

OPTIMAL LEGAL STANDARDS FOR COMPETITION POLICY

FURTHER RE-VISITED¹

Yannis Katsoulacos²

David Ulph³

Abstract

Katsoulacos and Ulph (2009) showed how all the factors identified as being relevant to choosing between a *Per Se* and an *Effects-Based* legal standard in terms of their decision error costs could be combined into a simple formula for determining which standard to use. Seifert (2020) gives an alternative characterisation of an *Effects-Based* legal standard and shows that its decision error costs are never higher than those of *Per Se*. We argue that nevertheless our original formula remains valid for choosing between these two legal standards.

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² Professor of Economics, Athens University of Economics and Business. E-Mail: yanniskatsoulacos@gmail.com

³ Professor of Economics, University of St Andrews. E-Mail: du1@st-andrews.ac.uk.

1. Introduction

Since Easterbrook (1984) the question of what legal standard to use in handling infringements of competition law continues to be the subject of debate among academics⁴ and policy makers. While it is generally agreed that there is a continuum of possible standards (Jones and Kovacic, 2017), the debate is usually framed as a choice between two extremes – *Per Se* (hereafter PS) and *Effects-Based* (hereafter EB). Also, while it is recognised that the choice involves balancing many considerations – decision error costs (hereafter DEC), resource costs, deterrence, legal uncertainty – DEC remains a primary consideration. In Katsoulacos and Ulph (2009) we showed that all the factors that had been identified as being relevant for thinking about DEC could be brought together in a simple formula that would determine when EB was to be preferred to PS. Seifert (2020) presents an alternative view of how liability decisions are reached under an EB legal standard and shows that its DEC are never higher than those of PS. This note argues that, whatever view one takes as to how an EB legal standard is operated, our previous formula still gives the precise conditions for determining the choice between them when DEC are the prime consideration, thus generalising our previous result.

2. The Setting

A Competition Authority (hereafter CA) has to decide whether or not a firm's potentially anticompetitive conduct violates competition law. The CA first characterises the conduct as being of a particular *type* by virtue of its formal features⁵. Drawing on its knowledge of other cases and of economic theory and evidence regarding this type of conduct the CA comes to a view that a fraction γ , $0 < \gamma < 1$ of such cases are genuinely harmful to consumer welfare, with (average) harm $H > 0$, while the remaining fraction are genuinely benign with (average) benefit $B > 0$. It can therefore determine whether:

- $\gamma H > (1 - \gamma)B$ - in which case the conduct is *presumptively illegal* (hereafter PI);
- $\gamma H < (1 - \gamma)B$ in which case the conduct is *presumptively legal* (hereafter PL).

Breckner and Salop (1999) refer to these as “the initial characterisation of the case”. For the particular case in front of it, the CA does not know whether it is harmful or benign, and so

⁴ See Beckner and Salop (1999), Kovacic and Shapiro (2000), Hylton and Salinger (2001), Padilla and Evans (2005), Jones and Kovacic (2017) and Hovenkamp (2018) for important contributions.

⁵ E.g. tying, exclusive dealing, fidelity rebates etc. For each type, the specific characteristics of various cases may, of course, be different.

whether to Ban or Allow the conduct. Reaching a liability decision requires that it first chooses which legal standard to use.

2.1 *Per Se*

If the CA uses a PS legal standard it gathers no further information but bases its decision on the specific conduct on the *presumption* formed about the nature of the *type* of this conduct⁶. Specifically it decides to:

- (i) ban the conduct if it is *presumptively illegal* (PI);
- (ii) allow the conduct if it is *presumptively legal* (PL).

This gives rise to DEC. In the first case, it might ban benign conduct, thus generating expected DEC $(1-\gamma)B$; in the second case it might allow harmful conduct, thus generating expected DEC γH .

2.2 *Effects-Based*

Here the CA carries out an investigation into the specifics of the particular case: the relevant market; demand and cost conditions; the specifics of the conduct and how it has affected all the firms in the market etc. Based on this it performs certain calculations/tests that will point to whether the specific conduct is harmful (resp. benign). We refer to this as getting a harmful (resp. benign) signal.

Until it carries out the investigation it doesn't know what it will find. However in order to decide whether to proceed, it has to form a judgement about the quality of the evidence it is likely to find. So the CA forms a view about $p_H, 0 < p_H < 1$ (resp. $p_B, 0 < p_B < 1$) which is the probability that if the conduct is genuinely harmful it will get a harmful signal, (resp. that if the conduct is genuinely benign it will get a benign signal). It is also (implicitly) assumed that if the signal generated is not harmful (resp. benign) it is benign (resp. harmful)⁷.

The fact that these probabilities lie between 0 and 1 reflects the fact that the CA knows that tests are never perfect and there can be false positives as well as false negatives. However we assume that the investigations and tests carried out by a CA have some *discriminatory power* and so probability that a genuinely harmful conduct will generate a harmful signal is higher than the probability that a genuinely benign conduct will do so. Formally it is assumed that:

⁶ Easterbrook (1984) emphasized the importance of presumptions in antitrust inquiries.

⁷ Essentially this treats "inconclusive" as effectively equivalent to benign.

$$p_H > 1 - p_B \Leftrightarrow p_B + p_H > 1 \Leftrightarrow p_B > 1 - p_H. \quad (1)$$

This setting is common to both Katsoulacos and Ulph (2009) and Seifert (2020), as well as many other papers⁸.

3. Effects-Based Decision Making and DEC

There are two accounts of how the CA makes the liability decision under an EB standard.

3.1 Katsoulacos and Ulph (2009)

In this specification the CA's decision is driven by the evidence generated by the investigation as reflected in the signal it generates. So it is assumed that if the investigation generates a harmful signal the conduct is banned whereas if it generates a benign signal the conduct is allowed. Consequently p_H (resp. p_B) is the probability that a genuinely harmful conduct will be banned (resp. a genuinely benign conduct allowed).

Since DEC arise when the "wrong" decision is made, the expected DEC under this characterisation of EB is:

$$\gamma(1 - p_H)H + (1 - \gamma)(1 - p_B)B. \quad (2)$$

These expected DEC are the same whether the conduct is PI or PL.

To determine whether expected DEC under EB are lower than under PS, since under PS the expected DEC depends on whether conduct is PI or PL, we need to consider the two cases in turn.

PI: Here we require $\gamma(1 - p_H)H + (1 - \gamma)(1 - p_B)B < (1 - \gamma)B$, which is true if and only if:

$$\frac{p_B}{1 - p_H} > \frac{\gamma H}{(1 - \gamma)B} > 1. \quad (3)$$

PL: Here we require $\gamma(1 - p_H)H + (1 - \gamma)(1 - p_B)B < \gamma H$, which is true if and only if:

$$\frac{p_H}{1 - p_B} > \frac{(1 - \gamma)B}{\gamma H} > 1. \quad (4)$$

The term on the LHS of (3) (resp. (4)) is a measure of the *discriminatory power of the EB investigations* for harmful (resp. benign) actions, since it is the ratio of the probability of judging a conduct to be harmful (resp. benign) depending on whether it is genuinely harmful or genuinely benign (resp. genuinely benign or genuinely harmful). The second terms are the *strength of the presumption of illegality* (resp. legality).

⁸ Though these might use rather different terminology.

So these inequalities tell us that in order for EB to have lower expected DEC than PS the evidence gathered in the course of an investigation has to be sufficiently compelling, as to satisfy these conditions.

3.2 Seifert (2020)

Seifert takes the view that, since a CA knows that investigations can generate false signals, the signal itself is an unreliable guide as to true harm, and hence not an appropriate basis on which to make a liability decision. So, he characterises the decision-making procedure of an EB legal standard as one under which, if a CA gets a particular signal, it will first use Bayesian updating to work out the probability that it comes from a genuinely harmful or genuinely benign conduct (the second is just 1 minus the first); it then calculates the expected harm conditional on the signal; and finally it bans or allows the conduct depending on whether expected harm conditional on the signal received is positive or negative.

The details of how this works are set out in the Appendix.

The following conclusions emerge:

- (i) If (3) (resp. (4)) hold, for conduct that is PI (resp. PL), the EB legal standard as characterised by Seifert (2020) behaves exactly like the EB legal standard as characterised by Katsoulacos and Ulph (2009): it bans the conduct conditional on getting a harmful signal and allows it conditional on getting a benign signal. Since, under the above conditions, these two EB decision procedures are equivalent they generate exactly the same DEC, and so, precisely because (3) (resp. (4)) hold we can conclude that, under both, EB generates lower DEC than PS.
- (ii) If (3) (resp.4) is not satisfied, the EB legal standard as characterised by Katsoulacos and Ulph (2009) leads to expected DEC that are higher than those under PS.
- (iii) If (3) (resp.4) is not satisfied, the EB legal standard as characterised by Seifert (2020), leads to conduct that is PI being banned whatever the signal (resp. conduct that is PL being allowed whatever the signal). So, in this case EB as characterised by Seifert (2020) essentially mimics PS and so generates precisely the same expected DEC.
- (iv) Conclusion (i) above in conjunction with (iii) leads to Seifert's main result that under an EB legal standard as characterised by him expected DEC are lower or exactly the same as those under PS.

4. Implications for the Choice of Legal Standard

Assume that the CA knows the parameters γ, H, B, p_H, p_B , and has to decide whether to handle the case before it under a PS or an EB legal standard. Assume also, that, while DEC is the primary consideration, the CA recognises that, because investigation is costly, the costs of an EB legal standard are higher than those of PS. The following two statements seem incontrovertible and each is a corollary of the other:

- A. A NECESSARY condition for using an EB legal standard is that it has lower DEC than PS.
- B. A SUFFICIENT condition to use a PS Legal standard is that its DEC are no higher than those of EB.

From the discussion above we have the following result:

Proposition

However the EB decision procedure is characterised:

- (a) *Condition (3) (resp.(4)) is the necessary condition for a PI (resp. PL) conduct to be assessed by EB rather than by PS;*
- (b) *However small is the additional cost of using an EB rather than a PS legal standard then, if conditions (3) (resp. (4)) is not satisfied, then the PS legal standard would be strictly preferred to EB.*

Proof: (a) follows from statement A above and conclusion (i); (b) from statement B above and conclusions (ii) and (iii).

5. Conclusion

Our central Proposition above suggests, interestingly, that Seifert's (2020) work strengthens the conclusions of Katsoulacos and Ulph (2009) on the fundamental question of whether to use PS or EB legal standards, since it implies that the Katsoulacos and Ulph (2009) conclusions do not depend on a particular characterisation of how the EB legal standard reaches decisions. The reason is that the difference between us as to the relative expected DEC of PS and EB arise precisely under the conditions when a CA would not want to use an EB standard.

Appendix: EB decisions using Seifert's approach

A1. Updated Probabilities and Expected Harm

Updated probability of getting a harmful (H) signal is $\tilde{p}_H = \gamma p_H + (1-\gamma)(1-p_B)$.

Updated probability of getting a benign (B) signal is $\tilde{p}_B = \gamma(1-p_H) + (1-\gamma)p_B$.

Note: $\tilde{p}_B + \tilde{p}_H = 1$. So:

CONDITIONAL ON GETTING A HARMFUL SIGNAL

Probability that signal comes from genuinely harmful (resp. benign) conduct is

$\frac{\gamma p_H}{\tilde{p}_H}$ (resp. $\frac{(1-\gamma)(1-p_B)}{\tilde{p}_H}$). Consequently expected harm is $\frac{\gamma p_H H - (1-\gamma)(1-p_B)B}{\tilde{p}_H}$

which will be positive if $\frac{p_H}{1-p_B} > \frac{(1-\gamma)B}{\gamma H}$ and negative if $\frac{p_H}{1-p_B} < \frac{(1-\gamma)B}{\gamma H}$.

CONDITIONAL ON GETTING A BENIGN SIGNAL

Probability that signal comes from genuinely harmful (resp. benign) conduct is

$\frac{\gamma(1-p_H)}{\tilde{p}_B}$ (resp. $\frac{(1-\gamma)p_B}{\tilde{p}_B}$). Consequently expected harm is $\frac{\gamma(1-p_H)H - (1-\gamma)p_B B}{\tilde{p}_B}$,

which will be positive if $\frac{p_B}{1-p_H} < \frac{\gamma H}{(1-\gamma)B}$ and negative if $\frac{p_B}{1-p_H} > \frac{\gamma H}{(1-\gamma)B}$.

A2. Decisions made under the EB legal standard as characterised by Seifert

Take the two types of conduct in turn:

PI: Since conduct is PI it follows that $\frac{(1-\gamma)B}{\gamma H} < 1 < \frac{p_H}{1-p_B}$ and so if CA gets H signal then,

using the updated probabilities, the expected harm conditional on the signal will be positive and the conduct will be banned.

If $1 < \frac{p_B}{1-p_H} < \frac{\gamma H}{(1-\gamma)B}$ then, using the updated probabilities, the expected harm based on

getting the B signal will also be positive and so the conduct will also be banned if CA gets B signal. In this case the EB rule is totally equivalent to PS, in the sense it bans the conduct whatever the signal. Obviously it then generates exactly the same DEC as a PS legal standard.

However, if

$$\frac{p_B}{1-p_H} > \frac{\gamma H}{(1-\gamma)B} > 1 \quad (5)$$

if CA gets B signal, the expected harm it calculates using the updated probabilities will be negative and so the CA will allow the conduct. So in this case the decision-making properties of Seifert’s characterisation of an EB procedure will be exactly the same as those of Katsoulacos and Ulph (2009) – namely the conduct is banned on receipt of a harmful signal and allowed on receipt of a benign signal. So the DEC of EB under both characterisations are exactly the same, and are as given by (2). But since (5) is equivalent to (3), it follows that in this case, DEC under EB are lower than under PS.

Now consider the second case:

PL: Since conduct is PL it follows that $\frac{\gamma H}{(1-\gamma)B} < 1 < \frac{p_B}{1-p_H}$ and so if CA gets B signal the conduct will definitely be allowed. If $1 < \frac{p_H}{1-p_B} < \frac{(1-\gamma)B}{\gamma H}$ the conduct will also be allowed if

CA gets H signal and so the EB rule is equivalent to PS, and generates the same DEC from allowing harmful conduct. However if the CA gets a harmful signal and

$$\frac{p_H}{1-p_B} > \frac{(1-\gamma)B}{\gamma H} > 1 \quad (6)$$

expected harm will be positive and it will disallow the conduct. So if (6) holds then the EB rule as characterised by Seifert (2020) has exactly the same decision-making properties as those of the Katsoulacos and Uplh (2009) characterisation and so has exactly the same DEC - given by (8). But since (6) is equivalent to (4), it follows that in this case, DEC under EB are lower than under PS.

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