusals then the “exceptional circumstances test” (rather than the test proposed by the Commission) would be the most appropriate test *because* of its superior indirect / deterrence effects.

K&U (2008a) assume that firms know whether their action is harmful or benign for consumer welfare and the CA’s model for assessing their action/conduct, and so can infer the likelihood that their actions will be disallowed. This implies that there will be differential deterrence of firms whose actions are harmful from those whose actions are benign. In K&U (2008b) it is assumed instead that firms can only deduce the average likelihood of having their actions disallowed. In this case improving the accuracy of the decision rules may not always be a good thing if it leads to a greater deterrence by firms whose actions are on average beneficial. A similar result is obtained by Immordino and Polo (2008) who focus on the special case of innovative activities where firms have to undertake an investment in order to innovate.

In a related paper confined to mergers, Sorgard (2008) determines the optimal number of merger cases to investigate taking account of both the quality of the analysis used by the authority and recognising the indirect effects on behaviour. In another paper by Will & Schmidtchen (2008) that also focuses on a specific type of action – non-hard-core-cartel agreements – the welfare effects of the recent Council Regulation EC 1/2003 are examined which significantly changed the way in which such agreements would be treated. They show that such a “relaxation” of notification requirements may not produce adverse indirect effects.

### ***3. Decision Procedures and Legal Uncertainty***

While the literature referred to above examines the optimal choice of decision procedures to be used in enforcing competition policy, it neglects a potentially important aspect of the issue which is that of Legal Uncertainty – which, it is often claimed in policy-making and legal circles, is an important factor that would favour *Per Se* rather than *effects-based* (or discriminating) procedures. The idea is that under *Per Se* rules either all actions

are allowed or all are disallowed, whereas under *effects-based* procedures, the Authority will allow some actions and disallow others. When firms make the decision as to whether or not to undertake the action they have to consider the possibility that it might come under scrutiny by the CA. Consequently, it is argued, under a *Per Se* rule they are certain how the action will be treated, whereas, under an *effects-based* approach, they do not know for sure what decision would be taken by the Authority. This Legal Uncertainty induced by *effects-based* procedures is harmful and should lead CAs to favour *Per Se* procedures.

However these arguments have typically been asserted rather than demonstrated and have not been subjected to rigorous scrutiny. In another recent paper, K&U (2009), we have adapted our original framework in K&U (2008a) and used it to subject these ideas to rigorous analysis. We show that whether legal uncertainty emerges under an *effects-based* procedure, its nature and extent, the implications for firm behaviour and the consequent choice of legal standard, depends crucially on:

- the information available to the Authority concerning the characteristics of firms/ their environment that determine the harm/benefit generated by their actions,
- the information available to the firms about these characteristics and about the assessment criteria/models used by the Authority.

Specifically, the key results that emerge from K&U (2009) are:

- (i) It is often presumed that just because *effects-based* procedures will make different decisions in different cases, they necessarily create Legal Uncertainty. But this is wrong. Suppose that, even after an investigation, the Authority cannot determine all the relevant characteristics that determine the harm/benefit caused by an action taken by any firm, but nevertheless can accurately measure a subset of these, and that the firms taking the actions also know the value of these characteristics. Suppose the Authority uses a decision rule that it will disallow all actions where the vector of characteristics lies in a particular set but allow all other actions. For example it might disallow all actions where market share exceeds a particular value. And suppose that this decision rule is communicated clearly and effectively to firms. This is an *effects-based* rule because different decisions will be made in different cases. Moreover it will typically be subject to both Type I Errors (False Acquittals) and Type II Errors (False Convictions) because there are harm-relevant characteristics that are excluded from the test. But there will be

absolutely no Legal Uncertainty. Every firm knows the value of the characteristics that will lead the CA to make its decision and so will know in advance exactly what decision will be made about it were it ever to be investigated. Put somewhat differently, it is very important to distinguish between *variability* of treatment and *uncertainty* of treatment. *Effects-based* procedures generate *variability* of treatment but not necessarily *uncertainty* of treatment. The crucial result established by K&U (2009) is that provided the *effects-based* rule can *effectively discriminate* – in the sense defined above – then welfare under an *effects-based* rule with no Legal Uncertainty is higher than under a *Per Se* rule. So not only is *Per Se* not the only way of achieving Legal Certainty, it is not necessarily the best way of achieving it. This result is very important because it suggests that Legal Certainty might best be achieved by *effects based* procedures provided the tests are based on factor that are known to firms and that the rule is made transparent.

(ii) In many cases of course these circumstances may not arise, and competition authorities may use powerful tests based on characteristics not readily observable by firms and, in addition, may not fully reveal the nature of the tests to firms. For example firms may know that decisions are based at least in part on a market share test, but not know what definition of market will be used. Consequently, the things that firms know about themselves and their environment may only be loosely connected to the characteristics on which the test is based, and so firms do not know for sure whether their action will be disallowed but can only calculate/perceive the *probability* that it's being disallowed were it ever to come before the authority. So now there is Legal Uncertainty. Moreover, since firms differ in their characteristics and/or environment, in general different firms will attach different probabilities to their action's being disallowed. In particular, suppose that, as in K&U (2008a), firms:

- know whether their conduct is harmful or benign;
- do not know the values of the underlying characteristics which make their actions harmful or benign;
- but know enough about how the Authority will assess their conduct, that they calculate/perceive the probability of the Authority's making Type I and Type II errors.

K&U (2009) establish two important results.

1. If the authority uses an *effects-based* procedure then welfare in this situation where there is Legal Uncertainty could still be higher than in the situation described in (i) above where there was no Legal Uncertainty. So Legal Uncertainty can be welfare-enhancing. This is because Legal Uncertainty can generate deterrence effects that are on balance welfare-improving. *A fortiori* if the *effects-based* rule can *effectively discriminate* then, given the result we reported in (i) welfare will be higher than under *Per Se*.
  2. Even if under an *effects-based* procedure welfare is lower with Legal Uncertainty than in the situation in (i) where there is no Legal Uncertainty, welfare may still be higher than under *Per Se*. This is because:
    - If the *effects-based* procedure can *effectively discriminate* it has lower costs of decision errors
    - Firms whose actions are harmful face a higher probability of having their actions disallowed than firms whose actions are benign and so, given that firms know their type, there is greater deterrence of harmful actions than benign actions.
- (iii) In the most extreme case of Legal Uncertainty firms may know so little about the characteristics that the CA uses in the tests that it conducts and about the nature of the tests that it employs, that not only do they not know for sure whether their action will be allowed or disallowed and can only calculate/perceive a probability of its being disallowed, but, this probability is unrelated to anything that the firm knows about itself and is common to all firms<sup>9</sup>. Effectively the only thing that firms know is how often on average actions of the type they are contemplating taking are disallowed when they come before the CA. For this reason this case is referred to as the “*average deterrence*”<sup>10</sup> case while that in (ii) above is referred to as “*marginal deterrence*”. The key result established by K&U (2009) is that if the CA uses an *effects-based* procedure then welfare under *average deterrence*

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<sup>9</sup> Vickers (2007) also distinguishes between “discretionary decision making” by a CA “based on whatever is thought to be desirable in economic terms case by case” and the *effects-based* approach proposed recently in EU. The case-by-case approach can be thought of as *Rule of Reason*. The *effects-based* approach need not necessarily produce legal uncertainty in the second sense above, as when the CA uses clearly specified models and criteria that allow firms to anticipate correctly how their conduct will be assessed—in the sense of correctly anticipating when the conduct will be allowed or disallowed depending on whether it is harmful or benign.

<sup>10</sup> See Katsoulacos and Ulph (2008a, b); also G. IMMORDINO AND M. POLO, JUDICIAL ERRORS AND INNOVATIVE ACTIVITY, mimeo (2008).

will be lower than welfare under *marginal deterrence* and the likelihood that *effects-based* procedures welfare dominate *Per Se* is correspondingly smaller. But even in this case of extreme Legal Uncertainty welfare may still be higher under an *effects –based* procedure than under *Per Se*.

To summarise:

- There is no automatic equivalence between *effects-based* rules and Legal Uncertainty.
- There is no monotonic link between Legal Uncertainty and welfare. While very great degrees of Legal Uncertainty are welfare reducing, welfare can be higher when there is some degree of Legal Uncertainty than when there is no Legal Uncertainty.
- If the tests on which *effects-based* procedures are based are good enough to enable the CA to *effectively discriminate* then *effects-based procedures* will often be welfare superior to *Per Se* rules even though they involve Legal Uncertainty.

#### **4. *The Role and Impact of Judicial Reviews***

In the above discussion we have maintained the assumption that the Authority undertakes a single examination of each case coming before it, reaches a decision as to whether to allow or disallow, and that this decision is final. Recent literature has also explored the issue of whether enforcement procedures should involve some kind of appeals procedure whereby a firm may choose to lodge an appeal against a decision to disallow its action, or some internal referral or review process<sup>11</sup> whereby the authority subjects some or all of its decisions to some kind of internal review before making a final decision to disallow. However, this has been rather informal with the focus just on the impact of such a process on the cost of decision errors - ignoring the impact of an appeals process on deterrence, in which case it will be important to recognise the possibility that an appeals process will also involve more delay.

K&U's (2008c) "Optimal Enforcement and Decisional Structures for Competition Policy", is the first attempt to examine the implications of different enforcement structures for the costs of decision errors **and** for welfare (taking account of deterrence effects). Concerning the role of judicial appeals and referral procedures, the following results are obtained. Appeals procedures:

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<sup>11</sup> See, for example, Ahlborn Evans and Padilla (2008).

- (i) Do not affect the decision errors of *Per Se* legal standards, while they
- (ii) Affect the decision errors made by *effects-based procedures* and in particular they:
  - (a) Increase the costs of Type II errors (false acquittals) whilst they
  - (b) Reduce the costs of Type I errors (false convictions)
- (iii) Will affect decision errors in a way that depends crucially on whether the conducts or actions investigated are *presumptively legal* (on average or *prima facie* benign to welfare) or *presumptively illegal* (on average or *prima facie* harmful to welfare). The stronger the presumption of legality the *more* likely that decision errors will be reduced for a presumptively legal practice. The stronger the presumption of illegality the *less* likely that decision errors will be reduced for a presumptively illegal practice. It is more likely that decision errors are reduced for presumptively legal than for presumptively illegal actions.
- (iv) Through their indirect / deterrence effects they will tend to improve welfare for presumptively legal actions and will tend to worsen welfare for presumptively illegal actions.
- (v) Are more likely to improve overall *welfare*<sup>12</sup> when actions are presumptively legal than when they are presumptively illegal. Indeed because of their beneficial deterrence effects they may improve welfare even when they increase decision errors for presumptively legal actions.

## 5. *The Role and Impact of Internal Error-Correction Mechanisms*

K&U (2008c) also examine the implications for decision errors and welfare of internal error-correction mechanisms such as those introduced by the Commission since 2004. An important issue here is whether, in the presence of such procedures, it is then best to take final decisions in the Competition Authority unanimously or through a majority rule. They find that such mechanisms:

- (i) Produce exactly the same decision errors as a judicial review system if internal review panels allow the same number of reviews as there are potential judicial reviews (usually two) **and** decisions in the authority are reached unanimously.

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<sup>12</sup> Overall welfare refers to welfare when account is taken of both costs of decision errors and of indirect / deterrence effects.

- (ii) If decisions in the authority are not reached unanimously but rather a majority rule is used the internal review panels will produce more Type I errors and fewer Type II errors relative to unanimity and hence, given (i), relative to an equal number of judicial reviews.
- (iii) Under unanimity, in contrast to judicial reviews, internal reviews unambiguously reduce deterrence effects and thus tend to improve welfare for a presumptively legal practice and tend to worsen welfare for a presumptively illegal practice. However, if decisions in the authority are reached using a majority rule then internal review panels may well increase deterrence effects. This suggests the interesting result that, *ceteris paribus*, *final decisions in the CA with internal review panels should be taken unanimously when the action investigated is presumptively legal and through a majority rule when the action investigated is presumptively illegal.*

*Corollaries:*

A somewhat loose but still quite accurate interpretation of what the results outlined in the last two subsections imply is the following:

- “Confirmatory” procedures (that is, procedures involving many checks and balances such as judicial appeals, internal reviews, chief economists, unanimity rules) are more likely to be used with benefit for *prima facie* good than for *prima facie* bad conduct.
- When the presumption of illegality is very strong (cartels would be a good example), so *Per Se Illegality* seems the right legal standard to use, one should not rely on “confirmatory” procedures – having too many checks and balances in place is then not important. However, when behavior is presumptively illegal but the presumption is not very strong (RPM may be such an example, for which many would like to adopt an *effects-based procedure*) adopting an intermediate degree of checks and balances might be most appropriate (e.g. internal reviews and unanimity may not be called for but one should allow for judicial reviews).

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